



Regional Growth
Choices for our Future

DISCLAIMERS

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Regional Growth: Choices for Our Future

Technical Memorandum Task II – 8.1 REGIONAL TRENDS AFFECTING FUTURE TRANSIT DEMAND

Draft Report
August 2002

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Task II-8.1

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Photo 1 and 5 provided by EATRAN, Photo 3 and 4 provided by CATA, Photos 2, 6 and 7 taken by Michele Manning, Planning and Zoning Center, Inc.
 Michele:c:/winword/terpc/transit/tableoc8.1.doc

1.0 INTRODUCTION

1.1 Purpose

A “Regional Transit Coordination Study” is being conducted as a part of the larger “Regional Growth: Choices for Our Future” project. The first task associated with this study is to identify regional trends that affect current transit ridership and future ridership.

There are volumes of planning documents written about the relationship between land use and transportation. Land use patterns do not just affect the transportation of people in cars; patterns also affect those traveling by transit. This part of the Regional Transit Coordination Study is intended to overview some of the land use trends and population trends that have affected transit ridership within the Tri-County region and how these trends may affect future demand.

The primary challenge underlying regional coordination for transit is rooted in the significant population and employment changes forecasted for suburban and rural areas of the three counties that comprise the region. Eaton County population is forecasted to increase from 1990 to 2020 by 23%, and retail employment is forecasted to grow by 37% in the same period. Delta Township, within Eaton County is forecasted for a 62% increase in population and retail employment is forecasted to increase 69%. Clinton County population is forecasted to grow 12% by 2020. Within Clinton County, Dewitt Township is forecasted to grow 37% in population and 28% in non-retail employment. Suburban areas within Ingham County are also forecasted for significant growth. Delhi Township population is projected to increase 42% and its non-retail employment is forecasted to increase 65%.

If transit is to be made a viable option for these expanding populations, regional coordination of transit needs to be a significant priority for the future for the three local transit providers.



This study gives the transit providers, and citizen advocate groups important information on how the regional trends for population change, employment, land use change and other issues may affect of the future of transit services and ridership within the Tri-County region. The findings of this technical memorandum were presented to the public at the Tri-County Transit Forum held on June 12, 2002 at the Sheraton Hotel in Lansing.

1.2 Scope of Services

This technical memorandum completes the requirements under Task II-8.1 (regional growth trends presentation) of the “Regional Growth: Choices for Our Future” scope of work. Some of the key terms used in this technical memorandum are defined in Appendix A.

This technical memo offers some background information on the transit providers, as well as, regional trends relating to transit. It can be used in reference to the technical memorandum for Task II-8.2 which focuses on the spatial mismatch between job growth and low-income groups in the Tri-County area. The final report for the Regional Transit Study, Task II-8.4, will focus on summarizing the two technical memorandums, the results of the transit forum and regional coordination for the systems.

1.3 Acknowledgements

Several individuals and organizations contributed to this memorandum through attendance at meetings, providing information and the generation of supportive graphics. The methodology for the report was developed by the Planning and Zoning Center, Inc., staff of the Tri-County Regional Planning Commission, as well as, the Transit Task Force, whose members are recognized in Section 8.0 of this document. Parsons Transportation Group was responsible for the travel demand modeling of the “potential” routes presented in Section 5.0. The Tri-County Regional Planning Commission produced the maps generated in Sections 2, 3, and 5.

2.0 REGIONAL TRANSIT PROVIDERS AND THE CURRENT TRANSIT SYSTEM

2.1 Three Transit Providers

The Clinton Area Transit Service, Eaton County Transportation Authority (EATRAN) and the Capital Area Transportation Authority (CATA) are the three public transit providers in the region. The majority of the region's fixed route service and ridership is within the urban area surrounding the cities of Lansing and East Lansing. Demand response service is available throughout the entire Tri-County region. The arrows on Map 1 represent the transit providers regularly crossing over county boundaries to pick up and or drop off passengers. But for the most part the three are separate systems with separate service hours and separate funding sources.

When added together, the region's average weekday trips totaled 30,200. Of that total, almost 28,000 of those trips are on CATA's fixed route system. CATA Demand Response averaged 1,440 daily trips. EATRAN averaged 556 trips and Clinton Area Transit System averaged 229 trips. The average weekday regional miles totaled 23,698. Of that total 11,330 miles were the CATA fixed route service. CATA's demand response miles average 9,161 miles for a weekday. EATRAN averages 1,709 miles and the Clinton Area Transit System averages 1,498 miles on an average weekday.

Photo 1
EATRAN Customer



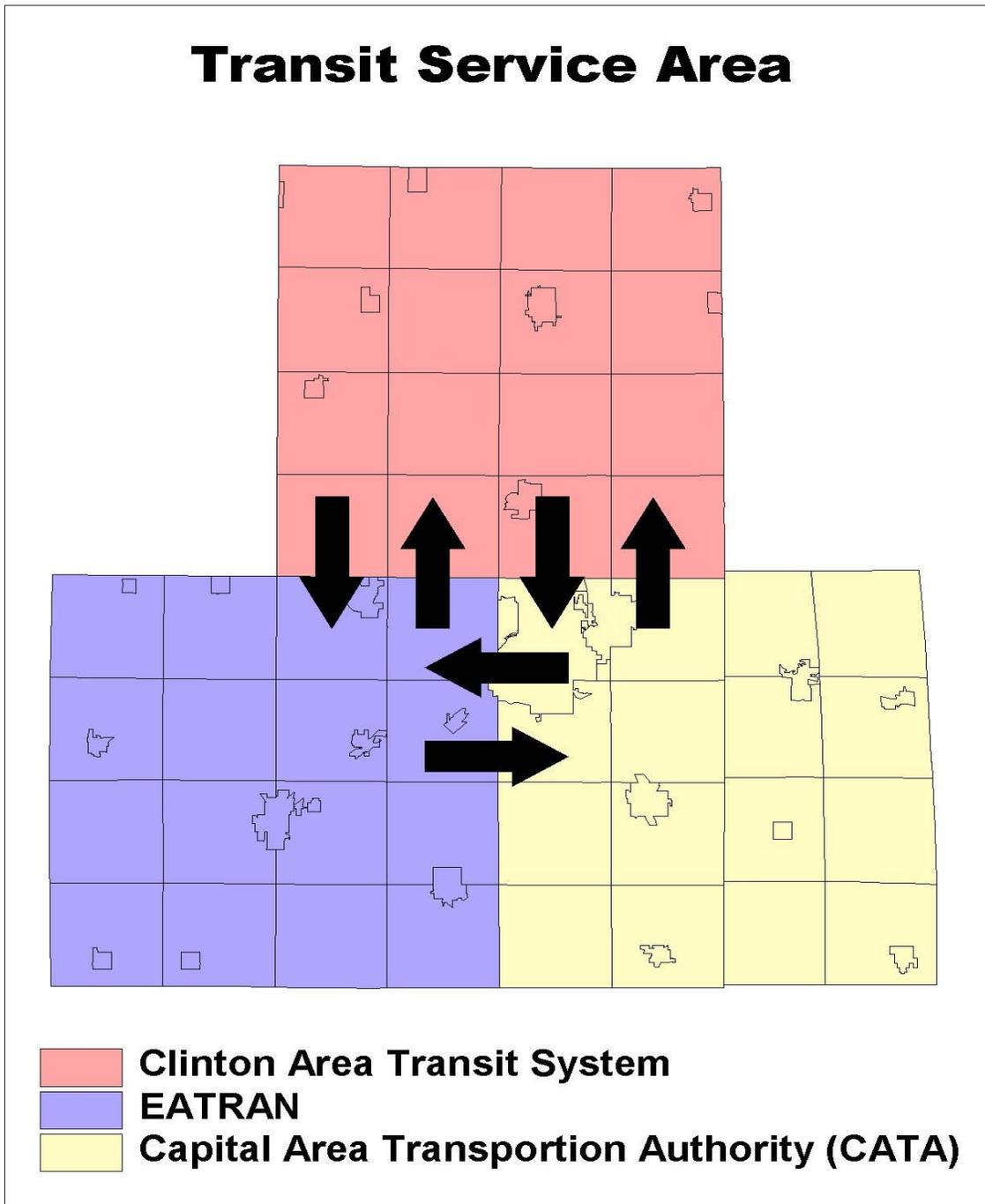
Photo 3
CATA Spec-TRAN Customer



Photo 2
Clinton Area Transit System Customer



Map 1: Tri-County Transit Coverage



2.2 Capital Area Transportation Authority (CATA)

The Capital Area Transportation Authority (CATA) is the largest transit provider within the region. It has been organized as CATA since 1972. It operates 35 fixed routes throughout much of the urbanized area. It also operates paratransit services within the urbanized area and the remaining area of Ingham County.

Photo 4: CATA Service



2.2.1 Services Offered

CATA offers a variety of services from fixed route bus service to door-to-door transportation. The 35 fixed routes have varying schedules. Nine of the fixed routes are operated on the Michigan State University campus and seven routes, which travel on and off campus. CATA Spec-Tran is an advance reservation service for persons with disabilities. CATA Spec-Tran is a curb-to-curb service. CATA Redi-Ride service operates in Mason, Williamston and Meridian Township. Redi-Rides are a curb-to-curb

service, which require an advance reservation. CATA Rural Services require a reservation 24 hour in advance. It is a curb-to-curb service for the residents of the outlying areas of Ingham County.

CATA Connector routes connect the outlying communities with the fixed route system. CATA Connectors operate service from Mason to the South Pennsylvania Meijers and from Webberville and Williamston to the Meridian Mall. The Connectors have fixed schedules, so no reservation is necessary.

CATA offers two express routes from downtown Lansing to Williamston, Webberville and Mason.

Additional CATA services include park and ride services in downtown Lansing, bike racks and lockers, senior shopping buses and CATA Rideshare matching.

