

TMACOG REGIONAL TRANSIT STUDY

Needs and Next Steps

FINAL REPORT

September 2004

(Reformatted and republished June, 2007)



TOLEDO METROPOLITAN AREA
COUNCIL OF GOVERNMENTS





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ABSTRACT

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The Board of Lucas County Commissioners
The Board of Monroe County Commissioners
City of Oregon
City of Perrysburg
City of Toledo
Lake Erie Transportation Commission
Owens Community College
Regional Growth Partnership
Springfield Township
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Executive Summary

Introduction

The Toledo Metropolitan Area Council of Governments (TMACOG) Regional Transit Study is the region's response to perceived shortcomings in the public transportation systems. These include a perceived lack of transportation options for growth areas and a lack of mobility for seniors, persons with disabilities, and other people who need or desire public transportation.



The purpose of the study was to determine whether there are unmet needs for public transportation in the region and the extent and nature of these needs. The study area includes Lucas and Wood counties in Ohio and Erie, Bedford and Whiteford townships in Monroe County, Michigan. Project sponsors include a wide range of local governmental agencies, transit providers, and non-profit entities from throughout the study area.

Project Organization

The Executive Committee, made up of representatives of the funding agencies, was the primary governing body of the study. A Study Committee, made up of representatives of the funding agencies, plus representatives from other agencies and concerned citizens, assisted in guiding the study and provided technical input. The study was managed day-to-day by TMACOG staff.

Study Findings: Is Public Transit Working in Our Region?

The Regional Transit Study revealed and documented a number of needs that are not being met by the existing transit services in the region. These needs were documented through analysis of the market for transit in the region, the transit services now operating in the region, and the public's perceptions of their public transportation services. **This study verifies that current public transportation does not provide a comprehensive system that serves all the needs of the region.**

Geographic Coverage

About 90 percent of the region's land area is not served by the fixed-route bus network provided by the Toledo Area Regional Transit Authority (TARTA). Other transit providers, including dial-a-ride services and university transit systems, serve some of these areas. (See map on page E-10.) However, most of these providers cover only small local areas, are not linked to TARTA or to one another, and provide little or no evening or weekend service. As a result, transit users cannot travel between many of the region's important trip generators, such as between Bowling Green State University and the University of Toledo.

Furthermore, **30 percent of the region's transit-supportive area lacks transit service.** These areas are major concentrations of employment and population to which transit service could be provided efficiently and effectively. Were transit to serve these areas, it would increase transit ridership and allow transit to support existing development in the region.

The lack of geographic coverage also limits the choices of transit-dependent consumers of retail, medical and professional services, and distorts normal patterns of travel and consumer choice. More than one-fourth of survey respondents chose their job, their doctor, and where they shop based on transit availability. Citizens desire access to specific areas in the region not currently served by regional transit (such as Oregon and Perrysburg Township), specific shopping centers and stores (such as Wal-Mart in Oregon, Spring Meadows and Woodville Malls) and specific medical facilities (St. Charles, Bay Park and Wood County hospitals). A number of the region's major recreation destinations (metroparks; Maumee Bay State Park) also lie outside the regional fixed-route transit network, and thus are inaccessible to those who use transit.

Suburban and Rural Residents

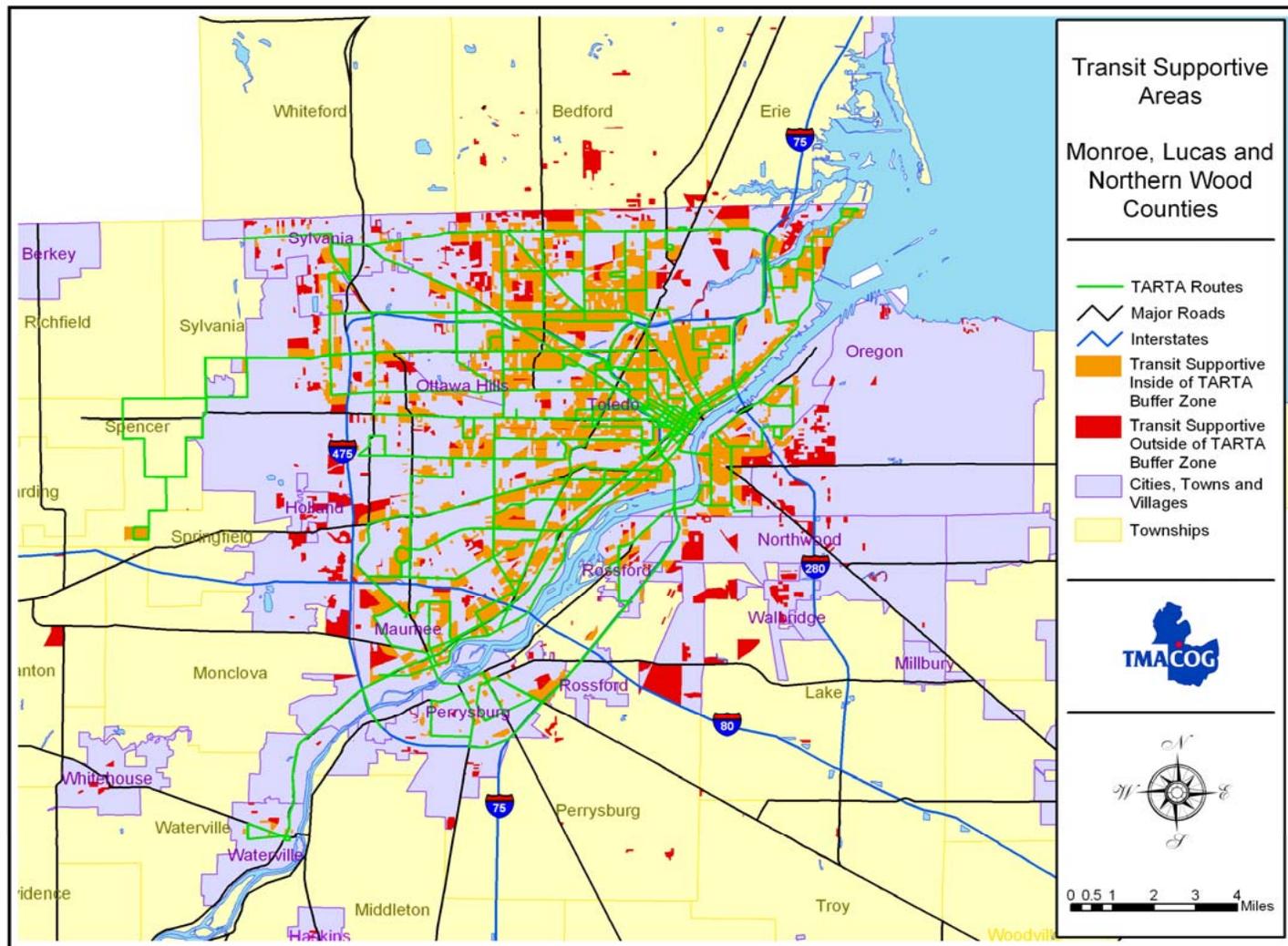
More than 47 percent of the region's population is not served by fixed-route transit service. Many suburban areas with growing populations and commercial concentrations, such as Perrysburg Township, City of Oregon, and Springfield Township, have no transit service. Population and employment growth, and growth in the number of elderly and disabled in these areas, will increase the need for transit service in the future.

Access to Jobs, Business, and Industry

Lack of geographic coverage and connections and limited evening, night, and weekend service curtails access to jobs for residents—particularly those who are without private transportation. Downtown Toledo, the focus of TARTA's fixed-route bus network, is no longer the main employment location. In fact, less than 5 percent of the TMACOG region's employment is located in the downtown. Employment is increasingly dispersed throughout the region. Analysis of employment location indicates that **57 percent of jobs in the region are not served** by the existing fixed-route transit system. The current lack of service, or limited service, in employment areas like northern Wood County and Arrowhead Park limits the flexibility of the transit system to serve business and industry in the region. It separates employees from jobs, and employers from workers.

The job market is changing (including growth in the service sector), and fewer people work a standard Monday-through-Friday daytime schedule. Nationally, the percentage of employees with flexible work schedules increased to nearly 29 percent by 2001. Between 25 to 40 percent of workers in retail sales, cleaning service, health care, food service, and production are working non-traditional shifts. These national figures are supported by local data: a Toledo area employer association survey found that among responding companies, approximately 28 percent of the reported staffing schedules were for a non-standard work week.

Non-weekday schedules are not well served with our current public transportation. TARTA has fewer bus routes in the evening, no service after the 11:00 p.m. hour, and less service on weekends. Other area transit provides little, if any, night, weekend or holiday service. Survey respondents stated inadequate time-of-day coverage is a significant problem. Workers reported lost wages and lost job opportunities. College students find it difficult to use transit to meet their school and work schedules.



Transit Supportive Areas: Numerous areas of the TMACOG region have employment and population densities that can support public transit service. However, many of these areas (highlighted in red) lie outside the region’s fixed-route public transit network.

To be of service to the community, transit must, at minimum, serve the needs of people entering the work force. A study of participants in the CommuterLINK program, which provides transportation to new workers, found that a large majority could not use TARTA for work trips. Transit was not available at the right hours and/or did not serve the workplaces of these workers. Suburban employers report problems with attracting and keeping entry-level staff due to lack of public transportation.

The number of people in the region aged 55+ will increase by nearly 50 percent over the next 20 years, while the number of younger adults will fall. However, area employment is expected to grow significantly. This suggests more people will work past “retirement age.” Seniors are more likely to use transit, and are also more likely to be disabled (about 40 percent of area residents aged 65 or older are disabled) and thus more dependent on public transportation.

All of these employment trends, taken together, point to more need for public transit. However, they also produce travel patterns that are extremely difficult to serve with traditional fixed-route public transit.

Elderly, Youth, and Disabled Access to Transit

Demographic trends suggest more transit will be needed in the future. Elderly, disabled, and young people are among those most likely to rely on transit. The number of persons in the region aged 65 and over is projected to increase by more than 30 percent in the next 20 years. This also increases the number of disabled in the population.

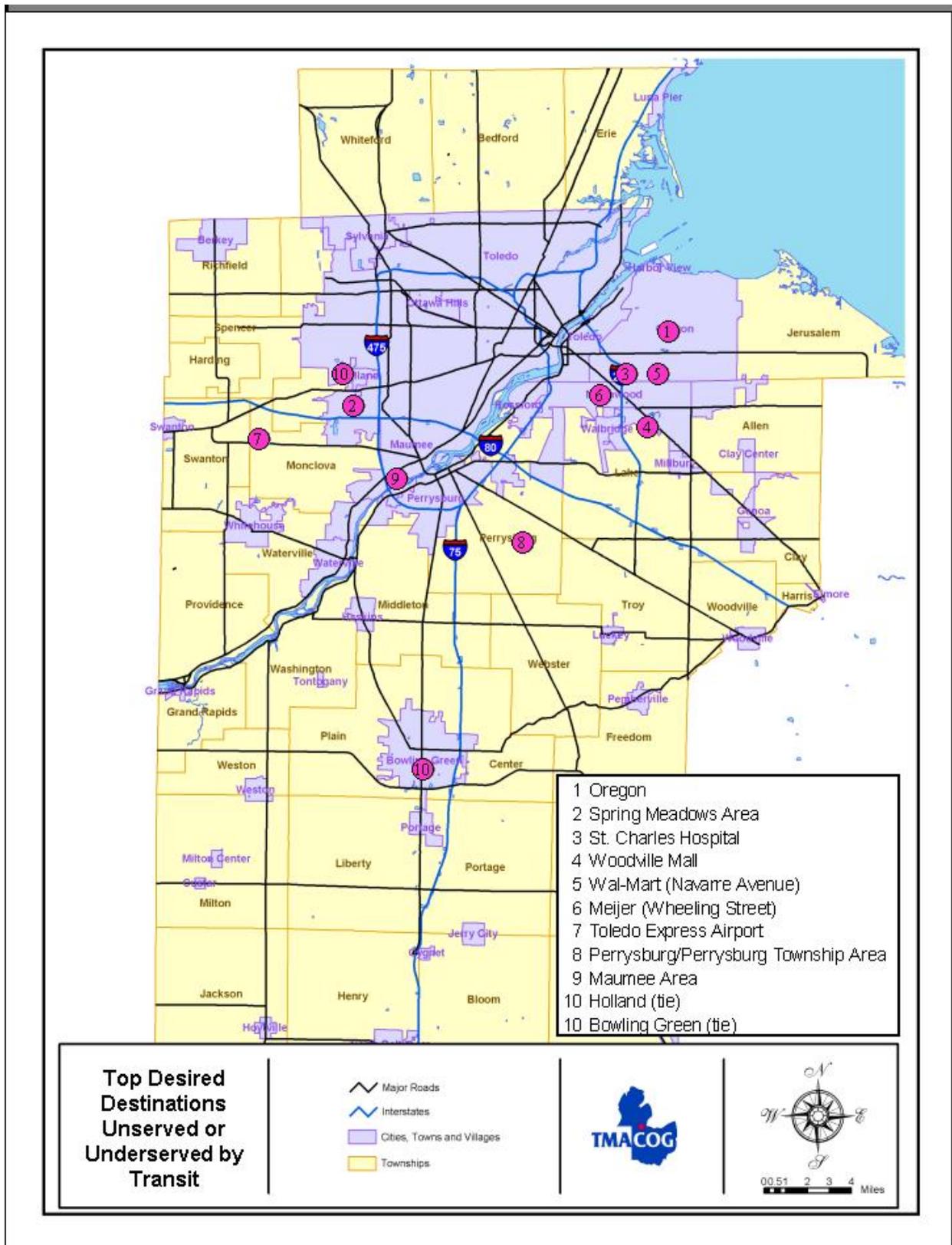
Many unserved areas in the region, including suburban areas, have higher densities of elderly, youth and disabled persons. About 15 percent of the older population (aged 65+)—and an equivalent percentage of disabled citizens—live in areas without transit, potentially isolating them from activities, jobs and services. In terms of numbers, more than 28,000 area residents over age 50, and more than 12,000 over age 65, live in unserved areas. Nearly 24,000 of the area’s youth live in non-transit areas. Workforce participation among the disabled and youth has increased in recent years, and this trend is expected to continue, creating further demand for transit services.

Service Frequency, Direct Routing and Trip Time Length

When trip time lengths are excessive, transit is eliminated as a realistic option for mobility. Excessive trip times in this region are related to:

- Lack of direct routing between destinations;
- Lack of connections (or very limited connections) between transit systems; and
- Insufficient service frequency.

Excessive trip time length affects access to jobs, education, medical care, and other essential services in the region.



Top Destinations: Members of the public indicated nearly 100 locations they would like to reach by bus that were not accessible to them. These are the “top 10.”

Airport Service

Connections to Toledo Express and Detroit Metro airports were recommended by economic development officials, business people, and survey respondents. TARTA began operating a trial service to Toledo Express Airport beginning in December 2003. No transit service is available from the Toledo area to Detroit Metro Airport. Airport service benefits current and potential airport employees and nearby businesses, as well as local travelers and visitors. Connections to airports are also a boost to civic pride, as most large cities have frequent, high-quality connections to their regional airports for travelers who choose transit.



Public outreach events, like this display at the Andersons' in West Toledo, helped to spread the word about the study and yielded important comments and ideas.

Study Recommendations

The Study Committee **affirms public transportation as part of the region's basic infrastructure**, essential to support economic development and personal mobility for all citizens. The study documented deficiencies in the transit system in our region and identified very real concerns with how transit works to meet transportation needs. The Study Committee has developed a set of objectives to address these concerns, and recommends that stakeholders **select and initiate strategies to accomplish these objectives**. Funding sources for this work should be pursued as needed.

The objectives include the following:

	Short Term (1-3 years)	Longer Term (4-10 years)
A. Existing Transit Areas	1) Investigate options and fund service improvements to: <ul style="list-style-type: none"> ▪ Add direct service between non-downtown destinations in the TARTA service area ▪ Add/expand evening, night, weekend, and holiday service in all transit service areas ▪ Increase service frequency in all service areas ▪ Expand the Bedford Dial-a-Ride service area, and add more connections to TARTA 2) Work with stakeholders to coordinate transportation resources of senior citizen, workforce development, Medicare, and social service agencies 3) Continue to provide ADA-compliant paratransit service to the growing disabled population in transit service areas	1) Add connection between Bedford and Monroe City area 2) Add connection between Bowling Green and the Toledo metro area

	Short Term (1-3 years)	Longer Term (4-10 years)
	4) Improve transit marketing / public information 5) Work with local governments to improve sidewalks and pedestrian access to bus stops	
B. New Transit Areas	1) Work with local stakeholders to investigate alternatives for providing service, and pursue new service in the Oregon area, Northwood, Holland/ Springfield Township, and Perrysburg Township	1) Operate and fund transit as a county-wide or multi-county system, allowing areas of need to be served 2) Pursue coordination and connectivity with adjoining rural county transit systems (Ottawa County, etc.)

Specific projects and policy changes resulting from these efforts will be implemented through the coordinated efforts of regional stakeholders and incorporated, along with other transit initiatives, into the Regional Transportation Plan (RTP). Pursuing these objectives will require political will, regional collaboration, thoughtful strategizing, and concerted effort. The benefits to the region will be significant.

Study Content: Basis for the Recommendations

The recommendations are based on in-depth technical analysis (market assessment, assessment of existing transit services, and potential transit demand estimate) and extensive public input. These were completed over a 20-month period with the assistance of a nationally recognized consultant team and are described briefly below.

Public Outreach

The study pursued a “mosaic” approach in which public input is gathered from a variety of sources and is placed together in its context to form the full picture of public opinion on the subject. The various strategies included:

- A statistically valid telephone survey of residents in the region
- An informational survey, distributed on buses, at community events, and by public service and non-profit agencies throughout the region
- Two series of traditional public meetings
- A series of public outreach events at several public locations
- Focus groups, targeting groups likely to be under-represented in the other efforts
- Interviews with local stakeholders (business and community leaders)
- Media outreach and paid advertising, including publication of the informational survey in newspapers
- Outreach via the Internet and receipt of comments by phone, fax, and e-mail
- Selected outreach materials created in both English and Spanish

The public outreach efforts confirmed that many of the perceived problems that prompted the study are genuine, and the feedback illuminated how these problems shape the lives of area residents. The most significant issues for the public are lack of geographic and time coverage, making it difficult or impossible to provide access to jobs and other essential destinations,

especially during evenings and weekends. The public input process also identified wide support for providing public transit, especially to serve the elderly, disabled, and those without access to automobiles.

Transit users expressed concern about long waits between buses, unreliable service, and lack of direct service between non-downtown locations. Also noted were inaccessibility to bus stops (due to lack of sidewalks, paved waiting areas and snow removal), the need for more advertising and instructions on how to use the transit system, and some quality of service issues. Support for more Mud Hens game service and bus service to the airport also were among the findings of the public outreach effort.

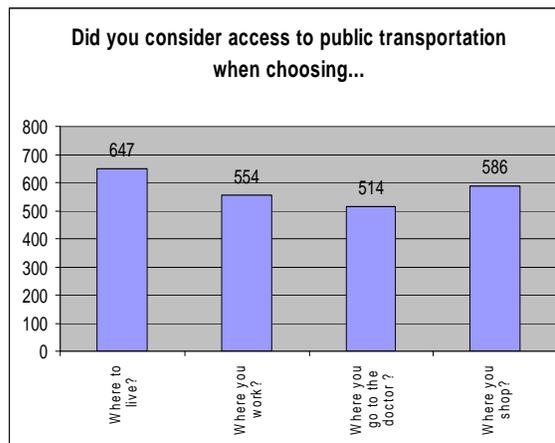
Market Assessment

The market assessment analyzed the population, employment and unemployment trends in the TMACOG region to identify how those trends might affect the need for public transportation. The region’s population is not predicted to grow significantly over the next thirty years. However, the population is expected to age significantly and to continue to move outward from the cities to suburban areas.

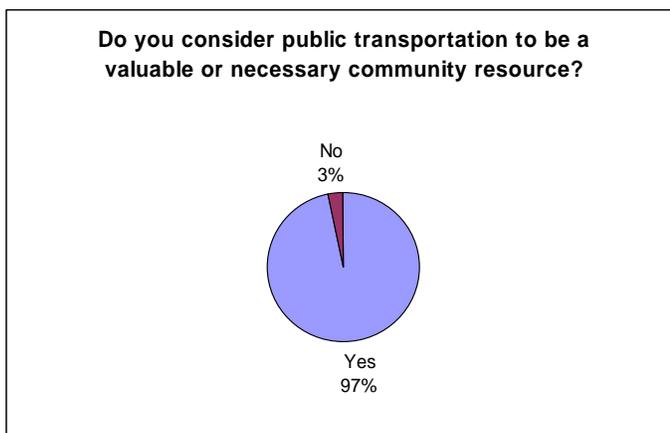
Regional employment is expected to grow, with workforce participation by women and older people expected to increase. Employment is also expected to diversify, with less reliance on manufacturing and more employment in various types of services.

Service jobs tend to be less geographically concentrated than manufacturing jobs, and service workers have more irregular work hours. The aging of the population and of the workforce will make public transportation more critical in the future. However, the trend is toward increased dispersal of people and jobs. GIS*

mapping of employment and demographic data shows that areas with high population densities (including high densities of elderly and disabled persons) and many employment sites are outside the area now served by fixed-route public transit.

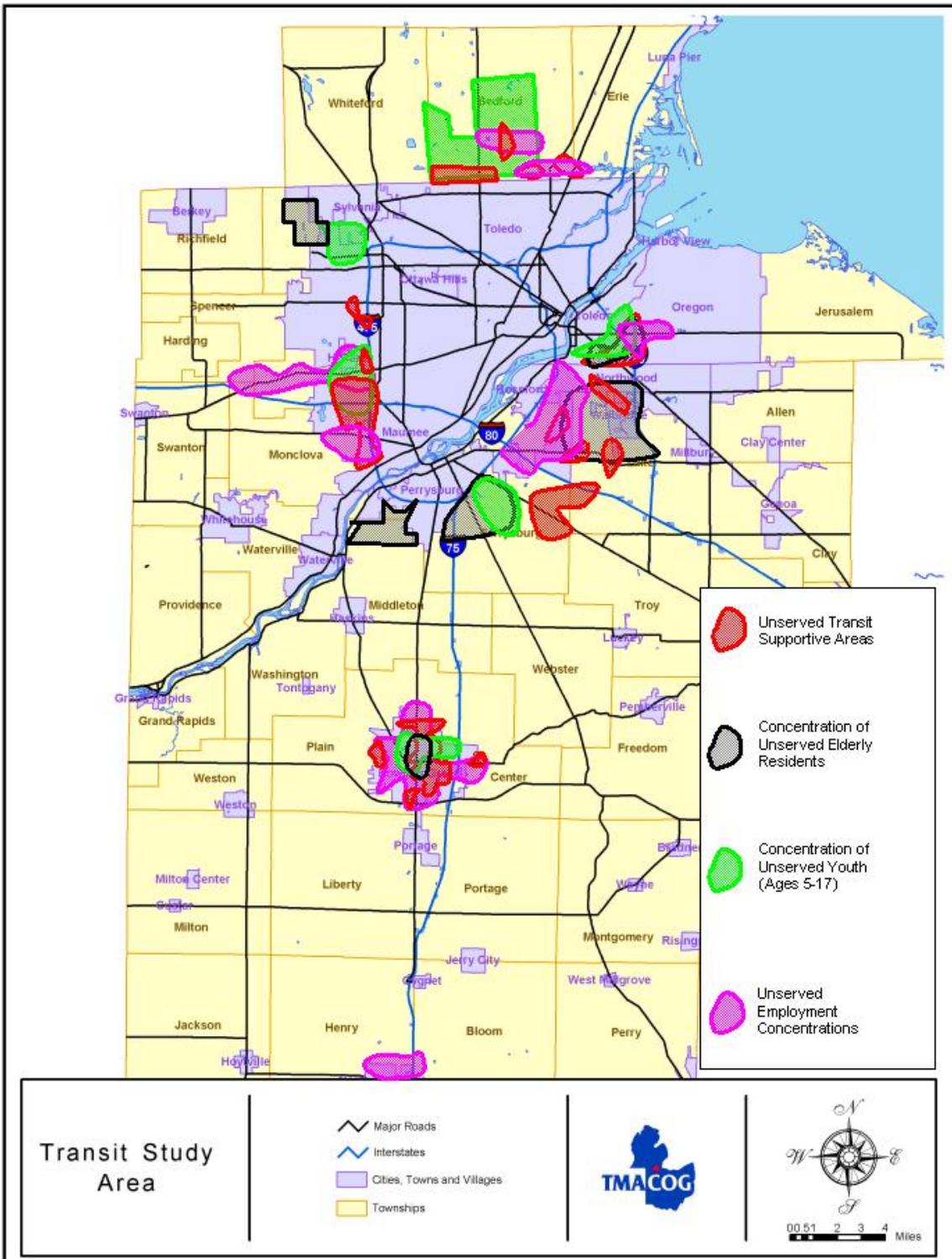


Hundreds of informational survey respondents said they made major life decisions, including where to live and work, based on the availability of transit service.



The informational survey reached thousands of area residents, both transit users and non-users. Nearly all respondents acknowledged public transit’s importance to community life.

* Geographic Information Systems, computerized systems that allow data tied to a spatial location to be analyzed using computer-generated maps. All of the maps shown in the Transit Study Report have been created using GIS.



Demographic Areas of Concern: This map shows concentrations of transit-supportive population and employment, plus concentrations of elderly and youth, in areas not served by the regional fixed-route transit network.

More than 46 percent of the population and 57 percent of the employment in the region is not served by fixed-route transit service. Areas in the region with a density of three jobs per acre and four persons per acre were identified as “transit-supportive areas.” More than 30 percent of the transit-supportive area lies outside the full service fixed-route transit network, leaving high-density growing areas in Lucas County and northern Wood County unserved. Other high-density areas including Bowling Green and Bedford Township provide limited public transit, but have no connections or very limited connections to the remainder of the region.

Coverage of TARTA Fixed-Route Bus Service in Study Area and Transit-Supportive Areas

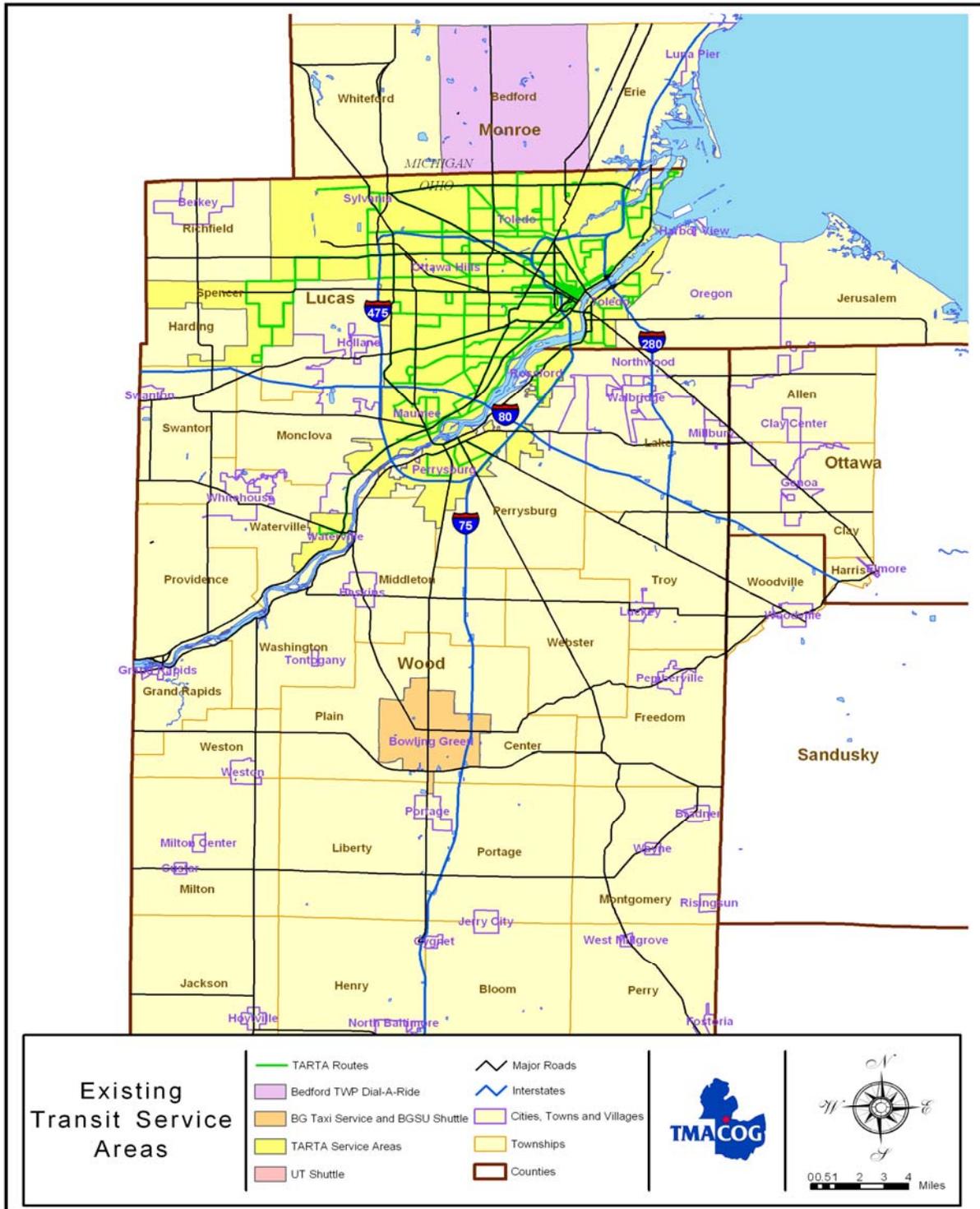
	Area (mile²)	Population	Employment
Study Area *	1,076.4	613,713	245,059
Transit Coverage Area (1/4-mile buffer around TARTA fixed routes)	103.1	327,058	105,060
Percent of Area Not Served by Transit Network	90.4%	46.7%	57.1%
Transit-Supportive Area	48.5	319,939	128,428
Transit-Supportive Area Covered	33.6	244,378	91,930
Percent of Transit-Supportive Area Not Served by Transit Network	30.7%	23.6%	28.4%

Assessment of Existing Transit Service

Public transportation in the TMACOG region is fragmented, and large areas of the region are not served by public transit. Toledo Area Regional Transit Authority (TARTA) provides bus service in Toledo and eight adjacent communities. TARTA provides fixed-route bus service throughout its service area. It provides Call-a-Ride circulators in Perrysburg and Maumee, and (beginning in 2004) in Sylvania; and operates Toledo Area Regional Paratransit Service (TARPS) for the disabled throughout its service area. TARTA’s service area does not include a number of growing suburban jurisdictions, such as the City of Oregon and Bedford, Perrysburg, Springfield, and Monclova Townships.

Bowling Green Transit is a subsidized taxi service that provides mobility options in the City of Bowling Green. Lake Erie Transit operates a dial-a-ride service in Bedford Township that provides circulation in the township and connections to TARTA in north Toledo. The University of Toledo (UT) and Bowling Green State University (BGSU) offer fixed-route bus service for the benefit of their students. During the academic year, BGSU’s service seems to function as a de-facto local bus service in Bowling Green.

*Lucas and Wood counties; Erie, Bedford and Whiteford townships in Monroe County



Existing Transit Service Areas: Most of the region (90 percent of the land area) is not served by a regional-scale, fixed-route public transit network. The services that do exist are not well interconnected and vary considerably in terms of the type and frequency of service offered.

As a result of the deficiencies in the region’s public transportation, a variety of services from TMACOG’s CommuterLINK program to the Office on Aging and numerous social service agency transit systems, have sprung up to meet the unmet transportation needs of specific populations. These independent and unlinked systems are difficult to assess, but may be untapped resources for providing better transit for the region in the future. TMACOG has a history of providing services and has an ongoing commitment to work with agency providers on coordinating transportation services.



TARPS, TARTA’s paratransit service for the disabled, came in for both praise and criticism by members of the public and the disabled community. Efficiency and effectiveness are improving, but ridership and costs are skyrocketing.

TARTA provides hourly service on suburban routes and half-hourly service in urban areas during the day, but service diminishes over the course of the evening, and the agency runs significantly fewer routes on weekends. None of the services operate between 11:00 p.m. and 6:00 a.m. TARTA and Bowling Green services do not interconnect, while TARTA and the Bedford dial-a-ride services connect only during the mid-day, leaving the region, in effect, without a regional transit network. TARTA’s services operate with reasonable efficiency and effectiveness compared to other agencies in similar-sized areas, and the region has added transit innovations over the years. However, demand for and therefore the cost of TARTA’s paratransit service, TARPS, has risen dramatically in recent years.



Flexible routing allows transit services to divert from a fixed route to pick up and drop off passengers closer to their origin and destination points. TARTA’s Call-a-Ride services in Perrysburg, Maumee and Sylvania, and the Bedford Dial-a-Ride are examples of flexible route service.

Transit agencies in other parts of the country have updated transit to make a better “fit” to today’s range of personal transportation needs. Smaller, more comfortable and efficient buses, improved transit stops and transfer centers, flexible service options, and the application of computer technologies have made transit more responsive to the public’s needs. The TMACOG region has some of these innovations (such as dial-a-rides) and may wish to consider additional updates to provide higher quality transit service to residents and businesses.

Potential Transit Demand

The project consultant team prepared a quantitative estimate of unmet demand for public transportation in the region using data from TMACOG’s travel demand model, demographic data, and information from project surveys. The estimates were made by comparing the percentage of travelers using transit (“transit share”) in transportation

corridors in the TMACOG region to corridors in other cities with similar demographic characteristics but with more complete and frequent transit service.

The estimate found that 4,000 to 10,000 more daily transit trips (in addition to the 20,000 daily transit trips taken today) could be generated in the TMACOG region if high-quality transit service were in place in all areas where potential demand for it exists. These additional trips could generate millions of dollars in additional transit fare revenues. The increased mobility provided by the improved transit service could also result in increased economic activity in the region.

Table: Estimate of Unmet Demand by Corridor

Corridor	Existing Riders	Existing Share	Additional Future Riders	Future Share	Total Future Riders	% Increase Over Existing
Downtown	2,630	3.2%	1,850	5.4%	4,480	70%
East	1,860	0.7%	400	0.8%	2,260	22%
South/West	5,280	0.7%	630	0.8%	5,910	12%
South	1,880	0.7%	150	0.8%	2,030	8%
North/West	6,420	0.6%	1,660	0.8%	8,080	26%
TOTAL	18,070		4,690		22,760	26%

Even a slight increase in transit’s share of the travel market in each corridor can result in large increases in transit ridership. However, in order to achieve these ridership gains, significant improvements to the transit system would be required. These might include:

- Expand service to portions of the TMACOG region and corridors where potential demand exists.
- Expand cross-town service to provide direct transit connections to growing employment and retail areas without requiring a downtown transfer. An example would be the development of a mini-hub in the Arrowhead Park area, with service extending directly into surrounding Toledo and suburban neighborhoods.
- Provide service to target areas and populations, including major transportation hubs, universities, and areas with large concentrations of seniors, students, low-income persons, and disabled persons.
- Increase service frequency, including peak period service to the downtown area and to other employment areas, and off-peak service to major retail and commercial centers.
- A Regional Effort

The Regional Transit Study has documented the findings of this first-ever comprehensive look at transit in the northwest Ohio/southeast Michigan region. This study has been a truly regional effort, aimed at improving the economic conditions and quality of life in this region through wise planning for and investment in public transportation services and facilities.

TMACOG thanks all the partners, citizens, and community leaders who helped make this study possible. Special thanks goes to the following agencies that joined the TMACOG Transportation Department and the TMACOG Commuter Services Department in funding the Regional Transit Study:

- Ability Center of Greater Toledo
- Area Office on Aging of Northwestern Ohio, Inc.
- Bedford Township
- The Board of Lucas County Commissioners
- The Board of Monroe County Commissioners
- City of Oregon
- City of Perrysburg
- City of Toledo
- Lake Erie Transportation Commission
- Owens Community College
- Regional Growth Partnership, Inc.
- Springfield Township
- Sylvania Township
- Toledo Area Regional Transit Authority (TARTA)
- Toledo-Lucas County Port Authority
- United Way of Greater Toledo

For more information, including the full Study Report, contact:

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P.O. Box 9508
Toledo, Ohio 43697-9508
419-241-9155; fax 419-241-9116
publicinfo@tmacog.org
www.tmacog.org

1. Introduction

1.1 Project History

There has long been recognition, among transportation planners and others in the northwestern Ohio/southeastern Michigan region, that the public transportation system in the region, is, if not deficient in some respects, certainly different than the systems serving other regions in Ohio and Michigan and in other parts of the country. Typically in Ohio, public transportation systems (most of which formed in the 1970s, when it became apparent that private enterprise could not profitably provide public transportation service) are formed on a county-wide basis, operated by a special-use district referred to as a regional transit authority (RTA) and funded through a county-wide sales or property tax. Because the core urbanized area of the northwestern Ohio/southeastern Michigan area straddles the Lucas/Wood and Lucas/Monroe county lines, a strictly county-based system would not have been as appropriate in this region as it is in Cleveland, Columbus and most of the other urbanized areas in Ohio.

TARTA is the region's largest transit system and provides fixed-route bus and demand-responsive paratransit service in the City of Toledo and a number of surrounding communities. TARTA was formed in the 1970s through an agreement between the City of Toledo and a number of suburban and semi-rural jurisdictions. Toledo and six other jurisdictions are located in Lucas County; two more are located in Wood County. A full list of the jurisdictions served by TARTA is provided in the analysis of TARTA's services in Chapter 5 of this report. Each of these jurisdictions approved a referendum imposing a property tax to cover the operating subsidy of the service.

At the time of the formation of TARTA, the jurisdictions located outside the TARTA service area were predominantly rural. Since the 1970s, the suburbanization and dispersal of the area's population and employment has resulted in significant development in many of these formerly rural jurisdictions, particularly Oregon, Northwood, and Perrysburg Township to the east of Toledo; Bedford Township in Michigan, north of Toledo; and Springfield and Monclova townships, west of Toledo. Because the region has a very low rate of population growth, these trends have resulted in a reduction in the population density of the region. Moreover, the suburbanization of employment, which accelerated in the 1980s and 1990s and continues today, has reduced the number of employees in downtown Toledo and in the dense urban corridors served by TARTA's fixed route system, and dispersed these jobs throughout the region. Because TARTA is constrained to serving only the jurisdictions in its service area, it has had only limited success in adapting its services to these changing conditions.

In addition to urban sprawl, demographic trends have had a marked change in the market for all transportation services, including public transportation. These trends include the aging of the population (which will result in higher numbers of people who are physically unable to drive due to mobility or sensory disabilities); the increasing mobility and employment of elderly and disabled persons; the trend toward part-time, shift, and flexible work hours; the growth in single parent households and increasing participation of women, including those with young children, in the workforce; and, efforts to move many long-term unemployed and cash assistance-dependent persons, including women with young children, into the workforce. These trends, coupled with the dispersal of workplaces and other services throughout the region, have made the transportation market much less concentrated, in terms of travel times as well as geographically, than it was in the past, making the market much more difficult and expensive to serve with traditional public transit service.

As a result of urban sprawl and the geographic limitations of TARTA's service coverage, a number of new services, and even new transit systems, have developed to provide transportation for these suburban areas. TARTA has developed Dial-A-Ride services to provide curb-to-curb transit in lower-density suburban areas such as Perrysburg, Maumee and soon in Sylvania. The City of Bowling Green has developed a subsidized taxi service, entirely separated from TARTA and other transit providers, to serve the need for public transportation within the city. Bedford Township has similarly developed a curb-to-curb Dial-A-Ride service to provide connections within that jurisdiction and nominal connections to TARTA. Bowling Green State University and the University of Toledo have developed significant transit systems to serve their students. Many public social service and educational agencies and private charities have developed their own transit resources, ranging from significant fleets of buses to single-van operations. More recently, TMACOG has developed a regional subsidized taxi and vanpool program, CommuterLINK, and even has a program to help new workers leaving the cash assistance rolls to purchase their own automobiles. While the decentralization and proliferation of services in and of itself is not evidence of serious problems, it does indicate a lack of regional focus and coordination that is worthy of analysis.

The many strategies that have been used by communities in the region that are not served by TARTA are one indication that there may be remaining unmet transit needs throughout the region. The diversity of strategies also indicates that expansion of the TARTA system, though a possible means to address these needs, is not the only, nor necessarily the best, strategy to meet all the transit needs of the region.

Recognizing that there are potentially a host of unmet needs for public transportation in the region, TMACOG formed a Transit Study Committee made up of key regional stakeholders and decision makers in the transportation, governmental, and human services sectors, TMACOG and transit agency staff, and concerned citizens. The analysis by the consultant team, TMACOG staff, and the study committees began in April 2003. This report documents the results of that study, summarizes the unmet needs in the region, and proposes next steps in the process.

1.2 Project Study Area

The project study area is shown in **Figure 5-1** (in **Chapter 5** of this report). It includes all of Wood and Lucas counties and the municipalities and townships therein, and the southern tier of townships in Monroe County, Michigan (Erie, Bedford and Whiteford townships). Due to data limitations, demographic and socioeconomic data is sometimes presented for other jurisdictions, including Ottawa and Fulton counties, counties to the east and west (respectively) of Lucas and Wood counties, which are part of the Toledo Area Metropolitan Statistical Area (MSA), as defined by the U.S. Census Bureau.

1.3 Project Goals

The primary goal of the project is to identify unmet needs for public transportation in the TMACOG region through data analysis and public outreach. The study seeks to reach a regional consensus, through agreement among the members of the project study and executive committees, on

1. Whether there are unmet needs for public transportation in regional transit project study area, and,

2. If there are such needs, whether further study and development of a plan to meet those needs is warranted.

Secondary goals of the project include the development of data to provide TMACOG with the capacity to perform ongoing analysis of public transportation in the region and estimation of unmet demand for public transportation.

1.4 Project Sponsors

The following entities have contributed to funding the TMACOG Regional Transit Study:

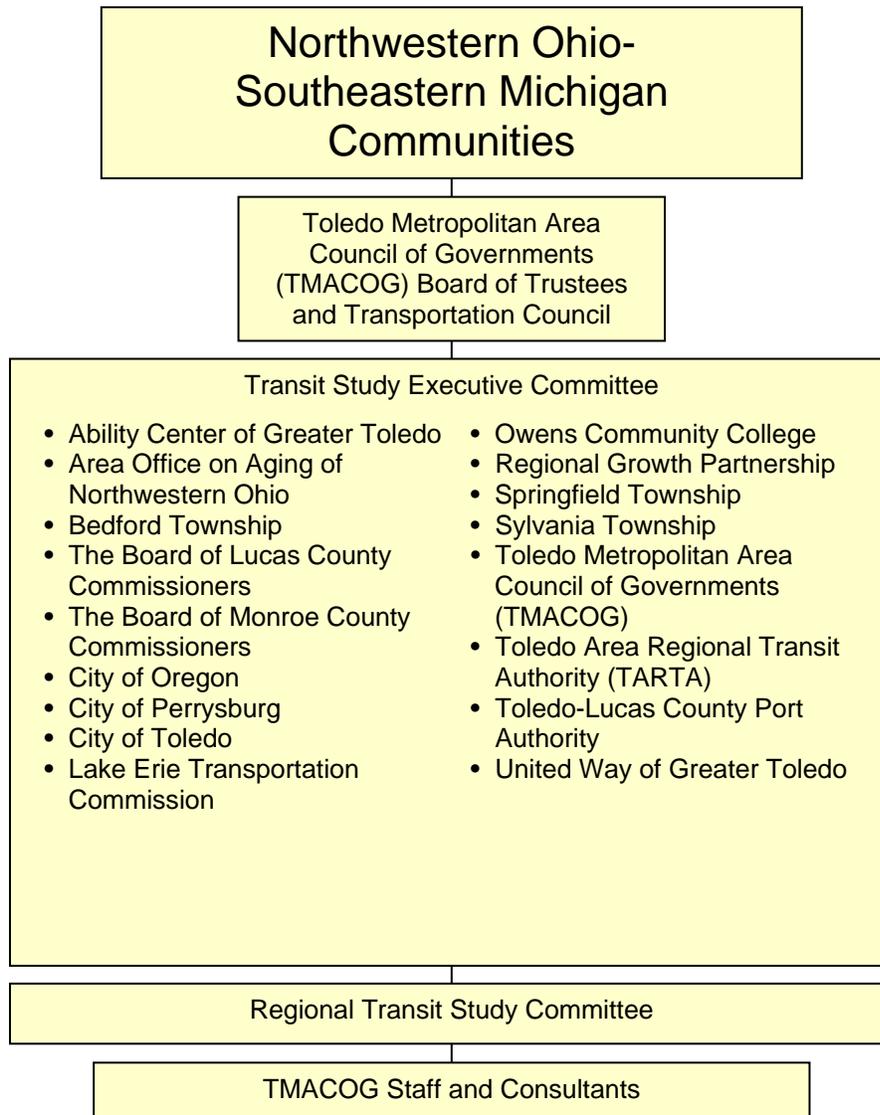
- Ability Center of Greater Toledo
- Area Office on Aging of Northwestern Ohio
- Bedford Township
- The Board of Lucas County Commissioners
- The Board of Monroe County Commissioners
- City of Oregon
- City of Perrysburg
- City of Toledo
- Lake Erie Transportation Commission
- Owens Community College
- Regional Growth Partnership
- Springfield Township
- Sylvania Township
- Toledo Metropolitan Area Council Of Governments (TMACOG)
- Toledo Area Regional Transit Authority (TARTA)
- Toledo-Lucas County Port Authority
- United Way of Greater Toledo

2. Project Organization

2.1 Organizational Structure

The conduct of the study and management of the consultant team was organized to ensure input from all interested parties, while providing a hierarchical management structure based on the financial participation of some entities. **Figure 2-1** graphically shows this management structure. The primary governing body of the study was the Executive Committee, made up of representatives of TMACOG and the other entities that provided financial support to the study. All major policy decisions governing the conduct of the study were reviewed and determined by this committee. The Study Committee provided additional input and guidance. This broader-based group was open to any interested individual or organization. Members included the representatives of the funding agencies (the Executive Committee) plus other interested citizens and representatives of other agencies. TMACOG staff managed the day-to-day operations of the study, assisted the consultant team in performing many of the project tasks, and reported to TMACOG management and the project-governing committees.

Figure 2-1: Regional Transit Study Management Structure



3. Public Outreach Efforts

Public outreach efforts for the study served three purposes:

- Gather public opinion about public transit generally and about specific services operating in the TMACOG area.
- Educate the public about innovations in public transit that have been implemented successfully in other cities, and the potential applicability of these services in the TMACOG area.
- Gather public reaction to the findings and recommendations of the study.

The study's extensive public outreach efforts used a variety of means to ensure that every member of the community had an opportunity to express his or her opinions about public transportation services in the region. These approaches included:

- A telephone survey of 800 residents of the region
- Distribution of brochures and printed materials
- An informational survey, distributed on buses, at community events, and by public service and non-profit agencies throughout the region
- Two sets of traditional public meetings
- A series of outreach events at several public locations in the study area
- Focus groups, targeting groups likely to be under-represented in the other efforts
- Interviews with local stakeholders (business and community leaders)
- Media outreach and paid advertising, including publication of the informational survey in various newspapers
- Outreach via the Internet and receipt of comments by phone, fax, e-mail and in Spanish

The study pursued a "mosaic" approach, in which public input is gathered from a variety of sources and is placed together in its context to form the full picture of public opinion on the subject. Public outreach, in turn, is but one element in the larger study, which includes information from a variety of quantitative and qualitative information sources, used to form a full picture of public transit in the TMACOG region.

3.1 Telephone Survey

A telephone survey of 800 residents of the study area was conducted in May 2003. Odesky and Associates, a research firm with experience performing surveys in the northwestern Ohio/southeastern Michigan area, assisted in developing the survey instrument and conducted the survey under the auspices of the study. The survey gathered general public opinion regarding public transit operations in the TMACOG region, probed the public's opinion about various potential deficiencies in the existing system, and tested the appeal of several possible new services that could be offered by public transit in the future. The telephone survey reached a theoretically random sample of households in the TMACOG region. Therefore, it provides the context for understanding the comments and responses that the study has received from other sources. The random survey is valuable because the other public input tended to over-represent the small percentage of the population in the region that today regularly uses transit.

The survey used a geographically stratified random sample of 800 households in the study area, using proven and scientifically valid telephone surveying techniques to overcome various types of potential bias in the sample or the survey. Thus, to the greatest degree practical, all residents of the TMACOG area had an equal chance to provide input to the study in this format. This technique ensured that the study would have a representation of the true range of opinion in the study area to compare against opinions collected by other public input and outreach efforts of the study. These other forms of input provide valuable insights into the opinions of the public, but often suffer from various forms of bias, principally in sample selection, that make the results scientifically invalid. Selection bias and other forms of survey bias, to the greatest extent possible, are absent in the telephone survey. As such, the telephone survey provides a quantitative, as well as qualitative, sample of public opinion in the region. Results of the telephone survey were used in the development of the estimate of unmet demand, the study's quantitative estimate of unmet demand for transit in the region.

A more detailed description of the telephone survey results is included in **Appendix E** of this report.

i. Methodology

The survey called 800 residences in the study area, 100 in each of eight geographically defined regions within the study area. The ZIP code areas included in the eight regions are listed below in **Table 3-1**. At the 95% confidence level, the survey results have a margin of error of $\pm 3.5\%$ for the study area as a whole and $\pm 9.8\%$ for each of the eight sub-regions. **Table 3-1** identifies the areas shown in the sub-regions.

ii. Results

Of those who responded to the survey, more than 90% had access to their own automobiles. This is consistent with recent census results, which also indicated high rates of auto ownership.

Table 3-1 Sub-Regions Surveyed		
Region Number, County	Selected ZIP Codes	Name of Areas
1. Lucas (Toledo Core)	43602, 43624, 43620, 43610	Downtown Toledo, Old West End
2. Lucas (Toledo Inner)	43604, 43608, 43605, 43609, 43607	Surrounding Downtown Toledo
3. Lucas (Toledo City)	43611, 43612, 43613, 43606, 43615, 43614, 43623	Ottawa Hills "Suburban" Toledo
4. Lucas (Toledo and Inner Suburban) Wood Monroe (MI)	43460, 43537, 43560, 43617, 43551, 48182, 48144	Bedford Maumee Perrysburg Rossford Sylvania
5. Lucas (Suburban) Wood	43616, 43619, 43542, 43528, 43566, 43571	Harbor View Monclova Northwood Oregon Springfield Waterville
6. Lucas (Outer Suburban) Wood Ottawa Sandusky Monroe (MI)	43551, 43618, 43412, 43468, 43408, 43445, 43430, 43469, 43443, 43447, 43465, 43525, 43547, 43522, 43558, 43504, 48133, 49267	Allen Clay Erie Harding Jerusalem Lake Middleton Perrysburg Township Providence Richfield Spencer Swanton Troy Washington Whiteford Woodville
7. Wood (Bowling Green)	43402	Bowling Green
8. Wood (Southern County)	43403	Southern Wood County

Auto Use

Autos were used for most trips, with transit accounting for a small percentage of trips. **Table 3-2** shows the percentage of respondents who use various modes to travel to work or for other trip purposes. Only 0.5% of respondents said they regularly use transit for work trips, while nearly 3% of other types of trips were taken using transit.

Table 3-2: Means of Travel Used by Trip Type

	Home to Work	Home to Other	Start Away from Home*
Drive	95%	96.10%	96.80%
Transit	0.50%	2.70%	1.90%
Other Means of Travel	4.50%	1.20%	1.30%

*Trips that begin somewhere other than home

Looking at the results by sub-region, only in the core areas of Toledo and in Bowling Green was the percentage driving to work below 90%. For travel from home to places other than work, the percentage driving was even higher, with the percentage lowest (90%) in the core area of Toledo. Among those identified as low income, the percentage driving for both work and other trips exceeded eighty percent.

Transit Familiarity and Use

More than 80% of respondents overall claimed to be familiar with public transportation in the area, with the percentages highest in the Toledo area and lowest among rural dwellers in southern Wood County. Lower income people and non-car owners were not significantly more likely to claim familiarity with the transit system.

Of the 81% who claimed familiarity with the region's transit system, 16.4 percent said they had used public transportation in the past year. An additional 2.6% said that they had used transit within the past two years, and 30% said they had used transit in at least five years. Nearly 27% said they had never used transit. Nearly 70% of non-car owners and approximately 40% of low-income residents and more than 30% of residents of Toledo's core areas said they had used transit in the past year. The majority of southern Wood County residents and residents of the most rural areas of Lucas County and the Monroe County townships said they had never used transit.

Only 0.5% of respondents said they use it daily to travel from home to work, and this rate rises to 8.3% of respondents who said they did not own cars, and 7.1% for residents of the core area of Toledo. Among those who had used transit in the past two years 3.3% said that they use it daily; about 21% use it weekly.

The reason most likely given (43.4%) for using transit was that the respondent had no car or used it when their car was in the shop. About 25% said they use it because it is convenient. Nearly 13% cited using the Mud Hens service.

Opinion About Transit

In terms of overall public opinion, a large number of respondents showed a lack of knowledge and indifference toward transit, with generally positive attitudes toward existing service and a low level of antipathy or negative stereotyping in evidence. As noted above, a high percentage of residents said they were aware of public transportation, and the majority said they think of TARTA or other bus services when they think of public transportation. Nearly one-third of

respondents had a positive image of transit, and only 5% said they saw it as having a negative image. Twenty-five percent said that public transit conjured up no image; nearly 40% said they had heard nothing positive about public transportation, and nearly 60% said they had heard nothing negative. The survey was conducted shortly after a news story broke involving some TARTA bus drivers who allegedly had criminal records, but less than 8 percent cited that news story as something negative heard about transit. Slightly more than 5% said that they had heard that transit had safety issues such as crime or rude kids riding the buses. When asked, most said they didn't know whether transit had improved in the past year, but less than 3% said it had gotten worse.

Transit Needs

Nearly 96% of respondents agreed that public transportation must be provided for the disabled, elderly, non-drivers, and others who need it, as well as for the general population. Large majorities of respondents agreed to this proposition, regardless of whether they live in areas served by transit or not. Large majorities also agreed that the buses often only have a few people on them, and that transit systems need to find more ways to provide better service to residents. The majority agreed that there should be service to the airport and the train and Greyhound bus stations, and that not enough information is provided on the services that already exist. There was also support for more community-based Dial-A-Ride services.

Given a list of new transit services that they might consider using, about 33% said that they were very likely to use a new service to the airport, rail station or Greyhound (of those, only the airport is not currently served by transit). About 22% said they would use park-and-ride services to downtown Toledo, and 17% said they would use services "to communities not now served by bus service." Point deviation services (something difficult to understand for those who haven't used it) and park-and-ride services to the Arrowhead area received among the lowest levels of interest.

When given the opportunity to identify other issues related to transit, the largest number of responses were related to providing services to outlying areas. Perhaps not surprisingly, residents of outlying areas were most likely to say this. This response was highest (exceeding 60%) in Bowling Green and southern Wood County, and in the 30%-40% range for other suburban areas. Less than 20% of inner-Toledo residents identified this as a problem. Only a small percentage of respondents identified other problems, with the highest being improvements to advertising and public information.

3.2 Brochures and Printed Materials

The study produced a number of printed materials to provide the public with information on the purpose and goals of the study, to elicit public comment, and to disseminate preliminary results of the study to the public.

An initial handout (a flier backed with a copy of the informational survey) was provided in advance of and at the first round of public meetings in May and June 2003. This handout form provided information on the purpose of the study and contact information including mailing, e-mail and Web addresses and telephone numbers for both English and Spanish-speaking respondents, and the locations and dates of the first round of public meetings. A Spanish-language version of this flier was also prepared. A poster was prepared advertising the initial

round of public meetings. Copies of this flier were distributed to agencies represented on the study committees, at events attended by TMACOG's Commuter Services division during spring 2003, and at the public meetings held in May and early June 2003.

A small single-fold brochure was produced to coincide with the summer events held July through September 2003. This brochure reported initial results of the public outreach and analysis conducted through June 2003, and provided information on the study purpose and contact information for those encountering the study for the first time. More than 1,000 copies were distributed at summer events and at events attended by TMACOG staff July through September 2003.

A third brochure, summarizing the preliminary findings of the study and soliciting further public comment, will be developed for the public meetings to be held towards the conclusion of the study.

3.3 Informational Survey

A one-page informational survey was distributed as part of the study. It ultimately had a number of purposes: to collect data from targeted populations, such as bus riders, clients of social service agencies, visitors to the project website, and attendees at public meetings; to disseminate information about the regional transit study; and to document the breadth of the public outreach effort that the study ultimately completed.

The survey was meant to be more informational than representative, and the study has consistently disclaimed statistical validity of the results. The sample is biased by the selection of populations that were provided with the opportunity to respond, and by self-selection bias within those populations. However, *the results provide a large volume of anecdotal evidence* of the opinions of various segments of the public in the TMACOG region. They also document the broad base of opinions that were represented in the study. The survey has provided a large cache of interesting insights, and will likely prove a treasure trove of data in future research on public transportation in the region.

The survey instrument is reproduced in **Appendix D**. Some slight variations occurred in the early versions of the survey instrument. The questions "do you consider public transportation to be a valuable or necessary community resource?" and "do you expect you or your family will have increased need for public transportation in the future?" were not included in some versions of the survey, and thus there are fewer responses to those questions. There was a Spanish language version of the survey distributed in the Spanish-speaking community and media outlets.

The survey sought to gather information about the interaction of the individual's travel habits and their personal situation, such as their type of work, age, and disability status. For transit users, it attempted to identify potential inadequacies in the transit system in the region and the potential effects on travelers of those inadequacies. It also provided ample opportunities for respondents to write in their individual responses and comments, and many did with gusto. The survey also collected origin-destination data for work trips, the early responses of which were considered in the estimate of unmet demand documented in **Chapter 6** of this report.

Distribution

More than 6,000 copies of the survey were printed. More than 2,000 were completed and returned. This high rate of return due in part to the large number completed on buses and at public events, where most were collected upon completion; and that copies distributed on buses and in the community were return-addressed and stamped. Distribution of surveys began in May and ran through August 2003. Surveys still were being received by TMACOG at the end of 2003.

Surveys were distributed and collected on buses and other transit services in the area. Members of the Study Committee and Executive Committee distributed them to clients and associates. Surveys also were distributed to social service agencies; were distributed and collected at public meetings, public events, and focus groups; were provided to stakeholders interviewed for the study, upon request; and were available on the project web site. The survey was published in paid advertisements in the *Toledo Blade*, the *Toledo Journal* and *El Tiempo*. Surveys also were distributed and collected by TMACOG staff at events sponsored or visited by the TMACOG staff throughout the area. On TARTA buses, the route number and block was marked on each survey collected on the bus. Surveys used color-coded paper and inks to allow for tracking of the origin of the survey (on-bus, at a public event, distributed by a social service agency, etc.).

Results

At the end of September 2003, approximately 1,930 surveys had been completed to a sufficient degree to allow some data analysis (a small number of surveys had been returned blank or contained no useful information). The response to each question or bank of questions on the survey is discussed individually below.

Do you consider public transportation to be a valuable or necessary community resource?

Nearly 97% of those who responded to the question (1,747) said yes. Only 57 responded negatively. This response shows wide recognition of the importance of public transit. Further, it indicates that there is little or no organized opposition to public transit in the region. This positive response indicates a future opportunity to build on the already generally positive image of transit in the region.

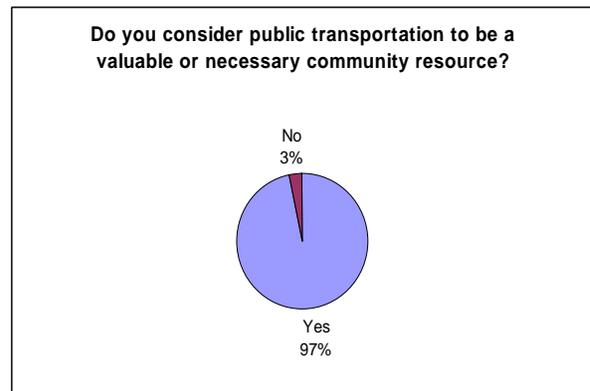


Figure 3-1

How often to you use public transportation?

Nearly half of the respondents to the survey said they never use transit, while nearly 30% said they use transit more than twice a week. Comparing this to the results of the telephone survey and the mode shares for transit demonstrates the unrepresentative nature of the survey—more than 80% of telephone survey respondents said they rarely, if ever, use public transit services. The over-sampling of the transit-using public is easily explained by the selection of audiences for the survey, but should be taken into account when considering the degree to which the results can be generalized to the public at large.

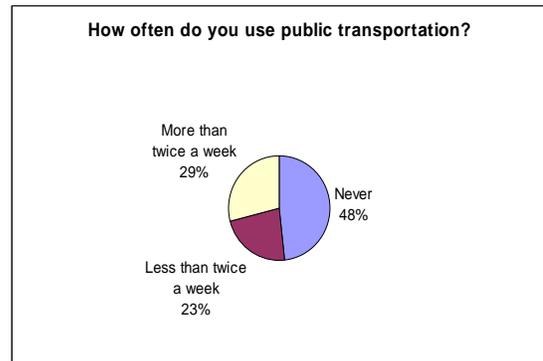


Figure 3-2

If you DO use public transportation, which services do you use?

This survey encouraged respondents to check all of the services that they use, rather than the one they use most. Of the 962 who responded to this question, nearly 800 said that they use TARTA fixed route service. A small number reported they use other TARTA services (TARPS, the Maumee and Perrysburg Call-a-Rides, the Mud Hens and Park-and-Ride services, Bedford Dial-a-Ride, BG Transit, UT and BGSU bus services). However, the responses for those services and for the non-TARTA services were all far below the response for TARTA bus service, in spite of the wide distribution of the surveys. It is possible that because TARTA bus was the first possible response to this question in the survey instrument, and because many are aware that TARTA operates some of the other services, it is possible that users of any of these services stopped once they had checked TARTA bus. Indeed, it is possible that users of the Bedford Call-a-Ride, the university services and so forth may believe that they are using TARTA, or do not know for sure that they are not. These distinctions may be obscure to members of the public, and TARTA is by far the region's best-known and most advertised service, as shown by the results of the telephone survey.

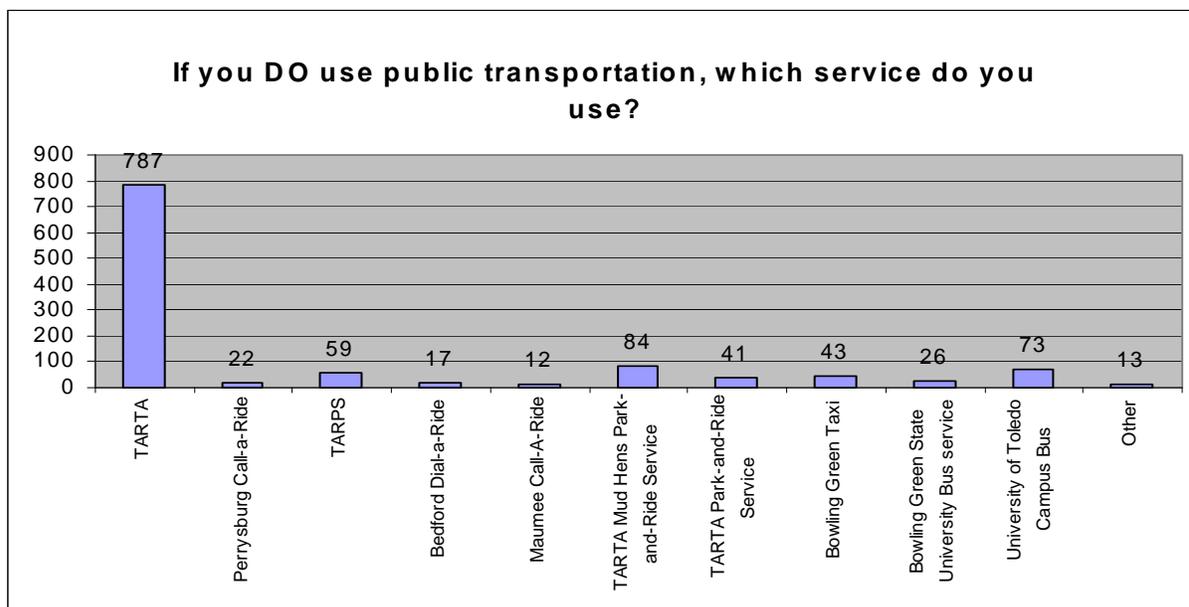


Figure 3-3

If you NEVER use public transportation, why not?

Approximately 570 respondents provided reasons why they never use transit. Multiple answers were permitted, and many provided more than one response. Quite a few transit users answered this question, perhaps indicating why they do not use transit more often.

The largest group of responses to this question came in the “other” category, which allowed the respondent to write in a reason for not using transit. By far the most responses to the question were some form of “I own a car,” or have access to an automobile, apparently expressing an opinion that car ownership eliminates all need to use public transportation. Those aged 65 and over made up the largest number of respondents to the survey. Nonetheless, it is clear from the comments that for many citizens, using transit is an option for people too poor or too infirm to drive or for those who have exhausted other options, including finding a friend or relative to drive them or just staying home.

Where do you go when using public transportation?

This question, aimed at transit users, was not meant to receive one exclusive response, and many respondents checked multiple categories. “Work” and “shopping” essentially were tied as the top category, with trips related to medical services close behind. Education and visiting also received hundreds of responses. None of the responses was selected by a majority of transit users. This follows the results of the phone survey and other indications in the study that suggest that work trips are not a large majority of transit trips in the TMACOG area. Hundreds also checked the category “other,” and wrote in responses. Mud Hens games, the library, church, entertainment events, and the art museum lead the written-in “other” events.

Figure 3-4
If you NEVER use public transportation, why not?

