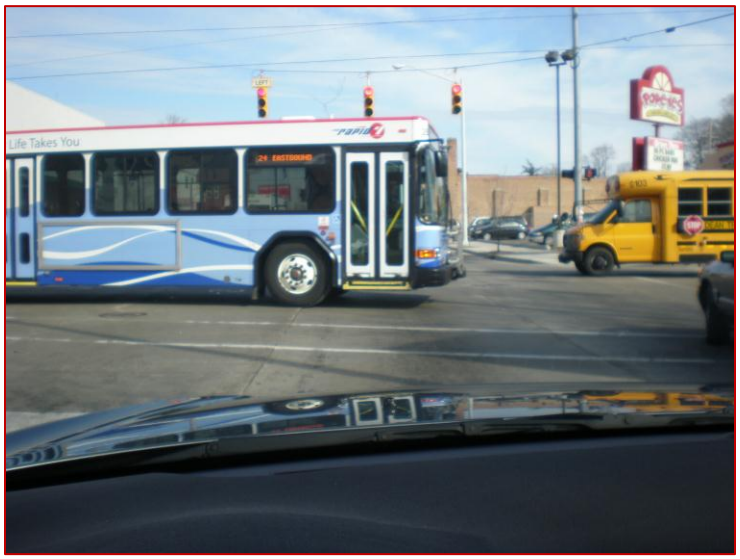
Technical Memorandum 2

Needs Assessment (Extent of Demand)

West Michigan Transit Linkages Study



Submitted to: Ottawa County, Michigan

Submitted by:
MP2PLANNING, LLC

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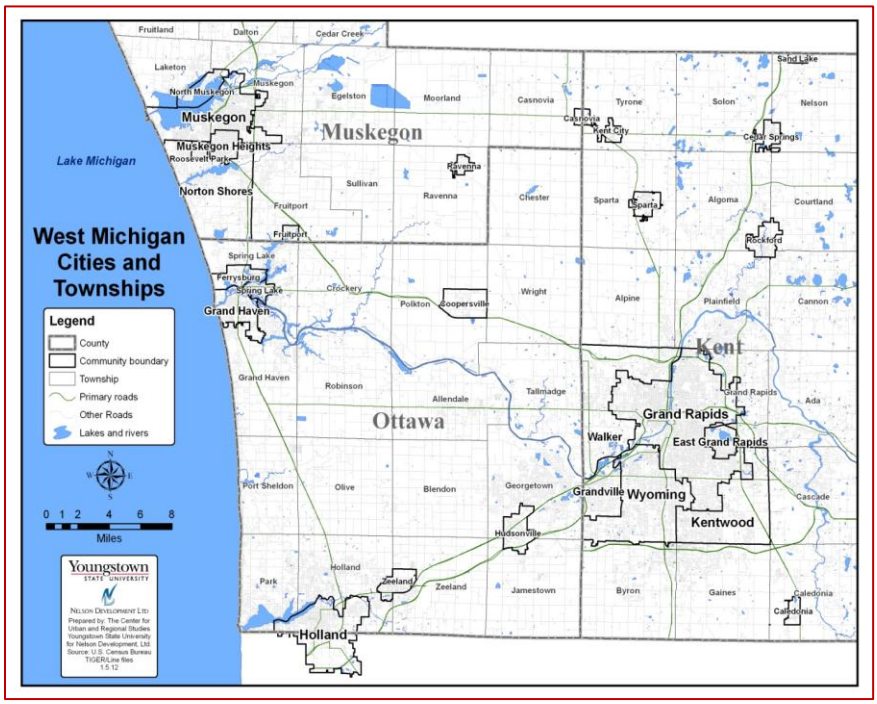
1. Introduction

The potential for new intercity and inter-county public transit service exists in West Michigan. The purpose of this study is to determine whether such a service would be feasible (based on needs, costs, available funding, capacity of service providers, etc.) and if so, to provide operating and administrative alternatives and recommendations for the implementation of a new service. This report presents an assessment of the need and demand for commuter transit service.

West Michigan, comprised of Kent, Muskegon, and Ottawa Counties (Figure 1-1) has been referred to as a triangle with Grand Rapids, the largest regional center, as the eastern point; the Muskegon/Muskegon Heights/Grand Haven area as the northwestern point; and Holland/Zeeland as the southwestern point. A number of smaller cities and townships fall within this area, including Allendale Township, home to the primary Grand Valley State University (GVSU) campus, which is effectively in the middle of this triangle and is the only community served by regional public transit via a link to Grand Rapids via The Rapid. A small part of Allegan County (the portion where the City of Holland extends into it) is also part of the study area.

Figure 1-1 West Michigan Cities and Townships

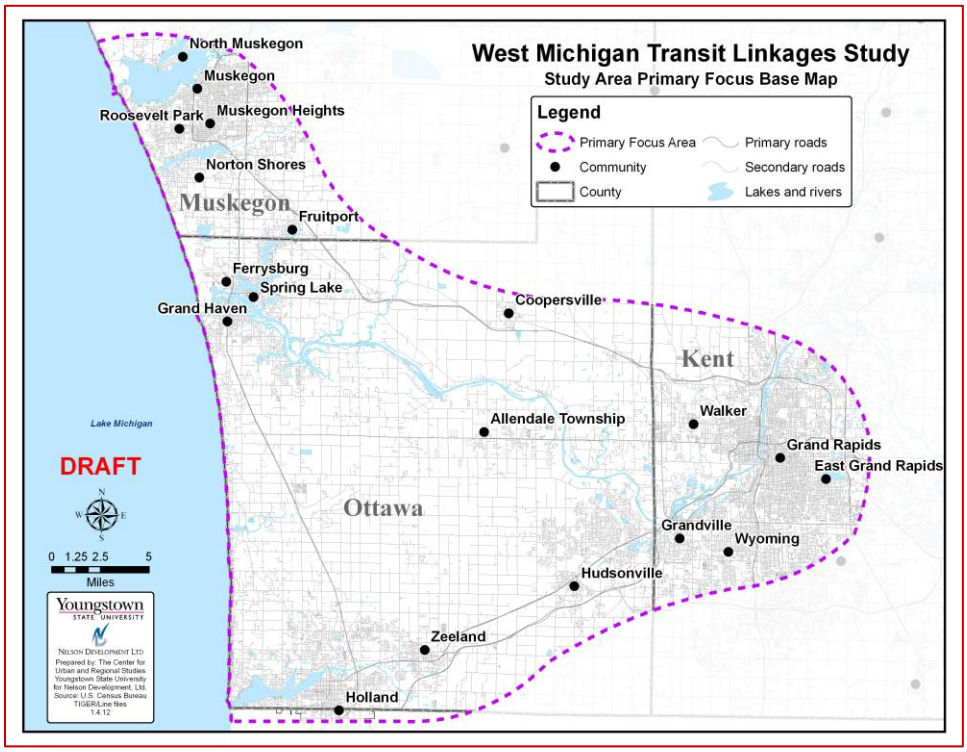


The Rapid is the public transit service operator in the Grand Rapids region. Other local transit operators provide service in each of the major cities/communities in West Michigan. Muskegon County is served by the Muskegon Area Transit System (MATS) and the greater Holland area is served by Macatawa Area Express (MAX). The Harbor Transit Multi-modal Transit System provides service to the City of Grand Haven, Grand Haven Charter Township, the City of Ferrysburg, and the Village of Spring Lake. There are a number of other agencies or organizations providing transportation including but not limited to Pioneer Resources, Georgetown Seniors, and a number of local churches and social service agencies.

The focus of this report is to present the need and demand that may exist for commuter bus transit services focusing primarily on the needs of residents in the "primary study focus area" as defined in Figure 1-2 and the results of surveys and stakeholder outreach activities conducted over the course of the study.

This study represents an objective analysis of the potential for integrating existing local and potential regional transit services to offer new commuter transportation options for residents, employees and major employers in the region. Some stakeholders have described the possible benefits of regional bus service, including the economic development potential in attracting new jobs to the region; incorporation of isolated populations into the regional economy; connecting the residents of the cities and the non-transit communities to isolated or difficult-to reach job sites; and providing regional connections not only for employment and education trips, but also for occasional shopping or medical trips. Key factors will be estimation of the actual demand for the services and the availability of adequate funding for a successful transit service.

Figure 1-2 Primary Study Focus Area



2. Demographic and Land Use Review

An understanding of the distribution and density of population and employment is an integral part of the transit planning process, which is generally focused on demand for local fixed route transit service. Demographics such as population, employment, age distribution, auto ownership, and travel behavior all tell a story about the complex travel needs of residents, employees and visitors, especially as they relate to the use of alternative transportation modes. Therefore, transit "markets" in a community are those groups of people with the propensity to use transit services for a wide array of trip types, and tend to be associated with the following demographic characteristics:

- Densely populated neighborhoods, communities, or cities
- Concentrated employment centers
- Older adults, typically over 65
- Youth, under 18
- Low income households
- Households without access to a vehicle
- Persons with disabilities

This section focuses on these indicators and others to provide a profile of demographics and land use in West Michigan. For the purposes of this study, the analysis focuses on commuter markets with emphasis on daily travel patterns. However, other transit markets, such as seniors and people with disabilities, may have demands for regional travel, so it is important to consider all of the potential regional mobility needs when assessing future service alternatives.

Data presented in this section is from the latest available US Bureau of the Census data, including the American Community Survey 5-year estimates, 2006 – 2010, 2010 Census of Population, and 2000 Census of Population.

2.1 Population Trends

In 2000, Ottawa County's population was 238,314 (Table 2-1). According to the 2010 census, the county population has grown to 263,801 since 2000, an increase of 10.7%. Ottawa County's population growth from 1990 to 2000 was 27%, but slowed between 2000 and 2010.

Still, Ottawa County's population growth outpaced the State of Michigan as a whole, which decreased from 9,938,444 in 2000 to 9,883,640 in 2010 (a 0.6% decrease).[1]

[1] Source U.S. Census Bureau: Census 2010 Summary File 1 (SF1).

Table 2-1 Population Trends in Ottawa County, 1990 – 2010

	Population			% Change	
	1990	2000	2010	1990-2000	2000-2010
Population	187,768	238,314	263,801	27%	10.7%
Housing Units	66,624	86,856	102,495	30%	18%
People per Household	2.82	2.74	2.73	-3%	-0.4%

Source: U.S. Census Bureau, Census 2010 Summary File 1 (SF1), Census 2000 Summary File 1 (SF 1) P12, Census 1990 Summary Tape File 1 (STF 1) P11 and Census Bureau State and County Quick Facts.

Total housing units in Ottawa County grew by 30% between 1990 and 2000 and slowed to 18% between 2000 and 2010. Growth in the number of housing units outpaced population growth between 2000 and 2010, as indicated by decreasing household size (a nationwide trend). According to the 2010 census, 71.5% of the homes in Ottawa County are owner-occupied, 20% are renter-occupied, and 8.5% are vacant. Table 2-2 presents population trends for the three county area.

Overall population growth from 2000 to 2010 varied throughout West Michigan. Ottawa County experienced the highest population growth at 10.7%, whereas Kent County grew by 4.9% and Muskegon County grew by just 1.2%. The average density in the West Michigan counties in the study area are shown in Table 2-2 with Kent County having the highest average density. A more telling fact is the population densities of cities and neighborhoods. Several of the largest communities in West Michigan have some neighborhoods in which population densities exceed 5,000 persons per square mile, although most of West Michigan has much lower densities than this.

Table 2-2 Population Growth and Density

West Michigan Counties	Population			2010 Population Density
	2000	2010	% Change	
Ottawa County	238,314	263,801	10.7%	468/sq. mile
Kent County	574,335	602,622	4.9%	712/sq. mile
Muskegon County	170,200	172,188	1.2%	345/sq. mile

Source U.S. Census Bureau: Census 2010 Summary File 1 (SF1), U.S. Census Bureau 2010 TIGER/Line Files.

Overall, Grand Rapids is the densest city in the West Michigan study region, with an average of 4,236 persons per square mile. Densities which can support regular all-day local fixed route transit typically are about 2,000 persons per square mile for very basic levels of bus service (e.g., service on hourly headways) and 3,000-4,000 minimum for improved frequencies. As an example, Muskegon has 2,119

persons per square mile).[2] Based on 2010 Census data, Holland approaches fixed route transit service feasibility with 1,905 persons per square mile. It is important to note that these standards are general. Holland has operated a fixed route system since 2000. Table 2-3 highlights the largest incorporated cities in West Michigan, along with population densities per square mile.

Table 2-3 Population and Population Densities in West Michigan Communities

City	County	2010 Population	2010 Population Density
Grand Rapids	Kent	188,040	4,236/sq. mile
Wyoming	Kent	72,125	2,927/sq. mile
Kentwood	Kent	48,707	2,330/sq. mile
Muskegon	Muskegon	38,401	2,702/sq. mile
Holland	Ottawa/Allegan	33,051	1,992/sq. mile
Grand Haven	Ottawa	10,412	1,804/sq. mile
Zeeland	Ottawa	5,504	1,840/sq. mile
Coopersville	Ottawa	4,275	889/sq. mile

Source U.S. Census Bureau: Census 2010 Summary File 1 (SF1), U.S. Census Bureau 2010 TIGER/Line Files.

2.2 Population and Employment Density

Understanding the distribution of population density and journey to work patterns throughout West Michigan are important factors that can lead to an understanding of demand for regional commuter service. Figure 2-1 (page 6) presents population density in western Michigan using 2010 Census data by census block. Figure 2-2 (page 7) presents employment density, using 2009 Census County Business Patterns data. Data on journey to work is presented in Section 2.3.8, on page 16.

Figure 2-2 also contains the location of major employers in western Michigan, based on Michigan Department of Technology, Management & Budget Labor Market Information (LMI) data. While the maps are not surprising—densities are higher in the urbanized areas—it is interesting to note where the density of land uses—both jobs and residences—are integrated into the same geographic area. This is most noticeable in central Grand Rapids, central Muskegon and Muskegon Heights, central Holland and portions of the Grand Haven area.

Other areas in the region, on the other hand, do not generally have a mixture of land uses, such as Georgetown Township and Hudsonville, which are mostly residential, or the eastern portion of Holland, which is largely commercial. A similar situation exists on the eastern edge of Grand Haven and the northeastern corner of Muskegon, both of which are largely residential. Looking at the location of major employers in Figure 2-2, Grand Rapids and East Grand Rapids have the highest concentration of employees in West Michigan and contain dense clusters of major employers. However, West Michigan's

[2] According to the Institute of Transportation Engineers (ITE), a minimum threshold for local 30-minute bus is deemed to be four to five dwelling units per acre (corresponding to population densities of 3,000 to 4,000 individuals per square mile). Many transit planners use 2,000 as a threshold for lower levels of service, such as hourly one-way services.

economy has a diverse mix of industries and manufacturing throughout the region, including Steelcase, Herman Miller, Alticor, and Wolverine World Wide.

In Ottawa County, there are more than 380 manufacturing facilities concentrated mainly in the Holland and Zeeland areas. In the Muskegon area, major employers are well distributed throughout the area with most of the density around downtown Muskegon and in central and east Muskegon Heights.

Figure 2-1 2010 Population Density by Census Block

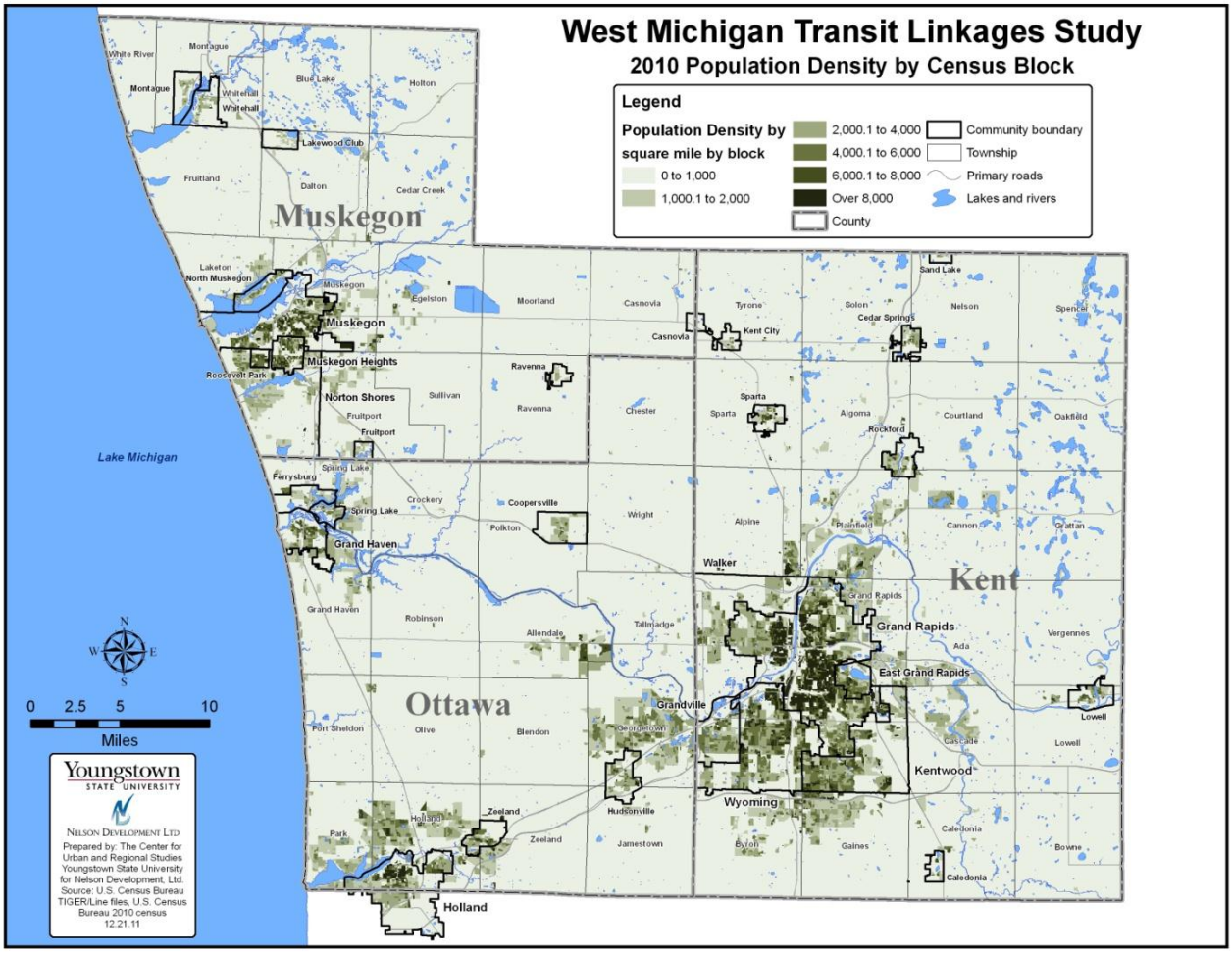
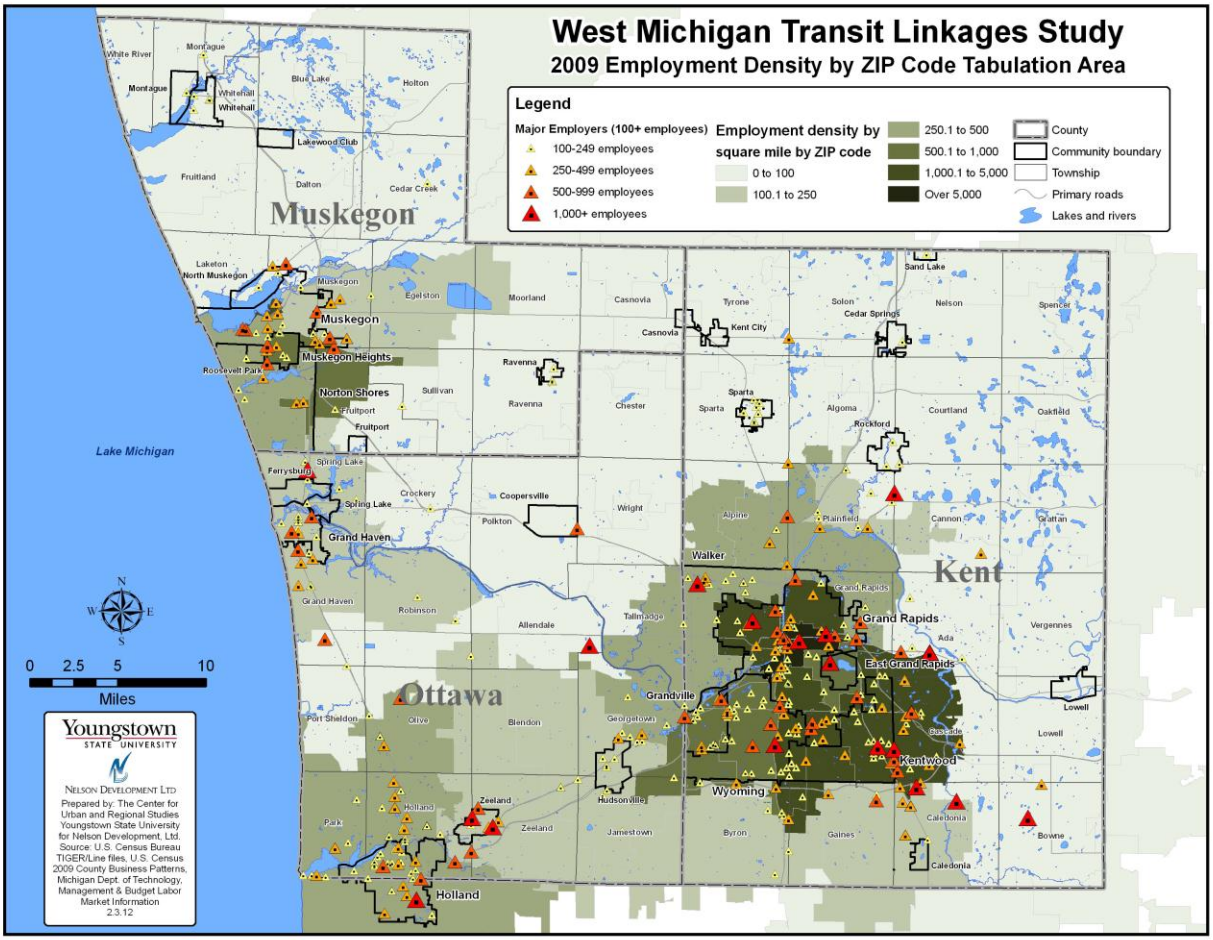


