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Technical Memorandum #2:
Needs Assessment

May 2013

Submitted by:

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Livingston County
Transportation Connectivity Plan

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Needs Assessment

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Livingston County Planning Department

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Transportation Connectivity Plan

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1. Needs Assessment

While the first technical memorandum focused on describing Livingston County's existing transportation system, the second memorandum – Needs Assessment – provides insight into the needs of its users and where the current system is lacking. Besides the inventory information collected on all aspects of the transportation system and previous studies that documented needs and recommendations, the needs assessment is also informed through efforts that involved obtaining feedback from those that operate and use the different elements of the system every day.

This memorandum will begin with a closer look at the existing transit system, the overall mobility needs and potential demands of the County's population and where the gaps in the transit services are. The needs of the other aspects of the transportation system have been obtained through previous studies and documents, stakeholder interviews (that were summarized in the first technical memorandum), an online public survey and a public informational meeting held in November 2012. The result is a comprehensive list of needs and gaps in the existing transportation system to consider as recommendations to improve the connectivity within the County for all users.

2. Transit Need, Demand, and Gap Analysis

2.1. Transit Need and Demand Analysis

2.1.1. Introduction

The Livingston Area Transportation Service (LATS), a subsidiary of the Rochester Genesee Regional Transit Authority (RGRTA) provides public transit service within the county. LATS operates 9 fixed-routes throughout Livingston County, including a medical shuttle into Rochester. Dial-A-Ride service is available in Avon, Dansville, and Mount Morris on weekdays and between all other communities in the county on specific days of the week. LATS also provides human service trips for the Livingston County Department of Social Services and other human services providers in the area. During fiscal year 2010 – 2011, LATS reported total ridership of 245,282 and a total of 608,048 miles driven by its 25 buses. LATS has 29 employees and an annual payroll of $806,160.

One of the key steps in developing and evaluating public transportation plans is an analysis of the mobility needs of the population and the potential transit demand within the population. After identifying both need and demand, and comparing with the current structure of the transit service, it is possible to identify gaps in the service and areas for improvement to better serve potential riders.

An important, though subtle, distinction here is between need and demand. Need refers to the desire for transit service regardless of the presence of transit. Demand refers to the number of transit trips that are likely to be made given a set of service characteristics (e.g., geographic area, price, service frequency, annual vehicle-miles of service).

The estimation techniques for need and demand are based on data available from the U.S. Census Bureau. Much of the data is available in the American Community Survey (ACS), which is an annual survey of approximately 2.5% of households. The ACS replaces the long-form (Summary File Three) of the decennial census. ACS data is made available for each year and rolling three-year and five-year periods. Data for geographic areas with small populations (under 20,000) are only available in the five-year rolling summaries. The most recent five-year ACS data available is for the period 2007 to 2011.

In addition to ACS data, the demand and need analysis uses data from the 2000 Census (Summary Files One and Three) and the 2010 Census. In some cases, due to changes in the available Census products, Census 2010 data or ACS 2007-2011 data did not provide the exact data needed for the estimations. In these instances, Census 2000 data was combined with more recent data to extrapolate the needed information. A final note on data is that in 2008 the Census changed the ACS questionnaire as it relates to disabilities, meaning that data on disabilities was extrapolated using Census 2000 data, a period which used a slightly different definition of disability.

2.1.2. Transit Need

Need for transit services has been calculated using two different methodologies, both contained within *Transit Cooperative Research Program (TCRP) Web-Only Document 49: Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation*. This report is the Interim Workbook for TCRP Project B-36, submitted in December 2009. Work for TCRP B-36 is ongoing. Both of the estimation techniques are done at the county level and thus show need for transit service for Livingston County as a whole.

2.1.2.1. Population Segment Method

The first method for estimating transit need in Livingston County is the Population Segment method, which estimates the number of people in a given geographic area likely to require a passenger transportation service. This method is based on ACS data for two population groups and is shown in the table below.

Table 2-1: Persons with Transportation Needs

Demographic Group	Count	Percent of County
Persons who have income below the poverty level	6,933	11%
Persons residing in households owning no vehicles	2,085	3%

SOURCE: 2011 American Community Survey, 5-Year Average, U.S. Census Bureau, Tables B17001 and B08201

These two population groups, persons below poverty and persons residing in households with zero vehicles, are the two most likely groups to need transit services because they are the most likely not to have access to a private automobile for trips. The total number of persons in Livingston County which are likely to need transit access is 9,018 or roughly 14% of the County population.

2.1.2.2. Mobility Gap Method

The second method used to calculate need is the Mobility Gap method. This approach looks at the difference between the number of trips taken by zero vehicle households and the number of trips taken by one vehicle households. Having a personal automobile increases mobility compared to individuals who must rely on transit, carpooling, walking, or other modes, and this mobility gap is expressed as the difference between the trips taken by zero vehicle households and one vehicle households.

This method relies on information from the National Household Travel Survey. *TCRP Document 49* includes the mobility gap for each of the nine census regions. For the Middle Atlantic region, which includes Livingston County, New York, zero vehicle households made 3.1 trips per day and one vehicle households made 5.9 trips per day, leading to a mobility gap of 2.7 trips per day. In other words, having a car in the Middle

Atlantic region allowed a household to make 2.7 more trips per day than households without cars.

According to ACS data, there are 1,270 households with zero vehicles in Livingston County. Using the mobility gap of 2.7, individuals in these households would make 3,429 more trips per year if they had the mobility of one vehicle households. Based on a 250-working-day year, this is an additional 857,250 trips if all of these trips were taken on LATS.

Both of the methods to calculate need show a significant need in Livingston County. Over 9,000 individuals are in the population groups most likely to depend on transit services for mobility. Also, there are over an estimated 850,000 annual trips not taken by individuals who lack access to automobiles. It is important to note that providing transit service to meet all demonstrated need as defined by these methods is an unrealistic goal for a transit agency due to financial and other considerations. The cost of constructing a system to meet all estimated need would be prohibitive, especially for a rural transit agency. A more appropriate goal for a transit agency is to satisfy demand for its services which is discussed in the next section.

2.1.3. Transit Demand

Demand is distinguished from need by being based on the transportation services available in a defined geographic area, in this case Livingston County. For example, need looks at the population in groups that are often dependent on transit and the mobility gap for households without cars. In reality, many of these people and trips will use transit to satisfy their needs, but other methods may also be used by individuals depending on the specific structure of transportation services in their area and their individual needs. For example some trips may be made by walking or carpooling, some trips may be delegated to friends or family, some trips may be combined with other trips (also known as trip chaining), and some trips may be simply foregone. Demand estimation seeks to determine the expected number of trips taken on transit within a geographic area.