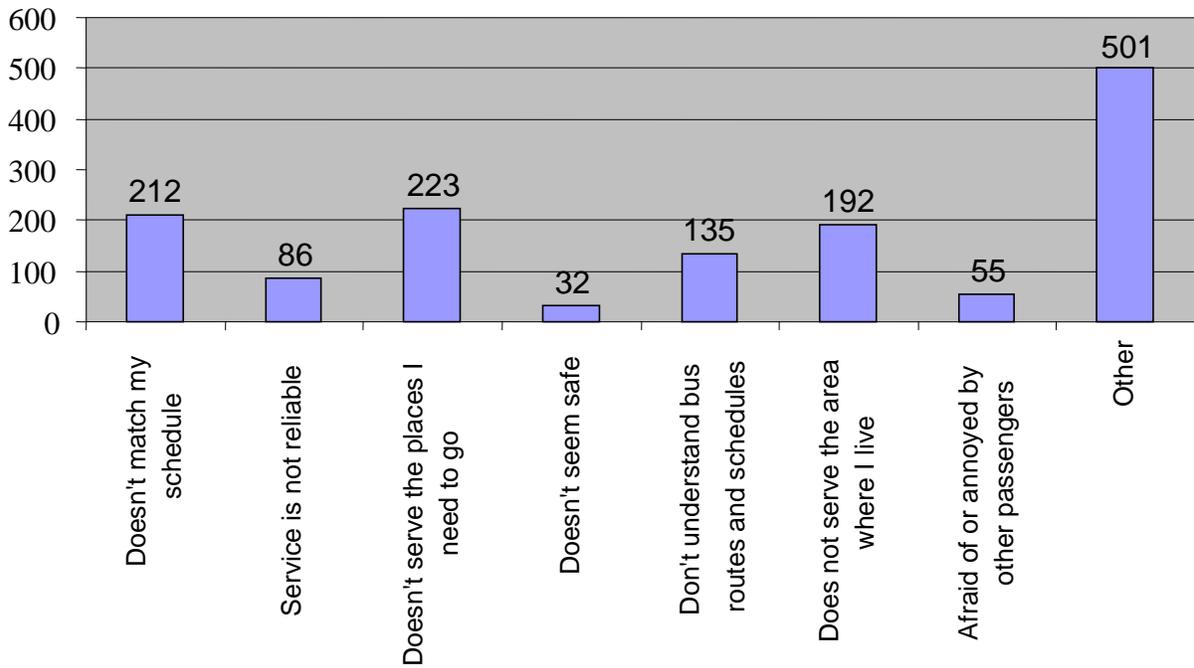
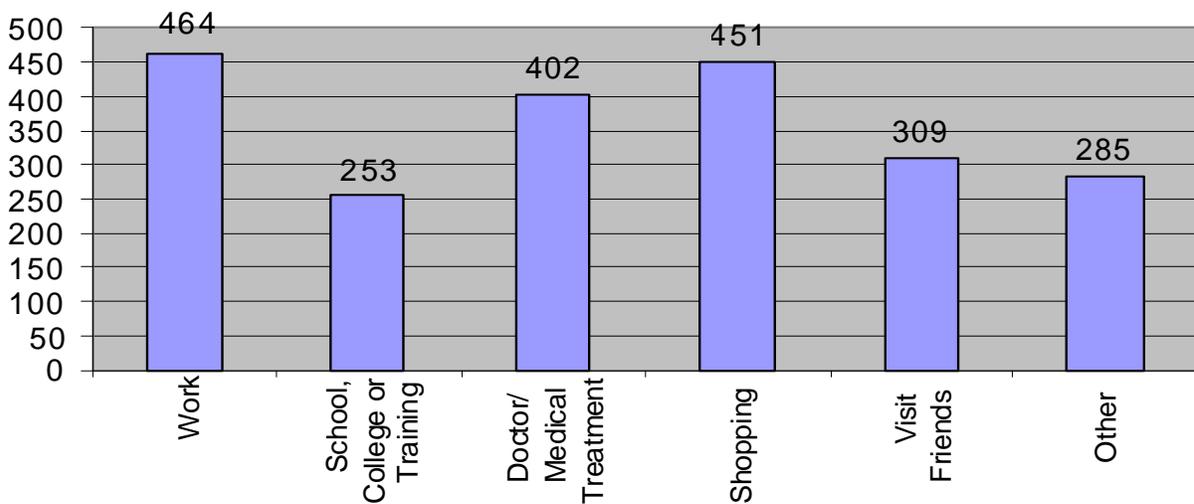


Figure 3-5 **Where do you go when using public transportation?**



Do you ever need or want to go anywhere where public transit doesn't go?

Of those who answered this question (about half of all respondents) more than 50% said that they could not go to all the places they needed or wanted to go using existing transit. Many of those who responded named places they would like to go. Oregon, and various places in Oregon (such as St. Charles Hospital and the Wal-Mart on Navarre Avenue) were the most popular unserved destinations. Locations in the Airport Highway corridor (Holland and Springfield Township, especially Spring Meadows Mall) and locations in Monroe County were among other popular, inaccessible locations.

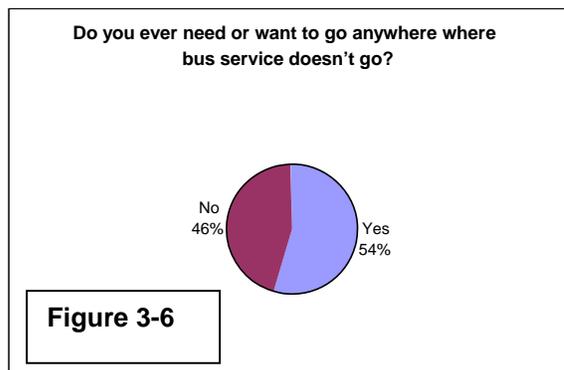


Figure 3-6

Do you have use of a car?

Sixty percent said they have access to an automobile. This is far lower than the results of the telephone survey, which indicated that more than 90% of respondents had access to a vehicle, and also below census reports on car ownership rates in the region. This again illustrates that transit users made up a disproportionate percentage of the respondents to the informational survey.

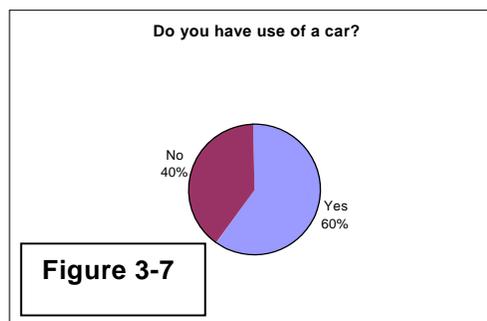
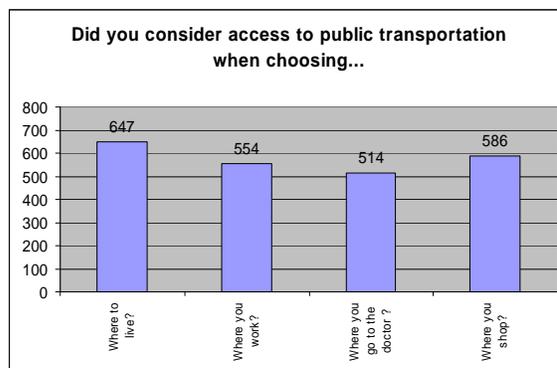


Figure 3-7

Did you consider access to public transportation when choosing... (home, job, doctor, shopping location)?

One of the more surprising results of the informational survey is the large number of respondents who said that they chose their home, their job, their doctor and where they shop based, at least in part, on the availability of public transit. Nearly one-third of respondents overall, and a high proportion of those who use transit, said they chose their home based on availability of transit. More than one fourth of respondents chose their job, their doctor, and where they shop, based on transit availability. If these results can be assumed to represent the behavior of transit users in the region, the economic and demographic implications of transit availability are significant to development patterns in the region.

Figure 3-8



There is evidence elsewhere in the study that the geographic and temporal availability of transit distorts the region's job market, preventing potential workers, particularly lower-skilled, lower-income workers, from gaining access to jobs, and preventing employers from gaining access to such workers. The response to this question suggests that availability of transit service also affects markets for residences and services as well. However, more detailed study would be required to confirm this connection between transit service and residential location.

Do your work start and end times change depending on the day of the week or from week to week?

The market analysis prepared for the study (**Chapter 4**) shows that the various types of service-sector jobs are a large and growing element of the TMACOG region's economy. Such jobs are more likely to have irregular work hours and shifts than are traditional manufacturing and governmental jobs. Further evidence of this pattern is found in the response to this question, asking whether the respondent works a steady work schedule. About two-thirds of the respondents to the survey responded to this question (many of the rest probably are retired or otherwise not in the workforce). About half indicated their work start or end times change. Such schedules suggest the need for longer hours of service and more frequent service for public transit to serve the varying work patterns of today's—and tomorrow's—workforce.



Figure 3-9

What time of day do you start work? What time of day do you finish?

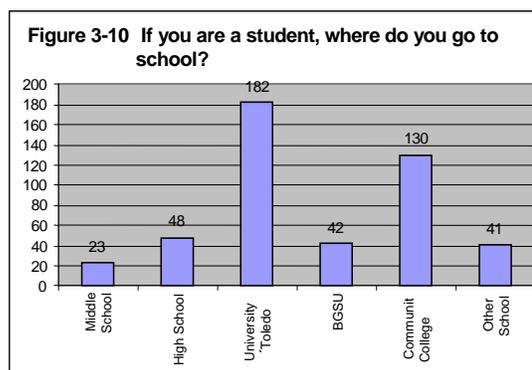
About two-thirds of the respondents to the survey completed this question. Processing of the written-in responses will be completed when the receipt of surveys closes. However, the responses are sufficiently various to confirm the finding from the question above that start and end times for work hours are no longer uniform.

What type of work do you do?

More than 1,700 surveys, or more than 85% of those received, had this question answered. Processing of the written-in responses will be completed when the receipt of surveys closes. However, early indications are that retirees and office and clerical workers (especially government workers) made up the largest groups of respondents. High numbers were also found from manufacturing employment and non-employed persons, ranging from homemakers to those actively seeking work.

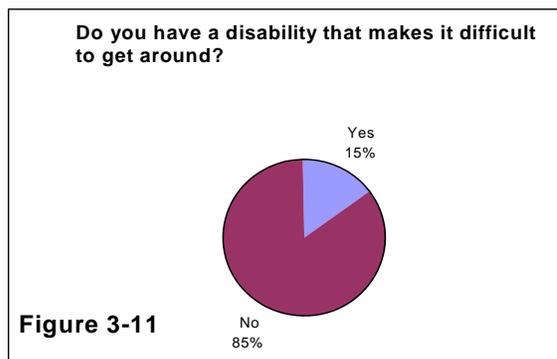
If you are a student, where do you go to school?

Students make up an important segment of the market for public transportation services, and are well represented in the sample of surveys received. The largest group of responses came from UT students, nearly 200 of whom completed the survey. Community college students also submitted more than 100 surveys. High school and junior high students, who are a large component of the transit market, are relatively under-represented in the survey.



What is the ZIP code where you live? What is the ZIP code where you work?

This question was placed mainly to derive origin-destination data for the estimate of unmet demand (see **Chapter 6**), but provided some useful information in its own right, particularly in confirming the broad coverage of the survey. About 90% of respondents answered the question regarding home ZIP code (however, not all the responses were usable, or provided in ZIP code form). About half of the respondents provided about their work location, and those responses were even more seldom provided in ZIP code form.



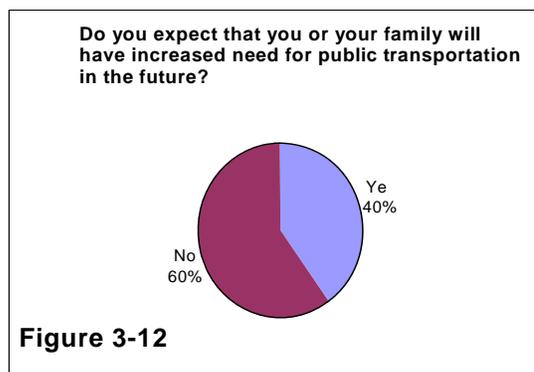
Based on analysis of the ZIP code data, the majority of surveys (more than 60%) were received from Toledo city residents. Residents of the cities of Oregon, Bowling Green, and both the City of Sylvania and Sylvania Township, were also well represented. Dozens of other localities were represented in the sample by one or more surveys.

Do you have a disability that makes it difficult to get around?

About 15% of respondents said they had a disability, which is approximately consistent with the percent of disabled in the population at large, and perhaps lower than would have been expected given the distribution of the surveys at social service agencies and on buses.

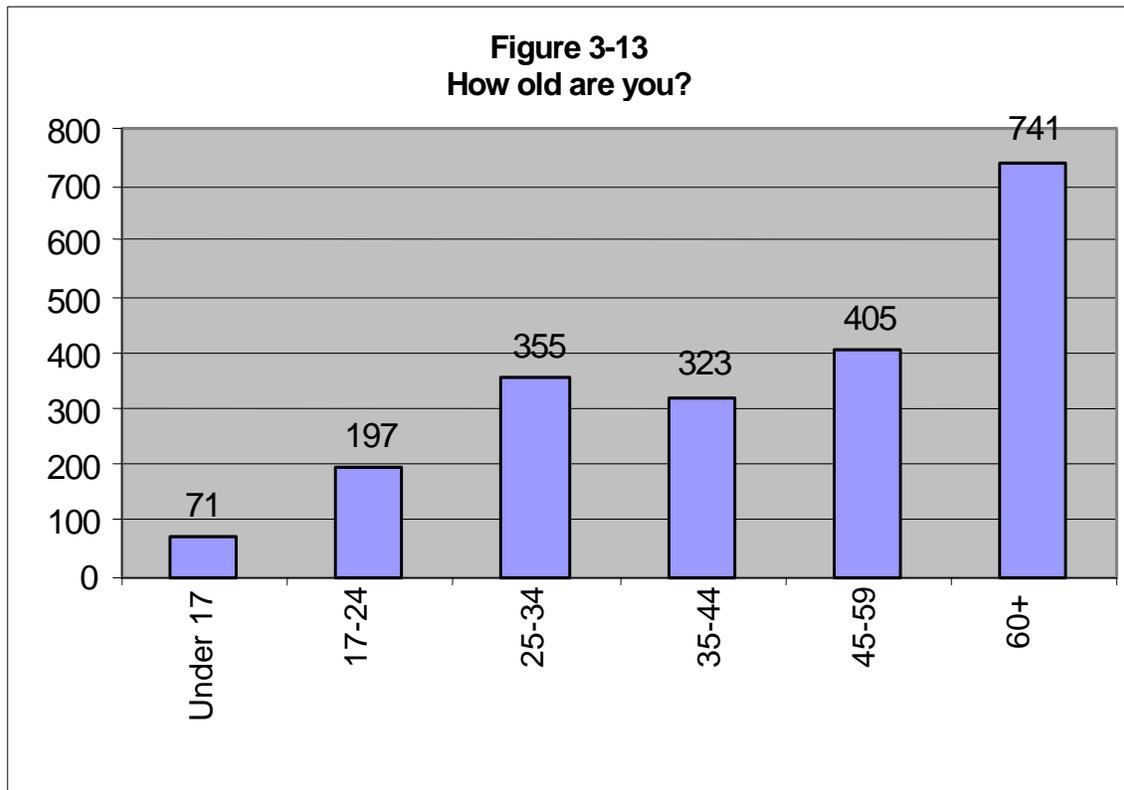
Do you expect that you or your family will have increased need for public transportation in the future?

About 40% of the respondents predicted more need for public transportation in the future. Given the large number of older people responding to the survey, this response perhaps indicates the fear that many older people have of losing their independence when they become too old to drive safely.



How old are you?

Perhaps given the distribution pattern of the surveys, it is not surprising that the largest groups of respondents were older people. The largest group, more than one-third of respondents, were persons 60 or over. Roughly equal numbers of persons 25 to 34 or 45 to 59 were the second largest groups. Those under 16 were under-represented in the survey given their numbers on board the buses for daily school trips.



Comments

A wide range of comments were received on the survey, ranging from praise and condemnation of the service to highly specific recommendations for route and schedule changes. The surveys will be fully processed when the survey is closed, and will be reproduced in the appendices.

3.4 Public Meetings

i. Round 1 Public Meetings, Spring 2003

The initial round of public meetings was conducted in May and early June 2003. The meetings were held at five locations throughout the region on four separate days.

- Perrysburg Township, May 20, 2003
- Oregon, May 21, 2003
- Bedford Township, May 22, 2003
- Downtown Toledo, June 4, 2003
- Springfield Township, June 4, 2003

The public meetings were structured as Stakeholder Charrettes (for invited major stakeholders and public officials) followed by meetings for the general public. Both types of meetings gave participants the opportunity to review the materials, hear a presentation, and provide their comments. Public times for the meetings were announced in paid newspaper advertisements, on posters and brochures, and with press releases to major and regional news outlets. The

press releases produced some news coverage for the initial public meetings, particularly in regional newspapers.

Turnout for most of the meetings was lighter than expected for both the stakeholder and public portions of the meetings. However, informed and spirited discussion was recorded at all the meetings. Comments recorded at the meetings are provided in **Appendix B**.

ii. Public Outreach Events, Summer 2003

The study conducted public outreach events at three locations in summer, 2003. Two Saturday mornings in July, TMACOG and study team staff were on hand to distribute materials, collect surveys and provide information at various locations in the study area. Displays were held at the Andersons stores in west Toledo and in Perrysburg Township on two Saturday mornings in July 2003. A display was in place, and staffed part-time, at the Lucas County Fair in Maumee in August 2003. The study collected hundreds of surveys and distributed project brochures at these events, collecting input from suburban and rural populations unlikely to be frequent users of the existing transit system.

iii. Round 2 Public Meetings, Spring 2004

A second round of formal public meetings was held in April 2004. The meetings were held at four locations over two days. Meetings were held on the following dates at the following locations:

- South Toledo, April 21, 2004
- Oregon, April 21, 2004
- Downtown Toledo, April 22, 2004
- Sylvania, April 22, 2004.

Public officials and members of the general public were invited to review displays and were provided with a presentation on the study findings and proposed recommendations before an open question and answer period. Turnout again was relatively light, though higher than in the initial round of meetings, particularly downtown and in Oregon. A number of useful comments which confirmed and clarified many of the study recommendations were received at the meetings. Comments recorded at the meetings are provided in **Appendix B**.

3.5 Focus Groups

The study conducted seven focus groups to provide input from targeted groups in the community. Focus groups are long-form interviews with groups of four to fifteen persons. In the focus group format, participants can read and handle materials about the subject, and can be asked follow-up questions and discuss issues amongst themselves, unlike one-on-one interviews.

Focus groups were held at sites convenient to the group being interviewed. The consultant team provided lunch or a snack and drinks. Interviews usually lasted one hour or more. Two or three consultants, sometimes supplemented by TMACOG staff, attended each focus group interview.

The focus groups were conducted with:

- The Ability Center of Greater Toledo, in Sylvania, representing the disabled community
- Senior Center, Inc., in the Old West End Toledo, representing the elderly
- Instructors at Lott Industries, in west Toledo, representing those serving the developmentally disabled community.
- A group of Monroe County officials and stakeholders representing the Michigan portion of the study area, at Ort Tool & Die, in Bedford Township, Michigan
- Representatives of the Hispanic community, at Aurora Gonzalez Family Resource Center in south Toledo
- South YMCA on Anthony Wayne Trail in south Toledo, representing non-transit users
- Lucas Metropolitan Housing Authority (LMHA) in Central Toledo, representing public housing residents

Following is a summary of comments heard at these meetings. Full notes on the focus group meetings can be found in **Appendix J**.

The Ability Center of Greater Toledo

The disabled clients of the Ability Center had many complaints about the region's transit system and specifically TARTA and TARPS operators, and compared the region's services unfavorably to those in larger cities. They complained of rude behavior and other inconveniences such as broken lifts, missed trips, and long waits between buses. They noted that in many areas, sidewalks lack curb ramps and other improvements to make the buses accessible to those in wheelchairs or who use other mobility aids, and plowed snow is often a problem in winter. They suggested large print and easier-to-understand schedules, more cross-town routes to cut travel time between non-downtown locations, more information at bus stops and "talking stop" technology, and recommend reform and regulation of the taxi system.

Senior Center

The elderly clients of this local center were thankful for TARTA and TARPS as, without them, they would be housebound were they to lose their licenses (several did not drive). The seniors also complained of rude drivers, though not as vehemently as the disabled group did. Like the disabled, they also complained of malfunctions on the buses and broken lifts, and of the lack of and poor condition of sidewalks in many parts of the region. They suggested route extensions such as to St. Charles and Bay Park Hospitals in Oregon, and to Bowling Green. The participants also said that they would like more Sunday service.

Lott Industries (Lucas Mental Retardation/Developmental Disabilities Board)

This focus group included instructors and staff of the MRDD board, which helps mentally retarded and developmentally disabled persons in the county. The group had praise for TARTA, particularly TARTA drivers, and feel that TARTA does a good job with the tools they have with which to work. However, the group complained of long travel times (some clients must ride TARTA two hours each way to work, and said that this sometimes affected the job performance of these developmentally disabled workers). They also were concerned that destinations such as Oregon and Spring Meadows can't be reached. The participants said that the refusal of some communities to accept TARTA amounts to "segregation" that should not be tolerated. The MRDD board considered moving its offices to Oregon but did not do so because it had no bus service. As a result of some of these problems, MRDD spends about \$100,000 per year on taxis to transport clients. In fact, less than 20% of MRDD passengers use TARTA, while the majority are transported by the MRDD board's fleet of 57 buses, fleet of vans, and taxi services. About 1,000 MRDD clients use the MRDD transportation system. They also admitted that many of

their clients who use TARPS today should be using TARTA and that this is in the process of being changed.

The participants cited a number of safety concerns with TARTA, including passengers riding at night, transferring in the downtown area, and riding buses at the same time as school students. They said that their clients effectively are precluded from working in evenings due to safety concerns. The MRDD instructors disliked the new TARPS reservation system, which they said is confusing and inconvenient, and seems to be more convenient for TARPS drivers than for clients. The focus group participants had a number of suggestions for improving transit service for the benefit of their clients. These include: satellite centers for TARPS users who need rides within a designated area; more special buses for student passengers (to eliminate students from regular bus trips) and greater coordination of the various bus systems in the region, including the MRDD system, to provide better service to disabled clients.

The participants had mostly negative comments regarding TARPS drivers, and gave very negative feedback to initiatives such as commuter rail and downtown trolley service. They said that these initiatives do nothing for their clients, and that providing more frequent service and routes to new areas should be the priority over rail services.

Ort Tool and Die (Monroe County)

This focus group included a number of Monroe County officials, including economic development and school officials. They pointed out that they have a property tax millage for transit now, used to fund the Bedford Dial-a-Ride service, which interfaces with TARTA. They said there are a number of passengers being served, including the elderly, young people, disabled, and non-drivers, but that residents would like earlier and later service, and earlier and later connections to TARTA. The service is running at peak capacity, and a second bus would generate more riders. If there were to be fixed route service, the group suggested north-south through the area, and possibly a park-and-ride lot for commuters to Toledo at Miracle Mile shopping center and connections to downtown. They said that there are some 200 Michigan Works welfare-to-work clients in the southern part of Monroe County. The biggest problem these clients face in finding jobs is transportation, and there are some vans, provided by SMART, that take them to job sites throughout the county. One participant suggested that service is needed from Bedford to Monroe. The group agreed that, to most people in the area, police and fire service is a higher priority than improved transit service.

Hispanic/Latino Community

The concerns of the Latino community as represented in the focus group cut across the concerns of the other groups ranging from non-users to the disabled. Several said they needed more information about the service and that the schedules and other materials were hard to read and use, and complained that there are no materials in Spanish. They suggested training in Spanish and hiring of a more diverse, Spanish-speaking staff for the transit agency. They complained about lack of night service and long travel times for cross town trips and described the effects of these kinds of delays on new workers, those studying for GED programs, and clients of social service agencies. They said that the times during which TARTA runs has some effect on scheduling and attendance at social service programs in the evening. Often, staff of social service agencies transport clients for evening and weekend programs. There was some discussion of tying the transit service in the south Toledo area into the community and developing a unique identity for the buses operating in that area. Toledo City Councilman Louis Escobar, one of the group participants, suggested that the service in Toledo compares

unfavorably to service in other cities and countries, and suggested the development of a “Jewels of Toledo” route to serve the Zoo, Botanical Gardens and Museum.

South YMCA (Non-Transit Users)

These self-professed non-users were not hostile to using public transportation but were generally unfamiliar with the service. Some had past experience riding the local bus service (TARTA) or using transit service in other areas, or have employees or clients of their programs who use it. They felt they didn’t have enough information about the service to use it comfortably. The participants recommended that TARTA overhaul its schedules and do more advertising and public awareness marketing. Those familiar with the existing service said buses come too infrequently and many of the employees and clients had long waits if they missed their bus. Some pointed out that the stop is too far from the YMCA building and service is too infrequent on the route serving Anthony Wayne Trail. Several participants suggested raising the fare to \$1 to raise more funds, and suggested an alliance between TARTA and the Y to transport children for Y programs (the Y has a fleet of 30 vans used now to take children to Y programs). Other suggestions included improvements to the taxi system. Participants agreed that the taxis are dirty, expensive, and hard to find. They also recommended cleaning up the “scary” Greyhound station. The participants thought that the Mud Hens service is a good idea and liked the idea of streetcars in the downtown area, but questioned what people would do once they got downtown, since there is no shopping there anymore.

Lucas Metropolitan Housing Authority

The LMHA focus group was very large—more than 40 LMHA employees and public housing residents who were divided into two groups. The session was conducted at LMHA’s facilities on Nebraska Avenue in Toledo. Many were frequent transit users, and the opinions expressed were as varied as the groups were large. Transit users were generally pleased with the drivers, and said that the drivers usually were kind and helpful. Many comments were similar to those expressed in other forums, such as the need to get to St. Charles Hospital, Spring Meadows Shopping Center, and other employment and shopping locations not served by the transit system today. A job placement coordinator said clients are unable to get jobs at UPS, Honeybaked and Hickory Farms due to lack of service. One participant was happy to learn that a bus does serve the Arrowhead development. Many residents, especially the elderly, avoid the buses in the morning and after school because of the kids abusing the elderly residents. They also said young residents had destroyed the bus stop benches in the neighborhood. The participants recommended using smaller buses, a simpler bus schedule (running buses on the hour and half hour), more frequent service, neighborhood Dial-A-Ride service, and training for LMHA staff to learn how to use the system, so they can pass on this knowledge to residents. Some complained of the fare, and they were very resistant to the idea of increasing taxes to pay for better service.

3.6 Stakeholder Interviews

In June through September 2003 the study team contacted and asked to interview more than 60 stakeholders—regional leaders in government, business, education and not-for-profit communities—whose organizations were not already represented on the project Executive or Study committees. The purpose of these interviews was to identify these leaders’ opinions and ideas about the future of public transportation in the TMACOG region. These meetings provided the perspective of governmental, business, and community leaders and allowed the study team to question and follow-up on comments made by the interviewees. Interviews were conducted in person or by telephone with the following business and community stakeholders in

the TMACOG region. The meetings were attended and conducted by consultant team staff, sometimes accompanied by TMACOG staff.

Fifteen community leaders were available for telephone or in-person interviews in that time period.

- Jim Carter, Wood County Commissioner
- Dr. David Nixon, Monroe County Community College
- Don Jakeway, Regional Growth Partnership
- Betty Goranson, The Andersons
- Wayman Usher and Brian Bilger, Lucas County Economic Development
- Becca Ferguson, Human Resources, Bowling Green State University (BGSU)
- Steve Nathanson, Mercy Health Partners
- Jodi Rosendale, Cooper Automotive
- Dan Hauenstein, Owens Community College
- Diana LaBiche, Toledo Urban League
- Phil Rudolph, Rudolph-Libbe, and Tom Blaha, Wood County Economic Development
- Mark V'Soske, Toledo Area Chamber of Commerce
- Colleen Sullivan, Hickory Farms
- Scott Schifferly, Wendy's Restaurants
- Althea Williams, National Family Opinion (NFO)

TMACOG and the study team wish to thank these community leaders for generously taking the time to meet with the study team and provide us with their valuable opinions and information.

Generally, the results of the interviews with stakeholders can be summarized as follows:

- Economic development and government officials and the Chamber of Commerce think there would be a benefit to having a truly regional public transit system, more transit service to suburban employment areas, and perhaps connections to the Toledo Express and Detroit Metropolitan Airports, among other new or improved services. Some expressed the need for better marketing of transit services to make it seem more appealing to moderate and higher-income workers. However, the businesses they serve do not cite deficiencies in public transit as a problem for their businesses, and the officials do not see such deficiencies as being among the region's economic development challenges.
- Employers of moderate or higher-income workers, including industrial and warehouse workers, see little need for improvements to public transit service. Some noted labor shortages during the late 1990s, but said that the demand for workers has decreased in recent years, and these employers have little trouble filling well-paying jobs.
- Employers of lower-paid, part-time and seasonal workers, particularly in places not now served by public transit, said that lack of public transit is often a major challenge in getting

and keeping workers. These employers expressed the desire for public transit service to their areas, but stop short of offering to help subsidize such service, expressing that providing transportation is a governmental function.

- Higher education officials would like local governments to take on more of the cost of public transportation, a cost that many of the higher education entities have taken upon themselves to provide transportation for their students. They would also like more transit service and better transit connections. The exception to this is Monroe County Community College, which sees little, if any, need for public transit service.

The comments of each interviewee are briefly summarized below. More complete documentation of each interview is provided in **Appendix D**.

Jim Carter, Wood County Commissioner

Mr. Carter sees no particular need for increased transit service in Wood County beyond the existing BG Transit (subsidized taxi) service in the City of Bowling Green. He notes a number of public agencies receive tax levy funding to provide services (including transportation) for the elderly and people with various disabilities. He believes these agencies should be held accountable to provide these services before additional services are developed. As a County Commissioner, he does not recall receiving any requests for public transit. Mr. Carter said he believes people should not expect the government to solve all their problems for them, and those who need transportation can often rely on friends, family, and charity organizations to provide for their needs, particularly in rural areas like much of Wood County.

Dr. David Nixon, Monroe County Community College (MCCC)

MCCC is a rapidly growing institution, and its Whitman Center campus, which is located in the TMACOG region and the regional study project study area, is the fastest growing element of it. MCCC and the Whitman Center particularly has some enrollment from Ohio, and MCCC also has an agreement with Owens Community College in Perrysburg Township that allows students at each institution to take classes at the other. These are indications that transit service to the Toledo area could be helpful to MCCC. Dr. Nixon also believes that transit service, both from Toledo and from Monroe, could be helpful in the College's outreach to lower-income students. He believes the community is growing and transit could be required to support more economic growth. He would be supportive of transit service to Whitman Center from the Toledo area and would consider allowing a park-and-ride facility to be developed on the Whitman Center site if the finances could be worked out. He said he thought expansion of transit could be helpful to him in expanding the College's student base.

Don Jakeway, Toledo Regional Growth Partnership/Ohio Transportation Review Advisory Council (TRAC)

Mr. Jakeway is both an economic development official with local and statewide experience and a member of the Ohio Department of Transportation's Transportation Review Advisory Council (TRAC), which advises the agency on transportation priority projects in the state. He said that service connecting the Toledo Express and Detroit Airports to downtown Toledo would be an economic benefit to the region. He also expressed interest in the plans for high-speed rail service in the region and connecting the airports, and in the downtown transit services being discussed as part of the Regional Core Circulator Study. He also suggested marketing needs to be increased to improve the image of public transit among moderate and higher income people in the region. Employers have not told him that public transportation is an issue in their businesses or in regional competitiveness. He believes transportation generally is a priority at

the state level, evidence of which includes the recent passage of the 2 cents per gallon increase in the gasoline tax. However, he said public transit would need to compete with other transportation projects for priority.

Betty Goranson, The Andersons

Mrs. Goranson said some Andersons sites have access to public transit service, others don't. Some employees use transit to reach stores where there is service, but they have no particular problem finding workers for facilities that are not served by transit. She believes the Andersons has little trouble recruiting because the business is established and well known in the area, and because the pay is relatively high for the skill level involved, including for part-time and seasonal work. She said during the labor shortage of the late 1990s, they were in discussions with Hickory Farms to develop a cooperative transportation service to bring lower-income and disabled workers to their sites. They also worked with Goodwill Industries to identify candidates for jobs and hired more disabled workers. However, since 2000 the labor shortage has eased and these plans have been abandoned. Mrs. Goranson said most of their problems related to transportation are due to auto traffic around their facilities, particularly regarding traffic in the Arrowhead Park area and at the freeway and Turnpike interchanges in that area.

Wayman Usher and Brian Bilger, Lucas County Economic Development

Mr. Usher and Mr. Bilger said their priority for public transportation is for more and improved service to Arrowhead Park, service to Toledo Express Airport, and to growing retail and commercial areas in the Airport Highway area and elsewhere in the county. They pointed out that Arrowhead Park now houses more jobs than downtown Toledo, and yet has very little public transit service. They said lack of public transit service has hurt the area's opportunities to attract manufacturing employment, and at least one potential investment in a manufacturing facility in a suburban area was lost because the area was not served by public transit. In spite of the lack of transit, they said the market for commercial and manufacturing development remains "greenfield" suburban sites, and businesses need to be educated about the amenities of locating in cities. They said ideally TARTA would serve the whole county, but finding an equitable funding mechanism will be difficult.

Becca Ferguson, Human Resources, Bowling Green State University

Mrs. Ferguson is an enthusiastic advocate for public transportation who believes a transit connection to Toledo would be a great advantage for BGSU. She said the lack of public transportation services between Bowling Green and Toledo is a bar to recruitment of workers and students for the university and makes it difficult for the university to meet its diversity goals in terms of both students and staff. They have also needed service for employees and students who can't drive, some temporarily (because of license suspension). She said BGSU might consider developing a charter service, or flexing parking pass money to allow students to pay for public transit service. However, her preference would be for Wood County or other governmental entities to provide transit, as it is a governmental responsibility.

Steve Nathanson, Mercy Health Partners

Mr. Nathanson represents Mercy Health Partners, a health care organization that owns several medical facilities in Toledo, including St. Charles Hospital in Oregon. Mr. Nathanson is also a Toledo resident and community activist. He said unequivocally that St. Charles Hospital needs bus service, and the region needs bus service to St. Charles Hospital. Many East Toledo residents who live only a short distance from St. Charles Hospital travel across town to St. Vincent's, just west of downtown Toledo, because St. Charles Hospital is not served by transit. He said service for patients (for both in-patient and out-patient services) and for visitors is just

as important as access for employees. He pointed out that other facilities in the Oregon-Northwood area, including Bay Park Hospital, Little Sisters nursing home, and some public housing facilities in Oregon would benefit from public transit service. He noted the commercial area on Navarre Avenue (SR 2) has become too big and too regionally important since the development of the Wal-Mart in that area for Oregon to remain outside the public transit service area.

Jodi Rosendale, Cooper Automotive, Bowling Green

Mrs. Rosendale is human resources manager for this major industrial employer, located in a suburban commercial area in Bowling Green. She said employees of the firm generally drive and recruitment has not been hurt by lack of regional public transit service. She said the only instances of employees being unable to drive themselves were when they were injured or had their licenses suspended, but this was very rare. She said the plant has few disabled workers. Accommodating disabled persons for the manufacturing jobs would be difficult as the work is physically demanding and—because employees are paid “piece work”—production speeds must be very high. She said HR professionals in the Bowling Green area meet monthly for a “round table” discussion of issues facing them, and transportation issues occasionally come up. However, she said she didn’t recall any specific discussions related to public transportation.

Dan Hauenstein, Owens Community College

Mr. Hauenstein said the bus service for which Owens Community College contracts with TARTA helps them serve students and lessens the perceived distance between Toledo and the campus, located in Perrysburg Township. The charter service provides both the connection to Toledo and provides circulation service within the campus for students who park in remote areas or need rides between classes. This circulation service is supplemented by vans provided by the college. He says the charter service is used by both employees and students and has provided recruitment benefits to the college. He said the college has doubled the number of students it serves in ten years and projects continued rapid growth, and the need for more public transit is likely to increase in the future. He supports Wood County providing public transit from other areas of the county, noting that demand is likely to increase and lower income students would greatly benefit from such a service.

Diana LaBiche, Toledo Area Urban League

Ms. LaBiche, Director of the Youthbuild program, has worked with Job Placement candidates. Many of these clients are recently released from prison and often work irregular and late shifts. Some have lost job opportunities due to lack of transit. She said the area now un-served with the greatest need is Perrysburg Township—not Oregon. She said some clients use the Owens bus but there is need for more service to Owens and to other places in that area. She often provides bus tokens to people who need transportation, and believes there should be a voucher program for people who get new jobs so they can ride free until the first time they get paid. She opined that the community would support higher taxes for transit if they believed their needs would be met by expansions in service.

Maggie Thurber, Lucas County Commissioner

Mrs. Thurber was most concerned about the efficiency of public transportation, noting that it should be as self-sufficient and efficient as possible. She said many people believe there should be good quality transit, but it is questionable that they are willing to pay for it. She said the scheduled service is difficult for people’s busy schedules today, especially for moms. She said she supported the Mud Hens service so long as it continues to be used, and pointed out that the

service is used because people don't like to pay to park downtown. Constituents have not approached her to complain of the lack of transit service, but staff at Job & Family Services has reported that lack of transportation to the suburbs is a problem for many of their clients.

Phil Rudolph, Rudolph-Libbe, and Tom Blaha, Wood County Economic Development

Mr. Rudolph and Mr. Blaha are involved in the development of a major industrial park on SR 795 in Wood County. They believe that public transit service would be a benefit to that park to bring industrial workers from throughout the region. However, their transportation focus is on improvements to local roads surrounding the industrial park to provide better access to the park for autos and trucks.

Mark V'Soske, Toledo Regional Chamber of Commerce

Mr. V'Soske sees some value in the idea of having a countywide or region-wide transit service, but has not heard complaints about the quality or lack of transit in the region from local businesses. He noted that driving is the normal mode in this region and using transit can be difficult given our complicated lifestyles. He supports good connections to the airport, and says there will be demand for better service to Arrowhead, Route 20 in Perrysburg Township, Bedford-Temperance area, and Oregon. He supports the proposed streetcar service in downtown Toledo, saying it will add a "new dimension" to downtown. He says the extension of the bus loop one block south to Monroe will support the Warehouse District developments. He is skeptical, however, that a tax referendum for transit could be passed in the present down economy.

Colleen Sullivan, Hickory Farms

Hickory Farms has several locations in the Toledo area and, as a high proportion of their products are sold at Christmas, their work is highly seasonal. Between June and November, the distribution center runs three shifts of workers, and from October to December there are nearly 1,000 workers on staff throughout the region. During the first half of the year, employment is around 100. They use an employment agency, Job One, to provide workers during their busy season. Mrs. Sullivan said some people working the third shift have some problems with transportation, and in the past TARTA has put on an additional bus during Hickory Farms' peak period to serve third shift workers. She said that, in the morning, the bus serving the distribution facility gets workers there either one hour early or 15 minutes late, and some workers who miss it arrive late. She said more service late and early, and more frequent service, would be helpful. She suggested that TARTA enter into discussions with Job One regarding providing the special bus service for the third shift. She said they have no trouble filling all the jobs, but do occasionally have workers blaming the bus for their late arrivals. There are many fewer cars in the lot than there are employees, so she suspects many use the bus.

Scott Schifferly, Wendy's Restaurants

Mr. Schifferly, a representative of the largest Wendy's franchisee in Northwest Ohio, said he has three locations not served, including one in the Spring Meadows Shopping Center area and one in Perrysburg Township at Buck Road near I-75. The bus service at his locations in Arrowhead and in Sylvania is also not very good. He has trouble attracting and maintaining staff at these locations due to lack of transportation, and says some employees walk long distances from the bus stop to the Spring Meadows and Arrowhead locations. He asked why the bus from Owens College couldn't be extended to the Buck Road area, a fast growing area, and suggested Owens should help its students get to jobs located in this area. He says he has no trouble filling and maintaining staff positions at his locations where there is good bus service, such as the Monroe Street location. He is a Perrysburg resident and very supportive of the Dial-A-Ride

service, and believes this should be implemented in other areas. He noted that in these times of high unemployment it is important that the bus service get people to jobs.

Althea Williams, National Family Opinion (NFO)

According to Mrs. Williams, Director of Human Resources for this large, Toledo-based market research firm, NFO has difficulties in recruiting lower-paid workers for their operations as a result of the lack of public transportation in Northwood. Some employees, particularly those of temp agencies, have problems with reliability of transportation, while others lack their own vehicles. NFO supplements its staff at busy times with extra staff from temporary employment agencies. Late or no-show employees are a significant problem for them, and NFO sees the lack of public transportation as a significant problem for recruiting and for employees getting to work on time. They also have actively recruited disabled persons and have had difficulties with transportation for them. NFO has contacted local officials, with little success. They have considered sharing in the cost of the bus route that nearby Owens Community College has chartered but found it to be too expensive. They are considering developing their own service, but would prefer if the local government provided the service.

3.7 Media Outreach and Paid Advertising

During the week of May 12, 2003, advertisements for the initial round of public meetings were placed in the following regional newspapers:

- Bedford Now
- The Suburban Metro Press
- La Prensa
- Mirror Newspaper Group
- Messenger Journal Group
- Toledo Journal
- Herald Newspaper Group

A press release to major news organizations in the Toledo market was released in late April 2003 to coincide with the initial round of public meetings.

The informational survey was published in the following newspapers during the summer of 2003.

- Toledo Blade (June 13, 2003)
- Toledo Journal (July 15, 2003)
- El Tiempo (August 11, 2003)

An article about the study was provided to regional Chambers of Commerce for inclusion in their newsletters in August 2003.

Additional press releases were timed to coincide with the final round of public meetings held in April 2004.

3.8 Project Website

The regional transit study project website, accessed through the TMACOG website at www.tmacog.org/transitstudy, provided the public with project information and resources to contact and provide input to the study. The website included copies of informational brochures, dates and times of public meetings, and other information about the study. The website also provided the project message line and fax number and the study e-mail address. The website included an e-mail link that allowed visitors to instantly send an e-mail comment to the study team, and an interactive version of the informational survey. More than a dozen surveys were received in this manner.

3.9 Comments Received by E-Mail, Phone, Fax and Mail

Study brochures and the project website provided the public with various means to contact the study team to ask questions and comment on the study and public transit in the region. In addition to TMACOG's postal address, a project e-mail address, transitstudy@tmacog.org, was created within TMACOG's e-mail system to receive e-mails pertaining to the study. The e-mail address was also linked to the project website, to allow most computer users to create a pop-up e-mail message addressed to the study with a single click. Telephone numbers connecting to voice mail in the TMACOG telephone system, with messages inviting callers to provide their comments in both English (419-241-9155, Extension 250) and Spanish (Extension 260), were also provided. The number of TMACOG's central fax machine (419-241-9116) was also provided to collect public input through that mode of communication.

3.10 Assessment of Public Outreach Efforts

The study's efforts to reach out to the public, to allow the public to provide input and comment on the study, attempted to provide coverage to all geographic areas and population groups within the study area. **Table 3-3** identifies some of the groups that the study attempted to reach and the efforts the study made to reach those groups.

Table 3-3: Public and Stakeholder Outreach Coverage Matrix

	Transit User Status				Targeted Populations				Geographic Distribution					
	Non Users- Urban	Non Users- Suburban	Non Users- Rural	Transit Users	Students	Disabled	Elderly	Minorities	City of Toledo	Eastern Suburban / Rural	Western Suburban / Rural	Southern Suburban / Rural	Northern Suburban / Rural	Bowling Green
Telephone Survey														
Informational Survey														
Distribution on TARTA Buses														
Distribution on TARPS Buses														
Distribution on Bedford Dian-a-Ride														
Distribution by TMACOG Commuter Services														
Distribution at Public Meetings														
Distribution to Service Agencies														
Distribution to Committee Members														
Distribution in the <i>Toledo Blade</i>														
Distribution in the <i>Toledo Journal</i>														
Distribution in <i>El Tiempo</i>														
Moded Development Survey														
Bowling Green Wal Mart														
Bowling Green State University														
Spring 2003 Public Meetings														
Perrysburg Township														
Oregon														
Springfield Township														
Downtown Library														
Bedford Township														
Focus Groups														
Ability Center														
Office on Aging														
South YMCA														
Hispanic Community														
LMHA														
Bedford Township														
Summer 2003 Events														
Andersons (Monroe St.)														
Lucas County fair														
Andersons (Woodville)														
Spring 2004 Public Meetings														
South Toledo														
Oregon														
Downtown Toledo														
Sylvania														

4. Market Assessment

4.1 Transit Market Analysis Overview

Economic and demographic trends will affect the future market for public transit service. The market analysis examined population, employment and demographic trends in the TMACOG region. These data were used to help identify areas where there is potential unmet demand for public transit in areas that are potentially supportive of transit services.

4.2 Socioeconomic Trends

i. Population Growth, Distribution and Movement

In 2000, the Toledo Metropolitan Statistical Area (MSA), consisting of Lucas, Wood, and Fulton counties, had a population of 618,000 (2000 Census). **Table 4-1** shows the breakdown by county and projections to 2020. The population increased by 0.7% between 1990 and 2000. The region is growing far more slowly than the United States as a whole, the population of which grew 13.2% over the same time period, and slower than the State of Ohio, which grew 4.7% between 1990 and 2000 (US Census). Projections prepared by Woods & Poole Research, a market research firm, indicated that population in the three-county MSA will grow by only 2.1% between 2002 and 2015. They also projected that the four-county region (including Ottawa County but excluding Monroe County) will increase in population by only 1.2% between 2000 and 2020.

Year	Fulton	Lucas	Wood	MSA Total
1990	38,606	462,383	113,384	614,373
<i>Percent of MSA</i>	6%	75%	18%	100%
2000	42,153	454,717	121,186	618,056
<i>Percent of MSA</i>	7%	74%	20%	100%
2010	45,507	444,633	128,169	618,309
<i>Percent of MSA</i>	7%	72%	21%	100%
2020	49,367	438,108	136,523	623,998
<i>Percent of MSA</i>	8%	70%	22%	100%
Growth				
<i>1990-2000</i>	9.2%	-1.7%	6.9%	0.6%
<i>2000-2010</i>	8.5%	-2.2%	6.2%	0.0%
<i>2010-2020</i>	8.5%	-1.5%	6.5%	0.9%
<i>1990-2020</i>	27.9%	-5.2%	20.4%	1.6%

Table 4-1: Population by County and Year for Toledo MSA Counties

Data from TMACOG confirms this **pattern of slow growth** over the next 30 years. TMACOG projections used in the traffic forecasting model shows the population of the TMACOG region growing less than 4% between 2000 and 2025. This is an annual growth rate of less than 0.02% per year. The model estimates that growth will increase slightly, a total of 1.32% over the ten

years 2025 to 2035, a rate of growth over 0.1% each year. However, in both periods, the rate of growth will be imperceptible, and will be far below the projected growth rates of the United States and the State of Ohio.

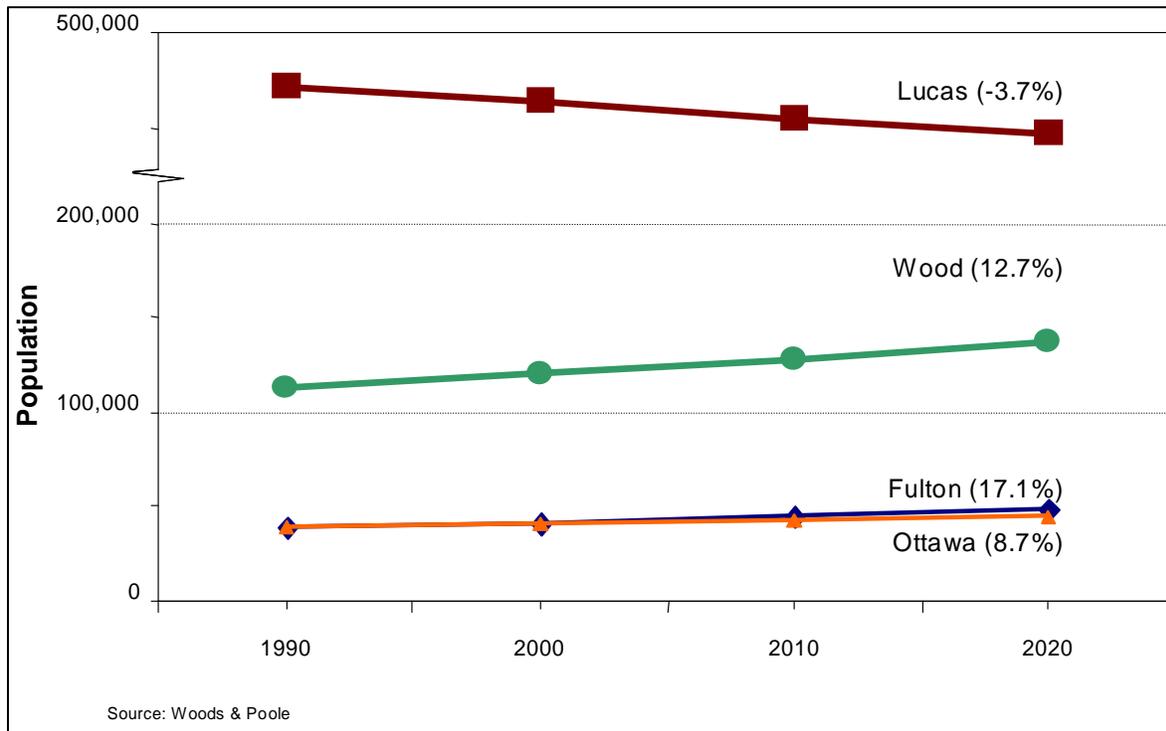


Figure 4-1: Population Trends by County, 1990-2020

While the region effectively is not growing in population, and is not anticipated to grow in the next 20 years, its population is dispersing over a larger area, with population moving from the City of Toledo and Lucas County into Wood, Ottawa and Fulton counties in Ohio and Monroe County in Michigan. These counties are now rural but are suburbanizing, a trend that is expected to continue in the future. As **Figure 4-1** shows, the population of Lucas County, by far the most populous in the region, is expected to fall continuously over the 1990-2020 period which is nearly halfway complete. Most of this population loss is accounted for by the rapid growth projected for Wood, Fulton, Ottawa and Monroe counties. **Figure 4-1** shows the rapid growth of Wood, Fulton and Ottawa counties over the 1990-2020 period. Monroe County, which is not part of the Toledo MSA, is projected to grow even more rapidly than Wood, Ottawa and Fulton counties. **Table 4-2** shows population data for Monroe County. Driven by out-migration from both the Toledo and Detroit areas, Monroe County’s population grew by more than 9% between 1990 and 2000. Between 1990 and 2030 Monroe County’s population is projected to grow by nearly 50%.

Table 4-2: Monroe County Population Growth, 1990-2030

1990 US Census	133,600
2000 US Census	145,945
December 2003 ¹	151,574
2030 ²	196,554
¹ US Census Estimate	
² South East Michigan Council of Governments (2030)	

These counties, whose populations are and will continue to be much smaller than that of Lucas County, are anticipated to grow rapidly over the same period. This same pattern is repeated on a smaller scale within Lucas County, where Toledo, the region's central city, has declined in population by 5% between 1990 and 2000.

The pattern these trends represent is a chain of outward movement of population, in which suburban Lucas County residents move to rural counties and City of Toledo residents move to suburban locations. In the absence of population growth, this chain of movements leads to depopulation of central city neighborhoods.

The maps in **Figures 4-3** and **4-4** show the changes in population density in the region between 1990 and 2000. Careful comparison of these maps clearly shows the loss of population density occurring in the region, with densities falling in urban areas within Toledo and some inner suburbs, and density increasing in formerly rural areas at the periphery of the suburban area. Population in the area is moving mainly to the west and south, notably along the interstates and major roads (I-75, I-475, and US 24), though development is also occurring along the northern and eastern periphery of the region.

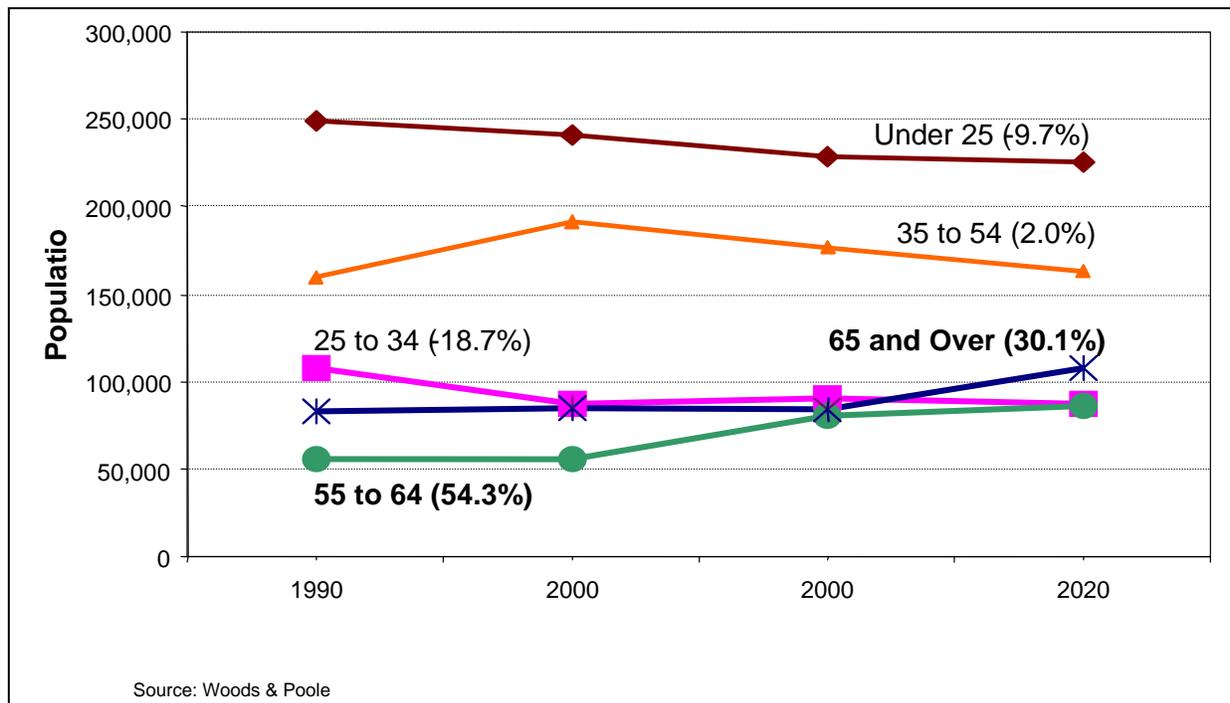


Figure 4-2: Population Trends by Age Cohort, 1990-2020

Analysis of population trends by age cohort, as shown in **Figure 4-2**, shows that **the region is aging**, with rapid growth among older cohorts and flat growth or decline among younger cohorts. While the under 25 age group will remain the largest, the number of children and young adults will represent barely a third of the regional population by 2020. The data indicates that the number of persons in the high productivity years of 35 to 54 years of age has peaked in 2000 and is expected to decline over the next two decades.

The 55 to 64 age group is anticipated to grow by more than 50% over the next twenty years, as the “baby boom” cohort approaches retirement age. The 65 and over group is also expected to grow dramatically, by more than 30%, and by 2020 will be the third largest age cohort in the region, representing nearly one-sixth of the region’s population.

The growth in the number of older adults over the next 20 years will have far-reaching socio-economic effects. Among these effects there is expected to be an increasing demand for public transit service. Ability and desire to drive can diminish with age, and aging populations may return to urban neighborhoods to secure the lifestyle benefits of living in more compact, walkable communities. Data collected by TARTA indicates that up to two-thirds of the riders of the Perrysburg Call-a-Ride service are aged 60 or older.

ii. Income and Population Distribution

The TMACOG region follows the spatial pattern of income and population distribution common in most American metropolitan areas:

- lower incomes, higher household density, and larger household sizes in older neighborhoods near the urban core
- higher incomes, lower household density and smaller household sizes in the suburban ring
- slightly lower than average incomes, lower household density and larger household sizes in the rural areas beyond the suburban ring

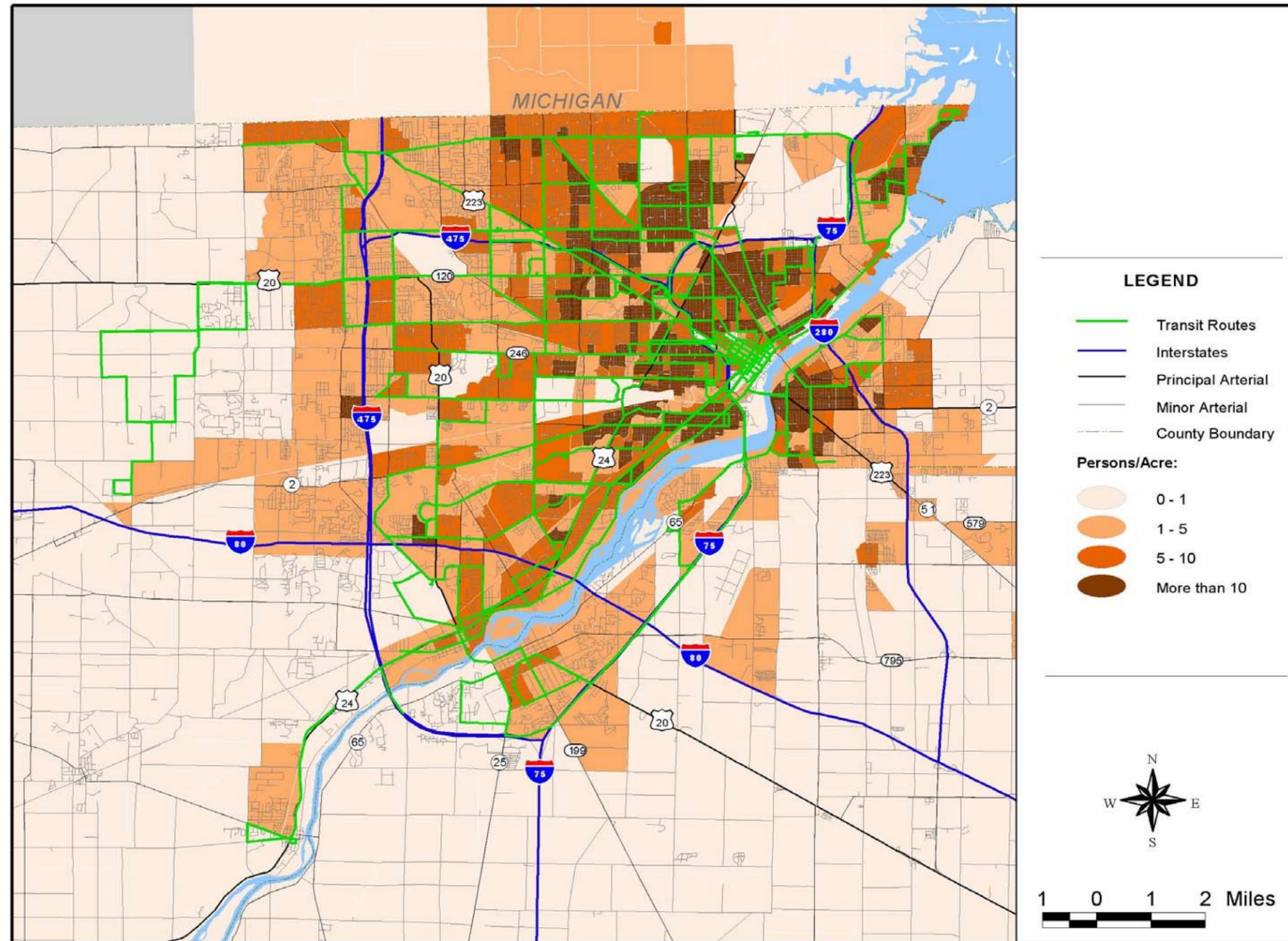
As the maps in **Figures 4-5 and 4-6** show, in the TMACOG region high median income areas and high household density areas are a mirror image of one another—that is to say, high income correlates with low density. Population density and household density also generally correlate with one another, as might be expected (compare **Figures 4-4 and 4-5**). There is a growing trend toward reinvestment by higher-income people in downtown Toledo and in some neighborhoods near downtown, though the number of housing units that are part of this trend is, at this time, relatively small. Another exception to the rule of low-density/high income and vice versa are the central areas of some suburban towns, such as Perrysburg and Maumee, which combine relatively high densities with higher incomes.

iii. Distribution of Special Populations

People with disabilities, the elderly, youth, and persons who live in low-income households are among groups that show a larger than average propensity to use public transit services. In the TMACOG region, these groups are growing. As **Figures 4-7** through service show, there are several areas in the region containing concentrations of these groups that are not served by public transit, indicating potential need for transit services in these areas.