2.2.2 Service Area and Hours

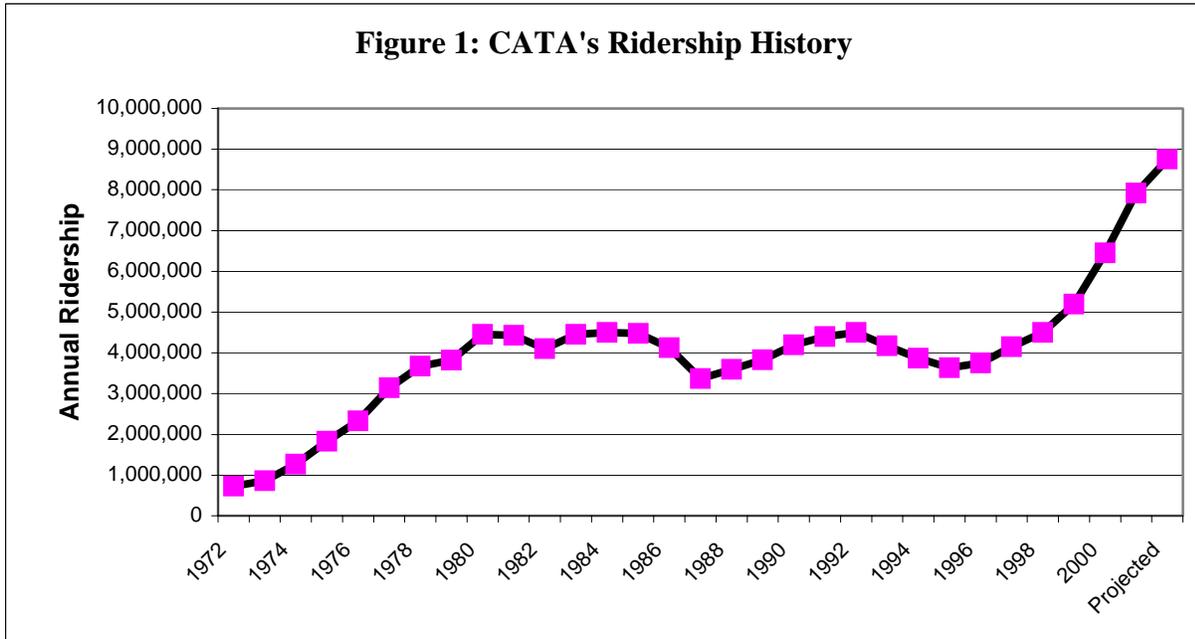
The MSU routes operate 24 hours a day during the Fall and Spring semesters. CATA's fixed routes that operate into downtown Lansing have varying schedules. The Redi-Ride operates from 8am to 5pm Monday through Saturday. CATA Rural Service is offered Monday through Friday from 7am to 6pm.

CATA Spec-Tran operates in Lansing, East Lansing, Lansing Township, Delhi, and Meridian Township. CATA Spec-Tran operates seven days a week with similar hours to the fixed route service.

2.2.3 Ridership

Since CATA took over operation of the MSU bus service in 1999 ridership has grown tremendously. CATA is projecting 8 million 750 thousand riders for 2002, which is another year of record ridership growth. Ridership has

increased a whopping 68% just since 1999. Figure 1 shows how dramatic the increase has been. That rate of an increase is almost unheard of in transit and is certainly a tremendously exciting accomplishment for CATA and for transit in the region.



Source: Capital Area Transportation Authority, 2002

2.3 Eaton County Transportation Authority (EATRAN)

EATRAN is the public transit service provider authorized for Eaton County. It has operated since 1980.

2.3.1 Services Offered

Two fixed routes are operated from Charlotte to Grand Ledge to the Lansing Mall and from Charlotte to Eaton Rapids to the Lansing Mall. These routes offer direct transfer options to the CATA fixed route service. EATRAN worked with the Eaton County Family Independence Agency (FIA) to develop a new route in June 2002 which will circulate within Delta Township to Charlotte. It is specifically designed to get people to jobs and to the many county offices like the FIA and Michigan Works! which are located in Delta Township.

EATRAN also offers demand response services throughout Eaton County.

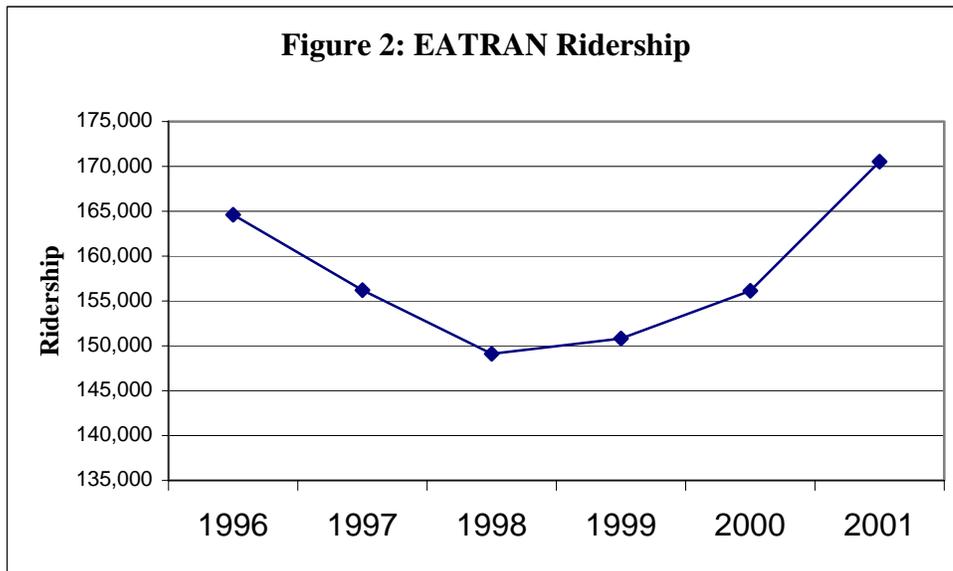
2.3.2 Service Area and Hours

EATRAN operates within Eaton County. In certain situations EATRAN crosses county boundaries to pick up and drop off passengers in Lansing. The fixed routes and demand services operate from 6am to about 6pm.

2.3.3 Ridership

Figure 2 shows how EATRAN ridership has increased steadily over the past few years. In 2001 it reached a record high of one hundred seventy thousand passengers.

**Photo 5
EATRAN Service**



Source: Michigan Department of Transportation, 2002.

2.4 Clinton Area Transit System

The Clinton Area Transit System, was reorganized in 2001, it was formerly Community Resource Volunteers (CRV). CRV had operated within Clinton County since 1984, purely as a volunteer establishment. In 2001, Clinton County agreed to accept state funding to organize a more formal operation with employees who are compensated for their time.

Photo 6
Clinton Area Transit Service Vehicle



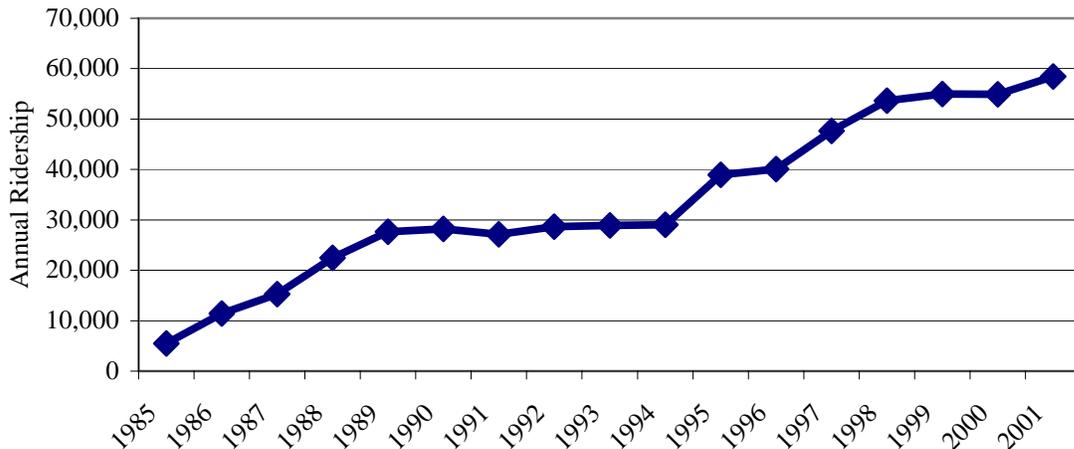
2.4.1 Services Offered, Hours

The system offers demand response service from 6am to 5:30 pm Monday through Friday. The system concentrates on transporting riders within Clinton County.

2.4.2 Ridership

Figure 3 displays how Clinton County has maintained steady ridership growth since 1985. In 2001, ridership grew to an all time high nearing 60,000 passengers.

Figure 3: Clinton County Ridership History



Source: Clinton Area Transit System, 2002.

2.5 Success Stories of Regional Coordination

In addition to rapid ridership growth for all three systems there have been efforts to bridge services over county lines. Here are some regional examples of how three of the region’s suburban areas have added services to some traditionally underserved areas.

2.5.1 Dewitt

A Dewitt demand response service was instituted in 1998 and operated by CATA. The route generated healthy ridership increases but was discontinued in 2001 due to the lack of local funding support. Figure 4 shows how the ridership steadily grew.

2.5.2 Delta

In Delta Township, CATA and EATRAN have partnered to operate service in some of the areas of township with shopping and office destinations. EATRAN operates a Flex Route during the day and CATA takes over at night with demand response service. This

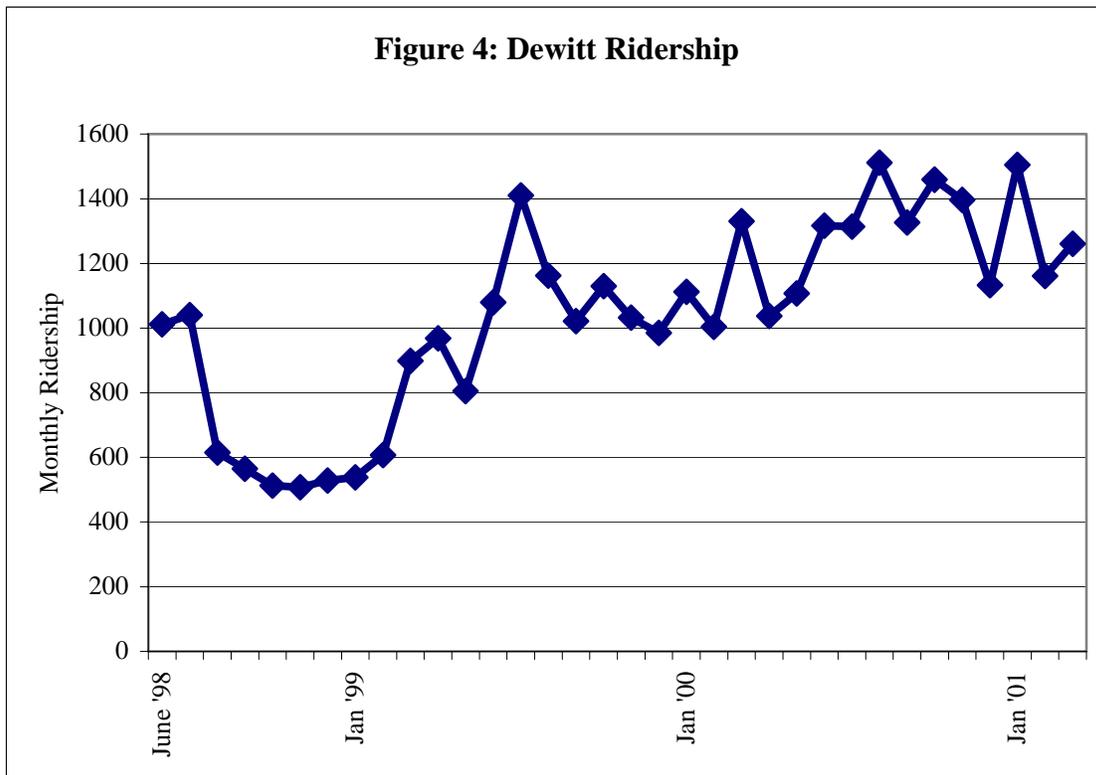
combination has also enjoyed healthy ridership increases as Figure 5 shows.