Three methods were used to estimate the potential demand for transit in Livingston County. These methods pertain to demand, irrespective of vehicle type, so they cover both demand-responsive services and fixed-route services:

- TCRP Document 49 Methods
    - Rural Transit Demand Estimation Model
    - Annual Vehicle-Miles Estimation Technique
    - Annual Vehicle-Hours Estimation Technique
- The Arkansas and Arizona Models
- Greatest Transit Needs Index Model

2.1.3.1. TCRP Document 49 Methods

There are several demand estimation methods included in TCRP Document 49, and of these methods, the Rural Transit Demand Estimation Model, annual vehicle-miles estimation technique, and annual vehicle hours estimation technique, were chosen as the most applicable to LATS, because of the demographic and population characteristics of Livingston County.

The Rural Transit Demand Estimation Model was first proposed in *TCRP Project A-3: Rural Transit Demand Estimation Techniques*. This study represents the first substantial research into demand for transit services in rural areas and small communities since the early 1980s (the methodology was updated in 1995). This methodology is further confirmed as a valuable method by *TCRP Document 49*, which recommends using the Rural Transit Demand Estimation Model as one of its preferred demand estimation techniques.

This model uses a logit model approach to the estimation of transit demand that relates the quantity of service to the demographics of an area. This analysis considers transit demand in two major categories:

- *Program demand* – demand generated by transit ridership to and from specific social service programs
- *Non-program demand* – demand generated by other mobility needs of elderly persons, persons with ambulatory disabilities, and persons with below poverty income. Examples of non-program trips include shopping, employment, and medical trips.

This report focuses on non-program demand for LATS services in Livingston County because satisfying demand for program services are adequately met through existing institutional arrangements. The methodology for estimating non-program passenger transportation demand is a function of the following:

- The size of three population groups likely to use a rural passenger transportation service:
  - Seniors (persons aged 60 and over),
  - Persons with disabilities (persons aged 16 to 64 with ambulatory difficulties), and
  - Persons with income below the poverty level (persons aged 64 and under)
- The size of the service area
- The amount of service (measured in annual vehicle-miles) available to each of the population groups

The service area in this case is Livingston County. Transit trips are taken by individuals who are not part of any of the population segments analyzed in this method, but the model accounts for this. The estimation was made by analyzing 185 transit agencies and

the three analyzed population segments were the most statistically meaningful variables. However, because transit trips were taken on the examined agencies by individuals not in the three population segments, the trip rates developed for these population segments are slightly higher than they would be otherwise. As a result, the non-program estimates include 'general public' demand. The mathematical equation used to estimate demand is shown in **Figure 2-1** below:

Figure 2-1: Methodology for Estimating Annual Non-Program Rural Transit Demand

$$D = R_e E\left(\frac{1}{1 + k_e e^{-U_e}}\right) + R_m M\left(\frac{1}{1 + k_m e^{-U_m}}\right) + R_p P\left(\frac{1}{1 + k_p e^{-U_p}}\right)$$

where:

D = annual demand for Non-Program Related passenger transportation. (One-Way Trips per Year)

$R_e = 1{,}200$

$R_m = 1{,}200$

$R_p = 1{,}200$

E = number of persons age sixty or over.

M = number of mobility limited persons age sixteen to sixty-four.

P = number of persons, age sixty-four or less, in families with incomes below the poverty level. The definition of the poverty level is that used for the 1990 U.S. Census.

$k_e = e^{6.38}$

$k_m = e^{6.41}$

$k_p = e^{6.63}$

$$U_e = 0.000510 \times \frac{\text{Annual Vehicle-Miles Available to Elderly Market}}{\text{Area of the County}}$$

$$U_m = 0.000400 \times \frac{\text{Annual Vehicle-Miles Available to Mobility Limited Market}}{\text{Area of the County}}$$

$$U_p = 0.000490 \times \frac{\text{Annual Vehicle-Miles Available to Low-Income Market}}{\text{Area of the County}}$$

As stated above, the estimates were made at the block group level so that relative demand can be shown spatially within the County. The total demand for the entire County by each population segment is shown in **Table 2-2** on the following page.

Table 2-2: TCRP Estimated Demand for Transit Trips

Population Segment	Estimated Demand
Seniors	37,408
Persons with Ambulatory Difficulties	6,803
Persons with Income Below the Poverty Level	14,643
Total	58,494

SOURCES: Calculations based on: Census 2010, SF 1, Table QTP1; Census 2000, SF 3, Table P041; Census 2000, SF 3, Table P087; 2011 American Community Survey, 5-Year Average, Table B17021

Two other methods that are proposed in the TCRP Document 49 use service availability to estimate trips in the study area. The first method is based on annual vehicle-miles of service available and estimates there will be 0.2 trips per vehicle-mile. The second method estimates there will be 3.7 trips per vehicle-hour of service available. These two methods lead to annual ridership estimates of 88,373 and 97,842, respectively.

These methods clearly produce ridership estimates that are too low for Livingston County. The Rural Transit Demand Estimation Model leads to an estimate that is about 1/4 the current LATS ridership. The vehicle-mile and vehicle hour methods produce estimates that are about 1/3 to 1/2 the current LATS ridership.

There are a few possible reasons why the estimates using these models may be wrong. One of the biggest reasons is that none of these methods account for students directly, and the largely student-focused Geneseo Shuttle accounts for almost half of LATS ridership, about 115,000 trips per year out of 245,000 total trips. Unfortunately, as student-focused systems are often more urban in characteristic, the rural demand techniques do not account for them. Also, many university transit systems are run by the universities themselves, meaning they are often treated separately in the available research on rural demand. Teasing out the Geneseo Shuttle trips, the estimates from these methods are a lot closer to matching the remaining ridership from the Dial-a-Ride, demand-responsive, and other fixed-route services.

A similar issue is that parts of Livingston County have more urban characteristics than rural. The research that led to the different estimation techniques likely includes geographies covering small urban areas in addition to rural areas, but the character of these areas might not match those in Livingston County. It is also possible that LATS is simply a very productive system, serving far more riders than would be expected given the vehicle-miles and vehicle-hours of service.

Regardless of the low demand estimations from these methods, the spatial characteristics of the Rural Transit Demand Estimation Model still hold some value. **Figure 2-2** shows the distribution of demand within Livingston County, by Census block group.

2.1.3.2. Arkansas and Arizona Models

The Arkansas Model was developed by SG and Associates for the 1992 *Arkansas Public Transportation Needs Assessment and Action Plan*. The model uses trip rate factors developed for three likely transit using groups (seniors, individuals with disabilities, and individuals below poverty). The equation for the Model is shown below.