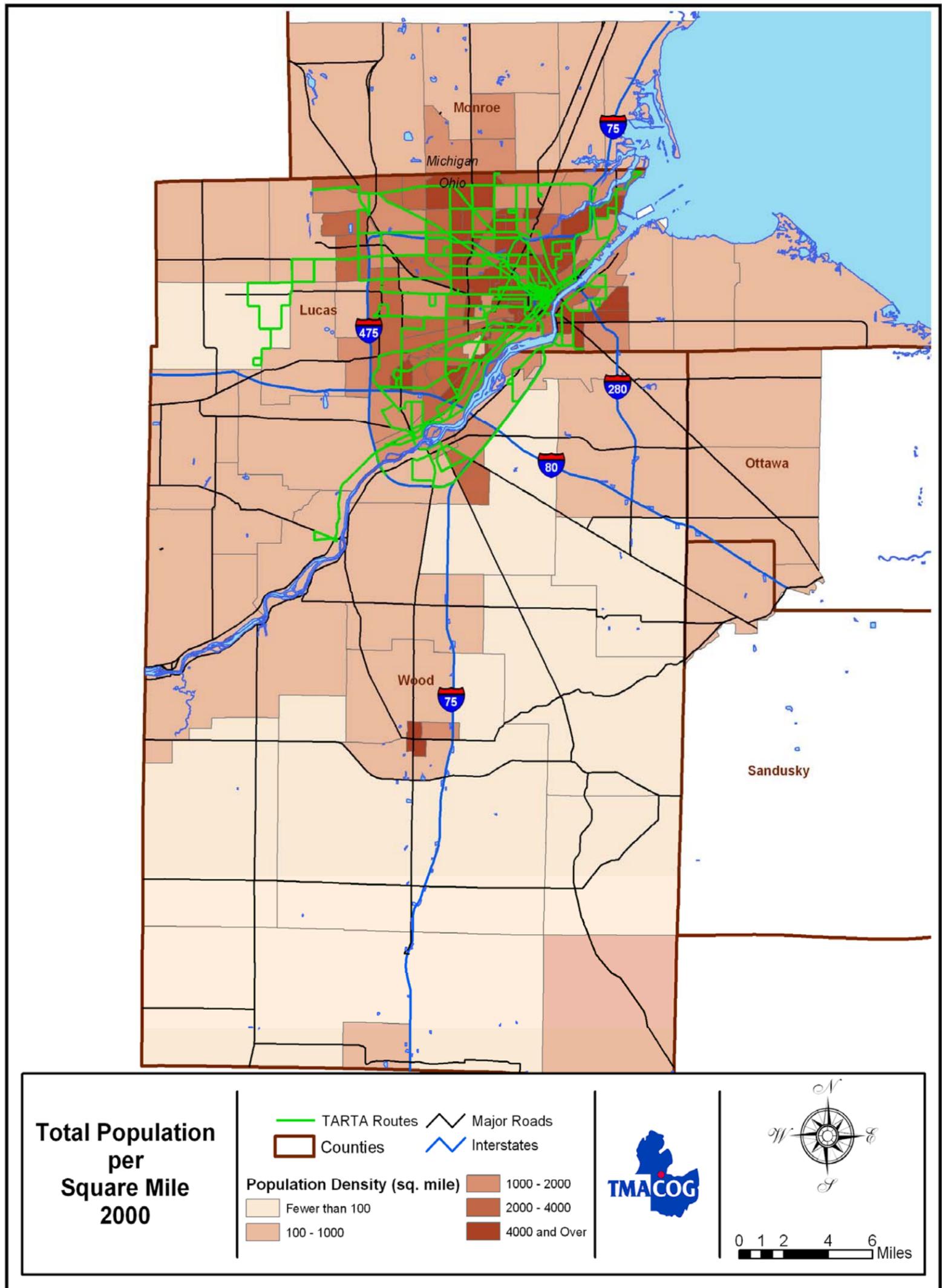
According to US Census data, approximately 18% of the TMACOG region’s population, and around 40% of the population 64 and over, is disabled. The majority of disabled persons aged 21 to 64 years of age living in the region are employed. However, they are less likely to be employed than their non-disabled counterparts. Disabled persons are more likely to depend on public transportation, and on transportation provided by non-profit and governmental social

Figure 4-3: Population Density, 1990



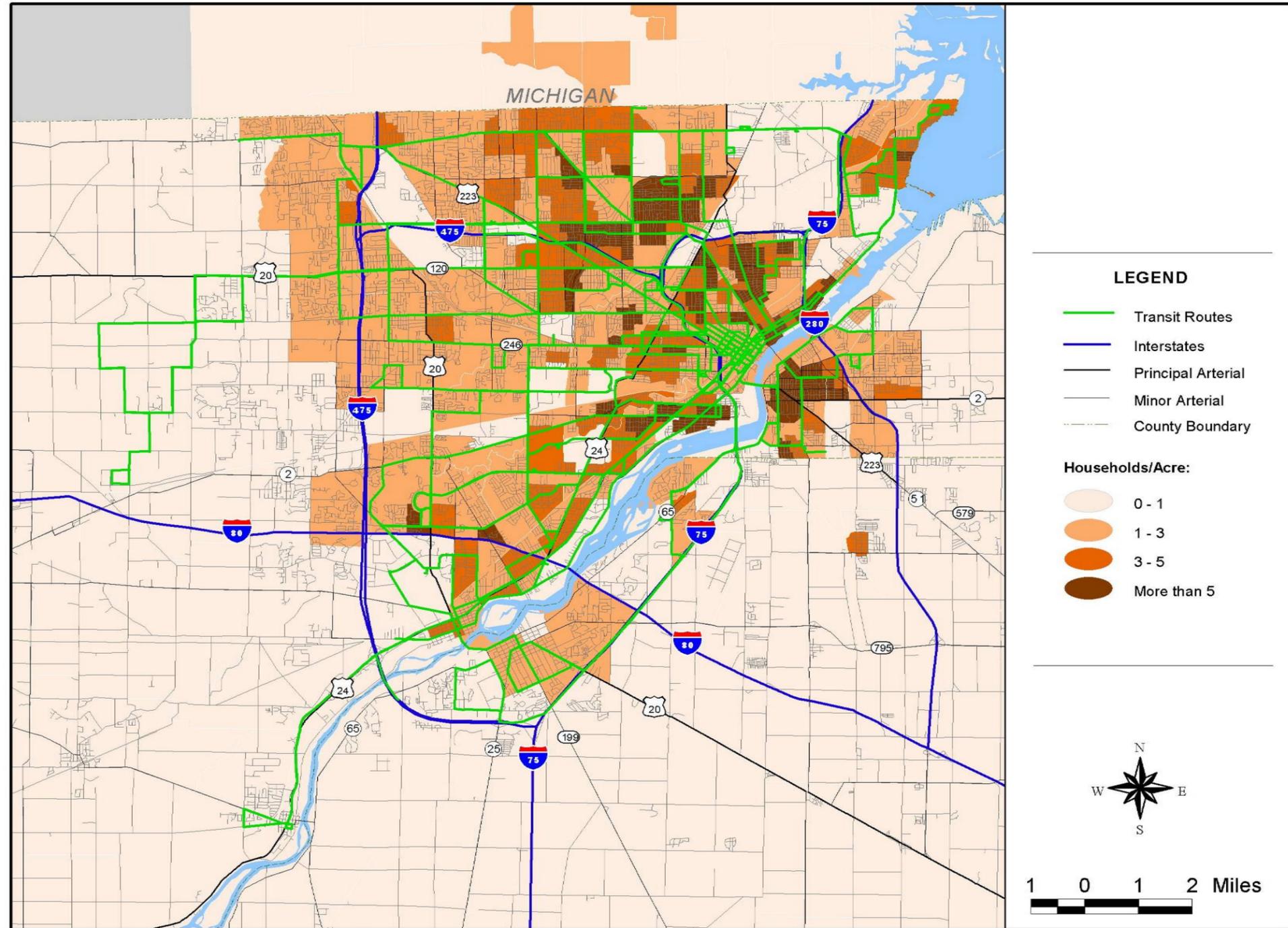
Source: U.S. Census

Figure 4-4: Population Density, 2000



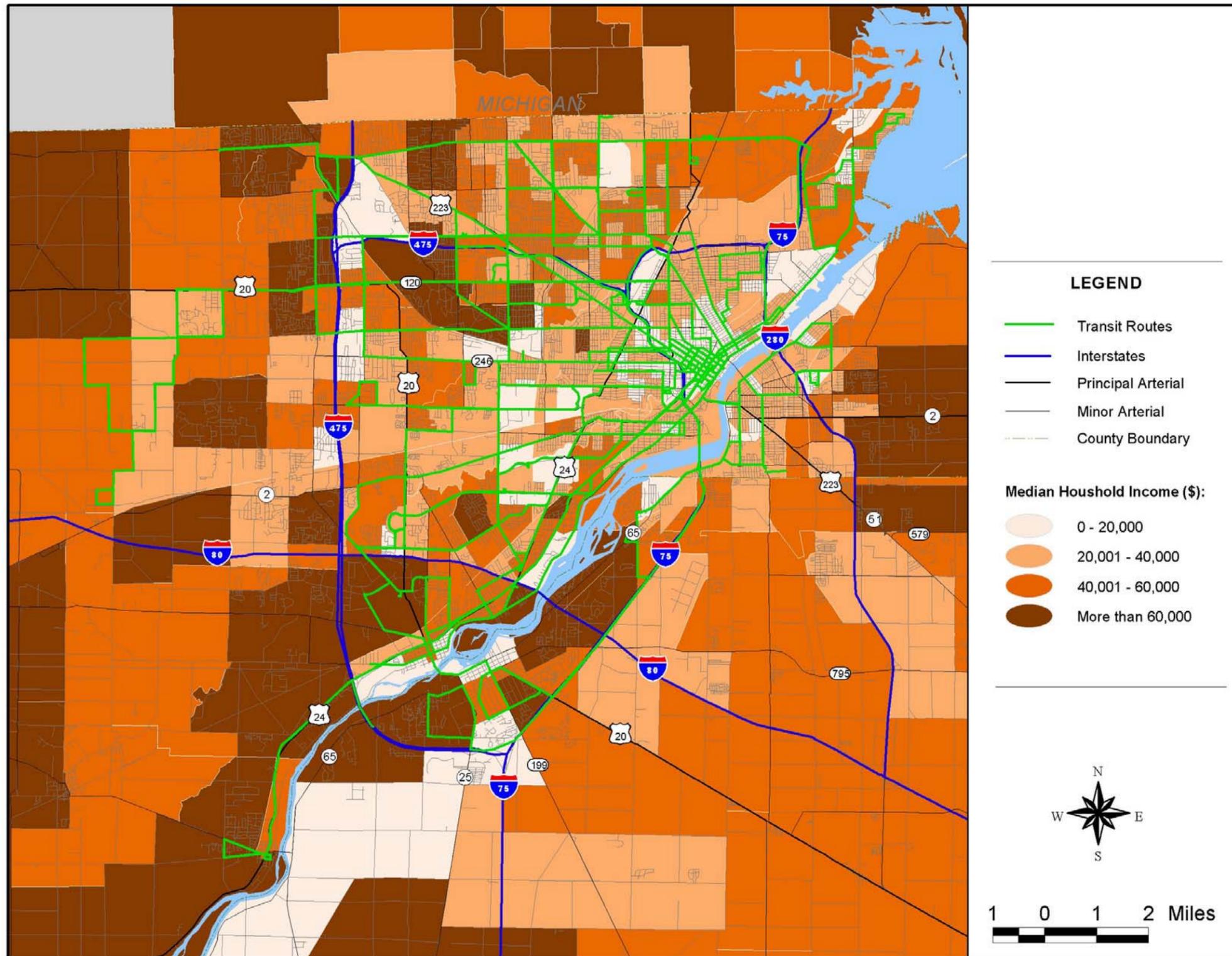
Source: U.S. Census

Figure 4-5: Household Density, 2000



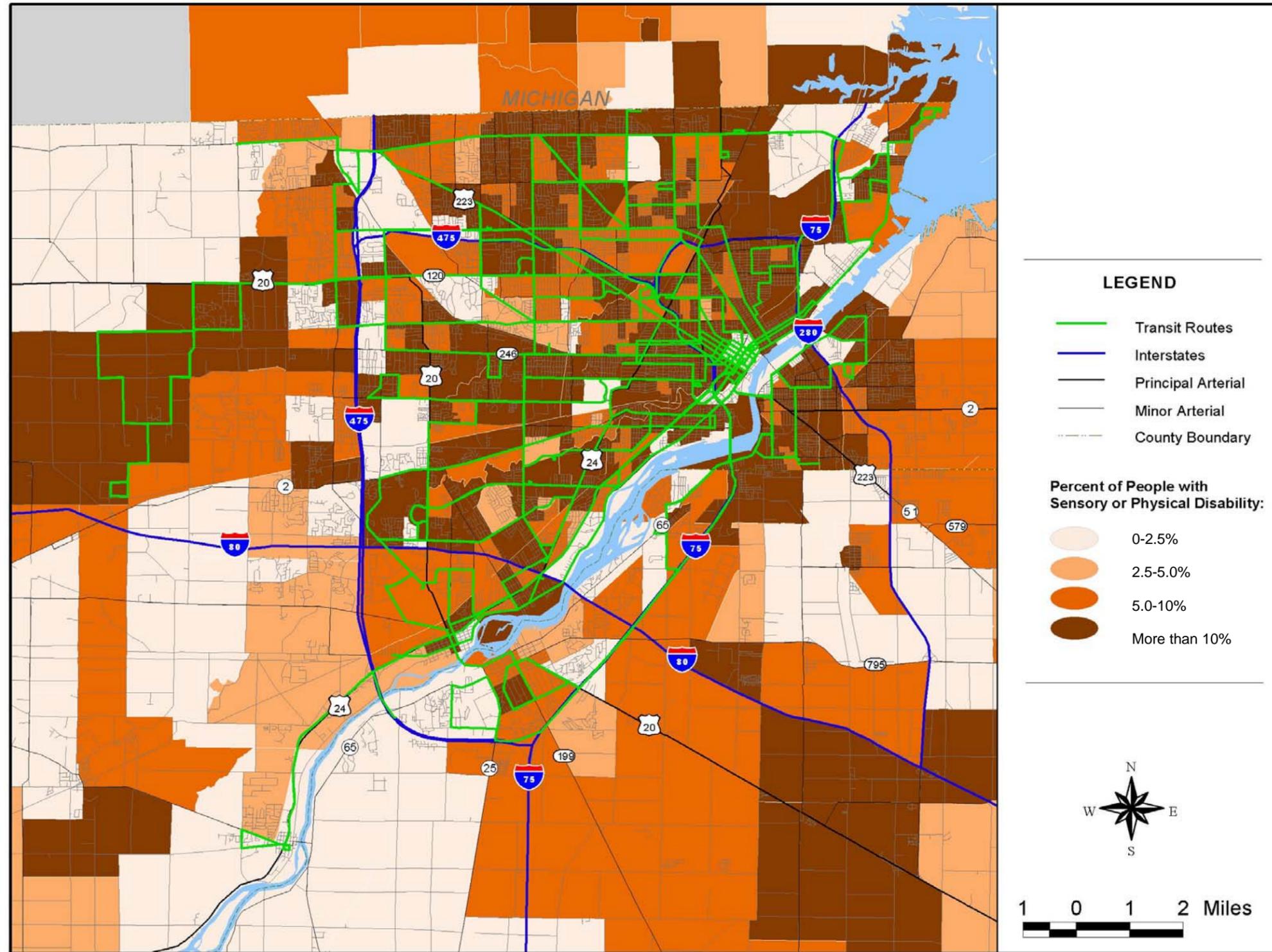
Source: U.S. Census

Figure 4-6: Median Income, 2000



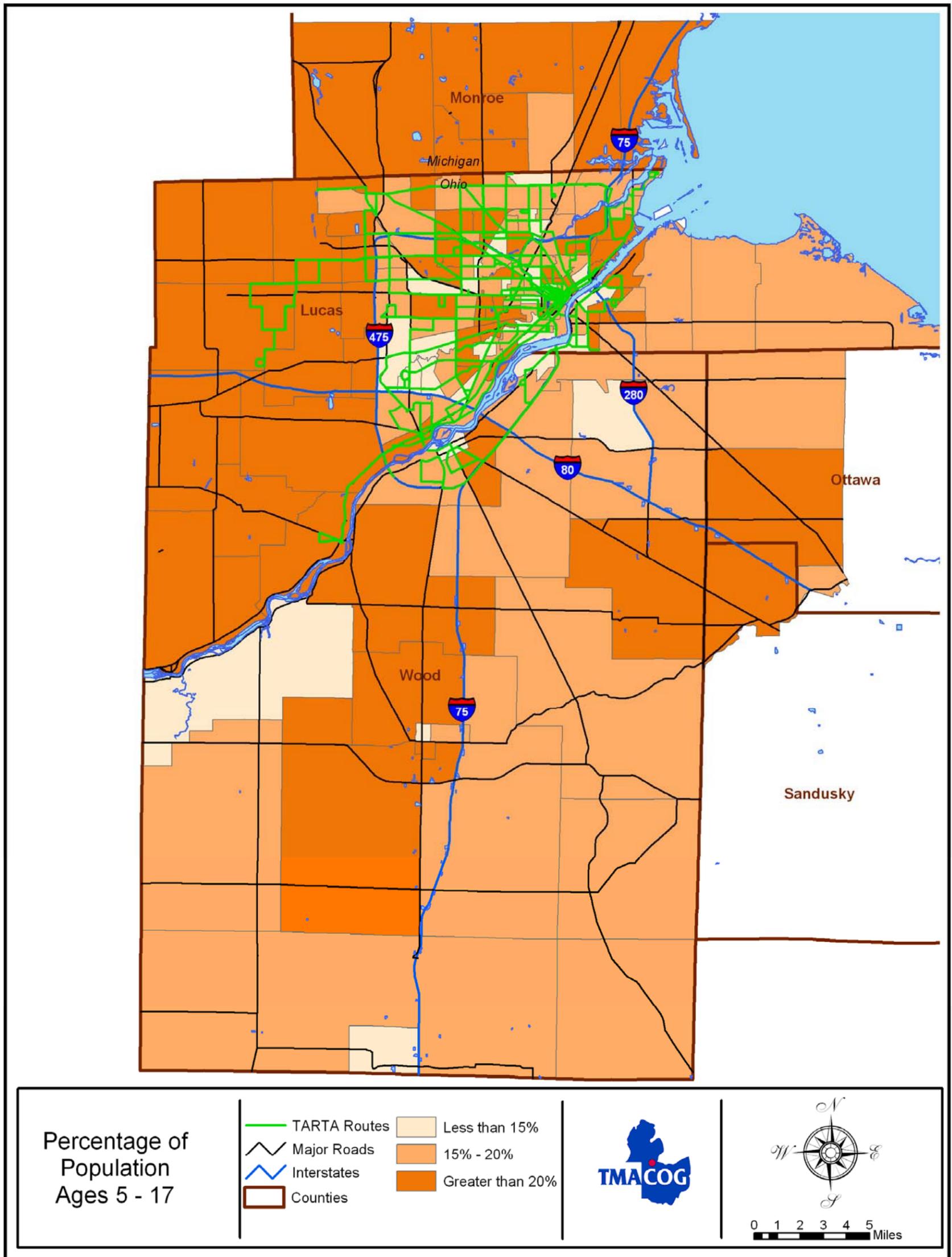
Source: U.S. Census

Figure 4-7: Percent of Population with Physical or Sensory Disability, 2000



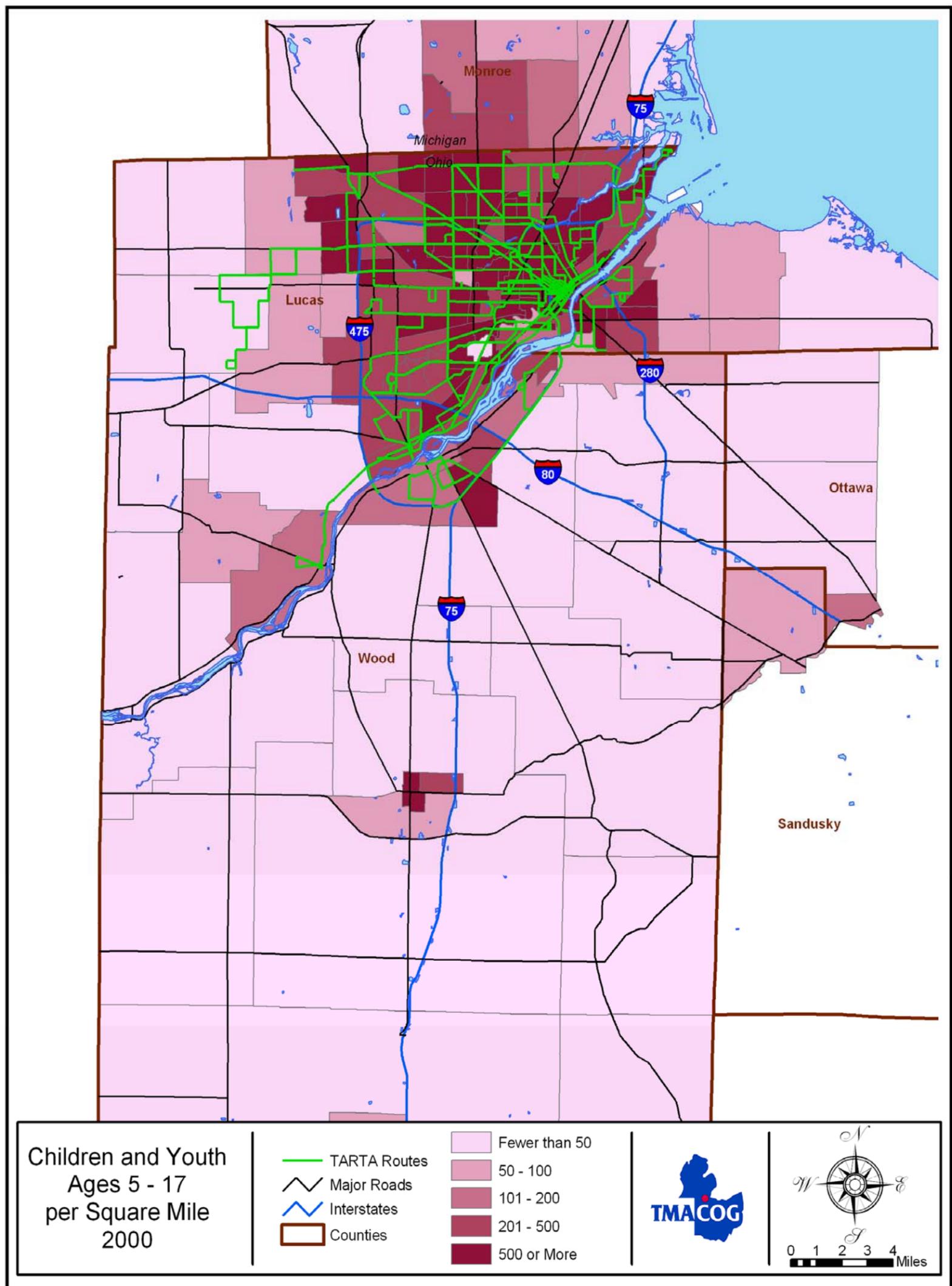
Source: U.S. Census

Figure 4-8: Percentage of Children and Youth in Population, 2000



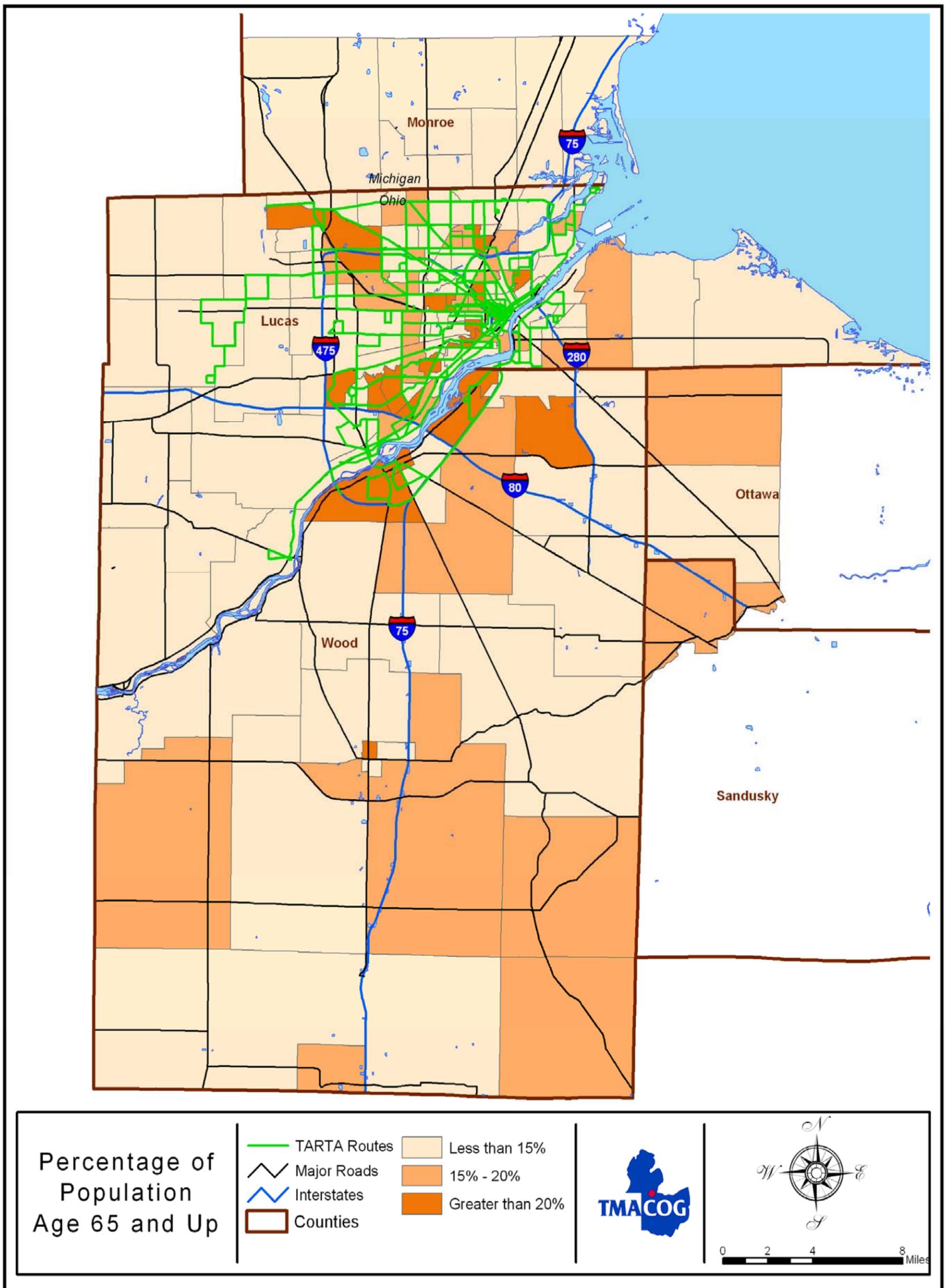
Source: US Census

Figure 4-9: Density of Children and Youth Population, 2000



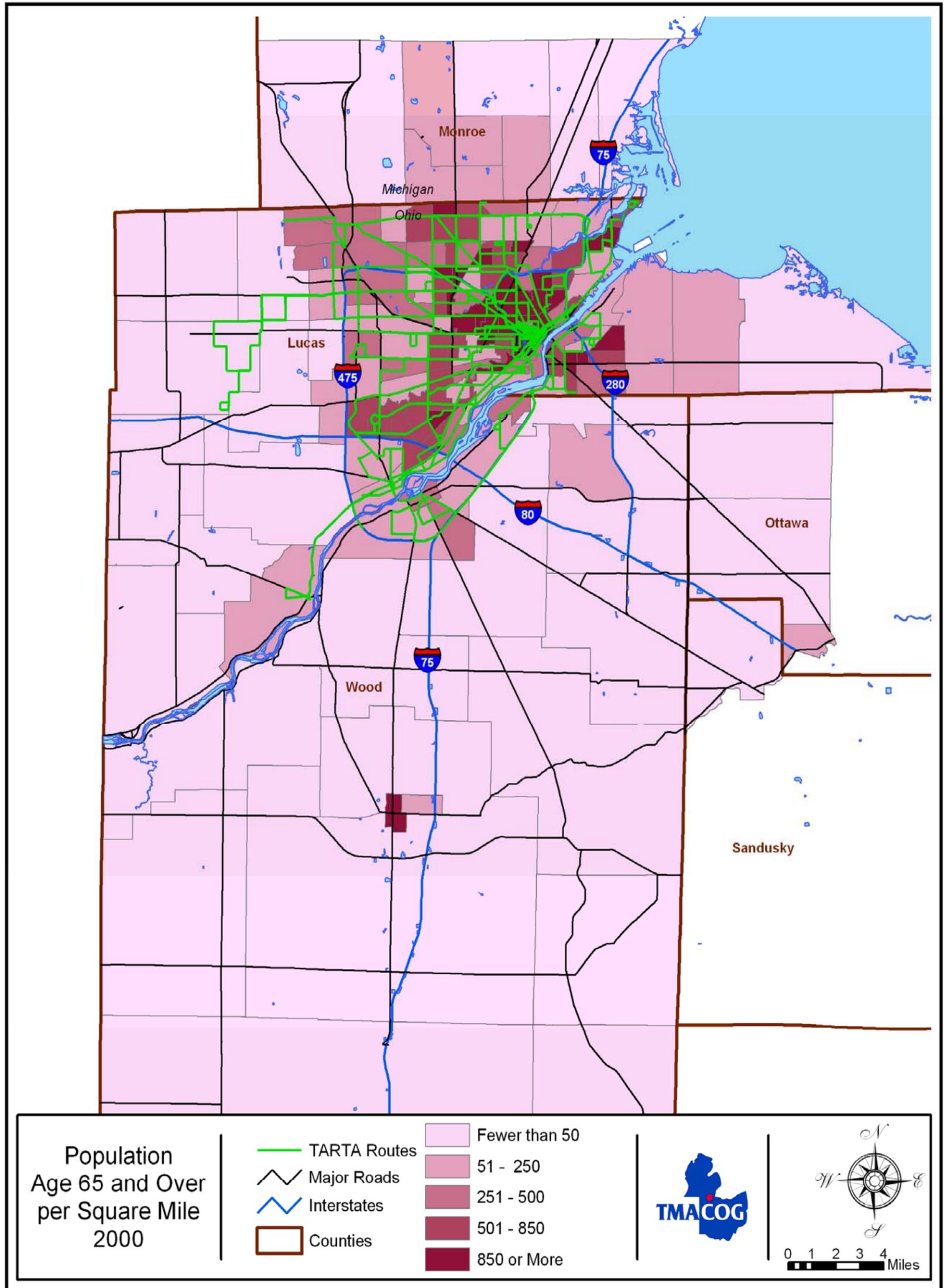
Source: US Census Bureau

Figure 4-10: Percentage of Population Aged 65 and Over, 2000



Source: US Census Bureau

4-11: Density of Population Aged 65 and Over, 2000



Source: US Census Bureau

service agencies, than are the non-disabled. Lack of access to public transportation may be one cause of the lower rate of employment for disabled persons.

Figure 4-7 shows the distribution of disabled population in the TMACOG region. As the map shows, there are areas of the TMACOG region with significant (10% or more) populations of disabled persons that are not served by public transit at this time. Disabled persons are served throughout Perrysburg, Maumee, Bowling Green and Bedford Township by the Dial-a-Ride services in those areas. However, disabled persons who live beyond ¼ mile of a TARTA fixed bus route are not eligible for door-to-door transit service. As the map shows, there are some areas that are home to significant disabled populations, even in the City of Toledo and other jurisdictions served by TARTA, that are beyond ¼ mile of TARTA bus route and thus ineligible for paratransit service.

Figures 4-8 and **4-9** show the population density of youth (children between the ages of 5 and 17) and **Figures 4-10** and **4-11** show distribution and percentage of elderly persons by area (aged 65 and older). TARTA bus routes are overlaid on the maps. As the maps indicate, there are significant populations of both of these groups living outside the geographic confines of the TARTA service area.

iv. Employment and Unemployment

The Great Lakes region has lost manufacturing jobs to other regions of the U.S. and to foreign competition over the past 25 years. However, the 1990s saw a dramatic growth in employment in the region and a decline in the long-high rate of unemployment. In the absence of population growth, this employment growth can be explained by three factors related to the growth in the national economy in the 1990s: the continued growth in the participation of women in the workforce; the postponement of retirement by persons of nominal retirement age; and the employment of structurally unemployed (very low-skilled or otherwise poorly qualified to work) and underemployed working age persons.

The Toledo Metropolitan Statistical Area (MSA) population is forecast to grow very little—1.6%—between 1990 and 2020 (see **Table 4-1**). However, employment by place of residence is forecast to grow 33.7% (115,571 jobs), as shown in **Table 4-3**. This growth is forecast for all counties, including Lucas County, where the population is projected to decline slightly. Despite a lower growth rate than the rapidly growing suburban counties, the 61,318 (23.3%) employment increase in Lucas County comprises over half of the total MSA employment growth over the 30-year period. The other two suburban counties are forecast to experience overall employment growth of 51.9% (11,520 employees in Fulton) and 73.4% (42,733 employees in Wood). **Figure 4-12** shows the trends in job growth and unemployment between 1993 and 2002. Employment in the area increased by more than 13% between 1993 and 2000, before declining by nearly 4% in 2000-2002. The recent rise in the unemployment reflects the loss of 12,300 jobs since the year 2000.

Nearly 40,000 jobs were added to the regional economy between 1993 and 2000 without a significant increase in regional population. The increase in jobs was matched by a decrease in unemployment, which fell by more than 30%, from 6.5% in 1993 to 4.5% in 2000, before rising back to 6.2% in 2002.

Figure 4-12: Employment and Unemployment Rate, Toledo MSA, 1993-2002

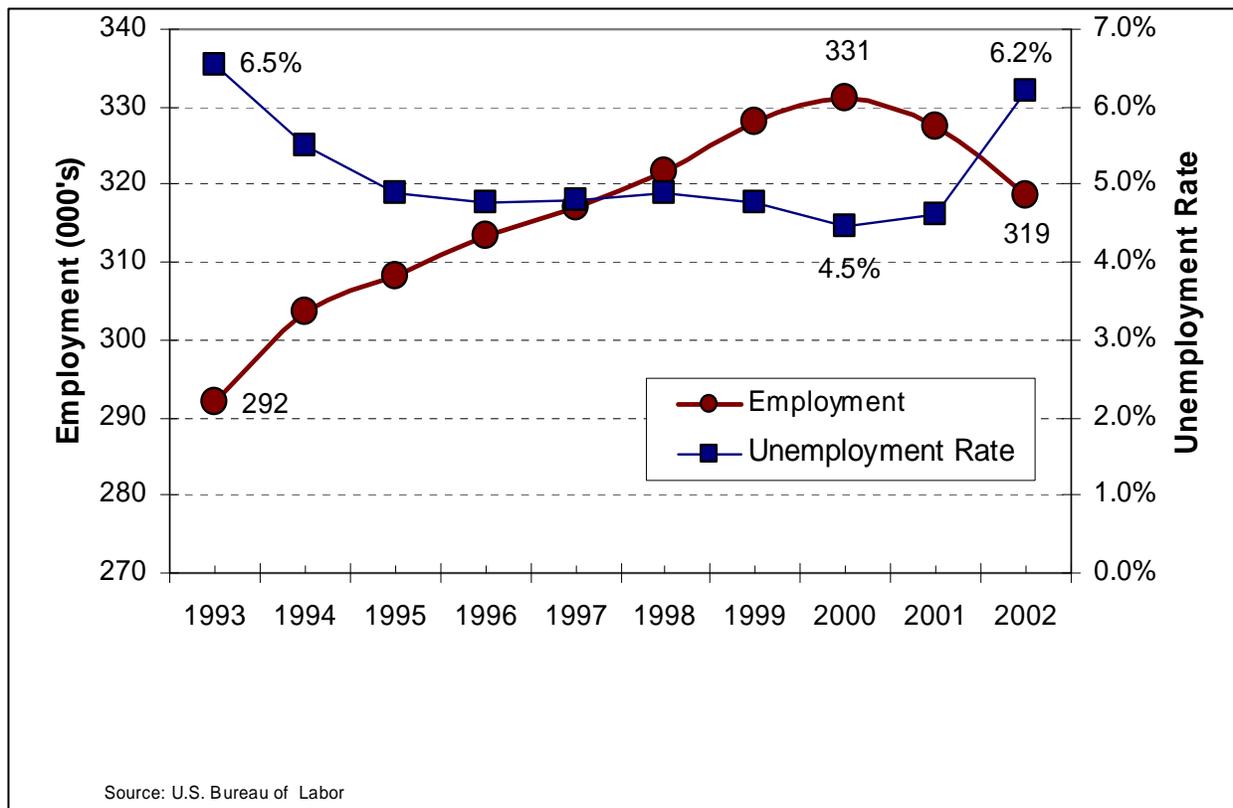


Table 4-3: Employment by Place of Residence for Toledo MSA, Projections to 2020

Year	Fulton	Lucas	Wood	MSA Total
1990	22,183	262,797	58,229	343,209
2000	27,502	291,585	75,196	394,283
2010	30,717	303,426	88,084	422,227
2020	33,703	324,115	100,962	458,780
Growth				
1990-2000	24.0%	11.0%	29.1%	14.9%
2000-2010	11.7%	4.1%	17.1%	7.1%
2010-2020	9.7%	6.8%	14.6%	8.7%
1990-2020	51.9%	23.3%	73.4%	33.7%

Source: Woods & Poole, employment by place of residence

As **Figure 4-13** shows, Ohio as a whole and the other major urban areas of the state followed the same basic unemployment trend as the Toledo region. Unemployment was lower in the

urban areas of southern Ohio (Columbus, Cincinnati and Dayton) than in Toledo and in Ohio as a whole.

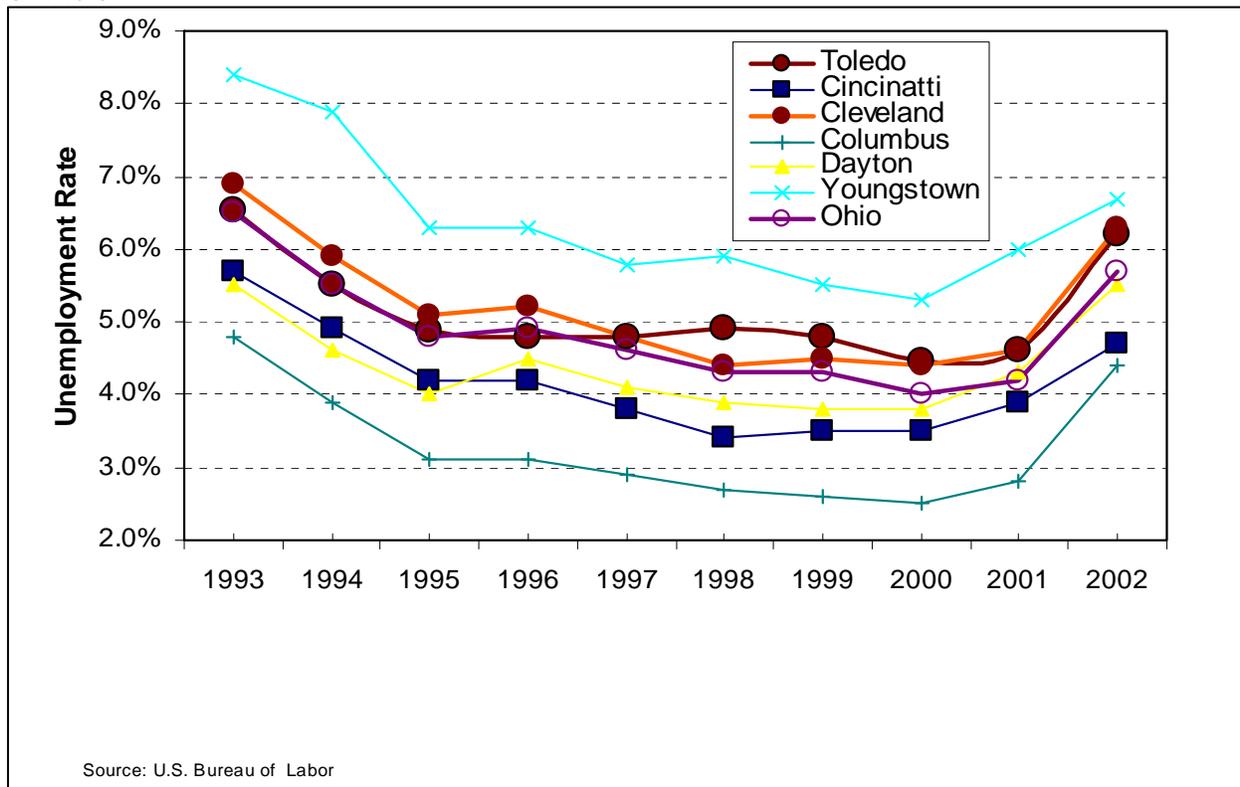


Figure 4-13: Unemployment Trends in Ohio Urban Areas, 1993-2002

Employment in the region (including Lucas, Wood, Ottawa, Fulton and Monroe counties) totaled more than 415,000 in 2000. Employment is expected to increase in the region in the 2000-2020 period. It is expected to top 483,000 by 2020, an increase over 2000 of 7.2%. Every county in the region is expected to grow in the 20-year period. Lucas County is expected to add the most, 32,500 jobs, an increase of 11.1%. Wood County will see the largest rate of employment growth, adding nearly 26,000 jobs, an increase over 2000 of 34%.

Table 4-4 shows employment by sector. The Services sector has the highest employment in the MSA with 123,556 in the year 2000 and is forecast to grow the fastest (31.1%), adding 38,373 jobs over the next 20 years. Manufacturing employment is forecast to decline 2.5% (1,550) in the MSA as jobs migrate out of Lucas County to suburban and suburbanizing counties. Specifically, manufacturing is forecast to decline sharply, down 17.2% (6,069), in Lucas County over the next 20 years, while growing 23.3% (2,345) in Fulton County and 13.7% (2,174) in Wood County. Other notable changes over the 20-year period include wholesale trade and construction in Wood County, which are forecast to grow 80% (2,759 employees) and 60.4% (2,861 employees), respectively.

Figure 4-14, which shows projected economic growth by sector for the years 2000 to 2020, indicates where job growth is likely to occur in the TMACOG region in the future. As the graph indicates, manufacturing is expected to continue its slow, steady decline over the next 20 years, while the transportation, communications and utilities sector is expected to essentially remain

flat over the period. However, all of the other sectors of employment—even agriculture—are anticipated to grow at a robust rate over the period. Services and construction are expected to lead the growth, with each of those sectors growing at a rate above 20%. However, Finance, Insurance and Real Estate (FIRE), Wholesale Trade, Retail Trade and the Government Sector are all expected to grow at double-digit rates over the 20-year period. Increased service sector and, to a lesser extent, government sector employment reflects the aging of the population, who will demand a higher level of services, especially health care services. This high rate of job growth, in the context of very modest population growth, indicates further the trend toward higher rates of employment for women, older (and younger) workers, and the region’s structurally unemployed.

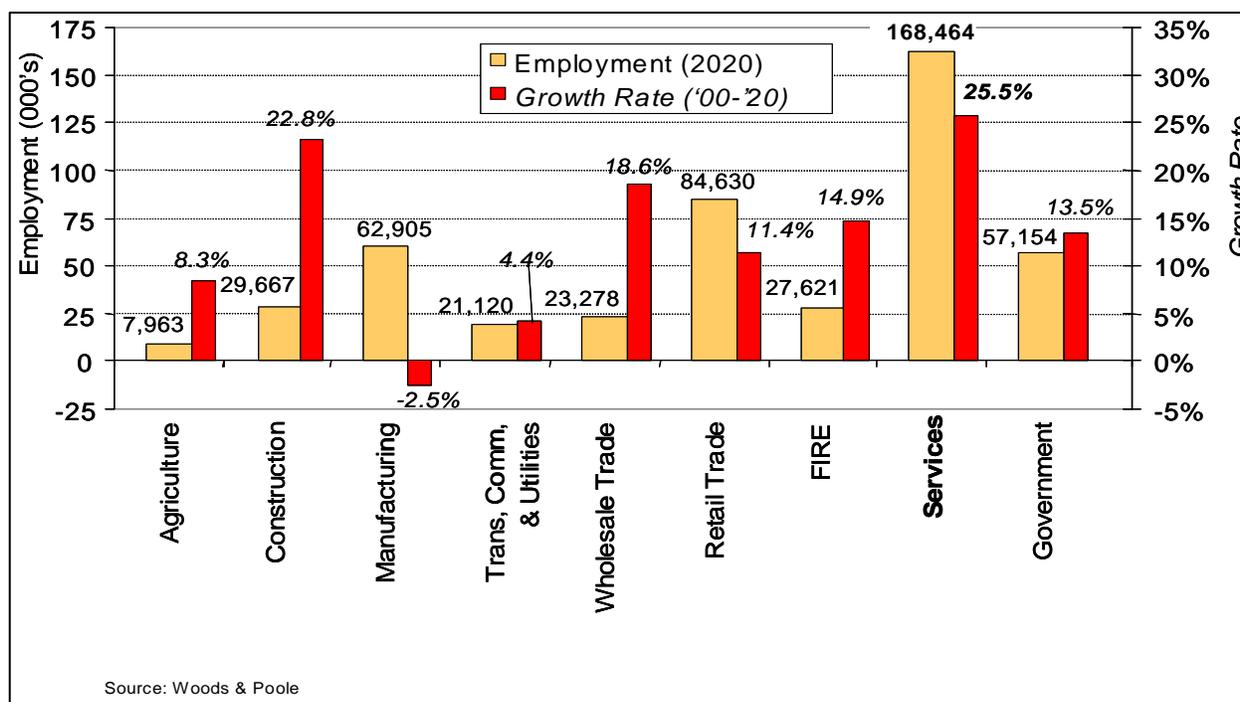


Figure 4-14: Projected Employment Growth by Economic Sector, Toledo MSA, 2000-2020. (FIRE = Finance, Insurance, Real Estate)

v. *Employment by Location*

The US Census Bureau does not track employment by the workplace location of the employee. The study team filled this data requirement by purchasing a current (April 2003) database of workplace location by Standard Industrial Category (SIC) code for the region from a commercial research firm, Harris Infosource. This data was used to analyze types of workers by location, and to compare the location of workers to existing transit services. This information was also valuable in determining the number of employees per acre for the development of transit supportive areas (see **Table 4-4**).

Table 4-4: Employment by Sector for Toledo MSA Counties, Projected to 2020

County & Sector	1990	2000	2010	2020	Growth			
					1990-00		2000-20	
					Number	Rate	Number	Rate
Fulton								
Agriculture	1,561	1,471	1,361	1,305	-90	-5.8%	-166	-11.3%
Mining	17	6	7	7	-11	-64.7%	1	16.7%
Construction	1,158	1,690	1,882	1,992	532	45.9%	302	17.9%
Manufacturing	7,329	10,079	11,461	12,424	2,750	37.5%	2,345	23.3%
Trans, Comm,& Utilities	609	617	627	635	8	1.3%	18	2.9%
Wholesale Trade	969	964	1,078	1,163	-5	-0.5%	199	20.6%
Retail Trade	3,296	3,628	3,739	3,965	332	10.1%	337	9.3%
FIRE	972	1,209	1,394	1,558	237	24.4%	349	28.9%
Services	3,743	5,439	6,630	7,930	1,696	45.3%	2,491	45.8%
Government	<u>2,529</u>	<u>2,399</u>	<u>2,538</u>	<u>2,724</u>	<u>-130</u>	<u>-5.1%</u>	<u>325</u>	<u>13.5%</u>
Total	22,183	27,502	30,717	33,703	5,319	24.0%	6,201	22.5%
Lucas								
Agriculture	2,253	2,675	3,080	3,385	422	18.7%	710	26.5%
Mining	322	241	273	302	-81	-25.2%	61	25.3%
Construction	12,202	16,629	17,724	18,815	4,427	36.3%	2,186	13.1%
Manufacturing	40,190	35,373	31,027	29,304	-4,817	-12.0%	-6,069	-17.2%
Trans, Comm,& Utilities	13,016	14,218	13,551	13,635	1,202	9.2%	-583	-4.1%
Wholesale Trade	13,302	14,814	14,874	15,422	1,512	11.4%	608	4.1%
Retail Trade	49,963	55,982	58,105	61,411	6,019	12.0%	5,429	9.7%
FIRE	17,058	17,780	18,221	18,863	722	4.2%	1,083	6.1%
Services	82,690	100,880	112,010	126,476	18,190	22.0%	25,596	25.4%
Government	<u>31,801</u>	<u>32,993</u>	<u>34,561</u>	<u>36,502</u>	<u>1,192</u>	<u>3.7%</u>	<u>3,509</u>	<u>10.6%</u>
Total	262,797	291,585	303,426	324,115	28,788	11.0%	32,530	11.2%
Wood								
Agriculture	2,200	2,238	2,279	2,311	38	1.7%	73	3.3%
Mining	118	92	102	112	-26	-22.0%	20	21.7%
Construction	2,617	4,739	6,316	7,600	2,122	81.1%	2,861	60.4%
Manufacturing	11,928	15,894	17,143	18,068	3,966	33.2%	2,174	13.7%
Trans, Comm,& Utilities	2,237	3,357	4,065	4,693	1,120	50.1%	1,336	39.8%
Wholesale Trade	2,198	3,448	4,830	6,207	1,250	56.9%	2,759	80.0%
Retail Trade	10,802	12,061	13,010	14,067	1,259	11.7%	2,006	16.6%
FIRE	2,376	3,567	4,383	5,191	1,191	50.1%	1,624	45.5%
Services	11,637	17,237	21,980	27,523	5,600	48.1%	10,286	59.7%
Government	<u>12,116</u>	<u>12,563</u>	<u>13,976</u>	<u>15,190</u>	<u>447</u>	<u>3.7%</u>	<u>2,627</u>	<u>20.9%</u>
Total	58,229	75,196	88,084	100,962	16,967	29.1%	25,766	34.3%
Region Total								
Agriculture	6,014	6,384	6,720	7,001	370	6.2%	617	9.7%
Mining	457	339	382	421	-118	-25.8%	82	24.2%
Construction	15,977	23,058	25,922	28,407	7,081	44.3%	5,349	23.2%
Manufacturing	59,447	61,346	59,631	59,796	1,899	3.2%	-1,550	-2.5%
Trans, Comm,& Utilities	15,862	18,192	18,243	18,963	2,330	14.7%	771	4.2%
Wholesale Trade	16,469	19,226	20,782	22,792	2,757	16.7%	3,566	18.5%
Retail Trade	64,061	71,671	74,854	79,443	7,610	11.9%	7,772	10.8%
FIRE	20,406	22,556	23,998	25,612	2,150	10.5%	3,056	13.5%
Services	98,070	123,556	140,620	161,929	25,486	26.0%	38,373	31.1%
Government	<u>46,446</u>	<u>47,955</u>	<u>51,075</u>	<u>54,416</u>	<u>1,509</u>	<u>3.2%</u>	<u>6,461</u>	<u>13.5%</u>
Total	343,209	394,283	422,227	458,780	51,074	14.9%	64,497	16.4%

Source: Woods & Poole, employment by place of residence

Figures 4-15a through **4-15d** show employment by location, the general size of the establishment in terms of number of employees, and SIC code. The maps indicate that a large number of the region's employment locations are not served by public transportation, thus limiting mobility options and potentially impacting both workers and employers. Significant concentrations of employment in several areas of the region are not served by public transit, including concentrations in Oregon, Perrysburg Township, and Northwood east of Toledo; and in the Airport Highway corridor, Monclova Township, and Whitehouse, west and south of Toledo. These concentrations are dominated by manufacturing and services employment, which includes many lower- and moderate-income workers.

vi. Service to Activity Centers

Good transportation connections are essential to reach training, shopping, medical facilities, and jobs in such facilities. The maps in **Figures 4-16a** through **4-16c** show ¼-mile buffers around TARTA fixed transit routes along with the locations of major shopping centers, colleges, universities, and hospitals in the region. As the map shows, there are a number of shopping centers (including Spring Meadows Shopping Center in Springfield Township), hospitals (such as St. Charles Hospital in Oregon) and schools that are outside the transit service area. Thus transit-dependent people, in particular, are isolated from these services, and these services are unable to attract all their potential clients and customers.

4.3 Economic and Demographic Factors Affecting Public Transit Markets

The socioeconomic and demographic analysis of the region clearly indicated a number of important trends in the region:

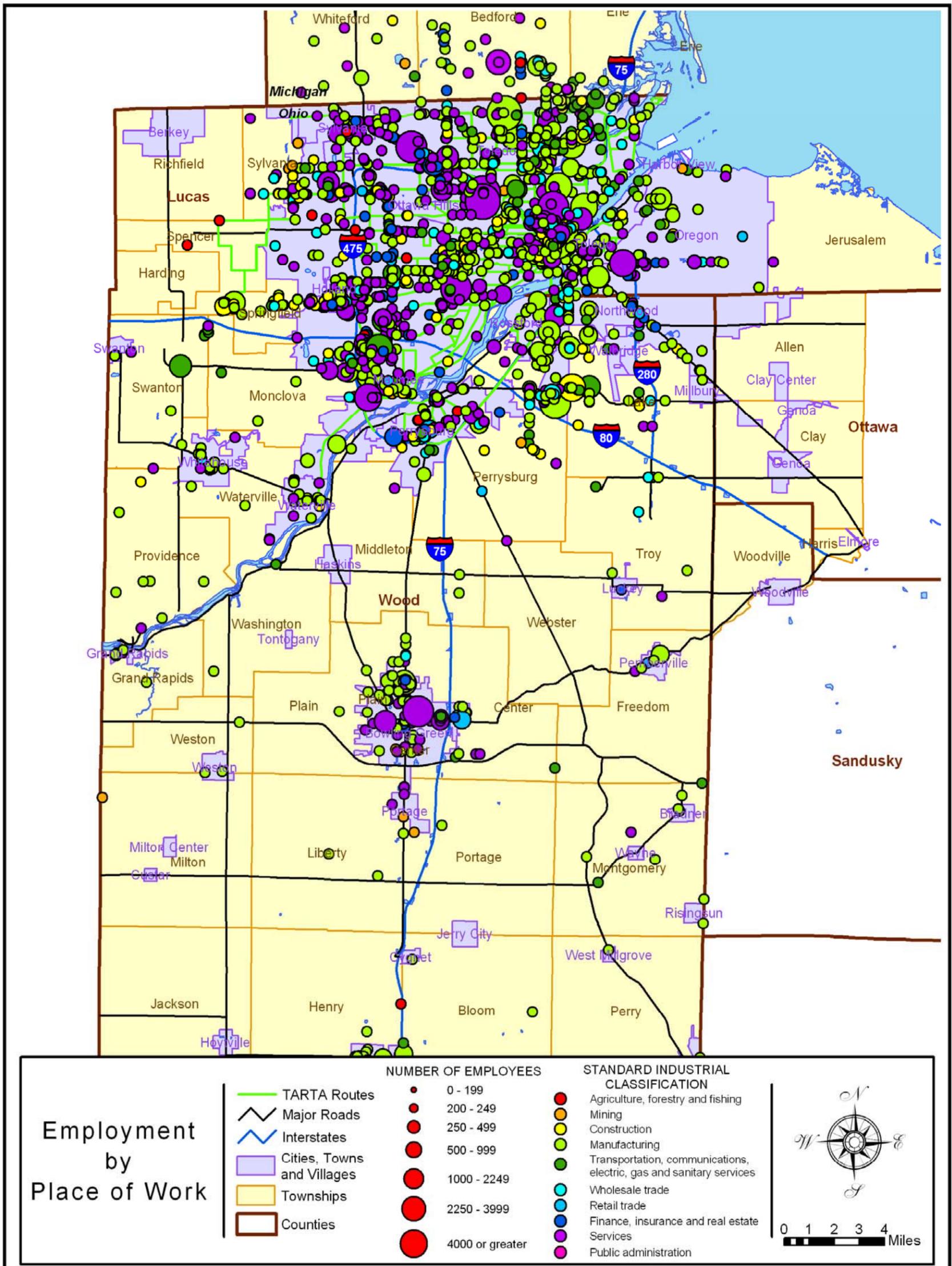
Population:

- Low-to-no population growth
- Aging population and an increased number of persons over age 60
- Continued suburbanization of population
- Reduced density in center city

Employment:

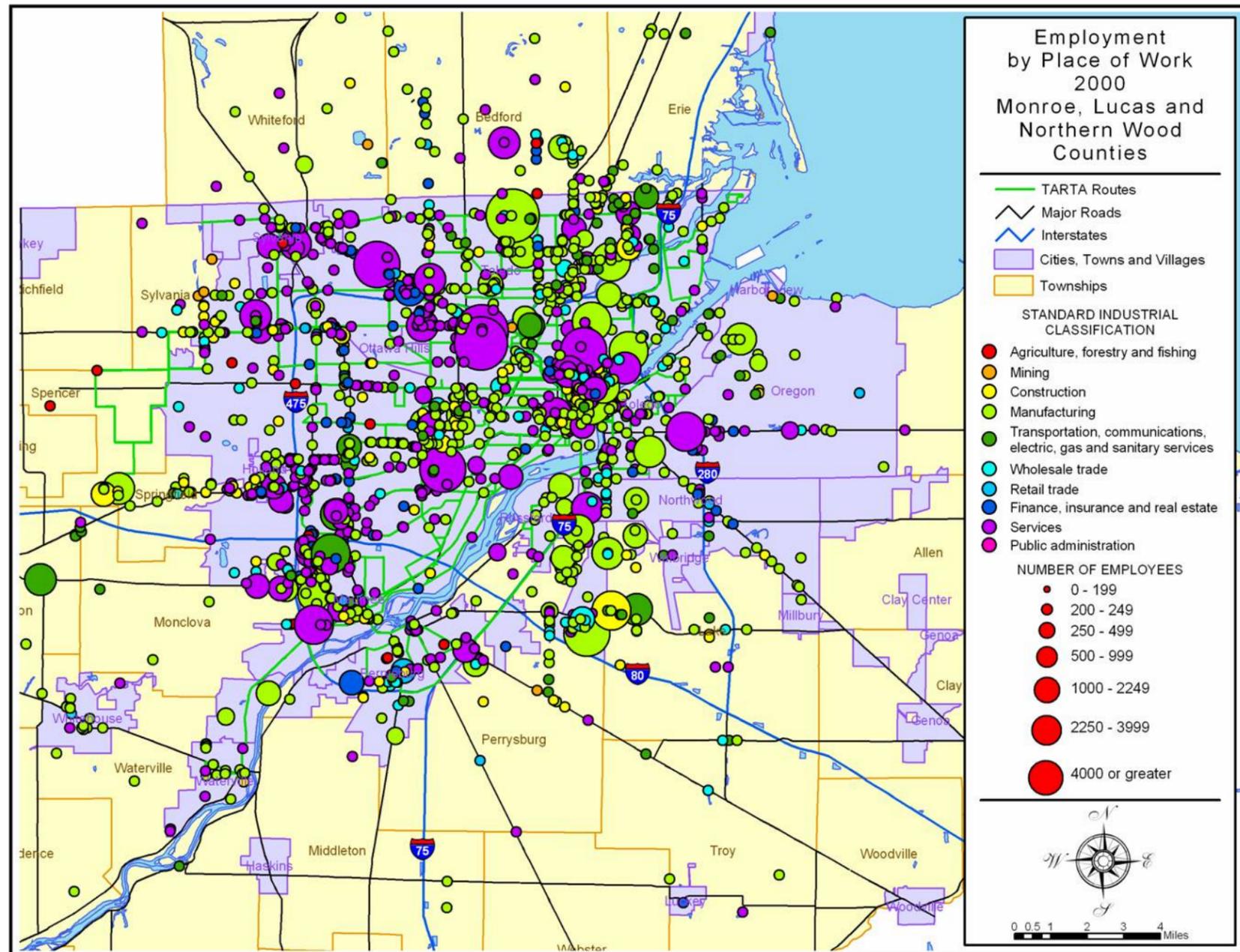
- Continued shift from primarily industrial/manufacturing employment to more diverse employment

Figure 4-15a: Employment Centers by Sector, 2003—Overview



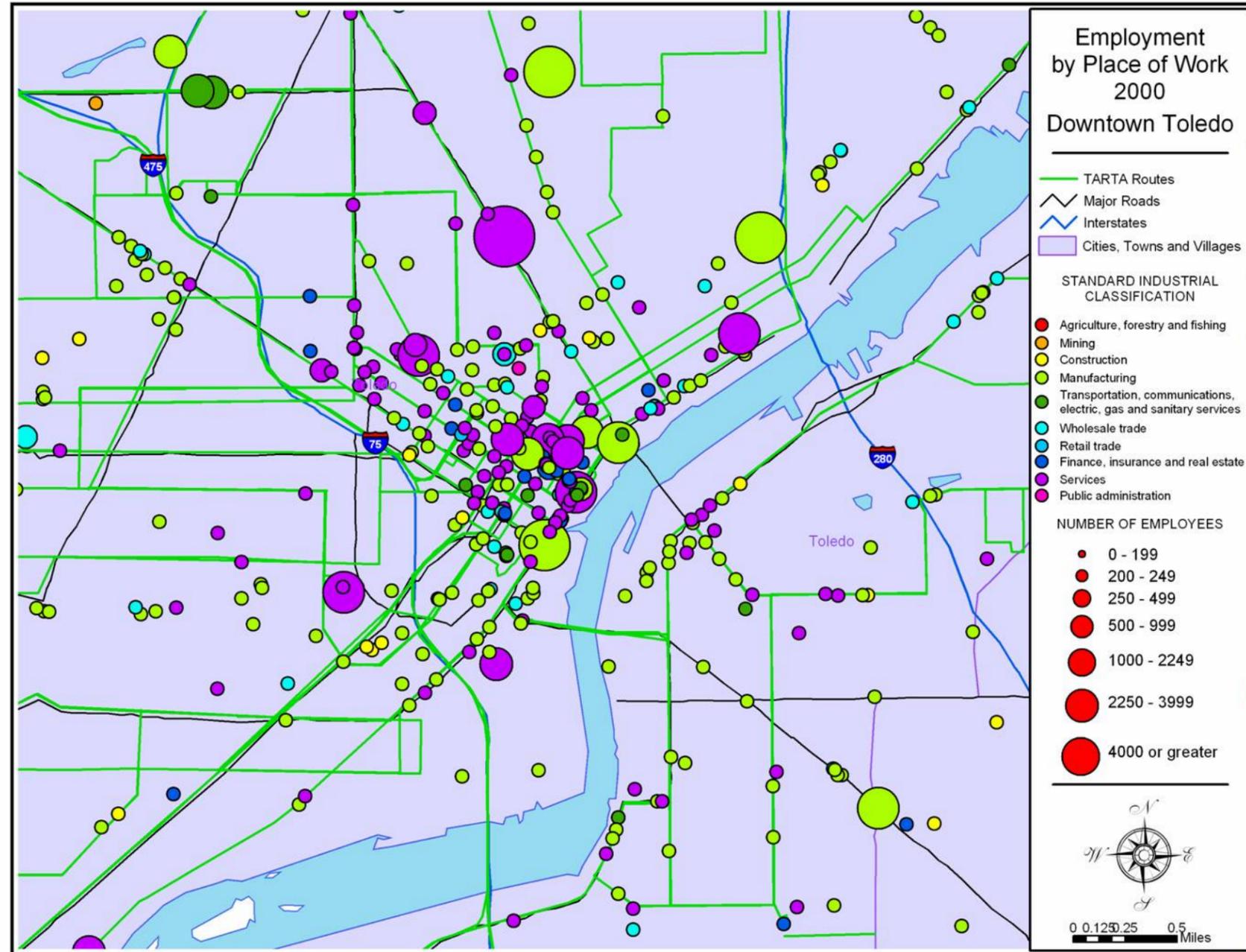
Source: Woods & Poole

Figure 4-15b: Employment Centers by Sector, 2003—Monroe, Lucas, Northern Wood County Portions of Study Area



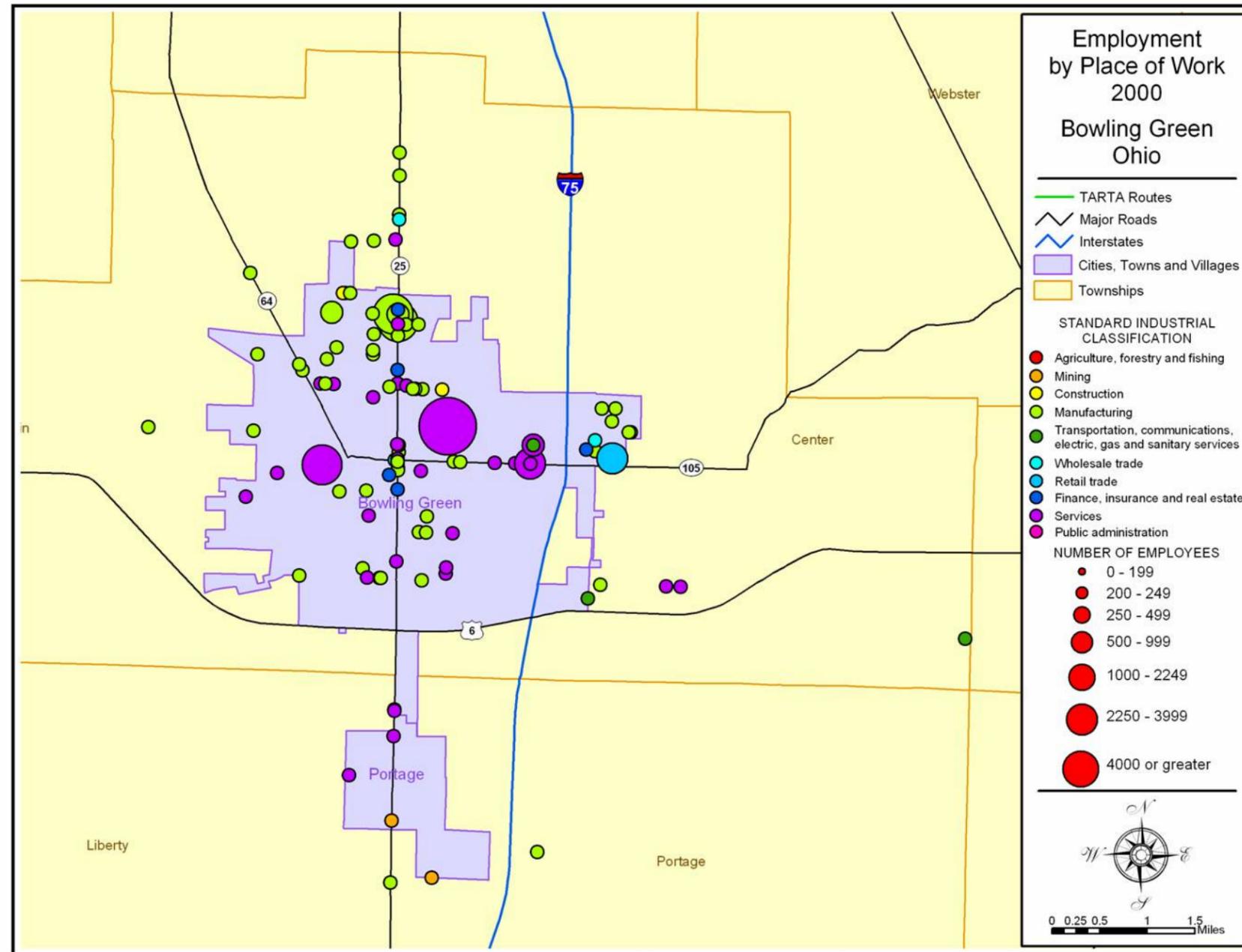
Source: Woods & Poole

Figure 4-15c: Employment Centers by Sector, 2003—Downtown Toledo



Source: Woods & Poole

Figure 4-15d: Employment Centers by Sector, 2003—Bowling Green



Source: Woods & Poole

Figure 4-16a: Locations of Major Public Destinations—Urban Area

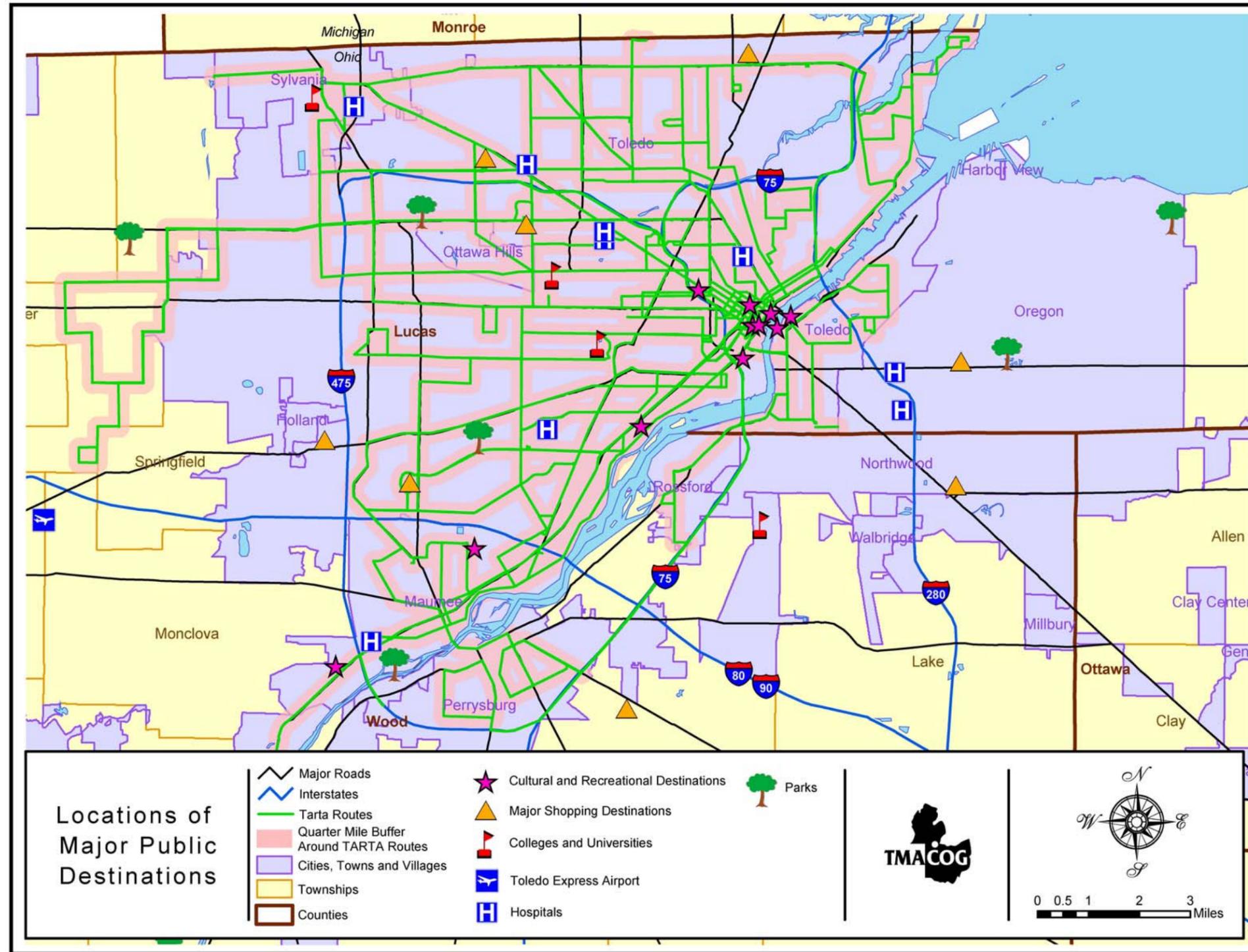


Figure 4-16b: Locations of Major Public Destinations—Downtown Toledo

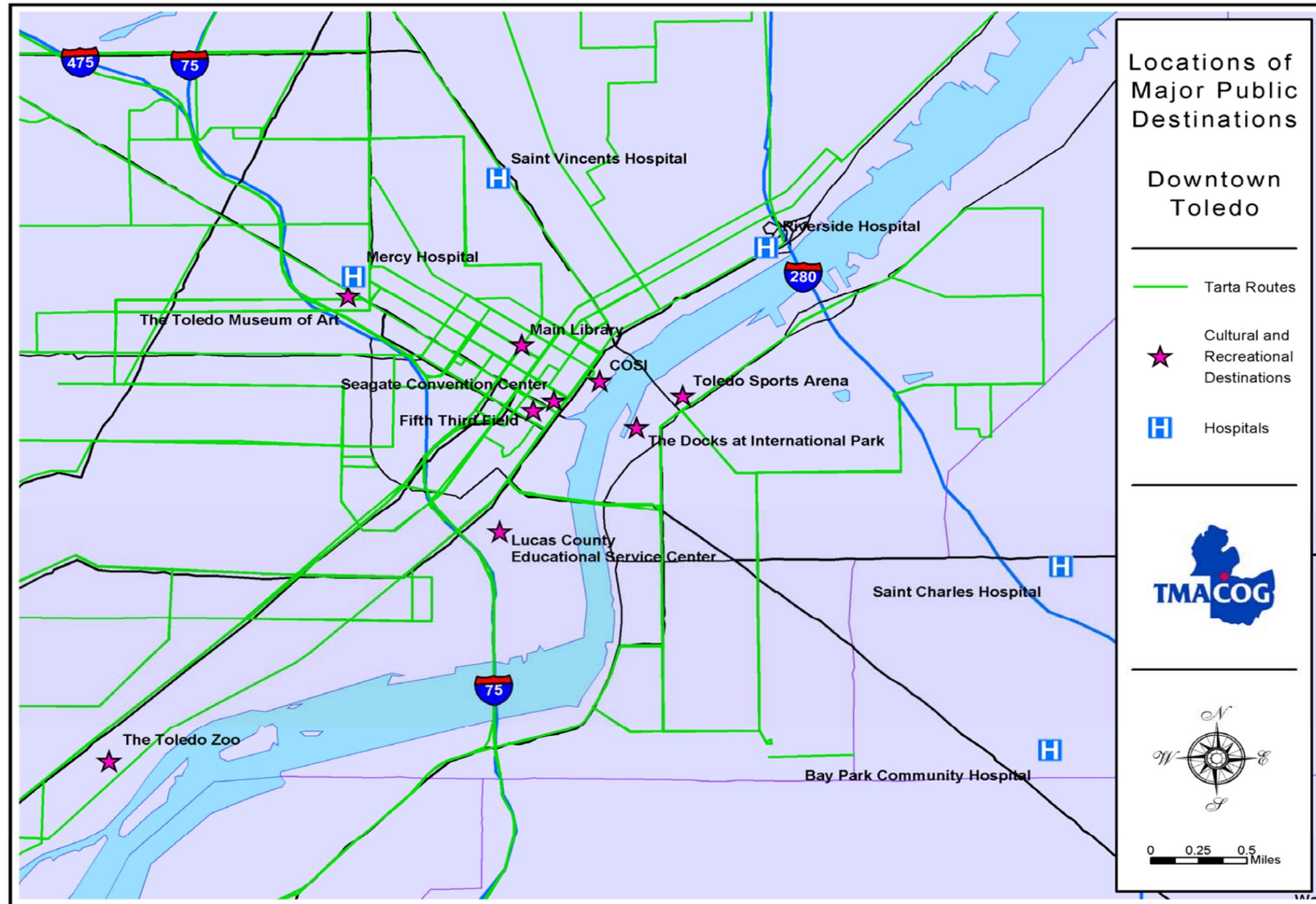
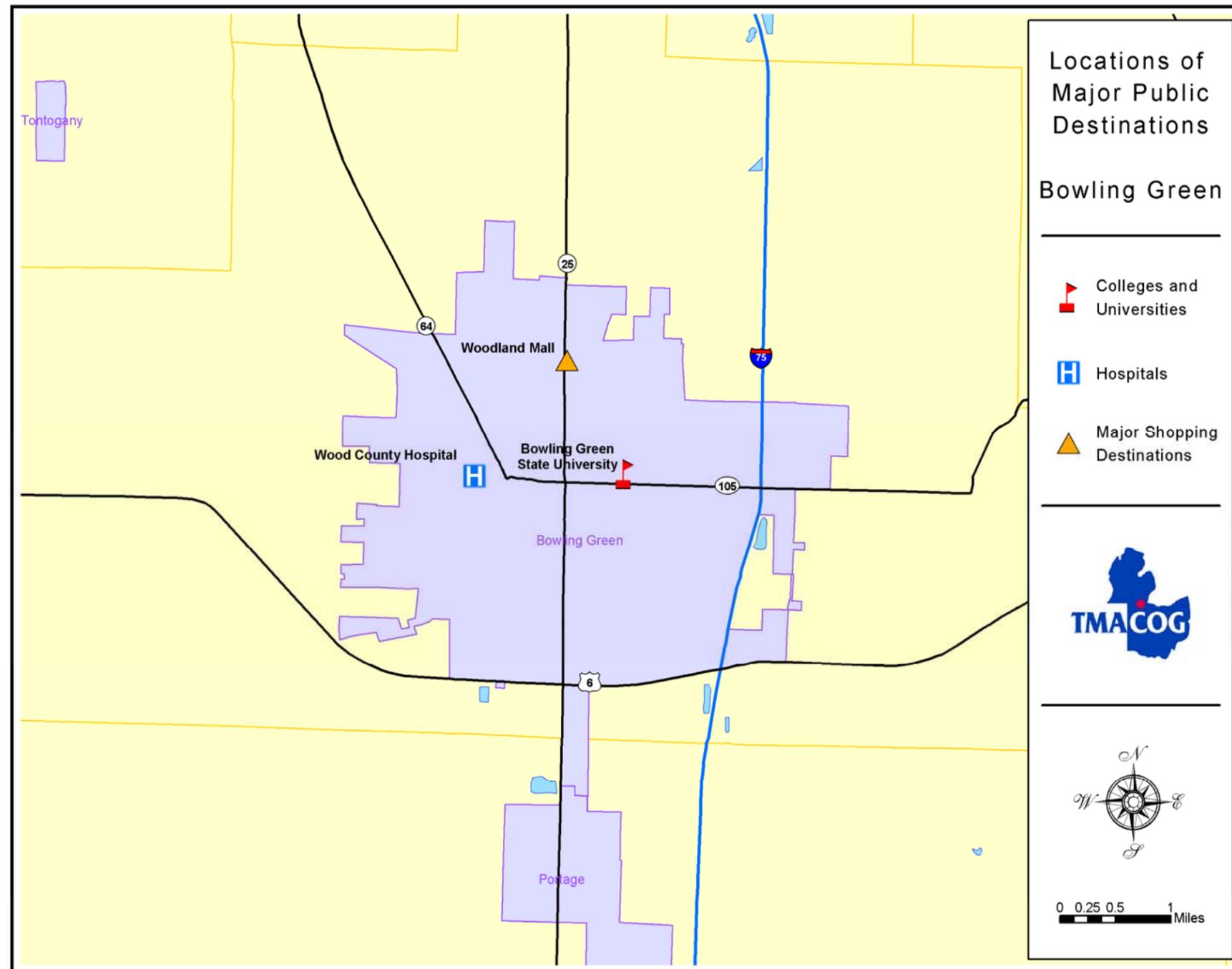


Figure 4-16c: Locations of Major Public Destinations—Bowling Green



- Shift from employment mainly in and near downtown Toledo to multiple major employment centers throughout region
- Strong employment growth in spite of low population growth
- Increased labor force participation by women, delayed retirees, students, and long-term unemployed or under-employed.