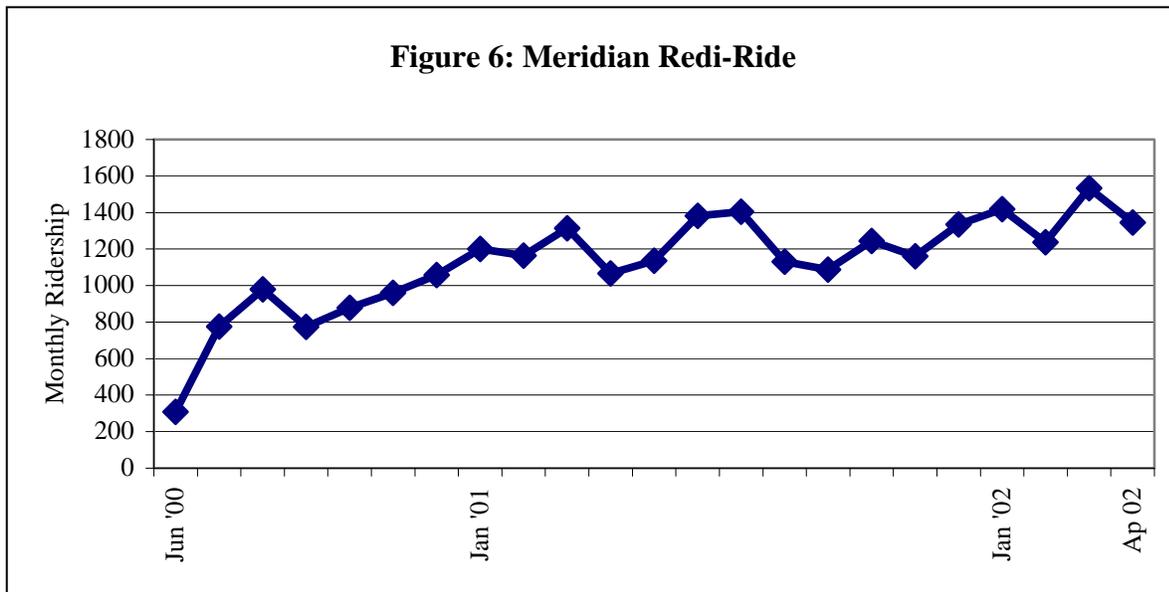
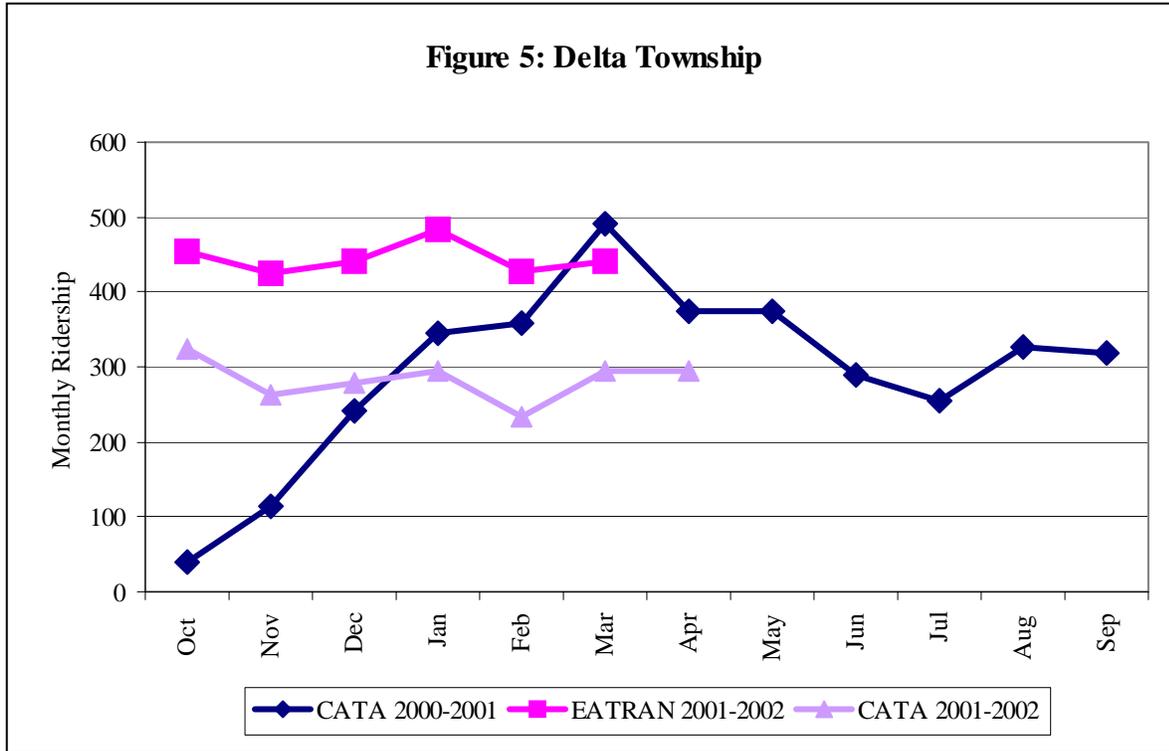
2.5.3 Meridian

Meridian Township held a millage vote in 1999 to support more transit service for their township. The Meridian Redi-Ride was created because of that effort. This is a demand response service dedicated to the township. This service has grown steadily to about 1,500 passengers per month, as seen in Figure 6, similar to the level of the Dewitt service.



Partners in Transportation Solutions





Source for Figures 4, 5 and 6: CATA, 2002

2.6 Challenges for Cross-County Riders

With these efforts there are still challenges to overcome for transit riders who want to cross over county boundaries. Some of the challenges include separate fare systems, lack

of convenient transfer points and different service hours. For riders that need to cross between systems, there is no free transfer, two fares would be required for each direction. A round trip journey from the Delta Township Wal-Mart to downtown Lansing would be \$4 per day for a standard adult fare.

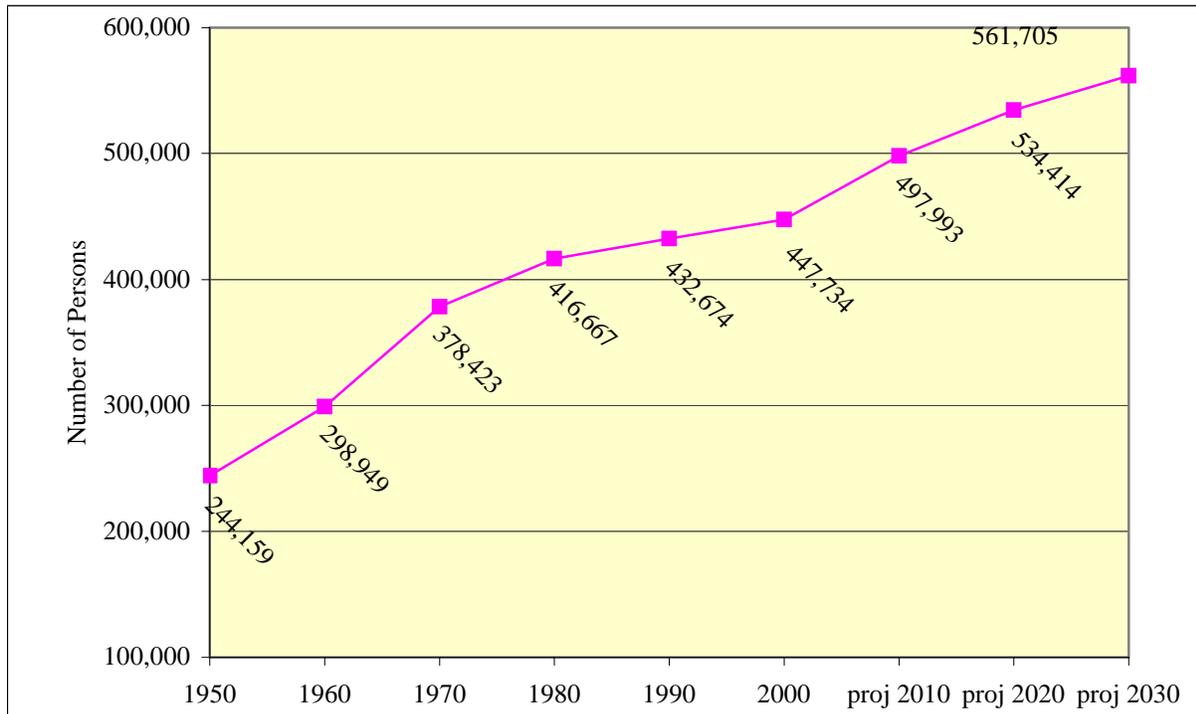
3.0 REGIONAL TRENDS

3.1 Regional Population

The regional population of the Tri-County area is projected to grow fairly substantially through the next thirty years. The forecasted population increases are related to the employment

increases forecasted for the area. The projected regional population is shown in Figure 7.

Figure 7
Regional Population: Clinton, Eaton and Ingham Counties



Source: Tri-County Regional Planning Commission

Following are the population increases projected for each county

- Region population in 2000: 448,000, projected to have a 30% increase by 2035.
- Eaton County projected to increase 44% (+43,171) by 2035.
- Clinton County projected to increase 52% (+32,442) by 2035.
- Ingham County projected to increase 20% (+55,842) by 2035
- Ingham County's share of the population has decreased over the past fifty years, from 70% of the population

in 1950 to 62% of the population in 2000. This decrease in the Ingham County population for 2000 reflects the decreases in the cities of Lansing (6%) and East Lansing (8%) since 1990.