UnlinkedPassTrips = (8.4 * Population $\geq$ 65 Years of Age) + (30.0 * Disabled Population $\leq$ 65 Years of Age) + (14.5 * Below Poverty Population $\leq$ 65 Years of Age)

The Arizona Model is an update to the Arkansas Model based on research by Cambridge Systematics. This method was used for the 2008 *Arizona Rural Transit Needs Study*. This is a much more current study that updates the model trip factors, but retains the same approach. The updated trip factors are:

- 6.79 trips per person per year for elderly persons age 60 and over,
- 4.49 trips per person per year for persons with disabilities under age 60, and
- 20.50 trips per person per year for persons living in poverty under age 60.

These two methods were used for the block groups in Livingston County. Not surprisingly, the results are similar. The Arkansas Model estimates 282,219 trips per year. The Arizona Model estimates 234,313 trips per year.

Finally, the Arkansas and Arizona demand estimation models were averaged together to produce one estimate of demand that incorporates both approaches. This was done because they are similar methods but based on slightly different research and slightly different study areas, so an estimate based on the average of the two methods will leverage both sets of research. The results for this model are shown in **Figure 2-3**. Using this method produced an estimate of 258,313 trips per year. Based on current ridership, LATS is meeting 95% of estimated demand.

2.1.3.3. Greatest Transit Needs Index Model

The third method used to estimate demand in Livingston County is the Greatest Transit Need Index Model (GTN). This method is used to compare, contrast, and augment the transit demand estimated using the Rural Transit Demand Estimation Model above. This method has been used in studies around the country including the NE Mississippi Coordinated Transit Service Study and the Johnston County Area Transit System 2011 Community Transportation Service Plan for Johnston County, NC. The method differs notably from the Rural Transit Demand Estimation Model by not estimating an actual expected number of trips, but rather producing a spatial estimation of the areas with the highest demand for transit. The GTN Model looks at the densities of the following groups:

- Zero-vehicle households
- Seniors (aged 60 and over)
- Mobility-impaired (aged 16-64 with an ambulatory difficulty)
- Below Poverty Income (aged 64 and under)

Using these categories, a "transit needs index" is created to determine the areas with the greatest transit need. The procedure that was utilized to estimate the GTN in the Study Area is as follows:

1. Calculate population density of US Census block groups within each user group (zero-vehicle households, seniors, mobility-impaired and below-poverty).
2. Rank the results in numerical order from lowest to highest and divide into six segments. Six segments were chosen in order to reflect a reasonable range that warranted equal representation.
3. Assign numerical scores to each of the six segments. The lowest densities and therefore the lowest transit need were given a score of one. The block groups in the segment with the next lowest densities were given a score of two, and so on. The block groups in the segment with the highest densities and therefore highest transit need were given a score of six. This scoring was completed for each of the categories (zero-vehicle households, seniors, mobility-impaired population, and below-poverty population).
4. After each block group is scored from one to six for the four categories, add all four scores together in order to calculate an overall score.
5. The overall score ranges from four (lowest demand for transit) to 24 (highest demand for transit). From these scores, the final Greatest Transit Need is calculated on a one to six scale with one representing the lowest demand for transit and six representing the highest demand for transit.

Figure 2-4 presents the output for the GTN index which shows spatially how demand is distributed within Livingston County. The results match the results from the Rural Transit Demand Estimation Model and the Arkansas and Arizona Models. The areas with the highest demand in all three sets of demand analyses are the villages, particularly Dansville, Mount Morris, and Geneseo. Nunda, Caledonia, Avon, and Lima all also show considerable transit demand.

2.1.4. Major Trip Generators

In addition to the quantitative need and demand estimation techniques, it is also possible to get a sense of the level of demand for transit services and where demand is located by examining the location of sites and services that are commonly needed. These include the location of major medical centers and hospitals, major employers, shopping centers, grocery stores, human and social services sites, colleges and universities, senior living facilities, and other hubs of activity. The location of the facilities can show where demand is concentrated.

Large employers and agglomerations of employers provide good opportunities for transit service. This is partly because large concentrations of employees all going to one location provide the ideal density to support transit service, but also because work trips are easy to predict and plan for as they generally happen at regular hours every day. Trips like medical or social trips can be harder to account for in a transit system because they are not always regularly recurring nor do they have regularly recurring hours necessarily. **Table 2-3** shows the major employers in Livingston County as noted in Technical Memorandum #1. For the most part, they are located in Geneseo, Mount Morris, and Avon.

Table 2-3: Major Employers

Employer	Location	# Employees[1]
Livingston County	Geneseo, Mt. Morris	1,036
State University of New York at Geneseo	Geneseo	936
Groveland and Livingston Correctional Facilities	Mt. Morris	1,038
American Rock Salt Company	Groveland	253
Nicholas Noyes Hospital	Dansville	357
Star Headlight & Lantern Company	Avon	200
Kraft Foods North America	Avon	350
NYS Department of Environmental Conservation	Avon	200

Other important destinations are government health and human service centers, Noyes hospital, and commercial parcels. Noyes hospital is a 72-bed facility in Dansville. There are concentrations of government health and human services offices, particularly in Dansville, Geneseo, Nunda, Caledonia, and Livonia. There are concentrations of commercial properties in Geneseo, Dansville, and Nunda and along major highways. **Figure 2-5** shows how some major destinations and trip generators are distributed in Livingston County, along with the current LATS routes.

SUNY Geneseo is also a major trip generator, listed among the major employers but worth mentioning on its own because it has its own LATS route to serve the needs of the students, although the Geneseo Shuttle is also available to the general public as well. The Geneseo Shuttle is the component of LATS with the single highest ridership, about 115,000 trips per year. The Shuttle has a small service area focused on the immediate need for transit on and near campus, but there are still a lot of trips to and from campus that are not possible on the shuttle. The campus has a little more than 5,000 students and employs a little fewer than 1,000 staff and faculty.

[1] SOURCE: Greater Rochester Enterprise; Livingston County Industrial Development Agency

2.1.5. Commuting Demand

Another potential generator of transit need and demand is out of county travel, particularly for medical and employment trips. Of these, the medical trips are the hardest to quantify, but trips to Rochester area hospitals and medical facilities may be needed from time to time. Work trips have better data, partly because they occur regularly and predictably. The Longitudinal Employer-Household Dynamics (LEHD) dataset developed by the U.S. Census Bureau provides a wealth of journey to work data for commuting trips and is based on a more complete dataset than the ACS data.

One important finding from the LEHD data is that Livingston County has a significant amount of out-commuting (residents of Livingston County commuting to other counties for work). This is particularly noticeable with Monroe County, where Rochester is located. More Livingston County residents actually work in Monroe County than work in Livingston County. Erie County, where Buffalo is, also has a significant amount of commuting. Error! Reference source not found.shows where Livingston County residents work.

