EXECUTIVE SUMMARY REPORT AND STUDY RECOMMENDATIONS

West Michigan Transit Linkages Study

Submitted to: Ottawa County, Michigan

Submitted by:
MP2PLANNING, LLC

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TABLE OF CONTENTS

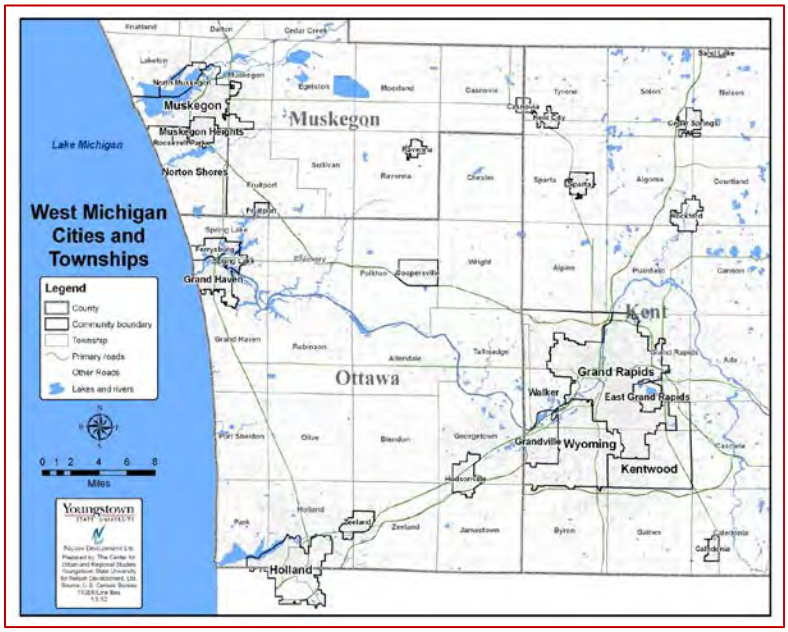
Executive Summary 2
Existing Transit Operators 2
Needs Assessment 3
General Public Survey 3
Employer Survey 4
Stakeholder Input 5
Commuter Transit Service Options 5
Commuter Transit Service Costs 7
Ten-year Operating and Capital Cost Projections 9
Funding 11
Recommendations 14

Executive Summary

The potential for new intercity and inter-county public transit service exists in West Michigan (Figure 1-1). Specifically, the analysis has focused on peak hour commuter transit service as defined by the Federal Transit Administration. Commuter bus service means fixed route bus service, characterized by service predominantly in one direction during peak periods, limited stops, use of multi-ride tickets, and routes of extended length, usually between the central business district and outlying suburbs. 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. To achieve the objectives of this study, analysis has been conducted and is documented in four reports:

- Assessment of Existing Public Transit Services;
- Needs Analysis (Extent of Demand);
- Commuter Transit Service Options; and,
- Commuter Transit Service Feasibility

Figure 1-1 West Michigan Cities and Townships



Existing Transit Operators

There are four public transit authorities in the West Michigan region. 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.

Needs Assessment

Extensive demographic information was collected for the Needs Analysis report. The information was primarily based on 2010 information and illustrated the widespread sprawling nature of residential, employment, and commercial development in West Michigan. Based on those factors and others, the information developed in the *Needs Analysis* report indicates that there could be some demand for regional commuter transit service primarily from Ottawa County and to a lesser extent Muskegon County to Grand Rapids. Significant reverse commute activity is not anticipated. 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. Employment locations are widespread. Based on journey-to-work data, the largest demand will be for commuter transit from Holland to Grand Rapids.

General Public Survey

The 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. The total response was 1,296. The complete analysis of the survey results is included in the Needs Analysis report. Key findings are summarized here.

One 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.*

Another question asked 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 will realistically not be an attractive option from the simple standpoint of time spent.

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.

When asked “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 13 focused on the "likelihood" of respondents, or a member of their household, to use various types of regional bus service in West Michigan. Twelve percent said they would be "very likely" to use a regional bus service connecting West Michigan cities and 8.8 percent said they would be "very likely" to use a bus service during peak commute hours. It should be noted that only weekday bus service during peak commute hours option fits the definition of FTA commuter transit service.