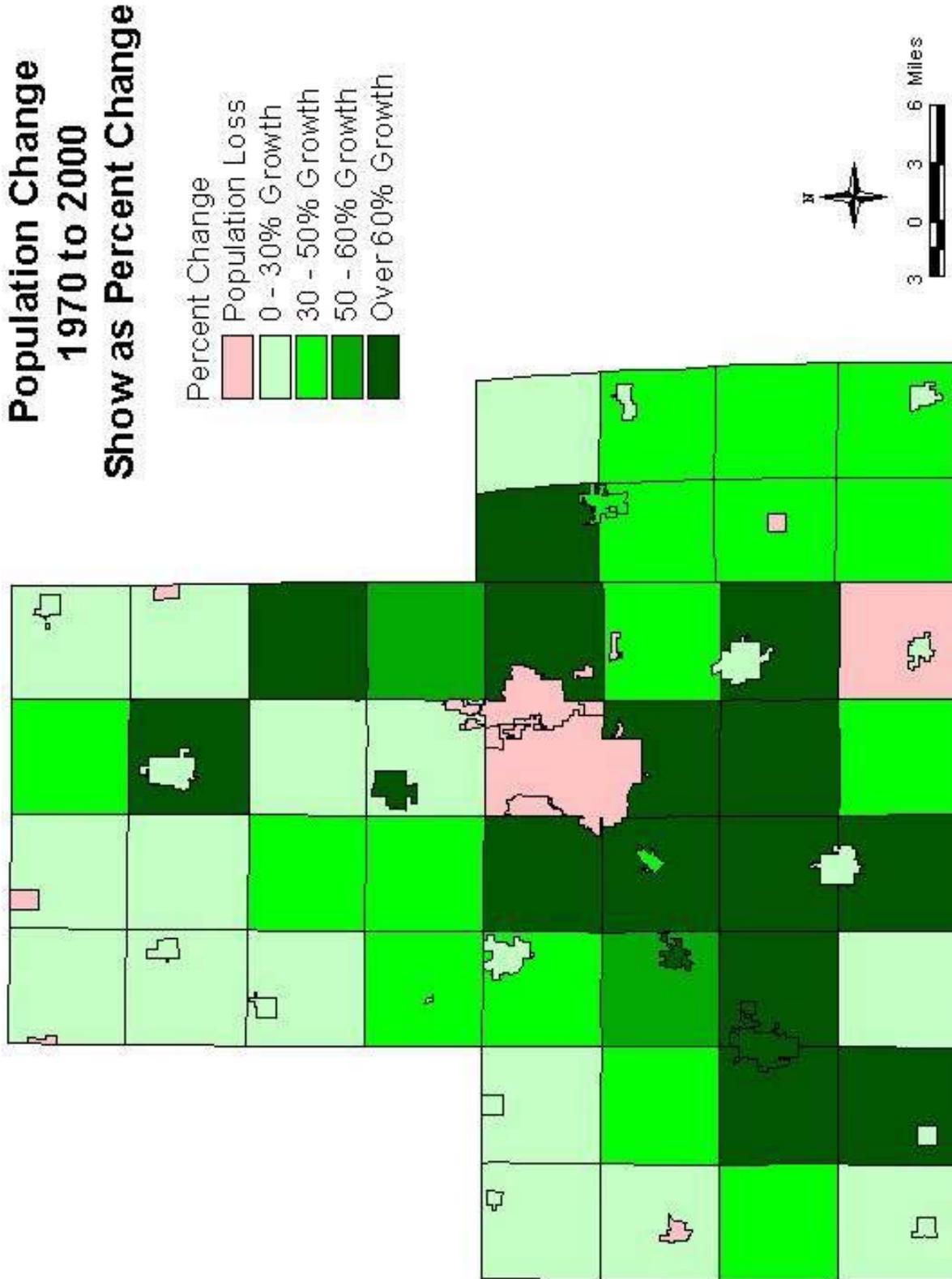
3.2 Population Change

Map 2 shows population percent change by jurisdiction. Seven townships within Eaton County show a growth rate higher than 60% from 1970 to 2000, Hamlin Twp., Eaton Rapids Twp., Walton Twp., Windsor Twp., Carmel Twp., Eaton Twp. and Delta Twp. The cities of Charlotte and Potterville also recorded growth rates over 60% in this period. Ingham County had five fast growing townships. Aurelius Twp., Ingham Twp., Vevay Twp., Delhi Twp., Williamston Twp., and Meridian Twp. had population growth above 60% from 1970 to 2000. Within Clinton County, Bingham Twp., Victor Twp. and the city of Dewitt had growth rates over 60% during this period.

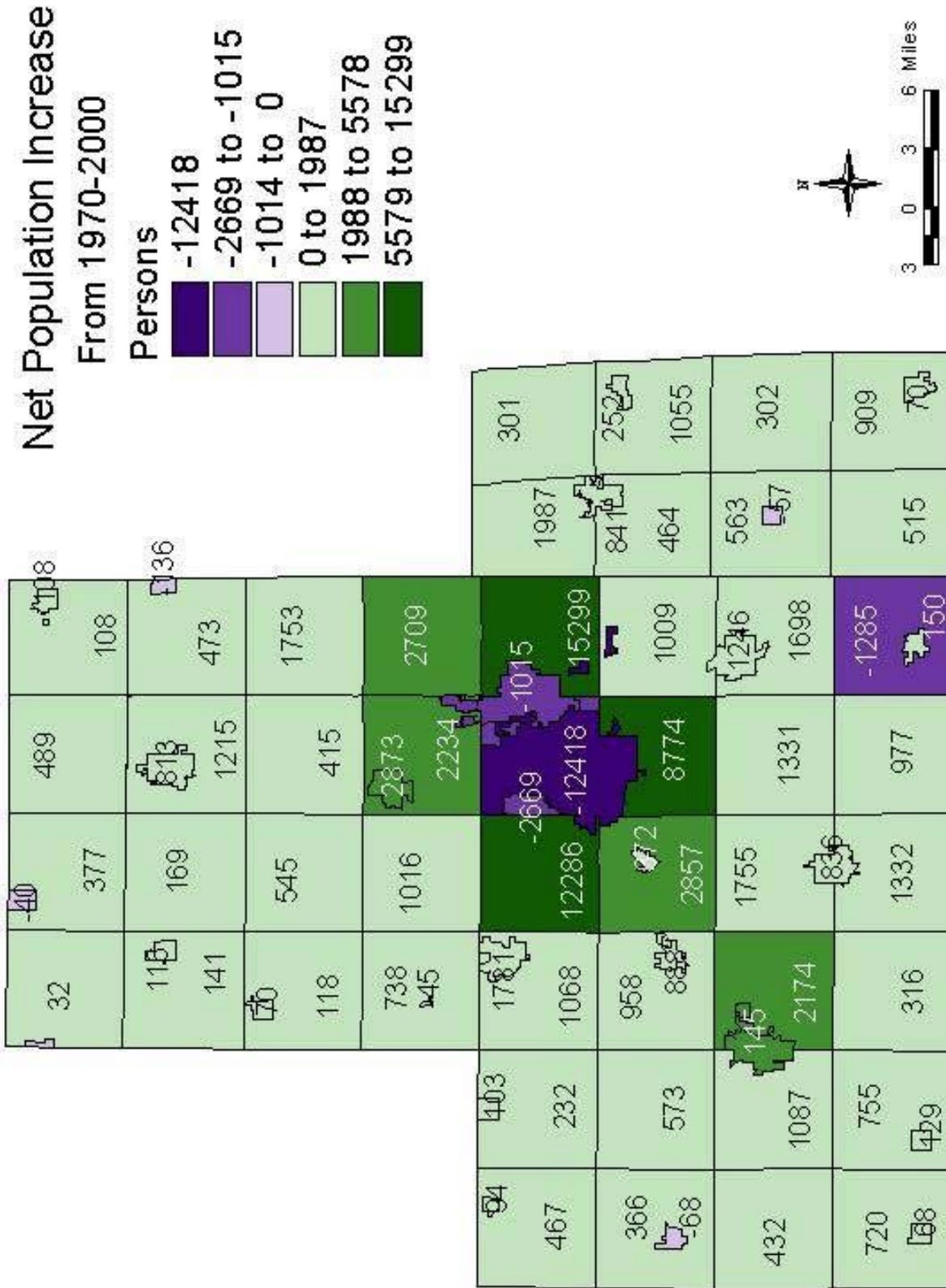
Map 3 shows the net increase in population by jurisdiction for the same period. The dark green reflects the communities that gained the highest number of residents over the past thirty years. Meridian Twp. gained the most, adding 15,299. Delta Twp. gained 12,286 followed by Delhi Twp. with 8,774.

From Map 2 and 3 the circular pattern of growth around the central cities of Lansing and East Lansing is clear. This 1st tier of growing suburban areas is what is referred to in this report as the area that is “underserved” by transit. There are only limited fixed route and demand response offered in these growing areas. Some of the major areas of new employment including the Jackson National Life headquarters, the new Delta Twp. GM plant, the Blue Cross/Blue Shield offices on Creyts Road, and other retail expansions on Saginaw Road either have very limited transit service or no fixed route transit service at all. Residential areas are also expanding in these “underserved” areas, which in many cases includes more modest income apartments or condominium developments.