Figure 2-2 2009 Employment Density by ZIP Code Tabulation Area



Using population and employment densities to predict demand for transit is generally oriented to local fixed route service concentrated in a specific service area or community. Using these as a predictor of commuter service is more complex. There are industry standards using population or population and employment per acre for assessing the feasibility and potential viable service level for fixed route transit. Additional factors need to be considered for a regional commuter service. As noted in *The Factors Influencing Transit Ridership: A Review and Analysis of the Ridership Literature,*[3] there are a host of factors that influence demand for a commuter service. Several studies have shown that parking availability and cost are "…the most significant factors affecting ridership." Since parking is generally free or inexpensive at work sites in Holland, Muskegon and Grand Haven, that would suggest that the greatest demand for service will be from the western cities into Grand Rapids. However, the low densities in those cities (which are barely at the threshold of supporting one hour transit service), do not indicate that there will be a high level of demand for commuter bus service.

[3] The Factor Influencing Transit Ridership: A Review and Analysis of the Ridership Literature, Research Report Number 681, University of California Transportation Center, Berkeley, authored by Brian D. Taylor and Camille Fink, 2003.

2.3 Measures of Transit Dependence

Regional transit may serve a wide range of markets. Markets that have a higher propensity to use transit generally include seniors, low-income residents, young people, low income households and persons without other transportation options, although low-income is more likely to be a predictor of potential commuter transit use. These population groups tend to be distributed around the region in similar proportions to the general population. However, there are subtle differences to be observed in the study area. Figures 2-3 (page 10) through 2-7 (page 14) illustrate these characteristics.

2.3.1 Senior Population

Persons age 65 and over are generally more likely to use public transportation because older adults are either unable to drive their own personal vehicle, choose not to drive, or no longer have access to a vehicle. As many baby boomers enter retirement, demand for transit services among this demographic group is expected to increase.

Figure 2-3 (page 10) shows that the highest concentration of seniors resides in the unincorporated areas outside of Grand Rapids and Muskegon. In Muskegon County, seniors comprise 13.6% of the population, whereas in most of the other communities in West Michigan, seniors comprise about 10% of the population. There are also medium density pockets of seniors outside Grandville and Wyoming.

2.3.2 Youth Population

Another transit market is youth (under the age of 18). While youth may be more likely to use local transit services because many of them are unable to or unwilling to drive themselves, they tend to use transit services less often than seniors because most of their activities, jobs and friends are located within the community where they live. Nevertheless, regional services could be used for after-school transportation and excursions to some of the county's largest shopping centers and other attractions in Muskegon, Holland, and Grand Rapids or along the lakeshore.

Figure 2-4 (page 11) shows the density of youth age 18 years or younger. Grand Rapids clearly stands out as having the highest concentrations of youth in the region, although there are high density pockets of youth in Muskegon. Young people tend to live in neighborhoods that are comprised mostly of other families, and youth population density is clearly higher than senior population density region-wide.

2.3.3 Low-Income Individuals

Individuals who are considered "low income" for the purposes of this study are those whose income is below 150% of the poverty level for a particular geography. Figure 2-5 (page 12) shows the density of low-income individuals (income below 150% of the poverty level) by census tract throughout the West Michigan area.

Areas with the highest concentration of low-income individuals include central Grand Rapids and the majority of Muskegon and Muskegon Heights. Smaller pockets of low income individuals also reside in central Holland and in the southern suburbs of Grand Rapids (primarily Wyoming). The areas with the lowest concentration of low-income individuals in the region include East Grand Rapids, all of the outer suburbs around Grand Rapids (with the exception of the area surrounding GVSU), and a number of areas along the lakeshore between Muskegon and Holland.

2.3.4 People with Disabilities

People with disabilities often need public transit services, especially those people who are not home-bound. People with disabilities represent a sizeable portion of transit ridership on each of the local transit systems, many of whom use regular general public dial-a-ride and fixed-route services, although others rely on the various paratransit services available in West Michigan. US Census data for 2000 illustrates concentrations of people with disabilities. Regrettably, more recent data on persons with disabilities is not available at the census tract level because of changes in Census definitions of persons with disabilities. Available census tract-level data is at least two years in the future. Typically, the geographic distribution of people with disabilities in West Michigan, shown in Figure 2-6 (page 13), mirrors the general population densities, suggesting that to serve all people with disabilities by transit requires service coverage of the region. Transportation services are available for people with severe physical or cognitive disabilities for travel to workshops, jobs, or socialization programs through specialized nonprofit transportation providers. However, according to staff from the local transit service providers, they are unable to meet all the demands for service. For instance, Pioneer resources reported receiving 1-2 weekly requests for service, usually for medical or work trips, which cannot be accommodated because the individual is not affiliated with one of Pioneer's programs. Macatawa Area Express (MAX) also reported similar problems. MAX representatives indicated that they receive daily requests from people with disabilities for transit service that they are unable to fulfill. Some people with physical disabilities, especially those who live in the smaller communities in Ottawa County, drive themselves (Muskegon County residents have the option of using the countywide rural GoBus service and Kent County also has rural services). One of the key challenges with providing transit to populations in the most rural portions of the county, especially people with disabilities, is that low densities and long distances makes the provision of transit service very costly.

2.3.5 Households without Vehicles

Households that do not have access to a vehicle represent another measure of income — often a very strong indicator of households likely to use transit. These households may not have the economic means of owning a vehicle, or are unable to drive, such as senior citizens and persons with disabilities. As shown in Figure 2-7 (page 14) the highest concentrations of households without vehicles are in Muskegon, Muskegon Heights, and Grand Rapids.

2.3.6 Median Household Income

Looking at household median income offers an alternative means for viewing the location of likely transit-dependent households. This is shown in Figure 2-8 (page 15). The similarity to the location of households with no access to a vehicle is clear. What also show is where higher income households, with lower transit use expectations, are located.

2.3.7 GVSU Students

Students often have a higher propensity to use transit since many younger adults choose not to or cannot afford their own private vehicle. In addition, campus environments often discourage students from driving alone by charging for parking, limiting the amount of parking or providing incentives to encourage transit use (such as free bus passes). Finally, students tend to cluster near the campus and near each other—often in locations that provide low-cost and multifamily housing, which makes it easier for them to be served by transit.

Figure 2-3 Density of 65+ Population
Density of 2010 65 and Over Population by Census Block

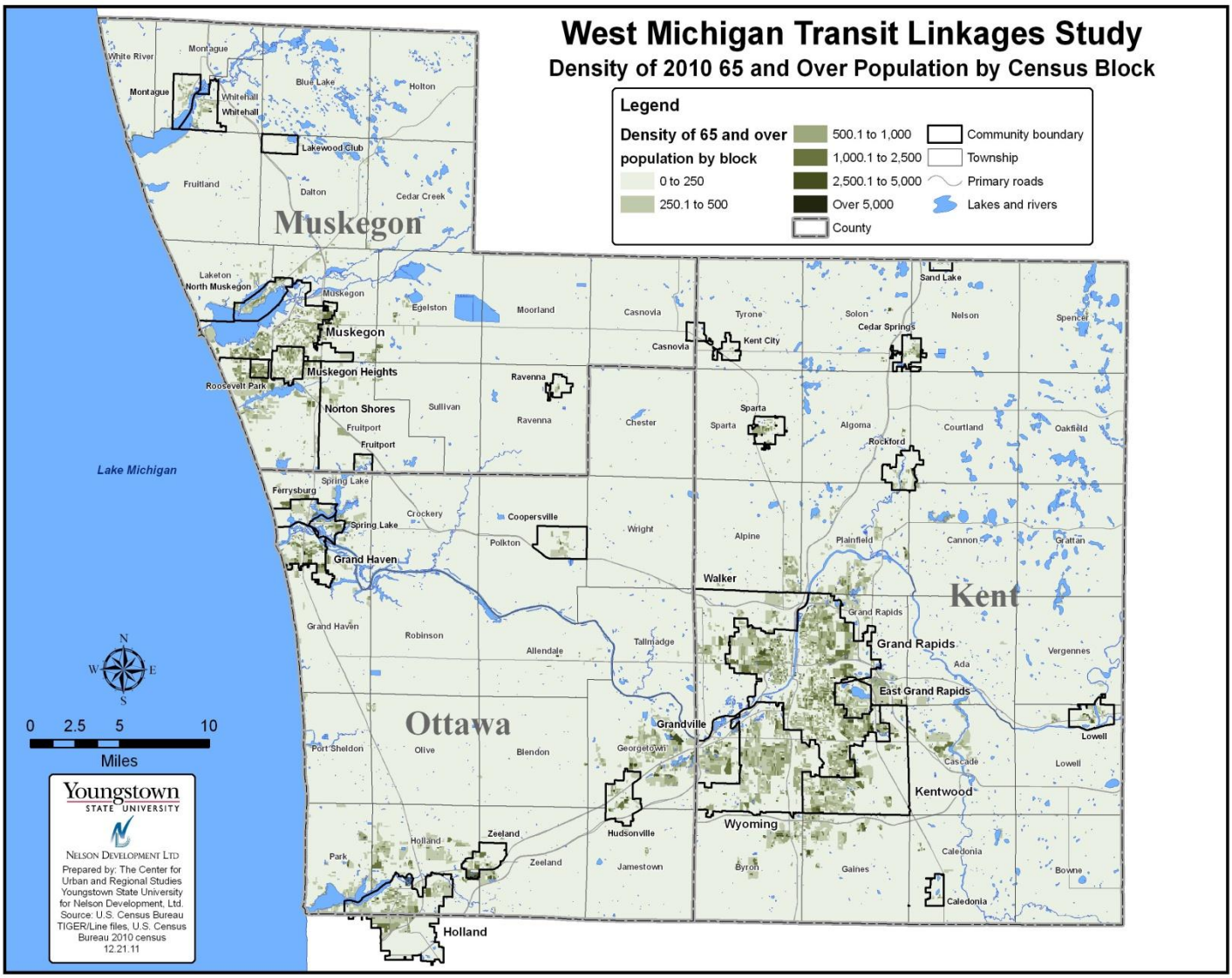


Figure 2-4 Density of Under 18 Population
Density of 2010 under 18 Population by Census Block

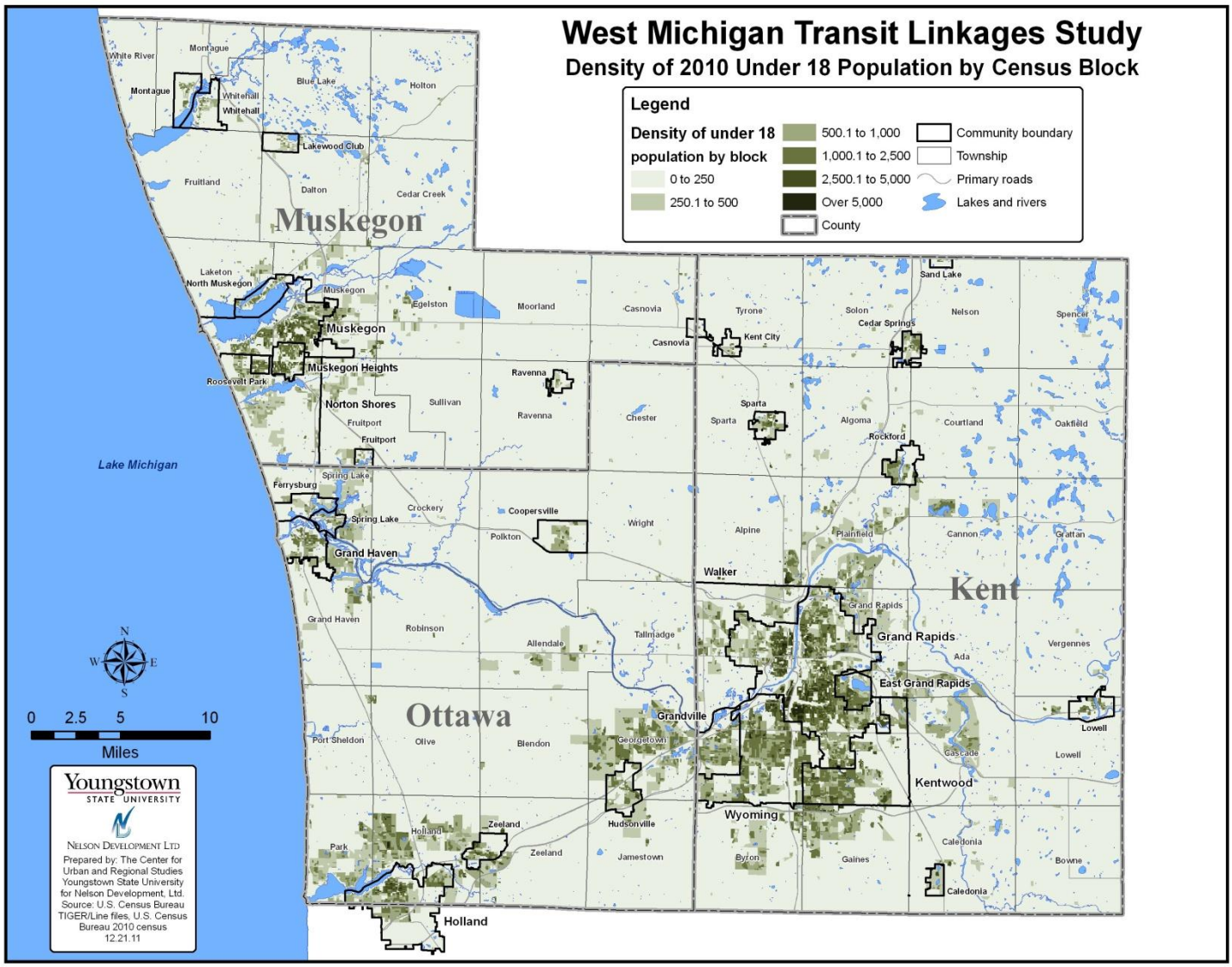


Figure 2-5 Density of Low-Income Individuals
Density of Low-Income Individuals by Census Tract, 2006-10 Estimate