The survey indicated that only very few respondents used transit on a regular basis. More interest was expressed in a regional connection type system than a peak hour service. Most telling perhaps was the fact that the mean travel time to work for employed respondents was 20 minutes. The results of the survey were fairly consistent across the region when analyzed from a geographic perspective.

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. 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. 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.

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

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, Farmers 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.

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.

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 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.

Commuter Transit Service Options

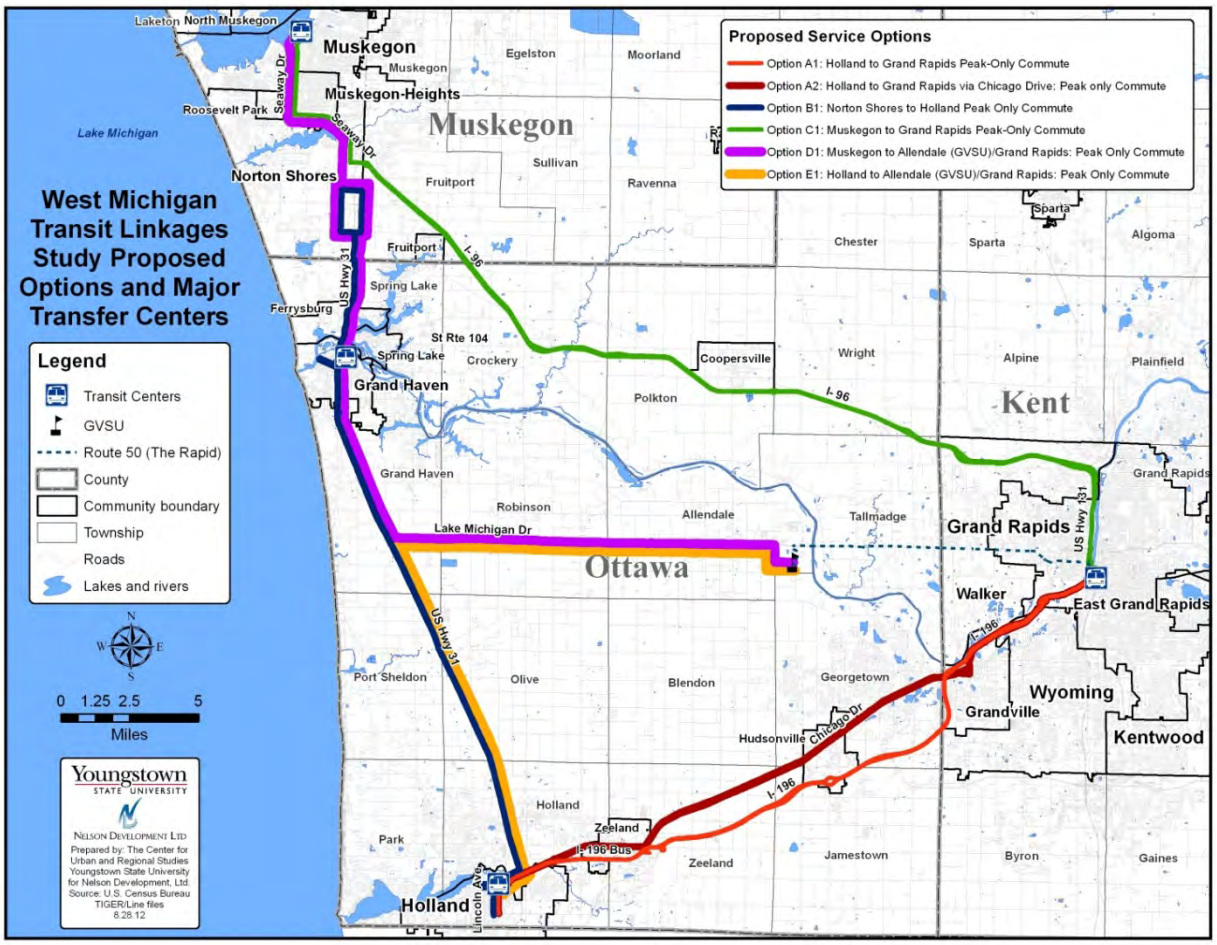
Six different route options for commuter transit linkages in West Michigan that address the potential markets identified through the planning process. Each option includes a sample route alignment, hypothetical schedule, stop and parking locations, and estimates of ridership. The service options identified have been structured to meet the requirements of the FTA's definition of commuter bus service. Figure E-2 illustrates the proposed options and proposed major transfer centers. The options as defined are:

- Option A1: Holland to Grand Rapids via I-196
- Option A2: Holland to Grand Rapids via Chicago Drive
- Option B1: Muskegon/Norton Shores to Holland
- Option C1: Muskego to Grand Rapids
- Option D1: Muskegon to Allendale (GVSU/Grand Rapids)
- Option E1: Holland to Allendale (GVSU/Grand Rapids)

Each option has proposed peak-hour service (with spans of approximately 6 a.m. to 9 a.m. and 4 p.m. to 8 p.m.). The initial level of service developed calls for two buses to operate each option.

The options could be implemented independently or as a system. It is anticipated that 14 vehicles (12 buses and 2 spares) would be required to implement the service.

Figure E-1 Commuter Express Transit Service Options



Ridership projections were developed for each option (with Options A1 and A2 grouped as one corridor and then split based on estimated usage of the I-196 and Chicago Drive corridors). These estimates were based on several factors including: work trip flows between communities, the transit mode split,[1] the likelihood of the general public to use commuter express transit as defined in the general public survey, and the presence of GVSU students. A detailed description of the methodology used to develop this analysis is presented in Appendix A of the *Commuter Transit Service Options* Report. Table E-1 presents the ridership forecasts developed through this analysis.

[1] Transit mode split refers to the percent of trips in a particular area made using public transit.

Table E-1 Ridership Forecasts

		Ridership Estimates and Productivity	
Routes	Annual Vehicle Hours	Estimated Riders	Productivity
A1- Holland to Grand Rapids via I-196	2,988	26,700	9
A-2-Holland to Grand Rapids via Chicago Drive	3,237	17,800	5
B1-Muskegon/Grand Haven to Holland	3,486	24,618	7
C1-Muskegon to Grand Rapids	3,237	9,624	3
D1-Muskegon/Grand Haven to GVSU	3,486	4,419	1
E1-Holland to GVSU	2,490	8,074	3
Total	18,924	91,235	5

Commuter Transit Service Costs

Acquisition of buses will be the greatest capital cost for starting commuter express service. Discussions with local transit agencies indicate there is little likelihood of them being able to provide buses for peak hour service. Based on the proposed commuter bus routes, fourteen buses will be required for the service. (12 for service and 2 spare vehicles). Ordinarily, it would be prudent to have a backup bus for each service option, however, FTA and MDOT stipulations on backup vehicles place a cap of 20 percent spare buses (with the exception that systems with fewer than 10 vehicles can have more spares), so two backups are proposed, one in Holland and one at Harbor Transit or MATS. Assuming 14 vehicles, the initial vehicle acquisition cost if new vehicles are purchased through MDOT's non-urban contract would be $1,525,000. An alternative would be to purchase used buses or have MDOT assign "replacement buses" (vehicles from other systems that have exceeded their useful life (as programmed at the time of manufacture, usually 7 or 12 years).

Operating costs are presented in Table 5-1. For each of the options, the operating cost is presented in two ways, stand-alone and contracted. The stand-alone operating cost for an independent system is based on the average 2011 fully allocated hourly cost for a transit system

in Michigan ($81 per hour, rounded).[2] Alternatively, service may be contracted by an entity with existing agencies (MAX, MATS, Harbor Transit). In this case, the respective hourly rates for each agency that would operate elements of the commuter express service and costs are based on FY 2011 data. [MAX would be $49 ($48.84 actual); MATS would be $46 ($46.20 actual); and Harbor Transit would be $73 ($72.80 actual)].

Table E-1 Operating Cost

	Weekday	**Annual**		
Commuter Express Option	Vehicle Trips per day	Vehicle Hours of Service	Stand-Alone Operating Cost	Contract Operating Cost
A1 / A2 - Holland to Grand Rapids	10 round trips	6,225	$504,225	$305,025
B1 - Muskegon / Grand Haven to Holland	4 round trips	3,486	$282,366	$207,417
C1 - Muskegon to Grand Rapids	5 round trips	3,237	$262,197	$148,902
D1 - Muskegon / Grand Haven to GVSU	4 round trips	3,486	$282,366	$160,356
E1 - Holland to GVSU	4 round trips	2,490	$201,690	$122,010
Total	---	18,924	$1,532,844	$943,710

[2] "Fully allocated costs are the non-capital costs required to operate a transit system including administration, operations, marketing, maintenance, and supplies.