Map 2: Population Change by Jurisdiction



Map 3: Net Population Change



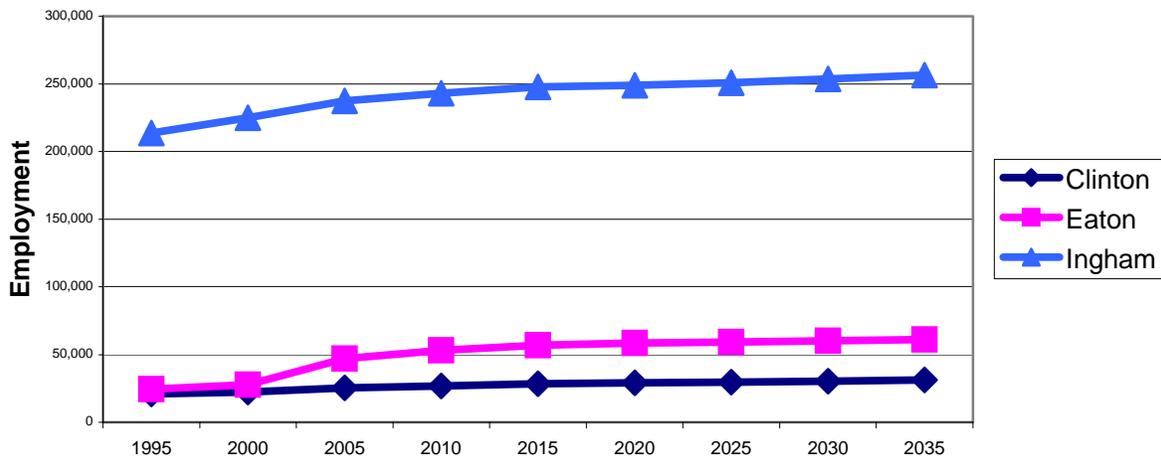
3.3 Employment

Figure 8 shows the steady growth in regional employment, which is projected to increase by 22% by 2035. These jobs are projected to grow in Eaton County the most, lead by the new GM plant. Eaton County employment is projected to increase by 62%. Ingham County employment is projected to increase by 14% and Clinton County employment is projected to increase by 39%. Altogether this represents 79,000 new employees in the region by 2035.

of the pyramid, and the children decreasing as a percent of the total.

With the projected increases, concern is growing maintaining mobility for elderly citizens. In a regional survey conducted by EPIC MRA in May 2001, 86% of the general population consider maintaining mobility for low income groups and the elderly a priority, over that of building new roads or widening existing roads. The survey had an error rate of 6.2%. (Epic MRA, February 2002) Tri-County Survey on

Figure 8: Projected Employment Increase In the Tri-County Region, 1995-2035



Source: Tri-County Regional Planning Commission

3.4 Aging Population

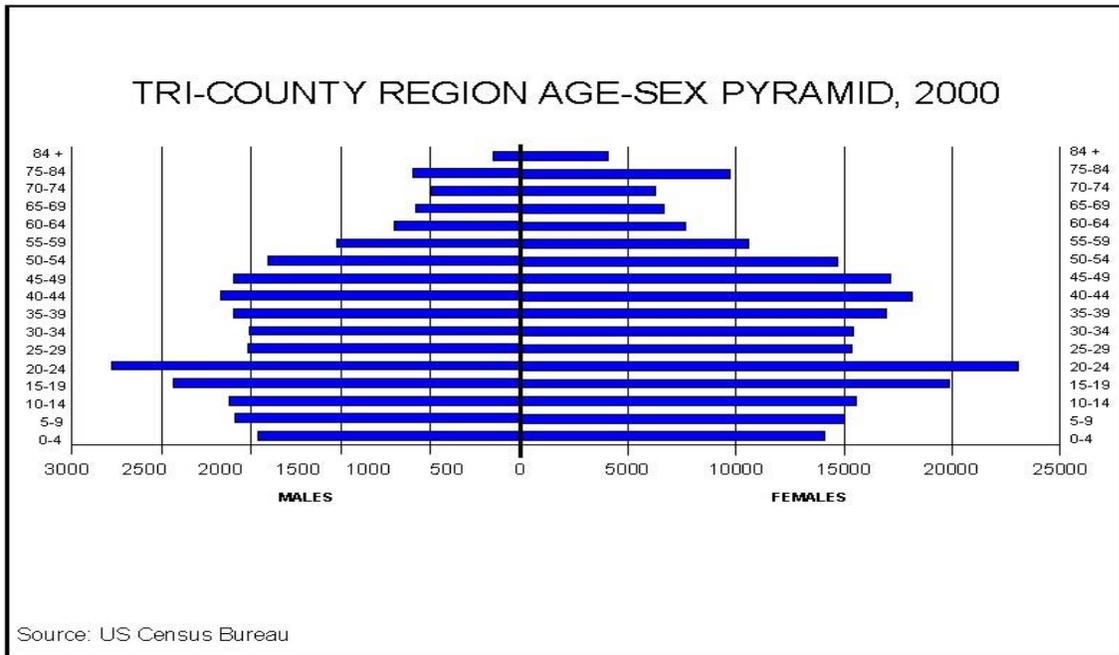
One of the most important trends that demographic studies have predicted is the increase in elderly populations within the next 25 years. Baby boomers will soon be eligible for retirement. That fact and the fact that people are living longer are suspected to increase the number of elderly citizens in the state over 50% by the year 2025.

Figure 9 shows the population pyramid for this region for 2000. In the next 25 years that pyramid is projected to turn into more of a box, with the elderly populations increasing at the top

Growth Issues.

Currently there are no projections for the region which link income and the aging population. However, national studies that suggested that elderly populations would be wealthier than any previous generation may need to be reevaluated after some of the stock market downturns of the past few years. Further, those that remain in the Lansing metro area may be the lower income seniors compared with those who can afford to relocate to retirement communities. However, regardless of level of wealth, elderly who are not physically able to drive will still have transportation needs that will need to be met.

Figure 9



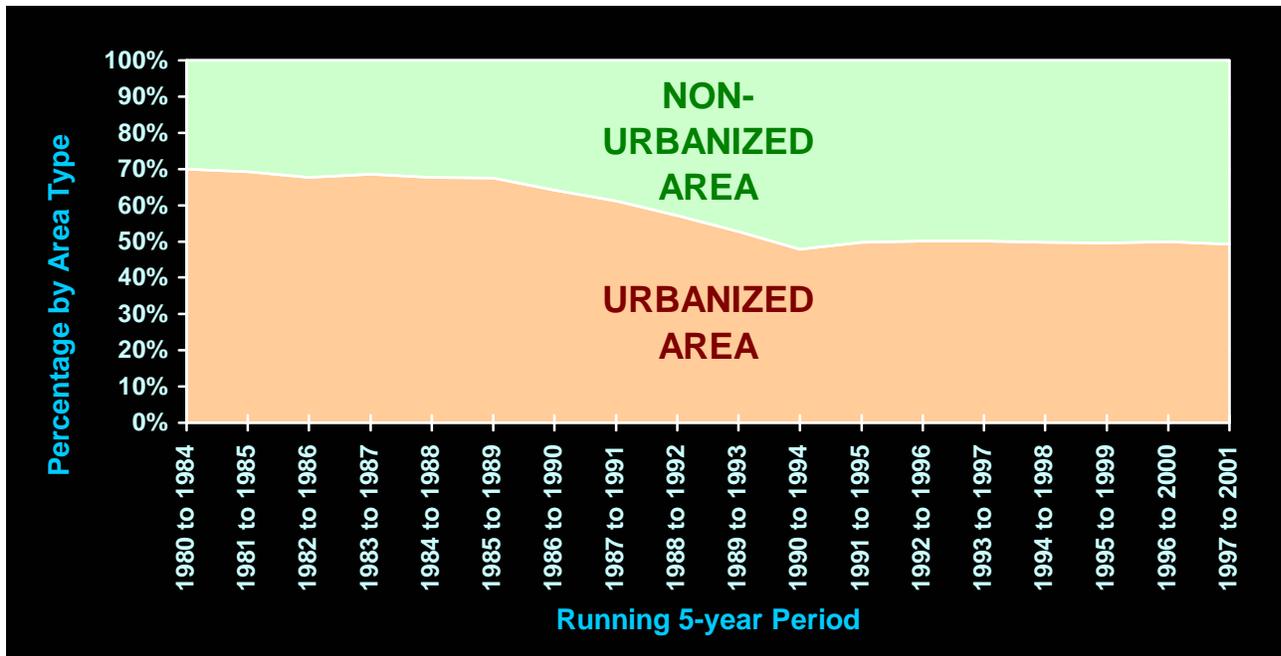
3.5 Housing Units

Figure 10 represents the urbanized area housing units issued versus the non-urbanized area. The data is presented in increments to avoid the spiking that typically will occur in the building season. As the figure shows, urbanized residential building is becoming less of the overall building in the region than was the case in 1980. In 1980 the urbanized area accounted for 70% of the residential building permits. In 2001, the urbanized area accounted for less than half of the residential permits issued in the region.

The “Urbanized” area represents the cities of Lansing, East Lansing, Dewitt, St. Johns, Charlotte, Eaton Rapids, Grand Ledge, Mason and Williamston. It also includes the townships of Meridian, Delta, Delhi, Dewitt, and Lansing. The “Non-urbanized” area represents the remaining jurisdictions.

The “non-urbanized” area accounting for a higher percentage of the residential building permits is particularly striking, because many of the jurisdictions within the “urbanized” area have considerable buildable land still available which could be utilized for development.

**Figure 10
Residential Building Permit Trends**



Source: US Bureau of Census, Construction Statistics Division, 2002

3.6 Urban Areas

Map 4 shows the urbanized area has increase size from 102.9 square miles in 1978 to 202.8 square miles in 1999. This increase of roughly 100 square miles includes residential, office and commercial development. Map 4 shows the large increase in urbanized area in Delta Township and many other suburban areas, such as Meridian Township and Dewitt. Photo 1 shows a typical suburban development scene from Saginaw and Creyts Roads in Delta Township where there residential, office, commercial and institutional development.