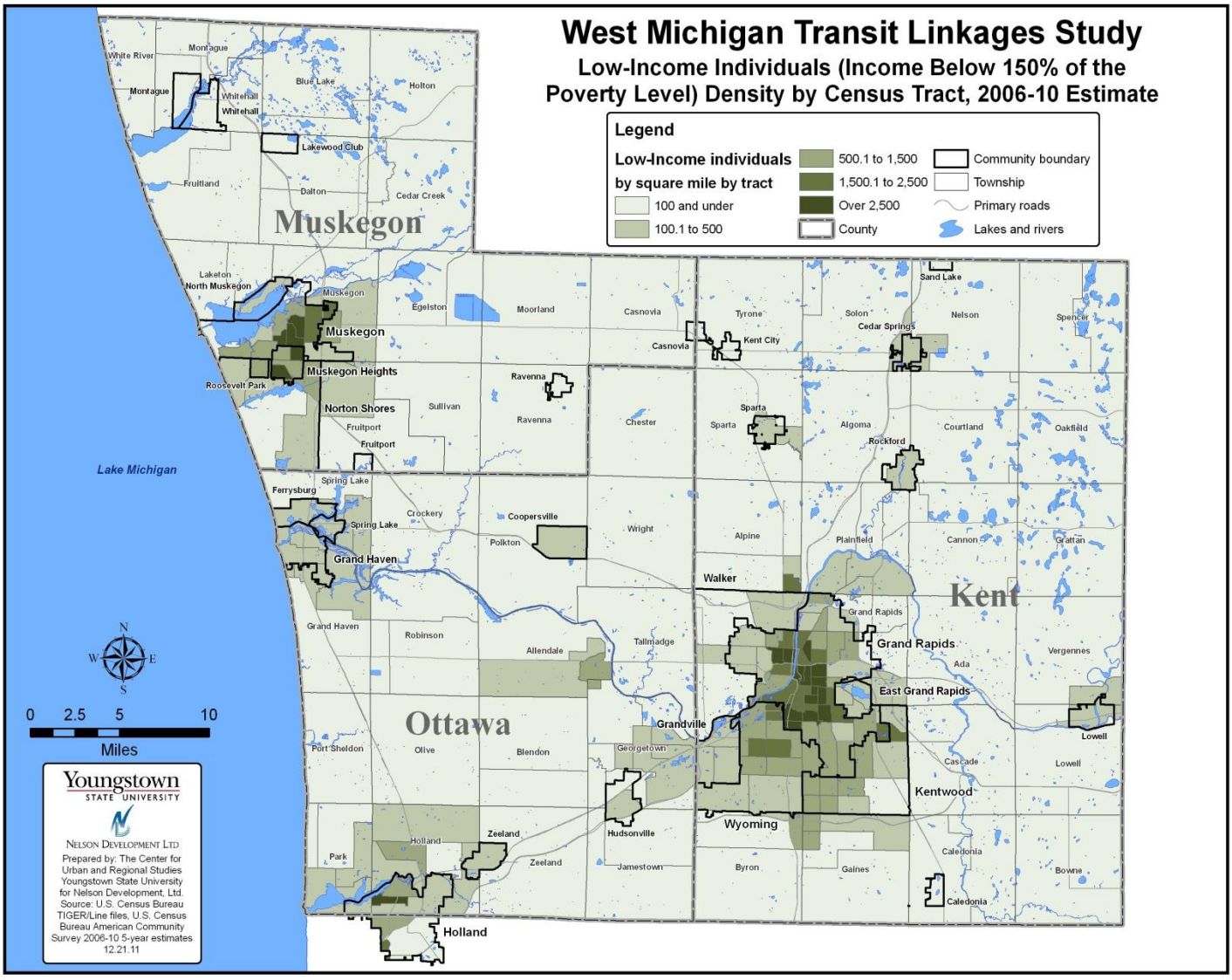


Figure 2-6 Disabilities of Population 5+ Years per Sq. Mile
Disabilities among the Population 5 Years and Over per Square Mile by 2000 Census Tract

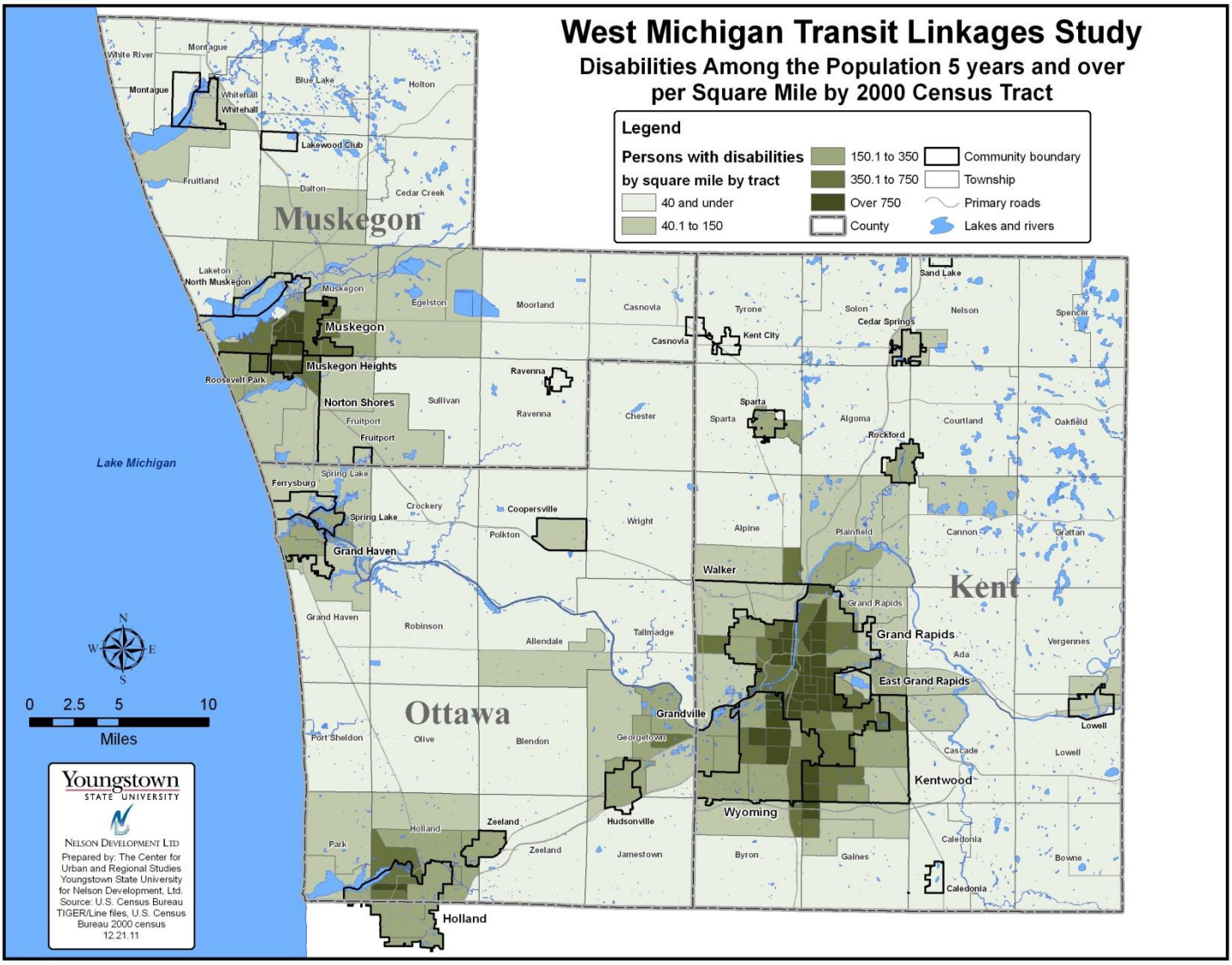


Figure 2-7 Estimate Density of 0 Vehicle Housholds

Estimate Density of 0 Vehicle Households by Census Tract, 2006-2010

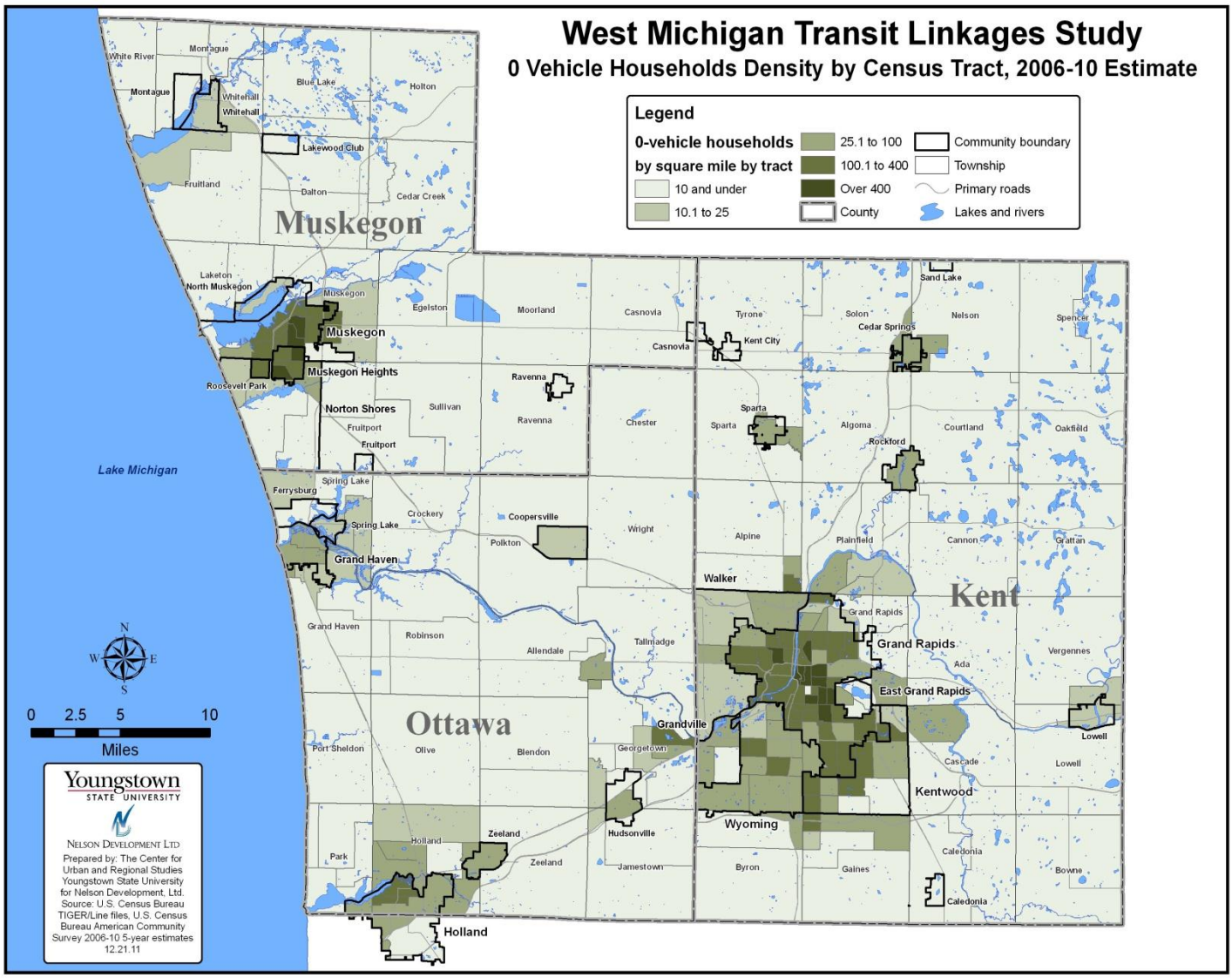


Figure 2-8 Median Household Income
Median Household Income by Census Tract, 2006-2010 Estimate

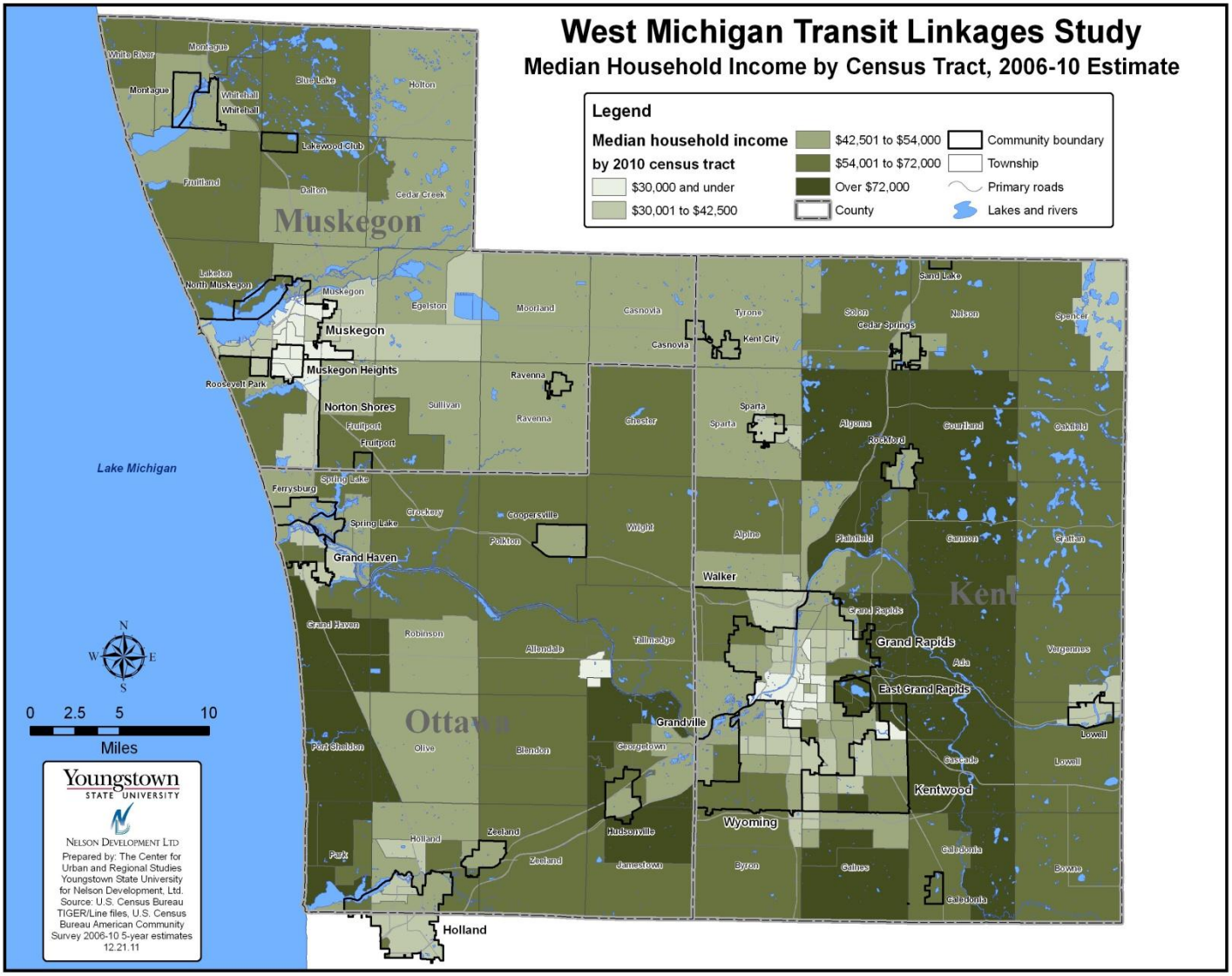
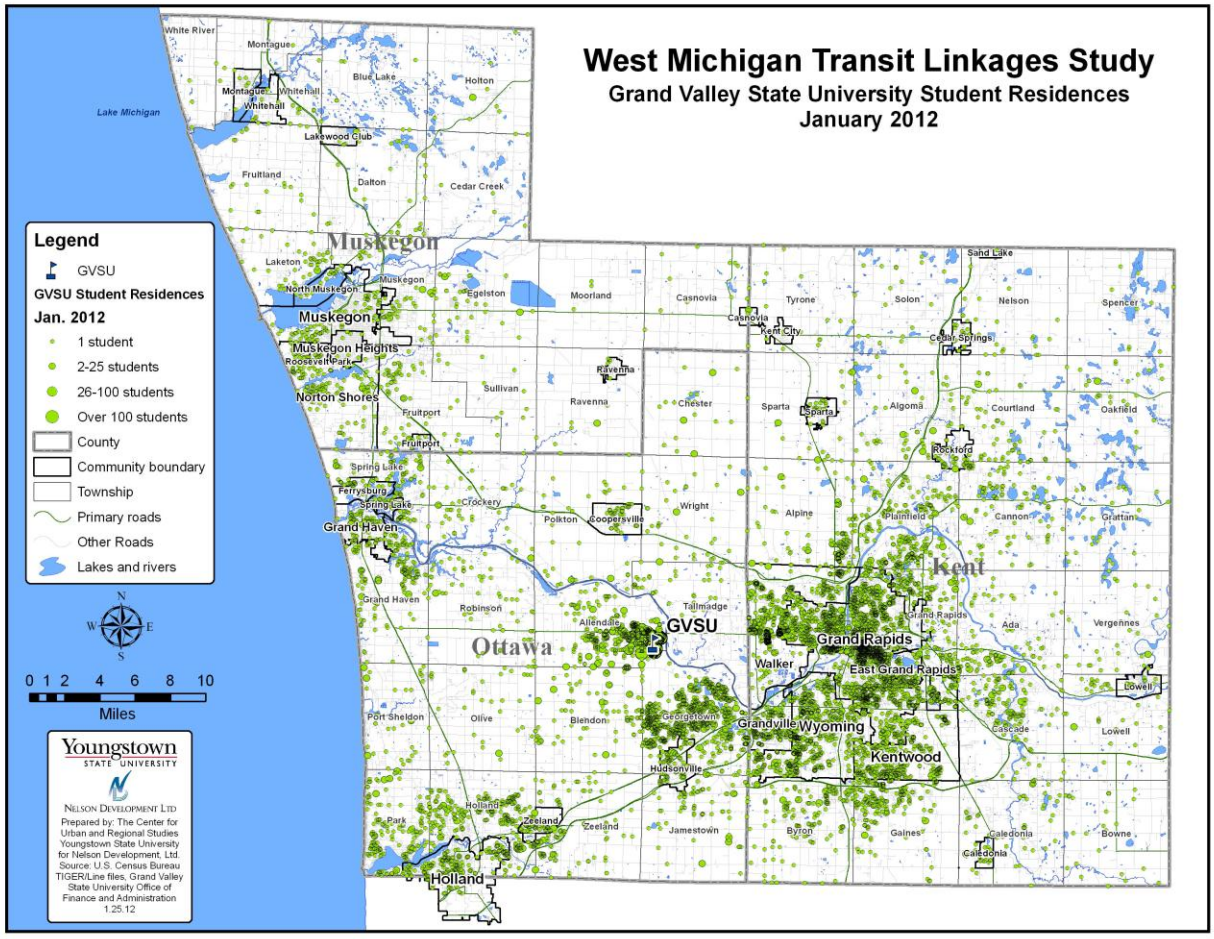


Figure 2-9 illustrates the home location of all GVSU students (from information provided by the school in January 2012). It should be noted that some students continue to provide their permanent address instead of the address where they live while attending college. Still, the overall distribution of students in the region suggests that the majority of students either live on campus, in Allendale Township close to GVSU or in the Grand Rapids area. Other areas with notable student populations include Georgetown Township, the Holland/Zeeland area and the Grand Haven/Muskegon area.

Figure 2-9 GVSU Student Residences
Grand Valley State University Student Residences (January 2012)



2.3.8 Journey-to-Work

Information about where people live and work is essential to understanding local and regional travel patterns. Therefore, the U.S. Census Bureau has formed the Longitudinal Employer-Household Dynamics (LEHD) program and partnered with state labor market information agencies to collect information about local labor markets on a quarterly basis. This partnership, commonly referred to as Local Employment Dynamics (LED), produces Quarterly Workforce Indicators (QWI), and includes sets of economic indicators that can be queried at various geographic levels, such as counties, cities, villages, and townships. QWI data is built on state unemployment insurance system records, but also includes

civilian federal workers, excluding those redacted for security purposes, in the 2010 data series. Over 90% of civilian wage and salary jobs are included in QWI data, although some farmers and agricultural employees, domestic workers, self-employed non-agricultural workers, Armed Services members, some state and local government workers, and some types of nonprofit employers and religious organizations, who do not participate in state unemployment insurance systems, are excluded.