Table 2-4: Place of Work for Livingston County Residents

Monroe County, NY	8,938	35.20%
Livingston County, NY	8,206	32.30%
Erie County, NY	2,113	8.30%
Ontario County, NY	1,017	4.00%
Steuben County, NY	817	3.20%
Wyoming County, NY	732	2.90%
Genesee County, NY	691	2.70%
Onondaga County, NY	457	1.80%
Allegany County, NY	208	0.80%
Cattaraugus County, NY	185	0.70%
All Other Locations	2,039	8.00%

SOURCE: http://lehd.ces.census.gov/

Out of county trips are often expensive for transit systems to serve because of the number of miles that must be driven and the amount of time that drivers must wait for riders to complete their needed trips out of county. Most systems, like LATS, serve out of county medical trips by providing services only on certain days and thereby grouping together several trips into one vehicle. Out of county work trips, particularly when going to a concentrated big city, can be served with express shuttle services, but this requires regional coordination. **Figure 2-6** shows the relative size of commuting patterns for Livingston County residents to other counties. **Figure 2-7** is a heat map, showing concentrations of employment for Livingston County residents. As can be seen,

Rochester and Buffalo are major destinations outside of the county and Geneseo, Avon, and Dansville are major destinations within Livingston County for workers.

2.1.6. On-Board Rider Transit Survey

An on-board survey of LATS riders was conducted as part of this study to better understand the perceptions of the service by riders and the areas where they would like to see improvement. The survey was distributed on-board during the week of November 5, 2012. A total of 24 surveys were received; respondents had the option to provide the survey to the operator or mail it back if they wished more time to complete it. The survey consisted of a total of ten questions.

The full results of the survey are included in **Appendix A**, but the following are the main results.

- A large percentage of survey respondents were likely captive riders, or transit dependent riders. Three-quarters of respondents listed reasons for using LATS that would indicate they may lack suitable alternative options.
- Supporting the claim that many riders may be transit dependent, one third of respondents said they would not have made their trip absent LATS, which shows many rely on LATS to provide access to needed services.
- The most common trip purposes were work, medical/dental services, human/social services, and shopping/personal business.
- Respondents used both the Dial-a-Ride and fixed-route services frequently.
- Overall, respondents were pleased with LATS services. Areas that were particularly praised were convenience, reliability, and safety. Areas that received less praise and which may have room for improvement were service frequency, stop amenities, and the availability of printed, phone, and web information.

In addition to the project-specific survey, it should be noted that LATS performs a quarterly satisfaction survey. These surveys are aimed at overall satisfaction of the service and typically garner five to ten responses.

2.1.7. Needs Identified by Other Studies

The 2011 Genesee-Finger Lakes Region Coordinated Public Transit-Human Services Transportation Plan Update identified several needs for the Genesee-Finger Lakes region and Livingston County specifically. For the region, the report identifies three main areas for improvements: regional and county mobility management, information, and service improvements. For Livingston County, the specific needs identified were:

- Better serving elder social trips
- Improving wait times and night and weekend service
- Increasing service span on weekdays to better accommodate work trips

- Coordination with other groups, like Catholic Charities
- Examining possibilities for improved out-of-county services

This report notes that the county mobility coordinator is a successful position. The 2001 Strategic Plan for Public Transportation in Livingston County is an older report, but identified marketing and publicity and linking LATS with other providers as ongoing needs. Many of this report's proposed initiatives have been adopted; these include: centralized transportation brokerage, a medical shuttle, and fixed-route services.

The Sage Commission issued a 2020 Vision for Aging Services Report in 2011 which identifies a number of goals and strategies related to transportation. The report identifies the growth in the senior population as a major challenge that the Finger Lakes region will face in coming years as the baby-boomers age. One element of this challenge is designing transportation services which can help older adults remain independent. The lack of affordable non-emergency transportation services was noted as a major barrier to seniors enjoying a high quality of life. This plan's recommendations for transportation include better regional coordination, better stop amenities and pedestrian access to transit, and the expansion of volunteer-based transportation programs and services.

2.2. Gap Analysis

2.2.1. Introduction

All of the different demand estimation techniques, the various trip estimation models, the locations of major destinations, and the work commuting patterns data all reinforce some main conclusions. There are areas of high demand for transit services in the urbanized villages, particularly Dansville, Mount Morris, Geneseo, and Avon which are all on the I-390 corridor. Other villages like Nunda, Livonia, Lima, and Caledonia also show considerable demand. These are the locations where there are concentrations of populations that ride transit (seniors, people with ambulatory disabilities, people with incomes below the poverty level, and students) and where major trip generators are like health facilities, human services offices, major employers, commercial properties, and SUNY Geneseo.

The demand analysis included a number of models to predict ridership on a service. On these measures, LATS did extremely well, with more ridership than predicted by some models and almost as much ridership as predicted by others. The need analysis shows that there are still potential transit trips which are not currently being served by LATS. LATS annual ridership meets about 29% of the estimated need; although it should be noted that this is a good result for a transit agency because need is calculated on a non-fiscally-constrained basis, meaning no realistic service could ever fully meet estimated need. Many transit agencies meet less than 10% of need.

Comparing the LATS fixed-routes to the demand analysis shows that the routes serve the locations with demonstrated needs; there are stops in all the major villages that show a high degree of demand. The three Dial-A-Ride services also cover the major areas, although there is not always connectivity and overlap in the services.

2.2.2. Service Gaps

Because LATS does a good job of serving key destinations with at least one fixed-route and Dial-A-Ride service, the primary area for improvement for LATS service is frequency and service span. Service frequency impacts accessibility as much as service locations. Frequency was also an area that was noted in the rider survey as having lower satisfaction than other items. The 2011 Genesee-Finger Lakes Region Coordinated Public Transit-Human Services Transportation Plan Update also identified service improvements, including frequency and span as two of the largest unmet needs for LATS.

Higher frequency fixed-route service makes transit service a viable option for more types of trips. Morning and evening schedules can serve job trips well, but regular service throughout the day can better meet the shopping, personal, medical, and general appointment needs that people have. Higher frequency does carry higher cost, so an idea is to start incrementally by focusing on the most productive routes and serving the most important locations. From the demand analysis, the key corridor to serve will be Dansville to Mount Morris to Geneseo to Avon and back. This is a corridor with a lot of key destinations.

As the LATS system currently functions, the Dial-A-Ride services can largely fill the gaps in the schedules for the fixed-route services for local and short distance trips; the Dial-A-Ride services operate throughout the day but have limited service areas and rotate service areas by day of week. The Dial-A-Ride services do help provide access to mid-day appointments and daily needs like grocery stores and pharmacies, other shopping needs, and social needs.