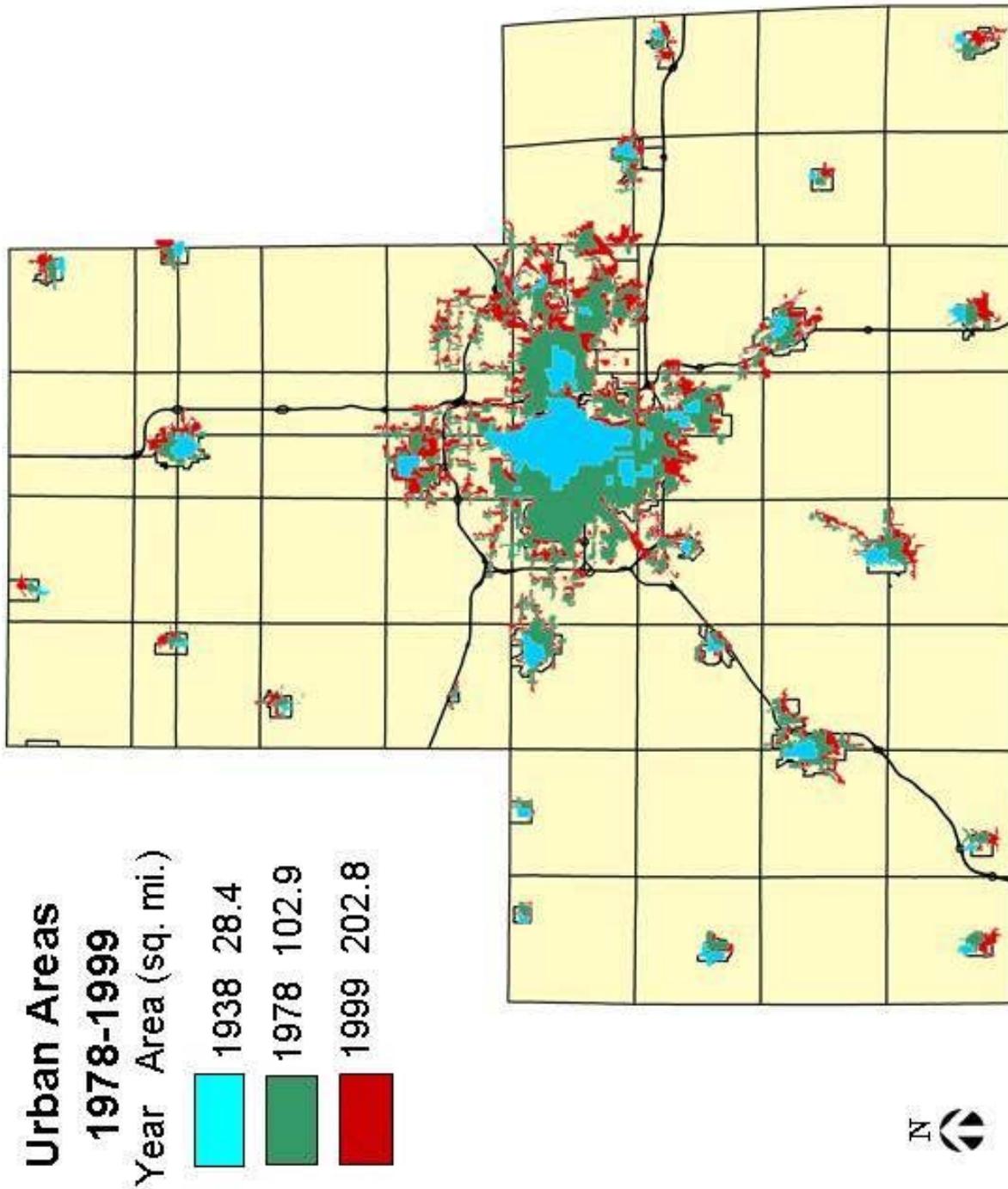
As the urban area increases in size, the travel distances increase. Vehicle miles traveled also increases as the number of destinations in the suburban areas increase and get more dispersed from the central city area. For transit, the spread of the urbanized area also increases the miles traveled because routes tend to be expanded to try to cover these new suburban destinations. In most cases, costs rise for the transit provider, or they are forced to cut services elsewhere.

In the case of Delta Township, the urbanized area extends across county and transit boundaries. This creates problems of coordination between transit providers. EATRAN, the service provider for Delta Township currently offers some service for the township's urbanized areas, but EATRAN's funding levels does not allow it to offer the level of service that CATA offers further down the same corridor.

Photo 7
Delta Township



Map 4: Urbanized Area

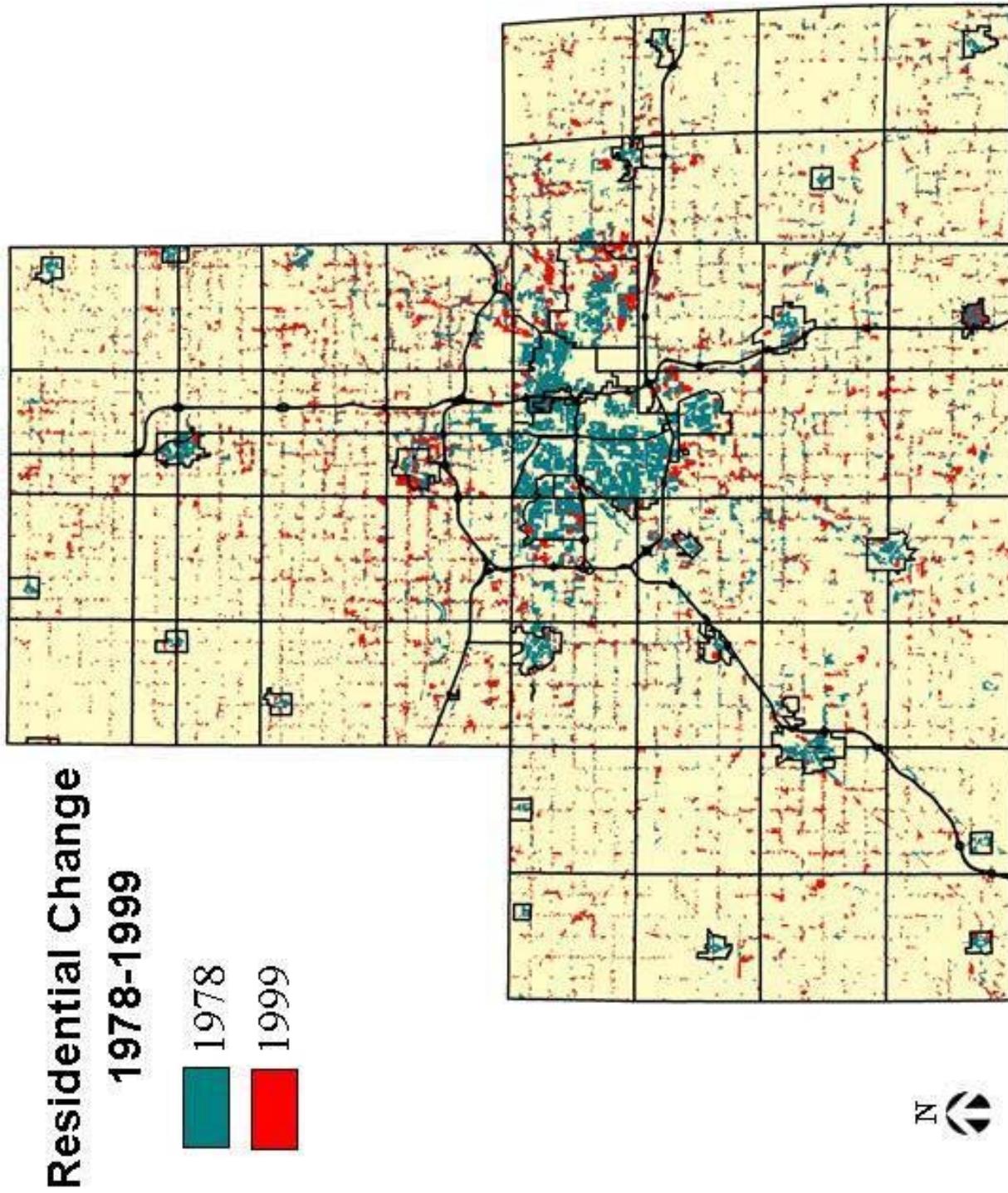


3.7 Residential Change

Map 5 displays residential change in the Tri-County region from 1978 to 1999. All of the red dots indicate new residential development in that twenty-year time frame. Looking at the map, the trend of single family home development along county roads is prevalent.

Overall, developed residential land increased in the Tri-County area by 104 square miles. Forty square miles were within Clinton, twenty-eight square miles were in Eaton and thirty-six were in Ingham. One township generally measures thirty-six square miles, so totaled together, the Tri-County region completely urbanized the equivalent of three townships in 21 years, however the population grew by only about 30,000. This is an average of 288 persons per mile or 0.45 persons per acre.

Map 5: Residential Change



4.0 REGIONAL TRENDS AFFECT ON TRANSIT OPERATIONS AND FUTURE TRANSIT DEMAND

4.1 Areas with Increasing Population Also “Underserved” with Transit

Section 3.0 provided an overview of some of the land use and demographic changes within the Tri-County region. The population shifts into the suburban locations have created a challenge for the local transit agencies to service the population, and have created a challenge to transit riders that need to access these locations for workplace, medical, shopping and other trips. These suburban areas are typically more difficult for transit providers to service because the population and destinations are more dispersed.

Section 2.0 overviewed the current transit services within the Tri-County region. For the traditionally “underserved” areas, which were defined in section 3.2 as the 1st tier of suburbs, surrounding the urban area, the services currently offered:

- Have limited transit hours in the evening and weekends.
- Limited routes
- Comparatively fewer riders on those suburban routes because population is more dispersed. The lower number of passengers per mile makes transit service in these areas appear ineffective. Common concerns from suburban taxpayers are also often expressed, “There is no one on those buses.”
- Longer trips for riders. This is a disincentive to ride transit. More transfers may be needed because downtown-oriented transit has a more difficult time servicing suburban areas.

All four points above make transit a less convenient option. Particularly when compared to an automobile trip. For example, a trip from Holt to Okemos in a car would take approximately 10 to 15 minutes (depending on the time of day, traffic levels, day of the week, etc.) A trip on the region’s transit from Holt to Okemos would take over an hour and a half. Time convenience is one of the primary decision

making factors when they decide which mode to choose. If they do not have a choice, as many transit riders do not have an access to an automobile, they may find themselves commuting for a significant portion of their day.

If residential and business development continues to move into suburban areas, the dispersed populations and employment centers will be more and more difficult to service with fixed route transit.

4.2 Employment Connection

As jobs grow in outlying parts of the urban area, such as western Delta Township in Eaton County, it is difficult to get people to switch between transit providers. For those who must ride transit, it is also comparatively expensive to the rider to switch between systems.

The employment connection is addressed in more depth in the technical memorandum for Task II-8.2.

4.3 Rural Development Difficult to Service with Conventional Fixed Route Buses

As Map 5 and Figure 10 shows, rural development has occurred along county roads throughout the Tri-County region. The growing rural development is difficult to address from the transit standpoint because there is no cost effective way to service it. Fixed route buses would be far too inefficient and demand response service is viewed as too inconvenient by many within the population to be a reasonable choice because an advance reservation is needed. Demand response service can also be costly to transit providers because of the administrative costs for call takers and a relatively low efficiency passenger per mile.

One solution to preventing the problem from getting worse is to hold down the demand response costs in rural areas by limiting development of low cost housing, like mobile home parks, and providing more affordable

housing options along existing bus routes in the urbanized area through the use of coordinated land use planning and zoning.