The LEHD program includes OnTheMap, an online mapping and reporting application developed by the U.S. Census Bureau and the partnering states that shows where people live and work. Due to its extensive geographic coverage, the 2010 data series produced by the LEHD program was evaluated to identify major travel trends between communities in the West Michigan study area. Because the study focuses on regional travel patterns, data was grouped into 11 areas that include groupings of cities, villages and townships that are considered to be part of the same region. These groupings are as follows:

- **Allendale Township**, which includes only Allendale Township.
- **Holland/Zeeland**, which includes Holland city in Ottawa County, Holland Charter Township, Zeeland city, and Zeeland Charter Township.
- **Grand Rapids**, which includes East Grand Rapids, Grand Rapids city, Grand Rapids Charter Township, Grandville, Kentwood, Walker, and Wyoming.
- **Grand Haven**, which includes Ferrysburg, Grand Haven city, Grand Haven Charter Township, Spring Lake village, and Spring Lake Township.
- **Coopersville**, which includes only Coopersville.
- **Georgetown**, which includes Georgetown Charter Township and Hudsonville.
- **Muskegon**, which includes Muskegon, Muskegon Heights, North Muskegon, Norton Shores, and Roosevelt Park.
- **Eastern Ottawa County**, which includes Blendon Township, Chester Township, Jamestown Charter Township, Polkton Charter Township, Tallmadge Charter Township, and Wright Township.
- **Western Ottawa County**, which includes Olive Township, Park Township, Port Sheldon Township, and Robinson Township.
- **Other Areas in the Study Area**, which include all areas within the project study area that are not included in the above groups.
- **Outside of the Study Area**, which includes all areas outside of Kent, Muskegon and Ottawa Counties.

Table 2-4 presents this information, which is summarized below. The county-to-county worker flows shown in Table 2-5 are derived from the same LEHD data used in Table 2-4.

Allendale Township

Workers living in Allendale Township, a suburban township west of Grand Rapids that contains Grand Valley State University, commute mostly to Grand Rapids (30.5%), within Allendale Township (13.8%) or to other areas within the study area not included in the groupings (18.3%). 7.7% of the township's resident workers are employed in the Holland/Zeeland Area, while a small number commute to the Grand Haven (3.3%) or Muskegon (2.6%) areas.

Holland/Zeeland Area

A large percentage (44.9%) of workers both live and work in the Holland/Zeeland area, while a sizable portion (14.8%) commute to the Grand Rapids area. 22.3% of the area's resident workers commute to places outside of the study area, while very few commute to the Georgetown Township (3.1%), Grand Haven (2.4%), or Muskegon (1.4%) areas.

Grand Rapids Area

As the region's economic and cultural hub, the Grand Rapids area is the largest employment destination in the study area. The majority of people who work in the Grand Rapids area also live in the area (59.7%). A sizable number commute outside of the study area (19%) or to other areas within the study area not included in the groupings (13.7%), although very few commute to the Holland/Zeeland (2.4%), Georgetown (1.8%), Muskegon (0.8%), or Grand Haven (0.4%) areas.

Grand Haven Area

A large percentage (35.3%) of workers both live and work in the Grand Haven area, while a sizable portion (16%) commute to areas outside of the study area, or to the Grand Rapids (14.2%) or Muskegon (12%) areas. 8.9% of the area's residents commute to the Holland/Zeeland area, while 7.7% commute to other areas within the study area not included in the groupings. A small percentage (5.9%) commutes to Allendale Township, Coopersville, Georgetown Township, or Eastern and Western Ottawa County.

Coopersville

The majority of workers in Coopersville commute to the Grand Rapids area (27.9%) or other areas within the study area not included in the groupings (23.9%). A sizable portion commutes to places outside of the study area (13.9%) or stay in Coopersville (11.8%). No other single important destination for employment exists, as Coopersville residents tend to commute throughout the study area for work.

Georgetown Township Area

The Grand Rapids area (28.8%) is the largest destination for Georgetown Township area workers, while a sizable portion commutes to other areas within the study area not included in the groupings (23.5%) or stays in the area (16.1%). 9.3% of the area's residents commute to the Holland/Zeeland area while 15.1% commute to places outside of the study area. Very few workers commute to Allendale Township, Grand Haven, Coopersville, Muskegon, or Eastern and Western Ottawa County.

Muskegon Area

A large percentage (37.8%) of workers in the Muskegon Area stays in their home communities, while a smaller number commutes to the Grand Rapids (10%) or Grand Haven (8.8%) areas. A sizable number commutes to places outside of the study area (22.6%) or other areas within the study area not included in the groupings (15.4%). A very small number commute to Allendale Township, Holland/Zeeland, Coopersville, Georgetown Township, or Eastern and Western Ottawa County.

Eastern Ottawa County

A large percentage (33.8%) of workers in Eastern Ottawa County work in the neighboring Grand Rapids area, while 16.7% commute west to the Holland/Zeeland area. A small number of workers commute to the Georgetown Township area (7.1%) or stay in Eastern Ottawa County (5.6%). 16.6% commute to places outside of the study area, while 10% commute to other areas within the study area not included in the groupings. A small number of workers commute to Allendale Township, Grand Haven, Coopersville, Muskegon, or Western Ottawa County.

Western Ottawa County

The majority of Western Ottawa County workers commute to the neighboring Holland/Zeeland area (36.3%) or to places outside of the study area (21.3%). A sizable portion stays in Western Ottawa County (9.9%) or commutes to the Grand Rapids (12.3%) or Grand Haven (9.2%) areas. A small number of workers commute to Allendale Township, Coopersville, Georgetown Township, Muskegon, Eastern Ottawa County, or other areas within the study area not included in the groupings.

Other Areas in the Study Area

The majority of the workers living in areas outside of the aforementioned geographic regions work in the Grand Rapids area (42.6%), other areas within the study area not included in the groupings (21.7%), or outside of the study area (19.3%). A small number (8.5%) commutes to the Muskegon area, while the rest commute throughout the study area for work.

County to County Work Flows

Although 73.8% of the workers who live in Kent County also work in Kent County, a very small percentage (7.1%) commutes Muskegon or Ottawa Counties, suggesting that there is a limited market for regional transit service for workers leaving Kent County. The remaining workers in Kent County (19.1%) commute to places outside of the study area. However, 29.6% of the workers who live in Ottawa County commute east to Kent County, while 49.6% stay in Ottawa County for work. Among Muskegon County workers, 51.5% work in Muskegon County, while 14% commute south to Ottawa County, and 13.5% commute east to Kent County. 21% of Muskegon County workers commute to places outside of the study area. A small market may exist for regional transit service between Muskegon and Ottawa and Kent Counties for people who are already employed. Table 2-5 and Figure 2-10 show county-to-county work trip patterns.

Table 2.4 Journey-to-Work Flows, West Michigan Study Area, 2010

WORKING IN

LIVING IN	Allendale Township	Holland/Zeeland Area	Grand Rapids Area	Grand Haven Area	Coopersville	Georgetown Township Area	Muskegon Area	Eastern Ottawa County	Western Ottawa County	Other Areas in the Study Area	Outside Study Area	Total
Allendale Township	804	451	1,780	190	45	178	151	104	79	1,064	982	5,828
Allendale Township (%)	13.8%	7.7%	30.5%	3.3%	0.8%	3.1%	2.6%	1.8%	1.4%	18.3%	16.8%	100.0%
Holland/Zeeland Area	240	14,719	4,847	794	57	1,010	443	709	1,340	1,284	7,314	32,757
Holland/Zeeland Area (%)	0.7%	44.9%	14.8%	2.4%	0.2%	3.1%	1.4%	2.2%	4.1%	3.9%	22.3%	100.0%
Grand Rapids Area	1,611	3,691	91,586	682	293	2,686	1,164	1,027	326	21,064	29,204	153,334
Grand Rapids Area (%)	1.1%	2.4%	59.7%	0.4%	0.2%	1.8%	0.8%	0.7%	0.2%	13.7%	19.0%	100.0%
Grand Haven Area	253	1,727	2,743	6,836	107	221	2,320	83	476	1,481	3,100	19,347
Grand Haven Area (%)	1.3%	8.9%	14.2%	35.3%	0.6%	1.1%	12.0%	0.4%	2.5%	7.7%	16.0%	100.0%
Coopersville	69	81	550	93	233	21	88	85	7	471	274	1,972
Coopersville (%)	3.5%	4.1%	27.9%	4.7%	11.8%	1.1%	4.5%	4.3%	0.4%	23.9%	13.9%	100.0%
Georgetown Township Area	502	2,292	7,125	272	73	3,993	255	392	276	5,806	3,743	24,729
Georgetown Township Area (%)	2.0%	9.3%	28.8%	1.1%	0.3%	16.1%	1.0%	1.6%	1.1%	23.5%	15.1%	100.0%
Muskegon Area	84	947	2,687	2,375	97	132	10,214	88	119	4,153	6,107	27,003
Muskegon Area (%)	0.3%	3.5%	10.0%	8.8%	0.4%	0.5%	37.8%	0.3%	0.4%	15.4%	22.6%	100.0%
Eastern Ottawa County	297	2,079	4,196	241	299	880	230	694	203	1,246	2,065	12,430
Eastern Ottawa County (%)	2.4%	16.7%	33.8%	1.9%	2.4%	7.1%	1.9%	5.6%	1.6%	10.0%	16.6%	100.0%
Western Ottawa County	161	5,610	1,904	1,419	18	284	400	212	1,535	600	3,294	15,437
Western Ottawa County (%)	1.0%	36.3%	12.3%	9.2%	0.1%	1.8%	2.6%	1.4%	9.9%	3.9%	21.3%	100.0%
Other Areas in the Study Area	677	3,085	57,374	3,880	462	1,591	11,463	607	331	29,197	25,986	134,653
Other Areas in the Study Area (%)	0.5%	2.3%	42.6%	2.9%	0.3%	1.2%	8.5%	0.5%	0.2%	21.7%	19.3%	100.0%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2010).

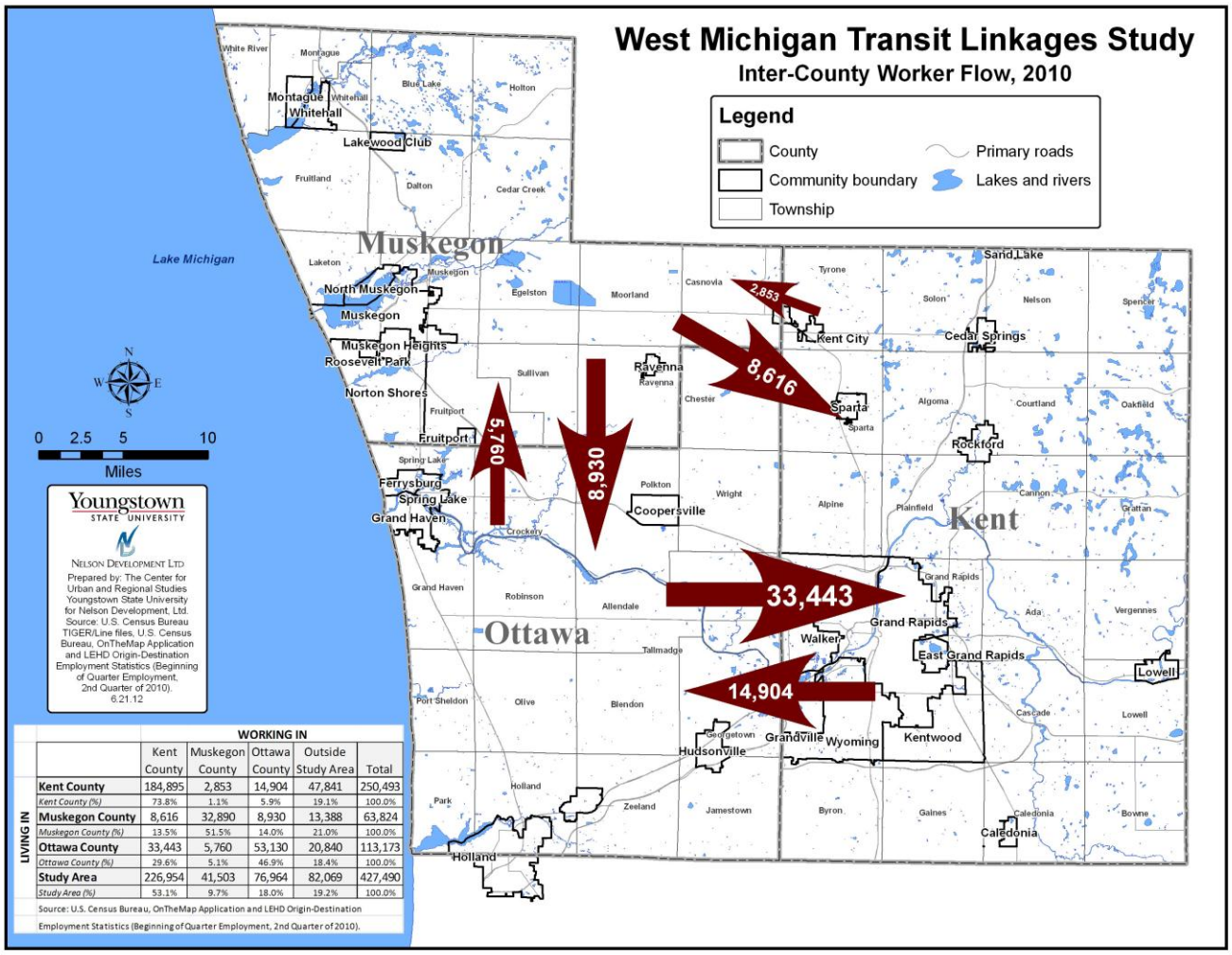
Table 2.5 County-to-County Journey-to-Work Flows, West Michigan Study Area, 2010

WORKING IN

LIVING IN	Kent County	Muskegon County	Ottawa County	Outside Study Area	Total
Kent County	184,895	2,853	14,904	47,841	250,493
Kent County (%)	73.8%	1.1%	5.9%	19.1%	100.0%
Muskegon County	8,616	32,890	8,930	13,388	63,824
Muskegon County (%)	13.5%	51.5%	14.0%	21.0%	100.0%
Ottawa County	33,443	5,760	53,130	20,840	113,173
Ottawa County (%)	29.6%	5.1%	46.9%	18.4%	100.0%
Study Area	226,954	41,503	76,964	82,069	427,490
Study Area (%)	53.1%	9.7%	18.0%	19.2%	100.0%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2010).

Figure 2-10 County-to-County Work Trip Patterns



LIVING IN	WORKING IN: Kent County	Muskegon County	Ottawa County	Outside Study Area	Total
Kent County	184,895	2,853	14,904	47,841	250,493
Kent County (%)	73.8%	1.1%	5.9%	19.1%	100.0%
Muskegon County	8,616	32,890	8,930	13,388	63,824
Muskegon County (%)	13.5%	51.5%	14.0%	21.0%	100.0%
Ottawa County	33,443	5,760	53,130	20,840	113,173
Ottawa County (%)	29.6%	5.1%	46.9%	18.4%	100.0%
Study Area	226,954	41,503	76,964	82,069	427,490
Study Area (%)	53.1%	9.7%	18.0%	19.2%	100.0%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2010).

2.3.10 Summary of Demographic Transit Demand Characteristics

The information presented in this section indicates that there could be some demand for regional commuter transit service primarily from Ottawa County and to a lesser extent Muskegon County. There are some concentrations of seniors and households without automobiles concentrated in Muskegon County but, while these concentrations may reflect demand for general local public transit, it is not likely they represent demand for regional commuter service. Based on the journey-to-work data, the largest demand will be for commuter transit from the western communities to Grand Rapids. The journey-to-work data does not indicate demand for Grand Rapids residents working in western Ottawa County or for linkages between Muskegon and Holland.

2.4 Planned Developments

Most of the information presented in this chapter examines existing conditions in West Michigan. While it is important to document existing land uses, it is also important to understand how the West Michigan area is changing. This section presents a preliminary list of new developments – either planned or under construction – that are worth identifying because of their potential impact on regional transit demand. Table 2-6 shows the list of anticipated developments. The list of development projects was compiled by contacting the planning departments of communities in West Michigan and from publicly available sources. Not surprisingly, nearly all jurisdictions indicated that the economic downturn had some effect on planned development and that some projects were on hold. Such projects are included in the list and map unless the planning department indicated that they were unlikely to proceed in the foreseeable future.

It should also be noted that due to the size of the region, a thorough evaluation of new developments in the Grand Rapids area is not included in this review. It is clear that Grand Rapids will remain an important regional destination regardless of new developments in the region. With financing approved by voters in May 2012, the Silver Line BRT project in Grand Rapids is included, since transit facilities that provide high-quality amenities tend to encourage development around the stations and along the route. This review is intended to highlight changing land uses in Ottawa and Muskegon Counties that may have an impact on regional transit demand. The development projects were categorized as mixed use, commercial, institutional, and residential. Other commercial projects include Continental Dairy in Coopersville, which is locating in a former auto-related manufacturing plant, and an advanced battery manufacturing plant in Holland. Institutional projects include a culinary institute at Baker College in Muskegon and a 14-story building at Helen DeVos Children's Hospital in Grand Rapids.

The larger-scale residential development projects identified are largely multi-family housing, including townhouses, condominiums, and student housing around GVSU. There are also some single-family subdivisions planned.

The planned developments in table 2.6 will likely have a minimal impact on commuter transit service proposed for the study area. Much of the development is planned or occurring in the Holland and Allendale areas, and the other residential and commercial projects planned or under development for other areas in the County are smaller in scope, and will not appreciably increase demand for commuter transit service. Likely the student housing developments in Allendale will increase flow of students between Allendale and Grand Rapids on the existing Rapid service, but the other developments in the area are small and will not have a significant impact on commuter transit demand. As there is not

currently transit service in many of the areas where development is occurring, it is difficult to project demand for commuter transit service.