Another gap is to provide improved connectivity and transfers between routes. The Dansville – Perry route currently does not go to Geneseo. A number of comments from the rider survey addressed the lack of Nunda – Geneseo connection. Because Geneseo is both a frequent destination and a hub for accessing other routes, having all routes go through Geneseo is important. The 2011 Genesee-Finger Lakes Region Coordinated Public Transit-Human Services Transportation Plan Update notes the success of the mobility coordinator to place riders on needed services, but increased coordination, particularly with out of county trips, would be helpful.

Another connection to increase is to expand park-and-ride service to Rochester from the north end of the County. Currently, one bus in the morning leaves Avon and goes to Rochester, via Lima, with one return bus in the evening. Additionally, there is a reverse

commute bus with service from Rochester to Avon in the morning and Avon to Rochester in the evening. As ridership allows, adding a second bus (with later evening hours, especially) will help accommodate more work schedules. Additionally, considering service south of Avon would improve weekday connections to Rochester. (There is, for example, an informal park and ride lot at the intersection of I-390 and US 20A.) Park-and-ride service is helpful as climbing gas costs make long-distance commuting an increasing burden, and as shown in the LEHD data, there are a lot of commuters from Livingston County to Rochester. One option would be to explore quicker express service. The current shuttle takes about twice as long as driving.

One consideration in the gap analysis is the type of trips which are best accommodated by LATS services. Currently, LATS, through its various services, does an excellent job of serving medical trips, which is good because these are critical trips. However, trip purposes that could be better served are work trips, especially those that are not on a traditional schedule; shopping trips; and recreational trips. Social trips for the elderly were identified by the 2011 Genesee-Finger Lakes Region Coordinated Public Transit-Human Services Transportation Plan Update as a trip type which is currently underserved. The fixed-route services often do not run throughout the day, and the Dial-A-Ride services do not always provide the full range of service area coverage that might be needed. Work trips would also be better served by longer service hours.

Connected to this idea of trying to expand the coverage of service types, most villages contain at least one grocery store, but often only one grocery store. This may suffice for the majority of needs, but these stores may not satisfy all needs. For seniors aging in place or below poverty individuals this can pose a problem by limiting choice. The choice can be expanded by easing transfers between different Dial-A-Ride services and making sure common destinations, such as the Walmart, can be reached by most residents.

In addition to connections to grocery stores, an important consideration in food access is the availability of transit service to farmers' markets in the County. The Livingston County Department of Health and the ACHIEVE program have both sought to increase access to fresh foods, with a component of this being to encouraging farmers' markets that are active in many villages like Geneseo, Mt. Morris, Dansville, and Lima. Access to fresh foods is of particular concern for lower-income populations, which are also populations that use transit at higher rates and may rely on transit as the only available means of transportation. Additionally, farmers' markets can be an asset for the local economy by supporting local agricultural businesses and keeping more dollars in-county. Because each farmers' market is only typically active one day a week, regular service is not needed; instead, shuttle service providing connections between the farmers' market and housing developments and senior centers during the active time for the market would be the best means of providing access.

One population with potentially high need for transit, but difficult to gauge, is the agricultural community in Livingston County, particularly the year-round and seasonal farm workers. For these workers, vehicle access can be a particular challenge. Yet, they still need access to banks, grocery stores and other services, particularly for those who live on the farms at which they work as they may be miles from the nearest services. Many have families with children so need access to medical care and social services in addition to regular shopping and similar errands. Most needs are daytime weekday, so potentially well-suited to transit particularly as many farmers currently pay private operators to provide van service. One concern facing many workers is the potential of getting stopped by law enforcement; while most are legal immigrants, not all are and there is a general distrust of law enforcement. Currently, though, Wyoming County is successfully running a shuttle.

A separate, but related, need is for reverse transportation from Rochester into the County. There are workers, immigrants and otherwise, living in low-income housing who work as farm workers in the County. Transportation is difficult and a limiting factor in the ability of the programs to accommodate participants. As these workers typically work at the dairy farms, it is year-round employment and gives them the chance to become settled in the community if they can find the transportation.

Future needs will likely increase for Dial-A-Ride and paratransit service, so these will continue to be vital services into the future. The New York Department of Labor projects the population of Livingston County to be flat or even decline slightly into the future until 2040, the final year of their analysis. However, while they project very little change in total population, they do predict a sizable increase in the number of seniors in the County. An increase in the senior population likely means an increase in the need for demand-responsive, curb-to-curb services like the Dial-a-Ride services (as well as medically-oriented door-through-door).

The increased senior population and disabled individuals and others with mobility challenges represent a specialized transportation need for LATS. These individuals are often prevented from taking traditional bus services because of comfort, physical limitations, and other health concerns. For these individuals, the curb-to-curb and door-through-door services are essential for maintaining independence and mobility. These services are often used to access critical medical care as well as essential services like grocery stores. We can expect the need for these types of services to increase along with the senior population.

The key for the Dial-A-Ride services is to improve connectivity, transfers between services, and ease of use without sacrificing the time period where service is available and total service area. The Dial-A-Ride services are critical for medical trips, work trips to smaller employers, and seniors who are aging in place, and the Dial-A-Ride services or a similar type of service like deviated fixed-route, may be better able to serve some populations and some trip types. The Sage Commission 2020 Vision for Aging Services

Report lists better coordination between organizations and mobility managers in the region as a top priority for transit, recognizing the importance of curb-to-curb transit services.

2.2.3. Access to Transit

In addition to the actual transit service, it is important to ensure that residents are able to physically, and safely, access the transit routes and wait for the transit vehicles. The Sage Commission 2020 Vision for Aging Services Report recommends improvements around transit stops that allow for walkability and provide pedestrian access around transit stops. In much of the county, sidewalks are missing and passengers wait in dirt or snow for the bus.

Stop amenities was one of the items from the rider survey which received the lowest marks. Increasing stop amenities was also one of the strategies identified by the 2011 Genesee-Finger Lakes Region Coordinated Public Transit-Human Services Transportation Plan Update. Improved access to stops and stop amenities can expand the geographic coverage of a service by making more activities and destinations within comfortable walking distance of a stop. Additionally, stop amenities and sidewalks can expand the population willing or able to take transit by making accessing stops and waiting for buses easier.

Also, information on the transit system and schedules is important as well. LATS has made a concerted effort in this area to provide good information in a variety of formats to reach the widest audiences possible. However, information on the system (web, printed, and phone) received some of the lower marks in the rider survey. Further, information availability was one of the top identified gaps from the 2011 Genesee-Finger Lakes Region Coordinated Public Transit-Human Services Transportation Plan Update.