4.4 The Increasing Geographic Urbanized Area and Costs

Local property tax millages, state funds and some federal funding currently support CATA and EATRAN. The Clinton Area Transit System accepts state funding, and some funding through the county, but currently does not have a local tax to support the system.

The more urbanized area there is to serve; generally there are more costs for the transit providers because the increased area needs to be covered, in some form, if the transit provider is to receive property taxes for the services.

Increased size of the urbanized area means that more routes may be needed to cover more area. The regional totals presented in Section 2.0 point out just how much more service is offered within Ingham County versus Clinton and Eaton. Part of the reason is because fixed route transit services can operate much more efficiently relative to demand response service. This is most evident when comparing passengers carried per mile. This point is fairly well documented within the transit industry as commonplace in nearly every community. However, fixed route services become less efficient as the density levels decrease. It is difficult to convince people that they need more services when the buses running are perceived to be empty. As sprawl continues, transit service providers had to offer more demand response services to meet needs in growing outlying areas.

As awareness of the suspected connection between increased costs for transit agencies and sprawl has grown, national researchers looking for more efficient transit operations, such as the Transit Cooperative Research Program (TCRP), have funded studies such as “The Cost of Sprawl”, “The Role of Transit in Creating Livable Metropolitan Communities” and other publications. These publications link the efficiency and effectiveness of public transportation to constraining sprawl.

“Providing a variety of transportation choices and creating walkable neighborhoods” are some of the primary policies cited to creating “livable communities”(Smart Growth Network, 2002) Getting to Smart Growth—100 Policies to Implementation. When sprawl in uncontrolled, there is “almost total reliance on private automobile transportation...low-income residents who cannot afford to own a car or truck cannot easily commute to most areas where new jobs are being created.” (TCRP, 2002) Costs of Sprawl—2000: TCRP Report 74

The report also indicates that public transit is “inefficiently used” because of the low-density development patterns. It goes on to note that these negative transportation effects of sprawl are regional issues. “Most of the negative impacts of sprawl cannot be remedied by individual localities adopting policies without any explicit means of coordinating those policies.” (TCRP, 2002) The same can be applied to transit properties struggling to meet the needs of an expanding geographic urbanized area.

5.0 “POTENTIAL ROUTES” AND TRANSIT DEMAND

5.1 Regional Growth “Choices for Our Future” Preferred Land Use Alternative

As a part of the Regional Growth “Choices for Our Future” a preferred land use alternative was chosen and adopted for the region. The preferred alternative reflects a “Wise Growth” pattern of development. The “Wise Growth” Scenario represents a focus on encouraging more development in the urbanized area and less in rural outlying areas. Compact development and environmental preservation ideals are focused on in this scenario, which encourages urban redevelopment, new development where there is existing infrastructure, and adjacent to existing development. Figure 11 depicts examples of some of the principles incorporated into the Wise Growth scenario. Map 6 shows a visual of these principles, concentrating growth in the urban area and encouraging new development as infill or in areas adjacent to the urban area.

The “Existing Zoning” scenario projects 2025 population and employment for the region by TAZ, but it is done so at maximum allowable densities for the current zoned municipalities.

Two alternative scenarios were also analyzed. The “Business as Usual” scenario is based on extrapolation of existing development and urbanization trends. The scenario was evaluated at the Traffic Analysis Zone (TAZ) level and is projected for the year 2025.

Figure 11: Wise Growth Principles

- Residential development would be located near existing communities to allow for the sharing of services
- Commercial and retail services would be located within a short distance to residential areas providing walking and biking opportunities
- Less open space and agricultural land would be developed in this scenario
- Would require adoption of new regulations for planned unit development (PUD), cluster development, and open space in communities
- Non-motorized transportation linkages such as trails, pathways, and open space corridors, would necessitate increased investment
- Average lot sizes would be smaller, with an increased diversity of housing types and prices to meet the needs of all elements of the Tri-County population.
- Smaller lot sizes would consume less land overtime, resulting in lower infrastructure costs than the current trend
- More concentrated development patterns would encourage more use of transit and less need for more roads.

Map 6: Preferred Land Use Alternative

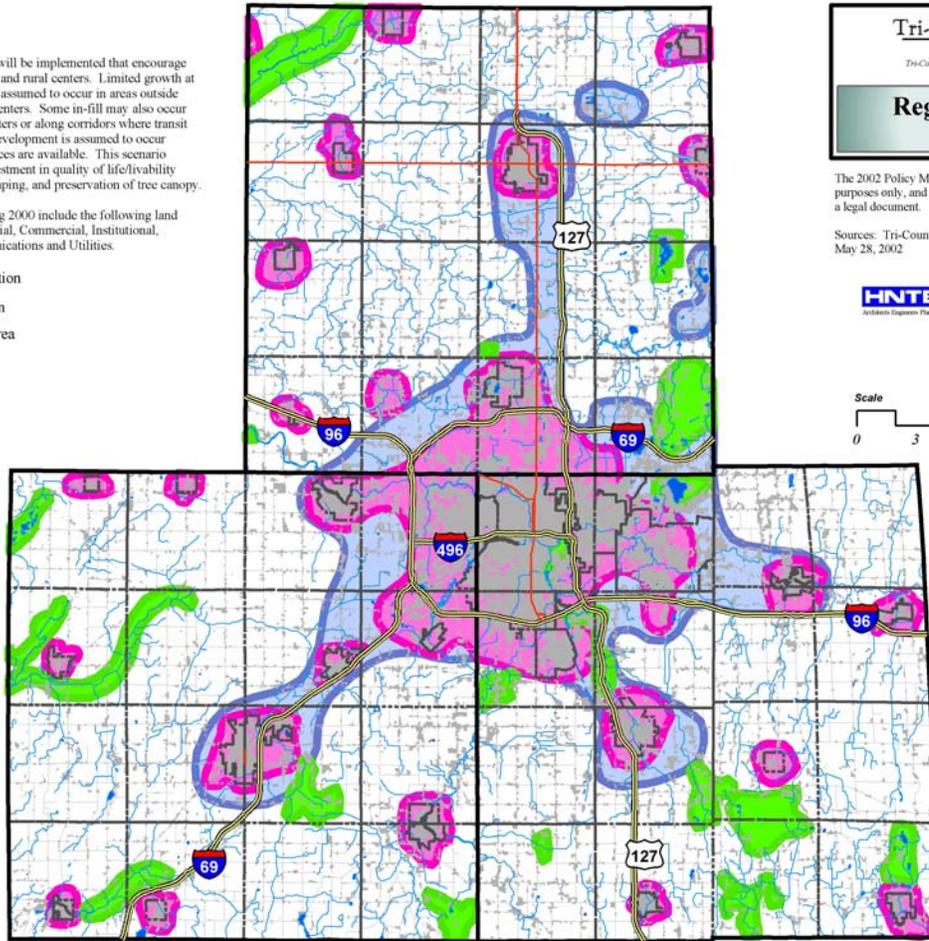
Legend

Preferred Alternative

This scenario assumes that policies will be implemented that encourage in-fill in developed urban, suburban and rural centers. Limited growth at low densities in clustered settings is assumed to occur in areas outside existing urban, suburban and rural centers. Some in-fill may also occur in mature corridors that connect centers or along corridors where transit ridership is high. The majority of development is assumed to occur where public water and sewer services are available. This scenario assumes that there will be more investment in quality of life/livability factors including sidewalks, landscaping, and preservation of tree canopy.

*Note: Developed Land as of Spring 2000 include the following land classifications: Industrial, Residential, Commercial, Institutional, Extractive, Transportation, Communications and Utilities.

-  Environmental Preservation
-  Agricultural Preservation
-  Cluster Development Area
-  Focused Growth Area
-  Built Out Lands*
-  County Boundary
-  Township Boundary
-  City-Town Jurisdiction
-  Freeway
-  Arterial
-  County Road

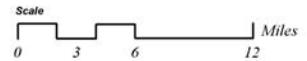


Tri-County Region
Regional Growth: Choices for our Future
 Tri-County Regional Planning Commission

**Regional Vision
 2025**

The 2002 Policy Map is intended for general informational purposes only, and is subject to change. This map is not a legal document.

Sources: Tri-County Regional Planning Commission, HNTB
 May 28, 2002



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5.2 Transit Service and the Preferred Land use Alternative

5.2.1 Current Routes

As Section 4.0 and Figure 11 have indicated, the current transit system would function more efficiently under a “Wise Growth” scenario because the development would be concentrated into already urbanized areas and areas that are adjacent to urbanized areas. This geographic containment of the future population is potentially positive for transit because efficient transit service can be delivered with higher population densities and a concentrated service area.

5.2.2 “Potential” Routes

The members of the Transit Task Force developed potential routes that would extend into the “underserved” areas of the region over several meetings. They were developed as a guide for the future fixed route services within the region. These routes are intended to be “rough” in the sense that they could be altered at a later date. These “potential” routes were intended to serve as a basis for modeling ridership numbers. The modeling utilizes population, employment and the number of autos available to generate ridership estimates for the new routes. Map 7 shows the “potential” routes, along with the current routes, overlaid with the “wise growth” scenario, the preferred land use alternative.

The Parsons Transportation Group (PTG), under a separate project, is working with the Tri-County Regional Planning Commission to analyze these routes and potential transit demand for these routes if instituted in the future. Table 1 and 2 represent an analysis conducted by the Tri-County Regional Planning Commission utilizing preliminary PTG data. Table 1 shows under the “Business as Usual” scenario, that only 42% of households within the region are within a ¼ of a mile of a transit route. Under the “Existing Zoning” scenario the sprawl situation is more severe, and therefore the percent within walking distance is only 23%. Under the “Wise Growth” scenario the households within walking distance of a route

goes up to 65%. With the new “potential” routes that number goes up to 71% of households.

Table 2 shows that under the “Business as Usual” scenario, that only 61% of the jobs within the region are within walking distance of transit. Under the “Existing Zoning” scenario, that only 48% are within walking distance of existing fixed route transit. However, under “Wise Growth” the number of jobs within walking distance of transit increases to 80%, because the scenario encourages the development of jobs within the existing urbanized area. Adding “potential” routes under the “Wise Growth” scenario (which would add fixed route service to places such as Dewitt and St. Johns) the percentage increases to 86%.