Table 2-3 Planned Developments in West Michigan

City	Description	Type	Location	Size	Notes
Allendale Township	500 bed student housing project, proposed	Residential -MF	Lake Michigan Dr / 48th Ave	500 beds	North side
Allendale Township	Lake Michigan Credit Union	Commercial	Lake Michigan Dr / 48th Ave		
Allendale Township	Alaskan Pipeline Restaurant	Commercial	Lake Michigan Dr / 48th Ave		North, by hotel
Allendale Township	Edgewater Office Building for Q.S.T. Consultants	Commercial	Lake Michigan Dr / Edgewater Dr.		Behind McDonalds
Allendale Township	Turks II Restaurant	Commercial			
Allendale Township	48 West -Campus West Apartments - Student Housing	Residential -MF	Lake Michigan Dr / 48th Ave		South
Allendale Township	Allsward Terrace	Residential -MF	52nd Avenue / Pierce Street	125 units	
Allendale Township	Mystic Woods II – Student Housing -On Hold	Residential -MF	S. of Pierce		1st Phase, 136 beds - Project on hold.
Coopersville	Continental Dairy, taking over 300,000 sq. ft former GM/Delphi manufacturing plant	Commercial	1 block off of I-96, to north at Coopersville Exit (#16, 68th Ave)	300,000 sq. ft	
Coopersville	160-Unit Housing Development	Residential -MF	½ mile north of I-96, at Lamont/Coopersville exit (#17, 48th Ave/Squires Rd)		Project on hold
Georgetown	Mixed use planned unit development with commercial uses and some residential uses including high density dwelling units.	Mixed Use	East end of Baldwin St. by the new connector to I-196 to Chicago Dr.	2 9-acres sites	

City	Description	Type	Location	Size	Notes
Grand Haven	Loutit District Library	Institutional	4th and Columbus	Expansion of the existing facility	Completed
Grand Haven	Country Inn and Suites	Commercial			Project abandoned
Grand Rapids	Helen DeVos Children's Hospital	Institutional	100 Michigan Street, NE	14-story, 440,000-square-foot	Completed
Grand Rapids	Tower 35 Medical Building	Institutional	Across the street from Children's Hospital		
Grand Rapids	Silver Line BRT	Transit	Central Station to 68th Street via Division Ave		In development
Grand Rapids	Relocation of Amtrak Station	Transit	Rapid Central Station		In development
Holland Township	Energet ex	Manufacturing		Build wind turbines	Opening 2013, 50 new jobs
Holland Township	Pfizer/MSU BioEnterprise Center	Institutional / Public	188 Howard Street	138,000 sq ft	Running 25 employees
Holland	Johnson Controls-Saft Advanced Power Solutions	Manufacturing	Meadowbrook and 48th Street	Advanced battery manufacturing	Up & running, 75 employees, another 75 in 12-18 months
Holland	LG Chemical Plant	Manufacturing	SE Holland	Electric vehicle battery plant	Summer 2010 125-150 new jobs

City	Description	Type	Location	Size	Notes
Hudsonville	Summergreen Condominiums (Golf Course)	Residential – MF	New Holland, E. of 36th Ave	158 Units	On hold
Hudsonville	Elmwood Condominiums	Residential -MF	Balsam Dr/Chicago	47 units	Completed
Hudsonville	Residential subdivision – Phase 1	Residential –SF	40th Ave S. of Chicago Dr	11 units	Still under development
Hudsonville	Residential subdivision – Phase 2	Residential -SF	40th Ave S. of Chicago Dr	17 units	
Hudsonville	Residential subdivision	Residential -SF	40th / N. Endura	28 units	2/3 in
Hudsonville	Business center	Commercial	Balsam Dr / N. of Oak	16 x 1400 sq ft	Some businesses taking multiple units
Hudsonville	Pinnacle Center Expansion	Commercial	3330 Highland Dr	74,000 sq ft addition, accommodate 200 more people for events	
Hudsonville	Existing manufacturer moved to new facility	Commercial	S. of I-196, E of 32nd		
Hudsonville	New industry to vacated facility	Commercial	Highland Dr, E of 32nd, E of I-196		
Hudsonville	Winery	Commercial	Chicago Dr / near 37th Ave		
Hudsonville	Microbrewery	Commercial	NE Corner 36th Ave & Allen St		
Hudsonville	High School Expansion	Institutional	32nd Ave N of new Holland	New High School; bus garage	In development

City	Description	Type	Location	Size	Notes
Muskegon	Highpoint Flats Condominiums	Residential – MF	285 West Western (Clay)	30 units	Rehab of Hackley Bank Building, & new two-story addition; no activity
Muskegon	Heritage Square Townhomes	Residential -MF	Clay	2 units current, up to 22 units	Adjacent to Highpoint Flats; 5 units built to-date
Muskegon	New Social Security Office	Institutional	Downtown Muskegon		
Robinson Township	M-231 bypass	Public	Connection between M-45 and the M-104 / I-96 interchange	New 2 lane roadway with bridge over the Grand River	
Zeeland	Gentex Expansion	Manufacturing		Phase 1 of Plant	

3. Surveys and Stakeholder Outreach

This chapter presents the findings of three outreach efforts conducted for the study:

- A random sample statistically valid survey of residents in the West Michigan primary focus area;
- A survey of major employers; and,
- Stakeholder outreach.

3.1 General Public Survey

The Mp2planning consultant team conducted a general public survey in February and March 2012 to obtain statistically valid representative data from the study area. The primary emphasis of the survey focused upon likelihood to use commuter bus transit service. The survey was conducted as a mail back questionnaire with a cover letter from Grand Valley State University. Approximately 12,000 questionnaires were mailed to a sample randomly chosen throughout the study area based on zip code population. Figure 3-1 (page 34) shows the distribution of the original sample. A copy of the questionnaire used for the survey is presented in Appendix A.

3.1.1 Summary of Survey Results

The survey instrument was drafted by the consulting team and reviewed by County staff and stakeholders. The surveys were mailed with a Business Reply Envelope (BRE) and a cover letter on Grand Valley State University letterhead. The surveys were mailed on or about February 24, 2012 and the survey ended on March 19, 2012. The total response was 1,296. When examining the study findings, it is helpful to keep in mind that the results are based on a sample and are therefore subject to sampling variability, often referred to as "sampling error." The "margin of sampling error" depends on the "sample size" and the percentage from the survey that is being examined. Given the population size, a sample size of 1,296 respondents has a "maximum" sampling margin of error of +/- 2.7 percentage points at the "95% confidence level." Table 3-1 (page 35) presents a summary of the survey results. This section discusses the overall results. Section 3.1.2 discusses the results by geographic region.

Question 1 refers to where respondents live and is discussed in Section 3.1.3 (page 38). The second question considered transportation mode for various activities. Many of the respondents selected "drive alone" for such activities as medical care, shopping, and/or going to work, with a high percentage also selecting "ride with another person" for leisure activities, shopping, and medical care. *Less than two percent use public transit for each of the modes of transportation.*

Question 3 presents the interest of respondents or someone in their household of using new regional public transit service for various activities. As an example, 17 percent of the respondents selected "Yes" in using such a service to go to work while 40 percent selected "No", and 13% selected "Maybe". Among the different activities, leisure activities (47%) and shopping (43%) had the highest percentages selecting "Yes" or "Maybe", while going to school had one of the lowest percentages.

Question 4 refers to where respondents work and is not included in this summary. Question 5 asks how long does it take for the respondent to travel one-way to work. The mean response was 21 minutes and the median was 15 minutes (Mean is the average response and median is the mid-point of all responses.). Given that any of the service options would likely require more than an hour (including time getting to and from the bus), this suggests that for most people commuter transit service would realistically not be an attractive option from the simple standpoint of time spent.

Question 6 considers employer parking. Fifty-seven percent of respondents reported their employer offered free parking while less than three percent said they didn't. About 40 percent didn't respond.

Questions 7 through 9 were targeted to respondents in school. Question 7 asked where they went to school and is not reported on here. The question also queried whether respondents live on campus. Almost 6 percent of the overall respondents selected "No", which represents 91% of the respondents providing a response to this question i.e., only two respondents selected "Yes". The low number of completes for this segment is not surprising given that the survey was not targeted to college students specifically.

A question about travel time to campus revealed that students take longer to get to school than typical respondents travel to get to work. Mean travel time was almost 30 minutes while the median was 25 minutes. In response to a question about whether their educational institution offered free parking about two percent of the overall respondents said "No" while three percent said "Yes".

Question 10 posed the question "Where do you travel for most of your shopping (i.e., groceries and other daily needs)?" Almost 30 percent of respondents said Grand Rapids and after that generally the responses varied according to the size of the area with Muskegon and Holland being the next two highest reported areas.

Question 11 was similar to Question 10 but focused on medical needs and again the responses correlated to the size of the community with Grand Rapids being the frequently most cited at 46 percent.

When asked if they had used any public transit system in West Michigan in the last six months, almost 10 percent reported they had while 88 percent said they had not (two percent did not respond).

Question 13 focused on the "likelihood" of respondents, or a member of their household, to use various types of regional bus service in West Michigan. After combining the response categories of "Likely" and "Very Likely", the most popular selection (35%) was new public bus service connecting the major cities in West Michigan. Twenty-four percent would consider a weekday bus service during peak commute hours. Almost thirty percent would consider weekend bus service to another West Michigan city. It should be noted that only the weekday bus service during peak commute hours option fits the definition of FTA commuter transit service. The responses to both Question 3 and 13 are interesting in the level of interest when compared to current use of transit as reflected in Question 1.

When respondents were asked what they would be willing to pay for a one-way trip on a regional bus to a preferred destination, the mean response (average) was $3.89 and the median response (mid-point) was $3.

Several questions were also asked about demographics. Generally, the response percentages increased as the age bracket increased in age range. In terms of household income, the ranges were distributed among the income brackets, with 20% preferring not to answer or providing no response. About 59 percent of the respondents were female.

Figure 3-1 Survey Distribution Map

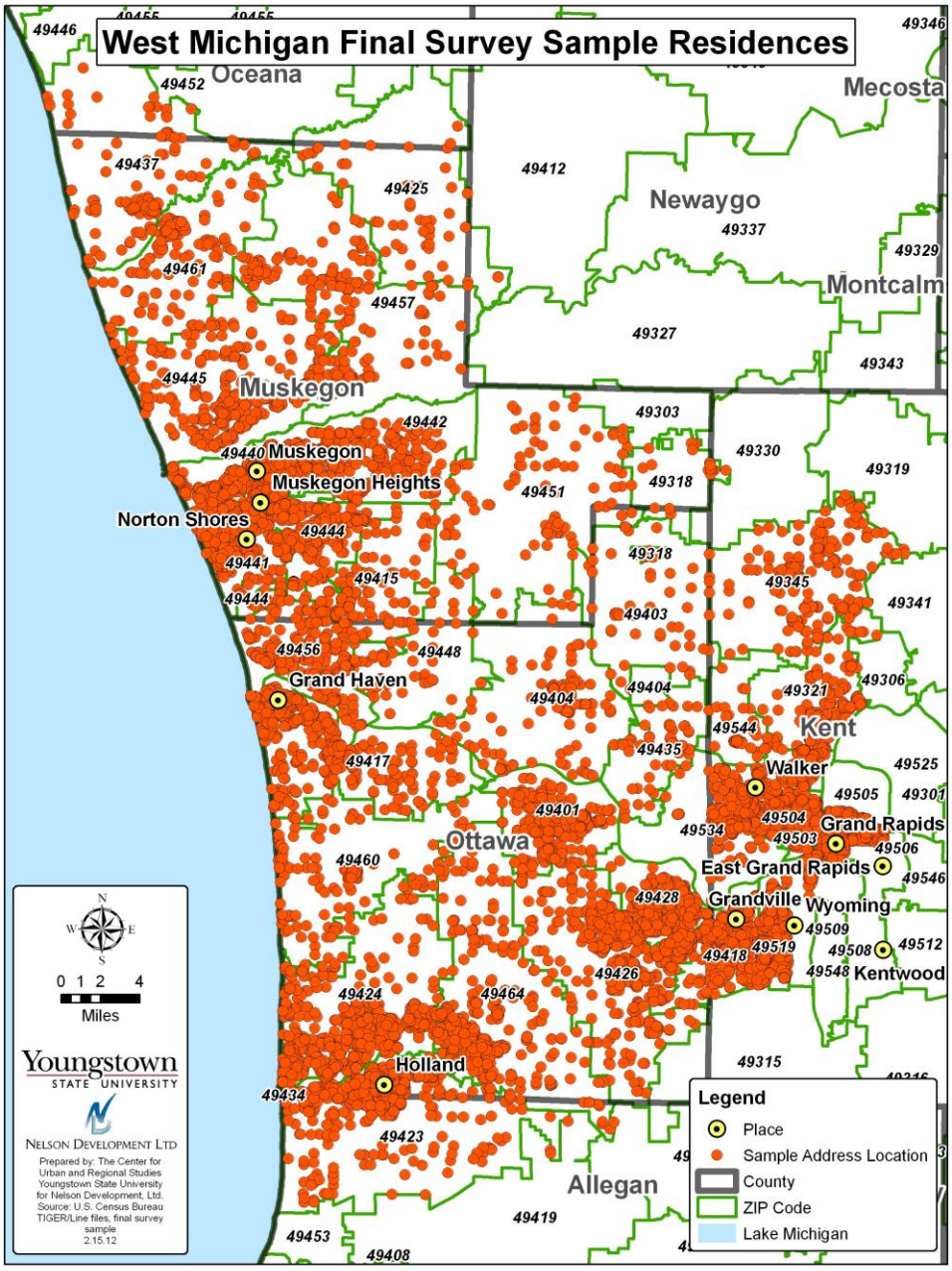


Table 3-1 West Michigan Transit Linkages Study General Public Survey Results

1. In which city/township do you live? What is the zip code? (See Section 3.1.3, Page 38)

2. What is the means of transportation you use most for the following activities? (Please select one response per row)

	Drive alone	Ride with another person	Walk	Ride the bus	Bike	Other	Not applicable	No response / inaccurate response	Total (N)
Going to work	764 (59.0%)	36 (2.8%)	13 (1.0%)	11 (0.8%)	4 (0.3%)	3 (0.2%)	318 (24.5%)	147 (11.3%)	1296 (100.0%)
Going to school	123 (9.5%)	34 (2.6%)	8 (0.6%)	21 (1.6%)	0 (0.0%)	2 (0.2%)	812 (62.7.0%)	296 (22.8%)	1296 (100.0%)
Shopping	855 (66.0%)	300 (23.1%)	5 (0.4%)	22 (1.7%)	4 (0.3%)	6 (0.5%)	12 (0.9%)	92 (7.1%)	1296 (100.0%)
Medical care	930 (71.8%)	215 (16.6%)	4 (0.3%)	17 (1.3%)	3 (0.2%)	7 (0.5%)	28 (2.2%)	92 (7.1%)	1296 (100.0%)
Leisure activities	482 (37.2%)	565 (43.6%)	35 (2.7%)	21 (1.6%)	16 (1.2%)	8 (0.6%)	16 (1.2%)	153 (11.8%)	1296 (100.0%)
Other	251 (19.4%)	124 (9.6%)	25 (1.9%)	15 (1.2%)	27 (2.1%)	14 (1.1%)	81 (6.3%)	759 (58.6%)	1296 (100.0%)

3. The counties and cities in West Michigan are assessing the need for new regional public transit routes that travel beyond city boundaries. Would you or a member of your household be interested in such a service? (Rate EACH activity below)

	Yes	Maybe	No	Don't know	Not applicable	No response / inaccurate response	Total (N)
Going to work	220 (17.0%)	164 (12.7%)	521 (40.2%)	25 (1.9%)	244 (18.8%)	122 (9.4%)	1296 (100.0%)
Going to school	148 (11.4%)	74 (5.7%)	313 (24.2%)	19 (1.5%)	571 (44.1%)	171 (13.2%)	1296 (100.0%)
Shopping	262 (20.2%)	297 (22.9%)	606 (46.8%)	46 (3.5%)	29 (2.2%)	56 (4.3%)	1296 (100.0%)
Medical care	231 (17.8%)	243 (18.8%)	670 (51.7%)	42 (3.2%)	35 (2.7%)	75 (5.8%)	1296 (100.0%)
Leisure activities	256 (19.8%)	349 (26.9%)	528 (40.7%)	60 (4.6%)	28 (2.2%)	75 (5.8%)	1296 (100.0%)
Other	121 (9.3%)	110 (8.5%)	237 (18.3%)	57 (4.4%)	73 (5.6%)	698 (53.9%)	1296 (100.0%)

IF YOU ARE CURRENTLY EMPLOYED, ANSWER QUESTIONS 4 THROUGH 6 (OTHERWISE SKIP TO QUESTION 7)

4. In what city/township do you work? What is the zip code? (See Section 3.1.3, Page 38)

5. On a typical day, how long does it take to travel one-way to work?

In minutes: Mean Response: 20.73 Median Response: 15

6. Does your employer offer free parking?

Response Choice	Frequencies	Count
Yes	57.0%	739
No	2.4%	31
Don't know	0.3%	4
No response / inaccurate response	40.3%	522
Total (N)		**1296**

IF YOU ARE CURRENTLY IN COLLEGE/SCHOOL, ANSWER QUESTIONS 7 THROUGH 9 (OTHERWISE SKIP TO QUESTION 10)

7. In what city/township do you go to college/school? (See Section 3.1.3, Page 38)

What is the zip code? (See Section 3.1.3, Page 38)

Do you live on campus?

Response Choice	Frequencies	Count
Yes	0.2%	2
No	5.6%	72
No response / inaccurate response	94.3%	1222
Total (N)		**1296**

8. If you do not live on campus, on a typical day, how long does it take to travel one-way to college/school?

In minutes: Mean Response: 29.23 Median Response: 25

9. Does your college/school offer free parking?

Response Choice	Frequencies	Count
Yes	2.3%	30
No	3.2%	42
Don't know	0.2%	2
No response / inaccurate response	94.3%	1222
Total (N)		**1296**

10. Where do you travel for most of your shopping (i.e. groceries and other daily needs)? (Check all that apply)

Response Choice	Frequencies	Count
Grand Rapids	29.6%	383
Muskegon or Muskegon Heights	23.0%	298
Holland/Holland Township	22.8%	295
Allendale Township	6.3%	81
Hudsonville/Georgetown Township	14.4%	186
Coopersville	3.1%	40
Zeeland	5.1%	66
Grand Haven area	11.9%	154
Other*	24.0%	311
No response / inaccurate response	19.0%	246
Total (N)		**1296**

*See data file

11. Where do you travel most to see the doctor or go for other medical needs? (Check all that apply)

Response Choice	Frequencies	Count
Grand Rapids	46.0%	596
Muskegon or Muskegon Heights	23.5%	304
Holland/Holland Township	22.1%	286
Allendale Township	3.5%	46
Hudsonville/Georgetown Township	9.7%	126
Coopersville	1.8%	23
Zeeland	7.6%	98
Grand Haven area	10.3%	133
Other*	16.6%	215
No response / inaccurate response	2.3%	30
Total (N)		**1296**

*See data file

12. Have you used any public transit system in West Michigan in the last six months?

Response Choice	Frequencies	Count
Yes	9.6%	125
No	87.7%	1136
No response / inaccurate response	2.7%	35
Total (N)		**1296**

13. What kind of transit service would encourage you or members of your household to consider taking a regional bus in the West Michigan region? Please rate EACH possible service below in terms of its likelihood to encourage you to take a regional transit service.