Six major economic and demographic trends in the United States over the past thirty years have had major affects on the market for public transit service. These have included:

- **Industrial Restructuring:** Shift from manufacturing employment to a more diverse mix of jobs.
- **Labor Flexibility/Instability:** increase in frequency of job changing, increase in irregular work schedules, part-time and seasonal employment.
- **Suburbanization:** movement of population and employment to locations outside the central business district and central city, resulting (in the absence of vigorous regional population and economic growth) in the reduction of central city employment and population size and density.
- **Telecommuting:** increase in the number of working people who do not make a daily work trip to a fixed work location.
- **Women's Labor Force Participation:** increase in the number of women of all ages participating in full or part-time employment. Women have traditionally been more inclined to use public transportation than men; however, advent of two-career families and "trip chain" commuting patterns have reduced transit's ability to respond to womens' transportation needs.
- **Postponed Retirement:** increase in the number of persons over age 60 who are remaining in the workforce on a full or part-time basis.

Several of these trends are documented as occurring in the TMACOG region by the data analysis presented above, or by statistical and anecdotal data presented elsewhere in this report. Generally, these trends have had a negative affect on the market for public transit services.

One of these changes that has a potentially negative effect is the rise of employment outside normal business hours. According to a study on Workers on Flexible Schedules produced by the Bureau of Labor Statistics, the percentage of U.S. employees with flexible work schedules has increased from only 12% in 1985 to nearly 29% in 2001. One third of these employees participate in a formal flex time program. Overall, the percentage of workers who work alternate shifts (evenings, nights, and rotating shifts) actually has fallen, from 18% in 1991 to 14.5% in 2001. This reflects the decline in manufacturing as an element of the economy and the decline in shift work among manufacturing workers. However, the increase in various kinds of services that require evening, night or rotating shifts has increase, as have the number of workers in those industries that work alternate shifts. Not unexpectedly, protective service workers (police, firefighters, and guards had the highest percentage of workers of alternate shifts (49%). However, 26% of retail sales and cleaning service workers, 30% of the health care industry, and 40% of food service workers also work non-traditional shifts. As noted in **Table 4-4** employment

in these service industries with a prevalence of alternate shift laborers is expected to grow in the future in the Toledo area.

A survey conducted for the Toledo area Employers' Association found that, among responding companies, approximately 28% of the reported staffing schedules were for a non-standard work week. **Table 4-5** shows the results of this survey. Among production workers, more than 30% work a non-standard employment situation, and more than 15% work in shifts in continuous 24-hour operations. Non-unionized workers showed the highest proportion of situations in which non-standard shifts were prevalent, with only half of such workers at large companies working a standard 40-hour, five-day work week. Perhaps surprisingly, smaller businesses with fewer than 100 employees had the lowest prevalence of non-standard work week situations.

Flexible hours and shift work have a negative effect on public transit because most public transit agencies—including those in the Toledo region, as will be discussed in Chapter —provide less service on evenings and weekends than is provided at peak travel hours, and provide little or no service at all during the night, when many shift workers must travel to or from their jobs.

However, some trends, including increased workplace participation by women and postponed retirement, could result in future increased demand for public transit services. Future labor shortages (such as that experienced in 1997-200) increased employment of elderly and younger workers, women and disabled person would increase demand for public transportation.

4.4 Transit Supportive Conditions in the TMACOG Region

The efficiency of public transit depends on a variety of external factors, including the size and strength of the core areas served, the pedestrian amenities available, the income and demographic characteristics of the population, and the propensity of the population to use public transit. However, factors such as population density, household density, and employment density are highly predictive of the success of transit in a given area.

i. Transit Supportive Conditions

Literature dating back many years recommends minimum levels of population, employment, or development density needed to support specific modes of transit or frequency of service. These recommendations are meant to serve as guidelines and not as prescriptions for or prohibitions against services or condemnations of existing transit practices. Many transit agencies use these guidelines as standards to identify potential markets and corridors for new or improved transit services.

Table 4-5: Percentage of Employers By Category Working Various Work Schedules, 2002-2003

	1-100 Employees				101-250 Employees				More than 250 Employees			
	Non-Unionized Production	Unionized Production	Technical and Clerical	Supervisory/Management/Professional	Non-Unionized Production	Unionized Production	Technical and Clerical	Supervisory/Management/Professional	Non-Unionized Production	Unionized Production	Technical and Clerical	Supervisory/Management/Professional
5 Days, 40 Hours	75%	79%	80%	74%	59%	77%	76%	73%	50%	61%	71%	66%
5 Days, Less than 40 Hours	7%	0%	11%	9%	0%	9%	7%	6%	4%	11%	8%	5%
5 Days, More than 40 Hours	8%	0%	5%	13%	7%	0%	5%	7%	0%	5%	8%	18%
4 Days	5%	0%	0%	0%	0%	6%	0%	0%	8%	0%	0%	0%
6 Days	2%	0%	0%	0%	0%	0%	2%	2%	0%	0%	0%	0%
Continuous 24-Hour Operation	3%	21%	1%	1%	33%	8%	10%	12%	38%	17%	11%	8%
Other	0%	0%	4%	2%	0%	0%	0%	0%	0%	6%	3%	3%
Number of Responses	81	4	85	86	27	13	41	41	114	45	164	165

Source: Toledo Area Employer's Association

Table 4-6 specifies the mode and service frequency supportable by various combinations of residential and employment density. The table shows, for example, that in an area with a residential density of 7-14 dwelling units per acre (the density in most areas of the City of Toledo, and some suburban areas in the study area) serving an employment destination area of at least 8 million square feet of commercial space (larger than downtown Toledo, or any other single contiguous commercial center in the TMACOG region), could support bus service at a 30-minute frequency. Areas with higher density (including some parts of the TMACOG region) can support higher frequency bus service, while higher density areas with larger commercial centers can support bus rapid transit (BRT), light rail (LRT) and even heavy rail transit, or subway services.

Service Mode	Service Frequency (minutes)	Residential Density (units/acre)	Commercial Density (millions sq ft)
No Service	None	0-2	0-4
Bus	60	3-6	5-8
Bus	30	7-14	8-20
Bus	15	More than 15	20-25
LRT/BRT	Less than 15	More than 9	35-50

Table 4-6: Transit Mode and Service Frequency Supportable by Various Levels of Combined Residential and Commercial Density LRT/BRT: Light Rail Transit/Bus Rapid Transit *Services may pass through areas with these characteristics between more densely developed areas

Based on the existing characteristics of the TMACOG region and areas served by transit industry standards and standards established by other transit systems, the study consultant team developed **a transit-supportive area standard for the TMACOG region**. This standard stipulated a minimum density of employment and population:

- Gross employment density of 3 persons per acre.
- Gross population density of 4 persons per acre.

Such densities are consistent with national guidelines for transit supportiveness, though on the lower end of the standards, befitting the relatively lower density of much of the TMACOG region. Areas meeting these density standards are considered transit supportive, and could support transit service within walking distance, ¼ mile of the transit route.

Figures 4-17a through **4-17c** show these transit-supportive areas and compare them with the fixed transit routes in the area. While many of these transit supportive areas are located near downtown Toledo and within the City of Toledo, many are located far from downtown Toledo, and some are located outside the fixed-route transit service area. Oregon, Northwood, Perrysburg Township, Monclova Township and Springfield Township, and much of Bowling Green are among the locations of significant concentrations of transit-supportive development that are not served by fixed-route transit.

Table 4-7: Coverage of TARTA Fixed-Route Bus Service in Study Area, Transit-Supportive Areas

	Area (mile ²)	Population	Employment
Study Area*	1,076.4	613,713	245,059
Transit Coverage Area within 1/4 mile of TARTA fixed routes	103.1	327,058	105,060
Percent of Study Area Not Served by Transit Network	90.4%	46.7%	57.1%
Transit-Supportive Area**	48.5	319,939	128,428
Transit-Supportive Area Served by Transit Network	33.6	244,378	91,930
Percent of Transit Supportive Area Not Served by Transit Network	30.7%	23.6%	28.4%

*Lucas and Wood counties; Erie, Bedford and Whiteford townships in Monroe County

**Areas with a gross employment density of 3 or more persons/acre and gross population density of 4 or more persons/acre

Table 4-7 includes calculations of the area served by fixed-route, public bus service (not including dial-a-ride services or university-based services) in the study area. The non-fixed route services were not considered for this analysis because they do not start service early enough or operate late enough to provide dependable service for most work trips, and in some cases do not link with the TARTA fixed route network. University services were not included because, technically, they are not public transit services, and because their operating schedules and characteristics also do not match many work trips.

As the table shows:

- More than 90% of the study area lies outside the fixed-route transit service area;
- 47% of the population of the region lies outside this area; and
- More than 57% of the region’s jobs, lie outside the reach of this transit network.

The second half of the table indicates:

- About half of the region’s population and employment is located within transit-supportive areas.
- However, more than 30% of this transit supportive area is not served by the fixed-route transit network.
- Even in the transit-supportive areas, significant numbers of people and jobs are outside the reach of the region’s fixed-route public transit network.

The transit-supportive areas not currently within reach of fixed-route transit service are primarily in communities outside the TARTA service area. About 25 percent of the population and jobs located in these higher-density transit supportive areas are not served by the transit network.

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Figure 4-17a: Transit-Supportive Areas—Area Overview

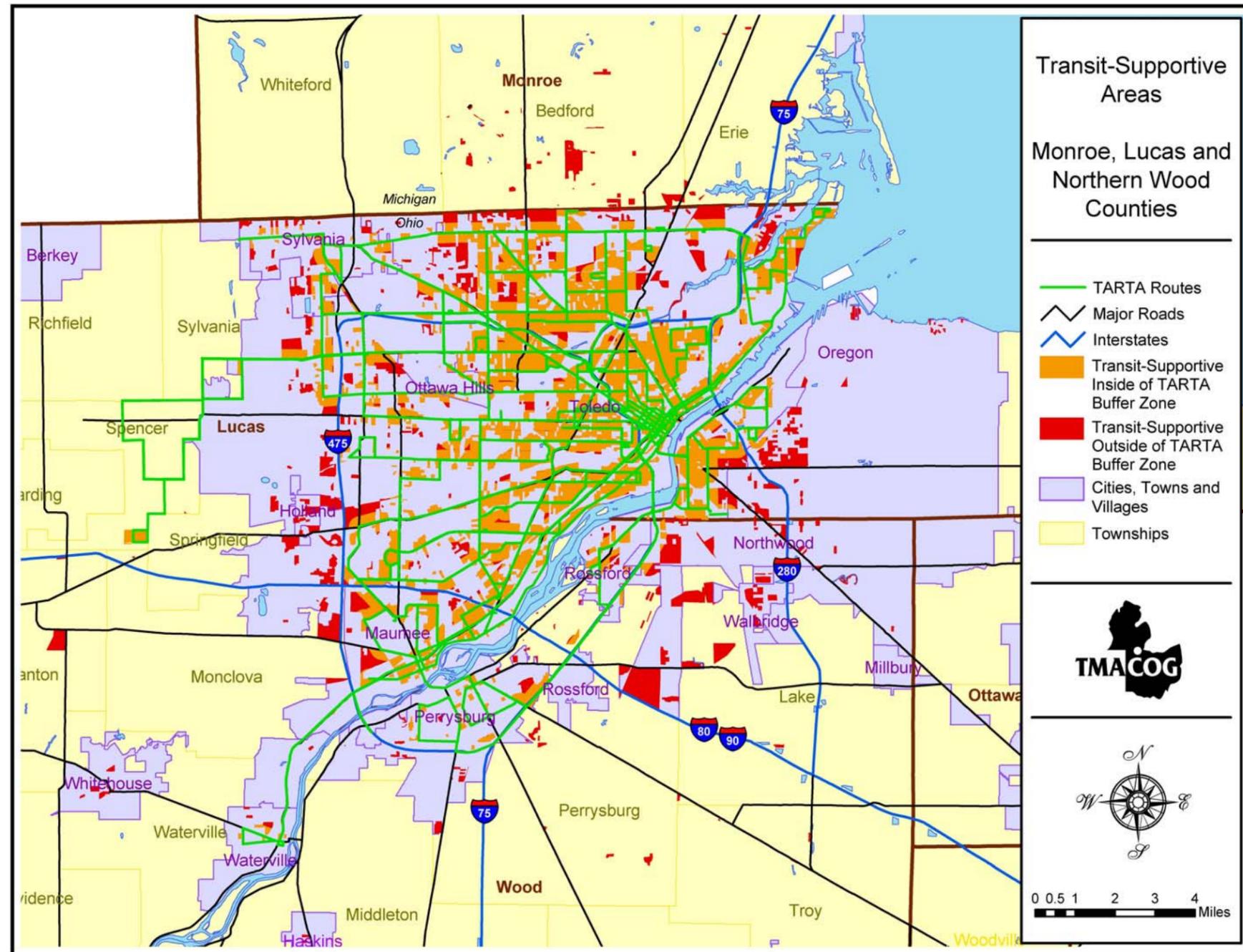
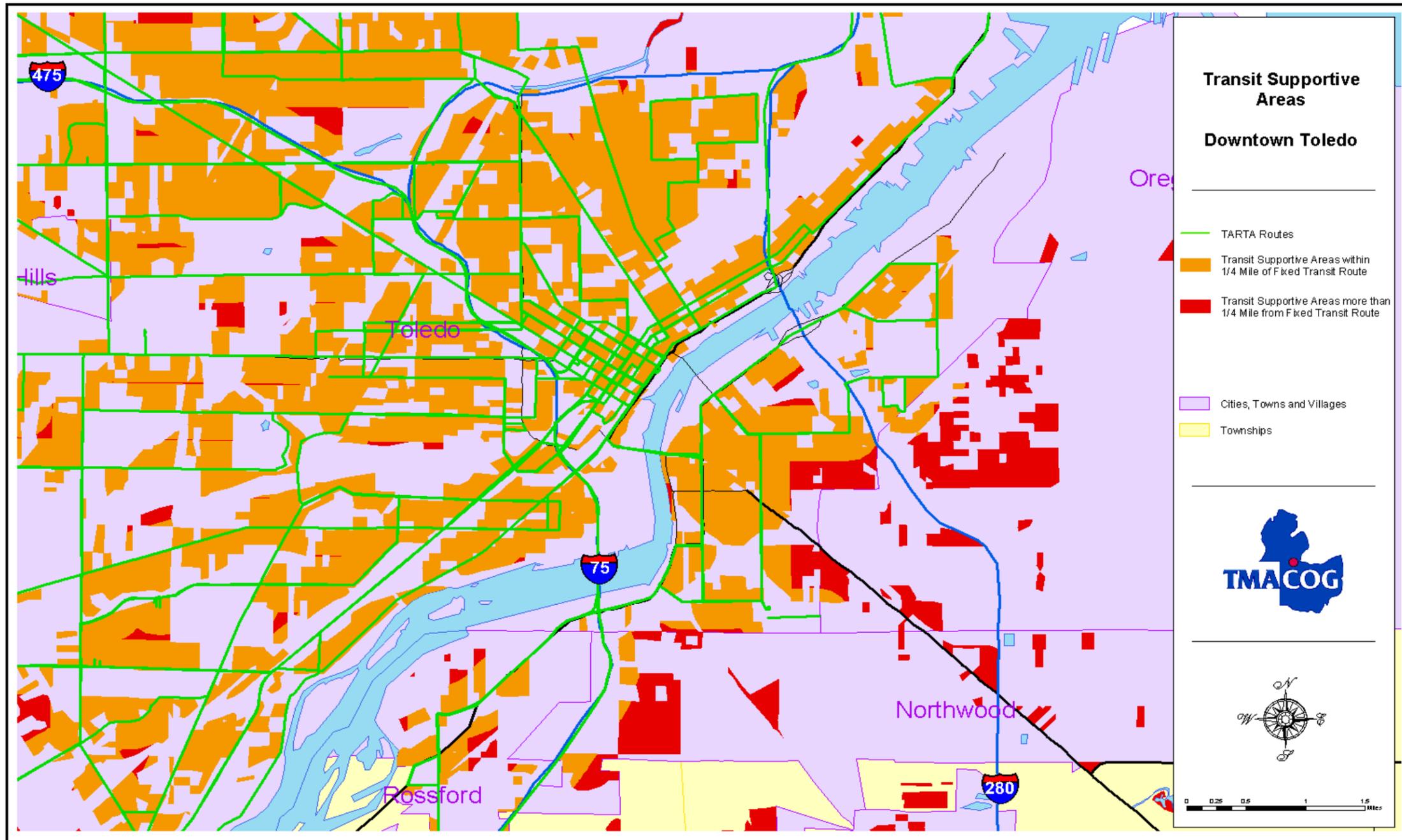
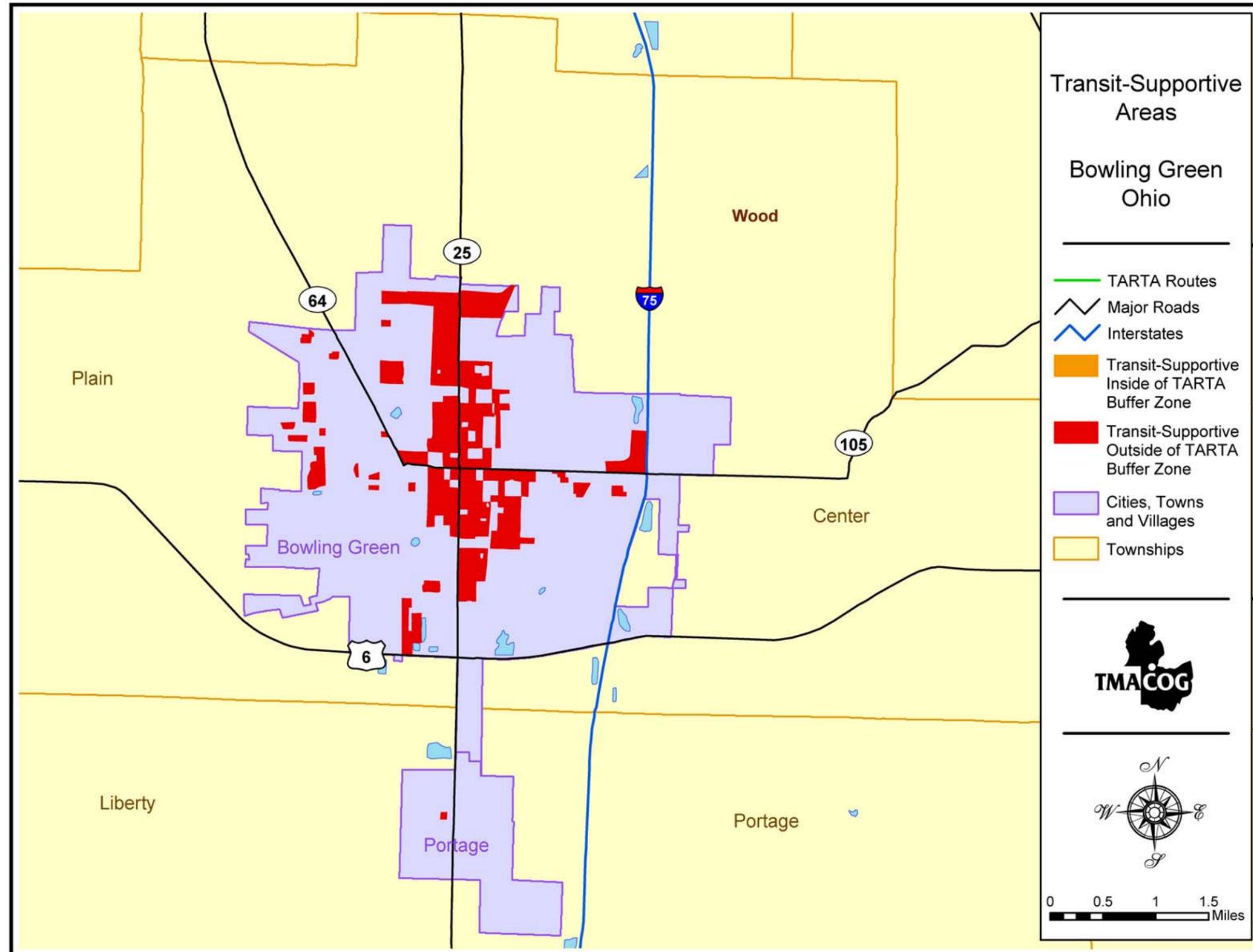


Figure 4-17b: Transit-Supportive Areas—Toledo Area



4-17c: Transit-Supportive Areas—Bowling Green



4.5 Senior Transportation Usage

The Office on Aging of Northwestern Ohio funds van transportation for residents age 60 and older in various northwest Ohio counties. One indication of the need for transportation among senior citizens is the number currently receiving transportation.

The following maps (**Figures 4-18a and b**) were developed to display the data provided by the Office on Aging for part of the current year (2004). Dots on the map represent addresses of those who have requested and received van transportation, for both trips to the doctor, and non-medical trips through the agency-funded services. This includes assisted transportation, with a staff person assisting the resident from their door to the van. It includes vans operated by specific senior centers (such as the one in North Baltimore) as well as agency funded medical transportation trips by vehicles operated by a local cab company.

The larger dots represent addresses at which more than one person resides, for example, an apartment complex where all residents have the same street address. The data provided and shown on the map *does not reflect the number of trips taken*, only the number of individuals.

The number of seniors who requested but did not receive transportation (for whatever reason) is currently not being recorded. Thus this information was not available to include in this report.

As indicated on the maps, older residents in both Lucas and Wood Counties are requesting transportation. This indicates that they are relying on publicly-funded transit (provided through a nonprofit agency) to reach essential services and increase their personal mobility.

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Figure 4-18a: Senior Transportation Usage

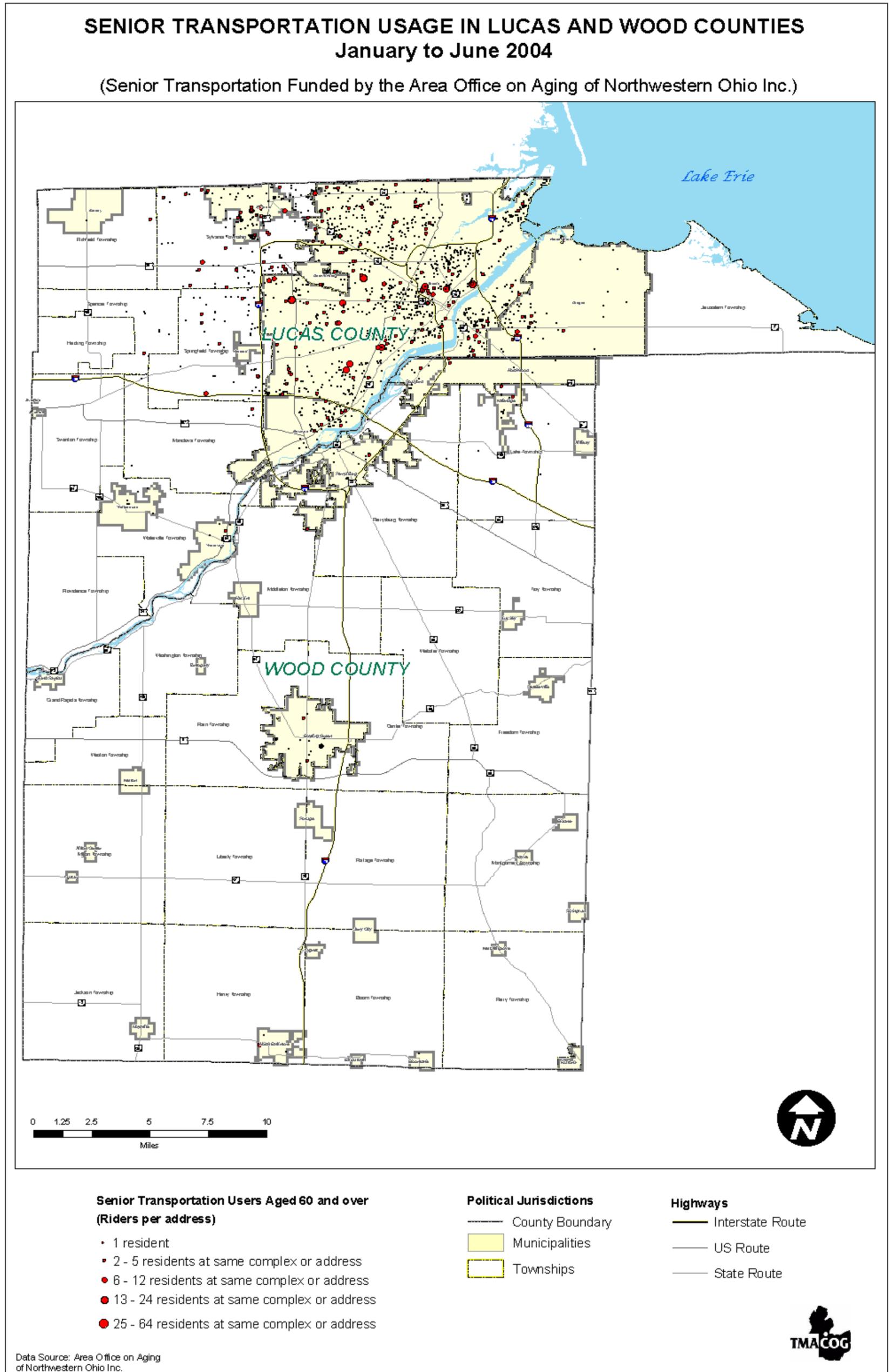
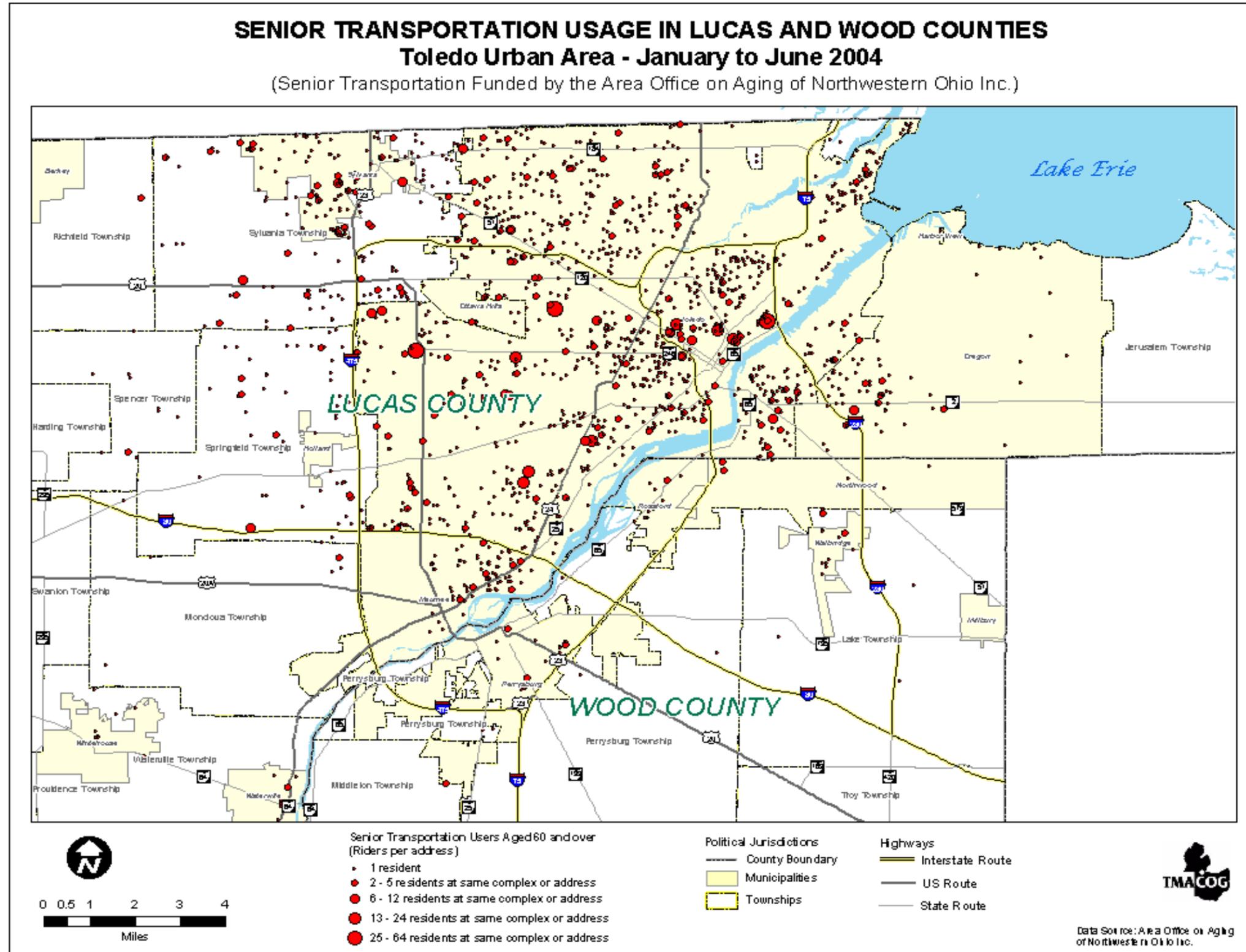


Figure 4-18b: Senior Transportation Usage, Urban Area



5. Assessment of Existing Transit

5.1 Public Transit Operations

i. Description of Services and Operating Characteristics

Several transit agencies and other entities provide a variety of transit services in the TMACOG region. **Table 5-1** broadly summarizes the agencies and their services. The map in **Figure 5.1** shows the approximate service areas of each.

Table 5-1. Transit Services in the TMACOG Region

Service Provider	Mode	Service Name
TARTA	Fixed-Route Bus	TARTA
TARTA	Flex-Route Bus	Maumee Call-a-Ride; Perrysburg Call-a-Ride
TARTA	Paratransit	TARPS
TARTA / Owens Community College	Regular Charter Bus	Study Bus
University of Toledo	Fixed-Route Bus	Intra-Campus Shuttle
University of Toledo	Fixed-Route Bus	Off-Campus Shuttle
Lake Erie Transit	Flex-Route Bus	Bedford Dial-a-Ride
Bowling Green State University	Fixed Route Bus	BGSU Transit
Bowling Green Transit	Subsidized Taxi	BG Transit

As the map in **Figure 5-1** indicates, large portions of the study area are not served by public transit, including many developed suburban areas. In addition, several densely populated smaller towns and cities, such as Bowling Green, are not connected to Toledo or the suburban areas of the region by public transit service.

TARTA Fixed Route Bus

The Toledo Area Regional Transit Authority (TARTA) operates an extensive system of 54 fixed-routes and services (including route branches and variations, school-oriented routes and the Maumee and Perrysburg Call-a-Ride services) in the Toledo region. The agency’s mission is to be the most innovative and responsive public transit system, by providing transit in a reliable, timely, safe, accessible, affordable and friendly manner. In addition to the City of Toledo, TARTA also serves the City of Sylvania and Sylvania Township, Ottawa Hills, Maumee, Perrysburg, Rossford, Spencer Township and Waterville.

Maps of TARTA’s fixed route system can be found in **Figures 5-2** and **5-3**. All of TARTA’s routes but two provide radial service focused on downtown Toledo, where routes converge to serve five major stops on the “Loop”, a dedicated, one-mile, 16-foot-wide busway that operates on Summit, Jefferson, Erie and Jackson Streets. The loop features a series of bus stations, several of them with comfortable indoor waiting areas. On Jefferson Street, the bus lane operates as a contraflow lane, allowing buses to operate in a westbound direction while auto traffic operates one-way eastbound. The downtown loop promotes timed transfer activity, providing relatively efficient connections throughout the service area while avoiding the

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Figure 5-1: Bus Service Areas In The Study Area

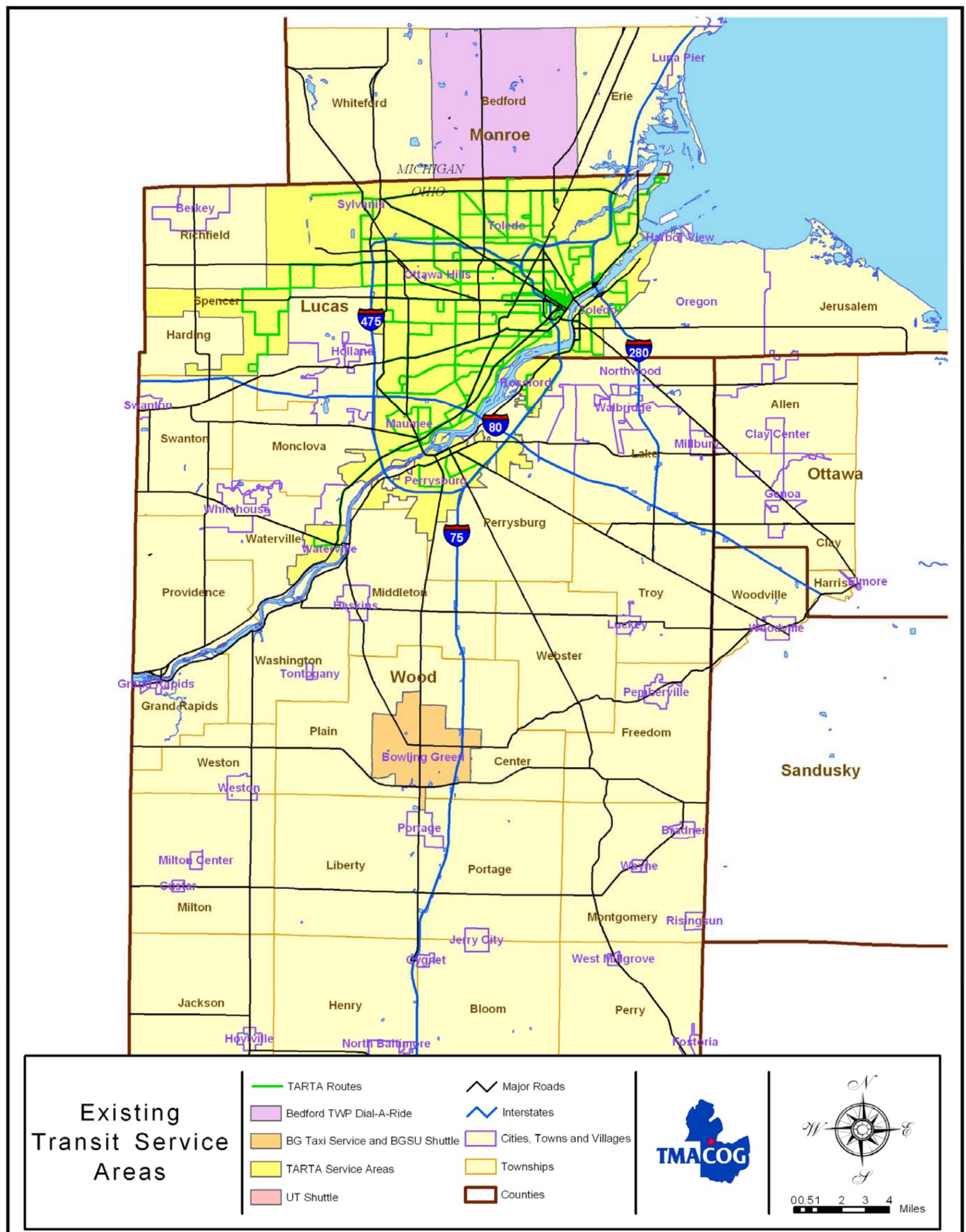


Figure 5-2: TARTA Monday Through Friday Fixed Route Bus Service Map

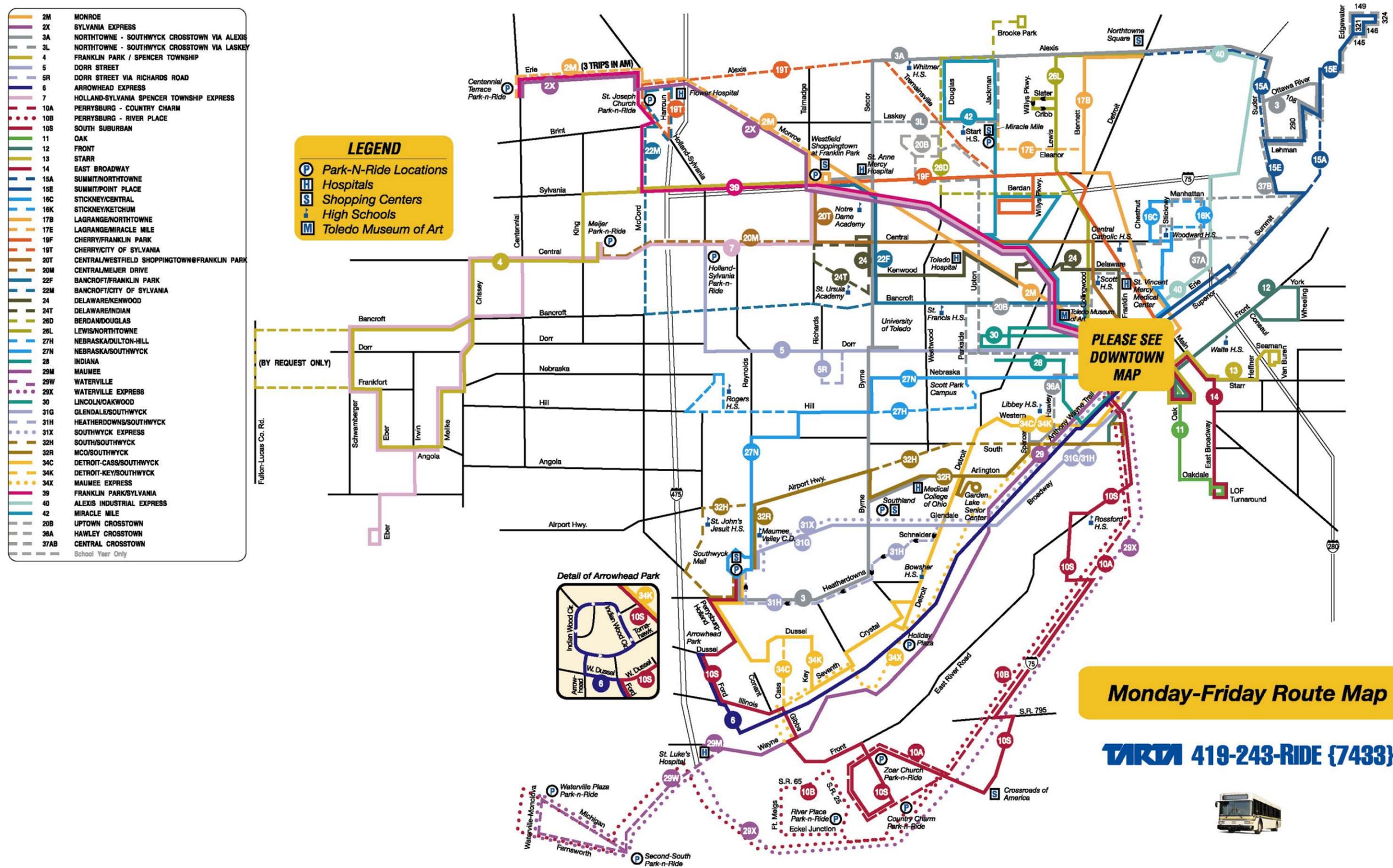
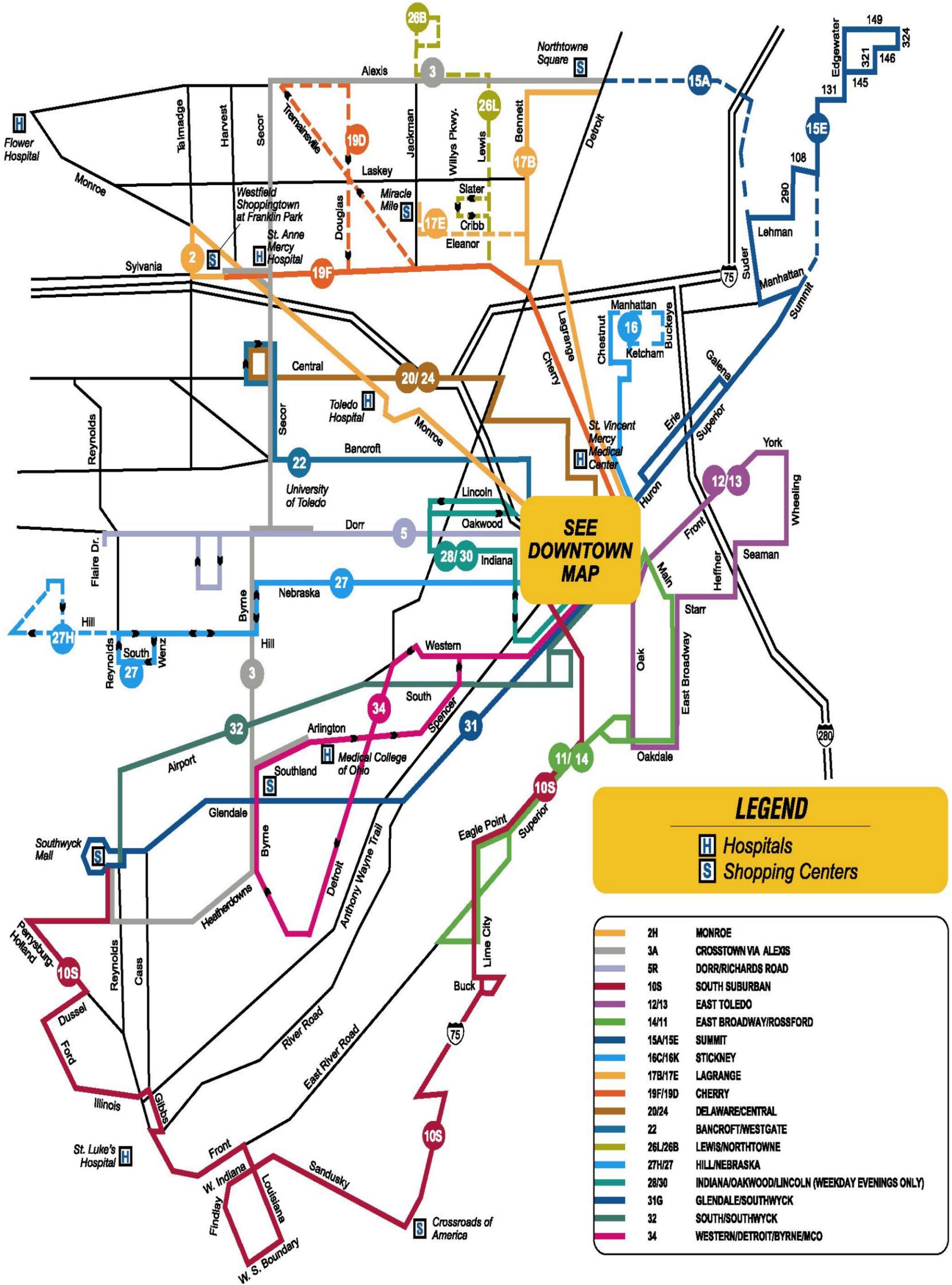


Figure 5-3: TARTA Evening, Saturday, Sunday and Holiday Fixed Route Bus Service Map

**Route Map for Evening, Saturday,
Sunday and Holiday Service**

TARTA 419-243-RIDE {7433}



operation of crosstown routes. Details on each route are available on TARTA's website, www.tarta.com.

On TARTA's routes, buses typically arrive every 30 minutes during peak periods and every 30 or 60 minutes during off-peak periods. TARTA fixed bus routes typically operate from about 5 a.m. to between 10 p.m. and 11 p.m., though several routes operate only during peak hours. TARTA interlines, or through-routes, buses on several routes, providing one-seat rides where a transfer otherwise would be required, and waiving the normal 10-cent transfer fare. TARTA has an average of around 16,000 weekday boardings. TARTA provides service on Saturdays, Sundays and holidays on 17 routes, typically operating at 70-minute headways. Transfers are facilitated via the "line up", when buses converge in downtown Toledo every 70 minutes and lay over together on Jackson Street between Summit and Erie.

TARTA offers several special fixed-route services as well. Owens Community College and TARTA offer a bus service to Owens Community College (which is located in Perrysburg Township, outside the TARTA service area). The service operates Monday to Friday during the fall and spring semesters, and is available for students, faculty and staff only. The route is chartered by Owens Community College, which pays TARTA approximately \$100,000 each year to subsidize the service. The bus operates from downtown Toledo directly to the college and circulates through the Owens campus to collect and distribute passengers.

Since 2002, TARTA has also operated two flex-route "Call-A-Ride" services, initially in Perrysburg and later also in Maumee. These services operate from 6 a.m. to 9 p.m. daily. These routes could be characterized as route deviation circulator bus services. The routes operate with scheduled timepoints and offer connections to the fixed-route TARTA services that serve Perrysburg and Maumee, but deviate from their regular route to provide curb-to-curb service on-demand. Cash fare is 50 cents. In early June 2003, the two systems were interconnected to allow service between Maumee and Perrysburg. A new call-a-ride is to be initiated in Sylvania in 2004.



Figure 5-4: TARTA downtown trolley routes showing connections to the water taxi.

Downtown, travelers enjoy access to two midday rubber-tire trolley routes, oriented to providing service during the lunch hour to restaurants for downtown workers and visitors. **Figure 5-4** shows the alignment of the trolley routes. The Red Loop serves from COSI (science museum) along the waterfront, northwest to Madison and 17th Street. The Blue Loop runs from Government Center to Erie Street Market and Farmers Market, an attractive lunch destination just beyond downtown proper.

The services are operated with two vehicles on each route. The Red (east-west) route operates on a seven-minute headway, while the Blue (north south) route, which operates a longer alignment, operates on a 12- 13-minute headway. Fare for the downtown services is 25 cents. TARTA also provides direct door-to-door trips for parties of six or more that call in advance. During the summer months, the trolley provides a connection to the private water taxi service that operates between the west bank of the Maumee River and the Docks restaurant complex on the east bank of the Maumee River.

TARTA provides a popular special service between Mud Hens baseball games at Fifth Third Field and 13 area park-and-ride lots located in every corner of its service area. For the first year of the service, inaugurated to coincide with the Mud Hen's move into their new stadium in downtown Toledo, the service was provided free. (TARTA has two game day-only transit centers built into Fifth Third Field.) Round trip fare is just \$1 per person or \$2 for groups of up to five people for trips originating at the park-and-ride lots. Boarding a regular TARTA bus route to the game costs the normal 85 cents cash fare, but the return trip is free if you have a Mud Hens ticket stub.

The agency's dedication to positive image and responsiveness is evident in many ways, and TARTA is known in the industry for aggressively pursuing innovative approaches to managing, operating and providing transit service. The downtown loop, which was created in the 1980s, is a highly unusual, and highly successful, approach to facilitating downtown transfers and distributing passengers through the downtown, while limiting bus traffic within the inner core of the downtown and the damage that buses often cause to downtown streets. The array of five transit centers around the loop provides a high level of comfort for passengers in Toledo's hot summers and cold, windy winters, and are prime examples of high quality architecture of their time period. TARTA provides a very user-friendly interactive web site, makes available the Toledo Blade on board its buses (at the regular newsstand price), operates suburban express park-and-ride services, provides bike racks on all its vehicles, has implemented "wrapped bus" advertising on a number of vehicles, and has achieved 100% accessibility for the mobility impaired on all its fixed route buses and at all its facilities. In addition, TARTA provides several special and/or innovative services – such as flex-routes (on-demand services with some scheduled time points), the downtown lunch trolleys, and the Mud Hens Home Game special services and fares.

TARPS

TARTA also operates a door-to-door, on-demand paratransit service called TARPS (Toledo Area Regional Paratransit Service). TARPS provides paratransit service to persons with disabilities throughout the communities it serves. This standard exceeds the requirements of the Americans with Disabilities Act of 1990 (ADA), which requires that transit systems serve only trips within $\frac{3}{4}$ mile of fixed route bus routes. TARTA contracts with Laidlaw Transportation Services to provide the TARPS service. TARTA owns the vehicles, radios, and scheduling software but does not directly employ the operators of the TARPS service. Laidlaw employees operate and maintain the vehicles and schedule the services, and Laidlaw owns the operating and maintenance facility in West Toledo.

TARPS service volumes and ridership have grown steadily and rapidly in recent years, reflecting a national trend. For example, in 2000, TARPS underwent a major upgrade and

experienced a 50% increase in service hours and a 58% growth in ridership, while denying not a single request during the last 11 months of the year. In the most recent year for which full data is available (2001), TARPS carried about 40,000 passengers. According to TARTA, TARPS carried nearly 100,000 passengers in FY 2003.

Comparison of TARTA with peer group properties, as shown in **Table 5-5**, indicates that while most peer agencies are also showing marked increases in the volume of paratransit service demanded, TARTA's growth is higher than any of the others. The peer group analysis also indicates that TARPS/TARTA actually provides a substantially lower volume of paratransit service than many of the peer group transit agencies. TARPS/TARTA provides less service in absolute terms, compared to some smaller cities. The ratio between the volume of fixed route service that TARTA provides and the volume of service that TARPS provides is also higher than at peer properties. Thus, part of the high rate of growth in paratransit service demand in Toledo may be simply a function of the Toledo area "catching up" to the rates of use in other cities. If so, these rapid rates of growth may level off within a few years.

The validity of the comparison may be attenuated by the fact that each of the transit agencies has different eligibility requirements for passengers to qualify for door-to-door paratransit service. For example, some agencies provide paratransit service to elderly persons regardless of their disability status, sometimes in response to state or local laws that exceed ADA requirements. The State of Ohio has not imposed a standard higher than those required under the ADA. ADA does not require that paratransit services be offered to elderly persons of any age, unless they have a mobility impairment that prevents them from using regular fixed-route transit.

As with all limited resources, demand for paratransit service sometimes exceeds supply. Members of the public with disabilities have expressed displeasure with the TARPS service, in part on the basis of denial of service. TARTA instituted a "zero denials" policy in February 2000.

University of Toledo Bus Service

The University of Toledo operates an extensive system of fixed-route bus services, with several intra-campus shuttles on its main Bancroft campus and longer routes connecting the main campus to off-campus apartment complexes and the Scott Park campus. Five fixed routes provide off-campus connections, as shown in **Figure 5-5**, and three shuttles loop through campus as shown in **Figure 5-6**. All routes serve a Transportation Center on the Bancroft campus.

During the spring and fall semesters, four off-campus routes serve apartment complexes and provide hourly service from roughly 7 a.m. to 10 p.m. or 11 p.m. The Oak Hill service, shown in blue, has been discontinued for the 2003-2004 academic year. The short Scott Park route provides half hourly service during the same period. All routes serve the Transportation Center on the main campus and depart either on the hour or half past the hour. Routes complete their loops within a half hour, at which point buses interline to other routes, so that the entire system requires operation of only three vehicles during its peak operating period.

Figure 5-5. Off-Campus Route Map, University of Toledo

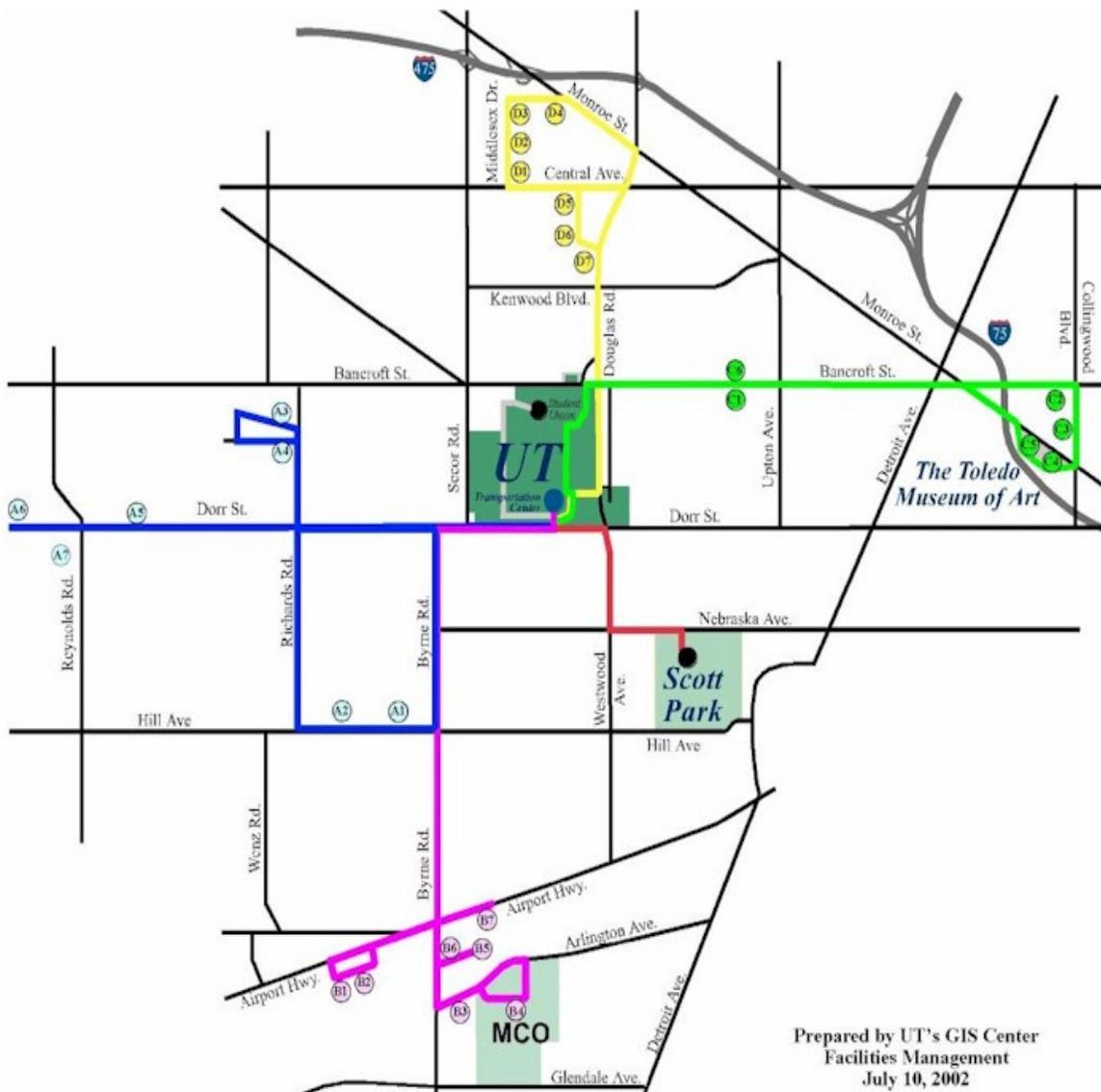


Table 5.2 shows estimated ridership levels for four of the University's five off-campus bus routes. The Hampshire Heights route attracts the highest ridership: about 500 students use this route regularly. Altogether, the four routes carry more than 230,000 annual boardings, exceeding the volumes carried by some smaller public transit systems.

In addition to the routes described above, three intra-campus shuttles connect the Transportation Center (with connections to off-campus routes), the Student Union, classrooms and numerous parking lots on campus, as shown in **Figure 5-6**. Two of the shuttles (Blue and Yellow Loops) operate Monday to Friday from 7 a.m. to 7 p.m., providing service four times per hour; and the Night Shuttle (Red Loop) operates from 7 p.m. to 11 p.m. Monday through Thursday.

Figure 5-6. Intra-Campus Route Map, University of Toledo

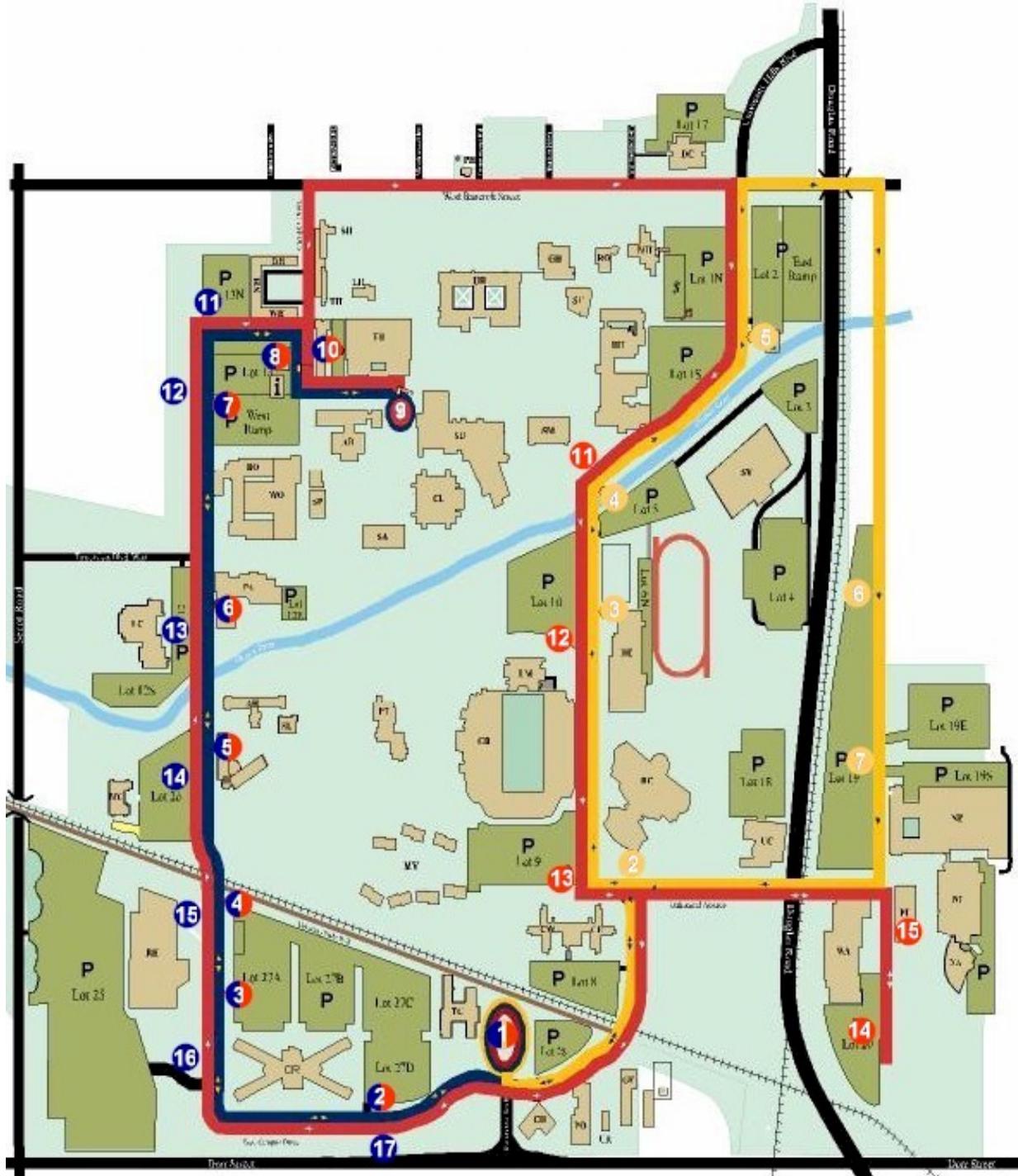


Table 5-2. University of Toledo Off-Campus Bus Estimated Ridership, 2002-2003

Route	Direction From Main Campus	Annual Boardings	Students Who Use Service
Medical College of Ohio (MCO) at Toledo	South	34,900	150
Oak Hill (Discontinued)	West	27,900	120
Hampshire Heights	North	150,900	501
Museum of Art	East	18,500	79
Scott Park Campus	Southeast	n.a.	n.a.
TOTAL	-	232,245	850

During the summer, when the University's population is significantly lower, the intra-campus shuttles do not operate, and the off-campus routes all serve the Student Union instead of the Transportation Center. During the summer semester, only three of the five off-campus routes provide service, still at hourly headways from around 7 a.m. to 10 p.m.

Bowling Green Transit

Bowling Green (BG) Transit is a curb-to-curb, demand response service whose route is determined by passenger reservations. The service is operated by a local, independent taxi service under contract with the City of Bowling Green. The taxi service provides service to the curb of each passenger's desired origin and destination, and operators may assist passengers in boarding and alighting, though they are not allowed to assist passengers to and from their front doors. Service currently is limited to origins and destinations located within the City of Bowling Green. Hours of operation are 6 a.m. to 8 p.m. Monday to Friday and 10 a.m. to 4 p.m. on Saturdays. No service is provided on Sundays or major holidays.

Fares are charged at a flat rate of \$2.50 per trip for regular passengers. A \$1.25 discount is provided to children aged four to 13, to senior citizens aged 65 and above, and to any person with a permanent disability who has a city transit identification card. Reservations are requested well in advance. BG Transit anticipates carrying 50,000 trips in 2003.

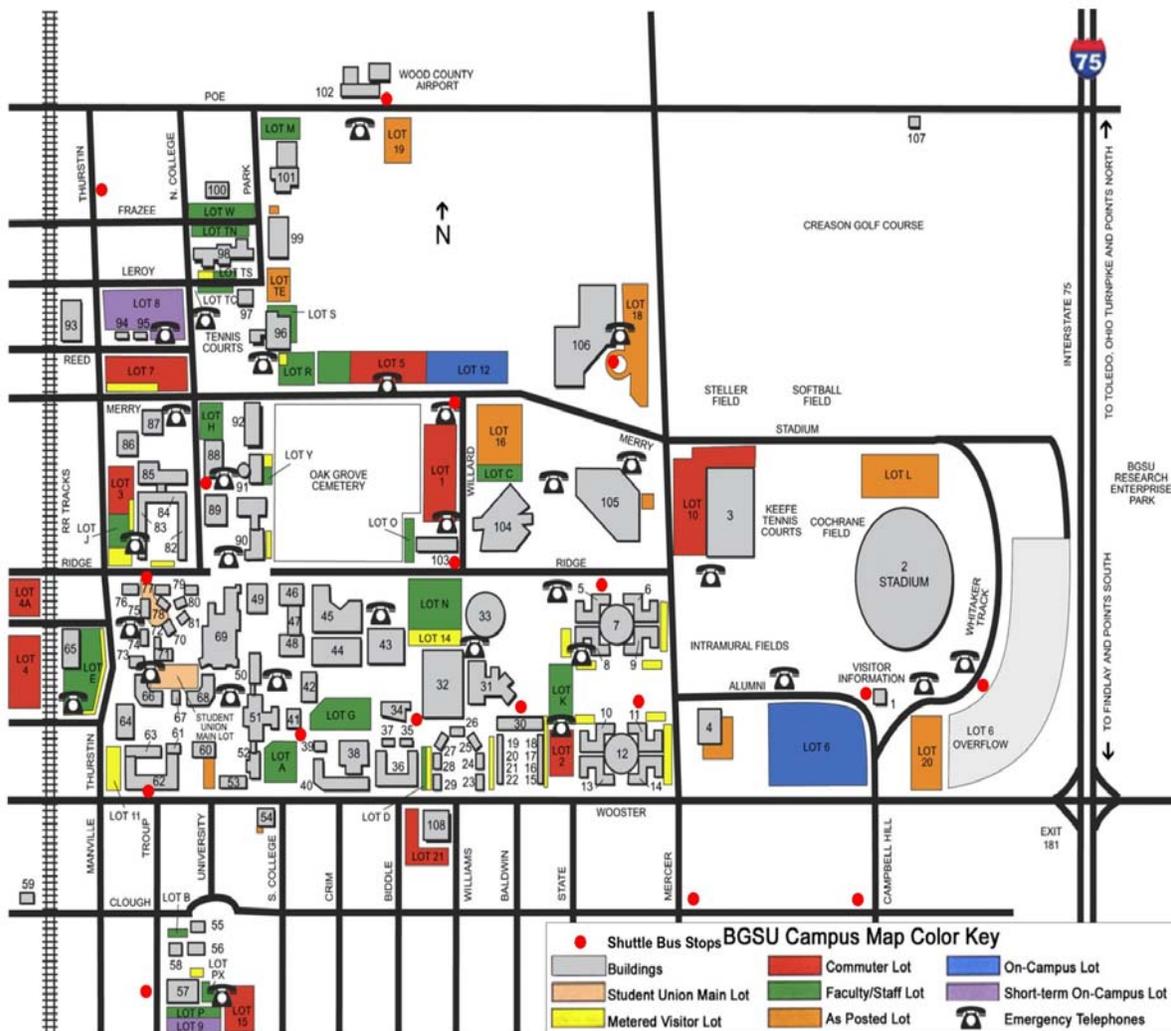
Service is available to anyone in the general public. Approximately half of the current riders are elderly or disabled.