3. Public Survey Results

In order to obtain the thoughts and opinions of the public on the needs and gaps in the County's transportation system, a survey was launched in August 2012. The online based survey was advertised through local publications, websites, and notices distributed via email databases. Hundreds of postcards were also created and distributed at various meetings (including the project's first public meeting), public offices/agencies and commercial establishments.

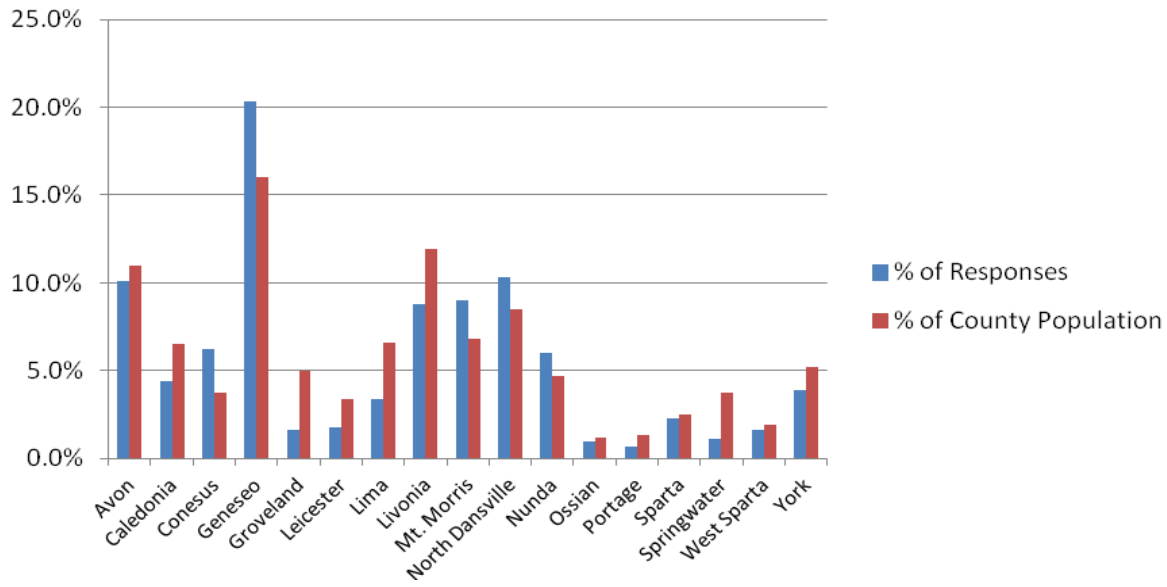
Figure 3-1: Survey Notice/Postcard

While the survey was created to be taken online, a number of hardcopies were distributed to those populations that are not comfortable using the computer or have limited access to the internet through different social groups or public agencies. The survey was closed in January 2013.

The survey consisted of 27 questions that were designed to capture demographic information, existing mode share data, opinions on existing transportation services, preferences regarding shifts to using alternative modes of transportation, detailed information on locations with safety concerns and gaps in the existing system, and overall perceptions of the transportation network. The following is a summary of key findings from the survey but a copy of the final survey, detailed results for each question, and detailed written comments are provided in **Appendix B**.

Approximately 600 people responded to the survey and each of the communities in the county was represented. While representation in the survey does not perfectly match the county's population breakdown, the distribution of survey respondents generally followed the trend of population distribution as shown in **Figure 3-2**.

Figure 3-2: Where Respondents Live



When asked which town or village was most frequently visited for work, shopping or leisure, Geneseo was reported as a destination for the vast majority of respondents – 87% - most likely due to the presence of SUNY Geneseo, regional shopping centers, county government offices, and other large employers. Avon, Livonia, Mt. Morris, and Dansville were also reported as frequent destinations but at a significantly fewer rate than Geneseo.

The vast majority (87%) of Livingston County residents travel using personal automobile, consistent with regional, state, and national trends. The next most common modes are public transit and walking, accounting for 5.8% and 4.8% of respondents, respectively. Only 1% of respondents reported bicycling as their primary choice for transport.

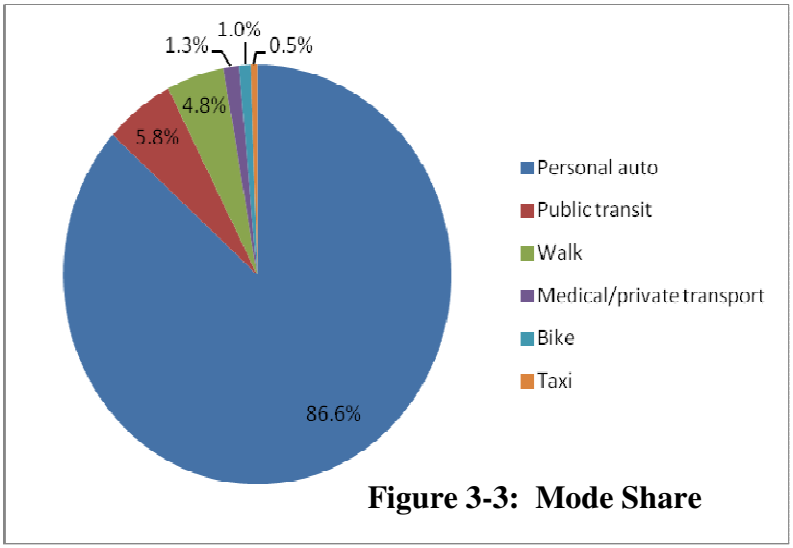
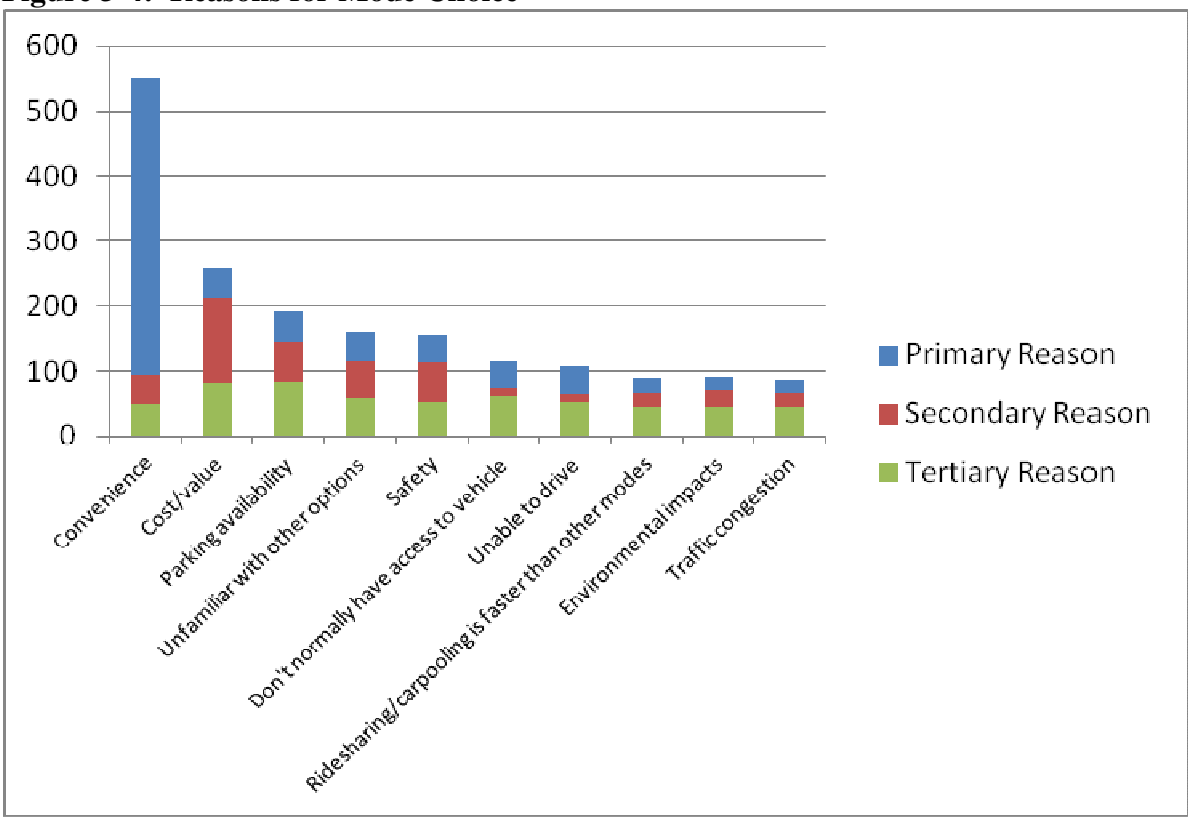