	1 Not at All	2 Not likely	3 Neutral	4 Likely	5 Very Likely	No response / inaccurate response	**Total (N)**	**Mean Median***
New public bus service connecting the major cities in West Michigan (Grand Rapids, Muskegon, Grand Haven, Holland, Coopersville, Hudsonville/Georgetown Township area, Allendale, Zeeland)	332 (25.6%)	229 (17.7%)	241 (18.6%)	298 (23.0%)	157 (12.1%)	39 (3.0%)	1296 (100.0%)	**2.78** **3.0**
Weekday bus service from my hometown to another West Michigan city during peak commute hours (6:00 am to 9:00 am & 4:00 pm to 7:00 pm)	429 (33.1%)	325 (25.1%)	194 (15.0%)	196 (15.1%)	114 (8.8%)	38 (2.9%)	1296 (100.0%)	**2.40** **2.0**
Weekday bus service from my hometown to another city in West Michigan during midday hours (9:00 am to 4:00 pm)	416 (32.1%)	326 (25.2%)	223 (17.2%)	198 (15.3%)	96 (7.4%)	37 (2.9%)	1296 (100.0%)	**2.39** **2.0**
Weekend bus service from my hometown to another city in West Michigan	360 (27.8%)	243 (18.8%)	258 (19.9%)	262 (20.2%)	120 (9.3%)	53 (4.1%)	1296 (100.0%)	**2.63** **3.0**
Weekday bus service from my hometown to another city in West Michigan during evening hours (after 5:00 pm)	430 33.2%	381 29.4%	212 16.4%	148 11.4%	68 5.2%	57 4.4%	1296 100.0%	**2.23** **2.0**
Weekday bus service from my hometown or work place to and from GVSU in Allendale	666 (51.4%)	298 (23.0%)	138 (10.6%)	57 (4.4%)	71 (5.5%)	66 (5.1%)	1296 (100.0%)	**1.84** **1.0**
From my hometown or work place to and from another college or university (e.g., GVSU Holland, Muskegon County Community College, Davenport University in Holland, etc.)	683 (52.7%)	271 (20.9%)	135 (10.4%)	81 (6.3%)	61 (4.7%)	65 (5.0%)	1296 (100.0%)	**1.84** **1.0**

*Mean and median have been computed without inclusion of "no response / inaccurate response".

14. What is the most you would be willing to pay for a one-way trip on a regional bus to your preferred destination?

$__ __.__ __ Mean Response:$3.89 Median Response: $3

15. What is your age?

Response Choice	Frequencies	Count
Under 18	0.2%	3
18-24	1.6%	21
25-34	8.1%	105
35-44	11.1%	144
45-54	22.8%	295
55-64	25.5%	330
65 or older	28.5%	369
No response / inaccurate response	2.2%	29
Total (N)		**1296**

16. What is your household income range (last year, before taxes)?

Response Choice	Frequencies	Count
Under $15,000	6.9%	89
$15,000 - $24,000	7.6%	99
$25,000 - $34,000	9.6%	125
$35,000 - $49,000	13.7%	177
$50,000 - $74,000	17.5%	227
$75,000 - $99,000	12.0%	155
$100,000 - $149,000	9.3%	120
$150,000+	3.2%	42
Prefer not to disclose	14.1%	183
No response / inaccurate response	6.1%	79
Total (N)		**1296**

17. What is your gender?

Response Choice	Frequencies	Count
Male	36.3%	470
Female	59.3%	768
No response / inaccurate response	4.5%	58
Total (N)		**1296**

3.1.2 Additional Analysis

Question 13 of the survey gauged the respondent's interest in different types of regional transit. Two of the transit types (general regional transit connecting major cities, and weekday commuter service during peak hours) have been cross-tabulated with demographic information from question 15, and 16 in order to show variations in responses by age and income.

Table 3-2 Cross Tab of Questions 13 and 15 (Responses are percentages)

Question 13: Connecting the major cities		**Question 15: What is your age?**					
		Under 18-34	**35-54**	**55-64**	**65 or older**	**No Response**	**Total**
	Not at All	(7.8%)	(28.0%)	(21.0%)	(40.0%)	(1.2%)	(100.0%)
	Not Likely	(10.0%)	(35.8%)	(26.2%)	(27.1%)	(0.9%)	(100.0%)
	Neutral	(10.8%)	(36.5%)	(28.2%)	(23.7%)	(0.8%)	(100.0%)
	Likely	(10.7%)	(37.6%)	(26.2%)	(24.5%)	(1.0%)	(100.0%)
	Very Likely	(13.4%)	(37.6%)	(28.0%)	(18.5%)	(2.6%)	(100.0%)
Question 13: Weekday - (6:00 am to 9:00 am & 4:00 pm to 7:00 pm)		**Question 15: What is your age?**					
		Under 18-34	**35-54**	**55-64**	**65 or older**	**No Response**	**Total**
	Not at All	(8.4%)	(29.6%)	(22.6%)	(38.5%)	(0.9%)	(100.0%)
	Not Likely	(9.2%)	(32.0%)	(29.2%)	(28.6%)	(0.9%)	(100.0%)
	Neutral	(13.4%)	(35.6%)	(25.8%)	(23.7%)	(1.6%)	(100.0%)
	Likely	(8.7%)	(43.9%)	(25.5%)	(20.9%)	(1.0%)	(100.0%)
	Very Likely	(15.8%)	(44.7%)	(25.4%)	(10.5%)	(3.5%)	(100.0%)

Respondents ages 35-54 expressed the most interest in the general concept of a transit service connecting cities in West Michigan and/or a weekday peak hour service. Those under age 34 and over age 65 generally expressed less interest in either option.

Table 3-3 Cross Tab of Questions 13 and 16 (Responses are percentages)

Question 13:			Question 15: What is your household income range (last year, before taxes)?					
Connecting the major cities		Under $15,000 - $34,000	$35,000 - $49,000	$50,000 - $74,000	$75,000+	Prefer Not to Disclose	No Response	Total
	Not at All	(17.8%)	(12.3%)	(17.2%)	(23.8%)	(19.6%)	(9.3%)	(100.0%)
	Not Likely	(22.3%)	(14.9%)	(14.4%)	(29.3%)	(16.6%)	(2.6%)	(100.0%)
	Neutral	(22.8%)	(13.3%)	(18.3%)	(26.1%)	(14.9%)	(4.6%)	(100.0%)
	Likely	(27.5%)	(15.4%)	(19.7%)	(23.8%)	(9.7%)	(4.0%)	(100.0%)
	Very Likely	(37.6%)	(13.4%)	(19.8%)	(19.1%)	(7.6%)	(2.6%)	(100.0%)
Question 13:			**Question 15: What is your household income range (last year, before taxes)?**					
Weekday - (6:00 am to 9:00 am & 4:00 pm to 7:00 pm)		**Under $15,000 - $34,000**	**$35,000 - $49,000**	**$50,000 - $74,000**	**$75,000+**	**Prefer Not to Disclose**	**No Response**	**Total**
	Not at All	(17.7%)	(12.4%)	(18.7%)	(25.9%)	(18.0%)	(7.5%)	(100.0%)
	Not Likely	(24.3%)	(14.8%)	(18.2%)	(24.6%)	(14.8%)	(3.4%)	(100.0%)
	Neutral	(27.8%)	(16.5%)	(14.4%)	(22.1%)	(13.9%)	(5.2%)	(100.0%)
	Likely	(30.6%)	(10.7%)	(16.8%)	(27.6%)	(11.2%)	(3.1%)	(100.0%)
	Very Likely	(32.5%)	(14.1%)	(21.1%)	(22.8%)	(5.3%)	(4.4%)	(100.0%)

As expected, individuals in the lowest income range expressed the most interest in regional transit.

3.1.3 Survey Results by Geographic Distribution

The survey results were also analyzed by geographic distribution (Figure 3-2). Four zip code "clusters" were analyzed:

- 1 – Muskegon/Grand Haven Area (381 respondents)
- 2 – Grand Rapids / Allendale Area (373 respondents)
- 3 – Holland Area (510 respondents)

The purpose of the geographic tabulation analysis is to assist in identifying differences among the three main zip code areas or clusters. The fourth cluster (No response / zip code outside service area) is included as one of the geographic points so that the total number of respondents corresponds with the overall totals set forth in the report.

Following are observations based on the data on some key points relating to the feasibility of regional commuter bus service:

- People in the Muskegon/Grand Haven area are less likely to drive alone to work.

- Relative to being interested in some kind of new regional transit service, the regions are fairly uniform in the percentage of respondents who reported that they or someone in their household may be interested in some type of service as it relates to going to work (15% to 18%).

- Residents in the Muskegon/Grand Haven area reported greater interest in using regional routes for shopping than residents in the Grand Rapids / Allendale Area and Holland Area.

- Residents in the Muskegon/Grand Haven area reported greater interest in using regional routes for medical care and leisure activities than residents in the Holland Area;

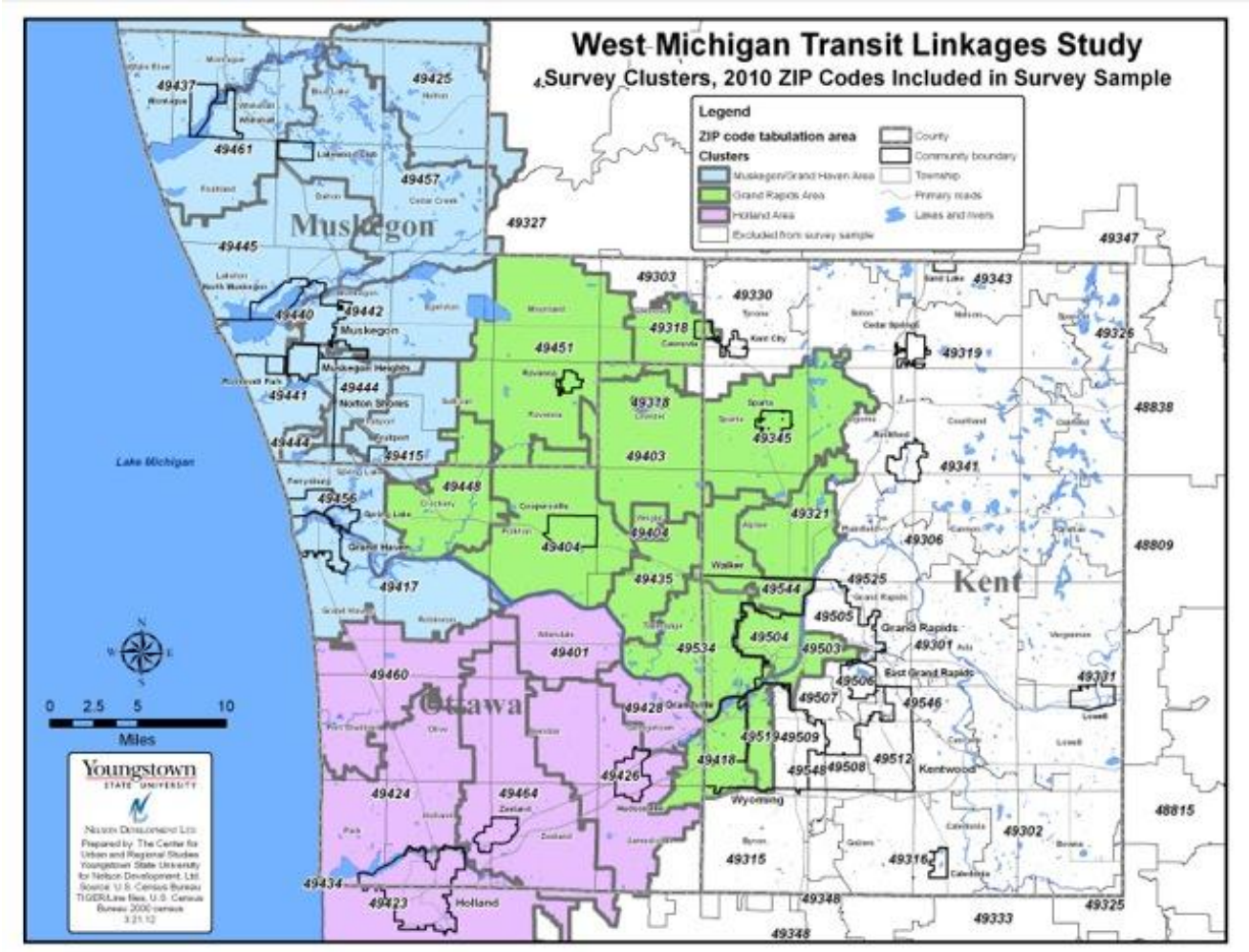
- Seventy-three respondents reported going to school (in response to Question 7 in the survey). Of these, 35 went to the Grand Rapids area, 12 to the Muskegon area, 9 to Allendale, 5 to Holland, and the remainder to diverse locations throughout the area including local high schools and trade schools.

- The Muskegon/Grand Haven area has a longer mean travel time to work (25 minutes) as opposed to the Holland and Grand Rapids/Allendale areas (both under 20 minutes), although the median travel time among the three areas was the same. These travel times suggest that commuter transit service will have to be convenient with a minimum of transfers for people to consider switching from an auto-based trip to a commuter express based trip.

- Respondents from the Muskegon/Grand Haven area are more likely than residents from the Holland or Grand Rapids/Allendale areas to consider using a regional bus service connecting the major cities in West Michigan, weekday bus service to another West Michigan city during peak commute hours, using weekday bus service to another city in West Michigan during midday hours, using weekend bus service to another city in West Michigan, and using weekday bus service to another city in West Michigan during evening hours.

- Respondents from the Muskegon/Grand Haven area were willing to pay more for a commuter bus trip ($5.09) than those from the Grand Rapids/Allendale area ($3.78) or Holland area ($3.08), although respondents from the Grand Rapids/Allendale area were willing to pay more for a commuter bus trip than those from the Holland area.

Figure 3-2 Zip Code Clusters for Banner Analysis



3.2 Employer Survey

A survey of major employers was conducted for Ottawa County in 2009. A total of 24 surveys were completed. The various chambers of commerce provided assistance in soliciting major employers to complete the survey questionnaire. A list of major employers is included in Appendix B. Some major employers, such as Herman Miller, expressed regrets that their company policies forbade them from providing information, while other employers who were asked to complete a survey were unresponsive. As a result, the survey sample size is not representative of all major employers in West Michigan, but provides useful information about several key jobsites. Table 3-2 shows the employers who responded to the survey requests and the location of their primary business office.

Table 3-2 Employer Survey Respondents

Employer	Location
Benteler Automotive	Grand Rapids
Brilliance Audio	Grand Haven
Cascade Engineering	Grand Rapids
Eagle Alloy and Group	Muskegon
Engine Power Components, Inc.	Grand Haven
Farmers Insurance Company (Foremost)	Caledonia
Gentex Corporation	Zeeland
GHSP, Inc.	Grand Haven
Grand Transformers. Inc.	Grand Haven
Harbor Industries Inc.	Grand Haven
Hope Network	Grand Rapids
ITW Drawform	Zeeland
Johnson Controls Inc.	Holland
Knoll Inc.	Muskegon
Light Corporation	Grand Haven
Mead Johnson Nutrition	Zeeland
Mona Shores Public Schools	Muskegon
Perrigo Company	Allegan
Plascore, Inc.	Zeeland
Saint Mary's Health Care	Grand Rapids

Total numbers of employees at these major employers ranged from about 70 to more than 2,800.

The majority of the employers' workforces consist of full-time employees, but some of the employers have part-time employees. Contract employees represent only a small portion of the typical workforce, with one employers contracted workforce representing about 14 percent of the total workforce and another representing about 10 percent.

3.2.1 Seasonal Employees

Only two of the major employers said they make use of seasonal employees, hiring seasonal workers during summer months (May, June, July and August). Based on the total numbers from the employer surveys, these numbers are small and do not represent a potential transit market.

3.2.2 Multiple Worksites

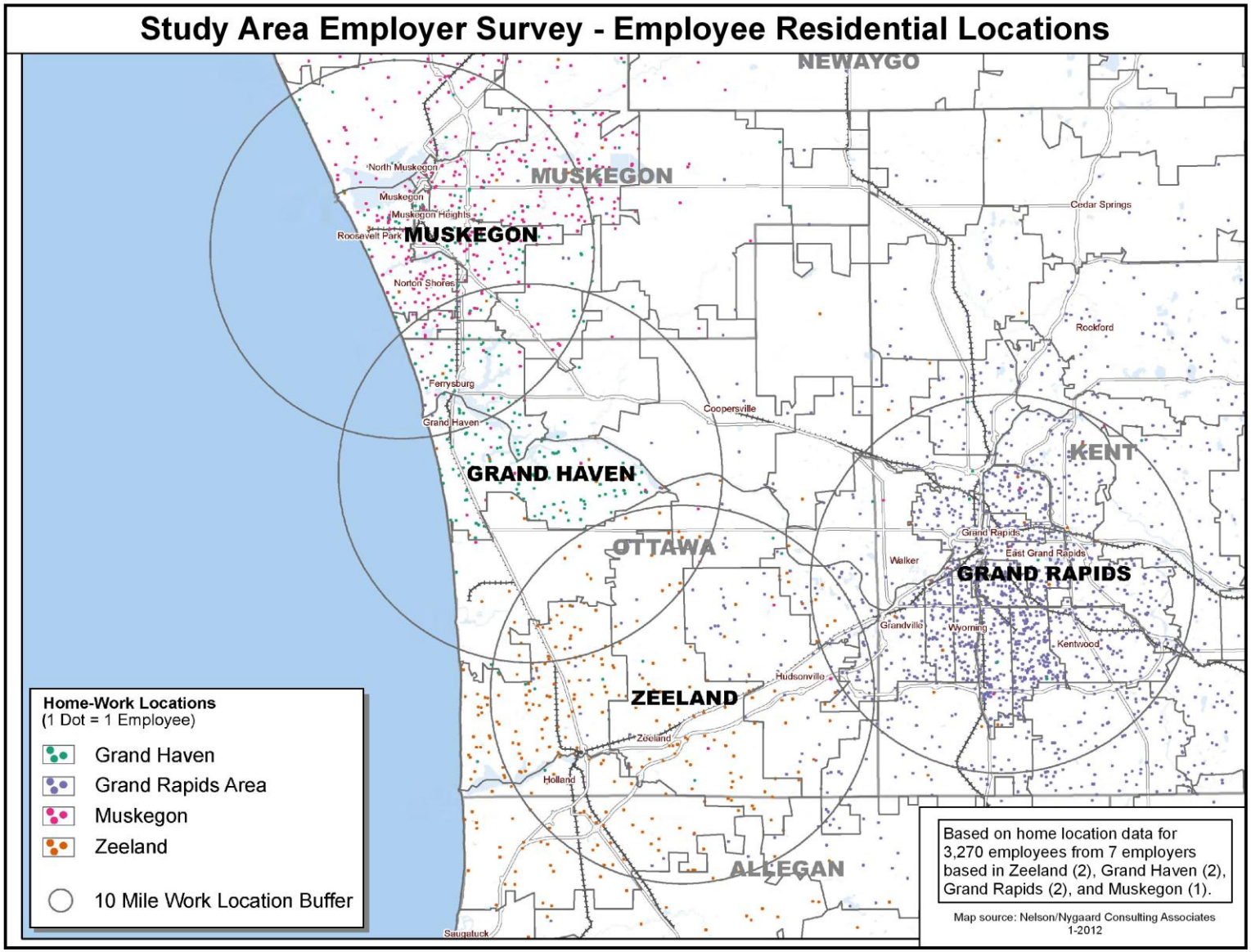
Seven of the employers indicated they have multiple worksites around West Michigan, some of which have several hundred employees. Overall, most of the major employers with multiple worksites indicated their other job locations are in the same city as their primary location or in a neighboring city in Ottawa, Kent or Muskegon County. All of the survey respondents were asked if their employees primarily work at their location(s), or whether they work elsewhere throughout the region, making deliveries, house calls, etc. All of the major employers indicated all of their employees work at one of their jobsites.