Bowling Green State University Bus Service

Bowling Green State University (BGSU) Parking & Traffic division operates a three-route, fixed-route bus service on their campus and within the City of Bowling Green. The North Route serves the mostly student population on the north side of town; the Main Route covers just the campus; and the South Route serves students who live south of campus. Together the three routes cover about one-third of the area of the city of Bowling Green. These routes operate from 7 or 7:30 a.m. until 5 p.m., with the North route operating to Kroger's and the Woodland Mall on North Main Street (SR 25). A special night and weekend provides basic transit coverage to the campus and city until 3 a.m. The routes are described in detail on the Parking & Traffic web page at <http://www.bgsu.edu/offices/safety/parking/shuttle-routes.htm>. Locations of shuttle bus stops within the campus are shown in **Figure 5-7**.

The bus service is primarily oriented to serving the transportation needs of residential students and provides service within the main campus, connects outlying areas of the campus to the main campus area, and provides connections for students traveling to residential or employment sites off campus. The service operates only during the nine-month academic year. There is no fare charged for using the service. It is funded by BGSU, and service is nominally restricted to student use. In reality, the service operates as a free, open-door fixed-route bus system that serves students, residents, and visitors to both the University and the city of Bowling Green.

Figure 5-7: BGSU CAMPUS MAP



The three routes attract about 503,000 boardings per year (concentrated in the nine months of operation), with about one quarter in the first three months of the year and the other three-quarters in the other six months. Ridership is higher during winter and early spring months because the cold and wet weather during those periods is less conducive to walking.

The service requires five buses plus one spare bus. BGSU also has one van to supplement its fixed-route services. The van serves "educational and health" purposes.

BGSU's service does not operate outside the City of Bowling Green and provides no transfer connections with TARTA fixed route bus service. The BGSU Campus Bus Service is not associated with the BG Transit subsidized taxi service.

Bedford Dial-a-Ride

The Bedford Dial-a-Ride provides curb-to-curb service for Bedford Township (Michigan) residents, for trips within the township, nearby locations in adjacent Erie and Whiteford Townships, and connections to TARTA at transfer points in Toledo. Bedford Dial-a-Ride is a one-bus operation, operating as a route deviation circulator bus service. Lake Erie Transportation Commission operates the service. The Commission also operates Lake Erie Transit (LET), the seven-route, public bus system in Monroe County, Michigan; the Essential Transportation Service (ETS), a fully accessible door-to-door demand responsive service in Monroe County designed to serve handicapped persons and senior citizens. ETS is a contracted service that primarily serves community mental health and the Commission on Aging. The fixed route service and ETS are focused on the City of Monroe, located about 10 miles north of Bedford Township, and provide no service to Bedford Township or connection to the Bedford Dial-a-Ride service. Bedford Dial-a-Ride links to the TARTA fixed-route service.

Bedford Dial-a-Ride serves the Northtowne, Miracle Mile, and Alexis Park Shopping Malls in Lucas County at scheduled times. The routes stop at the malls twice each day and allow for transfers to the TARTA fixed-route bus system. TARTA and LET have an agreement permitting passengers to transfer between the two systems free of charge. However, the Bedford Dial-a-Ride service is the only connection between the LET system and TARTA, and connections occur only at the locations listed above. Thus, there is no connection between TARTA's fixed route service and the LET fixed-route network serving the City of Monroe.

The Bedford Dial-a-Ride service operates Monday to Friday, 9 a.m. to 5 p.m. No service is provided on the weekends or on major holidays. About 7,500 passengers board the Bedford Dial-a-Ride annually. Flat fares are charged at 60 cents per ride for adults and 30 cents for elderly, handicapped, and children under 12. The fare is free for children under 5.

The service has an average of approximately 150 to 350 boardings per week. Ridership varies greatly over the course of the year. During the summer, for example, the route carries many groups and summer school students.

Ottawa County Transportation Agency

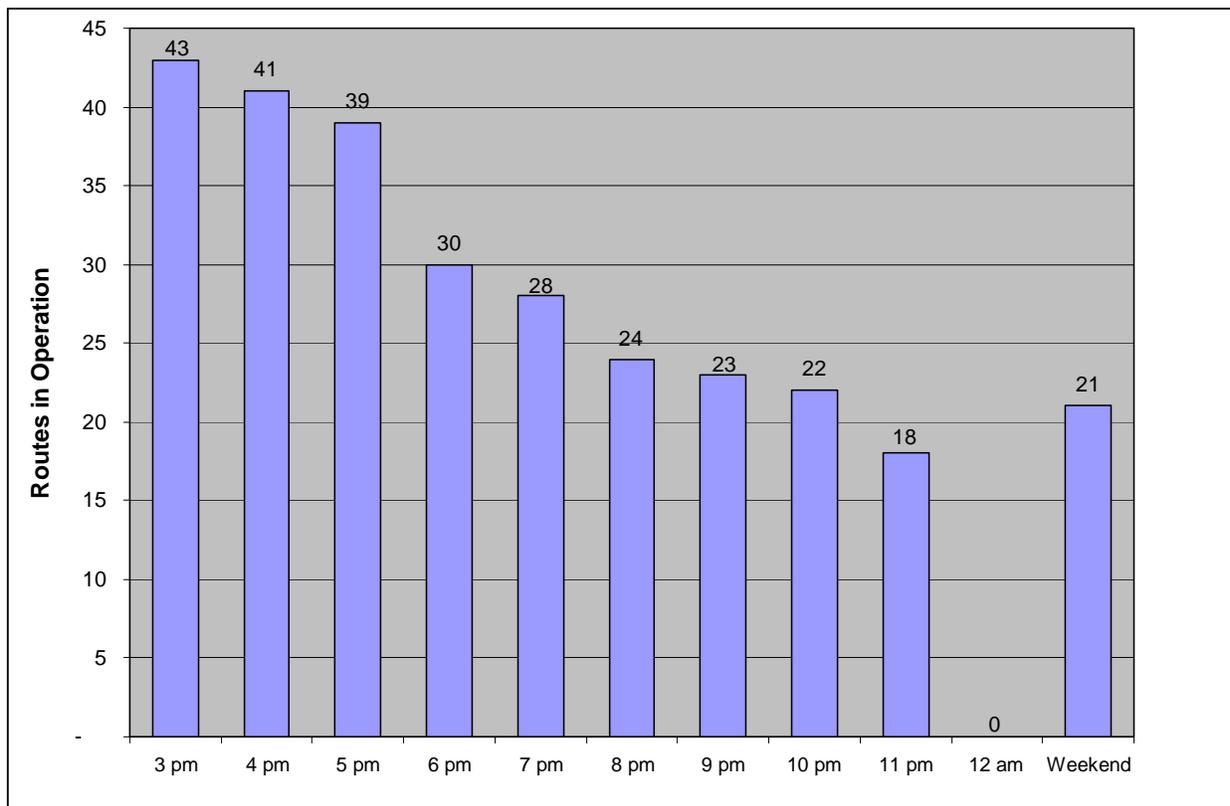
While not formally a part of the regional transit study, Ottawa County Transportation Agency (OCTA), operating transit service in a county adjacent to the study area, would be affected by changes to the transit system in the study area. OCTA has participated in the Regional Transit Study and has expressed interest in coordinating with TMACOG on any future phases of the study. The OCTA system includes two shuttle buses that operate days and evenings during the summer season in Port Clinton and Portage/Catawba, and paratransit for the disabled, operating all year.

ii. System Time-of-Day and Geographic Coverage

More than 40 distinct transit services, including TARTA bus routes and branches, TARPS, University services, and demand-responsive services, operate during weekdays. During the evening hours, service coverage gradually decreases. Some routes end service as early as 3:30 p.m. while others continue operating to as late as 11:30 p.m. **Figure 5-8** summarizes the number of routes scheduled to operate at various time-points throughout the weekday evening. About 20% of routes discontinue service between 5 p.m. and 6 p.m., and during each hour thereafter a couple of routes provide their last runs for the day. Eighteen routes provide service as late as 11 p.m., though no routes provide service as late as midnight. **Figures 5-9a through 5-9f** show the coverage of the various bus systems operating in the region as they diminish over the course of the evening.

Weekend service is comparable to the service available between 10 p.m. and 11 p.m. on a weekday. Twenty-one bus routes, including TARTA, University of Toledo, BGSU and Bedford Dial-a-Ride services, also operate on Saturdays, and 20 routes operate on Sundays. Peak hour service frequency ranges from 30-minute headways on some heavily patronized routes to 60 minutes or more on less patronized routes.

Figure 5-8. Routes in Operation, by Time of Day: TMACOG Region



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Figure 5-9: Hours of Operation for TMACOG Region Transit Services

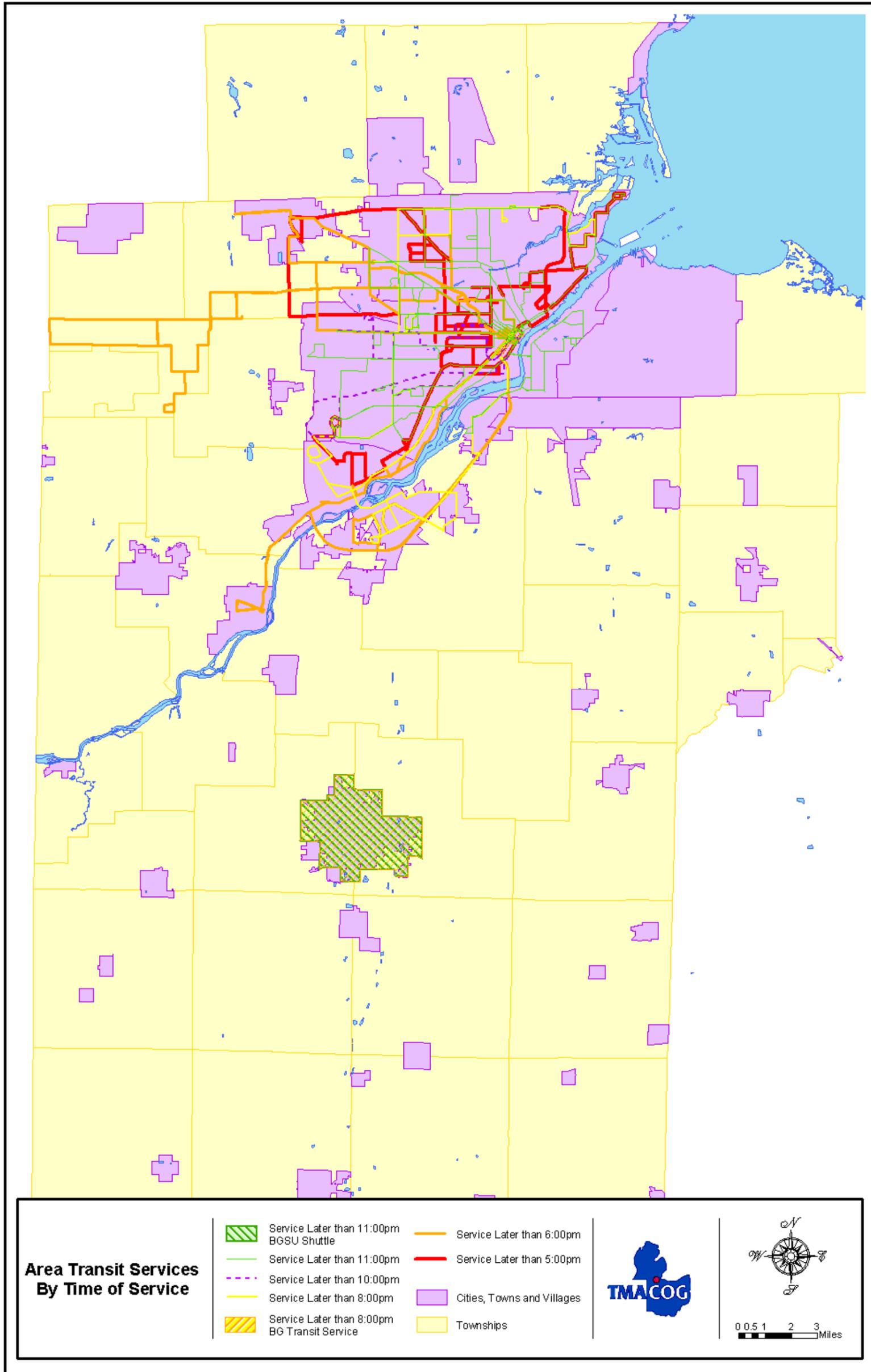


Figure 5-10: Transit Services Operating Between 5 P.M. and 6 P.M. Weekdays

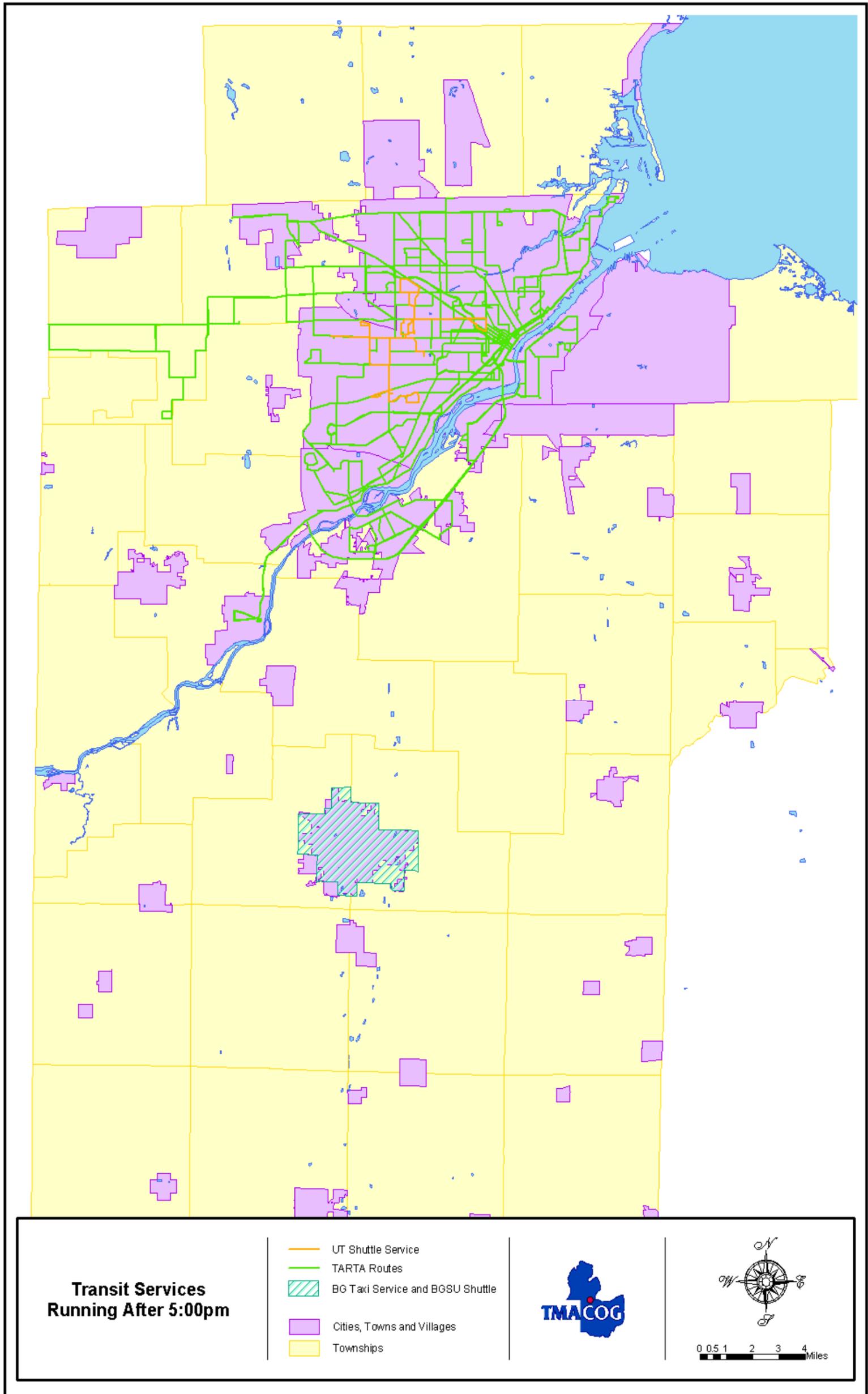


Figure 5-11: TMACOG Region Transit Services Operating Between 6 P.M. and 8 P.M. Weekdays

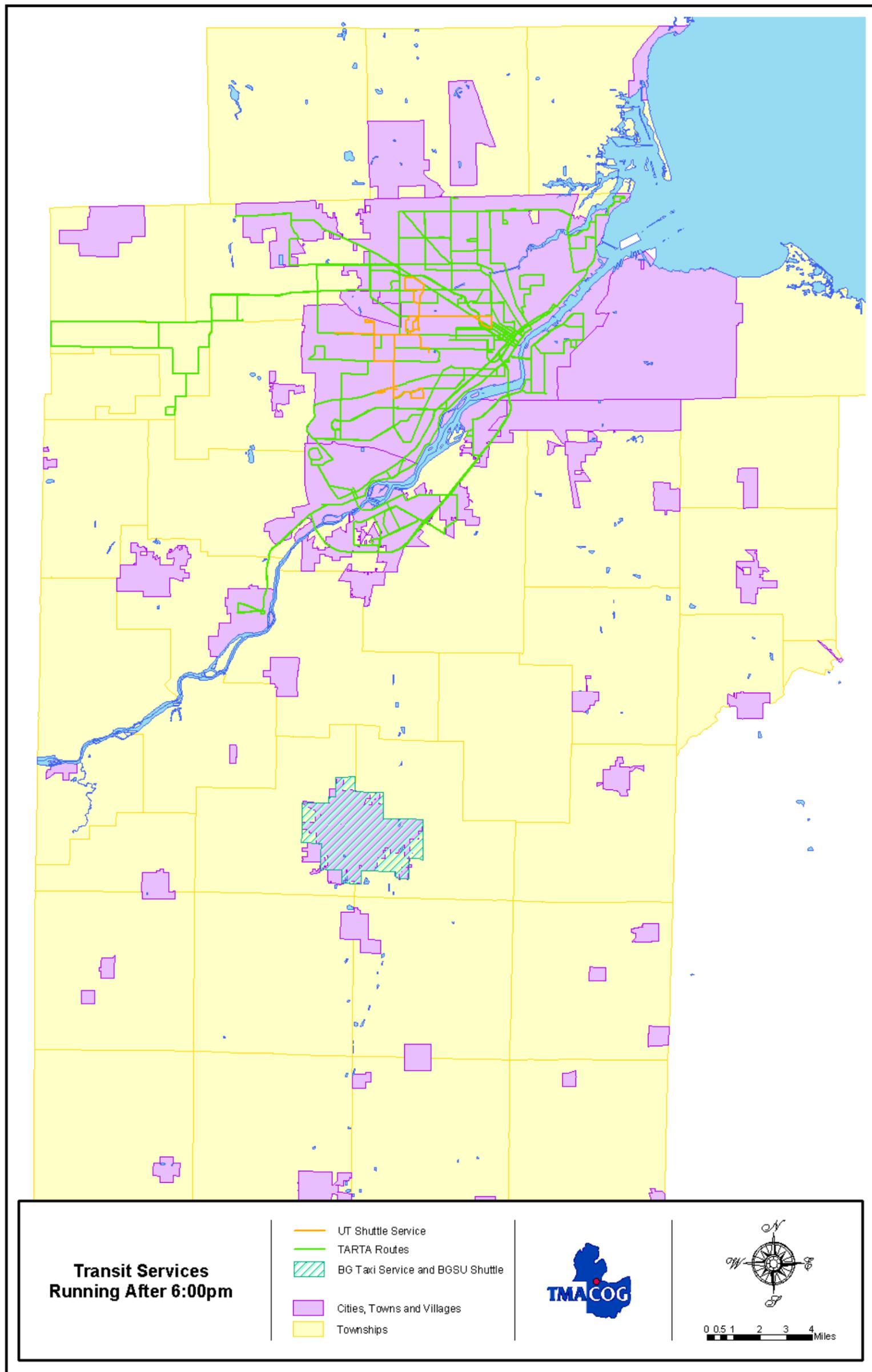


Figure 5-12: TMACOG Region Transit Services Operating Between 8 P.M. and 10 P.M. Weekdays

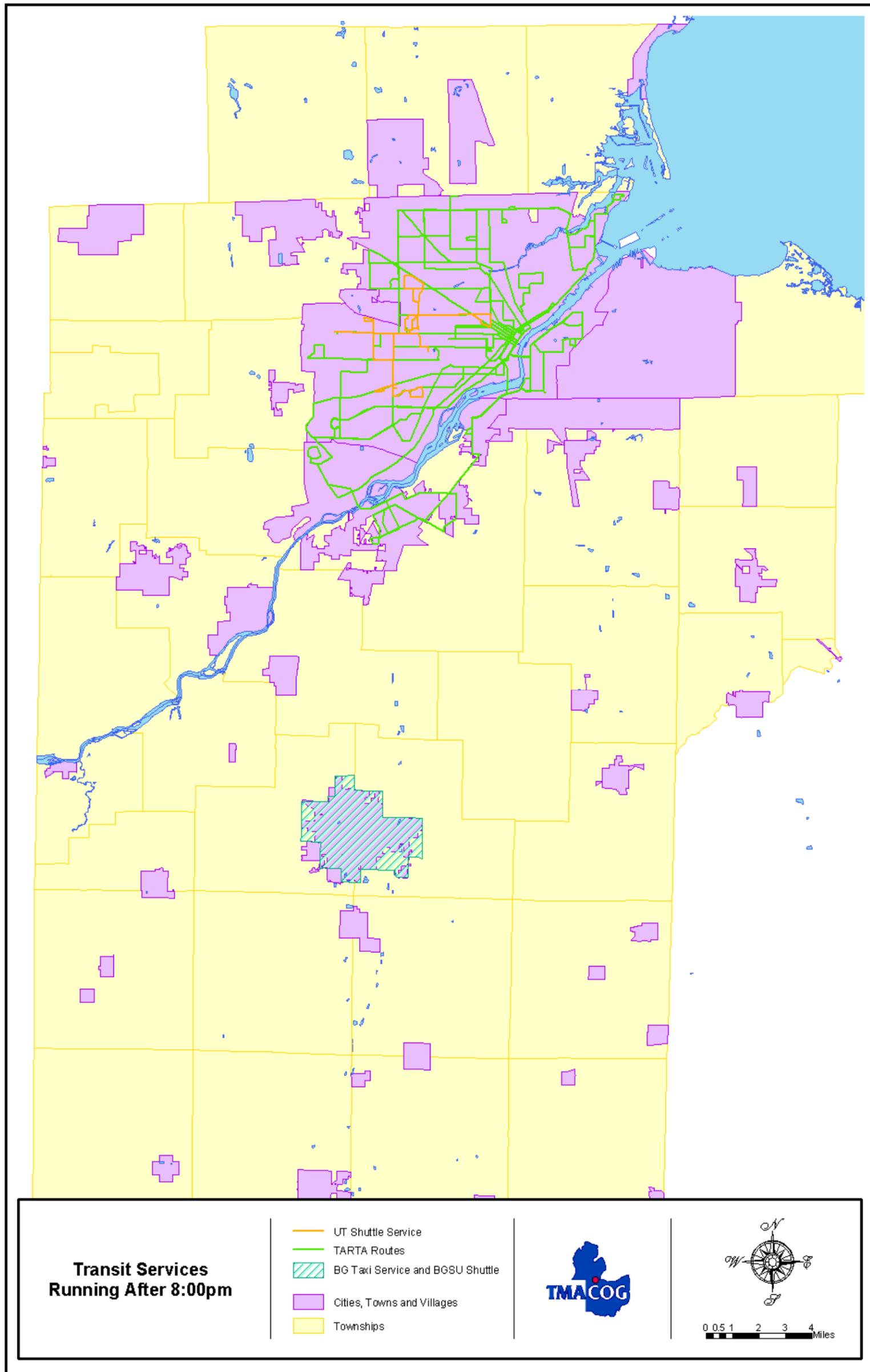


Figure 5-13: TMACOG Region Transit Services Operating Between 10 P.M. and 11 P.M. Weekdays

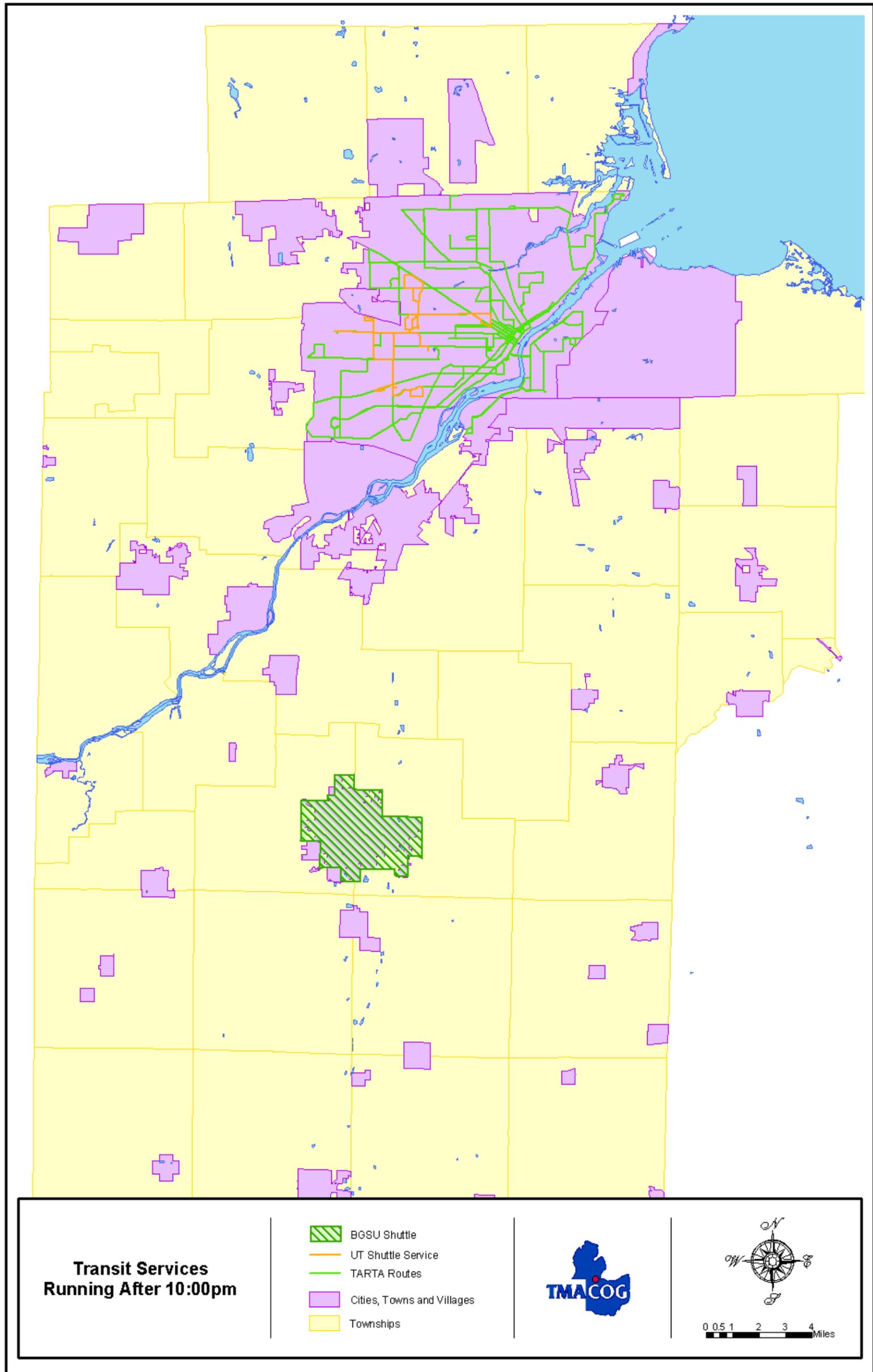
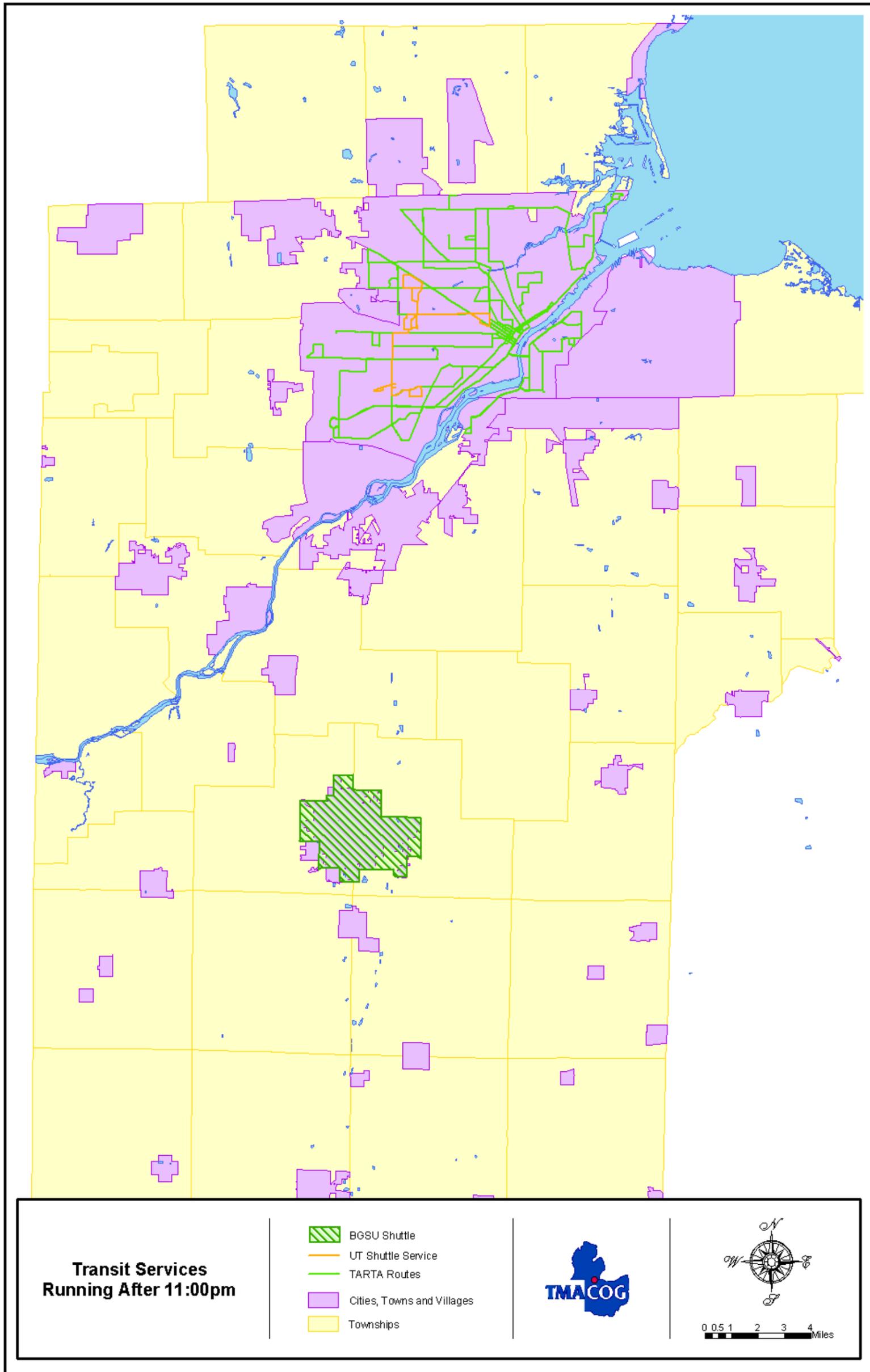


Figure 5-14: TMACOG Region Transit Services Operating After 11 P. M. Weekdays



iii Financial Analysis and Operating Efficiencies

Financial and operating data, provided by the operating agencies or compiled from independent sources, is presented below. Much of the data for TARTA and its TARPS service was obtained from the National Transit Database (NTDB), in order to facilitate comparisons with peer agencies. These peer agencies were selected because they are from similar cities or are agencies of a similar size. It is important to note that while the NTDB offers an easily obtainable record of the performance of transit agencies and a basis for comparison, there are limits to the accuracy, reliability and precision of the data. Much of the data is obtained using sampling techniques, and relies on accurate application of these techniques by thousands of transit professionals around the country. Moreover, there is no procedure or mechanism for verification of much of the data. Conclusions reached and comparisons made using this data thus must be considered with these caveats in mind.

TARTA and TARPS

Table 5-3 shows a comparison of cost and operating statistics for TARTA and the TARPS paratransit service, compiled from Federal Transit Administration National Transit Data Base (NTDB) information. TARTA is the only transit provider in the study area whose statistics are collected and presented by the NTDB.

TARTA's fixed-route bus system cost \$18.7 million to operate in 2001 and had more than 4.3 million boardings. **Table 5-3** shows information about TARTA's service levels, costs and levels of efficiency during the three-year period for which data are most recently available from the Federal Transit Administration's National Transit Database.

During the three-year period 1999-2001, TARTA increased its fixed-route service-hours by more than 15% (and increased its fixed route operating costs by 19%), yet lost approximately 5% of its ridership. The increase in service volumes and costs, against the overall loss in ridership, resulted in a slight reduction in operating efficiency, including the cost per vehicle revenue hour and mile of service and the number of boardings per revenue vehicle hour and mile of service.

The TARPS paratransit service cost \$1.8 million to operate in 2001 and had nearly 70,000 boardings during the same year. As with most transit providers, TARTA's door-to-door paratransit service costs much more per boarding and per passenger-mile than its fixed-route bus services, since each boarding requires several minutes and miles of driving to accommodate it. While some grouping of trips is possible, paratransit service is much more individualized than fixed-route service, with each boarding and alighting taking several minutes and many trips made expressly for a single individual. Illustrating the difference, paratransit services carry 1.6% of TARTA's passenger-trips but consume 8.8% of TARTA's overall operating budget. As a result, paratransit's cost per boarding is approximately \$26, compared to just \$4 per boarding on fixed-route services. These differences reflect normal circumstances of the paratransit mode and are not unique to TARTA. They are, however, impetus to promote policies and services that seek to "mainstream" disabled passengers onto fixed-route services, and to encourage efficient use of the paratransit service wherever possible.

During the past few years, TARTA paratransit services have maintained about the same levels of efficiency and productivity, but the amount of service provided has increased markedly. During the three-year period between 1999 and 2001, service-hours rose by 74%, and the number of vehicles operated during the peak hour rose by 93%. More recent estimates of ridership for 2003 indicate that nearly 100,000 paratransit trips will be provided by TARTA in 2003, 2.5 times the number served just five years ago. This increase reflects TARTA's priority to provide high-quality service to disabled persons and to the growing elderly population in the region. It also indicates a growing propensity for disabled and elderly persons to use public transportation services, reflecting their growing independence in society.

Table 5-3: TARTA Service Levels, Consumption, Costs and Productivity: 1999 to 2001

Measure	1999	2000	2001	% Change: 1999-2001
<u>Fixed-Route</u>				
Operating Costs (millions)	\$15.69	\$17.69	\$18.70	+ 19.2 %
Peak Vehicles	146	146	146	-
Service-Hours	218,800	220,600	251,000	+ 15.1 %
Service-Miles	3,511,000	3,610,000	3,697,000	+ 5.3 %
Annual Boardings*	4,543,000	4,561,000	4,319,000	- 4.9 %
Average Weekday Boardings*	16,311	16,315	15,627	- 4.2 %
Operating Expense per Veh-rev-mi.	\$4.47	\$4.90	\$5.06	+ 13.2 %
Operating Expense per Veh-rev-hr.	\$71.69	\$80.22	\$74.50	+ 3.9 %
Operating Expense per Pass-mi.	\$0.72	\$0.82	\$0.83	+ 15.3 %
Operating Expense per Boarding	\$3.44	\$3.89	\$4.32	+ 25.6 %
Boardings per Veh-rev-mi.	1.30	1.26	1.17	- 10.0 %
Boardings per Veh-rev-hr.*	20.85	20.60	17.18	- 17.6 %
<u>Paratransit (TARPS)</u>				
Operating Costs (millions)	\$1.05	\$1.48	\$1.81	+ 72.4 %
Peak Vehicles	14	21	27	+ 92.9 %
Annual Boardings	40,790	41,665	69,801	+ 71.1 %
Service-Hours	34,700	40,800	60,400	+ 74.0 %
Service-Miles	395,000	494,000	677,000	+ 71.4 %
Average Weekday Boardings	135	167	237	+ 75.6 %
Operating Expense per Veh-rev-mi.	\$2.65	\$2.98	\$2.67	+ 0.8 %
Operating Expense per Veh-rev-hr.	\$30.15	\$36.17	\$29.97	- 0.6 %
Operating Expense per Pass-mi.	\$2.85	\$3.05	\$3.91	+ 37.2 %
Operating Expense per Boarding	\$25.13	\$29.29	\$25.93	+ 3.2 %
Boardings per Veh-rev-mi.	0.11	0.10	0.10	- 9.1 %
Boardings per Veh-rev-hr.	1.20	1.23	1.16	- 3.3 %

Source: *National Transit Data Base*

*Boardings estimated based on sampling; fare revenues have remained constant, indicating no significant loss of ridership.

Comparison of TARTA with Peer Agencies

One way to better understand TARTA's operating environment, and to distinguish between local-specific trends and variables outside TARTA's control, is to examine the performance of peer agencies. For this comparison, the study team chose a small group of agencies in the Midwest region that operate medium-sized fixed-route bus fleets (between 100 and 300 vehicles) and serve regions of less than one million people, similar to the Toledo region. Seven agencies fit these criteria, including TARTA. Data provided by the Federal Transit Administration's National Transit Database were used to characterize each agency's service levels, service consumption and operating efficiencies. The most recently available data for all peer agencies were from Fiscal Year 2000; in addition, data from FY 1998 were compiled to provide a basis for comparing change over time.

Table 5-4 and **Table 5-5** show peer comparisons for diesel bus and paratransit, respectively.

Regarding fixed-route bus service (**Table 5-4**), TARTA's cost of providing an hour or mile of service is comparable to that of the agency's peers. Overall, changes in TARTA's bus service levels, ridership, cost efficiency and cost effectiveness all have paralleled closely those of its peers. TARTA's bus ridership and costs per mile and hour rose by 5% to 8% during the two-year period, while boardings per mile and hour remained steady – reflecting the typical experience of TARTA's peers during the same period.

In terms of paratransit, the **Table 5-5** shows that, while the peer group increased paratransit services considerably between 1998 and 2000, TARTA did so to an even greater extent. TARTA expanded its number of peak paratransit vehicles by 50% and its annual vehicle-hours and -miles by about 38%, whereas peer agencies on average increased their number of peak vehicles by roughly 11% and their miles and hours by 7% and 15% respectively. TARTA's paratransit ridership ("Annual Boardings") also increased significantly more than peer agencies: 34% compared to an average of 9% during the two-year periods. This perhaps is explained by the fact that TARTA provides relatively less service than most of the peer agencies. In 1998, TARPS was providing only one-sixth as many paratransit trips as the average for the peer group, and less than one-tenth as many paratransit trips as the transit system in Flint, Michigan. Many factors, including TARTA's lack of full regional coverage and different eligibility requirements in other cities contribute to this large difference in the volume of paratransit trips provided. However, in part, the rapid growth of TARPS ridership and costs in the past five years can be attributed to TARPS "catching up" to the volume of service provided in other similarly-sized areas.

While TARTA's cost per boarding (O&M Per Boarding) increased, the rate of increase was reasonable when compared to the peer agencies. Most importantly, TARTA's cost per boarding remains comparable to its peers, and its cost per mile and hour of service remain better than those of many agencies.

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Table 5-4 Peer Agencies – Diesel Bus

2000														
Agency	Acronym or Service Name	Region	Population	Peak Buses	Annual O&M Expense	Annual Boardings	Weekday Boardings	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	O&M Per Mile	O&M Per Hour	O&M Per Boarding	Boardings per Mile	Boardings per Hour
Toledo Area Regional Transit Authority ¹	TARTA	Toledo, OH	489,155	146	\$17,693,931	4,543,313	16,315	3,610,262	220,570	\$4.90	\$80.22	\$3.89	1.26	20.6
Madison Metro Transit	Madison Metro	Madison, WI	244,336	166	\$28,232,128	10,065,495	34,596	4,792,120	385,072	\$5.89	\$73.32	\$2.80	2.10	26.1
Metro Regional Transit Authority	METRO	Akron, OH	527,863	143	\$20,406,324	7,888,862	26,420	4,143,805	303,423	\$4.92	\$67.25	\$2.59	1.90	26.0
Central Ohio Transit Authority	COTA	Columbus, OH	945,237	277	\$62,051,579	18,727,260	64,195	8,978,194	723,458	\$6.91	\$85.77	\$3.31	2.09	25.9
Miami Valley Regional Transit Authority ²	Miami Valley RTA	Dayton, OH	613,467	143	\$30,512,865	10,407,728	35,457	6,405,818	432,097	\$4.76	\$70.62	\$2.93	1.62	24.1
Mass Transportation Authority	MTA	Flint, MI	326,023	196	\$14,471,058	6,565,036	23,201	3,963,020	259,040	\$3.65	\$55.86	\$2.20	1.66	25.3
Indianapolis Public Transportation Corp.	IPTC	Indianapolis, IN	914,761	146	\$30,017,556	11,462,255	36,188	6,141,179	432,858	\$4.89	\$69.35	\$2.62	1.87	26.5
Average (Not Including TARTA)				179	\$30,948,585	10,852,773	36,676	5,737,356	422,658	\$5.17	\$70.36	\$2.74	1.87	25.7
1998														
Agency	Acronym or Service Name	Region	Population	Peak Buses	Annual O&M Expense	Annual Boardings	Weekday Boardings	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	O&M Per Mile	O&M Per Hour	O&M Per Boarding	Boardings per Mile	Boardings per Hour
Toledo Area Regional Transit Authority ¹	TARTA	Toledo, OH	489,155	139	\$15,771,647	4,305,055	15,395	3,377,183	212,326	\$4.67	\$74.28	\$3.66	1.27	20.3
Madison Metro Transit	Madison Metro	Madison, WI	244,336	157	\$25,548,528	10,097,867	34,714	4,239,437	344,204	\$6.03	\$74.22	\$2.53	2.38	29.3
Metro Regional Transit Authority	METRO	Akron, OH	527,863	128	\$17,128,109	5,935,310	20,797	3,880,727	275,421	\$4.41	\$62.19	\$2.89	1.53	21.5
Central Ohio Transit Authority	COTA	Columbus, OH	945,237	258	\$48,969,434	18,326,115	62,410	8,323,748	654,377	\$5.88	\$74.83	\$2.67	2.20	28.0
Miami Valley Regional Transit Authority ²	Miami Valley RTA	Dayton, OH	613,467	169	\$31,178,719	11,642,123	37,799	7,098,811	487,345	\$4.39	\$63.98	\$2.68	1.64	23.9
Mass Transportation Authority	MTA	Flint, MI	326,023	178	\$11,462,295	6,135,736	21,708	3,641,815	259,154	\$3.15	\$44.23	\$1.87	1.68	23.7
Indianapolis Public Transportation Corp.	Indy Go	Indianapolis, IN	914,761	116	\$20,174,141	10,130,503	33,632	5,745,172	386,477	\$3.51	\$52.20	\$1.99	1.76	26.2
Average (Not Including TARTA)				168	\$25,743,538	10,377,942	35,177	5,488,285	401,163	\$4.56	\$61.94	\$2.44	1.87	25.4
% Change														
Agency	Acronym or Service Name	Region	Population	Peak Buses	Annual O&M Expense	Annual Boardings	Weekday Boardings	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	O&M Per Mile	O&M Per Hour	O&M Per Boarding	Boardings per Mile	Boardings per Hour
Toledo Area Regional Transit Authority ¹	TARTA	Toledo, OH	489,155	5.0%	12.2%	5.5%	6.0%	6.9%	3.9%	4.9%	8.0%	6.3%	-1.3%	1.6%
Madison Metro Transit	Madison Metro	Madison, WI	244,336	5.7%	10.5%	-0.3%	-0.3%	13.0%	11.9%	-2.2%	-1.2%	10.9%	-11.8%	-10.9%
Metro Regional Transit Authority	METRO	Akron, OH	527,863	11.7%	19.1%	32.9%	27.0%	6.8%	10.2%	11.6%	8.1%	-10.4%	24.5%	20.6%
Central Ohio Transit Authority	COTA	Columbus, OH	945,237	7.4%	26.7%	2.2%	2.9%	7.9%	10.6%	17.5%	14.6%	24.0%	-5.3%	-7.6%
Miami Valley Regional Transit Authority ²	Miami Valley RTA	Dayton, OH	613,467	-15.4%	-2.1%	-10.6%	-6.2%	-9.8%	-11.3%	8.5%	10.4%	9.5%	-0.9%	0.8%
Mass Transportation Authority	MTA	Flint, MI	326,023	10.1%	26.2%	7.0%	6.9%	8.8%	0.0%	16.0%	26.3%	18.0%	-1.7%	7.0%
Indianapolis Public Transportation Corp.	Indy Go	Indianapolis, IN	914,761	25.9%	48.8%	13.1%	7.6%	6.9%	12.0%	39.2%	32.8%	31.5%	5.8%	1.0%
Average (Not Including TARTA)				7.6%	21.5%	7.4%	6.3%	5.6%	5.5%	15.1%	15.2%	13.9%	1.8%	1.8%

Source: National Transit Data Base

¹ Boardings estimated based on sampling; fare revenues have remained constant, indicating no significant loss of ridership. Measures of operating efficiency, such as operating and maintenance costs per hour, mile and boarding, are affected by this estimated boardings data and thus may be flawed.

² Miami Valley Regional Transit Authority also operates 46 electric trolley buses

Table 5-5. Peer Agencies - Paratransit

2000

Agency	Acronym or Service Name	Region	Population	Peak Buses	O&M Expense	Annual Boardings	Weekday Boardings	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	O&M Per Mile	O&M Per Hour	O&M Per Boarding	Boardings per Mile	Boardings per Hour
Toledo Area Regional Transit Authority	TARTA	Toledo, OH	489,155	21	\$1,475,220	50,359	167	494,307	40,790	\$2.98	\$36.17	\$29.29	0.10	1.2
Madison Metro Transit	Madison Metro	Madison, WI	244,336	73	\$4,475,223	250,343	882	1,486,012	109,214	\$3.01	\$40.98	\$17.88	0.17	2.3
Metro Regional Transit Authority	METRO	Akron, OH	527,863	113	\$5,592,704	329,980	1267	2,006,135	125,643	\$2.79	\$44.51	\$16.95	0.16	2.6
Central Ohio Transit Authority	COTA	Columbus, OH	945,237	36	\$3,912,409	132,083	448	1,137,037	100,346	\$3.44	\$38.99	\$29.62	0.12	1.3
Miami Valley Regional Transit Authority	Miami Valley RTA	Dayton, OH	613,467	49	\$6,660,563	124,605	424	650,806	88,073	\$10.23	\$75.63	\$53.45	0.19	1.4
Mass Transportation Authority	MTA	Flint, MI	326,023	86	\$6,226,199	484,982	1777	3,198,325	223,244	\$1.95	\$27.89	\$12.84	0.15	2.2
Indianapolis Public Transportation Corp.	IPTC	Indianapolis, IN	914,761	48	\$6,221,146	255,655	944	2,438,925	128,484	\$2.55	\$48.42	\$24.33	0.10	2.0
Average (Not Including TARTA)				67.5	\$5,514,707	262,941	957	1,819,540	129167	\$4.00	\$46.07	\$25.85	0.15	2.0

1998

Agency	Acronym or Service Name	Region	Population	Peak Buses	O&M Expense	Annual Boardings	Weekday Boardings	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	O&M Per Mile	O&M Per Hour	O&M Per Boarding	Boardings per Mile	Boardings per Hour
Toledo Area Regional Transit Authority	TARTA	Toledo, OH	489,155	14	\$923,335	37,508	122	356,781	29,509	\$2.59	\$31.29	\$24.62	0.11	1.3
Madison Metro Transit	Madison Metro	Madison, WI	244,336	69	\$3,640,636	221,050	786	1,193,467	78,089	\$3.05	\$46.62	\$16.47	0.19	2.8
Metro Regional Transit Authority	METRO	Akron, OH	527,863	99	\$4,518,781	347,577	1325	1,545,463	104,796	\$2.92	\$43.12	\$13.00	0.22	3.3
Central Ohio Transit Authority	COTA	Columbus, OH	945,237	32	\$3,023,008	106,398	377	1,314,432	79,515	\$2.30	\$38.02	\$28.41	0.08	1.3
Miami Valley Regional Transit Authority	Miami Valley RTA	Dayton, OH	613,467	40	\$5,408,323	138,480	481	922,765	86,890	\$5.86	\$62.24	\$39.05	0.15	1.6
Mass Transportation Authority	MTA	Flint, MI	326,023	73	\$5,768,151	388,845	1419	2,539,392	183,986	\$2.27	\$31.35	\$14.83	0.15	2.1
Indianapolis Public Transportation Corp.	IPTC	Indianapolis, IN	914,761	51	\$5,046,288	236,750	869	2,332,843	153,821	\$2.16	\$32.81	\$21.31	0.10	1.5
Average (Not Including TARTA)				61	\$4,567,531	239,850	869	1,641,394	114,516	\$3.09	\$ 42.36	\$ 22.18	0.15	2.1

% Change

Agency	Acronym or Service Name	Region	Population	Peak Buses	Annual O&M Expense	Annual Boardings	Weekday Boardings	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	O&M Per Mile	O&M Per Hour	O&M Per Boarding	Boardings per Mile	Boardings per Hour
Toledo Area Regional Transit Authority	TARTA	Toledo, OH	489,155	50.0%	59.8%	34.3%	36.9%	38.5%	38.2%	15.3%	15.6%	19.0%	- 3.1%	- 2.9%
Madison Metro Transit	Madison Metro	Madison, WI	244,336	5.8%	22.9%	13.3%	12.2%	24.5%	39.9%	- 1.3%	- 12.1%	8.5%	- 9.0%	- 19.0%
Metro Regional Transit Authority	METRO	Akron, OH	527,863	14.1%	23.8%	- 5.1%	- 4.4%	29.8%	19.9%	- 4.7%	3.2%	30.4%	- 26.9%	- 20.8%
Central Ohio Transit Authority	COTA	Columbus, OH	945,237	12.5%	29.4%	24.1%	18.8%	- 13.5%	26.2%	49.6%	2.6%	4.3%	43.5%	- 1.6%
Miami Valley Regional Transit Authority	Miami Valley RTA	Dayton, OH	613,467	22.5%	23.2%	- 10.0%	- 11.9%	- 29.5%	1.4%	74.6%	21.5%	36.9%	27.6%	- 11.2%
Mass Transportation Authority	MTA	Flint, MI	326,023	17.8%	7.9%	24.7%	25.2%	25.9%	21.3%	- 14.3%	- 11.0%	- 13.5%	- 1.0%	2.8%
Indianapolis Public Transportation Corp.	Indy Go	Indianapolis, IN	914,761	- 5.9%	23.3%	8.0%	14.3%	4.5%	- 16.5%	17.9%	47.6%	14.2%	3.3%	29.3%
Average (Not Including TARTA)				11.1%	21.7%	9.2%	9.1%	7.0%	15.4%	20.3%	8.6%	13.5%	6.2%	- 3.4%

Source: National Transit Data Base

University of Toledo Bus Service

The University of Toledo's bus services – including its five off-campus routes and three intra-campus shuttles – provide about 256,000 miles of service annually. The University monitors financial information but does not make this information publicly available.

Bowling Green Transit

Total operating budget for BG Transit is \$442,000 in 2003 and will have to be flat for the next several years as reflected in the region's 2004-2007 Transportation Improvement Plan, published by TMACOG. The system's four-year operating plan anticipates total operating costs of the program of around \$500,000 per year and combined local, state and Federal subsidies of \$420,000 in 2005, rising to \$436,000 in 2008, with operating (fare) revenue making up the differences of \$65,000 to \$75,000 per year. The current funding is provided by a rural transit grant from ODOT, which includes both Federal and state funds, supplemented by funding from the City of Bowling Green. The system's four-year capital plan calls for spending nearly \$300,000 in capital funds on new lift equipped minivans over the next four years.

BG Transit indicates that with no increase in funds anticipated, and annual increases in operating costs (wages, insurance, gasoline), the agency only can expect additional limitations in service and increases in fares. BG Transit will be experimenting with certain collaborative efforts within the City and with contracts within the county when feasible.

Bowling Green State University Bus System

It costs about \$480,000 annually to operate and maintain the BGSU bus service during its nine-month operating year. The main source of funding is the Parking and Traffic Division of Campus Safety, which provides about \$420,000 annually, drawn from traffic tickets, meters, parking fines, and vehicle registration fees. The service generates the remaining \$60,000 or so (about 12.5% of total revenues) from chartering its buses on evenings and weekends. No information was provided regarding the number of hours and miles of service operated. However, given the high ridership recorded by the operation (more than 500,000 riders in a nine-month operating year), the system operates with enviable efficiency, providing service at an operating cost of less than \$0.85 per trip. The relatively high population and employment density of the City of Bowling Green and the BGSU campus, the free fare (which encourages high ridership) and, possibly, the lower pay of the operators are among possible explanations for this low cost per trip.

Bedford Dial-a-Ride

The Bedford Dial-a-Ride service costs about \$137,000 annually to operate and maintain. Funding is provided by a 1/10 mil tax on property in Bedford Township, which generates about \$85,000 annually. Other funding comes from State of Michigan Act 51 funds and fare revenues. The service operates about 40,000 annual vehicle revenue miles and 2,000 annual vehicle revenue hours. Bedford Dial-A-Ride provides about 10,000 rides per year.

5.2 Special Transportation Services

i. CommuterLINK

The Northwest Ohio CommuterLINK program (CommuterLINK) is a program operated by TMACOG under contract with the Lucas County Department of Jobs and Family Services. It is the TMACOG region's response to the need for transportation services for individuals leaving the cash assistance rolls and entering into employment during the 1990s, representing the trend to provide "welfare-to-work" transportation to support these individuals' efforts. CommuterLINK offers transportation to low income individuals to facilitate their entry into the workforce. It pays for cab service to and from work, to and from child day care centers, and between employment locations for those who need to do so over the course of the work day. Van service is offered when several clients are traveling to the same location. Clients who are not receiving cash assistance must contribute \$1 per trip.

As of 2003, 3,395 clients were approved for the CommuterLINK services. In 2001, daily commuting included 643 adults and 812 children. Transportation was provided to 440 separate employers and 720 employer locations in the region, and to 220 child day care locations. During 2000, CommuterLINK provided more than 117,000 rides at a cost of approximately \$2.4 million, or an average cost per ride of about \$20.70. For the first six months of 2001, costs were \$1.6 million to carry approximately 76,000 rides, a cost of approximately \$21.40 per trip. The average cost per month for each adult using the service in the first six months of 2001 was calculated to be about \$348.

CommuterLINK also includes a program to provide Ohio Works First participants with funding to purchase and maintain a car of their own. The purpose of the Car Buy Program was to reduce the cost of the cab-van program, and to deal with complaints about delays and inconvenience related to using cabs and vans. Given the cost of the cab-van program per participant, using these funds to purchase a car is not an unreasonable course of action. The Car Buy Program requires that the participants contribute \$125 per month toward the purchase and maintenance of their cars, and requires them to maintain good credit and to attend seminars on budgeting and vehicle maintenance. The Car Buy Program served 70 clients in its first year at a cost of \$173,000, or about \$2,470 per client. The car buy program saved the CommuterLINK program nearly \$400,000 by removing these particular clients (who apparently had extraordinary transportation needs) from the cab-van program, a savings of nearly \$7,000 per client. As of 2003, 221 cars had been delivered, with 139 paid in full.

The development of a system such as CommuterLINK, in the TMACOG region as in other regions, is a tacit admission that the public transportation system in the region is unlikely to adequately serve the transportation needs of these new workers. Lynn Bachelor and Peter Lindquist of the University of Toledo prepared an analysis of the CommuterLINK program and the transportation conditions and environment under which it operates in the TMACOG region. This study provided much of the initial evidence of transportation need in the TMACOG region that resulted in the Regional Transit Study. The report analyzed the location of CommuterLINK clients residences, child care locations and employment locations, using GIS analysis and client surveys. The study documented that the existing TARTA fixed route bus system fails to serve these trips, particularly trips to employers.

The CommuterLINK Study

In 2001, Lynn Bachelor and Peter Lindquist, of the University of Toledo, conducted a study of TMACOG's CommuterLINK program. The study consisted of an assessment of the CommuterLINK program and of the transportation needs of new workers in programs to move them from public assistance to work; a survey of these workers' experience with transportation; an analysis of the cost and operations of the CommuterLINK program and the related car-buy program, which assisted qualified members of the program with purchasing and maintaining an automobile; and a GIS analysis of the locations of CommuterLINK program residential, child day care and workplace locations.

The study found a variety of needs that the CommuterLINK service addressed in the community, which is to say, needs that could not be adequately served by public transit service. While the majority of the residences and child care facilities of CommuterLINK clients were served by transit (though a significant number were not), a very large number of their workplaces were not served. In terms of the absolute number of workplace locations, the study found that only 84% of clients' workplaces were located in the service area. Larger employers of CommuterLINK clients tend to be located outside the transit service area. Among CommuterLINK clients, only 69% of employee trips were to employers within ¼ mile of TARTA fixed-route bus lines; the remainder was to employers outside the service range of TARTA. Of the clients requiring child day care, only 68% had their place of residence, child care facility and place of employment located within range of TARTA service. For those who work weekends, the geographic situation worsened significantly, since TARTA offers less service on weekends. On weekends, only 51% of workplace locations are served by transit, and for those who needed child care, only 43% of the clients had all three of their locations—residence, child care, and workplace, in locations within ¼ mile of TARTA fixed bus routes. **Figures 5-15 through 5-18** are maps prepared for the CommuterLINK study showing the locations of client residences, child day care providers and workplaces.

The study found that *temporal* access to jobs was an even more severe problem than geographic access. TARTA's bus system reduces its service coverage over the course of the evening, and offers no service after 11 p.m. Service ends even earlier on weekends. Those who lack temporal coverage have work schedules that require at least one of their work trips to occur outside the TARTA service hours. The study reported that only 32% have work schedules that allow them to use TARTA for both their trip to work and their trip home. On weekends, the percentage falls to 15%. The study found that only 23% of clients have both geographic and temporal access to their jobs using TARTA fixed-route bus service. For those who work on weekends, only 7% have temporal and geographic access.

ii. Social Services Transportation

A variety of agencies, ranging from school boards, mental retardation-developmental disabilities boards, agencies serving the elderly, and charitable and faith-based organizations serving a range of clients, own and operate buses, vans, or other vehicles to provide transportation services for their clients. These agencies operate at various degrees of removal from governmental transportation and funding agencies, ranging from education and human services agencies that are entirely funded by the government, to organizations that receive federal or state grants to purchase equipment and/or services, to charitable organizations that are funded entirely through private donations. Moreover, many work with their local public transportation providers to take advantage of the existing services or to develop new services. For example, TARTA works closely with the Toledo City Schools and the Lucas County Board of Mental Retardation-Developmental Disability to help those entities provide transportation for their clients.

Taken together, these various agencies undoubtedly provide more transportation services than the combined public transit services. These services were not considered in detail in this study for both methodological and practical reasons. Methodologically, most of these services are not, at this time, open to use by the general public. Practically, contacting all these entities was perceived as being beyond the resources of the present study, and it was unlikely that many of these agencies would have sufficient data to study and evaluate.

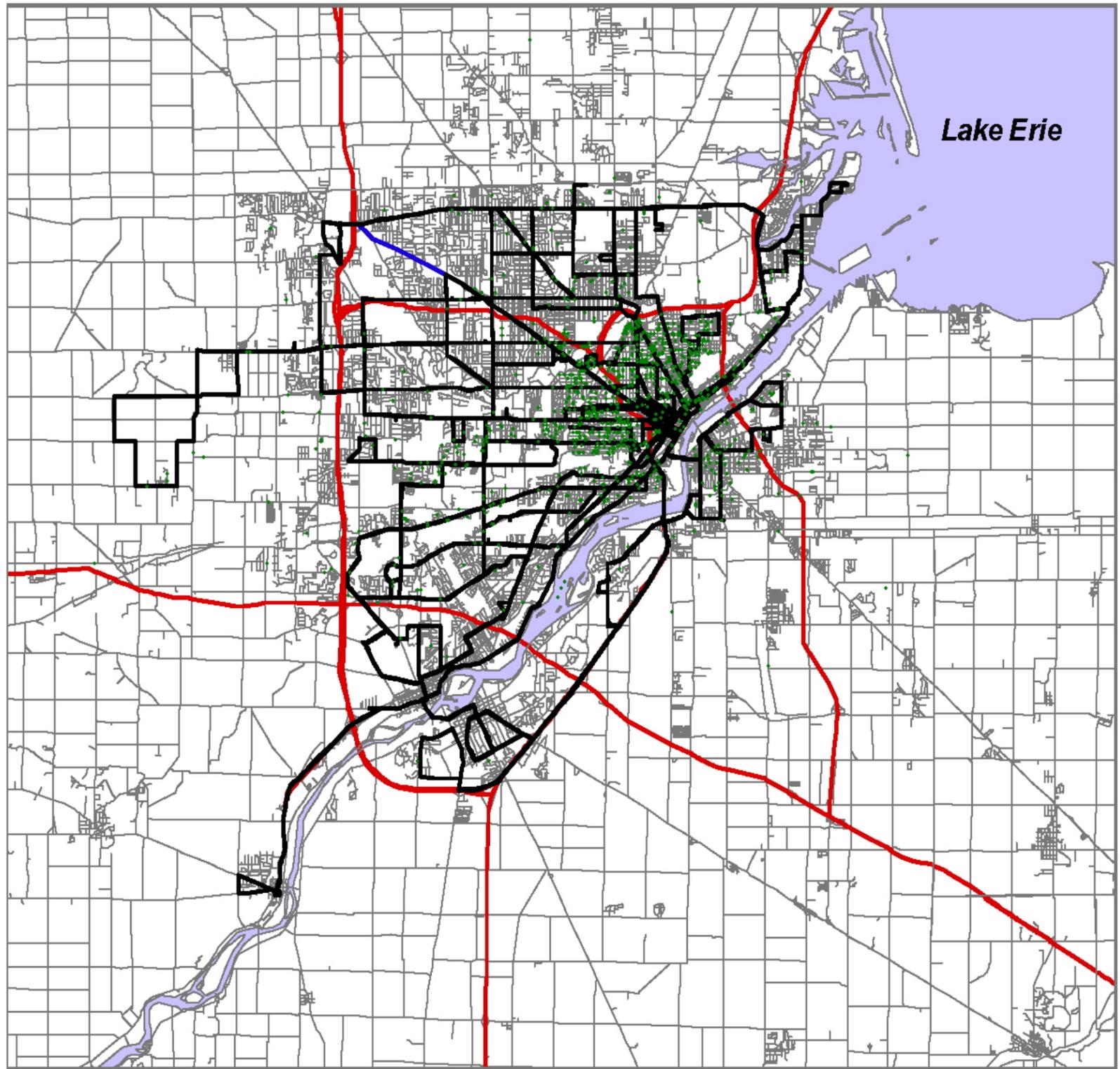
One element of this system, providing a small sample of the types of client organizations, is the list of agencies that have received grants to purchase vans to provide transportation for elderly and disabled clients under the Federal Transit Administrations Section 5310 program. This program, administered locally by TMACOG, was created expressly to provide vans to not-for-profit and social service agencies. Currently, 17 vans purchased under this grant program are in operation in the Toledo area.

- Ability Center of Greater Toledo (1 vehicle)
- Anne Grady Center, Holland (2)
- Autistic Community of Northwest Ohio (Bittersweet Farms), Whitehouse (1)
- Community Development Center, Holland (1)
- East Toledo Family Center, Toledo (3)
- Jewish Senior Services of Toledo (2)
- Lutheran Housing Services (1)
- Margaret L. Hunt Senior Center (1)
- Ohio Presbyterian Retirement Services (Swan Creek) (1)
- Senior Centers, Inc., Toledo (2)
- Sunshine, Inc. of Northwest Ohio, Maumee (1)

In Monroe County, the Bedford Health van and three vans operated by Monroe County Opportunity Program (MCOP) have been purchased through the 5310 program, administered by Southeastern Michigan Metropolitan Council of Governments (SEMCOG), the MPO serving most of Monroe County.