Figure 3-3: Mode Share

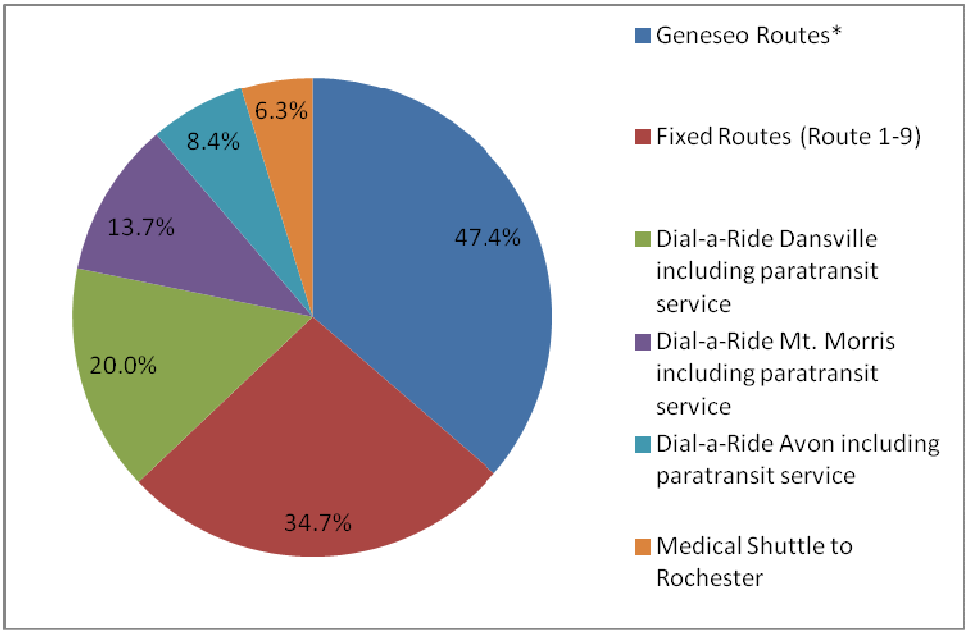
When asked why respondents choose the mode they use, the overwhelming majority (76%) noted "convenience" as the most important reason. "Cost/value" was the most common secondary reason given. It is notable that more than a quarter of respondents noted that they were unfamiliar with other options. This represents an opportunity to provide greater publicity and education for alternative modes of transportation. However, the fact that "traffic congestion" was the lowest scoring response can be an impediment to encouraging people to choose something other than personal automobiles for travel.

Figure 3-4: Reasons for Mode Choice



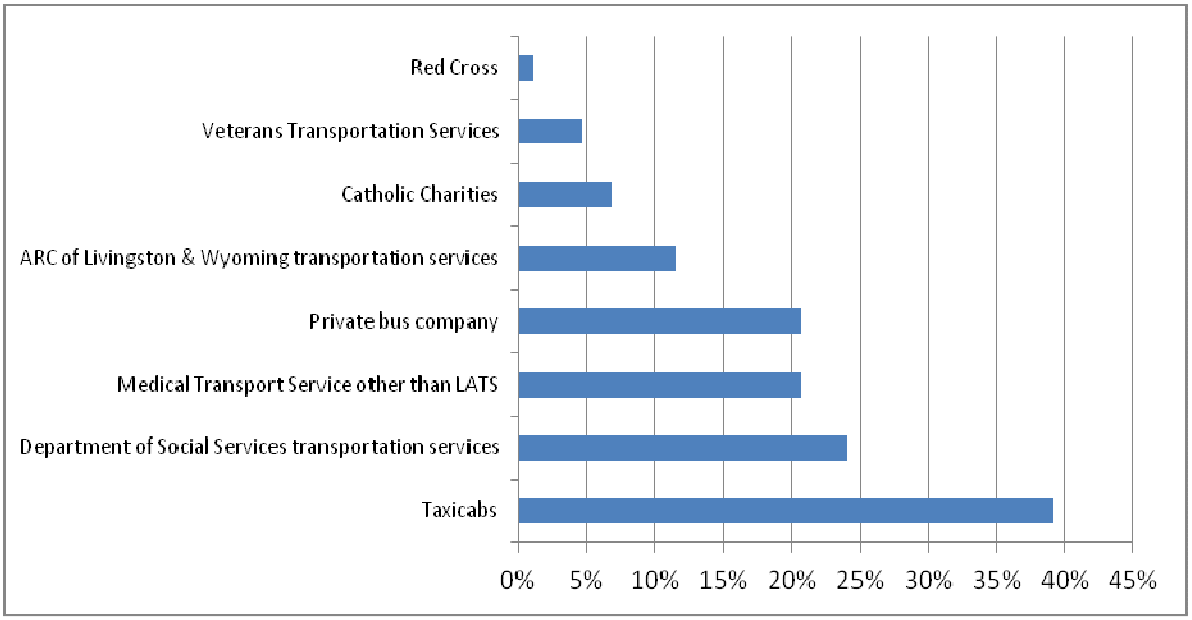
The questions regarding the use of LATS or other transportation services had very limited response rates. Only 95 respondents noted they used a service provided by LATS and only 87 people noted using a transportation service other than LATS. Of those that noted using LATS, 8% use it daily. Other responses, which totaled 17%, represent a population that uses LATS for something other than daily commuting.