3.2.3 Employee Residential Locations

Seven of the employers provided home locations for 3,270 employees at the zip code level. The data included two employers each from Grand Haven, Zeeland, and Grand Rapids/Caledonia (referred to as Grand Rapids), and one from Muskegon.

The map in Figure 3-3 shows the number of employees at each residential ZIP Code who work for these employers. Each color represents a different workplace city, while the various dots represent where employees reside who are traveling to these surveyed employment locations. The map shows that employees are clustered around their work location, with the largest concentrations of employees living within a 5- to 10-mile distance of work. Increasingly smaller concentrations of employees live longer distances from their work location. Large concentrations of employees who work in Grand Rapids and to a lesser extent, Muskegon, live 20 miles or more from work, while few employees live more than 50 miles away from their work site. The data does not indicate which employees work from home; however one employer indicated that employees who live farther than 100 miles away almost certainly work remotely.

Figure 3-3 Surveyed Employee Travel Patterns



3.2.4 Travel to Work

The questionnaire asked employers to identify how their employees commute to work (if the information is available). Based on employer data or estimates, between 75% and 99% of West Michigan employees drive alone to work, with all responses averaging 86% of employees drive alone. Employers indicate that an average of 11% of employees carpool or travel with another employee. None of the employers surveyed charge for parking.

Only very small numbers of employees use transit, although a couple of Grand Rapids-area employers indicated that transit accounts for as much as 5% to 10% of their employee commute modes. Walking to work or bicycling each account for less than 3% of employee commutes.

3.2.5 Work Shifts

Many of the major employers are manufacturers that have multiple work shifts. For these employers, most of them indicated that work hours for office/administrative staff are between 8:00 AM and 5:00 PM. For the production employees, shifts vary. Some employers indicated 24-hour production schedules (some with 12-hour shifts, 6:00 AM to 6:00 PM and 6:00 PM to 6:00 AM), although most of them have three shifts. Typical shift schedules are 7:00 AM to 3:00 or 3:30PM, although some employers have schedules that begin between 10 and 30 minutes earlier than this standard shift. A couple of employers indicated a first shift from 5:45 AM or 6:00 AM to 2:00 or 2:15 PM.

The majority of second shifts run from 3:00 or 3:30 PM to 11:00 of 11:30 PM, and most late-night shifts begin around 11:00 or 11:30 PM and go until 7:00 or 7:30 AM. Some employers indicated Saturday and Sunday are not scheduled workdays (they are scheduled as needed), while others said they have different weekend shifts than the weekday work shifts.

The variety of work shifts is not as much a challenge for commuter transit service compared to the hours of the day that production shifts begin and end. Considering that worksites that are near each other have shifts that begin and end within 30 minutes to an hour of each other, multiple worksites could be served with a two or three trips around typical shift start or end times. Operating transit, however, that serves key employment locations early in the morning and late at night can present challenges, especially considering these trips are likely to attract few riders who do not work these shifts and local transit operators do not provide connecting services at these times.

Employers were asked if their company/organization offers any sort of commuter benefits for employees that use other means of transportation. Only Farmer's Insurance and Perrigo indicated they participate in the GreenRide carpool/vanpool/TDM program.

3.2.6 Support for Public Transit

Employers were asked if they currently provide financial support or purchase services from any local or regional transportation provider. Only one Grand Rapids area employer, Farmer's Insurance, indicated that they do. No other employers provide financial support or purchase services from a transit agency (two employers indicated they were unaware whether they

provided financial support or purchased services).

Employers were also asked whether their company/organization would be interested in providing financial support in exchange for new or enhanced transit services to their employment location. No respondents said they would be interested in paying for service, with five of them responding "no." Nine employers said "maybe," leaving the door open for potential negotiations for private employer support for regional transit. The remaining respondents indicated they could not provide an answer.

3.3 Stakeholder Input

More than 90 individual stakeholders (members of the project Technical Committee, Coordination Committee, six focus groups, and individual in-person and telephone interviews) were consulted for their input regarding perceptions of existing transit, challenges, key issues and priorities for regional transit services. The following discussion provides a qualitative overview of concerns and ideas that reflect the perspectives of members of the community regarding issues that were discussed at the meetings. This information provides additional insight and information about some of the issues raised in the surveys.

3.3.1 Perceptions of Public Transit

Stakeholders were asked to share their impressions and perceptions of existing public transit services. Opinions varied depending on stakeholders' level of familiarity with their existing transit services and also varied based on the community/transit operation. MAX and The Rapid received generally complimentary reviews for their existing services, although a number of stakeholders discussed limitations with both system's schedules and operating areas. Harbor Transit was generally referred to as a somewhat limited service, primarily because individuals must call ahead to reserve a ride on the demand-responsive operation. MATS was repeatedly identified by stakeholders as a "bare bones" service that meets basic needs in Muskegon County but offers neither the service hours nor the types of routes that would be attractive to many non-riders who would be interested in using the bus.

Some of the most interesting observations about existing transit services include the following:

- **Service area boundaries.** Perhaps the most significant frustration among stakeholders– primarily human service agency representatives, workforce development officials and tourism boosters – is the lack of interconnectivity between transit operations in West Michigan and the limited service areas of the existing operators. Although this study is looking at opportunities to provide connections between communities, stakeholders observed that many transit providers only serve a portion of the employers and residences in their community. Interest in an expanded service area was noted for both MAX and MATS; Harbor Transit is now an authority and will provide service in Grand Haven Charter Township in 2012).

- **Reliability.** Comments were made about the reliability of all of the transit services. Many stakeholders said existing transit services are generally reliable, but several of the stakeholders representing medical facilities commented that the reliability of the existing services can be a barrier to getting individuals to their facilities for medical care.

- **Employment impacts of limited regional transit service.** Although some stakeholders identified how transit has been a benefit to major employers (e.g., one stakeholder said that Priceline located in Grand Rapids because of a quality transit system), most stakeholders acknowledged that the lack of regional transit in West Michigan has probably not resulted in a lack of employers locating in the region.

- **Ridership markets.** According to stakeholders most transit riders are students and commuters. A perception exists that in Grand Rapids, bus services are primarily used by students and lower income workers, but many Grand Rapids stakeholders talked about their familiarity with The Rapid and how they or family members used the service from time to time. Some people said they have had a positive experience riding The Rapid, and they think that it is a relaxing way to get around town, although they admit that using the service can be intimidating for the first time. In Allendale, it was noted that transit service was attempted from GVSU to downtown Allendale. After six months of low ridership numbers, the service was discontinued.

Examples of some of the relevant comments are as follows:

- MATS serves the Muskegon area pretty well, but there are holes in the network.
- Most people in Holland think people who ride MAX are low income. Many people in the region have the luxury of not having to worry about transit services.
- How do you get over the stigma of using the bus?
- Existing transit services are not very well advertised. You can find them if you are searching, but there's no information that is particularly helpful.
- There aren't many options for people going to or from Gerald Ford Airport.
- GVSU's Rte. 50 is such a success because it's a straight, frequent and convenient route.

- **Frequencies and service hours.** Other barriers to successful transit service are limited service hours and limited frequencies. Muskegon Community College sees tremendous value in encouraging students to ride MATS, but sees limitations with how its class schedules mesh with transit schedules and how the lack of late service limits the number of students who can use transit to attend evening classes. On the other hand, it was noted that the purchased service from The Rapid in Allendale operates at good frequencies, although vehicle capacity is sometimes inadequate.

- The perception of Harbor Transit riders is that they are seniors, riding the bus for leisure purposes, but the system also serves lower income commuters and people traveling for shopping, while the trolley service is almost exclusively for tourists. MAX's ridership markets, according to stakeholders, include commuters and residents without cars, and the system has a considerable number of Spanish-speaking riders.

- With regard to MAX's demand-response service, human service agency stakeholders noted that the service is curb-to-curb – not door-to-door and therefore does not meet the needs of many individuals. Stakeholders in most of the focus groups agreed that

there is more stigma attached to riding MATS than the other systems, mostly due to its limited network, service hours, and a perception that riders have very low incomes. One stakeholder mentioned that seniors are accustomed to being independent and have a difficult time transitioning to transit, partly because there is a stigma attached to using public transportation. Many stakeholders said they believe marketing is a critical component to encouraging transit use, and those attitudes about public transit need to be challenged for it to be successful.

3.3.2 Priorities for Regional Transit Service

Some stakeholders agreed that there is a need for intercity transit service. Individuals noted that West Michigan is becoming more of a region (rather than separate cities) and that people travel outside their own community for jobs, services, education, recreation and medical appointments. The following sections identify priorities for a regional transit service. According to representatives from school districts, social service agencies, chambers of commerce, medical facilities and tourism organizations, a transit network in West Michigan that is built exclusively to serve work trips will be missing a number of other trip purpose opportunities. Stakeholders said transit should address the various "work-play-live functions" in the region, and thus should serve an array of trips, including the following:

Work Trips: Although stakeholders were somewhat skeptical about the number of people choosing to leave behind their car and opt for transit for some longer-distance work trips, some work trips are considered good candidates for regional transit service. These include the following:

- Locations where employers may subsidize transit passes
- Locations with limited or paid parking, such as GVSU or downtown Grand Rapids
- Major commercial centers/shopping malls with a large number of service sector jobs
- Hotels and other locations where hospitality industry employees would use transit to commute

Medical Trips: Although hospitals are some of the region's major employers, transit ridership is likely to come from patients traveling between medical centers or to specialist appointments and not from employees who work at medical centers.

Education Trips: School district officials noted that regional transit is desirable for recreational and after-school activity trips for students, especially because transit provides a safer long-distance alternative for young drivers, but that college students are more likely to use transit regularly. Some stakeholders indicated that transportation links between community colleges and four-year colleges would benefit a large number of students, and many of the smaller independent colleges said they are already coordinating some services. Stakeholders pointed to the successes of GVSU's transit services, suggesting the services are a model for a regional transit network. The high cost of parking on some campuses (e.g., $250 per year at GVSU or $50 per semester at Cornerstone College) was also noted as a way to encourage college students to ride the bus, and college subsidies of transit passes may also encourage use. For example, Calvin College subsidizes a discounted bus pass whereby students pay $0.50 and the school pays $0.40 for each ride. The fact that GVSU's students ride "free" plays a role in encouraging use of the services in Allendale and between Grand Rapids and Allendale.

Social Service Trips: Regional transit would help fill the gaps that exist, allowing mostly low-income residents and people with disabilities to travel to various human service agencies, court appointments, job-training programs and other public and non-profit agency programs.

Shopping Trips: Shopping was identified as something that happens primarily at the local level, with the exception of some interest in travel from smaller cities to Grand Rapids for specialty shopping. Many stakeholders acknowledged that shopping trips via transit are more likely to be made by very low-income riders without other mobility options because it can be inconvenient to carry packages on the bus. It was also noted that shopping trips can be a politically charged issue: past efforts to provide Harbor Transit service to The Lakes Mall were quashed, according to stakeholders, due to concerns that Grand Haven residents would spend their shopping dollars elsewhere.

Recreational Trips: Although no stakeholders said that recreational trips should be the basis for a regional transit network, many people representing a large number of organizations and potential ridership groups said that one of the great benefits of a regional transit network would be that individuals could ride the bus for recreational purposes. Key destinations would include (1) Grand Rapids, for nightlife, theater, dining, and special events and (2) Lake Michigan for primarily summertime visits to beaches and for outdoor activities. Holland and Grand Haven were both noted as desirable Lake Michigan destinations for visitors to the region and residents of Kent County.

It should be noted that some of the input from stakeholders reflected types of transit trips (e.g. weekend or recreational trips) that are not commonly associated with regional commuter transit service as defined by the Federal Transit Adminstration.

3.3.3 Regional Service Should be Fast and Direct

According to stakeholders, service should be provided with seamless transfers to/from local transit providers. The time it takes to travel on the bus should be competitive with the time it takes to drive between cities.

3.3.4 A Long Service Span is Desirable

A service operating weekdays, early enough to get people to work at 9:00 AM and to leave for home around 5:00 PM would be insufficient, according to most stakeholders. Some stakeholders said that at a minimum, service should begin around 6:30 AM and run until about 8:00 or 9:00 PM. Others talked about shift jobs that begin earlier and end later, suggesting that an even longer service span is necessary. Weekend service for recreational trips is encouraged to operate later into the night, to allow for people to travel home for dinner, movies or special events.

3.3.5 Frequency is not a Critical Element of a Regional System

Most stakeholders understood that a regional bus service would be unlikely to operate at high frequencies, based on the types of trips that would be served and the long distances between

cities in West Michigan. Some social service agency and hospital representatives noted that clients already schedule their appointments based on the bus schedules, and they would work around frequency limitations if the service were to exist. For commuter trips, some stakeholders responded to the consultant's questions that better frequencies are needed during peak travel hours.

3.3.6 There are Specific Destinations for Transit Service

The stakeholders were asked to prioritize which regional transit lines would be the most beneficial for them, their organization, and for West Michigan residents and visitors. The consultants suggested different routings to understand what stakeholders thought would be the most critical links in a regional transit system.

Top Priorities

Muskegon to Grand Rapids: Perhaps the largest groups of stakeholders indicated that a link between Muskegon and Grand Rapids was most likely to benefit commuters and social service users. Some people indicated that Muskegon County has residents who would work in the Grand Rapids area if transportation were available. There was also consensus among the stakeholders representing hospitals and other medical facilities that service between Muskegon County and Grand Rapids (via I- 96) would be the top priority for medical-related trips. It was also noted that this link would provide access between the ferry terminal and Grand Rapids.

Holland to Grand Rapids: Service from Holland, via Zeeland, to Grand Rapids was identified as an important employment transportation connection, as well as a key connection for social services, education and medical trips. Although not deemed as high a priority, a link that would allow Grand Rapids residents and visitors to travel to Holland for recreational purposes (primarily seasonal) was also discussed.

Other Transit Links to Consider

Grand Rapids to Grand Haven: Other than Saugatuck, Grand Haven is viewed as one of the most desirable lakeshore locations for recreational trips. Stakeholders viewed this link as seasonal, and emphasized the importance of providing a connection all the way to Lake Michigan. According to stakeholders, the advantage to visitors of Grand Haven over Holland is that the beaches are within close proximity of shops and restaurants, but some stakeholders said they prefer Holland's beaches.

Muskegon-Grand Haven-Holland: Some stakeholders thought if links were established between Grand Rapids and Muskegon or Grand Rapids and Holland, it would be necessary to provide transit connections along U.S. 31 to link Muskegon with Grand Haven and Grand Haven with Holland. It was noted by some individuals that this could be a seasonal link, but others suggested this is an important commercial and commuter link.

In addition, individual stakeholders talked about the need to provide transit to the Ottawa County Fillmore Complex; to provide links between Allendale and Grand Haven or Holland; and to expand the reach of some of the local transit systems to serve adjacent townships in

Muskegon, Ottawa and Kent Counties, where service is not currently available (e.g., Grand Haven Charter Township for Harbor Transit or Plainfield Township for The Rapid).

3.3.6 Amenities and Marketing Are Needed

Several individuals in the focus groups discussed the importance of making a regional transit network different form the existing transit services, and that this could be accomplished through specific branding and critical amenities. Examples of some the amenities suggested include the following:

- Bicycle racks on the buses
- Park and ride lots with safe and comfortable waiting areas and sufficient capacity
- Luggage compartments on the buses for visitors and to accommodate shoppers
- Seamless transfers and fares between local and regional services
- Safe, accessible, sheltered and heated waiting/ boarding areas
- Internet on the buses

How to market regional transit links was also discussed by some participants. It was noted that high-touch or social marketing – one-on-one outreach and providing information via word of mouth -- is effective as long as information is simple and informative. It was noted that friendly customer service and transit travel training can help people get over the obstacle of using transit for the first time.

Examples of some of the relevant comments are as follows:

- Convenience and safety are top priorities. Stops should be high-amenity and heated. Accessibility is essential.
- Transfers are not desirable, but if they are required a high-frequency shuttle (such as the DASH in downtown Grand Rapids) would be alright.
- Connections to the airport in Grand Rapids and to Amtrak should be explored,
- If transit is provided for medical reasons, people would use it.
- Expansion and frequency improvements for local routes should be explored. Frequency improvements from 60 to 30 minutes can have a huge impact.
- It will be important to establish institutional partnerships with colleges and universities, and possibly churches for park and ride lot locations.

Many people said that “sustainability” was an uncommon word in West Michigan only a few years ago, but now residents see it as an important value. As a result, promoting the service as the “green” option may help build interest and support among young urban professionals. This concept is also attractive to high school and college students, who are becoming more accustomed to using transit and having good experiences on transit (i.e., GVSU students rely on transit and therefore may be more open to using regional bus services when the graduates have their first job in the region). Other concepts that should be emphasized are as follows:

- Productive use of time. By riding regional transit, people can get work done , possibly even use the internet on the bus .
- Emphasize that the bus is “cool”: it’s not only environmentally sound, but it also offers convenience and cost savings.
- Offering free or low cost rides, or monthly passes, which in combination with charges for parking at rider destinations, would be strong motivating factors to use the bus.

Other marketing tools suggested by stakeholders include placing advertisements on college and tourist websites, ensuring newspaper articles are written about the service, and partnering with retailers.

Importantly, stakeholders said that regional bus service should be sold as being "very different" from local bus service, suggesting that people do not necessarily envision themselves as local bus riders.

3.3.7 Other Considerations

Some of the stakeholders in the focus groups and members of the project Coordination Committee offered other challenges or considerations for regional transit services in West Michigan. These include the interest in economic development and the role that regional transit could play. Some stakeholders suggested that West Michigan needs regional transit to promote economic development. It was also noted that private funds have not been sought in the past for public transportation infrastructure or operations and that it could be a challenge to seek private funding.

Another obstacle is the issue of regionalism versus local priorities. Stakeholders noted that rather than everyone doing their own thing, this project provides an opportunity to evaluate what can be done better together. Nevertheless, some people noted that regional thinking is a challenge in West Michigan because there are multiple cities and counties, three separate MPOs, and a limited pot of funds. Some elected officials noted their concerns about what a regional transit network might mean in terms of regional governance. Although some stakeholders said they would support a new regional transit authority, still other individuals voiced strong opposition.