Ten-year Operating and Capital Cost Projections

Ten-year operating cost projections were developed based on the stand-alone operating cost and are shown in Table E-2. These are based on the following assumptions:

1. Implementation of all service options;
2. Estimated stand-alone operating cost;
3. Purchase of new vehicles under the MDOT contract at $125,000; 16% price increase for replacements;
4. Half time administrative position for system start-up; and,
5. Six percent increase annually in operating expenses (MDOT considers up to 15% reasonable).

Table E-2 Cost Projection

Year	Capital	Operating (Stand-Alone)	Operating (Contract)	Administrative
2013	$1,750,000 (buses)			$37,500 (half-time system start-up)
2014	$222,250 (signs/park-and-ride)	$1,532,844	$943,710	1 FTE/included in operating costs, which include administration.
2015		$1,624,815	$1,000,333	See 2014
2016		$1,722,304	$1,060,353	See 2014
2017		$1,825,642	$1,123,974	See 2014
2018		$1,935,180	$1,191,413	See 2014
2019		$2,051,291	$1,162,897	See 2014
2021	$676,667 (replacement buses)	$2,174,369	$1,338,671	See 2014
2022	$676,667	$2,304,831	$1,418,991	See 2014
2023	$676,667	$2,443,120	$1,504,131	See 2014
TOTAL	$4,002,251	$17,614,395	$10,744,473	$37,500

Source: Mp2planning

The six percent annual operating cost increase is an estimate reflects an assessment of inflationary trends (2.77% over the last 1O years, diesel fuel price trends (.8%), and personnel and overhead cost increases (estimated at about 1.5%). It does not reflect any system expansion. The overall cost presented here reflects and estimate of the maximum costs that would be incurred assuming implementation of all service options. Clearly, as outlined in this report there are many variables and ways implementation could occur which will have an effect on cost. Table E-3 presents an itemized cost estimate which provides detailed cost by option.

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Table E-3 Commuter Transit Service – Estimated Itemized Cost

Option	Capital Cost*	Annual Administrative Cost	Annual Operating Cost**	Estimated Passenger Trips	Cost per passenger trip ***
A1 – Holland to Grand Rapids	$375,000 (MDOT Contract), 3 Medium Duty 18-19 pax buses (one is a spare) $100,000 (Park-and-ride improvements) $375 (Bus stop signs)	During the first year of implementation there would be a cost of $37,500 for a half-time administrative position. Once the system was implemented administrative costs would be part of annual operating costs, which includes non-capital costs such as administration, operations, and maintenance.	$252,112 (stand-alone) $152,512 (contract)	26,700	$9.44 (stand alone) $5.71 (contract)
A2 – Holland to Grand Rapids	$250,000 (MDOT Contract), 2 Medium Duty 18-19 pax buses $375 (Bus stop signs)	(See A1)	$252,113 (stand alone) $152,513 (contract)	17,800	$14.16 (stand alone) $8.56 (contract)
B1 – Muskegon / Grand Haven to Holland	$375,000 (MDOT Contract), 2 Medium Duty 18-19 pax buses, 1 spare $375 (Bus stop signs)	(See A1)	$282,366 (stand alone) $207,417 (contract)	24,618	$11.47 (stand alone) $8.42 (contract)
C1 – Muskegon to Grand Rapids	$250,000 (MDOT Contract), 2 Medium Duty 18-19 pax buses $120,000 (Park-and-ride improvements) $375 (Bus stop signs)	(See A1)	$262,197 (stand alone) $148,902 (contract)	9,624	$27.25 (stand alone) $15.47 (contract)
D1 – Muskegon / Grand Haven to GVSU	$250,000 (MDOT Contract), 2 Medium Duty 18-19 pax buses $375 (Bus stop signs)	(See A1)	$282,366 (stand alone) $160,356 (contract)	4,419	$63.90 (stand alone) $19.86 (contract)
E1 – Holland to GVSU	$250,000 (MDOT Contract), 2 Medium Duty 18-19 pax buses $375 (Bus stop signs)	(See A1)	$201,690 (stand alone) $122,010 (contract)	8,074	$24.98 (stand alone) $15.11 (contract)
TOTAL ESTIMATED COST	$1,972,250	$37,500	$1,532,844 (stand alone) $943,710 (contract)	91,235	$16.80 (stand alone) $10.43 (contract)