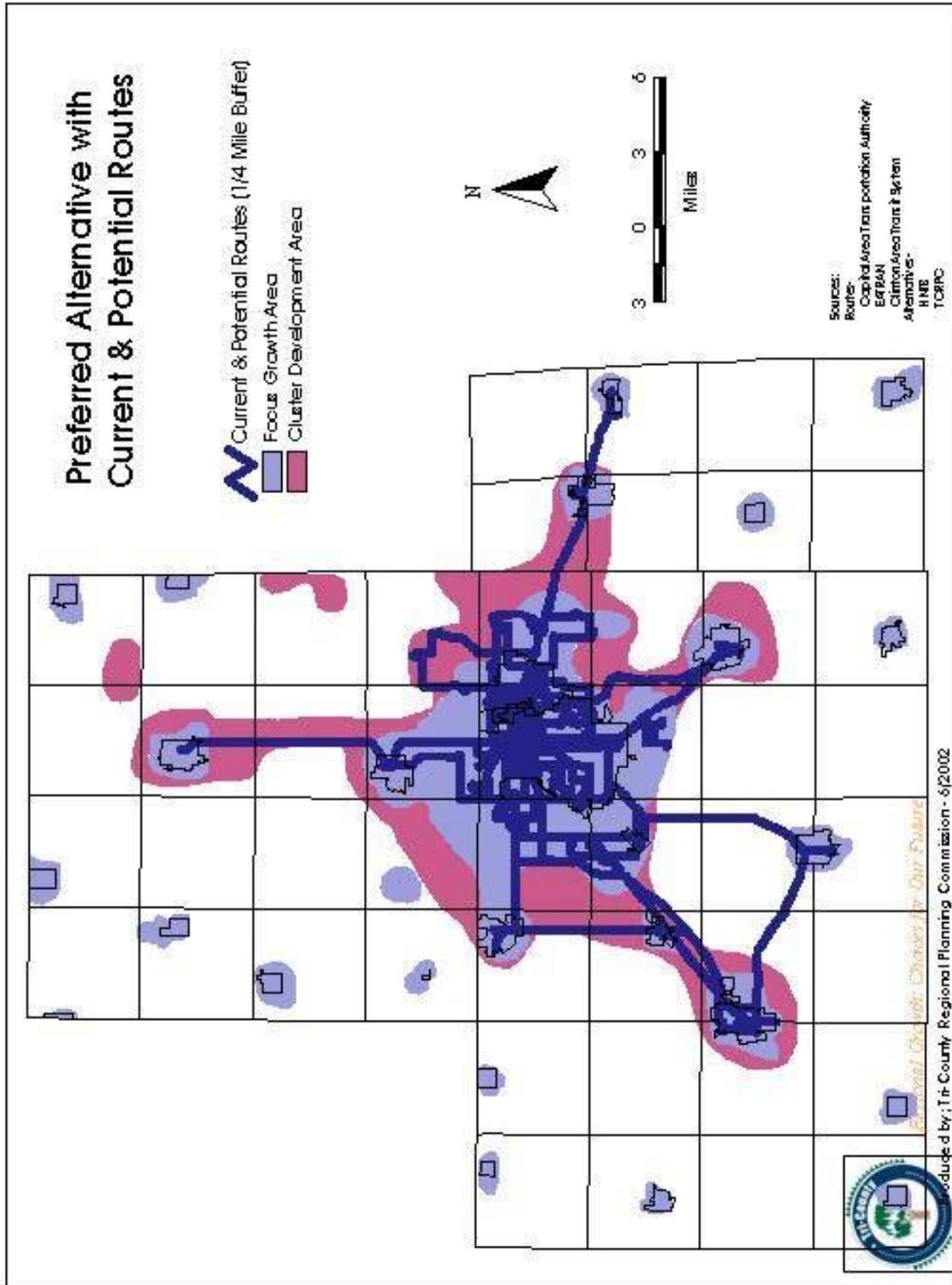
**Table 1
PROJECTED HOUSEHOLDS WITHIN WALKING DISTANCE OF TRANSIT (1/4 MILE) 2025**

Business as Usual	Existing Zoning	Wise Growth-Current Routes	Wise Growth-Current and Potential Routes
42%	23%	65%	71%

**Table 2
PROJECTED JOBS WITHIN WALKING DISTANCE OF TRANSIT (1/4 MILE) 2025**

Business as Usual	Existing Zoning	Wise Growth-Current Routes	Wise Growth-Current and Potential Routes
61%	48%	80%	86%

Map 7: Routes with Preferred Land Use Alternative



6.0 SUMMARY

6.1 Regional Trends

This task was created to analyze the perceived problem of a population shift from the central cities to the region's suburban and rural areas and the associated affects for transit demand and operations.

Many of the trends that were presented within Sections 2, 3 and 4 involved regional population growing and shifting to suburban regional townships like Delta, Dewitt, Delhi and Meridian Townships and more rural townships throughout the region. The land use trends show these suburbs and more rural development continuing to grow. These areas traditionally have been "underserved" by transit, which means, other than demand response services, there is little transit service offered. In suburban areas, there may be fixed routes but long routes and the number of transfers may decrease their attractiveness to citizens that have a choice. For those who are transit dependant, employment locations in suburban areas can be difficult to access because of the long headways, limited routes, etc. The projections also show employment moving to the outlying areas.

Section 4 highlighted what these regional land use and population trends will mean for transit. In short, a decrease in convenience: longer transit trips, more transfers, and increased costs for more services. There is no easy answer for rural areas, where populations are so dispersed, fixed route transit is ineffective, but the population and need for transit is growing.

Section 5 introduces the "Wise Growth" scenario, which was developed as a part of the larger "Choices for Our Future" project as an attempt to coordinate growth by focusing it into the already urbanized area and the area adjacent to the urban area. This "Wise Growth" pattern would be advantageous for transit for many reasons. First, it will allow the transit agencies to plan for growth along their current routes, instead of attempting to "chase" the growth with longer and longer routes. More growth along

the current routes would likely increase the productivity of the route and perhaps allow for decreased headways, which would make the existing routes more convenient. Second, the "Wise Growth" alternative would limit the amount of rural scattered development. Limiting this type of development would be advantageous for transit service because the demand response service to these areas is costly, so it is best if the customer base does not increase. But the basic demand response service for these existing populations is a necessity, particularly for access to medical locations.

6.2 Regional Coordination

Even with a "Wise Growth" scenario, regional coordination is still an issue because of the three separate transit providers. An issue raised throughout the Transit Coordination Study is the need for the three transit providers to coordinate services, time schedules, etc. for better services between county boundaries. Certainly, better coordination across the county boundaries would assist those seeking work in entry-level job areas such as Saginaw Road, west of the Lansing Mall. The growth in ridership of the Dewitt, Delta and Meridian demand response services indicates that there is a certain level of demand for more specialized services in these areas. Task II-8.4 will address these issues in more depth.

6.3 Transit Forum

The information presented in this technical memorandum was presented to the public on June 12, 2002 at the Sheridan Lansing. The results of the forum will be presented in the final report for the "Regional Transit Coordination Study," Task II-8.4.

7.0 LIST OF REFERENCES

- Epic MRA, February 2002
Tri-County Survey on Growth Issues.
- Smart Growth Network, 2002
Getting to Smart Growth—100 Policies to Implementation, Smart Growth Network and International City/County Management Association, Washington DC.
- Transit Cooperative Research Program (TCRP), 2002
Costs of Sprawl—2000: TCRP Report 74, Transportation Research Board, Washington DC.

8.0 LIST OF PERSONS AND AGENCIES CONSULTED

Transit Task Force

- Constance Benca, Michigan Department of Transportation (UPTRAN)
- Brad Funkhouser, Capital Area Transportation Authority (CATA)
- Paul Hamilton, Tri-County Regional Planning Commission
- Raymond Lenze, Michigan Department of Transportation
- Steven Lieby, Clinton Area Transportation System
- Linda Tokar, Eaton County Transportation Authority (EATRAN)
- Edith Hatter-Williams, Capital Area Michigan Works!

Others who were consulted

- Deb Alexander, CATA
- John Arehart, Clinton County Board of Commissioners
- Jan Bazler, Eaton County FIA
- Maureen Beavers, Clinton County FIA
- Bernard Feldpausch, Bees Chrysler
- Thomas Griffin, Employment Service Center, Eaton County Interim School District
- Cordell Henderson, Lansing School District
- Jere Hinkle, Parsons Transportation Group
- Mei Ingram, Parsons Transportation Group
- Nicole Lam, CATA
- Amy Mc Ewan, Delta Charter Township
- Carol Monroe, EATRAN
- Leonard Peters, Eaton County Board of Commissioners
- Christine Quinn, Capital Area Michigan Works!
- Jo Sinha, Peckham Vocational Industries
- Doug Stites, Capital Area Michigan Works!
- Robert Thelen, Ingham Intermediate School District
- Janice Tower, Eaton County Planning Commission
- Jan Watkins, Ingham County FIA

9.0 LIST OF PREPARERS

Michele Manning, AICP

Ms. Manning holds a Bachelor's Degree in Urban and Regional Planning from Michigan State University, as well as a Master's Degree from the University of Michigan in Urban Planning. She worked for three years in Grand Rapids as the Senior Planner for the Grand Rapids Area Transit Authority. She has worked for the past three years as an Associate Planner at the Planning and Zoning Center, Inc. on a variety of land use and transportation related assignments.

10.0 APPENDIX A

10.1 Transit Definitions

Fixed Route: bus service on a fixed schedule with a specific route, stopping to pick up and drop off passengers.

Express Route: fixed route with a limited number of stops.

Demand Response: vehicles not on a fixed route or fixed schedule, vehicles may be dispatched to pick up one of several passengers. (Also called dial-a-ride, paratransit or door-to-door transportation).

Flex Route: is a route with a fixed beginning and ending point with a fixed schedule at these points. The stops in-between vary depending upon rider destinations. Loose schedules can accommodate these diverging trips.

Connector: Fixed routes that have limited service into rural areas. Intended to create a bridge between demand response and fixed route services.

Headways: The scheduled time between buses.

Convenience is an important aspect of transit service the more convenient trips are the more likely people will ride.

Generally fixed route buses are more convenient because:

- ◆ The time to wait for the bus is short
- ◆ The time on the bus is fairly short
- ◆ The # of transfers needed is minimal (preferably none)
- ◆ The time to walk to the bus is minimal.

For demand response convenience depends on:

- ◆ The amount of time waiting for the vehicle and
- ◆ The time spent on the vehicle;
- ◆ Also, demand response is viewed by many as more inconvenient because trips typically need to be scheduled 24 hours in advance.

Michele:c:/winword/tcrpc/transit/task8.1-aug.doc