One issue identified in a meeting of the Coordination Committee, but not voiced in many of the stakeholder focus groups, is the need for support systems (local feeder services, parking facilities, pedestrian access) to make regional transit services successful. Some of the local transit operators acknowledged that they struggle to meet the needs in their own communities. Indeed, temporal and spatial gaps exist at the local level, and a new set of regional transit services is unlikely to address those gaps. In fact, new intercity bus links may exacerbate these gaps because individuals who do not have local transit access may be more vocal about their need to access regional services.

Building upon existing partnerships and developing new partnerships focused on regional mobility may be necessary in order to ensure consensus on regional transit alternatives. Nevertheless, some people said regional transportation issues have been studied enough and some people may be skeptical of yet another study.

4. Key Issues and Findings

Technical Memoranda 1 and 2 provide background information for the next phases of the study. This section summarizes the key findings thus far in the study by outlining some of the potential opportunities for regional transit service, as well as possible obstacles or other needs that will be addressed in the definition of service alternatives in the next phase of this study.

4.1 Commuter Bus Routes

Although stakeholders suggested that large numbers of Muskegon and Holland residents would travel via regional bus to Grand Rapids if the service were available, US Census data suggests that these longer distance commutes are not currently as common as they are assumed to be in West Michigan. If transit service were available, some stakeholders suggest this would avail Muskegon or other lakeshore city residents of jobs and educational opportunities in Grand Rapids that they may not currently be able to access due to a lack of transportation. The Journey-to-Work data demonstrates that the Holland to Grand Rapids route is the most used of any of the corridors for work trip flows. The next step will be to propose different routes, prepare ridership estimates and costs, and review available funding to determine the feasibility of introducing these new services.

4.2 Transit Demands/Markets for Regional Transit Service

The 2008 Ottawa County Household Survey[4] found that only 13% of Ottawa County residents would consider using public transit two or more times each week, compared to 21% who said they would bicycle, 23% who said they would walk and 31% who said they would carpool. The Ottawa County Household Survey found that younger adults (age 18-24) were most likely to consider using public transportation (28%). The general public survey conducted as part of this West Michigan Transit Linkages Study reflects similar findings. Less than two percent of respondents use transit for any particular trip purpose. Nonetheless, some respondents expressed interest in some type of regional service.

4.3 Geography and Demographics

The three-county West Michigan region is large and much of it is rural. The distance from Holland to downtown Grand Rapids is about 30 miles; Grand Haven to downtown Grand Rapids is about 35 miles; and Muskegon to Grand Rapids is about 40 miles. Travel along US 31 between Holland and Muskegon is about 35 miles. The demographic data shows very high automobile ownership rates. The general public survey determined that the mean travel time to work for respondents ranges from less than 20 minutes in the Grand Rapids/Allendale areas to 25 minutes in the Muskegon/Grand Haven area.

[4] 2008 Ottawa County Household Survey, sponsored by the Greater Ottawa County United Way, conducted by the Community Research Institute of Grand Valley State University's Johnson Center for Philanthropy, 2008.

4.4 Growth and Development

New employment centers and residential development in West Michigan are not necessarily occurring in areas that are convenient to serve by transit. Increasing population growth in some of the townships, most of which are not connected to local transit systems, is putting pressure on operators like Harbor Transit and MAX to expand their service areas. These higher-growth areas are places where it would be difficult to provide regional transit due to lower household densities and disjointed street networks.

Few locations outside of downtown Grand Rapids have parking limitations or parking facilities that charge for parking (In the survey of major employers, no employer indicated that employees must pay for parking). For example, most of the major manufacturers around Holland and in Zeeland have very large parking lots that can accommodate more employees than currently work at the facilities. GVSU's campuses in Grand Rapids and Allendale are an exception, because "free" bus service for students and staff, combined with pricey parking passes, encourages transit use.

4.5 Local Transit Services

Existing transit services provide local circulation, but do not serve areas outside their jurisdictional boundaries. MATS provides GoBus service to eligible riders throughout Muskegon County, but the general public route structure is essentially limited to the Muskegon-Muskegon Heights area. Harbor Transit provides connections beyond Grand Haven to/from Ferrysburg, Spring Lake, and Grand Haven Charter Township; MAX provides an intercity link between Zeeland and Holland; and The Rapid serves Grand Rapids and several adjacent jurisdictions in Kent County. The only West Michigan transit operations to travel beyond county lines are (1) MAX, because a very small portion of the service area in Holland is located in Allegan County, and (2)The Rapid services purchased by GVSU (Route 50), providing the only existing regional public transit link in West Michigan. Both Georgetown Seniors and Pioneer Resources provide specialized services for transit-dependent populations.

Any regional service will involve an "additional" trip either by car or on the local bus system to get to the service. That means there will be a travel time penalty to using the service. Given that the general public survey indicated most respondents had about a 20 minute one-way travel time to work or school a service is going to have be very convenient to attract "choice" riders.[5]

4.6 Conclusions

The purpose of this study is to evaluate the feasibility of regional commuter bus service as defined by the Federal Transit Administration.

[5] A choice rider is a person who chooses to use transit who has access to an automobile and sufficient resources to drive on a particular trip.

The analysis and information presented in this report suggests that demand for commuter bus service will be limited. This is due to a number of factors. The West Michigan region outside Grand Rapids has low density development, is very spread out, and there is limited local transit service. Because most of the people who live in Kent County work in Kent County the likelihood of Grand Rapids commuters traveling west is low. The greatest potential suggested by the data will be commuters traveling from Holland to downtown Grand Rapids.

Based on the stakeholder analysis and the general public survey results, there is interest in some type of regional connector service. But, this would likely be more for medical, shopping and other uses rather than work trips. With less than ten percent of respondents to the general public survey stating they have used transit in West Michigan in the last six months and the short travel times to work or school (less than 20 minutes in the Holland and Grand Rapids areas) the reality of people doubling (or more) their travel time to use transit is not great. The next phase of the study (Task 3) will consider several commuter bus service options including development of projected ridership and service and administrative characteristics.

A. APPENDIX A: GENERAL PUBLIC SURVEY FORM

West Michigan Transit Linkages Survey

1. In which city/township do you live? _____ What is the zip code?_____

2. What is the means of transportation you use most for the following activities? (Please select one response per row)

	Drive alone	Ride with another person	Walk	Ride the bus	Bike	Other	Not applicable
Going to work							
Going to school							
Shopping							
Medical care							
Leisure activities							
Other							

3. The counties and cities in West Michigan are assessing the need for new regional public transit routes that travel beyond city boundaries. Would you or a member of your household be interested in such a service? (Rate EACH activity below)

	Yes	Maybe	No	Don't know	Not applicable
Going to work					
Going to school					
Shopping					
Medical care					
Leisure activities					
Other					

IF YOU ARE CURRENTLY EMPLOYED, ANSWER QUESTIONS 4 THROUGH 6 (OTHERWISE SKIP TO QUESTION 7)

4. In what city/township do you work? _____ What is the zip code? _____

5. On a typical day, how long does it take to travel one-way to work?
   In minutes: _____

6. Does your employer offer free parking? ☐ Yes ☐ No ☐ Don't know

IF YOU ARE CURRENTLY IN COLLEGE/SCHOOL, ANSWER QUESTIONS 7 THROUGH 9 (OTHERWISE SKIP TO QUESTION 10)

7. In what city/township do you go to college/school? _____

What is the zip code? _____ Do you live on campus? ☐ Yes ☐ No

8. If you do not live on campus, on a typical day, how long does it take to travel one-way to college/school?
   In minutes: _____

9. Does your college/school offer free parking? ☐ Yes ☐ No ☐ Don't know

10. Where do you travel for most of your shopping (i.e. groceries and other daily needs)? (Check all that apply)
   ☐ Grand Rapids ☐ Muskegon or Muskegon Heights ☐ Holland/Holland Township
   ☐ Allendale Township ☐ Hudsonville/Georgetown Township ☐ Coopersville
   ☐ Zeeland ☐ Grand Haven area ☐ Other: _____

11. Where do you travel most to see the doctor or go for other medical needs? (Check all that apply)

☐ Grand Rapids ☐ Muskegon or Muskegon Heights ☐ Holland/Holland Township

☐ Allendale Township ☐ Hudsonville/Georgetown Township ☐ Coopersville

☐ Zeeland ☐ Grand Haven area ☐ Other: _____

12. Have you used any public transit system in West Michigan in the last six months? ☐ Yes ☐ No

13. What kind of transit service would encourage you or members of your household to consider taking a regional bus in the West Michigan region? Please rate EACH possible service below in terms of its likelihood to encourage you to take a regional transit service. (1 = Not at All; 5 = Very Likely).

	1 Not at All	2 Not Likely	3 Neutral	4 Likely	5 Very Likely
A. New public bus service connecting the major cities in West Michigan (Grand Rapids, Muskegon, Grand Haven, Holland, Coopersville, Hudsonville/Georgetown Township area, Allendale, Zeeland)	☐	☐	☐	☐	☐
B. Weekday bus service from my hometown to another West Michigan city during peak commute hours (6:00 am to 9:00 am & 4:00 pm to 7:00 pm)	☐	☐	☐	☐	☐
C. Weekday bus service from my hometown to another city in West Michigan during midday hours (9:00 am to 4:00 pm)	☐	☐	☐	☐	☐
D. Weekend bus service from my hometown to another city in West Michigan	☐	☐	☐	☐	☐
E. Weekday bus service from my hometown to another city in West Michigan during evening hours (after 5:00 pm)	☐	☐	☐	☐	☐
F. Weekday bus service from my hometown or work place to and from GVSU in Allendale	☐	☐	☐	☐	☐
G. From my hometown or work place to and from another college or university (e.g., GVSU Holland, Muskegon County Community College, Davenport University in Holland, etc.)	☐	☐	☐	☐	☐

14. What is the most you would be willing to pay for a one-way trip on a regional bus to your preferred destination?
$__ __.__ __

15. What is your age?

☐ Under 18 ☐ 35-44 ☐ 65 or older

☐ 18-24 ☐ 45-54

☐ 25-34 ☐ 55-64

16. What is your household income range (last year, before taxes)?

☐ Under $15,000 ☐ $35,000 - $49,000 ☐ $100,000 - $149,000

☐ $15,000 - $24,000 ☐ $50,000 - $74,000 ☐ $150,000+

☐ $25,000 - $34,000 ☐ $75,000 - $99,000 ☐ Prefer not to disclose

17. What is your gender? ☐ Male ☐ Female

THANK YOU FOR YOUR TIME

B. APPENDIX B: MAJOR EMPLOYERS

Appendix B: Major Employers

Name	Address	City	Zip code	Type	Number of Employees
Amway Corp.	7575 Fulton St E	Ada	49355	Manufacturing	500+
CSS-USA	8066 Fulton St E	Ada	49301	Security	500+
Perrigo Co.	515 Eastern Ave	Allegan	49010	N/A	2,500
Grand Valley State University	1 Campus Dr	Allendale	49401	Education	500+
Spartan Stores, Inc.	850 76TH Street SW	Byron Center	49315	Grocers	500+
Foremost Insurance Company	5600 Beech Tree Lane	Caledonia	49316	Insurance	500+
Fruitport Community Schools	3255 East Pontaluna Road	Fruitport	49415	NA	NA
ADAC Automotive	5920 Tahoe Drive SE	Grand Rapids	49588	Plastic	500+
American Seating Company	801 Broadway Ave NW	Grand Rapids	49504	Furniture	500+
Amway Grand Plaza Hotel	187 Monroe Ave NW	Grand Rapids	49503	Hotels/Motels/Resorts/B&B	500+
Benteler Automotive	320 Hall St SW	Grand Rapids	49507	Automotive	500+
Calvin College	3201 Burton St SE	Grand Rapids	49546	Education	500+
Cascade Engineering, Inc.	3400 Innovation Ct SE	Grand Rapids	49512	Plastic	500+
Consumers Energy	4000 Clay SW	Grand Rapids	49501	Utilities	500+
Fifth Third Bank	111 Lyon St NW	Grand Rapids	49503	Banks & Credit Unions	500+
Fishbeck, Thompson, Carr & Huber, Inc.	1515 Arboretum Drive, SE	Grand Rapids	49546	NA	NA
GE Aviation	3290 Patterson Ave SE	Grand Rapids	49512	Airports/Aircraft/Airlines	500+
Grand Rapids Community College	143 Bostwick Ave NE	Grand Rapids	49503	Education	500+
Holland Home Corporate Office	2100 Raybrook St SE	Grand Rapids	49546	Senior Care/Housing	500+
Hope Network Corporation	751 Stocking Ave NW	Grand Rapids	49518	Organizations & Non-Profits	500+
Lacks Enterprises, Inc.	5460 Cascade Rd SE	Grand Rapids	49546	Plastic	500+
Mary Free Bed Rehabilitation Hospital	235 Wealthy St SE	Grand Rapids	49503	Hospitals	500+
MC Sports	3160 28th St SE	Grand Rapids	49512	Sports & Recreation	500+
Meijer, Inc.	2929 Walker Ave NW	Grand Rapids	49544	Retail	500+
Pine Rest Christian Mental Health Services	300 68th Street SE	Grand Rapids	49501	Hospitals	500+
Pridgeon & Clay, Inc.	50 Cottage Grove St SW	Grand Rapids	49507	Metal	500+
Priority Health	1231 E Beltline Ave NE	Grand Rapids	49525	Health/Wellness	500+
Saint Mary's Health Care	200 Jefferson Ave SE	Grand Rapids	49503	Hospitals	500+
Spectrum Health	100 Michigan St NE	Grand Rapids	49503	Hospitals	500+
Steelcase Inc.	901 44th St SE	Grand Rapids	49501	Office Furniture/Office Supplies	500+
The Grand Rapids Press	155 Michigan St NW	Grand Rapids	49503	Advertising	500+
Boar's Head Provisions Co., Inc.	284 Roost Ave	Holland	49424	N/A	540
Challenge Manufacturing	1401 S Washington Ave	Holland	49423	N/A	600
Dr Pepper-Seven Up Bottling Group Midwest Division	777 Brooks Ave	Holland	49423	N/A	350
Hart & Cooley Inc.	500 E 8th St	Holland	49423	N/A	500
Haworth Inc.	1 Haworth Ctr	Holland	49423	N/A	1,900
Hydro Automotive Structures	533 Ottawa Ave	Holland	49423	N/A	199
Invensys Appliance Controls	11768 James St	Holland	49424	N/A	320
J. B. Laboratories Inc.	13295 Reflections Dr	Holland	49423	N/A	340
Johnson Controls Inc.	88 E 48th St	Holland	49423	N/A	3,250
L & W Engineering	808 E 32nd St	Holland	49423	N/A	358
Magna Donnelly	3575 128th Ave	Holland	49424	N/A	1,450
Optera Inc.	414 E 40th St	Holland	49423	N/A	250
Priority Health	250 East 8th Street	Holland	49423	NA	NA
Request Foods Inc.	3460 John F Donnelly Dr	Holland	49424	N/A	377
The Holland Group	467 Ottawa Ave.	Holland	49423	N/A	326
Tiara Yachts	725 E 40TH ST	Holland	49423	N/A	1,300
Trans-Matic Manufacturing Co.	300 E 48th St,	Holland	49423	N/A	250
Trendway Corp.	13467 Quincy St	Holland	49424	N/A	298
Royal Plastics Inc.	2905 Corporate Grove Dr	Hudsonville	49426	N/A	700
Diversified Machine Inc.	5353 Wilcox	Montague	49437	NA	NA
CWC Textron	1085 West Sherman Boulevard	Muskegon	49441	NA	NA
Eagle Alloy, Inc.	5142 Evanston Avenue	Muskegon	49442	NA	NA
Johnson Technology, Inc.	2034 Latimer Drive	Muskegon	49441	NA	NA
Knoll, Inc.	2800 Estes	Muskegon	49441	NA	NA
L-3 Communications Combat Propulsion Systems	76 Getty Street	Muskegon	49442	NA	NA
Mercy Health Partners	1500 East Sherman Boulevard	Muskegon	49444	NA	NA
Mercy Health Partners -Hackley Campus	1700 Clinton Street	Muskegon	49442	NA	NA
Michigan's Adventure Amusement Park	4750 Whitehall Road	Muskegon	49445	NA	NA
Mona Shores Public Schools	3374 McCracken Street	Muskegon	49441	NA	NA
Muskegon Public Schools	349 West Webster Avenue	Muskegon	49440	NA	NA
Muskegon, City of	933 Terrace Street	Muskegon	49440	NA	NA
Muskegon, County of	990 Terrace Street	Muskegon	49442	NA	NA

Orchard View Schools	35 South Sheridan	Muskegon	49442	NA	NA
Port City Group	1985 East Laketon Avenue	Muskegon	49442	NA	NA
Reeths-Puffer Schools	991 West Giles Road	Muskegon	49445	NA	NA
Sun Chemical	4925 Evanston Avenue	Muskegon	49442	NA	NA
The Lakes Mall	5600 Harvey Street	Muskegon	49444	NA	NA
Wal-Mart	1879 East Sherman Boulevard	Muskegon	49444	NA	NA
Wal-Mart	3267 Henry Street	Muskegon	49441	NA	NA
Wesco, Inc.	1460 Whitehall Road	Muskegon	49445	NA	NA
Yale Lift-Tech	414 West Broadway Avenue	Muskegon	49440	NA	NA
School District of the City of Muskegon Heights	2603 Leahy	Muskegon Heights	49444	NA	NA
Wolverine World Wide, Inc.	9341 Courtland Dr NE	Rockford	49351	Shoes	500+
Alcoa Howmet	1 Misco Drive	Whitehall	49461	NA	NA
Metro Health	5900 Byron Center Ave. SW	Wyoming	49519	Hospitals	500+
Gentex	600 N. Centennial	Zeeland	49464	NA	3000
Gentex Corp.	10985 Chicago Dr	Zeeland	49464	N/A	2,186
Herman Miller	855 E. Main Ave	Zeeland	49465	NA	2500
Herman Miller Inc.	855 East Main Avenue	Zeeland	49464	N/A	4,320
Howard Miller Clock Co. Inc.	860 E Main Ave	Zeeland	49464	N/A	403
ITW Drawform	500 Fairview	Zeeland	49470	NA	280
Johnson Mead Nutritionals	725 E Main Ave	Zeeland	49464	N/A	375
Mead Johnson	725 E. Main	Zeeland	49467	NA	375
O.D.L. Inc.	215 E Roosevelt Ave	Zeeland	49464	N/A	566
ODL Inc.	215 E. Roosevelt	Zeeland	49468	NA	425
Plascore	615 N. Fairview	Zeeland	49469	NA	300
Sara Lee Corp.	8300 96th Ave	Zeeland	49464	N/A	800