Figure 5-15: CommuterLINK Study—Location of Child Care Providers (Child care providers shown as green points)

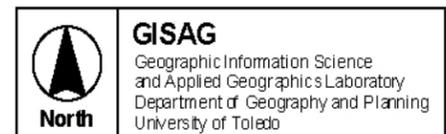
CommuterLINK Study Region Location of Child Care Providers



- Major Highways / Expressways
- TARTA Routes
- Streets / Highways

Data Sources: Toledo Metropolitan Area Council of Governments;
Lucas County Job & Family Services;
Toledo Area Regional Transit Authority

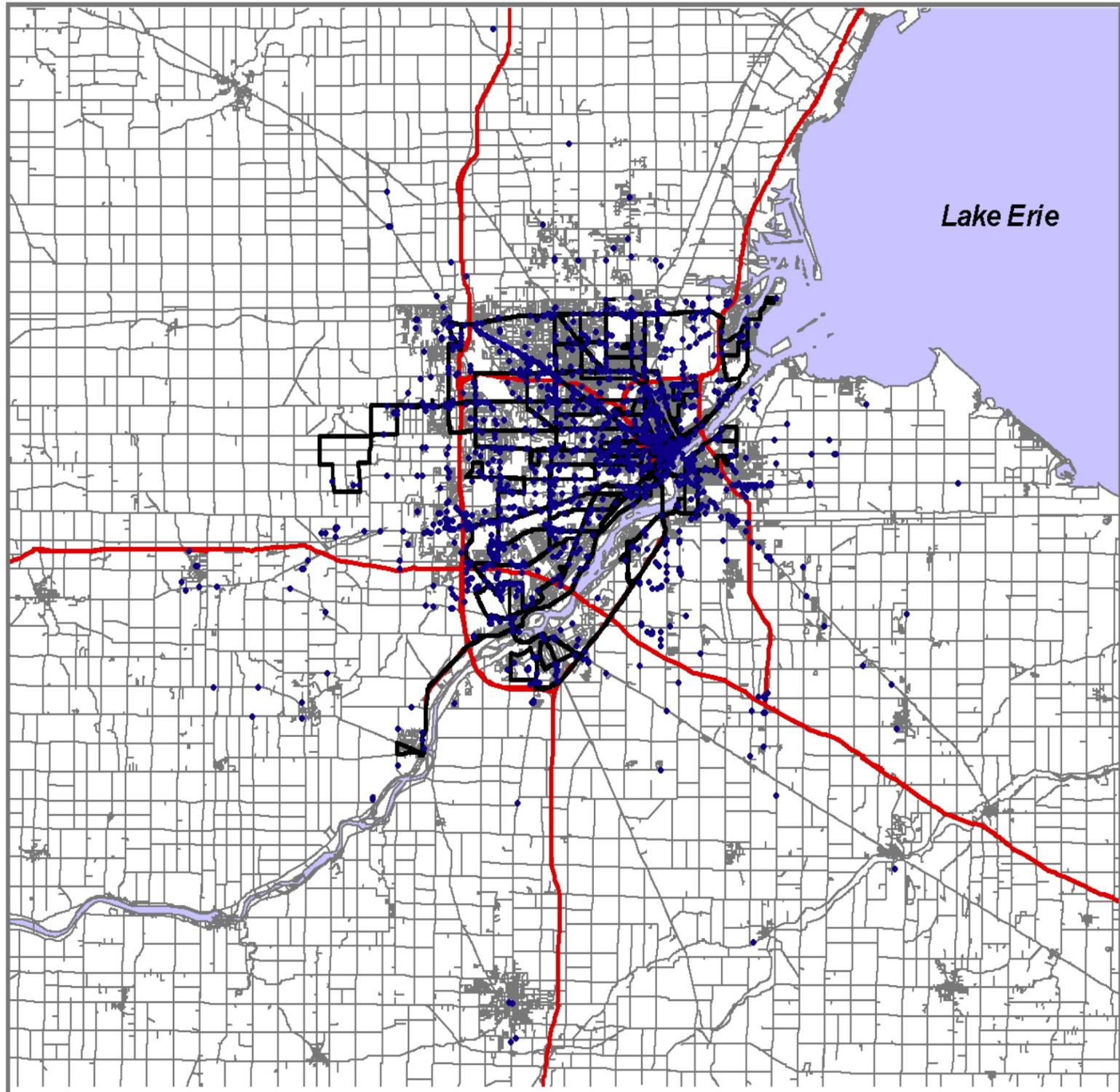
0 2 4 6 8 10 Miles



Source: University of Toledo CommuterLINK Study

Figure 5-16: CommuterLINK Study—CommuterLINK Employer Locations (Employers Shown as Blue Points)

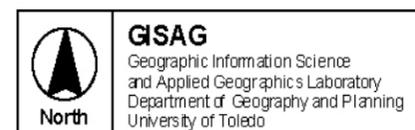
CommuterLINK Study Region CommuterLINK Employer Locations



-  Major Highways / Expressways
-  TARTA Routes
-  Streets / Highways

Data Sources: Toledo Metropolitan Area Council of Governments;
Lucas County Job & Family Services;
Toledo Area Regional Transit Authority

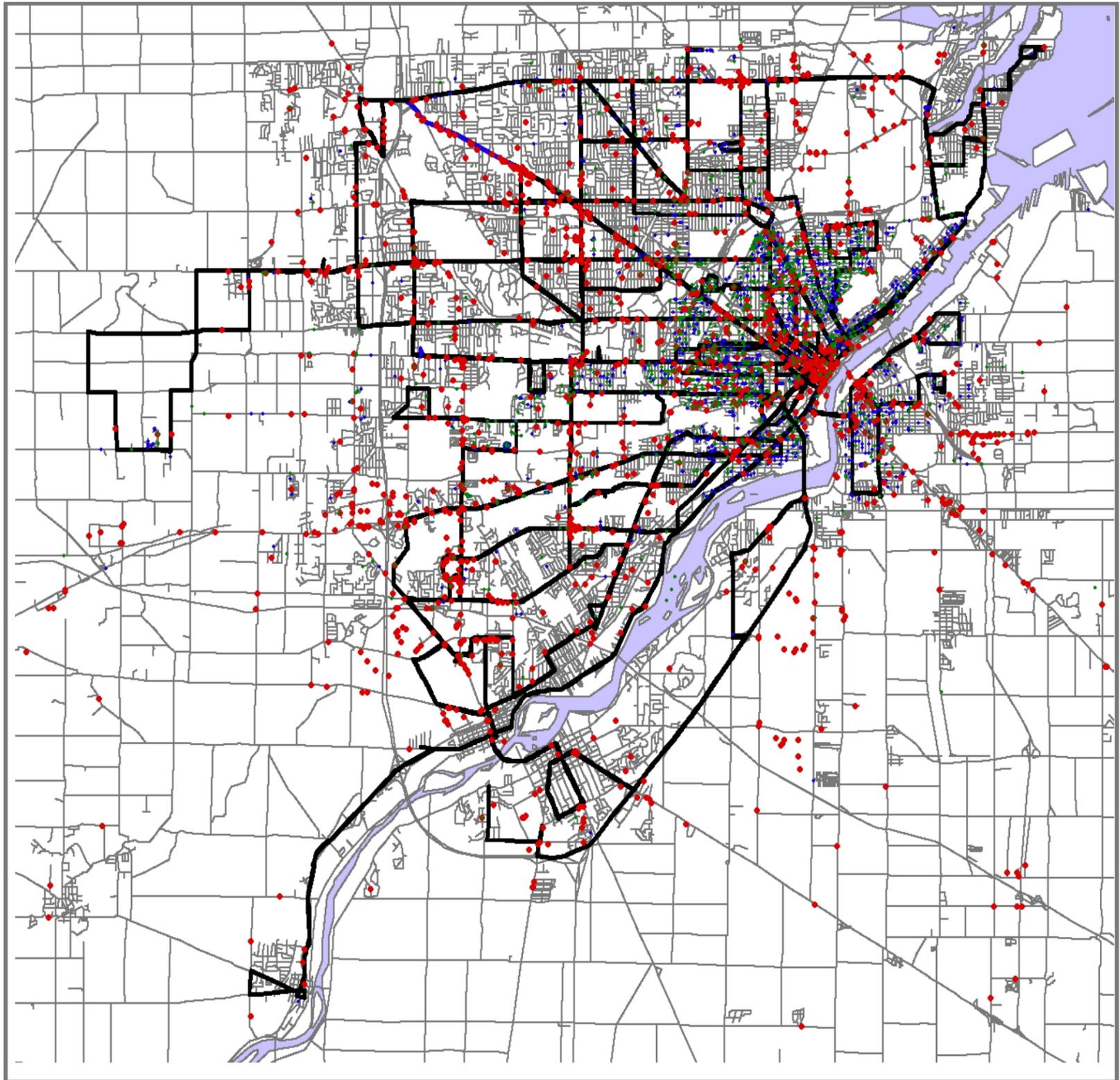
0 2 4 6 8 10 Miles

Source: University of Toledo Commuter LINK Study

Figure 5-17: CommuterLINK Clients and Weekday TARTA Route Alignments

CommuterLINK Study Region Weekday TARTA Route Alignments

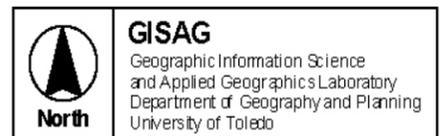


Data Sources: Toledo Metropolitan Area Council of Governments;
Lucas County Job & Family Services;
Toledo Area Regional Transit Authority

———— TARTA Routes
———— Streets / Highways

Clients Shown as Blue Points
Employers Shown as Red Points
Child Care Providers as Green Points

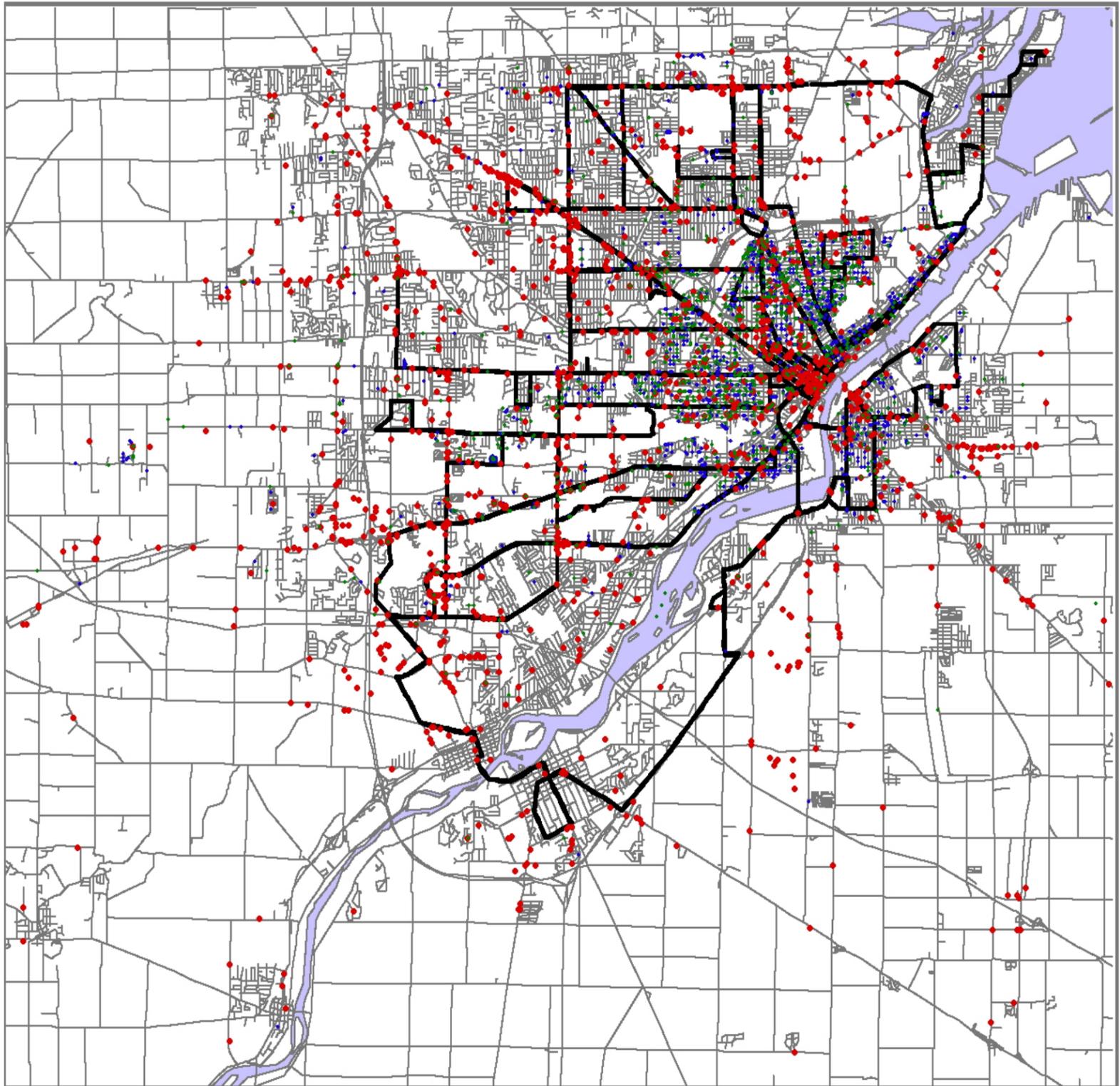
0 2 4 6 8 10 Miles



Source: University of Toledo CommuterLINK Study

Figure 5-18: CommuterLINK Client and Weekend/Holiday TARTA Routes

CommuterLINK Study Region Weekend/Holiday TARTA Routes

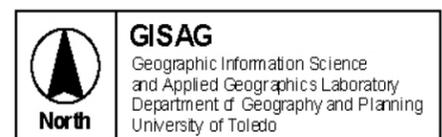


Data Sources: Toledo Metropolitan Area Council of Governments;
Lucas County Job & Family Services;
Toledo Area Regional Transit Authority

———— TARTA Routes
———— Streets / Highways

Clients Shown as Blue Points
Employers Shown as Red Points
Child Care Providers as Green Points

0 2 4 6 8 10 Miles



Source: University of Toledo CommuterLINK Study

Operation and maintenance of the vehicles is provided by the agencies, many of which are private, faith-based entities. However, it is likely that the agencies receiving vans under this program are representative of a number of other similar organizations in the TMACOG region that are relying on their own sources of transportation for their clients, rather than the public transit system.

5.3 Assessment of Existing Transit: Conclusions

Public transportation in Northwestern Ohio and Southeastern Michigan faces a number of challenges. The fragmentation of service areas means that many areas are not served, and systems and services are not connected well, if at all. Funding constraints limit service frequencies and prevent the transit agencies from operating service during evenings, nights and weekends. However, these problems, particularly the funding issues, are not unusual for public transit systems in smaller metropolitan areas. Given the constraints under which they operate, the public transit systems serving the TMACOG region perform reasonably well in terms of efficiency and effectiveness relative to one another and to similar agencies in other cities, though sufficient data and a robust field of peer agencies exists only for TARTA, the area's largest transit service.

TARTA's operating statistics are similar to those of its peer agencies, in terms of cost and service efficiency. TARTA has consistently brought transit innovations to Toledo, including the downtown transit loop and transit centers, lift-equipped vehicles, bicycle racks on buses, special services to ball games, and dial-a-ride services. TARTA was among the earlier public transit agencies in the country to introduce these and other innovations, and has implemented the innovative programs aggressively. TARTA's fares are also among the lowest in the industry and, arguably, should be increased. It is unlikely that TARTA would see any significant reduction in ridership were the cash fare on fixed-route services to be increased from its current level of \$0.85 to \$1.00, and the additional funds would be sufficient to fund a modest but noticeable increase in service.

The Bowling Green Transit service is too new to assess in any detail but represents a creative approach to providing service in a relatively compact area with a low potential density of transit trips. Assessment of the other services was hampered by lack of data. However, none of the services appears to operate in a way that is exceptional, either positively or negatively. The services are characterized by creativity within the constraints under which they operate—in terms of geography, funding, and the challenges of operating in a region with high rates of auto ownership and an economy heavily dependent on the auto industry.

The transit systems in the TMACOG region have several obvious deficiencies that are widely acknowledged by transportation professionals and public officials in the region, including representatives of the transit services. Chief among these is the geographic constraint under which the service operates. Transit in the TMACOG region is confined to a small number of jurisdictions. Most of the population of the region has some access to transit service, but spatially the majority of the region has no transit, including paratransit services for the elderly and disabled. This geographic constraint has a financial impact on transit in the region, since many of the communities that are not served by or contributing financially to the transit system are among the fastest growing and most affluent communities in the region.

The BG Transit and BGSU bus systems are isolated from the Toledo and Bedford Township systems. This deprives transit-reliant Toledo area residents of educational and job opportunities in Bowling Green that are easily accessible to most by car. Conversely, it isolates Bowling Green area residents and BGSU students from a wealth of education, jobs and services available in the Toledo area. Several suburban areas with employment and population densities that are sufficient to support public transit (such as the Navarre Avenue corridor in Oregon, the Woodville Road area in Northwood, and the Airport Highway corridor in Springfield Township) are outside the TARTA service area. The geographic separation of services and lack of service in many areas limits both the efficiency of transit and its effectiveness in providing transportation to those who need it throughout the region.

Similarly, the lack of evening, night and weekend service limits the effectiveness of transit in a labor market that increasingly works all hours, seven days each week. Even within the TARTA service area, transit shuts down before the workday ends for many types of employment. TARTA's shutdown at 11 p.m. prevents many restaurant and retail workers and third shift service and manufacturing workers from relying on transit. Bedford Dial-a-Ride's eight-hour daytime service day effectively precludes nearly anyone from using it for employment-related travel, including potentially valuable connections to TARTA that would allow residents to reach job opportunities in the Toledo area.

TARTA's fixed-route bus system also lacks cross-town connections. The downtown loop and pulsed transfer system is an efficient way to provide connections that link origins and destinations in the TARTA service area. However, with the increasing suburbanization of the region's population and employment, and the present weakness of downtown Toledo as an employment and retail center, TARTA's service area may be too large to serve effectively from a single hub. Today, downtown Toledo is the site of less than 10% of the region's jobs, and there is little significant retail activity. Toledo likely will remain the densest employment area in the region, and redevelopment efforts should result in an increase in employment and retail/restaurant/entertainment activity in downtown Toledo. However, several suburban employment locations (some within the current TARTA area, others not) likely will surpass it in terms of the number of jobs. Additional and more frequent cross-town routes, perhaps in the context of secondary "hubs" at suburban employment centers, would improve access to these suburban employment locations. Additional cross-town services would also reduce travel time for many mid-day non-work trips.

Perhaps the most important finding is one that was not obvious to most at the start: the threat to TARTA, and to a lesser extent the other transit services, from the rapid rate of growth in paratransit demand, and the corresponding growth in the costs of providing that service. Disabled-accessible paratransit service is an important element of the market for transit service, and one of the most important given the disabled community's dependence on it. However, it is very expensive to provide, and it is difficult to achieve economies of scale in providing it. The average cost of a trip on the TARPS service—\$25 to \$30 per trip—is by no means unusually high. Indeed most of the peer properties analyzed in **Table 5-5** indicated similar, or even higher, costs. TARTA's peer agencies spend 15%-25% of their total operating and maintenance budget on paratransit service, while today TARTA spends less than 10% on such service. As noted earlier, the volume of paratransit trips provided by TARPS is very low compared to the peer

agencies. The volume and cost of TARPS service has more than doubled in the past five years, and yet TARPS today provides less than half as much paratransit service as do other similarly sized areas such as Akron, Madison, and Dayton. The volume of service demanded of TARPS is likely to level off once it reaches the level of 15% to 25% of total service. However, reaching that volume, without reducing existing fixed-route service, would require doubling the approximately \$2 million per year that TARTA spends on TARPS. TARTA lacks the resources to provide for significant increases in the costs of paratransit service while maintaining its fixed route services at their current levels. Addressing these needs will require creativity, and pursuing strategies to potentially increase funding while looking for more efficient ways of providing transit services of all types in the community.

The transportation resources of social service agencies may provide one set of strategies for providing more transit service, more efficiently. This study did not include a significant analysis of the transportation provided by social service agencies. However, the development and proliferation of these services, and their sheer size (with more vehicles than the public and university transit combined) indicate serious gaps that are being addressed, at least partially, by these services. The coordination of these services, perhaps through development of a central dispatching and cost accounting system, potentially offers an opportunity for improved transit in the region, particularly for disabled persons living outside the TARPS service region. However, there are a number of formidable challenges to such coordination. These include restrictions on funding used to purchase and operate these vehicles, contractual and insurance requirements, labor issues, and the simple reluctance of such agencies to engage in a new, potentially complex exercise that would cede a measure of control over their operations. However, such coordination has been pursued with reasonable success in other jurisdictions, and could fill identified needs in the TMACOG region.

5.4 Innovative Services in Other Communities

Transit today is much more than just running big buses up and down the street. America has changed, and public transportation has changed with it. While Toledo has generally been near the forefront of transit innovation, there are communities where other innovations have been successfully implemented. More types of services, new and different vehicles, and more attractive facilities can help make transit a better “fit” to serve the varied transportation needs of Americans today.

Flexible Routing

Flexible route service (sometimes called route deviation or dial-a-ride service) is a mechanism to make transit more effective in lower-density areas. In the most common form of this service today, buses operate on a standard fixed route, but their schedule allows drivers the option of deviating from the route to pick up and drop off passengers closer to their ultimate destination. For example, a passenger waiting in a shopping center might call the bus to pick him up at the shopping center door, or a passenger on the bus may ask the driver to divert a few blocks into a subdivision



Figure 5-19 - Flexible Routing allows transit services to divert from a fixed route to pick up and drop off passengers closer to their origin and destination points. TARTA's Call-a-Ride services in Perrysburg, Maumee and Sylvania, and the Bedford Dial-a-Ride are examples of flexible route service.

to drop the passenger off at her door. Using cellular phone technology, implementing the system has become as simple as printing the driver's number on the side of the bus.

Innovations in Bus Technology

Buses have proliferated in terms of their size, configuration, fuel and power type to meet a more varied array of transportation demands. Large 40-foot buses (or even longer articulated vehicles) are most appropriate for providing high-capacity service on major urban corridors, but may not be the most appropriate for lower density suburban and rural applications, particularly in areas sensitive to noise and vibration. Transit agencies have traditionally been reluctant to have multiple vehicle types within their fleets due to the need to keep multiple sets of spare parts and repair equipment, and the need to train operators and maintenance personnel to use multiple types of vehicles. However, many have relented and have diversified their fleets, due to increasing demands from the public for smaller, lighter and more flexible vehicles. The requirement to provide complementary paratransit service to the disabled community, which became mandatory after the passage of the Americans with Disabilities Act in 1990, probably also led to transit agencies becoming more open to the idea of operating mixed fleets, since all had to add the smaller paratransit vehicles to their fleets.

Vehicles ranging from 25- and 30-foot versions of large transit buses to small 15- to 20-foot cutaway vehicles based on pickup truck and passenger vans have been developed in a variety of styles, seating layouts and door configurations. Buses also may vary in terms of their power configuration, with some buses now powered by low emission "clean diesel" power, on-board electric power, and hybrid (diesel-electric) configurations. Fuel cell powered buses are likely an early commercial use of fuel cell technology, which will represent a further innovation in the transit industry.



Figure 5-20: Bus Technology - Buses today come in a wide range of styles, colors and layouts. From top left: large windows are popular with the public; low-floor transit bus; civic bus rapid transit vehicle; van cutaway bus, open bus-tram, low-floor over-the-road coach.

Buses also vary in terms of the means by which they load disabled passengers. All buses are required to be lift-equipped to provide disabled access. However some are built in a "low-floor" configuration, which reduces the difference between the bus's door sill and the street level. If positioned properly relative to the curb height, low floor buses can provide a nearly flat boarding without the deployment of the lift. Many buses are equipped with bicycle racks to allow bus passengers to store their bicycles while riding the bus.

Many transit agencies have provided special "commuter" style buses for longer-distance routes or routes that use high-speed, freeway alignments. These buses can range from over-the-road coach buses similar to those used by long-distance coach services to regular transit buses reconfigured to better serve longer distance trips. These buses are provided with a higher level of amenity to provide commuters, often riding for thirty minutes or more, with a more comfortable transit experience. Commuter services operate for longer distances and over longer periods of time, often at high speeds, so it is important that all passengers can be seated.

Commuter style buses feature a configuration meant to maximize the number and size of seats on the bus and minimize standing area. Seat padding is increased and higher back, reclining seats are often provided. Reading lights and sometimes tray tables are also provided. Some transit agencies have provided electrical power for computers, complimentary newspapers, coffee, and other amenities to these routes.

Bus rapid transit, which many cities are considering as an alternative to light rail transit, has generated the development of many buses which, like the “commuter” buses, offer a look and experience in many ways similar to rail transit. Longer, articulated coaches, often with a high level of interior amenity and a futuristic inside and outside look, with multiple doors, are characteristic of new bus rapid transit systems.

Recent research in consumer preference surveys suggest that, regardless of the size or type of bus, the public has definite preferences as to certain aspects of bus configuration. Large, clear windows on the bus, including in the front and back of the vehicle, and a variety of seating positions are popular among both transit users and non-users. Smoked windows, advertising on the sides of buses, “wrapped” buses (buses that have been converted to billboards by covering all surfaces, including the windows, with advertising), and engine configurations that block the back of the bus are unpopular with the public.

Transit Centers

The TMACOG region includes several examples of transit centers, including several arrayed around the downtown Toledo bus loop and even two “game day” transit centers in Fifth Third Field. Transit centers can refer to a variety of facilities but include at minimum



Figure 5-21: Transit Centers - Some views of US urban and suburban transit centers.

some indoor waiting space for bus passengers, information for passengers, and designated parking for buses, either on-or off-street. Transit centers can be located in downtown, neighborhood or suburban locations and are often associated with park-and-ride lots. Often, transit centers form the hubs of multiple-hub transit systems, where a neighborhood hub hosts four or five neighborhood circulators, which then allow transfers to longer-haul buses to other parts of the region. The level of amenity in a transit center can vary significantly depending on the length of waits encountered there by passengers, the amount of service to the site, and the types of development in the surrounding area. The amenities can range from simple to plush. Sometimes, the facilities include transit agency staff that may provide passengers with information and sell transit tickets and passes, in addition to keeping an eye on the facility. Some transit centers include public toilets for passengers. Uniformed security is often in place to provide a greater sense of security to both transit users and to the surrounding community.

Transit centers can serve as opportunities for joint development. The TARTA sites within Fifth Third Field, in which the transit centers are a small part of a larger development, are an example of how transit centers can be used to help establish a development and to integrate the transit use into the development. Transit centers have included within them coffee shops, child day care centers, fast food restaurants or food courts, and convenience stores. They are often included as a smaller element of a larger development, such as a shopping center or office parks. Locating development within or a short way from transit centers helps transit users to run the types of errands that drivers often run on their way to and from work (called “trip chaining” in transportation planning terms), such as drop off and pick up children at day care, buy food or pick up dry cleaning.

Bus Stop Amenities

The transit passengers’ first contact with the transit system usually comes at the bus stop. Bus stops are often nothing more than a sign on a utility pole, but they offer an opportunity for transit agencies to provide transit users with a variety of services and amenities. Many agencies have bus stop standards, to ensure that all bus stops have at least a minimal level of amenities for passengers (lighting, a hard surface on which to stand) and that more significant bus stops in terms of boardings and alightings will have a higher level of amenities on an ascending scale, including shelters, benches, route information and other useful amenities.



Figure 5-22: Bus Stop Amenities, clockwise from top left: bus shelter and stop in a park-and-ride lot/transit center; bus shelter and stop in urban setting, with street trees and lighting; information kiosk in downtown area; bus shelter and stop in a suburban setting; Automatic Vehicle Location (AVL) system control room.

Some transit agencies are now providing real-time bus schedule information at bus stops using their automatic vehicle location (AVL) systems. This helps passengers determine how long they have to wait for their bus, which encourages ridership. Other technological innovations at bus stops have included information kiosks, security phones and even lighting and heating systems inside bus shelters.

Park-and-Ride Lots

Park-and-ride lots allow passengers in suburban and semi-rural areas drive to a collection point to be picked up by a bus or rail transit service. Park-and-ride lots primarily are meant to connect lower-density areas to a strong downtown core. They are usually located



Figure 5-23: Park and Ride Lots Three views of park-and-ride lots, from left: bus bay at free-standing park-and-ride lot; bus bay at park-and-ride lot transit center; bicycle parking and shelter at park-and-ride lot.

in areas lower density areas where the population mainly lives in suburban subdivisions, where providing bus service to within walking distance of every residence would be impractical. Park-and-ride lot customers have access to automobiles but prefer to use transit, either to reduce commuting costs or to use commuting time for other activities such as working or reading.

Park-and-ride lots can be free standing facilities or can be integrated into other developments such as shopping centers or other activity centers with under-used parking lots. Movie theaters, parks, and churches, whose parking demand needs are mainly at night and on weekends (opposite the need for park-and-ride spaces) are prime locations where successful joint-use park-and-ride lots have been located in many places. Park-and-ride lots often also include transit centers to help support transit passengers or to serve as hubs for area transit services. TARTA currently has a number of joint use park-and-ride lots in the area for both commuters and for the Mud Hens service.

Airport Services

Until recently, there was no public transit connection from the TMACOG area either to the Detroit Metropolitan Airport or to the Toledo-Lucas County Express Airport. Ground transportation services to either of these locations are limited to taxi services, the cost of which is many times the typical transit fare. TARTA is operating an experimental service to Toledo Express Airport that began in December 2003. The service was evaluated in spring 2004 and continued for a further six months. The service is currently under evaluation for possible continuation. Funding for the service is provided by TARTA and the Toledo-Lucas County Port Authority.

Most major U.S. cities larger than Toledo have a public transit (usually bus) connection to their regional airport. Services to airports are usually used more by employees of the airport and businesses in the airport area than by business and tourism travelers. However, many cities, including Cleveland and Chicago, and more recently Baltimore and Pittsburgh, have been so convinced of the *psychological* as well as transportation benefits in terms of the image of the city of improved transit connections to their regional airports that they have built fixed guideway (rail or busway) transit lines to serve those facilities. Several cities have such systems or improvements to their systems in various stages of planning to improve connections to their regional airports.

The Return of Rail and Fixed-Guideway Transit

After many years during which passenger rail service and urban street rail networks were eliminated or scaled back, rail mass transit began a comeback in the 1980s. However, rail transit has taken on a number of new forms, as well as replicating all the old variety of uses, since that time. This has included



Figure 5-24: Fixed Guideway and Transit. Recent and proposed development of fixed-guideway transit. Clockwise from top-left: two views of historic style streetcars; trolley bus; monorail people mover; rendering of personal rapid transit (PRT) vehicle and guideway; light rail vehicles.

the development of new subway and heavy rail systems in cities as diverse as Baltimore, Miami and Los Angeles; the development of regional light rail systems in many areas, including New Jersey, San Diego, Portland and Calgary; commuter rail systems in Dallas, Washington, D.C., Southeast Florida, and other areas; and new streetcar systems in Denver, Tampa, New Orleans and Kenosha. People-mover and automated guideway transit technologies have been implemented in several places, including Las Vegas, Detroit and Vancouver.

Rail transit provides a high capacity transit option, is a unique attraction and amenity that reinforces the primacy of the downtown area in a region, and is often a spur to investment in the downtown area and in areas around transit stations. Rail transit is very popular with the public and tends to draw higher levels of patronage than equivalent bus transit services. Busways and bus rapid transit (BRT), however, can approximate the performance of rail transit and offer cost and flexibility advantages over rail, and are increasingly considered as an alternative to fixed rail transit. Busways, which sometimes use alternative fuel or trolley bus technology, have been highly successful in cities like Ottawa and Pittsburgh, and BRT technology is under consideration in several U.S. and Canadian cities.

The Regional Core Circulator Study, sponsored by TMACOG, is likely to recommend some form of downtown rail transit, possibly a historic streetcar or modern tram railway, as part of its preferred alternative for transportation improvements in downtown Toledo.

Transit Financing and Governance

Since the 1970s, most mass transit in the United States has been public transit—provided by governmental entities and supported, in part, by tax revenues. In some areas, local city, county or state governments directly operate and financially support transit out of general revenues. In some areas, regional governments or metropolitan planning organizations (MPOs) operate and fund transit services. In other cases, a special-purpose governmental entity (in Ohio called a regional transit authority, or RTA) is formed to operate mass transit services and to collect taxes to support it.

TARTA in northwestern Ohio and SMART in southeastern Michigan are special-purpose governmental entities that operate and fund transit. In the case of TARTA, funding is provided by a property tax in the communities that TARTA serves; in most other Ohio regions, RTA's are funded by sales taxes or by direct funding from the county. Other funding for transit includes grants from the Federal Transit Administration (FTA) and other federal agencies, and from state departments of transportation.

However, as in most aspects of local government services, a one-size-fits-all approach has been abandoned for providing transit services, and a variety of funding and governance structures have developed. Funding for transit vehicles and operations increasingly comes from a variety of non-traditional sources, including private businesses, nonprofit and religious organizations, and governmental agencies that are not primarily transit providers, such as colleges and parks districts. Transportation management associations, which are entities set up to manage transportation issues in downtowns or in suburban commercial districts, have directly operated or subsidized local transit services in many areas. Downtown business organizations or parking authorities also have operated or subsidized transit service. Private businesses,

either individually or in groups based on industry or location, have subsidized van and bus services to provide transit for their employees and visitors. Governmental and non-profit organizations serving special needs populations often operate transit services for the benefit of their clients. Local governments and neighborhood groups have also operated or subsidized transit services, in many cases over-and-above the services provided by the regional transit provider.

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6. Estimation of Potential Transit Demand

6.1 Introduction

The Regional Transit Study developed generalized estimates of potential demand for transit service in the TMACOG region using a transit ridership estimation model developed expressly for the study. Along with transit demand estimates that provided an understanding of unmet transit needs, the study developed a sensitivity model around key transportation parameters to allow future testing of transit services. The results of this analysis provide an important, quantitative element of the picture of unmet demand verified by the various aspects of the study. The estimation technique primarily relies on comparison of transit shares in travel corridors in the TMACOG region to national and regional standard shares. The potential increase from transit's share of the local market to a share closer to national and regional averages represents the unmet demand for public transit in each corridor.

6.2 Methodology

TMACOG had available a 1990 calibrated and validated travel demand forecasting model that provided estimates of auto and some transit trips for a number of planning years including 1990, 2000 and 2035. Although model inputs were updated by TMACOG staff to reflect the 2000 Census and other more current land use data (employment, square footage and density), the TMACOG model had not been recalibrated to the year 2000. Therefore, all current and future year model results were based on the 1990 calibrated and validated model. The 1990 model presented some challenges to forecasting transit use. First, transit shares produced by the 1990 TMACOG model were based on 1990 travel data. Second, the 1990 model lacked some key sensitivity variables around which to assess the impacts of policy or service changes such as the affect of changes in fare or frequency on transit demand. Finally, the 1990 TMACOG model did not include the Bowling Green area in Wood County. TMACOG project management decided it was critical to include this area in the Regional Transit Study. Thus a zone structure, zonal land use information and any resulting zonal trips were missing for Bowling Green.

To complete the analysis, the study consultants developed an alternative approach to estimating unmet transit demand and to developing a sensitivity model for the TMACOG region, inclusive of Bowling Green. Guided by standard practices in the transportation industry, the consultants "borrowed" mode parameters from national and/or similar transportation markets to estimate unmet transit demand and develop a sensitivity model. Along with this nationally based information, the consultants also collected new primary data (conducted surveys, etc.) to support the study. This primary data collection provided information to capture trips ending in Bowling Green.

A Traffic Forecasting Model divides an area into zones ("Traffic Analysis Zones" or TAZs) and predicts the volume of travel between each of these zones. Since Bowling Green is not included in the 1990 model,¹ the methodology used a zone structure for Bowling Green, treating the area as an external zone and estimating the total number of trips into this system from the rest of the

¹ The TMACOG travel demand forecasting model is currently being updated to include Bowling Green and southern Wood County.

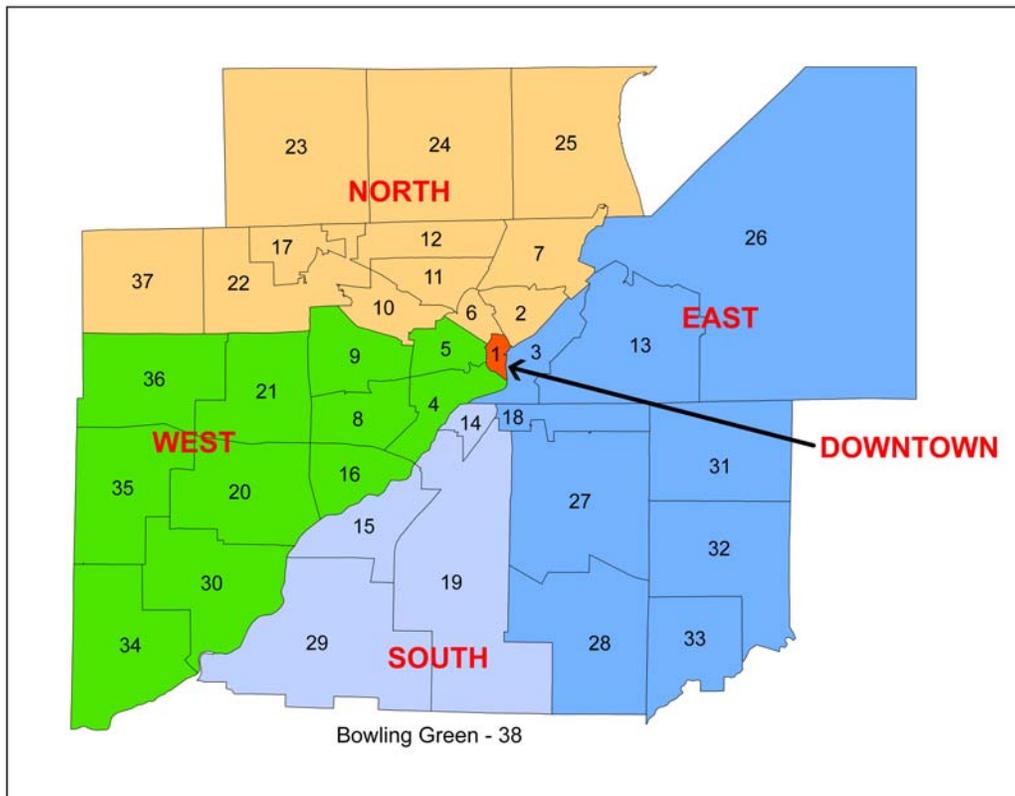
region, including internal-to-internal (I-I) trips within Bowling Green. Appending the Bowling Green zone system to the existing TMACOG zone system resulted in additional trips to the model reflecting the inclusion of information previously unaccounted for in the TMACOG transportation model system.

For analysis purposes the entire TMACOG zonal system was aggregated into 37 districts. The addition of Bowling Green created an additional district for a total of 38 districts. All trip tables generated by the TMACOG model were aggregated into a 38 by 38 district format. This format enabled the analysis of where trips were coming from and where trips were going. Further, this format enabled the creation of TMACOG transportation corridors and the identification of key travel destinations in the TMACOG region.

Five transportation corridors were created by aggregating these districts. The five corridors were: Downtown Toledo, East Corridor, West Corridor, South Corridor and North Corridor. These corridors represent five distinct travel markets in the region. The corridors are depicted in **Figure 6-1**. The corridors consist of the following areas as listed in **Table 6-1**.

Corridor	Area		
Downtown Toledo	Toledo CBD		
East	East Toledo Oregon Jerusalem Twp. Walbridge Millbury	Troy Twp. Luckey Allan Twp. Clay Center Clay Twp.	Genoa Northwood Woodville Twp. Woodville
West	Dorr Reynolds	Southwyck Maumee Monclova Twp. (Part)	Brandywine Briarfield West of Briarfield
South	Rossford Perrysburg Perrysburg Twp.	Webster Twp. Middleton Twp. Haskins	Washington Twp. (Wood Co) Bowling Green
North	North Toledo Old West End Point Place Washington Twp. Westgate	Ottawa Hills West Toledo Alexis Sylvania (Part) Sylvania Twp. (Part)	Whiteford Twp. Bedford Twp. Erie Twp. City of Luna Pier Richfield Twp. Berkey

Figure 6-1: Transportation Corridors



In order to better match the way in which the data was categorized geographically in the telephone survey (discussed in Section 6-3), the districts were also arranged according to key travel destination markets. This allowed the consultants to apply information in the telephone survey—including reported frequency of transit use by survey respondents—to the districts. The key travel destinations included:

Downtown Toledo

Core

- North Toledo
- East Toledo
- South Side
- Dorr Avenue Corridor
- Old West End

Extended Core

- Sylvania (Part)
- Springfield Township
- Holland
- Sylvania Township (Part)

Outside Core

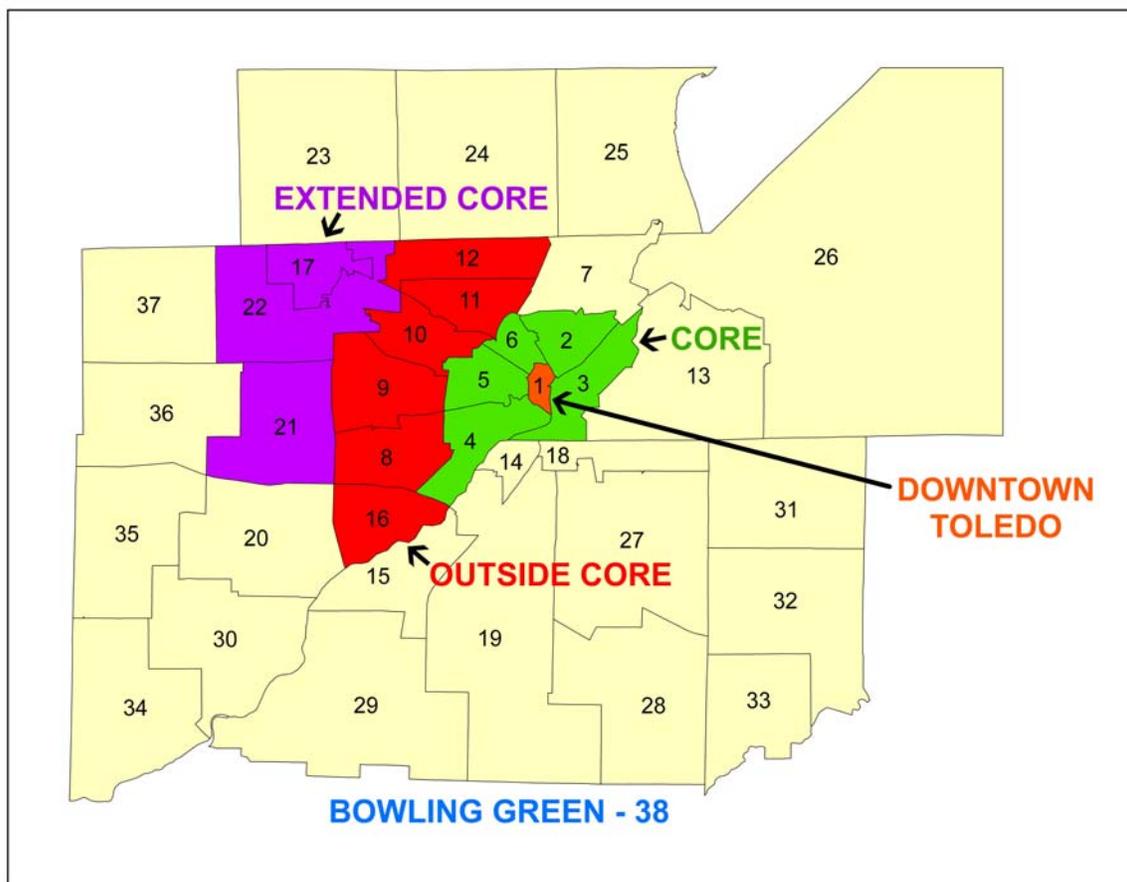
- Southwyck Shopping Center Area
- Reynolds Road Corridor
- Westgate
- Ottawa Hills
- West Toledo
- Alexis Road Corridor
- Maumee

Bowling Green

- Wal-Mart
- Bowling Green State University
- Cooper Plants
- Wood County Hospital
- ODOT

The key travel destination areas are depicted in **Figure 6-2**. Identification of these key destinations was based on the number of trips going to TMACOG travel districts within them or whether the district was considered a major Central Business District (CBD) or major commercial center. Downtown Toledo was classified as its own key travel destination area. The districts immediately around Downtown Toledo were classified as “core” districts. These districts exceeded 80,000 daily person trips but had fewer than 100,000 trips. Districts “outside the core” which had 100,000 or more trips were classified as an “outside the core” key destination. The Extended Core reflected trips of around 70,000 to 80,000 or had a major regional commercial center. Bowling Green became its own key destination area because it represents a major travel destination in the TMACOG region. More details about trips for these key destination areas is provided in **Table 6-3**².

Figure 6-2: Aggregation of Districts: Key Travel Destinations



² Bowling Green is not included in this detail because it was not part of the TMACOG region in 1990.

6.3 Developing Potential Transit Demand Estimates

The demand estimation effort can be categorized into four areas: total trip estimates, transit shares, unmet transit demand and sensitivity parameters. The data collection process consisted of designing and implementing surveys, extracting information from national studies as well as from other transportation planning areas, and obtaining land use or socio-economic data for selected locations in the TMACOG study region. The TMACOG model and land use files also served as another useful source of data.

i. Total Trip Estimates

Trip estimates for the original district level zone system for the region defined as the TMACOG study area consisted of 37 districts and were taken from the TMACOG travel model. In 1990 there were a total of 2.1 million daily person trips for this region. In 2000, without the inclusion of Bowling Green there were 2.3 million daily person trips in the region. Expanding the region to include Bowling Green meant the total number of trips had to increase. By adding a district to include Bowling Green, the number of daily person trips in the TMACOG region increased to 2.4 million.

To extend the study to include Bowling Green the TMACOG project management team identified two major trip attractors in Bowling Green – Wal-Mart and Bowling Green State University. These two entities, along with some secondary trip attractors – Cooper Plant and Wood County Hospital – provided the basis for estimating the total number of trips into the Bowling Green district. Data used to create the Bowling Green trips came from a variety of data collection efforts. First, employment data by home zip code were obtained to establish the total number of employees at the Cooper Plant, Wood County Hospital and Bowling Green State University and the origin trip-end of these employees. Next, appropriate Institute of Transportation Engineers (ITE) trip rates provided the basis for determining the total number of trips into these locations. The employee distribution of origin trip-ends were applied to the total number of trips estimated using ITE trip rates to allocate these trips from the origin ends into the Bowling Green district.

Example:

- Bowling Green State University: 2,817 Employees - based on Bowling Green State University employee zip code survey data
- ITE, 6th Edition Fitted Curve Rate: 7.0 vehicle trips per employee
- 2,817 employees x 7.0 employee trip rate = 19, 719 vehicle trips in 24 hours
- 19, 719 x 1.2 vehicle occupancy ratio = 23,663 person trips in 24 hours

Where: the distribution of 23,663 trips into the Bowling Green district was based on the distribution of the origin trip-ends derived from the employee zip code survey.

Another process used to estimate trips into the newly created Bowling Green district was the use of intercept surveys. Since there was no information on Wal-Mart shoppers or visitors to

Bowling Green State University, intercept surveys gathering information in the field were conducted at each of these locations. ITE trip rates provided the mechanism to estimate the number of person trips into Wal-Mart. The Wal-Mart intercept survey was used to distribute these trips at the origin ends into Wal-Mart. Similarly ITE trip rates were used to capture the total number of student trips into Bowling Green State University and were distributed using the student zip code survey. Because of the small sample size, visitor trips into Bowling Green State University were not estimated using the Bowling Green State University intercept survey. Instead, this study remained conservative by using only trips generated by employees and students for estimating Bowling Green State University trips.

Once trips were estimated and distributed for each selected land use facility, these trips were summed to provide the total number of trips into the new Bowling Green district – from everywhere. **Table 6-4** provides the computation detail for each of the trip attractors used to create and append the new Bowling Green district to the TMACOG zone system. **Table 6-5** provides the distribution detail for each of these Bowling Green trip attractors.

ii. Trip Tables

Twenty-four hour person-trip and transit-trip tables were generated in origin (where trips come from) – destination (where trips go to) format. These tables were generated for all trip purposes and by trip purpose for the 1990 base year, 2000 current year, and 2035 future year scenario. These tables were a direct result of the 1990 calibrated and validated TMACOG model. 1990 does not include Bowling Green since Bowling Green was not included in the 1990 model calibration/validation process. The 2002 and 2035 trip tables incorporated the Bowling Green district.

Once trip tables were generated, they were summarized at the district and corridor levels. Each table is provided in a separate Technical Memorandum and includes the district and corridor summaries.

Transit Shares

The 1990 TMACOG calibrated and validated model provided daily trips for both total person and transit trips. Transit shares were computed using the ratio of transit trips to total person trips for each district in the TMACOG zone system. The 1990 regional transit share³ was computed as 0.8%.

The 1990 transit shares by district and by total region were used to compute the transit shares for 2000 and 2035 TMACOG trips. Transit shares were also computed for each trip purpose: Home-Based Work, Non Home-Based and Non Home/Non Work trips.

A TMACOG regional telephone survey⁴ was designed and executed to provide more current information on transit shares than were available through the 1990 model-based transit share information. Unfortunately there were several reasons why results from the telephone study were deemed not robust enough to support an adjustment to the transit shares based on the

³ Total Transit Trips / Total Person Trips = Regional Transit Share.

⁴ Regional Transportation Needs Assessment, prepared by Stanford H. Odesky and Associates, May 2003.

1990 calibrated and validated TMACOG model. First, while 81% of the telephone respondents acknowledged familiarity with the public transportation system available in the TMACOG region, only 19% had used this service within the past two years. Second, the transit shares obtained from the survey were not consistent with some known transit behavior. For instance, in the Bowling Green district there is considerable transit use among students commuting to Bowling Green University. However, the survey revealed zero transit activity in this district. Finally, the overall transit share computed using the telephone survey differed substantially from the 2000 model results, which are based on the 1990 calibrated/validated TMACOG model. Because the 2000 information was based on a calibrated/validated model where a full household survey was used to obtain information on transportation behavior, the decision was made to rely on the model for transit share information. **Table 6-6** provides the transit share results from the telephone survey and the comparison of these results to the 1990 model-based results in 2000.

In the absence of better information, the regional transit share was assumed for the Bowling Green district.

Data external to the TMACOG region was gathered to evaluate how well the 1990 model-based results performed in producing transit shares and to build confidence in the use of this information. Data from two external models were used for this purpose. These are:

- Northern New Jersey Transportation Model for selected transportation corridors deemed similar to corridors in the TMACOG region
- Mid-Ohio Regional Planning Commission (MORPC) for selected corridors deemed similar to TMACOG corridors

The results of this comparison provided the high and low ranges of possible transit shares the TMACOG region could or has approached since 1990. For instance, daily transit shares into a NJ Transit (NJT) corridor that could be characterized as a suburban corridor with lots of shopping areas including a major regional mall, non-CBD oriented, was a dominated by bus service and attracted cross-county trips had a transit share of 0.9%. This share is consistent with 0.8% transit share the TMACOG model produces for District 8 where the Southwyck Mall is located, has bus service and is non-CBD oriented. Similarly a comparison between TMACOG and MORPC also yields consistency in transit share results. Overall transit share from the MORPC model is 0.9% and is comparable to the overall 0.8% transit share of the 1990 TMACOG model results.

One final set of data was used to build confidence in the use of transit shares from the TMACOG model rather than updating these shares with information obtained from the telephone study. The source of this data was the Traveler Response to Transportation System Changes Interim Handbook sponsored and published by Transit Cooperative Research Program (TCRP), Transportation Research Board (TRB) and the National Research Council (NRC). Data from this handbook provided average transit shares based on population sizes.

Using the most conservative population ranges⁵, the lowest transit share expected in a region like TMACOG is 0.8%. **Table 6-7** provides the district level details of transit shares for

⁵ TCRP population for metropolitan area of 50,000 to 200,000 could expect transit shares ranging from 0.8% to 3.32%. The total 2000-year population for the TMACOG region is slightly over 565,000 but in any given district the

TMACOG, NJT and MORPC. It also provides the various TCRP transit shares for varying metropolitan sizes.

iii. Potential Demand in TMACOG Transportation Corridors

To determine unmet transit needs in the TMACOG region, an examination was made of a variety of factors. First, the TMACOG transit shares at the district and corridor levels were compared to the shares obtained from the NJT and MORPC models for selected corridors. The purpose of this comparison was to determine the potential for additional transit in specific TMACOG corridors. If either or both of the NJT and MORPC models showed that a transit share in a selected NJT/MORPC corridor was greater than the transit share in a particular TMACOG corridor, then the conclusion was that there existed more transit potential in the TMACOG region. Next, TCRP data was used to round out this analysis because TCRP provided transit share patterns across the United States based on broader, more comprehensive transportation surveys.

After, NJT, MORPC and TCRP data was analyzed and contrasted with the TMACOG model results; decision-rules were created using additional information relevant to the TMACOG study region. This additional information included.

- Existing transit service levels
- Existing service levels versus trip activity
- Existing service levels versus land use characteristics
- Existing road network
- Cross-county transit potential
- Off-peak transit potential
- Population specific transit needs
- Potential high growth areas
- Results from public and telephone surveys

The decision-rules consisted of the following. If a corridor could be characterized as having cross county, off-peak, or high growth potential, and existing transit services didn't serve this potential, and the current transit shares were lower than the norm⁶, then one could reasonably expect this corridor to have transit potential. If a corridor could be characterized as having high trip activity relative to other locations but relatively lower transit service, then the corridor could be reasonably expected to have transit potential. If a corridor could be characterized as having population specific transit needs that could be better served, then this corridor could be expected to have transit potential. Finally, the extensive road network in the TMACOG region was viewed as a potential infrastructure to support low-cost transit service increase in any of the TMACOG corridors.

Consideration of cross-county and off-peak potential was based on the existing orientation of trips. The Toledo CBD is no longer the only significant trip destination. Instead, a significant percentage of the trips are oriented to areas away from Toledo Downtown. The decision-rule

population ranges from 1,500 to 4,500, and for any of the transportation corridors the population ranges from 1,900 to 151,000.

⁶ Based on the information provided by the NJT/MORPC models and TCRP national studies.

used to determine unmet transit demand captures this trip pattern, generated in large measure to dispersed shopping and commercial centers and concentrations of off-peak working hours in many locations. Similarly, growing commercial hubs like the Bowling Green area, with little or no existing regional transit service is also captured in the decision-rules to derive potential transit demand.

Population specific and public feedback supports the decision-rules.

The calculation of unmet transit demand is the following:

- Existing Transit Trips (ETT) – Potential Transit Trips⁷ (PTT) = Unmet Transit Demand
- If: ETT is less than PTT, then transit demand is unmet
- If: ETT is greater than PTT, then transit demand is more than met
- If: ETT = PTT, then transit demand is sufficiently served

Analysis of TMACOG transit ridership and existing transit shares indicates there is unmet demand for public transit in all of the travel corridors, based on the share of the existing travel markets being served by transit in those corridors. This unmet demand is illustrated below using the corridors identified in **Table 6-2**. For instance, the Toledo Downtown corridor currently has 2,630 daily transit riders based on a transit share of 3.2%. Low capital cost transit improvements to provide more off-peak and cross-county transit service combined with increasing concentrations of economic development activity in Downtown Toledo would increase transit ridership to and from this corridor. The future transit share that could be expected from these changes is up to 5.4% and is modeled after what a comparable area corridor in Ohio is experiencing now today. The resulting impact would be 4,690 additional daily riders. At just \$1.00 per rider trip, two trips a day, 250 working days a year, this these additional riders would generate \$1,172,500 in additional fares annually.

Similarly, other corridors could increase by at least 1 percentage point in transit shares resulting from low cost transit improvements. The kinds of improvements to consider include the following.

- Expansion of transit service into Bowling Green and across county boundaries into Wood and Monroe counties. This low-cost improvement would provide transit access into and out of Bowling Green for jobs, higher education and medical services.
- Expansion of transit coverage and increase in off-peak service into extensive retail, service and commercial markets such as along Navarre Road and Airport Highway. This improvement would provide better off-peak transit access and encourage more people to use transit – an environment-friendly transportation alternative.
- Expansion of coverage to specific populations such as seniors, students, low-income groups and disabled persons. This improvement would increase mobility among these groups. In the telephone survey prepared for the study, 58% of the people surveyed said they need service where the bus doesn't go; 45% said they do not own a car.

⁷ Based on NJT, MORPC or TCRP transit shares.

With minor, low-cost transit improvements (new bus routes, and increased service frequencies on existing routes, but not major infrastructure investments), the TMACOG region could generate approximately 4,690 new daily transit riders. Up to \$1.7 million dollars in additional revenue⁸ could be generated annually from increased transit ridership. **Table 6-2** applies new corridor shares to the other corridors in the study area. These new riders could be generated through moderate increases in corridor shares. Applying the same formula as was applied to the downtown corridor above, at two trips per day, a \$1 transit fare and 250 working days per year, the region could generate an additional \$2,345,000 in transit fare revenue. Increased employment, increased business and commercial activity generated by increased regional mobility, and increased federal transit subsidies based on increased ridership, could generate additional economic activity and revenue for the service.

Table 6-2: Estimate of Unmet Demand by Corridor

	Existing Riders	Existing Share	Additional Future Riders	Future Share	Total Future Riders	% Increase Over Existing
Downtown	2,630	3.2%	1,850	5.4%	4,480	70%
East	1,860	0.7%	400	0.8%	2,260	22%
South/West	5,280	0.7%	630	0.8%	5,910	12%
South	1,880	0.7%	150	0.8%	2,030	8%
North/West	6,420	0.6%	1,660	0.8%	8,080	26%
	18,070		4,690		22,760	26%
(Assumes Year 2000 Demographic Conditions)						

Table 6-8 provides the results of this analysis by each of the TMACOG corridors.

6.4 Sensitivity Model

The TMACOG Sensitivity Model is a spreadsheet-based tool that was developed by this study so that TMACOG and other agencies engaged in regional transit planning can test the likely ridership impacts of “what-if” scenarios of various changes to the regional transit network. This model takes into account the key policy and service variables that can be varied to determine the resulting impact on transit demand in a given corridor.

The following variables are considered in the model.

- | | |
|------------------------------------|-------------------|
| Fare | Frequency |
| Service (Route Miles) | Crosstown Service |
| Radial (downtown-oriented) Service | Service Hours |
| Land Use | |

An illustration of how the model works is as follows. If the transit service frequency variable were to increase by 1.0%, then there would be a corresponding 0.5 percent increase in transit ridership.

⁸ 4,690 additional riders x \$1.00 x 365 days = \$1.7 million.

The documentation of the model is provided in a separate Technical Memorandum – Sensitivity Model and User Manual.

Table 6-3 Snapshot of TMACOG Districts⁹

District	Destination Name	Total Trips – Destination End	Share of Total	Internal-to Internal Trips
1	Downtown	84,600	0.040	12,800
2	Core	94,100	0.044	23,200
3	Core	91,200	0.043	26,200
4	Core	97,700	0.046	24,000
5	Core	92,700	0.044	17,500
6	Core	84,000	0.040	13,700
8	Outside Core	149,100	0.070	50,700
9	Outside Core	114,800	0.054	32,100
10	Outside Core	175,200	0.082	49,000
11	Outside Core	154,600	0.073	38,800
12	Outside Core	144,000	0.068	42,800
16	Outside Core	109,800	0.052	38,100
17	Extended Core ¹⁰	79,000	0.037	27,000
21 ¹¹	Extended Core	55,300	0.026	13,300
22	Extended Core	69,700	0.033	13,100
All 37 Districts	Sum of all districts:	2,130,200	na	na

⁹ Source: 1990 All Person, All Mode TMACOG Trip Table. Trips are rounded up.

¹⁰ Includes districts in the core plus these additional districts.

¹¹ Does not meet the decision-rule but has a large regional shopping center.

Table 6-4: Adjustments to 2002 All Person Trip Table Based on Addition of Bowling Green (BG) Zone Assumptions/Computations

1. Wal-Mart: $300 \times 350 = 105,000$ square feet
ITE, 6th Edition Average Weekday Rate: 42.92 per 1000 Sq. Feet Gross Leasable Area in a 24-Hour Period
 $105,000/1000 = 105$; $105 \times 42.92 = 4,507$ vehicle trips in 24 hours
 $4,507 \times 1.2$ vehicle occupancy ratio = 5,408 person trips in 24 hours
2. Bowling Green University: 2817 Employees
ITE, 6th Edition Fitted Curve Rate: 7.0 vehicle trips per employee; $2,817 \times 7.0 = 19,719$ vehicle trips in 24 hours
 $19,719 \times 1.2$ vehicle occupancy ratio = 23,663 person trips in 24 hours
3. Bowling Green University: 18,558 Students
ITE, 6th Edition Average Weekday Rate: 2.38 vehicle trips per student; $18,658 \times 2.38 = 44,406$ vehicle trips in 24 hours
 $44,406 \times 1.2$ vehicle occupancy ratio = 53,287 person trips in 24 hours
4. Bowling Green Cooper Plant: 561 Employees
ITE, 5th Edition Average Weekday Rate: 2.09 vehicle trips per employee; $561 \times 2.09 = 1,172$ vehicle trips in 24 hours
 $1,172 \times 1.2$ vehicle occupancy ration = 1,406
5. Bowling Green Woods County Hospital: 676
ITE, 5th Edition Average Weekday Rate: 5.17 vehicle trips per employee; $676 \times 5.17 = 3,494$ vehicle trips in 24 hours
 $3,494 \times 1.2$ vehicle occupancy ratio = 4,194 person trips in 24 hours
6. Total Trips for Bowling Green District 38 (new External Zone added):
Sum (1, 2, 3, 4, 5) =87,958 Check: 87958
7. Source of distribution Information for distributing Bowling Green trips from origins to BG (e.g. BG)
Wal-Mart: Telephone Survey
BGU, Cooper, Woods County Hospital: Employee Zip Codes, Student Zip Codes
8. Reduction of trips into District 1-37 (non BG districts) not recommended; instead treat as External Cordon trips

Table 6-5: Distribution of Bowling Green Trip Attractions

Districts	Cooper		Wood		Wal-	Mart_Adju	BGU Stud	BGU Stu	BGU Emp	BGU EE	Total BG
	Cooper	Adjusted	Wood	Adjusted	Wal-Mart						
	1406		4194		5408		53287		23663		87958
1	5	5	6	6	0	0	66	66	109	109	186
2	9	9	6	6	11	11	144	144	57	57	228
3	9	9	6	6	11	11	144	144	57	57	228
4	9	9	6	6	11	11	144	144	57	57	228
5	9	9	6	6	11	11	144	144	57	57	228
6	5	5	6	6	0	0	66	66	109	109	186
7	14	14	10	11	27	26	378	378	192	192	622
8	14	14	10	11	27	26	378	378	192	192	622
9	14	14	10	11	27	26	378	378	192	192	622
10	14	14	10	11	27	26	378	378	192	192	622
11	14	14	10	11	27	26	378	378	192	192	622
12	14	14	10	11	10	10	378	378	192	192	606
13	4	4	18	18	9	9	251	251	118	118	400
14	13	13	42	42	34	34	528	528	448	449	1067
15	13	13	42	42	34	34	528	528	448	449	1067
16	13	13	42	42	34	34	528	528	448	449	1067
17	13	13	42	42	34	34	528	528	448	449	1067
18	4	4	18	18	9	9	251	251	118	118	400
19	5	5	19	20	39	39	82	82	49	49	195
20	4	4	18	18	9	9	251	251	118	118	400
21	4	4	18	18	9	9	251	251	118	118	400
22	13	13	42	42	34	34	528	528	448	449	1067
23	5	5	19	20	39	39	82	82	49	49	195
24	13	13	42	42	34	34	528	528	448	449	1067
25	5	5	19	20	39	39	82	82	49	49	195
26	5	5	19	20	39	39	82	82	49	49	195
27	5	5	19	20	39	39	82	82	49	49	195
28	5	5	19	20	39	39	82	82	49	49	195
29	5	5	19	20	39	39	82	82	49	49	195
30	4	4	18	18	39	39	251	251	49	49	361
31	5	5	19	20	39	39	82	82	49	49	195
32	5	5	19	20	39	39	82	82	49	49	195
33	5	5	19	20	39	39	82	82	49	49	195
34	5	5	19	20	39	39	82	82	49	49	195
35	5	5	19	20	39	39	82	82	49	49	195
36	5	5	19	20	39	39	82	82	49	49	195
37	5	5	19	20	39	39	82	82	49	49	195
38	1111	1102	3431	3472	4408	4397	44699	44738	18108	18164	71873
	1417	1406	4144	4194	5422	5408	53241	53287	23590	23663 Check	87958

Table 6-6: Transit Shares by Data Source—Telephone Survey versus 1990 Model-Based Results in 2000

Source	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7
Telephone¹²							
HBW	7%	2%	0%	0%	0%	0%	0%
NHB	6%	8%	1%	0%	1%	0%	0%
NHNW	8%	9%	3%	0%	1%	0%	0%
All Purpose	7%	7%	2%	0%	1%	0%	0%
TMACOG Model¹³							
HBW	6%	2%	2%	2%	2%	3%	2%
All Purpose	2%	1%	1%	1%	1%	1%	1%

HBW = Home-Based Work Trips
NHB = Non Home-Based Trips
NHNW = Non Home/Non Work Trips

Region 1 = Districts 1, 6
Region 2 = Districts 2, 3, 4, 5
Region 3 = Districts 7, 8, 9, 10, 11, 12
Region 4 = Districts 14, 15, 16, 17, 22, 24
Region 5 = Districts 13, 18, 20, 21, 30
Region 6 = Districts 19, 23, 25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37
Region 7 = District 38¹⁴

¹² Source: May 2003 Telephone Survey

¹³ Source: 2000 TMACOG Model Results

¹⁴ For the telephone survey this region 7 also includes non-classified zip codes provided by respondents.

Table 6-7: Transit Shares by Data Source—NJT, MORPC, TCRP, TMACOG
(Percent of trips taken by public transit)

NJT¹⁵

Corridor:	Newark CBD	Rutgers/UMDNJ Hospital	Willowbrook Mall	Livingston Mall
Transit Share ¹⁶	14%	14%	1%	1%
Transit Share ¹⁷	15%	13%	1%	1%

MORPC¹⁸

Corridor:	Downtown Columbus	North Corridor	Northwest
Total Daily Transit Share	5%	1%	1%
HBW Transit Share	11%	3%	2%

TCRP¹⁹

Population Range:	50,000 – 200,000	200,000 – 500,000	500,000-1,000,000
Average Transit Share	0.8 to 3.32%	1.55% to 4.4%	2.35% to 28.81%

TMACOG²⁰ —Transit Use in Transportation Analysis Districts (see *Figure 6-2*)

Aggregated District / Key Travel Destination	District #	General Description (including number of person trips/day to these districts)	Includes	Transit Share
Downtown Toledo	1	Toledo's city center / central business district		3.2%
Core	2–6	Areas surrounding city center; 80,000-100,00 trips/day	North Toledo, East Toledo, South Side, Dorr Street Corridor, Old West End	.6% to .8%
Outside Core	8–12, 16	Areas outside the core with at least 100,000 trips/day	Southwyck Shopping Center area, Reynolds Road corridor, Westgate, Ottawa Hills, West Toledo, Alexis Road corridor, Maumee	.5% to .9%
Extended Core	17, 21, 22	Areas with 70,000-80,000 trips/day, or with a major regional commercial center (Spring Meadows Mall in district 21)	Sylvania (part), Springfield Township, Holland, Sylvania Township (part)	.4% to .5%
Remainder of region ²⁰	7, 13–15, 18–20, 23–37	Not key travel destinations	Southern Monroe County, northern Wood County, and western Lucas County	.2% to 1.3%
Bowling Green	38	City of Bowling Green	Area includes major destinations such as Wal-Mart, Bowling Green State University, Cooper Plants, Wood County Hospital, ODOT	.8%

¹⁵ Source: NJ Transit Northern New Jersey Transportation Model

¹⁶ 1990 Model Results, Total Daily

¹⁷ 2020 Model Results, Total Daily

¹⁸ Source: Mid-Ohio Regional Planning Commission, 2002 Model Results

¹⁹ Source: Transit Cooperative Research Program's "Traveler Response to Transportation System Changes – Interim Handbook", March 2000

²⁰ Source: TMACOG 2000/2002 Model Results (note this model did **not** include southern Wood County)

Table 6-8: Estimation of Unmet Transit Demand by Corridor

<i>Average Transit Share for Population Range (TCRP):</i>		
<i>50,000-200,000</i>	<i>200,000-500,000</i>	<i>500,000-1,000,000</i>
<i>(.80 to 3.32%)</i>	<i>(1.55 to 4.40%)</i>	<i>(2.35 to 28.81%)</i>

Unmet Transit Need in Downtown Toledo Corridor

<u>Range of Transit Shares</u>		<u>Potential</u>		<u>Transit</u>		<u>Deficit/Surplus</u>	
		Daily	HBW	Daily	HBW	Daily	HBW
<u>TCRP</u>							
Low	0.80%	654	129	1,975	1,633		
High	3.32%	2,714	537	-85	1,225		
<u>MORPC</u>							
Low (NW)	0.60%	491	97	2,138	1,665		
Moderate (N)	1.04%	850	168	1,779	1,594		
High (DT)	5.48%	4,480	886	-1,851	876		
<u>NJT</u>							
High (CBD)	14.48%	11,772	2,328	-9,143	-566		
Low (Suburban)	0.90%	738	146	1,891	1,616		

Table 6-8: Estimation of Unmet Transit Demand by Corridor, continued

<i>Average Transit Share for Population Range (TCRP):</i>		
<i>50,000-200,000</i>	<i>200,000-500,000</i>	<i>500,000-1,000,000</i>
<i>(.80 to 3.32%)</i>	<i>(1.55 to 4.40%)</i>	<i>(2.35 to 28.81%)</i>

Unmet Transit Need in East Corridor

<u>Range of Transit Shares</u>		<u>Potential</u>		<u>Transit</u>		<u>Deficit/Surplus</u>	
		Daily	HBW	Daily	HBW	Daily	HBW
<u>TCRP</u>							
Low	0.80%	2,257	389	-395	545		
High	3.32%	9,365	1,613	-7,503	-679		
<u>MORPC</u>							
Low (NW)	0.60%	1,692	291	170	643		
Moderate (N)	1.04%	2,933	505	-1,071	429		
High (DT)	5.48%	15,457	2,662	-13,595	-1,728		
<u>NJT</u>							
High (CBD)	14.40%	40,618	6,995	-38,756	-6,061		
Low (Suburban)	0.90%	2,539	437	-677	497		

Table 6-8: Estimation of Unmet Transit Demand by Corridor, continued

<i>Average Transit Share for Population Range (TCRP):</i>		
<i>50,000-200,000</i>	<i>200,000-500,000</i>	<i>500,000-1,000,000</i>
<i>(.80 to 3.32%)</i>	<i>(1.55 to 4.40%)</i>	<i>(2.35 to 28.81%)</i>

Unmet Transit Need in West Corridor

<u>Range of Transit Shares</u>		<u>Potential</u>	<u>Transit</u>	<u>Deficit/Surplus</u>	
		Daily	HBW	Daily	HBW
<u>TCRP</u>					
Low	0.80%	5,908	1,016	-633	974
High	3.32%	24,517	4,216	-19,242	-2,226
<u>MORPC</u>					
Low (NW)	0.60%	4,431	761	844	1,229
Moderate (N)	1.04%	7,680	1,321	-2,405	669
High (DT)	5.48%	40,469	6,959	-35,194	-4,969
<u>NJT</u>					
High (CBD)	14.40%	106,340	18,287	-101,065	-16,297
Low (Suburban)	0.90%	6,646	1,143	-1,371	847

Table 6-8: Estimation of Unmet Transit Demand by Corridor, continued

<i>Average Transit Share for Population Range (TCRP):</i>		
<i>50,000-200,000</i>	<i>200,000-500,000</i>	<i>500,000-1,000,000</i>
<i>(.80 to 3.32%)</i>	<i>(1.55 to 4.40%)</i>	<i>(2.35 to 28.81%)</i>

Unmet Transit Need in South Corridor

<u>Range of Transit Shares</u>		<u>Potential</u>		<u>Transit</u>		<u>Deficit/Surplus</u>	
		Daily	HBW	Daily	HBW	Daily	HBW
<u>TCRP</u>							
Low	0.80%	2,023	343	-146	678		
High	3.32%	8,395	1,423	-6,518	-402		
<u>MORPC</u>							
Low (NW)	0.60%	1,517	7257	360	764		
Moderate (N)	1.04%	2,630	446	-753	575		
High (DT)	5.48%	13,857	2,348	-11,980	-1,327		
<u>NJT</u>							
High (CBD)	14.40%	36,411	6,170	-34,534	-51497		
Low (Suburban)	0.90%	2,275	386	-398	635		

Table 6-8: Estimation of Unmet Transit Demand by Corridor, continued

<i>Average Transit Share for Population Range (TCRP):</i>		
<i>50,000-200,000</i>	<i>200,000-500,000</i>	<i>500,000-1,000,000</i>
<i>(.80 to 3.32%)</i>	<i>(1.55 to 4.40%)</i>	<i>(2.35 to 28.81%)</i>

Unmet Transit Need in North Corridor

<u>Range of Transit Shares</u>		<u>Potential</u>		<u>Transit</u>		<u>Deficit/Surplus</u>	
		Daily	HBW	Daily	HBW	Daily	HBW
<u>TCRP</u>							
Low	0.80%	8,077	1,340	-1,657	974		
High	3.32%	33,518	5,562	-27,098	-3,075		
<u>MORPC</u>							
Low (NW)	0.60%	6,058	1,005	362	1,482		
Moderate (N)	1.04%	10,500	1,742	-4,080	745		
High (DT)	5.48%	55,325	9,180	-48,905	-6,693		
<u>NJT</u>							
High (CBD)	14.40%	145,380	24,123	-138,960	-21,636		
Low (Suburban)	0.90%	9,086	1,508	-2,666	979		

7. Does Transit Work in Our Region?: Unmet Needs Identified by the Study

The primary goal of the TMACOG Regional Transit Study is to identify unmet needs for public transit in the region and the extent and nature of these needs. The study used a broad array of public input, planning, and technical analysis techniques to assess transit use and needs. This section summarizes the key study findings.