Funding

Transit funding in Michigan is currently provided to eligible public entities via the Comprehensive Transportation Fund in Public Act 51. Eligible non-urban agencies may receive up to 60% of their eligible operating expenses in reimbursement from State Formula Operating funds. However, only once since the 60% cap was enacted (1997) has the percentage been reimbursed at that level. The current reimbursement rate in state operating funds is 37.37 percent. Federal operating funds from Section 5311 are also available to eligible entities. The current rate of reimbursement is 16%. For FY 2013, just over 52% of a transit agency's operational funding will come from state and federal funding. The balance is made up of farebox revenues, contract fares, and local revenue, usually from a dedicated transit millage or other local appropriation.

The impact of the latest reauthorization of the Federal Transportation funding legislation, Moving Ahead for Progress in the 21st Century (MAP-21), is uncertain; though it appears that capital funding for non-urban transit agencies in Michigan will be severely impacted. This means that the local units of government could be responsible for providing funding for the purchase of vehicles, park-and-ride improvements and the other improvements identified in the report. It should be noted that of the existing agencies only MATS expressed the possibility of providing vehicles.

Funding from an appropriation or dedicated millage will be required to balance the operating budget of any system commuter express option or set of options that is selected and implemented. As mentioned above, local funds are a required element in transit funding in Michigan. "Gap" funding for the short term during a startup period may be required for primarily capital expenses (buses and other equipment). Capital funding for bus purchase takes several years (from time of application to grant award to bus manufacture to actually receiving vehicles. Additionally, if the decision is made to implement the service there will be a need for administrative support for grants, coordination with MDOT, etc. from the beginning. It is estimated that this would require one half-time equivalent position and initial funding would be required to cover this position.

MDOT may be able to assist in possibly reassigning older buses from existing transit agencies, but the most expeditious manner is to purchase used vehicles. If an entire fleet of 14 buses were to be purchased used from other transit agencies or bus dealers, an amount in the range of $150,000 to $400,000 would likely be needed. One issue that results from this type of startup is that a mix (in style, size, and condition) vehicles are usually placed in service, and it takes time to develop a uniform fleet.

Table E-4 presents the Operating and Financial characteristics for the stand alone system as defined in this report. Table E-5 presents the same characteristics for the system operating as a contracted services system to the local transit agencies.

Table E-4

OPERATING AND FINANCIAL CHARACTERISTICS – STAND ALONE OPERATING COST

	Weekday			Annual						
Commuter Express Option	Commuter Workflow	Vehicle Trips per day	Vehicle Hours of Service	Riders	Operating Cost	Federal Funding	State Funding	Local Funding	Farebox Revenue	Local Funding Less Farebox
A1 / A2 - Holland to Grand Rapids	11,972 / 5,983	10 round trips	6,225	44,499	$504,225	$80,676	$188,429	$235,120	$66,749	$168,372
B1 - Norton Shores / Grand Haven to Holland	8,284 / 6,716	4 round trips	3,486	24,618	$282,366	$45,179	$105,520	$131,667	$36,927	$94,740
C1 - Muskegon to Grand Rapids	3,237 / 1,252	5 round trips	3,237	9,624	$262,197	$41,952	$97,983	$122,262	$14,436	$107,826
D1 - Muskegon / Grand Haven to GVSU	337 / 341	4 round trips	3,486	4,419	$282,366	$45,179	$105,520	$131,667	$6,629	$125,039
E1 - Holland to GVSU	240 / 451	4 round trips	2,490	8,074	$201,690	$32,270	$75,372	$94,048	$12,111	$81,937
Total	---		18,924	91,234	$1,532,844	$245,255	$572,824	$714,765	$136,851	$577,914