Public transportation services today carry a small fraction of the total trips made in the TMACOG region. Even modest increases in public transportation's share of the total travel market would result in a dramatic increase in transit ridership in the region. Unmet demand for public transportation services, as reflected in the lower-than-standard market shares for transit in the region, are caused by lack of full geographic coverage, infrequent service, lack of adequate service to outlying employment centers and cross-town connections, and lack of night and weekend service. Improvements in all these aspects of service would likely be necessary for transit to fully meet the unmet demand for service in the region.

7.1 Lack of Full Geographic Coverage

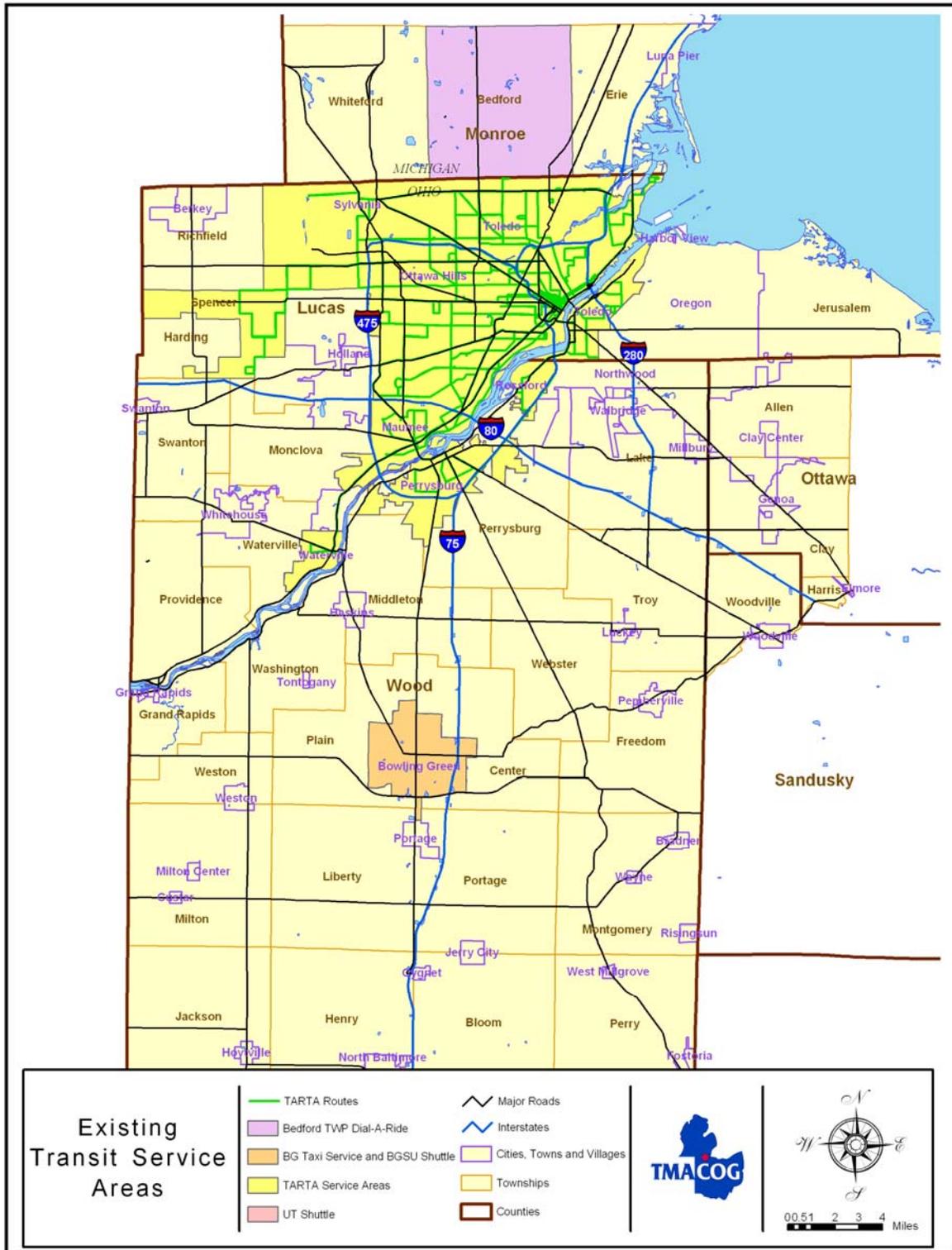
Figure 7-1 shows vast areas of the region are not served by public transportation in any form. Less than 10% of the study area is served by TARTA's fixed-route bus network, and 47% of the region's population has no access to the TARTA network. As noted in **Chapter 4**, 30% of the transit-supportive area of the region lies outside the TARTA service area. There, transit-supportive areas are major concentrations of employment and population, and in many cases serving them would actually increase the efficiency of the existing transit system. The TARTA network is the only transit service in the area that provides reasonable connections to regional employment, shopping, health care and entertainment centers. Other transit providers in the region either are not linked (or well linked) to TARTA, or to one another, or provide little or no evening or weekend service to provide full coverage. Residents of non-TARTA service areas who cannot or do not wish to drive are effectively isolated from most of the region's assets.

Bowling Green's transit service and BGSU bus service operate only within Bowling Green and do not provide regional connections. Bedford Township's Dial-a-Ride operates too infrequently and for too short of a service day to serve most trip purposes.

7.2 Lack of Transit Connections to Regional Services

Because the region lacks transit with full geographic coverage, travelers cannot make trips between many important trip generators. For example, it is impossible to travel between Bowling Green State University and either Medical College of Ohio or the University of Toledo. Owens Community College and Monroe County Community College, the region's two associate-degree granting institutions, are poorly connected by transit either to one another or to the University of Toledo, and are isolated from Bowling Green State University.

Figure 7-1: Bus Service Areas in the Study Area



The lack of geographic coverage also limits the choices of transit-dependent consumers of retail, medical and professional services, and distorts normal patterns of travel and consumer choice based on the availability of transit services. Under the current system, consumers decide which shopping center, which grocery store, which hospital and which doctor they use, based on transit access, rather than on the basis of price, quality of service, or even in many cases, physical proximity. For example, many consumers in East Toledo apparently choose to go to St. Vincent's Hospital in West Toledo, rather than St. Charles Hospital in Oregon (which is physically closer) because of the lack of transit service to St. Charles Hospital. Nearly one-third of respondents to the informational survey said they chose their home based on availability of transit. More than one fourth of respondents chose their job, their doctor, and where they shop, based on transit availability. Citizens desire access to specific areas in the region (such as Oregon and Perrysburg Township), specific shopping centers and stores (such as Wal-Mart in Oregon, Spring Meadows, and Woodville Malls) and specific medical facilities (St. Charles, Bay Park and Wood County hospitals). Many of the region's major recreation destinations (Maumee Bay State Park) also lie outside the regional fixed-route transit network, and thus are inaccessible to those who use transit.

7.3 Lack of Service for Suburban and Rural Residents

Forty-seven percent (47%) of the population of the region lies outside the full service fixed-route transit area. There is no public transportation service and no connection to the regional transit network in medium-to-higher density residential areas in suburbs such as Oregon, Northwood, Perrysburg Township, Monclova Township, Springfield Township, and Holland. In the informational survey conducted for the study, hundreds of suburban residents, particularly older people and disabled people, expressed their desire for public transit to serve their neighborhoods. These comments were received at public meetings and in the informational surveys collected over the course of the study.

Population trends show continued future outward movement of both residences and jobs into suburban areas, and increasing numbers of young, elderly and disabled persons, and commercial development moving into these areas, pointing to a greater need for public transportation in suburban areas in the future.

7.4 Lack of Access to Business and Industry

Lack of geographic coverage and connections and limited evening, night and weekend service curtails access to jobs for residents, particularly for those who are without private transportation. The analysis of employment location included in **Chapter 4** indicates 57% of the jobs in the study area are not connected to the TARTA regional transit network in such a way as to support work trips. Lack of transit service in suburban areas blocks access to suburban jobs for workers throughout the region. The CommuterLINK Study, conducted in 2001 by researchers at the University of Toledo, indicated that 3 out of 10 CommuterLINK client workplaces lie outside the TARTA weekday service area, and more than half lie outside their weekend service area.

Growing suburban commercial and industrial areas in Oregon, Springfield, and Monclova Townships, Perrysburg Township, and other jurisdictions are not accessible using public transportation. The current lack of service, or limited service, in employment areas like

Perrysburg Township and Arrowhead Park limits the flexibility of the transit system to serve business and industry in the region. It separates employees from jobs, and employers from workers. Residents of the northern portion of the study area are prevented from access to job and educational opportunities in Bowling Green.

The job market is changing, and fewer people work a standard Monday-through-Friday, nine-to-five schedule. Nationally, the percentage of employees with flexible work schedules has increased from only 12% in 1985 to nearly 29% in 2001. Fourteen-and-a-half percent of the full-time workforce works exclusively outside the traditional workday, including evening, night and rotating shifts. Twenty-six percent of retail sales and cleaning service workers, 30% of the health care industry, and 40% of food service workers work a non-traditional shift. Among production workers, more than 30% work a non-standard employment situation, and more than 15% work in shifts in continuous 24-hour operations. These national figures are supported by local data: a Toledo area Employers' Association survey found that, among responding companies, approximately 28% of the reported staffing schedules were for a non-standard work week. Such schedules are difficult to serve with public transportation.

Non-weekday schedules are difficult to serve with public transportation. TARTA begins reducing the number of bus routes operating in the early evening, and all service ends during the 11 p.m. hour. TARTA also provides fewer routes and less frequent service on weekends. The region's other public transit agencies provide little, if any, night, weekend or holiday service. Survey respondents stated inadequate time-of-day coverage is a significant problem (both for work and nonwork trips). Workers reported lost wages and lost job opportunities because of inadequate transit service hours. Students at the region's universities and community colleges, many of whom work, also find it difficult to use transit while maintaining their school and work schedules. In the next 20 years, manufacturing employment will not grow and may decline slightly. Employment in service sectors such as retail trade, finance, and general services, will grow 10% to 25%. Transit Study survey results indicated that work schedules that vary day-by-day and week-by-week, and include late night and weekend shifts, are already common in this region. Further shifts to service employment will make variable schedules even more common.

To be effective, transit must, at minimum, serve the needs of people entering the work force. A study of participants in the CommuterLINK program, which provides transportation to new workers, found that 68% could not use TARTA for their trips both to and from work because bus service didn't operate at the time that one of the trips occurred. This rose to 85% for those who worked weekends. The study also determined that 3 out of 10 CommuterLINK client workplaces lie outside the TARTA weekday service area, and more than half lie outside their weekend service area.

Some employers reported having difficulty filling even relatively well-paying jobs in suburban areas during the labor shortage of the late 1990s. Demographic trends show a drop in the number of people in their prime employment years (21 to 65) in the TMACOG region, pointing to future labor shortages potentially more severe than those of the late 1990s.

Employers of lower-to-moderate income workers in suburban areas interviewed for the study have significant problems with attracting and keeping employees and with tardiness and

absenteeism, due to workers' lack of reliable transportation. In evidence of this problem, companies have:

- Approached TARTA and local governments to request transit,
- Considered subsidizing the creation of new bus routes, as Owens Community College has done to provide transportation for its students and employees; and
- Considered developing their own transportation services, either individually or shared with other employers, to provide reliable employee transportation.

Transit users who responded to the informational survey and attended public meetings said they needed to get to locations outside the existing transit service area to seek jobs.

Another employment issue is the aging of the workforce. The number of people in the TMACOG region aged 55 and older will increase by nearly 50% over the next 20 years, while the number of younger adults will fall. However, employment in the region is expected to grow significantly. These two trends suggest that more people will continue to work past "retirement age." Older people are more likely to use public transportation than younger, and are also more likely to be disabled (about 40% of study area residents aged 65 or older are disabled) and thus more dependent on public transportation.

All of these employment trends, taken together, point to more need for public transit. However, they also produce travel patterns that are extremely difficult to serve with traditional fixed-route public transit.

7.5 Lack of Service to Transit-supportive Areas

The study identified areas with the combined population and employment densities to qualify as "transit-supportive areas." However, 30% of this transit-supportive area lies outside the full service transit network.

Quantitative analysis (estimate of unmet demand) indicates that allowing services to follow existing and future development patterns is required to achieve full potential transit ridership in the TMACOG region. Operating efficiencies would be achieved if higher-density areas adjacent to existing transit services could be served.

7.6 Gaps in Transit Service for Special Populations

The study identified un-served areas with relatively large populations of elderly, disabled, young, and lower income people. (See **Figures 4-17a through e** in **Chapter 4**.) Examples are:

- Oregon and the Walbridge/Lake Township areas show densities of 50-100 senior citizens per square mile.
- Youth aged 5-17 reside in suburban areas at densities of 50-200 or more per square mile, including Oregon, Northwood, Springfield and Perrysburg Townships, and the Waterville/Whitehouse area.
- More than 10 of every 100 residents have some form of physical disability in such areas as northern Wood County and western Lucas County.

Elderly, disabled, and young people are among those most likely to rely on transit. About 15% of the population of the TMACOG region has some form of mobility or cognitive disability. About 28% are over age 50, and nearly 14% are over age 65. The number of persons in the region aged 65 and over is projected to increase by more than 30% in the next 20 years. Increasing age also increases the number of disabled in the population.

Lack of full geographic coverage and interconnectivity limits the mobility of the disabled and other non-driving populations. This impacts employment and health care options. Study comments suggested that a fully regionalized paratransit system for disabled persons would be desirable.

Demographic trends indicate an aging population in the region, increasing percentages of the population in the active work force, and delay of retirement. These are indicators of need for additional transportation options for all populations in the region, especially older citizens.

7.7 Lack of Transit to Airports

Until recently, there were no public transit connections to the Toledo Express, and no connections from the Toledo area to the Detroit Metro airport. Economic development officials, business people and members of the public responding to the study surveys expressed support for this service and disbelief that this need had not been addressed. TARTA started service to Toledo Express on a three-month trial basis beginning December 28, 2003. This service was re-evaluated after three months and the decision was made to continue it through the end of 2004. Several stakeholders and survey respondents also mentioned the proposal for high-speed rail service to the Detroit Airport.

7.8 Inadequate Time of Day and Weekend Coverage

There is strong evidence that the time of day coverage provided by the existing transit system is an even greater challenge than the lack of geographic coverage.

The CommuterLINK study documented that only a small minority of CommuterLINK clients—low-income new workers—could get both to work and home using existing transit schedules, even in areas where transit service was available at some parts of the day. Among CommuterLINK participants who worked weekends, the percentage with full temporal access plunged into the single digits.

Both TARTA's fixed route service and the various dial-a-ride services operate primarily during the day, on weekdays. Service coverage drops off hour by hour after 5 p.m., and there is no service anywhere in the region after 11 p.m. Transit is limited on weekends and on holidays, and survey respondents report losing work hours and wages because of inadequate weekend bus service.

Part-time employment and irregular work schedules have increased in recent years. Of the informational survey respondents who work, a majority work irregular hours, with schedules changing each day or each week. Respondents described regularly walking to or from work or accepting rides with strangers due to the lack of transit after 11 p.m. Workers in bars, restaurants, entertainment venues, hospitals, retail stores and manufacturing facilities that

operate second or third shifts are particularly hard hit by the lack of temporal coverage provided by the existing transit network.

7.9 Inadequate Frequency, Lack of Crosstown Routes, and Excessive Trip Length

When trip time lengths are excessive, transit is eliminated as a realistic option for mobility. In this region, factors that create excessive trip times are inadequate frequency of bus arrivals and the necessity to transfer TARTA buses at the downtown Toledo hub for almost all trips (lack of direct crosstown routes).

Excessive trip length was documented by the CommuterLINK study. A new worker with children to drop off at daycare faced a weekday transit trip of 183 minutes (more than 3 hours) one-way on average. An equivalent trip averaged 21 minutes by car. For workers without children, the averages were 79 minutes (with a maximum of 178 minutes) by transit vs. 15 minutes by car.

Most of the transit in the region operates on a service frequency of a half hour, one hour, or more. TARTA's fixed-route buses and the Bedford Dial-a-Ride operate at headways of up to 70 minutes during the off-peak periods of the day. This service frequency is inadequate to attract potential choice riders, since most auto trips in the TMACOG region are less than 30 minutes. It can create significant delays for transit users, and may not be frequent enough to provide reasonable levels of service in the region.

Survey respondents noted long waits for buses, particularly if connections are missed at the downtown transit loop. When a fixed-route (regular) bus does not stop for a disabled user due to a mechanical problem with a wheelchair lift, he or she must wait up to an hour for another bus to arrive.

TARTA operates on a "pulse-transfer" basis using the downtown transit loop, allowing passengers to transfer at the five downtown transit centers to facilitate trips throughout their service area. The system has only two cross-town (non-downtown oriented) routes. The need to transfer in the downtown area can make cross-town trips extremely long.

Transit users report four- and five-hour one-way trips to go to doctor appointments due to multiple transfers. They also report long trips to and from downtown to go to locations in adjacent corridors. For example, a trip from Sylvania to Arrowhead Park is ten miles by automobile and takes less than 20 minutes. Using TARTA, this trip would take more than an hour and would require a transfer between bus lines in downtown Toledo. If the transfer connection is missed, either due to a late bus or passenger confusion (one of the inherent dangers of "pulsed" connections), the wait for another bus could be as long as 70 minutes. One mistake and a short car trip becomes a more than two-hour bus trip.

The Bedford bus also arrives infrequently and, because it is a dial-a-ride service, on a somewhat irregular schedule. Its short service hours (Monday to Friday, 9 a.m. to 5 p.m.), the inconveniently-timed connection to the TARTA service in north Toledo, and the infrequency of the service, make it difficult to use for many trip purposes. Bedford trips requiring both a transfer to TARTA and a transfer in downtown Toledo can take multiple hours to complete.

Infrequent services make transit use difficult for occasional riders (car in the shop, bad driving weather, etc.) and potential riders who would like to use transit but have other options. Long headways create long waits at stops for riders who are not familiar with the bus schedules. On a bus route with a 30-minute headway, the average wait for a passenger with no knowledge of the schedule would be 15 minutes, which is itself longer than many door-to-door auto commute trips in the Toledo region. When the route is operating at a 70-minute headway, wait times could be 35 minutes or longer.

7.10 Lack of Sidewalks, Snow Clearance and Other Obstacles

The study documented public comment that a lack of sidewalks in suburban areas, snow piled on bus stops and sidewalks, and the lack of amenities such as a paved pad, shelters, benches, and lighting at bus stops are curtailing use of the transit system. The elderly and disabled are particularly affected.

These conditions result in higher use of door-to-door Paratransit service rather than fixed-route bus service. For example, during the winter and spring, many disabled people report using Paratransit service even though they are normally physically able to use fixed-route buses at other times of the year, due to the obstacles created by piled snow and muddy conditions.

7.11 Transit Marketing Not Reaching Customers

The study documented that many people in the region are not aware of their public transit options. This is in spite of TARTA's significant marketing and advertising campaign; their distribution of bus schedules throughout the region and their excellent website, as well as the efforts of the other transit agencies. The telephone survey revealed that more than 4 out of 5 residents were aware that public transit service is available in the region, but respondents cited not knowing enough about the service as a main reason they did not use it.

Non-users cited apprehension about not knowing where the bus is going, how to pay the fare, the amount of the fare, and general lack of knowledge about the service as one reason they did not use transit. Others said they first used it to attend a Mud Hens game, a service that has generated significant press attention. Focus groups including disabled persons, Toledo public housing residents, and non-users expressed confusion and apprehension over reading the bus schedules.

Economic development officials noted a lack of knowledge about transit options in the community. Other study comments suggested marketing to counter the perceived image of public transit service as being primarily for lower-income people.

8. Study Recommendations

The Regional Transit Study has identified unmet needs in the region. **Chapter 7** summarized the significant transit needs identified. This chapter will identify key geographic areas of concern. It will also recommend next steps the region should take in addressing the geographic areas with greatest need as well as other top issues.

8.1 Areas of Concern

i. Geographic Areas of Concern

The study identified specific geographic areas in which the lack of transit, poor regional transit connectivity, or the level of service are of particular concern. These include:

- areas and locations that were identified by members of the public who provided input to the study;
- major regional destinations and attractions that are located outside the TARTA service area and thus are not connected to a regional transit network; and
- areas with higher densities of employment and population, or with high concentrations of older and younger residents, who are not served or underserved by transit.

Major Destinations and Attractions Outside the Study Area

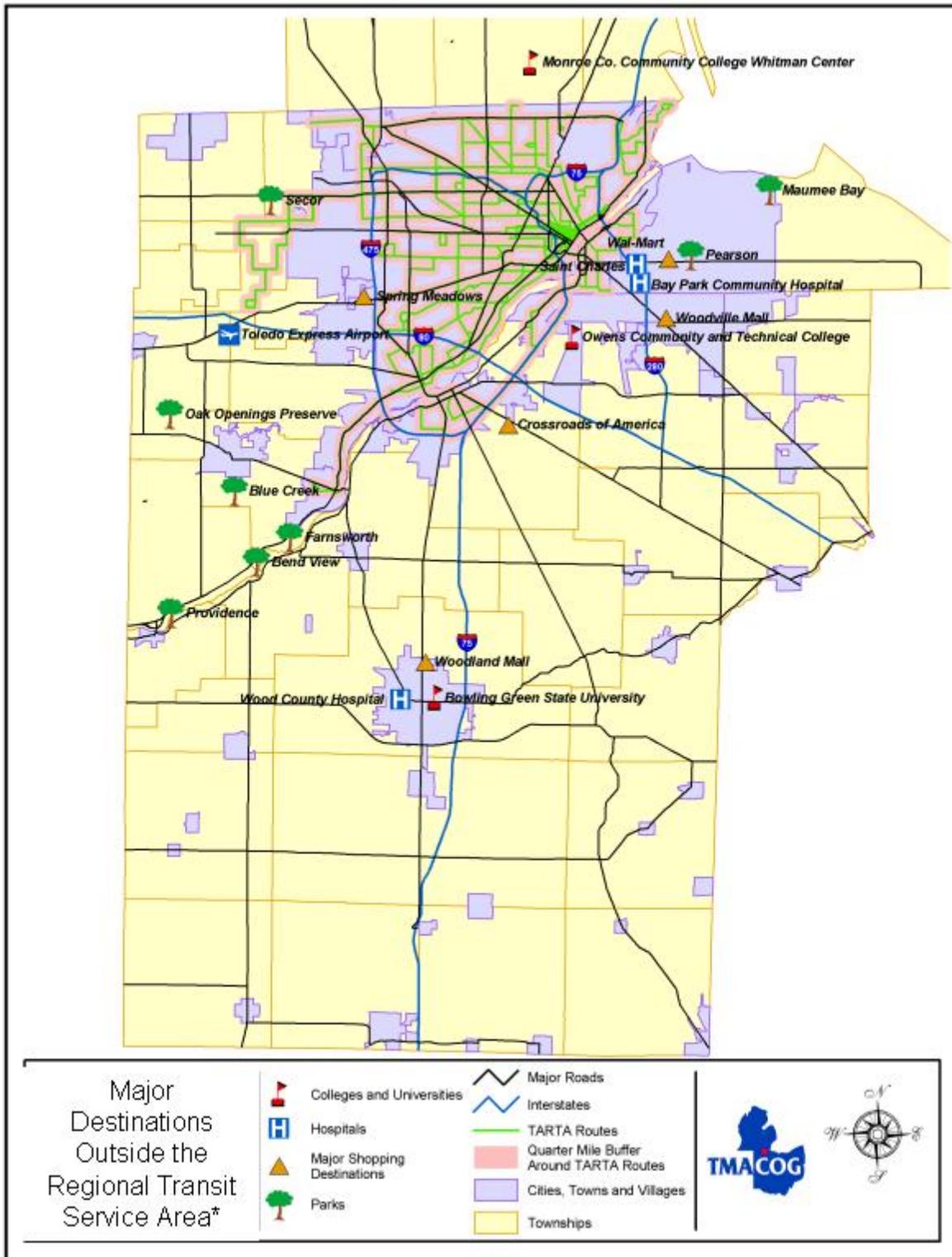
The map in **Figure 8-1** identifies a sampling of major regional attractions that are not served by the regional transit network. These attractions are inaccessible to those who depend on or prefer to use transit, including disabled, elderly and young people. As the figure shows, three of the region's major hospitals (St. Charles, Bay Park, and Wood County Hospital), several regional shopping centers and the Wal-Mart on Navarre Avenue, numerous parks, and the region's two major community colleges (Owens Community College and the Whitman Center campus of Monroe County Community College) lie outside the service area of TARTA, which is the only regional transit network. Owens Community College is currently served by TARTA through special arrangements between TARTA and the college, which include a subsidy of the TARTA service by the college. Toledo Express Airport is currently served by TARTA bus service on a trial basis.

Top Destinations Desired by the Public

Members of the public were asked to identify locations where they would like to go by bus but were inaccessible to them. Responses were gathered on the informational survey, which was distributed widely in the region. The survey was available on all area bus services, distributed by participating agencies and governments, and provided at public meetings and at the public outreach events. The survey also was available on the Internet and in local newspapers (the *Toledo Blade* and the *Toledo Journal*).

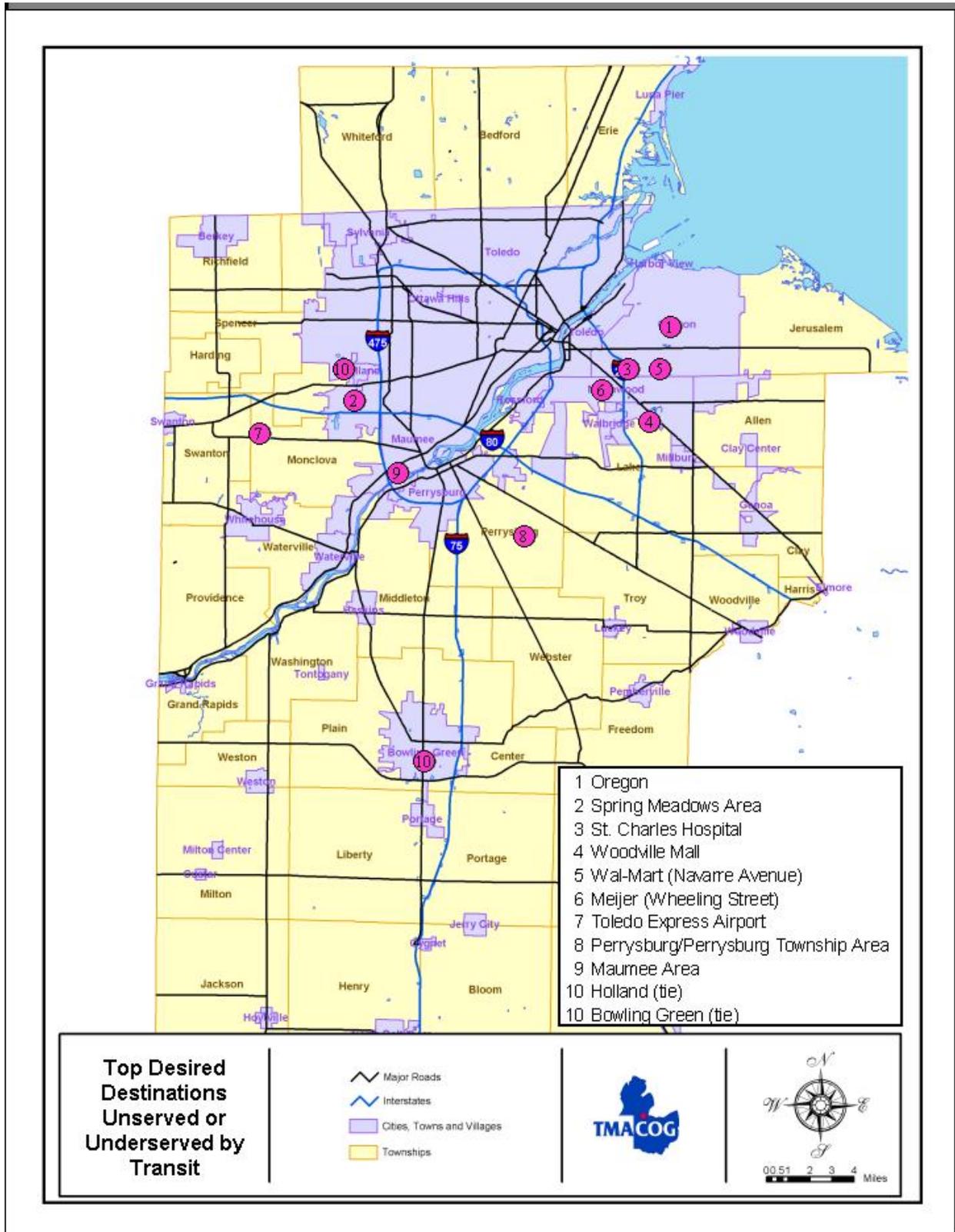
Verbal comments on desired destinations were received at the public meetings, at focus groups, and in stakeholder interviews. Additional comments were received by e-mail and voice mail. All these sources represent an unscientific survey but a strong indication of the needs and desires of current and potential transit users in the region, and thus represent potential areas of concern for development of future transit services.

Figure 8-1: Major Destinations Outside the Regional Transit Service Area*



*The TARTA network, which represents the region's only large-scale, regional transit network

Figure 8-2: Top Desired Destinations Unserved or Underserved by Transit



From all these sources, more than 400 responses citing nearly 100 desired destinations were received. The top locations identified are shown in the map in **Figure 8-2**. The top locations are:

1. Oregon
2. Spring Meadows and surrounding area
3. St. Charles Mercy Hospital
4. Woodville Mall
5. Wal-Mart on Navarre Avenue
6. Meijer on Wheeling Street (at Woodville Road)
7. Toledo Express Airport
8. Perrysburg/Perrysburg Township area
9. Maumee area
10. Holland (tie)
10. Bowling Green (tie)

The City of Oregon located east of Toledo and outside the TARTA service area, was by far the most frequently cited location. More than 60 responses identified Oregon generally as a desired destination, and three specific locations within Oregon (St. Charles Mercy Hospital, Wal-Mart on Navarre Avenue, and the Meijer discount retail store on Wheeling Street) also were among the locations most frequently cited. Of the more than 400 responses received, about 100 identified Oregon or specific businesses or locations in Oregon as desired destinations that cannot be reached using public transit. Woodville Mall, located in Northwood, just south of Oregon, was also among the most frequently cited locations.

Spring Meadows Mall, Toledo Express Airport and locations along Airport Highway west of Toledo were also frequently cited. (Most of the comments were received before TARTA's trial service to Toledo Express Airport was implemented.) Several locations that are within TARTA's service area, including Perrysburg, Maumee and Sylvania, were cited as locations to which they would like to travel using transit. This may indicate that some respondents lived outside the transit service area. It may also mean that the public is not aware that bus service is available to these locations, or that the existing service does not operate at the required times or is otherwise insufficient for the respondent's trip purposes.

Demographic Areas of Concern

As noted in **Chapter 7**, many areas of the TMACOG region with a high density of population or employment, and large concentrations of elderly and young people, are not served by transit. Such areas are potentially strong transit markets, where citizens would utilize public transit if available. These areas also represent a regional concern both in terms of the opportunity lost for shifting automobile trips to public transportation, and because they represent potentially isolated populations.

Figure 8-3 shows areas where these types of concerns exist. There are significant concentrations of elderly and youth populations outside the transit service area who are more likely than other age groups to rely on public transportation for their mobility needs. Likewise, there are large areas with transit-supportive densities of population and employment, and large concentrations of employment, that lie outside the transit service area.

The many overlaps indicate that a number of these areas have concentrations of employment and population and higher than average concentrations of younger and older residents. These areas of overlap represent areas of significant transit need and potential transit demand, and in many cases coincide with the locations identified in **Figures 8-1** and **8-2**. The maps shown in **Chapter 4** of this report provide further background on the demographic areas of concern in the region.

Time of Day Areas of Concern

As noted in **Chapter 7**, lack of evening and weekend service on some routes, and lack of night service throughout the area, prevents many people from using transit for work trips. The map shown in **Figure 8-4** shows the portion of the TMACOG region that is served by transit service that runs past 8 p.m. Areas outside the green shaded area—in spatial terms, most of the TMACOG region—have no transit service after the 8 p.m. hour. These areas not served after 8 p.m. include many employment locations, including shopping centers and retail stores, restaurants, hotels, hospitals, warehouses, factories, and other establishments where employees work shifts or routinely work past 9 p.m. Many of these establishments are nominally within the TARTA service area. However, due to lack of evening, night and weekend services, such areas, and the jobs in them, are practically inaccessible to those who rely on transit for their transportation needs.

ii. Populations of Concern

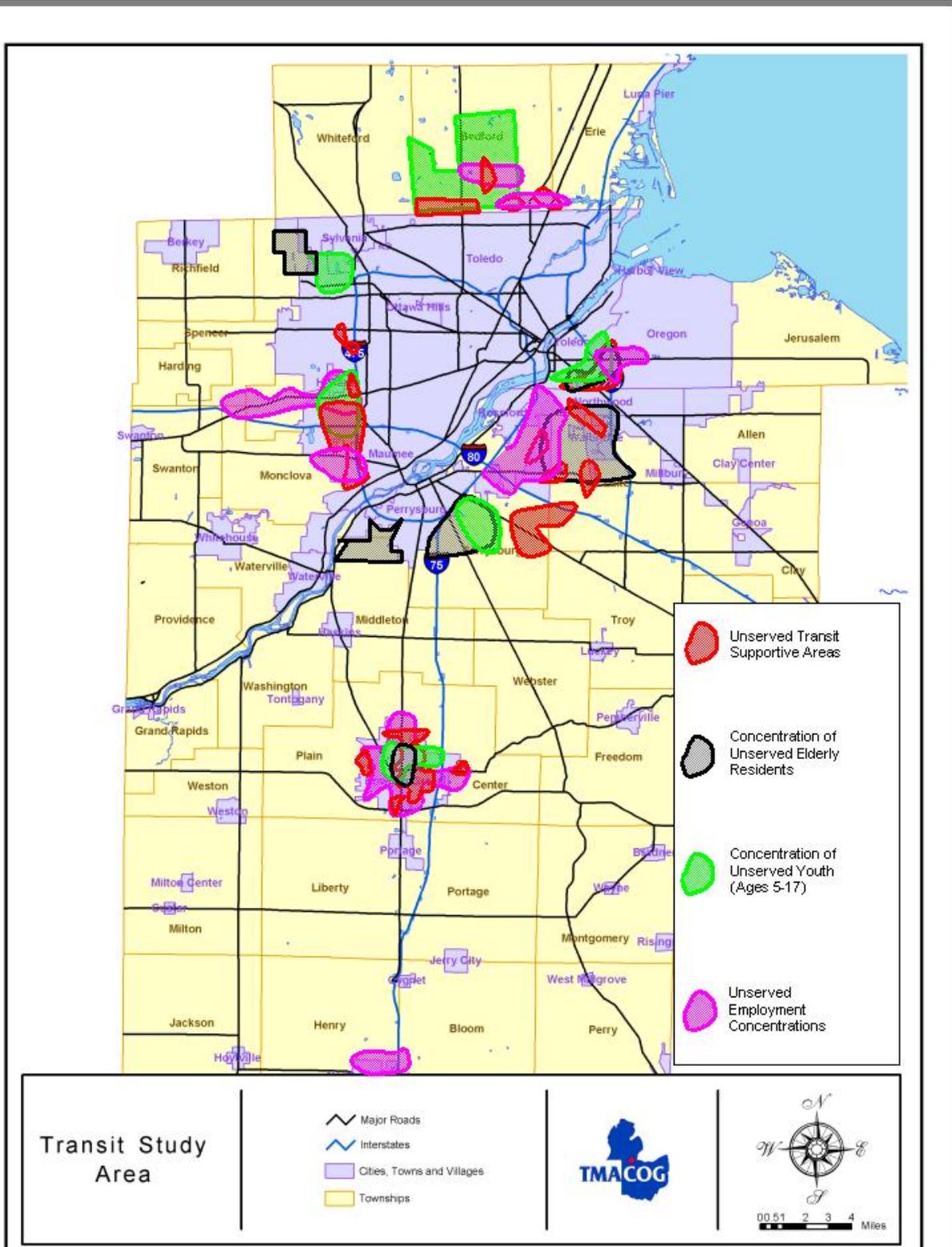
In addition to geographic areas, the lack of universal availability of high quality transit service throughout the region has an undue impact on a number of vulnerable populations. As noted in the section above, many areas of the region with high concentrations of elderly and young people are not served by transit at all, or not connected to the TARTA regional transit network. Disabled persons, who are the most likely of all groups to depend on public transportation, have few mobility options if they live in the 90% of the region that is not served by TARTA. New workers are discouraged from participating in the workforce by lack of transit service to major employment centers and by lack of evening, night, and weekend service. They are also hampered by infrequent service to parts of the service area, by lack of connection between transit systems, and by long travel times for trips between distant portions of the transit service area.

iii. Other Concerns

The regional transit study identified a number of additional issues regarding the transit system that, based on the number of comments received, might need to be addressed:

- A need for more direct service between non-downtown destinations (the need to explore route patterns that do not require transfers in downtown Toledo).
- The need for training of transit drivers to be more friendly and helpful to passengers, particularly disabled passengers.

Figure 8-3: Demographic Areas of Concern



- The need for improved bus stops, shelters, sidewalks, crosswalks, and other pedestrian infrastructure to support transit use and particularly to help disabled and elderly transit users.
- Funding to maintain and expand transit service in the TMACOG area.

8.2 Strategies for Addressing Unmet Needs

Addressing the highest priority transit needs in the community will require a variety of strategies at the regional, sub-regional, and local levels. Among the strategies that potentially could be considered in a regional transit strategic initiative are reorganization of the existing transit system or systems, additional services or changes to existing services, and changing to funding and governance structures.

i. System Reorganization

TARTA, the region's main transit system, is organized as a collection of local communities that opted in to the system beginning in the 1970s. Other services are operated by individual local communities or by the universities. Most other transit providers in Ohio, and throughout the country, are organized on a single or multiple countywide basis. Countywide organization removes constraints such as those that prevent service to growing suburban employment and residential areas. Strategies could include using an existing transit provider or developing a new countywide or multi-county entity to provide public transit service throughout the region.

ii. Additions or Changes to Existing Services

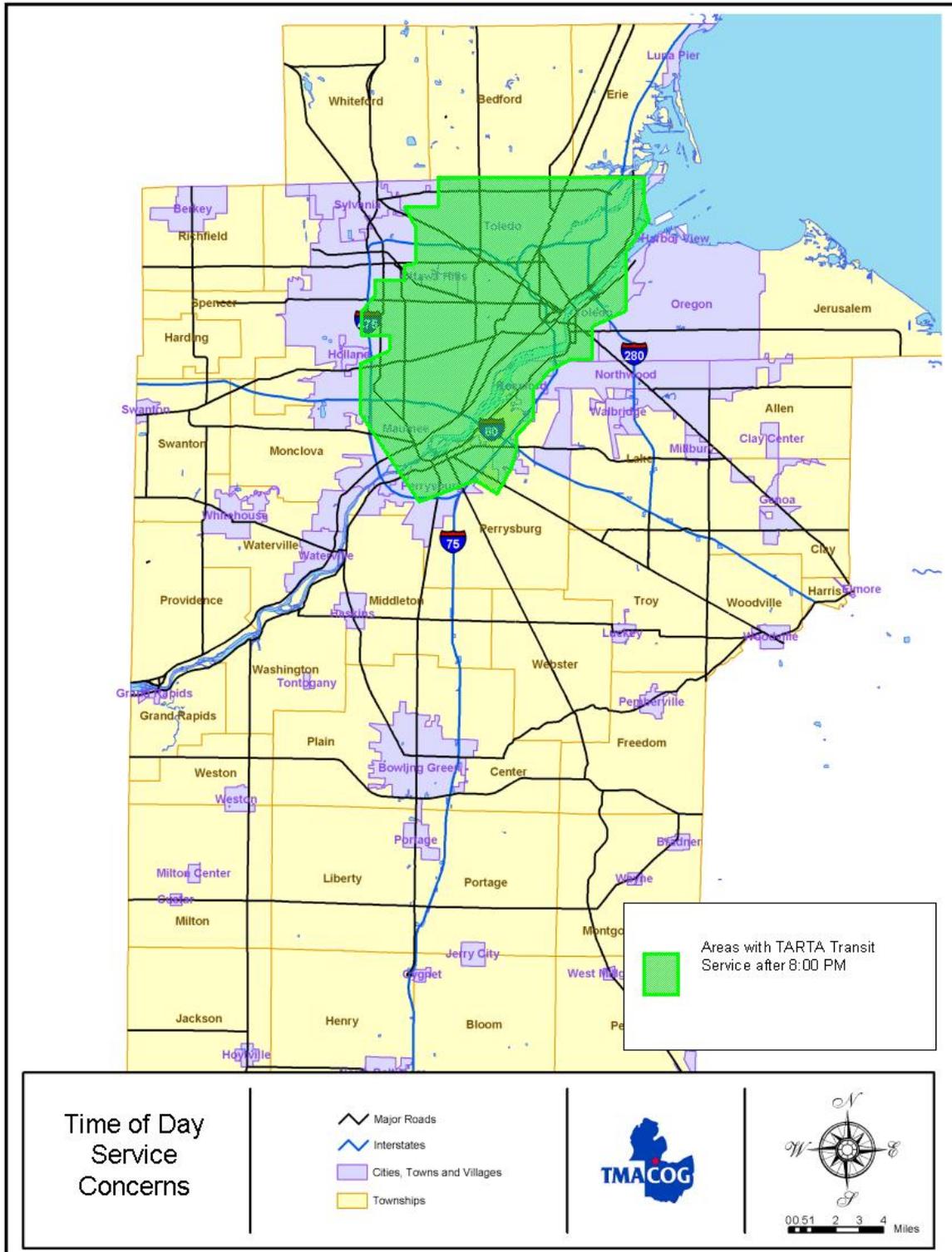
Changes that are less extensive than system reorganization that might occur include extension of existing services, development of new services, or development of new service approaches.

Service Area Additions

Transit services may be needed to some extent in every part of the TMACOG region. However, the areas of concern maps in this chapter (**Figures 8-1, 8-2, and 8-3**) provide a basis to prioritize areas for new service. These include areas of high employment and population, and areas with concentrations of highly transit-dependent populations. Regional priorities and local political support will also drive additions to the service area. Perhaps the most obvious strategy for providing transit service to most of these areas is for voters to approve their communities joining TARTA under the existing arrangement. However, other potential strategies exist. These include:

- the purchase of service from TARTA by individual communities or groups of communities;
- direct provision of transit service by one or more communities, either by contracting service to a private bus operator or by developing a public bus system to provide service within their communities and connections to other parts of the region; or
- the development of private, not-for-profit entities (transportation management associations) to provide transit and other transportation services in one or more communities, perhaps on a travel corridor basis or to serve a specific employment area.

Figure 8-4: Time of Day Areas of Concern



System Restructuring

Addressing comments raised by the public relating to directness of service and the need for direct, no-transfer service between areas outside of downtown, would require an examination of the existing TARTA transit system and possible restructuring of the system. Restructuring options could include overlays of new cross-town bus routes on the existing radial system, or development of regional hubs to provide more service to suburban areas. Restructuring will be essential if the TARTA system is significantly expanded or if countywide or multi-county service is the selected strategy for addressing the region's transit needs.

Improved Inter-connectivity Among Existing Services

Two areas in the region, Bedford Township and Bowling Green, provide transit service in their communities independent of TARTA. Bedford Township's system is relatively modest, providing infrequent dial-a-ride service during daytime hours and a twice-daily connection to the TARTA system. Bowling Green's system provides on-demand dial-a-ride service but provides no connection to the regional transit network. Upgrading those systems to provide, where warranted, fixed-route bus service and full ADA paratransit service, while maintaining their independence from TARTA, is one strategy for improving transit service to those areas. These services could be further enhanced by new or more frequent direct connections to the TARTA bus network. These would allow travelers from those areas to travel to most of the major destinations in the region while avoiding the political and funding issues related to these communities joining TARTA.

Time of Day Related Improvements

More frequent service, and extended service hours later in the evening and on weekends, would improve transit's ability to provide for personal mobility, especially travel to employment. These increases in service – whether in the TARTA, Bedford Township, or Bowling Green systems – would require increased funding. Options for increasing funding are discussed below.

iii. Funding Changes

TARTA, the region's main transit system, is organized as a collection of local communities that opted to pay a local real estate tax to provide subsidies to the system. The other transit systems in the region are supported by local funds limited to a single community (in the case of the Bedford Dial-a-Ride); by a combination of local and state support (in the case of Bowling Green Transit) or in the case of the campus bus service, supported by student fees, tuition, and state educational funding.

Both the organization and funding of TARTA and the other systems are unusual in the context of Ohio and most other U.S. urban areas. In most areas of Ohio (and in many areas in the U.S.), transit agencies are organized to serve entire counties and are supported by a county sales tax.

Any changes in our region's transit may require changes in funding levels and approaches. Various options to consider include major funding restructuring and minor changes to the existing system of funding. Some of these approaches are discussed below. This list is not exhaustive. Additional innovative strategies can be developed to address the specific needs of our region.

- Were transit to be restructured in order to provide service coverage throughout the areas where it is most needed, different funding organization would be required. This might resemble the funding approach used in most of communities, that is, a countywide or multi-county funding base.
- Incrementally expanding transit to additional suburban communities, especially those identified as areas of concern, could be accomplished under the existing opt-in system (voters in those areas approving a property tax).
- Specific organizations, communities or businesses that would benefit from new transit service could, in the manner used by Owens Community College, directly subsidize new transit services to their locations.
- Direct operation of transit service or contract purchase of transit service from a private vendor is another option for local communities or businesses interested in providing transit.
- Increasing service frequency, time-of-day coverage, or cross-town route service, would make providing transit service more costly both in areas now served by transit and in new areas. Funding these service improvements most likely would require an increase in the funding base. Voters could approve an increase in the transit levy, or switch to a regional sales tax-based funding system, or add a sales tax over and above the existing or increased property tax.
- Improved service could be prioritized on a corridor-by-corridor and route-by-route basis, and innovative funding strategies could be explored. For example, local businesses in the past have subsidized additional TARTA bus trips to serve workers whose shifts end later than buses operate. A business or consortium of businesses in a given corridor could create a transportation management association (TMA) to subsidize transit service to an area, such as in the Spring Meadows or Arrowhead Park areas, for geographic coverage or to provide services for their workers during non-transit hours.
- Similarly, governmental agencies and not-for-profit groups serving the newly employed, disabled, or other groups, could provide funding to increase the service frequency or service hours of bus routes in certain key corridors, to provide connections to jobs or other important attractions in those corridors.
- Combining services, such as public transit agencies assuming responsibility for transporting university students or social service agency clients, could also expand the funding base and increase economies of scale, resulting in cost savings.

iv. Other Strategies

In today's transit climate, there is increasing willingness to look at nontraditional approaches to providing transportation. Integrated paratransit services, system-wide dial-a-ride service, and new technologies are a few of the current innovations the region can consider:

- Providing high quality (door-to-door) paratransit service for the disabled was one of the higher priority items for the public and members of the Regional Transit Study committee. Establishment of a countywide or multi-county transit entity is a potentially cost-effective strategy for achieving this goal. Paratransit is expensive to operate and its costs, and use, are expanding rapidly. Innovative strategies to provide paratransit services are in operation in other areas and are helping to provide more service at lower cost. Computerized scheduling and vehicle location systems allow transit operators to integrate public transit and various other transportation services (such as services provided by boards of mental health and mental retardation, and other not-for-profit agencies) to provide more capacity to the paratransit system at a lower cost. Funding and cooperation arrangements for the development of such a system, which would include the development of a regional dispatching center, could be explored in a regional strategic transit initiative.
- System-wide dial-a-ride or guaranteed ride home services in which a transit agency contracts with taxi companies could be strategies to provide evening and night services in corridors where bus services could not be provided efficiently.
- Interest has been expressed in trying out new transit service on an experimental basis. A funding mechanism would need to be sought that would allow a trial service, for example to an unserved suburban area. Based on the results of the trial period, the service could then be discontinued, changed, or made permanent.
- The public expressed interest in innovative transit technologies such as the proposed regional core circulator in downtown Toledo and possible connections between downtown Toledo, the University of Toledo, Medical College of Ohio, and Owens Community College. Strategies for providing a regional rail or people-mover network could be explored in a regional initiative or as part of more detailed corridor studies.

8.3 Funding and Staffing of Strategic Initiatives

Developing any of the above strategies will require time, expertise, and effort. Some of that effort can be provided by existing staff and budgets of public and private stakeholders. Depending on the strategies selected, additional resources may also be needed (consultant services, extra staff time, public involvement expenses, computer software, etc.). The study committee has worked with the current consultant team to identify possible funding sources.

The Regional Transit Study was funded through a combination of funding by TMACOG, TARTA and Lake Erie Transit, county and local governments, economic development agencies, and social service agencies. A similar funding consortium is one potential source of funding for the development of strategic transit initiatives. Additional identified sources are included below.

Potential funding sources for initiatives to address transit needs include:

- TMACOG, the Toledo Area Regional Transit Authority (TARTA) and other providers of public transportation services in the region, primarily drawn from agency planning funds.

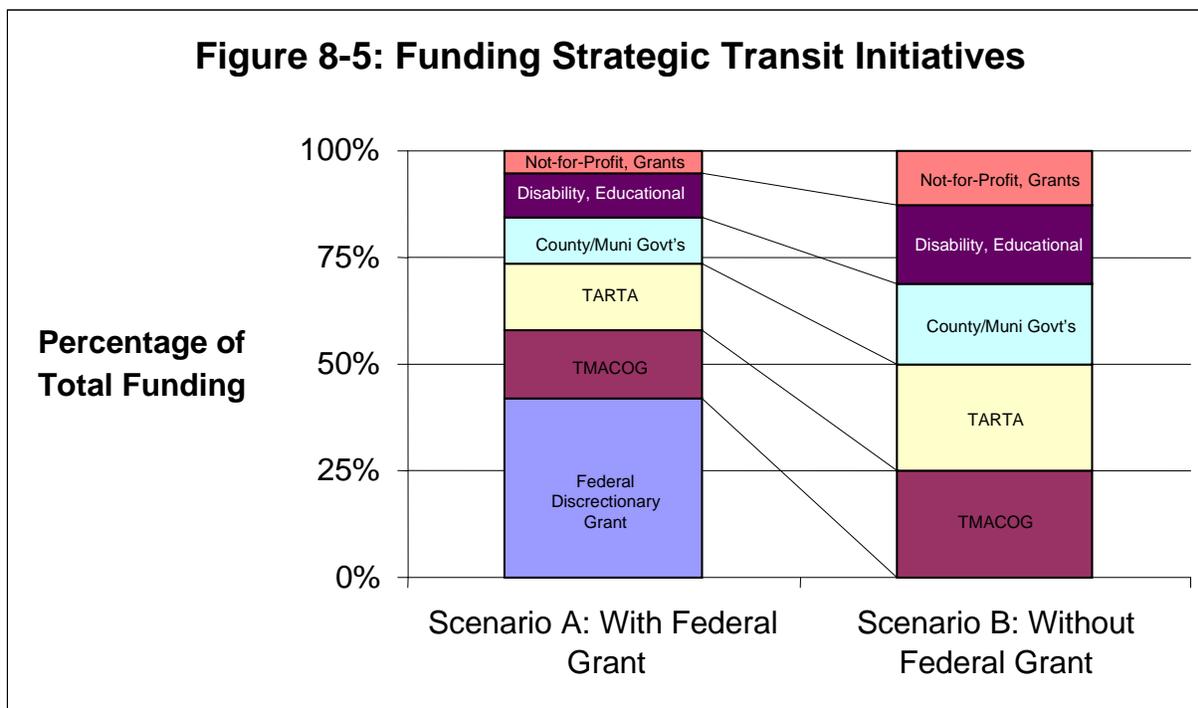
- Federal grant programs administered through the Federal Transit Administration (FTA) or other programs or agencies of the U.S. Department of Transportation (USDOT).
- State grant programs administered through the Ohio Department of Transportation (ODOT) or Michigan Department of Transportation (MDOT).
- Local, regional and national foundations with goals related to transportation or service to disadvantaged populations.
- Businesses based or operating in the region with an interest in developing the regional transportation system.
- County and local governments.
- Regional colleges, universities and training schools.
- Local governmental or non-profit entities serving disabled, mental health, developmental disability, elderly, youth, unemployed, low-income or other disadvantaged populations.

Aside from the federal formula grants that are now used to fund TMACOG's transportation planning activities as the Metropolitan Planning Organization, there is no specific federal program that funds transit development initiatives. Use of these formula funds would require re-allocation of existing TMACOG planning resources.

A federal earmark sponsored by the local congressional delegation is the most likely source of funding for initiatives of this type. Obtaining an earmark depends on a number of factors, including support of Congress and federal budgetary negotiations; and timing of such grants depends on the federal budgetary cycle. It is likely that a federal grant would cover no more than half the cost of a transit initiative. Nonetheless, the potential for a federal grant is probably the key variable in the funding and timing of any major efforts to address the region's transit priorities.

The study's financial analysis identified a number of potential local and national non-profit grant providers that may be interested in providing funding. Their areas of interest include serving the region's transportation needs, educational initiatives, helping the disabled, and expanding job opportunities.

Through these various sources, funding in the \$300,000-\$500,000 range could be developed for use in developing transit initiatives in the region. The likely proportions of this funding by source, with or without a federal grant, are illustrated in **Figure 8-5**.



8.4 Recommendations

The study committee **affirms public transportation as part of the region's basic infrastructure**, essential to support economic development and personal mobility for all citizens. Public transit is an important part of the region's multi-modal transportation system.

This study has documented deficiencies in the transit system in our region and has identified very real concerns with how transit works to meet transportation needs. Transportation stakeholders in our region will need to work together to address these shortcomings. The study committee has developed a set of actions (objectives) to be pursued to develop specific projects and policy changes toward this end. The committee **recommends that stakeholders select and initiate strategies to accomplish these objectives**. As needed, funding sources for this work should be pursued.

The following matrix outlines recommended objectives related to key concerns. They are organized by whether they are recommended for short- or longer-term action, and whether they primarily are issues of existing or new service areas. Within these categories, the objectives are listed in general priority order for implementation, reflecting both the importance of the objective and the time, funding, and political factors that will impact how soon it can be implemented.

Table 8-1: Recommended Objectives for Transit Improvement in the TMACOG Region—
in priority order for implementation

	Short Term (1-3 years)	Longer Term (4-10 years)
A. Existing Transit Areas	<p>1) Investigate options and fund service improvements to address the following:</p> <ul style="list-style-type: none"> ▪ Add direct service between non-downtown destinations (crosstown routes) in the TARTA service area ▪ Add/expand evening, night, weekend, and holiday service in all transit service areas ▪ Increase service frequency in all service areas ▪ Expand the Bedford Dial-a-Ride service area, and add more connections to TARTA <p>2) Work with stakeholders to coordinate transportation resources of senior citizen, workforce development, Medicare, and social service agencies to address transportation needs</p> <p>3) Continue to provide ADA-compliant paratransit service to the growing disabled population in transit service areas</p> <p>4) Improve transit marketing / public information</p> <p>5) Work with local governments to improve pedestrian access to bus stops (sidewalks, paved pads, snow removal, etc.)</p>	<p>1) Add connection between Bedford and Monroe City area</p> <p>2) Add connection between Bowling Green and the metro area</p>
B. New Transit Areas	<p>1) Work with local stakeholders to investigate alternatives for providing service, and pursue new service in the following areas:</p> <ol style="list-style-type: none"> 1. Oregon area 2. Northwood 3. Holland/Springfield 4. Perrysburg Township 	<p>1) Reorganize transit to operate and fund it as a county-wide or multi-county system, allowing areas of need to be served</p> <p>2) Pursue coordination and connectivity with adjoining rural county transit systems (Ottawa County, etc.)</p>

Specific projects and policy changes resulting from these efforts will be implemented through the coordinated efforts of regional stakeholders. These projects and policies will join other transit-related initiatives currently underway in the region and incorporated into regional and local plans and programs. The Regional Transportation Plan (RTP) includes major project and policy initiatives. The current RTP is the “2025 Regional Transportation Plan—Update 2004.” Federal funding is coordinated through the regional Transportation Improvement Program (TIP). Each transit agency maintains a multi-year program of projects.

Pursuing objectives developed by the Transit Study Committee—and the resulting transit improvements—will require political will, regional collaboration, thoughtful strategizing, and concerted effort. The benefits to the region will be significant.



This report has documented the findings of this first-ever comprehensive study of transit in the northwest Ohio/southeast Michigan region. This study has been a truly regional effort, aimed at improving the economic conditions and quality of life in this region through wise planning for and investment in public transportation services and facilities. TMACOG thanks all the partners, citizens, and community leaders who helped make this study possible.

APPENDICES

Appendix A

Members of Executive Committee

Study Executive Committee Members

(Representing Study Sponsors)

Dave Amstutz, Business Development Specialist, Regional Growth Partnership
Robert Anderson, Administrator, Springfield Township
Jim Bagdonas, Administrator, City of Perrysburg
Marge Brown, Mayor, City of Oregon
David R. Dysard, Vice President of Transportation, TMACOG
James Gee, General Manager, TARTA
Rob Greenlese, Director of Surface Transportation and Logistics, Toledo-Lucas County Port Authority
Linda Heineman, Vice President Community Impact, United Way of Greater Toledo
Patricia Holmberg, Board of Directors, TARTA
Don Jakeway, President/CEO, Regional Growth Partnership
Mark Jagodzinski, General Manager, Lake Erie Transit
Michael Kahle, Director of Planning, Area Office on Aging of Northwest Ohio
Wade Kapszukiewicz, Councilman, City of Toledo
Royce Maniko, Planning Director, Monroe County
Charles Mann, Vice President for Business Affairs, Owens Community College
Kathy Mehl, Vice President of Commuter Services, TMACOG
Dave Moebius, Commissioner, Division of Engineering Services, City of Toledo
Jim O'Neal, Assistant Administrator, The Board of Lucas County Commissioners
Shelly Papefuse, Ability Center of Greater Toledo
Brad Peebles, Administrator, Sylvania Township
Robert Schockman, Clerk, Township of Bedford
Frank Szollosi, Councilman at Large, City of Toledo
Mike White, Citizen Representative, City of Oregon

Appendix B

Public Meeting Notes

Public Meeting, May 20, 2003
Perrysburg – Holiday Inn French Quarter

Attendance

Stakeholders

- Vic Gable, Wood County MRDD, 705 W. Newton Road, Bowling Green, OH 43402, 419-352-5059, vgable@woodmrdd.org
- Denise Niese, Committee on Aging, 353 N. Main St., Bowling Green, OH 43402, 419-353-5661, deniseniese@hotmail.com
- Tim Harrington, Ability Center, 5605 Monroe St., Sylvania, OH 419-885-5733, tharrington@abilitycenter.org
- Robert Kiss, Village of Walbridge, 111 N. Main St., Walbridge, OH 419-344-6091
- Rob Greenlese, Port Authority, One Maritime Plaza, Toledo, OH 43604, 419-243-8251, rgreenlese@toledoportauthority.org
- Jim O'Neill, Lucas County, 1 Government Center, Toledo, OH 43604, 419-213-4545
- Jim Bagdonas, City of Perrysburg, 201 W. Indiana, Perrysburg, OH, 419-872-8010
- (Mr.) Kim Klewer, President of Council, City of Perrysburg, 26618 W. River, 419-874-1175, kklewer@cps-usa.net
- Chuck Mann, Owens Community College, 30335 Oregon, Perrysburg, OH, 419-661-7204, cmann@owens.edu
- Harry Barlos, Lucas County Commissioner, 1 Government Center, Suite 800, Toledo, OH, 419-213-4506
- Pat Holmberg, Lucas County Job & Family Services, TARTA Board of Directors
- Linda Heineman, United Way

Resident

- Phil Caron

Staff

- Tim Rosenberger, Parsons Brinckerhoff
- Diane Reamer-Evans, TMACOG
- BJ Fischer, Funk Luetke Skunda
- Amber Edds, Funk Luetke Skunda
- Margarita De Leon, Consultant

Questions/Comments during Charrette open discussion

- Will there be a reduction of federal support for transit?
- Transit doesn't go to Wood County.
- Call-A-Ride could grow
- Bowling Green Transit has limited area because of ODOT grant.
- Many people work in Bowling Green and live in Perrysburg and vice versa.
 - Similar system to Bowling Green would be good.
 - Further range.
- Perrysburg pays a lot to TARTA.
- Could use TARTA funding from Perrysburg for other non-TARTA transit. e.g., Bowling Green Transit; subsidized taxi.
- Need to realign Perrysburg services in Wood County.
- Need transportation south of Perrysburg.

- Tax and institutional structure doesn't match services.
- Needed: Job transportation and student transportation.
- Use US 25 for transit between Perrysburg and Bowling Green.
 - Reserve additional right-of-way for transit before development takes it.
 - Train system.
- Redirect unnecessary spending.
- Don't look at demand as it is today – look 5-10 years down the road.
- Capacity issue.
 - Aging population. People staying in homes longer.
 - People with disabilities.
- Does TARTA meet current expectations?
- Put survey in Blade for people to cut out and mail.
- How do we use existing agency vehicles?
 - Underused.
 - Possibly a resource.
- Seasonal demand.
- Toledo Express Airport
 - Employees
 - Travelers
- Does providing service promote sprawl?
- Convenience of subway system in Washington, D.C.
- Transit vehicle has to be the destination (interesting enough to attract riders).
- Transit needed to Arrowhead Park
- Not giving customers a good enough reason to subscribe to public transportation.
- Could run train down Monroe Street.
 - Connect buses to train
- Doesn't make sense to put more buses, more routes in effect.
 - Be creative
 - Think ahead
- Transportation to casino in Bedford
- Put casino on Telegraph
 - Michigan side has casino
 - Toledo side has hotels
- Bus to Sports Arena
- Oregon/Walbridge developing
 - Walbridge is close
- Walbridge to do survey
- Walbridge relates to Toledo over Bowling Green
- Promote and utilize cab services
- Ottawa County Transit Authority is doing a good job; use it to bring people into Lucas and Wood Counties

Questions/Comments during public meeting (Phil Caron)

- What are we going to get when this is all done?
- Seems expensive.

- Should we have more or less transport?
 - If transport stays the same (availability, etc.), there should be less in the suburbs.
- Equipment/people underutilized.
- Less ridership on weekends.
- TARTA should take a look at cutting weekend service.
- Sparse population not conducive to public transportation.
- People can flow around the city, traffic is light.
- Doesn't know how many people are really interested.
- Many efforts made to get community in with TARTA – has been little interest.
- Thinks people would want to get out of TARTA if possible.
 - Toledo will always have one more vote than combined districts; therefore suburbs can't get out.
 - Captured, no freedom.
- Try to duplicate convenience of people getting into cars and driving.
- Has to be readily available.
- Call-A-Ride could be more user friendly.
- Will lose people if not ready.
- People will adjust to high gas prices.
 - High gas prices will not push people to use public transportation.
 - \$4-5 a gallon might.
- Do not look at countywide tax; when you do, it's forever.
- How to better manage TARPS. Rather see focus on plan for elderly. Can do a better job with TARPS.
- Favors fixed route service for city.
- Only make good decisions on good data; we don't have good data.
- Confusing to have two transportation groups (TARTA and TMACOG).
 - Doesn't understand why TMACOG is in transportation business.
 - Shouldn't be in transportation management business.
- Watch knocking private enterprises (cab drivers) out of business.

Public Meeting, May 21, 2003 Oregon – Municipal Building

Attendance

Stakeholders

- Rob Greenlese, Port Authority
- Mike White, resident, member of Regional Transit Study Committee representing City of Oregon, 5432 Bayshore
- Douglas Young, City of Oregon, 5330 Seaman, 419-698-7071, dyoung@ci.oregon.oh.us
- Ken Filipiak, Administrator/Public Safety Director, City of Oregon, 5330 Seaman, 419-698-7095, kfilipiak@ci.oregon.oh.us
- Marge Brown, Mayor of Oregon
- Billie Darevin, Director, James W. Hancock Senior Center, Oregon
- Karen Rudess, Oregon City Council, 3251 Springtime
- Mike Sheehy, Oregon City Council, 419-698-3095, msheehyoregon@aol.com

Residents

- Mike and Judy Hoeflinger, 6175 Bayshore Road, Oregon, OH 43618, 419-691-9750
- David J. Farrell, 1921 Greenwood Ave., 419-691-8448
- K. Gregory Reihing, 210 Jennings Road, Rossford, OH 419-666-6382, greihing@buckeye-express.com

Staff

- Tim Rosenberger, Parsons Brinckerhoff
- Diane Reamer-Evans, TMACOG
- Dave Dysard, TMACOG
- Amber Edds, Funk Luetke Skunda
- Margarita De Leon, Consultant
- Linda Carpenter, Wilbur Smith Associates

Questions/Comments during public meeting

- No service in Oregon
- Find out where the need is
 - Young people without reliable transportation
 - Old people – church, grocery store
 - Disabled
 - Widowed people
- Not even enough sidewalks
- Route between Navarre and I-280
- Transportation to
 - Jobs
 - Recreation
 - Hospital
 - Stores

- Travel within community is a priority
 - Woodville to Wheeling to Starr
 - ProMedica
 - St. Charles
 - Great Eastern Shopping Center
- Connect loop with downtown
- Mud Hens service
- Get senior center bus out more often
 - Use more efficiently
- Two hospitals no one can get to
 - Visit
 - Medical attention
 - Work
- Seniors must cross Navarre Avenue (SR 2)
- City voted down TARTA in the past
 - Race
 - Undesirable element
- “This is a racist community whether you want to admit it or not.”
- How do you overcome the race issue?
 - Nicer transit facilities
 - Get key people in favor of the project
 - Accurate information to the public
- Issue needs to be addressed
- Why doesn't Oregon have TARTA
 - Perrysburg and Sylvania have TARTA and still have good schools
- Perception is that study is being done to sell TARTA
- People drive in Oregon
 - People will feel there is not a need
- Socio-economic issue between East side Toledo and Oregon
 - Oregon doesn't want to be extension of east side
- Older communities may have more of a relationship with mass transit; Oregon is a younger community
- Specific services
 - Mud Hens
- Didn't get TARTA because
 - Limited number of routes
 - Pay full amount as if getting full services
- In 80s, city was overwhelmingly against TARTA
- Mayor would be willing to sell idea of mass transit if there's a need
- Mall and other retail not served by public transportation
 - Woodville Mall
 - Wal-Mart, K-Mart, Meijer
 - Restaurants
- Get a good handle on transit-dependent people

- Reasons not to use vehicles have to be in place
- Benefits of transit
 - Time
 - Cost
 - Exercise
 - Reduced wear and tear
- Oregon to downtown rail? What's the possibility?
- Trial runs to change people's attitudes toward TARTA
- Can communities form their own transit authorities?
- Federal funding?

Easel notes during public meeting

- Find out the need – that's where the service should go
- Needs
 - Young people with no other means
 - Older persons
 - Disabled population
- Just getting to public transportation is a problem
- Coy to I-280
- Widowed persons, dependent on others for transportation
- Growing retail, need for access
- Access to creation areas
- Transit within an area (Loop Service)
 - Woodville – Wheeling – Starr
- Be sure to connect with the larger service – Mud Hens
- Public support vehicles that get limited usage – senior vehicles – should be used more efficiently, widely
- 2 hospital – no access
- Race issue
 - Transit as a means to let “undesirables” access a community
 - Is this getting addressed
 - Weigh this issue with need
 - Perception? Reality?
- Perception – this study is selling TARTA
- Perception – Mass transit is a means of extending the negative aspects of other areas to our area.
- At one time, concern that Oregon would pay a full share for a small measure of service
- Need “some form” of mass transit to grow community
- Shift from mass transit use as a means of transportation to a form of “social justice”?
- Who are the “transit-dependent” members of the community? Difficult to get hands around.
- How many Oregon residents work downtown? Possibly a good target group.
- What about individual communities creating their own transit authorities?

- Transit is an unknown in Oregon.
- Negative perceptions of transit.
- Retail growing a lot
 - New workers need access to jobs
- Oregon objected to perceived lesser services at same cost as other TARTA members
- Oregon service tied to rest of system
- Need to look at convenience
- Transit solves downtown parking problems
- Senior population 20% and growing
- Parking costs downtown
 - Could relax and read on trip
 - Lots of people work downtown
 - Transit could be cheaper
- What are the costs/benefits to the community
- Need for Jerusalem Township transit
- Need to share ideas with community
- What are options
- St. Charles used to have service
- Some have to go to Bay Park – no transportation
- Kids to recreational complex
- In future, kids to theater
- Transportation to Woodville Mall – seniors and kids
- Links to downtown Toledo
 - Mud Hens
 - Docks
- Night time, construction, bad weather – need transportation
- Adding service would be an improvement
- People and youth walk to East Toledo for jobs
- Services for seniors, for example those living at:
 - Senior villages
 - Oregon Village
 - Yorktown Village
 - Luther Complex
 - Fountain Square
 - Kingston Court
 - Little Sisters of the Poor

Public Meeting, May 22, 2003
Bedford Township Hall, Bedford Township, Michigan

Attendance

Public/Stakeholders

- Rose Dunholter, Michigan Works!, 1531 N. Telegraph, Monroe, MI 48161, 734-240-7958
- Jay Gardiner, SMART, 660 Woodward Ave., Detroit, MI 40226, 313-223-2352, jgardiner@smartbus.org
- Jim Samsel, MCISD, 1101 S. Raisinville, Monroe, MI 48161, 734-242-5799, samsel@misd.k12.mi.us
- Frank Nagy, Monroe Co. Planning, 125 E. Second St., Monroe, MI 48161, 734-240-7375
- Mark Jagodzinski, LET, 1105 W. Seventh St., Monroe, MI 48161, 734-242-6672
- Chuck Mann, Owens Community College, Perrysburg, OH, 419-661-7204
- Pam Dressel, Whiteford Township, 6403 U.S. 223, Ottawa Lake, MI 49267, 734-854-2416

Staff

- Tim Rosenberger, Parsons Brinckerhoff
- Diane Reamer-Evans, TMACOG
- Amber Edds, Funk Luetke Skunda
- Margarita De Leon, Consultant
- Linda Carpenter, Wilbur Smith Associates

Questions/Comments during Charrette open discussion

- Does Bedford Dial-A-Ride connect with TARTA? Yes, at three points:
Miracle Mile
Alexis Park
Northtowne
- There have been requests to link to Franklin Park; but to do that, we would have to give up one of the other links
- Requests to link up earlier and later (currently 10:20 a.m. and 1:20 p.m.) so that riders have more time at their destinations
Either spread the times apart, or
add another bus and add stops
- Dial-A-Ride has 300-500 riders a month
- Running a lot of miles on one bus, entire township, some parts of Erie and Whiteford townships
- Bedford Township is growing – 20-22,000 in 1990; 28,000 in 2000; 30,000 now; projected 38-40,000 in 2030
- There is traffic congestion crossing into Ohio.
- Employees can get to work, but can't get home because of the times the buses run.
- No Saturday service.
- Aging county; average age is up

- Adult education survey results
- Extended hours
- Extended routes
- Seniors need transportation
- What about connections to the rest of Monroe County?
- There is a lack of transportation to good jobs
- Whiteford Township is not served; People would use if it was
- 30-40% of Bedford Dial-A-Ride riders are disabled
- Service is provided on a reservation basis, first-come, first-served
- LCT operates 15 buses in Monroe—no connection to Bedford service
- Bedford Health van—for medical services only
- In 20 years, people see
 - 24-hour service
 - Dial-A-Ride-type service
 - More public transportation, perhaps fixed-route buses, added as development occurs
 - More traffic congestion
- The lack of sidewalks is a problem in many ways, including for transit users
- The millage that supports the Bedford Dial-a-Ride is now 1/10 mil (raises about \$75,000 per year). An increased millage would allow more service.
- Transit could be supported by a sales tax instead of property tax
- Money that goes into transportation should pay for transportation
- Owners of manufactured homes do not pay property tax if they rent the lot
- Bedford Dial-A-Ride does not serve convenience riders
- Do not think people will ride for convenience. Most riders will be:
 - Disabled
 - School-age kids
 - Seniors
 - People who've lost their license
 - People who can't afford two cars
- Condition and capacity of roads may relegate people to ride
- Interested in elevated train system in Toledo
- Interested in high-speed rail Toledo to Detroit Airport, Detroit

Public Meeting, June 3, 2003 Toledo – Downtown Library

Attendance

Residents and Stakeholders

- Karen Wagner
- Donald Lindsey, Ability Center
- Anna Macke
- Stephen E. Spielberg
- Norma Mihailoff
- Michele Shepler, LCBMRDD
- Howard Abts, 541 Ogdon, 419-382-1956
- Carolyn Eyre, 2444 Charletown, 419-475-5539
- Paul T. Laurel, KeyBank, P.O. Box 2151, Toledo, OH 43603-2151, 419-868-1355
- Kathie Jensen, E.O.P.A., 525 Hamilton, 419-242-7304, ext. 280
- Melroy Liggins, 505 Jefferson Ave., Apt. 1510, 419-245-0034
- Harry Wyatt, UT, 3417 Kirkwall Road, Toledo, OH 43606, 419-530-1445
- Juanita Easley-Hollis, NAMI, One Stranahan #560, Toledo, OH 43604, 419-243-1119, ext. 11
- Anita Martinez-Folger, NAMI, One Stranahan #560, Toledo, OH 43604, 419-243-1119, ext. 12
- Umar Authman, 2485 Consaul St. #2, Toledo, OH 43605, 419-870-1881
- David Patch, Toledo Blade

Staff

- Tim Rosenberger, Parsons Brinckerhoff
- Diane Reamer-Evans, TMACOG
- Amber Edds, Funk Luetke Skunda
- Margarita De Leon, Consultant

Questions/Comments during open discussion

- Will there be a bus to the airport, specifically the summer air show, in the future?
- Possibility of light rail system from SeaGate to airport? Anthony Wayne Trail to Oak Openings to airport. Line exists.
Rapid bus transit, rubber tires.
- TARTA would be better if ...
Expanded weekend service
Expanded evening service
- Where would funding come from?
Government not interested in public transportation.
Lost thousands of dollars a few years ago.
When cuts came, MRDD had to re-route clients
- Depending on where you live or work, it can take two hours to get to work in the morning and two hours to get home at night.
- Have to be able, willing to set schedule ahead of time.
- We do need more, better service, but where will the money come from?

- Why does service shut down at night? If you go somewhere late, you could get stranded.
- Two-hour trips without restrooms available – need facilities at bus stops.
- There is a need for cross-town service.
Sight Center moving, clients will need bus connections.
- Young adults need service to get home after the bars close to avoid driving drunk.
- Holland-Sylvania/Central to Franklin Park has to go downtown first. Why?
- No Sunday buses to
Spencer-Sharpel
Springfield Township
- 13 park and ride lots, but not marked well or at all
- Not enough Sunday bus service anywhere in city – people cannot use the service to get to church
- Amtrak changes schedule depending on time of year based on light, weather.
Need to get rid of freight cars
- TARTA doesn't go to train station
- Shopping areas not covered by transit
Northwood, Oregon, Woodville Mall
Monroe Street west of Talmadge
Airport Highway
- People shop mostly evenings and weekends when service isn't available
- St. Charles Hospital
- Need signs in other languages – Spanish
- Show schedule on signs at bus stops
- UT service, more frequent mid-day
Now students are either 50 minutes early or 5-10 minutes late
- Bus stops are dirty, not safe
Need cover, place to sit
People have to stand in puddles when raining
No snow removal
Bench at stop on Michigan broken
- Buses need to be more recognizable, need identifying marks
TARPS vs. TARTA is confusing
- Bikes racks on buses
Need more, only hold two bikes, sometimes not enough and people have been turned away
Bedford Dial-A-Ride doesn't have racks
Several have used bike racks
- Need service to Perrysburg Township
- Time waiting for buses needs to be shortened, now 30-60 minutes, should be 15
- Citizen stranded in Perrysburg once
- Maumee Call-A-Ride not connected with bus 3
Would be more useful when connected to more fixed routes
- Could BG Taxi-type service be put in place in Toledo?

Public Meeting, June 3, 2003 Springfield – Township Hall

Attendance

Residents/Stakeholders

- Bob Anderson, Administrator, Springfield Township
- Dr. Cynthia Beekley, Superintendent, Springfield Schools
- Charlie Kanthak, St. Luke's hospital Director of Facilities Management
- Larry Lerch, Transportation Director, Anthony Wayne Schools
- Craig Stough, Mayor, City of Sylvania

Staff

- Tim Rosenberger, Parsons Brinckerhoff
- Kathy Mehl, TMACOG
- BJ Fischer, Funk Luetke Skunda
- Margarita De Leon, Consultant

Questions/Comments during open discussion

- Access to bus stops is an issue
- Call-A-Ride is being implemented this year in Sylvania
- Springfield Township needs it too
- Access to other parts of city from Springfield Township
- Need for senior citizen transportation
- Aging population will put pressure on need for public transportation
- Handicapped/paratransit service will become greater need among this aging population
- Daycare becoming a greater demand
- Need to restrict or reduce pedestrian traffic in areas without public transit
- How close the bus (or service) comes to the user's house is an issue.
- Bike rack-equipped buses are becoming more popular.
- In theory, buses provide a dependable way to get to work.
- St. Luke's could host a meeting.
- Springfield Schools are willing to help communicate with those in their district.
- Flower Hospital – Sylvania's largest employer. Contact: Kevin Webb, president.
- Anthony Wayne Schools have attempted to get some transit service for charter schools.
- Demand will continue to grow in this system for this service.
- "Collection Points" are "hubs" for school systems to accommodate area needs. Primarily in suburban and rural systems.
- Proliferation of mobile home parks in Perrysburg Township. No public transit service.
- Look at expansion of special events service, eg. Mud Hens.

Appendix C

Focus Group Meeting Notes

Ability Center Focus Group July 21, 2003

Summary:

There were 5 participants in the focus group. Four had physical disabilities, two were in wheelchairs, and one was a parent with a disabled child who uses public transportation. The participants were very knowledgeable about TARTA and TARPS; its routes and how it operates as frequent some of the daily, users. This group felt that there was much need for improvement; in particular, TARTA since this is their primary mode of transportation. The two major complaints that stood out were tardiness and rudeness of the drivers.

Issues Discussed:

- Drivers need an attitude adjustment. "This is Saturday" should be no excuse for being late.
- As Toledo and the surrounding area change, TARTA doesn't. It doesn't go where things are happening like Arrowhead and Spring Meadows. More needs to be done in general to help the process along.
- The perception that public transportation in Toledo has the stigma of being just for poor people. In other more "progressive" cities it is assumed that you will ride public transportation (DC, Pittsburgh, Chicago, cited as examples.)
- Taxi service in Toledo is awful. Who oversees the Taxi system in Toledo?
- Bus stops and sidewalks where the buses stop are missing in instances.
- The buses are not accessible because the "city is not accessible." Do sidewalks so if you are in a wheelchair you cannot get on the bus.
- People don't like to go downtown for switching. It takes three hours to get from one point to another. There should be more cross-town direct bus trips.
- No weekend service so I get rides from my friends to get me to church on Sunday.
- The bus schedules take long to figure out. Haven't been able to access them online. You need to know the geography of Toledo to interpret the bus schedule.
- Bus schedules should be available online so you can download them. They should be provided in Braille or 16 pt. Type if requested for blind people or seniors. This would help people a lot.
- In terms of size of bus, that is a ridership issue. TARTA just need to look at their ridership and adjust accordingly.
- Many drivers will not talk to their passengers (customers). They say they are not supposed to. They say they have been instructed by their supervisors not to talk to the passengers.
- Not all bus drivers announce the next stop. This would help the elderly and others.
- The city ordinance that says buses can only stop once at the downtown loop is not taking the needs of blind people in mind. If we miss it, we have to wait for the next one.
- New technologies available that include talking signs so you know what bus it is and where it's going.
- We need bus service to St. Charles and Wal-Mart in Oregon.

- LMHA doesn't look at the TARTA lines when they build housing. In Springfield Township, they don't want TARTA buses because they don't want the "scum" out in Springfield.
- Driver attitude is bad. Blind woman told to muzzle her dog or she can't get on.
- If drivers see you in a wheelchair sometimes they don't stop because you are an inconvenience.
- I would pay more taxes for the services if it would get better.
- WE just need to take what we have and make it better. Provide better service and make it cleaner. That doesn't cost more.
- We don't need streetcars downtown. People should just use the bus. There's only 3 hotels downtown.
- Shelters should have big maps in them. Brochure and signage should be in larger point size.
- Shelters/stations should have audio marquees available at key locations.
- Wheelchair lifts only work ½ of the time.
- Medicaid will pay for taxi ride if needed.
- Put service where it is needed.

Senior Center Focus Group July 21, 2003

Summary:

There were 9 participants in the focus group. All the participants were from a lower income status and receive bus passes from the Senior Center.

Key Issues:

- Concern that without TARTA they would be housebound.
- Concerns about losing their driver's license because of age. TARTA is a security.
- Complained about drivers being rude. Examples included asking them to get off the bus because driver was taking their break, being left if they are not ready when the bus stops.
- The seniors would like to see the hours extended on Saturdays and Sundays.
- They would like to be able to take the bus to Wood County Shopping Center (BG); St. Charles and Bay Park Hospitals on the East side.
- The smaller buses have steeper stairs and they are harder to see out the window to the front to see where the bus is stopping.
- Buses don't stop in front of doctor's offices. Many times they park at the nearest street. In Sylvania many sidewalks are missing, so this is difficult for patients. If they are going to the doctor, they are already sick. The Senior Center uses TAXIs to get their clients to doctor's appointment.
- The seniors have experienced the bus driver throwing kids off the bus that are misbehaving.
- Have taken Shortway to Canada to pick up medications.
- Something is always wrong with the buses. There is always a safety feature that might not be working like the lifts.

Latino/Hispanic Community Focus Group Friday, July 21, 2003

Summary: There were 6 individuals who participated. They represented social services agencies, CDCs, the University of Toledo and the City of Toledo. City of Toledo Council President Louis Escobar and Transit study committee member Jesus Salas were present as participants. The need for Spanish language brochures and signs, some kind of special bus that made stops along the Broadway corridor was discussed. Making TARTA more accessible for the undocumented workers in the area, looking at TARTA staff to ensure that drivers reflect Latino population and are bilingual were unique issues to Latino focus group. The need for information on TARTA and its services was pointed out several times.

Key Issues Discussed:

- We need to know more about TARTA and its services. How do you find out about what TARTA has to offer?
- An employee of Adelante, the area's primary Latino social service agency said she's heard about Share-A-Ride, but really didn't know enough about it to share with her clients.
- The bus schedules are confusing for Adelante staff and clients. The employee gave examples of trying to help client understand the transfers. They called the TARTA information line and were able to work through it.
- It was note several times that many of the undocumented workers in the area work at area restaurants. These close late when TARTA is not in service so many times the workers get a ride or end up walking home late at night.
- About half of the woman in a support group for battered woman at Adelante use the bus. If they miss the bus, they will not be able to participate because they would arrive so late.
- Adelante has its own vans to transport for children's programs. TARTA does not run during the evening times when Adelante has most of its programming to help families. These programs include GED classes, parenting classes, battered woman support group and others.
- TARTA has no bus schedules, signage or other information in Spanish so many of these people do not event ride
- Jesus Salas, ABLE attorney and Transit study committee member, said that the schedules and signage should be available in Spanish because there is a significant population. He gave an example of how the Asian population has its own system to transfer people because there is a language and cultural barrier to utilizing TARTA.
- Salas also pointed out the double barrier of Latinos with mental illness and said that some clients with mental illness have been removed from the buses because they were considered a bother to others. He suggested that the drivers should attend some kind of sensitivity classes, maybe part of orientation to better deal with these riders.
- Ninety percent of the clients for the Help Me Grow program at Aurora Gonzalez, a United Way Latino social service agency, do not have transportation. The staff transports the families or they use taxis quite a bit. Taxis can get there on time.

TARTA might not be on time. They do have staff members who teach the participants how to use the bus by actually going on it with them.

- One of the staff at Aurora Gonzalez also said TARTA is not convenient or sensitive to students. If students miss a bus, they may end up waiting 2 to 3 hours after school. It's not convenient.
- An example was given of how it would take an East Side client 5 hours to get to an appointment at the Zeph Center (mental health agency).
- It was pointed out that Undocumented Workers can not get on Cash assistance because of their legal status, so they don't have access to the programs and services. The Aurora Gonzalez Center has about 150 undocumented families. Staff has to bring them and they are compensated for this.
- Seniors who attend the Mayores program at Aurora Gonzalez Center on the Trail and South have a hard time crossing the street to get to Center. Bus should go into the center and drop them off.
- Aurora Gonzalez has people coming off the street asking for bus tokens to ride the bus.
- Staff at Adelante stated that her program members come only when they get a ride. Anytime they have tried to switch TARTA, participation drops off.
- TARTA should provide teachers. If it has teachers, it doesn't advertise it. One participant did say that they called TARTA and they were very helpful. Even emailed the bus route.
- TARTA needs to identify and recruit Latino bilingual staff. Have them go along the routes where there might only be Spanish speakers. TARTA needs to diversify administrative staff as well. Jesus Salas suggested looking at their hiring practices.
- Salas suggested that there are lots of attorneys in BG who would ride TARTA into downtown Toledo. They would have plenty of work to do on the bus ride.
- Louis Escobar pointed out the "those people" issue. Some of these suburbs just don't want to participate because they don't want the people of color or poor people coming into their neighborhoods. Many areas have adopted regional systems. Our bus system is one of the few that is just a city system. We need to get over this and move on. We need a regional system.
- There should be a discussion with the Regional Growth Partnership and the Port Authority. As they plan for the future of Toledo, they should be talking with TARTA to see how they can work together.
- We need to think about rail. Louis Escobar shared his experience in Japan. He said you don't have to worry about having a car there. Buses will take you directly to the train and it is very easy to get around. The system also tells you how long you have to wait for the next bus to arrive.
- Viva South Toledo – the new CDC in the south end was discussed. They have a concerted effort to do economic development in the old south end. Transportation is the cornerstone of that development. A dedicated bus or bus line, jokingly referred to as the "Chile Bus" would travel through Broadway between downtown and the zoo. It could stop at Latino social service agencies, shops, the cultural center, the new south end library, etc.

- Latinos are coming from North Toledo and East Toledo to the south end for services, so buses need to be able to bring them from those locations.
- The focus for Latinos who need social service access is in the inner city. Latinos living outside of that have already assimilated and have cars.
- Councilman Escobar suggested a bus route that focused on the “Jewels of Toledo.” It would give visitors an opportunity to see Toledo’s major attractions, including the Toledo Botanical Gardens. He said that Toledo is out of sync with bigger cities where everybody rides public transportation. There needs to be a fundamental change in the way people look at transportation in the city.

MRDD/Lott Industries Focus Group

Monday, July 28, 2003

Summary: Lon Mitchell, public information officer for the Board of Mental Retardation & Developmental Disabilities, coordinated the meeting. There were 5 individuals who participated. They all worked for MRDD. Several of them have been hired specifically to deal with transportation issues. The interview took place at Lott Industries on Hill Avenue. Issues that came to the forefront included safety issues for the client, having to share the bus with students and TARTA not going where their clients need to go.

Key Issues:

- Michelle who handles all travel needs at MRDD stated that TARTA does a good job with what resources it has. They don't go to areas that we need, but if Holland and Oregon aren't willing to pay for it, we can't force them. There is no evening or weekend service in Sylvania (or very little).
- Michelle stated she was aware that TARTA lost a lot of federal funding a few years back and had to cut back on service.
- IT takes too long for MRDD clients to use TARTA. Rides take at least two hours one way and then the work six to seven hours. It's no wonder the clients are "geeked" out before they get to work.
- Why take TARTA when you can get anywhere in Toledo in a car in less than 30 minutes?
- One participant stated that there are no TARTA buses on main thoroughfares like Reynolds Road. The stop at Franklin Park has helped a bit.
- Parents object to their children going to downtown because they are concerned for safety. They see no need to go downtown because it just adds to the trip time.
- MRDD spends about \$100,000 on taxis to transport clients. Eight dollars per trip adds up.

TARPS

- The new reservation system is frustrating. You can only schedule a few days in advance and for a few days at a time. The window of time for pick-up has changed to be more flexible; however, this seems to benefit TARPS drivers and not the clients.
- The system is pretty complicated especially for MRDD clients.
- If TARPS could be like Dial-A-Ride in Maumee/Perrysburg that would be great. If my car broke down, I would use the Dial-A-Ride program.
- IF TARPS could have satellite centers where they could circulate in a particular area that would be great.
- There are a lot of people riding TARPS that could be riding TARTA. Once the new assessment center is operating, this should be corrected. More of the MRDD clients should be riding TARTA.
- Communication is difficult when we are trying to find a lost client. The dispatcher will not connect us to the driver.

Bus Size

- One of the participants didn't care for the smaller buses because it is hard to see out the front. You can't teach your clients to ride the bus by pointing out landmarks because you can't see the landmarks. However, the idea of smaller buses is important; it's the design of the smaller bus that's not working for our clients.

Safety

- Our clients will not ride TARTA at night because of safety issues. Clients are put on TARTA buses that do not have kids to avoid problems. TARTA should consider running buses just to schools separate from community buses. Some people don't ride because of the children on the bus.
- Most of our clients don't work night jobs. They are locked out of that work time just because of safety issues.
- Sidewalks are also a concern. Sometimes there are none where the buses drop off.

MRDD Transportation

- MRDD is required by the state to provide transportation for its clients. It has a fleet of 57 yellow buses that provide door-to-door service. They also have a fleet of vans that rotate in certain enclaves where their clients work. The buses are lift-equipped and they conform to school safety bus regulations. About 1,000 clients use the MRDD system as compared to a couple hundred who use TARTA.

Coordination of bus systems

- Mr. Mitchell suggested a discussion among all the bus systems in the region to see how they can better coordinate services and create efficiency. He gave the example of having to pick up 2 clients in Oregon to transport them across town when there is probably a school bus system that could be transporting them. He suggested looking at public, private and school bus systems (Ability Center, school systems, TARTA) to create coordination.
- TPS has 5,000 children who would qualify for MRDD services. Parents don't want their children to be sheltered; they want them to be integrated into the system in the future. These are future TARTA riders. Parents of these students are going to demand better public transportation in the future.
- MRDD is missing out on some good job sites like Spring Meadows because there is no transportation out there. TPS should be planning with TARTA to address their future clients' needs now.

Taxes, Coverage

- Those communities that don't have TARTA now are the ones that don't want "transients" coming into their neighborhoods.
- The federal government states that you should be able to go anywhere without restriction. TARTA system is not mass transit. It allows for segregation. You can't force the community to pay, but if someone pays a bus fare and wants to go to Oregon, they should be taken.

- At one point MRDD thought of moving central offices to Oregon, but decided against it because of no public transportation. Mr. Mitchell said he was told Oregon didn't want "transients."
- TARTA should consider other funding mechanisms besides property tax.
- Oregon can have their own system that interfaces with Toledo's.
- Before we go out for funding we really have to look at everything. We have several computer systems that outline transportation. It would be neat if these could talk to each other. We know at least three systems: TARPS, TARTA and MRDD.

Commuter Rail

- Putting a novelty where nobody lives and works doesn't make sense to me.
- The buildings are all close downtown. They should be able to walk.
- Instead of commuter rail, they should just have TARTA buses run more frequently and in areas that are not being served.
- Trolleys do nothing for our clients. They don't meet our needs.
- When planning for the future, TARTA should be looking at seniors and MRDD clients. Many of these people are clients for life. If it was safe and convenient for seniors, more would ride. To build a transit system without our clients and seniors in mind is not good planning. These are the folks that will use the system.
- TARTA drivers are great. They take care of our clients. They will help us find a lost person. TARPS on the other hand, refuse to communicate with our clients. They are very difficult.

Non-Transit User Focus Group

July 29, 2003

South YMCA

Summary: There were 8 individuals in attendance, all YMCA employees. They ran the teen programs, directed the Center, one was a fitness teacher another directed family programs. One participant stated that they live in the YMCA vans in the summer transporting kids for the summer programs.

Key Issues Discussed:

- One participant compared Toledo's transit system to Columbus transit system. She said the Columbus system was easy and reliable. There were regular routes and people were very familiar with them. With CODA you just waited 30 minutes for the bus to come. Not in Toledo – wait is usually longer.
- At the YMCA they let their workers go home early to make sure they don't miss the bus because they are not sure when it will show up.
- The Y's teens have no transportation. They depend on the buses to get to work at the Y. They struggle to make it to work on time.
- UT has its own transit system that runs on time. The UT buses come by the UT/MCO apartment complexes.
- One commented that they are not familiar with TARTA beyond the ozone days and the Mud Hens rides.
- The drop-off to the Y is not close. Many of the teens have to call for a ride to their jobs when they miss the bus.
- Another commented on how nice Toledo Express looked since it's been re-done with the food court.
- Several commented on how unwelcome the main downtown stop is. One would visit her mom's office, which was nearby to wait for the bus so they didn't have to wait at the station.
- The director of the Y lived in Ann Arbor. She explained that they had provided free bus passes to people working downtown to encourage using the bus system instead of driving cars.
- For teen employees in Oregon, transportation is an issue with limited service. In Springfield Township there are a group of teens that have to walk to catch a TARTA bus to get to work. There is no transportation near Airport Highway.
- Transportation limits where teens can work. Several teens were working at the Anderson's in Arrowhead. The bus runs during the day, but not the evening. They had to quit their jobs.
- Aware of TARPS, but doesn't use it much for our clients.

Funding

- You can raise the fair to \$1 so that there are not just taxes paying for the service.
- A strategic alliance between TARTA and the YMCA to transport kids to the Y and school would be an option.
- The Y has about 30 vans for the Ys in the area that they maintain to transport people.

Taxis

- One participant said they were afraid to use the Taxis in Toledo.
- Taxis are expensive.
- Taxis are not clean.
- There are a lot of “foreign drivers.”
- They don’t provide a good, clean image of Toledo.
- You don’t see taxis downtown like in other towns.

Greyhound Station

- The Greyhound Station is “scary” and unwelcoming. Had to use it to transport foster kids home. “It’s like a whole different world in there.”
- If people were more aware of TARTA’s services and if it were clean, the drivers nice and the buses on time, they would have more riders.
- The pamphlets should be more readily available.
- The number system on the bus schedules does not work.
- Teens in the Y’s YOP program swear by the bus. It gives them freedom if they know how to use the bus system to get around. Some of them have to get up at 6:15 in order to get to work on time. The buses are either too early or too late.
- TARTA is not connecting with the community. Give teens free passes then survey them to see what they think about the service.
- Many junior high kids have to take the bus to school. They get bus passes, but no one takes time to tell them how to use the system.
- Buses don’t have seats for young children.
- A camera on the bus would help cut down on misbehavior on the bus. The “red light” would imply you are being watched. It could help.
- It’s important to have options for transportation besides cars that are affordable, convenient and reliable. It helps to get more of a buy-in and a connection with the community.

Downtown Trolleys

- Cool idea. San Francisco has these.
- Take a trolley downtown to do what? There’s no shopping there.
- Something is starting down there. They need to make more family friendly. The Mud Hens is good. They need to market better. COSI and the art museum are all good things.

LMHA Focus Group
August 14, 2003
Noon

Summary: More than forty residents and staff met at Lucas Metropolitan Housing Authority (LMHA) offices near downtown Toledo. LMHA staff, Libby Drose, assisted in recruiting the meeting participants.

Key Issues Discussed:

- One veteran rider stated that the bus service was late regularly. The trains on Nebraska are partly to blame for the buses being late. There needs to be an underpass.
- Another participant had a very recent incident that resulted in her son being arrested on a bus. The drivers are afraid of the teenagers. The driver called the police on her son and he was handcuffed and taken away.
- Another elderly participant commented that the bus drivers go out of their way to help her. She uses the bus to go visit relatives, shopping, get her hair done. Very dependent on bus service.
- Seniors who participated were relatively pleased with the bus drivers and the service.
- There needs to be more buses on the weekends – more frequency on the weekends.
- The buses need to go further South,
- Buses need to go to Spring Meadows.
- Why can't we go anywhere near St. Charles? Have to walk a mile to go shopping on that side of town.
- Other places they would like to see the buses travel to included doctors offices on the East side, Andersons in Maumee, Super Cinemas in Maumee,
- A job placement coordinator for LMHA says they can't get jobs for clients at UPS, Honeybaked Hams, or Hickory Farms because there are no buses there. Job 1 USA has to limit its placement because of the buses.
- Many residents, especially elderly, will avoid the buses in the morning and after school because of the kids on the buses. The kids abuse the elderly residents.
- Older people need their own bus. The teenagers have taken over the buses.
- There used to be benches for seniors to sit on, but the kids have torn them up.

Improvements

- Smaller buses
- More frequency in certain areas
- Dial-A-Ride would be good in the neighborhoods
- There should be "special" buses for 35 cents that take us to all the malls.

Schedules

- Larger print, but can follow
- Buses should run on the half-hour instead of awkward times like 6:10, 6:20. It just makes it easier.

- Glad you brought the schedules didn't know that one like went out to Arrowhead.
- LMHA staff needs training on the bus lines and how to use the system.
- San Antonio's bus service charges flat 50 cents with no transfer cost.
- I would like to have a pass to get to work. I only work part time and it's costing me money to get back and forth.
- People in wheelchairs get a lot of pressure.

TARPS

- Nice because they pick you up at your doorstep.

TROLLEY

- It's good for downtown. Hard to get in and out of.

COST

- The senior price at 50 cents is just right.
- Why can't Maumee and Oregon pay to be part of the system?
- There was unanimous consensus that any type of new tax; property or sales would not be welcome. Some suggested that the riders should foot the bill. Others suggested that seniors, handicapped and low income should pay on a sliding scale.
- The "bigwigs" should figure how to solve this issue. That's why they make all this money.
- We are blessed, the elderly stated, our current price is very affordable.
- There should be free rides to the new Wonderland when it opens and to the malls during the holidays as a gift from TARTA. Can't do this all year because of the costs, just for the holidays.

Michigan Focus Group (Ort Tool & Dye)

Monday, August 18, 2003

Summary: In attendance were Tim Lake of the Small Business & Technology Center in Monroe, MI; Mark Jagodzinski, general manager of Lake Erie Transit in Monroe; Frank Ferro, account manager for Michigan Economic Development Corporation; Kenneth Colpaert, Welfare Reform coordinator for Michigan Works and the Superintendent of Monroe County Schools (arrived late).

Key Issues Discussed:

- Lake Erie Transit director attended. Their .5 mil levy generates \$600,000 a year. They have fixed route and Dial-A-Ride for the elderly and disabled. The Dial-A-Ride covers the largest population.
- Bedford is the largest suburb of Toledo. Toledo claims us when it makes sense. We are the ones who steal their jobs. Fifty percent of the working community works in Toledo, the other 50% work in Wayne County.
- Bedford Township has millage to support 1 bus. We are surrounded by cars.
- Maybe some form of interchange with TARTA could work.
- TARTA stops were too far away from where I worked all the time. People don't want to walk a mile to work.
- The transplanted manufacturers bring their employees to Michigan.
- TARTA is not convenient. The rides need to start earlier and end later in the evening.
- More service would generate more rides. All Bedford, Whiteford, Erie are all covered with only one bus.
- All transit is lift equipped. The four buses in Frenchtown are busy.
- Only demand is to go to Westfield Mall. The bus that connects for Westfield should be closer to Bedford.
- Fixed routes could be considered along Secor, Douglas, and Lewis. Jackman could be the North/South corridor. Sterns would be good also.
- Toledo's system is a hub and spoke system. Bedford is more in a grid pattern.
- Most Bedford residents won't walk more than 10 feet for a bus. They would not walk to a fixed route. They will go to Miracle Mile or Northtown. Park and Ride is not successful.

Welfare Clients

- Getting people to work is biggest issue. Seventy-five to eighty percent do not have their own transportation. Currently servicing 600 to 700 people
- Transitional vans are available. There is one FT and one PT driver. Once they are employed it is difficult getting to work.
- State has canceled \$1200 for car purchase that helped.
- Fifty percent of people placed do not make it pass the first 90 days. Twenty to twenty-five percent of that number (about 200 people) will have no job because of transportation issues.
- We get calls for bus service between Bedford and Monroe. Issues of cost and where to pick them up.

- These people also have to transport kids to day care – childcare is the 2nd largest issue they face.
- The county is so huge between Bedford and Monroe; it would be a logistical nightmare.

Employers

- No one complains about transportation. Employees get to their jobs. In this economy it is not an issue. The big issue for employers is healthcare.
- Employers don't see it as their responsibility
- Funding
- It would be hard to convince citizens to pass a levy for transportation. They worked hard to get millage for Dial-A-Ride. It worked because it was for seniors and the disabled.
- Maybe the community would pass a $\frac{1}{4}$ or $\frac{1}{3}$ millage, but not $\frac{1}{2}$ millage. Lake Erie Transit would come in third behind Homeland Security and Fire and Police.
- It's like pulling teeth to get people to vote. Out of 19,000 voters only 1500 voted in Bedford.
- It's easy to get to the airports. It's a short ride and the traffic is not bad.

Schools Superintendent

- School system oversees 54 buses and transports up to 5,000 students.
- Senior Citizens also have a fleet of 6 vans to transport them around the area.
- Seniors use Dial-A-Ride, but it cuts off at 4:30 p.m.
- Expanding the day to 12 hours would be a start
- You would have to add a second bus. With the new library, folks will want to get there in the evening for meetings and educational programs. A millage of at least $\frac{1}{10}$ to $\frac{1}{3}$ would be needed for a second bus.

Appendix D

Stakeholder Interview Discussion Notes

**Notes from Stakeholder Interview with Dr. David Nixon, President, Monroe County
Community College, March 12, 2004**

Summary:

Dr. Nixon recognizes the opportunities that public transit may offer to help Monroe County Community College (MCCC) meet its goals of serving more students and providing a greater range of course offerings.

- MCCC is a rapidly growing institution
- Its Whitman Center campus, located in the TMACOG region and the regional study project study area, is the fastest growing element of it.
- MCCC and the Whitman Center particularly has some enrollment from Ohio
- MCCC also has an agreement with Owens Community College in Perrysburg Township that allows students at each institution to take classes at the other. These are indications that transit service to the Toledo area could be helpful to MCCC.
- Transit service, both from Toledo and from Monroe, could be helpful in the College's outreach to lower-income students.
- The community is growing and transit could be required to support more economic growth.
- He would be supportive of transit service to Whitman Center from the Toledo area and would consider allowing a park-and-ride facility to be developed on the Whitman Center site if the finances could be worked out.
- Expansion of transit could be helpful to him in expanding the College's student base.

Notes from Interview with Jodi Rosendale, Personnel Manager, Cooper Tire, July 23, 2003

Summary:

Cooper Tire employs about 650 people at their Bowling Green site. They have not had any problems or complaints about transportation issues in terms of being able to get to work. Cooper Tire works on the piece work system, so they hire few, if any, people with disabilities. Many of their employees car-pool.

- Ms. Rosendale has been with Cooper for 10 years and was involved in hiring in the 90s. She stated there was never an issue with transportation. They have always been able to fill their jobs. The jobs pay well and offer benefits.
- She stated that she noticed the University bus coming to Fairview apartments. She stated the bus carries anybody who gets on without question.
- She stated they work on a piece rate system. They have made accommodations in the past for people who may have been injured on the job, but that the type of work they do does not lend itself to people with disabilities.
- She participates in an HR roundtable with other HR professionals in the manufacturing area. She said they have discussed transportation issues in the past, but not lately.

Notes from Phone Interview with Colleen Sullivan, Hickory Farms, August 26, 2003

Hickory Farms has several locations in the Toledo area and, as a high proportion of their products are sold at Christmas, their work is highly seasonal. Between June and November, the distribution center runs three shifts of workers, and from October to December there are nearly 1,000 workers on staff throughout the region. During the first half of the year, employment is around 100. They use an employment agency, Job One, to provide workers during their busy season. Mrs. Sullivan said that some people working the third shift have some problems with transportation, and in the past TARTA has put on an additional bus during Hickory Farms' peak period to serve third shift workers. She said that, in the morning, the bus serving the distribution facility gets workers there either one hour early or 15 minutes late, and some workers who miss it arrive late. She said that more service late and early, and more frequent service, would be helpful. She suggested that TARTA enter into discussions with Job One regarding providing the special bus service for the third shift. She said they have no trouble filling all the jobs, but do occasionally have workers blaming the bus for their late arrivals. She said that there are many fewer cars in the lot than there are employees, so she suspects many must use the bus.

Notes from Phone Interview with Mark V'Soske, Toledo Area Chamber of Commerce, August 7, 2003

Mr. V'Soske sees some value in the idea of having a county-wide or region-wide transit service, but has not heard complaints about the quality or lack of transit service in the region from local businesses. He thinks that perhaps if the economy comes back and the job market becomes tighter, this could change. He pointed out that the mindset is "drive" in Midwestern cities, and that people resist carpooling and use the Mud Hens service but not the regular bus service. He pointed out that people live more complicated lives today and have trouble living with the fixed schedule of transit. He noted that his secretary uses the bus and is sometimes frustrated when she needs to get back home in the middle of the day.

Mr. V'Soske said that there might be value in having service to the airports, as they have in Washington, Atlanta and other cities. However, he concedes that in Toledo, most of the time it would be empty, and he questions from where in the Toledo area it could originate. He suggests that given the distribution of the population west of downtown, that a location, perhaps in the Secor-Talmadge Avenue Area, may be the best place to locate a terminal for the airport service, rather than just in the downtown area. He said that there probably needs to be better bus service to Arrowhead to support its continued growth, and also to the Route 20 area in Perrysburg Township, as there will be more development in that area. The people who live in the Perrysburg Township area tend to work in Toledo, he said. The Bedford-Temperance area is also growing and is experiencing a lot of traffic congestion. He also noted Oregon and the I-75/US 23 area as being hot spots for traffic congestion. However, he pointed out that few of the travelers in these areas are going downtown, and the transit system is oriented to going downtown.

Mr. V'Soske said that he doesn't understand why more people don't use the downtown lunchtime trolley and likes the idea of the streetcars in the downtown area that is part of the recommendations of the Regional Core Circulator Study. He believes that the streetcar will add a new dimension to the downtown area, and noted that they are "more than just transportation." He also supports the idea of extending the bus loop south to get closer to the warehouse district, Fifth-Third Field and the bars and restaurants in that area.

Regarding a tax referendum, Mr. V'Soske said "not today, it would be a tough sell." The economy in the region is bad, a school levy was just defeated (the day before the interview) and the mindset is "no new taxes."

Lucas County Commissioner Maggie Thurber, August 25, 2003

Dave Dysard and Diane Reamer-Evans of TMACOG interviewed Commissioner Thurber.

- What is your personal impression of how the public transit system is working in the region?
A: I don't know how well transit is working; it is about time we studied transit in our region so we can learn this.
- Do you think there are needs that are not being met by public transportation in this region?
A: Set routes and schedules don't accommodate busy life styles, especially moms.
- Have you heard from any of your constituents/colleagues that there are transportation needs that are not being met by the existing transit system?
A: No except for programs working with people to get them into jobs (WIA-Workforce Investment Act, and Jobs & Family Services) – they say transportation is a barrier to employment in the suburbs.
- Do you, family members, or any of your employees, ever use public transit?
A: I use it to get to special events at Crosby [Toledo Botanical] Gardens and Jamie Farr golf tournament. My family doesn't use it. A lot of people in the County Clerk's office use transit to commute, plus the TARTA lunchtime trolley. And we changed the work schedule for a disabled person so she could use TARTA and get to work on time.
- Do you have any documentation of those needs, any reports your agency has written, letters from constituents, etc?
A: No (For this and Q. 3, check with Bruce Rumpf, of Jobs USA and JFS)
- What do you think of the Mud Hens service?
A: I haven't used. It is a good service as long as it continues to be used. If use declines, we should reevaluate. It helps overcome resident reluctance to come downtown – people like taking TARTA since they don't like to pay for parking.
- There are now Call-A-Ride services in Maumee, Perrysburg and Bedford Twp. Do you think there are other areas where that might be useful to residents or businesses?
A: I hope the study will answer this question.
- If any major improvements to the transit system were to happen, it would probably require more funding. What issues and concerns would need to be addressed for you to consider supporting development of more funding?
A: I would need to see that transit had done everything it could to be cost-effective. Also a cost-benefit analysis to show if users can cover the cost of increased service. Transit needs to be as self-sufficient as possible. It is different than highways. Government can't be the funder for all needs. We need to reduce the cost of government so people have more disposable income and can pay their own way. I

don't want to tax people for services they don't use. I am concerned people would say, "I support public transportation, but not out of my pocketbook."

Notes from Phone Interview with Althea Williams, Director of Human Resources, NFO, August 27, 2003

Tim Rosenberger interviewed Althea Williams by telephone. National Family Opinion (NFO) is located at 2700 Oregon Road in Northwood. There is no public transit there now, and NFO would love to have it.

NFO doesn't have multiple sites in Toledo but have other sites throughout the country and in other countries. NFO does survey research using telephone, mail back and diary surveys, performing market research for the food, auto, and other industries. They have a telephone center and business-to-business call center in Northwood. They have many employees in the \$7-\$13 per hour range.

This is the only NFO location she can think of where there is no access to public transportation. The business-to-business call center, mailroom, data entry, and consumer interviewing call center work shifts. NFO has about 300 employees in Northwood working shifts in these divisions. More than 400 also work a straight salaried schedule, mainly daytime, at the Northwood location. In the past they have operated three shifts. One group works Wednesday through Sunday late shift. They were working third shift late at night until 11 and 12 at night, still have some in the mail division working those shifts.

Some employees have problems with reliability of transportation. NFO supplements its staff with staff from temp agencies. Often the employees of temp agencies lack reliable transportation. It would help if there were alternative forms of transportation, for temps and for regular staff. Some employees, particularly temps, have had a problem getting there. This is a problem for NFO. Late or non-arriving employees create a production problem for NFO. Many of their contracts specify the time and number of surveys that will be completed. When people are late or don't show up it has a business impact. NFO may have statistics on late arriving employees and no-shows.

NFO has reached out to the visually impaired. There are some disabled employees, some in wheelchairs, some visually and hearing impaired.

They have not contacted the local officials recently. They have contacted TARTA and TMACOG. Transportation is a problem, they've talked about it and have approached the City of Northwood. Northwood officials have said in the past it was not in their best interest. They also have studied sharing the bus chartered by Owens College, but price quoted (\$50,000) was too much for them to consider. They also have considered developing their own service to pick up employees in downtown Toledo or from a park-and-ride lot. They definitely would consider helping to subsidize a service, but at a lower cost than the cost of the Owens shuttle.

Diana LaBiche, Greater Toledo Urban League, Inc., September 22, 2003

BJ Fisher interview Diana LaBiche. Ms. LaBiche is the Director of the Youthbuild program, and before that served as Director of Job placement for the Urban League. In both capacities, she has worked with at-risk clientele with strong employment challenges, including criminal records. Following is a summary of key points of the interview.

Summary:

- She had a client who had just been released from jail who was looking for work at Denny's in Perrysburg. Typically, clients such as this person can be placed in jobs, but they will be given the most undesirable shifts—evenings, etc. Bus service is difficult for these times. This client was unable to continue working at Denny's due to lack of bus service.
- She also noted that it is often difficult for young people starting a new job to use public transportation prior to being paid, and that a waiver or voucher to advance those funds would be helpful.
- She purchases tokens at TARTA.
- Transportation/transit are issues in every employment decision made by the clients Ms. LaBiche works with.
- She thinks that if the community were assured that its needs would be addressed in an expanded TARTA system, that the community would support a tax levy to support it.
- Most of her experience in needing transit has been in the Perrysburg area, and less in Oregon.
- She also has participants who want to go to Owens. She is aware of their shuttle program, but more comprehensive transit would be helpful.
- She has heard about accessibility issues for people with disabilities.

Appendix E

Telephone Survey Detailed Results

Regional Transportation Needs Assessment

May 2003

Stanford H. Odesky and Associates
4719 Rose Glenn
Toledo, Ohio 43615

Methodology

A random sample of 800 Lucas and Wood County residents were interviewed by telephone during the month of May 2003. One hundred interviews were completed in each of eight pre-determined zip code areas. Weights were applied to each zip code cell (Region) to reflect actual population counts.

The survey data is +/- 3.5% at the 95% confidence level. Within each region, the survey data is +/- 9.8% at the 95% confidence level.

This research was conducted to evaluate the region's public transportation services. The survey generated specifics about use patterns, impressions, attitudes toward recent service changes, and reactions and feedback to suggested possible changes to service or new services.

Summary

1. Overall, nine in ten respondents (90.7%) own an automobile that they use regularly for transportation.

A. Least likely to own an automobile:

	<u>%</u>
Total	90.7
Region One	69.0
Low Income	71.4
Region Two	83.0

2. Half of all respondents (52.6%) are currently employed.

A. The number of employed is greatest in Region Seven (68.0%).

B. Non-car owners (29.1%) and low income respondents are least likely to be employed (28.1%).

3. With the exception of residents in Regions Three, Four and Seven, the majority of employed respondents travel outside their area of residence to get work.

	Region*							
	1	2	3	4	5	6	7	8
	<u>%</u>							
Stay in area of residence	35.7	32.7	[63.5]	[49.1]	36.0	40.0	[57.4]	32.1
Travel outside area of residence to work	64.3	67.3	36.5	50.9	64.0	60.0	42.6	67.9

* See definition of regions ("Sample Definitions and Weights" table near the end of this.

4. The vast majority of respondents travel by driving either alone or in a carpool.

A. Travel to Work

	<u>% Drive Alone or by Carpool</u>
Total	95.0
<i>Region</i>	
One	88.1
Two	91.8
Three	98.0
Four	96.2
Five	93.9
Six	92.7
Seven	89.7
Eight	98.1
Low Income	82.0

B. Travel to Other

	<u>% Drive Alone or by Carpool</u>
Total	96.1
<i>Region</i>	
One	90.0
Two	89.0
Three	96.0
Four	100.0
Five	97.0
Six	99.1
Seven	98.0
Eight	99.0
Low Income	86.6

C. Travel Originating Other than Home

	<u>% Drive Alone or by Carpool</u>
Total	96.8
<i>Region</i>	
One	90.0
Two	91.0
Three	98.0
Four	99.0
Five	98.0
Six	99.1
Seven	98.0
Eight	97.0
Low Income	88.5

D. For each travel experience, low income respondents are less likely than the others to travel by car.

5. Eight in ten respondents (81.3%) consider themselves familiar with public transportation that is available in our region.

	<u>% Familiar</u>
Total	81.3
Region Three	92.1
Region Two	91.0
Region One	90.0
Non-Car Owners	86.7
Low Income	83.5
Region Four	83.0
Region Seven	76.0
Region Six	69.3
Region Five	66.0
Region Eight	47.0

6. Public transportation personal experience:

	Total <u>%</u>
Within the past year	16.4
More than one year, but less than two	2.6
Over two years, but less than five	8.9
Five or more years ago	45.3
Never	26.8

A. Most likely to have ridden in the past year:

	<u>%</u>
Total	16.4
Non-Car Owners	68.9
Low Income	41.5
Region One	36.7
Region Two	25.3

B. Most likely to have never ridden:

	<u>%</u>
Total	26.8
Region Eight	53.2
Region Seven	51.3
Region Six	41.4
Region Five	36.4
Region Four	32.5

7. Frequency of usage among those that have used public transportation within the past two years:

	Total <u>%</u>
Daily	3.3
Weekly	20.7
Few times a month	22.8
Less often	53.2

8. Less than one percent of respondents overall (0.5%) use TARTA to travel to work from where they live.
 - A. Usage is greatest among Non-Car Owners (8.3%) and residents in Region One (7.1%).
9. For travel to other locations such as doctor's offices, shopping malls or school from where they live, nearly three percent overall (2.7%) engage the services of TARTA.
 - A. Usage is greatest among non-car owners (26.1%), low income respondents (9.3%) and residents in Regions One (8.0%) and Two (9.0%).
10. When travel originates from somewhere other than home, two percent overall (1.9%) take TARTA.
 - A. Usage is greatest among non-car owners (18.6%), low income respondents (11.1%) and residents in Regions One (6.0%) and Two (8.0%).
11. In all travel experiences where TARTA is used (100.0%), respondents walk to catch the TARTA bus.

12. Reasons respondents use public transportation:

	Total <u>%</u>
No car/car in shop	43.4
Convenient	24.5
Don't drive	14.4
Free ride to Mud Hens games	12.6

13. The top two things that come to mind when respondents hear public transportation mentioned are "TARTA/buses" (82.6%) and "taxis/cabs" (13.1%).

14. The image of public transportation:

	Total <u>%</u>
Good/general positive	32.3
Don't know	25.3
Not near me/no where to catch it/ limited	13.3
Not good/general negative comment	5.0

15. Positive things heard about public transportation:

	Total %
None	38.3
Good service/gets people places	15.0
Don't know	10.7
Convenient/more routes/avoid parking	8.8
Good price/cheap/sometimes free	8.3
Good for handicapped	7.0
Gives non-car owners a way to get around	5.3
On time/reliable/prompt	5.0

16. Six in ten respondents (59.6%) have heard nothing negative regarding public transportation lately. Specific aspects mentioned include:

	Total %
Cut backs/not enough stops/limited service	9.3
Don't know	7.6
Drivers not nice/have criminal records	7.2
Not timely/have to wait/slow	6.4
Safety issues/crime/rude kids	5.3

17. Respondents feel that in the past year public transportation has:

	Total %
Improved	17.4
Gotten worse	2.9
Stayed the same	34.1
Don't know	45.6

- A. Reasons for perceived improvement are "provide more routes" (22.5%) and "modern buses/updated" (15.8%).
- B. Public transportation is considered worse because it's "in a financial crisis/cut hours" (38.3%).

18. Respondents agree that....(5.0 equals strongly agree)

	Total Mean	Region								Low Income Mean	Non-Car Owners Mean
		1 Mean	2 Mean	3 Mean	4 Mean	5 Mean	6 Mean	7 Mean	8 Mean		
A. Public transportation must be provided for the disabled, the elderly, non-drivers or people who choose to not drive, and for the general population.	4.74	4.85	4.86	4.86	4.60	4.66	4.58	4.66	4.67	4.77	4.87
B. I often seen buses with only a few people on them.	3.77	(3.53)	3.63	3.82	[4.03]	3.65	[3.99]	(3.46)	(3.32)	3.58	(3.47)
C. Public transportation needs to find more ways to provide better service to the area residents.	3.66	[4.11]	3.79	3.56	(3.34)	3.80	3.59	[3.89]	[4.11]	[4.00]	[3.94]
D. I would use the bus service if there were direct service to the Toledo Express Airport, to the train station, and/or Greyhound station.	3.30	[3.96]	3.37	3.22	3.28	3.16	3.29	3.21	3.45	3.46	3.48
E. Local public transit agencies do not provide enough local information regarding how to use public transit including schedules and times.	3.29	3.19	3.23	3.24	3.43	3.27	3.12	[3.50]	[3.56]	3.35	3.17
F. I would use public transit if it had curb-to-curb dial-a-ride service within an approximate 15-mile radius.	2.98	[3.48]	[3.24]	2.84	2.90	(2.67)	3.01	2.93	[3.29]	[3.31]	[3.66]

[] = significantly greater than total mean
 () = significantly less than total mean

	Total Mean	Region								Low Income Mean	Non-Car Owners Mean
		1 Mean	2 Mean	3 Mean	4 Mean	5 Mean	6 Mean	7 Mean	8 Mean		
G. I think the large 40 seat buses are intimidating and would prefer riding the smaller 15 seat buses.	2.92	(2.64)	2.78	2.99	2.89	2.95	3.10	(2.66)	2.99	2.94	(2.56)
H. I would use public transit if there was service to business parks such as Arrowhead Park or the new Levis Commons Park.	2.74	[3.35]	[3.14]	2.66	2.55	(2.34)	2.68	2.63	[3.05]	2.94	[3.36]
I. I would use bus service if the drive can change the route for passenger pick-up or drop off.	2.64	2.81	2.81	2.49	2.62	2.51	2.82	2.80	2.68	[3.44]	[3.34]
J. The pick-up locations and destinations of public transit are not suited for travel needs; if they changed I would use public transit.	2.61	[2.85]	2.62	2.55	(2.40)	2.64	2.64	[2.82]	[3.14]	[3.01]	[2.97]
K. I would use public transit if it provided increased hours of service (earlier in the morning, later in the evenings, and/or Sunday service).	2.51	[3.19]	[2.80]	2.36	(2.24)	(2.20)	2.50	[2.75]	[3.04]	[2.91]	[3.46]
L. I don't understand how to read the bus schedules.	2.26	(1.99)	2.23	2.32	2.36	2.24	2.33	(1.74)	2.27	2.24	(2.00)

[] = significantly greater than total mean

() = significantly less than total mean

19. Attitudes toward new service options:

	<u>Total</u>	<u>%Very Likely to Use</u>								<u>Low Income</u>	<u>Non-Car Owners</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>		
A. Direct service to the train station, Greyhound station, and/or Toledo Express Airport..	33.4	[49.0]	[44.0]	29.7	32.0	30.0	30.7	30.0	32.0	32.2	[45.7]
B. Park-and Ride service, from secure parking lots in outlying areas to downtown Toledo.	21.9	[38.0]	21.0	17.8	18.0	25.0	[27.7]	24.0	[29.0]	20.3	[29.0]
C. Bus service linked to communities not now service by bus service.	16.6	[24.0]	[30.0]	11.9	6.0	14.0	[21.8]	18.0	[21.0]	[21.2]	[37.6]
D. Curb-to-curb dial-a-ride service within 15 mile radius.	14.0	[27.0]	[24.0]	12.9	8.0	13.0	13.9	11.0	9.0	[29.4]	[40.6]
E. Bus service where the driver would have the authority to deviate a bus off route for passenger pick-up or drop off.	14.4	[21.0]	[20.0]	15.8	9.0	10.0	16.8	9.0	11.0	[27.8]	[37.4]
F. Park-and-ride service, from secure parking lots in outlying areas, to Arrowhead Park.	12.5	[23.0]	14.0	10.9	10.0	10.0	[16.8]	7.0	[17.0]	11.5	[24.9]
G. Current bus service with no changes.	7.9	[17.0]	[18.0]	7.9	7.0	5.0	1.0	2.0	2.0	[18.4]	[32.5]

[] = significantly greater than total percent

20. When given the chance to cover any additional issues regarding public transportation, respondents asked for “services to be offered to outlying/rural areas.”

	Total <u>%</u>
Total	24.1
Region Seven	63.6
Region Eight	60.0
Non-Car Owners	42.2
Region Six	41.2
Low Income	37.8
Region Five	35.7
Region Two	15.8
Region Three	15.8
Region Four	15.8
Region One	9.5

A. Additional comments:

	Total <u>%</u>
Advertise/PR/give out information	12.4
Increase security	8.4
Be timely	7.4
Improve handicap service	7.4
Fumes/dirty	6.0

Demographics

Region

Age		Total	1	2	3	4	5	6	7	8	Low Income	Non-Car Owners
		%	%	%	%	%	%	%	%	%	%	%
18-24	8.9	12.0	9.0	6.9	7.0	5.0	8.9	29.0	9.0	19.1	18.0	
25-34	14.7	16.0	18.0	15.8	9.0	16.0	12.9	14.0	16.0	10.4	6.1	
35-44	14.9	12.0	13.0	10.9	21.0	12.0	19.8	16.0	18.0	5.6	7.8	
45-54	20.3	18.0	21.0	17.8	21.0	25.0	24.8	24.0	15.0	10.2	20.4	
55-64	16.0	23.0	16.0	15.8	21.0	14.0	9.9	8.0	20.0	18.1	15.0	
65+		23.9	18.0	22.0	30.7	20.0	27.0	21.8	9.0	21.0	34.0	32.7

Gender												
Male	45.1	45.0	45.0	44.6	47.0	45.0	44.6	46.0	44.0	38.3	42.8	
Female	54.9	55.0	55.0	55.4	53.0	55.0	55.4	54.0	56.0	61.7	57.2	
Children Under 18 at Home												
	35.3	24.0	42.0	29.7	43.4	28.0	36.0	28.0	42.0	12.9	18.0	
Income:												
Up to \$15K												
	12.3	26.0	19.0	16.8	1.1	11.0	1.1	21.2	9.3	100.0	37.7	
\$15K to \$30K												
	16.7	22.0	25.0	18.8	10.0	12.8	12.8	13.0	15.2	---	24.7	
\$30K to \$45K												
	11.0	9.0	12.1	11.8	6.9	9.9	12.8	8.2	15.2	---	5.4	
\$45K or more												
	46.8	29.0	28.0	44.6	64.0	52.0	58.4	49.0	43.0	---	8.3	
Refused												
	12.6	13.0	15.0	7.9	17.0	13.0	15.8	8.0	15.0	---	23.7	

Route Information

(*caution small base sizes/number of respondents answering shown)

Travel to Work From Where You Live				
	Total	Region		Low Income
		1	2	
	# Resp	# Resp	# Resp	# Resp
17	6	-	6	-
5	1	1	-	1
Don't Know	1	1	-	-
32	1	1	-	-

Transit Route				
	Total	Region		Low Income
		1	2	
	# Resp	# Resp	# Resp	# Resp
Don't Know	6	-	6	-
20	1	1	-	1

Travel to Other Locations						
	Total	Region				Low Income
		1	2	3	5	
	# Resp					
Depends	28	3	23	-	3	15
Don't know	27	-	6	21	-	-
5	12	1	11	-	-	-
31	11	-	-	11	-	11
30	6	-	6	-	-	6
32	6	-	6	-	-	6
22	1	-	-	-	-	1
19	1	-	-	-	-	-
2830	1	-	-	-	-	1
Indiana	1	-	-	-	-	-

Transit Route						
	Total	Region				Low Income
		1	2	3	5	
	# Resp					
Depends	21	4	17	-	-	7
Don't know	7	1	6	-	-	-
31	1	1	-	-	-	1

Travel Originating Somewhere Other Than Home						
	Total	Region				Low Income
		1	2	3	5	
	# Resp					
Depends	23	3	17	-	3	11
Don't know	16	-	6	11	-	11
13	6	-	6	-	-	6
32	6	-	6	-	-	6
31	6	-	6	-	-	6
16	6	-	6	-	-	6
22	1	1	-	-	-	1
5	1	1	-	-	-	-
27	1	1	-	-	-	1

Transit Route						
	Total	Region				Low Income
		1	2	3	5	
	# Resp					
Depends	18	1	17	-	-	7
Don't know	10	2	6	-	3	4
31	1	1	-	-	-	1

Sample Definitions and Weights

Sample Definitions and Weights					
Region	ZIP Codes	Population			
		Counts	%	Weights	%
One	43602, 43624, 43620, 43610	19,515	2.96	1.00	2.96
Two	43604, 43608, 43605, 43609, 43607	110,129	16.71	5.64	16.70
Three	43611, 43612, 43613, 43606, 43615, 13614, 43623	205,561	31.19	10.53	31.19
Four	43460, 43537, 43560, 43617, 43551 (city) 48182, 48144	109,615	16.63	5.62	16.64
Five	43616, 43619, 43542, 43528, 43566, 43571	53,311	8.09	2.73	8.08
Six	43551 (Twp), 43618, 43412, 43468, 43408, 43445, 43430, 43469, 43443, 43447, 43435, 43547, 43522, 43558, 43504, 48133, 49267	72,342	10.98	3.71	10.98
Seven	43402	35,907	5.45	1.84	5.45
Eight	Other/Wood County	52,731	8.00	2.70	8.00
		659,111	100.1	33.77	99.99

Sampling Error

Sampling error (also referred to as STANDARD ERROR) is a measure of variability of a sample result from the true results for a population. It is always stated in terms of a plus or minus percentage figure surrounding the research result. Furthermore, the size of the error factor is influenced inversely by the size of the sample. The larger the sample, the smaller the sampling error factor.

Let's examine the effect of sample size on sampling error. The results from a brand awareness study indicate that 45% of our sample has heard of Brand XYZ. If our results are based on 100 respondents, the sampling error (at the 95% Confidence Level) would be $\pm 9.8\%$. Thus, in the real world we would expect somewhere between 35.2% and 54.8% of the population to be aware of this brand.

As we increase our sample size, we narrow this predicted awareness range. Based on 500 respondents, the sample error viewed would be $\pm 4.45\%$. Thus, for the entire population we would expect the awareness level to fall within the 40.55% to 49.45% range.

On the following page is sampling error change for the 95% Confidence Level. In order to find the error factor for a result, you will require two pieces of information:

- 1) The percentage results obtained in your research.
- 2) The sample size.

Once you have these two ingredients, consult the chart on the next page.

- 1) Locate the percentage at the top of the page which is closest to your result. For numbers near the middle of the range (45%, for example), it is best to use the higher reference percentage on the chart. This will give you a more conservative estimate of Sampling Error.
- 2) Find the Sampling Error factor by lining up the sample size line with the percentage result column.

CHART OF SAMPLING ERRORS

(At 95% Confidence)

Sample Size	The Percentage result you obtained...				
	50%	40% or 60%	30% or 70%	20% or 80%	10% or 90%
100	+/- 9.8	+/- 9.6	+/- 9.0	+/- 7.8	+/- 5.9
200	+/- 7.1	+/- 7.0	+/- 6.5	+/- 5.7	+/- 4.3
300	+/- 5.7	+/- 5.5	+/- 5.2	+/- 4.5	+/- 3.4

Appendix F

Estimation of Transit Demand: Additional Details

TMACOG Transit Shares¹ — Percent Transit Use in Transportation Analysis Districts
(see **Figure 6-2** in Chapter 6)

Aggregated District / Key Travel Destination	District #	General Description (including number of person trips/day to these districts)	Includes	Transit Share
Downtown Toledo	1	Toledo's city center / central business district		3.2%
Core	2–6	Areas surrounding city center; 80,000-100,00 trips/day	North Toledo, East Toledo, South Side, Dorr Street Corridor, Old West End	.6% to .8%
Outside Core	8–12, 16	Areas outside the core with at least 100,000 trips/day	Southwyck Shopping Center area, Reynolds Road corridor, Westgate, Ottawa Hills, West Toledo, Alexis Road corridor, Maumee	.5% to .9%
Extended Core	17, 21, 22	Areas with 70,000-80,000 trips/day, or with a major regional commercial center (Spring Meadows Mall in district 21)	Sylvania (part), Springfield Township, Holland, Sylvania Township (part)	.4% to .5%
Remainder of region ²⁰	7, 13–15, 18–20, 23–37	Not key travel destinations	Southern Monroe County, northern Wood County, and western Lucas County	.2% to 1.3%
Bowling Green	38	City of Bowling Green	Area includes major destinations such as Wal-Mart, Bowling Green State University, Cooper Plants, Wood County Hospital, ODOT	.8%

TMACOG¹ -- Transit shares for specific traffic analysis districts:

Transit Shares for Districts 1 – 10

3.2% .6% .8% .7% .7% .6% .6% .8% .9% .5%

Transit Shares for Districts 11 – 20

.6% .8% .6% .4% .8% .6% .4% .5% .7% .8%

Transit Shares for Districts 21 – 30

.5% .5% .9% 1.3% 1.1% 1% .8% 1.2% 1% .9%

Transit Shares for Districts 31 – 38

.7% 1% 1.2% 1.2% .6% .2% .5% .8%

¹ Source: TMACOG 2000/2002 Model Results (note this model did **not** include southern Wood County)