***Note: "Local funding required" represents the local subsidy required to match state and federal funds less the farebox revenue, which is considered part of local funding by MDOT.**

Table E-5
OPERATING AND FINANCIAL CHARACTERISTICS – CONTRACT OPERATING COST*

	Weekday			Annual						
Commuter Express Option	Commuter Workflow	Vehicle Trips per day	Vehicle Hours of Service	Riders	Contracted Operating Cost	Federal Funding	State Funding	Local Funding	Farebox Revenue	Local Funding Less Farebox
A1 / A2 - Holland to Grand Rapids	11,972 / 5,983	10 round trips	6,225	44,499	$305,025	$48,804	$113,988	$142,233	$66,749	$75,485
B1 - Norton Shores / Grand Haven to Holland	8,284 / 6,716	4 round trips	3,486	24,618	$207,417	$33,187	$77,512	$96,719	$36,927	$59,792
C1 - Muskegon to Grand Rapids	3,237 / 1,252	5 round trips	3,237	9,624	$148,902	$23,824	$55,645	$69,433	$14,436	$54,997
D1 - Muskegon / Grand Haven to GVSU	337 / 341	4 round trips	3,486	4,419	$160,356	$25,657	$59,925	$74,774	$6,629	$68,146
E1 - Holland to GVSU	240 / 451	4 round trips	2,490	8,074	$122,010	$19,522	$45,595	$56,893	$12,111	$44,782
Total	---		18,924	91,234	$943,710	$150,994	$352,664	$440,052	$136,851	$303,201

***Note: "Local funding less farebox" represents the local subsidy required to match state and federal funds less the farebox revenue, which is considered part of local funding by MDOT.**

Recommendations

There are several factors that need to be considered in evaluating the feasibility of commuter transit service at this time.

- **Demand** for commuter transit peak hour service is projected to be limited due to a number of factors including low density residential development and spread out employment locations, relatively short travel times (for most people using commuter transit service would double or more their travel time), general low levels of congestion as opposed to larger urban areas, and prevalence of free or low cost parking.
- **Ridership** is projected to be relatively light ranging from 1 to 9 passengers per hour. A caveat needs to be mentioned – if gas prices rise significantly there could be more demand. Nevertheless, the nature of the peak hour service contrasts with changing employment patterns and the short travel times to work as reflected in the survey do not suggest heavy ridership.
- **Interest** in regional transit in terms of connecting communities was expressed throughout the study.
- **Vehicles (Buses)** will not be readily available. The existing agencies have indicated they do not have vehicles for use in peak hour service. The new legislation associated with MAP 21 could restrict the ability of systems (including start-ups) to get new vehicles. It is not recommended to get used or replacement vehicles but this could be a future option.
- **Funding** from a local unit(s) will be needed. Based on the current economy, budget issues at the government level, and discussions with local transit systems, it is not anticipated that local funds necessary to fund a commuter express transit service as defined in this report will be forthcoming in the near future. An example is the recent millage defeat in Hudsonville of a millage to contract for transit service – the millage was called for by the City of Hudsonville and the funds would have gone to the City at least initially.
- **Local** transit systems could operate portions of the service but as indicated above would not be able to provide vehicles.
- **Four** existing transit authorities with dedicated funding sources are operating in the region.

Based on the work conducted in the study and the observations identified above, the following recommendations are proposed:

1. Based on demand, projected low ridership, and lack of local funding commitment, commuter express service as defined by the Federal Transit Administration should not be implemented.

2. It is recognized that there is interest in regional public transportation as expressed through the study and that changes may occur in the future that would make such a service more productive and efficient. The local stakeholders should consider this

report as a resource for implementation or further study at a point in time when any of the following might occur:

- ✓ Fuel prices reach levels that cause people to actively seek alternative transportation;
- ✓ Economic development factors such as the creation of a large centralized employment destination occur;
- ✓ Unforeseen demographic changes; and,
- ✓ The ability of local units to provide funding for public transportation improvements.

3. Throughout the course of this Study, there were many discussions about the potential to connect existing services that are already close in proximity. For example, Harbor Transit and Macatawa Area Express officials mentioned the fact that their services are only 3 miles apart, and possibly could be connected via an interlocal agreement. A regional connection of this nature could serve as an experimental route that could be built upon in the future if deemed successful.