Figure 3-5: LATS Services Used



*(Daily, Friday/Saturday to Rochester, Sunday to Rochester)

Figure 3-6: Other Services Used

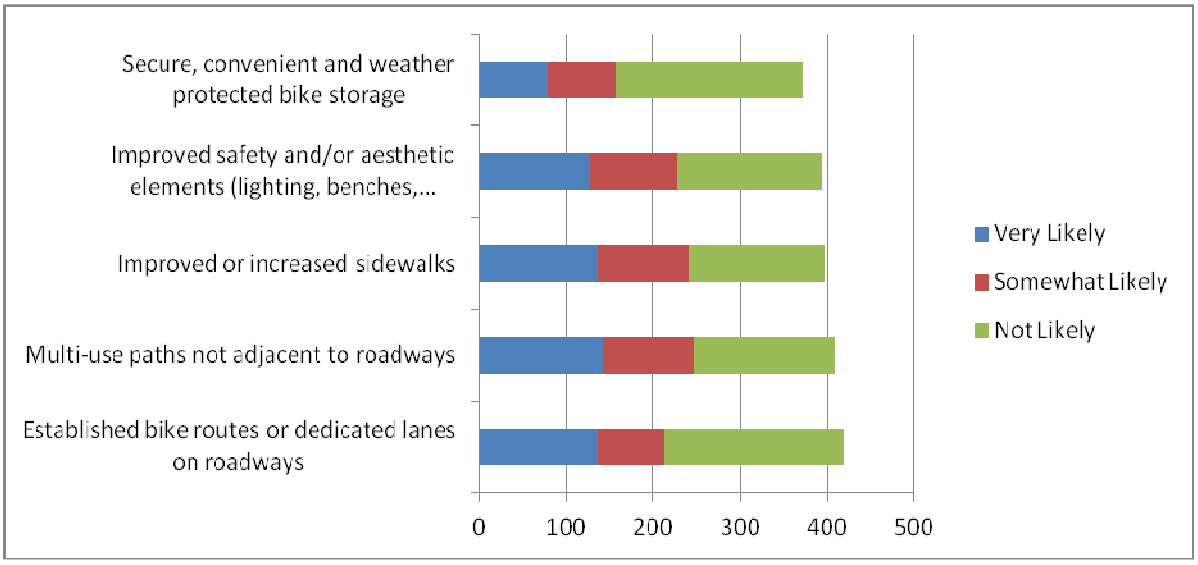


When asked what would encourage the use of LATS, the most significant item noted was the availability of information about services (routes and schedules). The desire for a stop closer to home ranked as the next most important issue. Other key influences noted were more

frequent service, better service outside the county, and flexible service for those with variable or unpredictable departure times.

The respondents were then provided a number of pedestrian and bicycle infrastructure and accommodation and asked how likely they would consider walking or biking if they were made available. Approximately 30% said they would be very likely to consider walking/biking if any of the bottom four incentives in the chart below were available. Improved bike storage scored the lowest in terms of encouraging new walkers/bikers. More than 50% of respondents indicated that they would be likely to walk/bike if multi-use path networks were expanded. Similarly, 46% felt that improved or increased sidewalks would encourage more active transportation. This represents an untapped potential that could be captured by an expanded network of non-automobile infrastructure.

Figure 3-7: Incentives for Walking/Biking

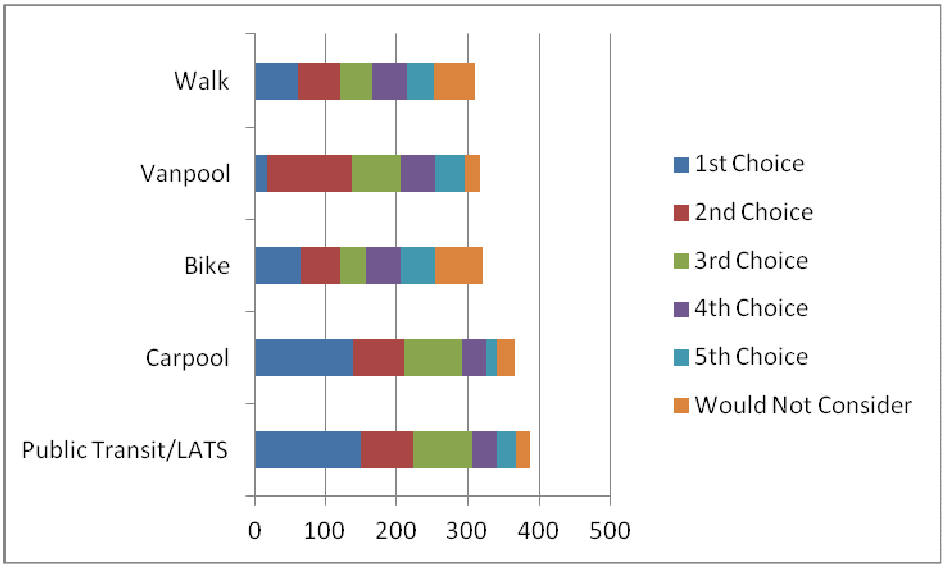


While non-automobile choices are unlikely for many residents, it is important to understand the alternative modes of transportation that represent the greatest opportunity in the community. According to how these modes were ranked as shown in **Figure 3-8**, LATS would be the first choice of one third of respondents, followed closely by carpooling at 29%. Vanpooling appears to be the least popular option, capturing only 4% of first choice votes and having the second lowest overall ranking.

Note that walking and biking had similar numbers of respondents ranking them as a first choice for an alternate to driving (approximately 13%). However, they were also flagged as non-options by the highest percentage of respondents (approximately 13%). While walking and biking are the healthiest, inexpensive, and environmentally-friendly options, their physical nature presents an additional challenge on top of the logistical obstacles shared by other non-traditional modes.

Walking scored low as an alternative to driving. However, in the question discussing incentives for walking/biking, sidewalk improvements ranked high in terms of investments that would encourage more walking/biking. This apparent discrepancy between the responses to these two may be explained by the notion that walking and biking have both recreational and non-recreational value, whereas driving is used mainly for non-recreational purposes (commuting, errands, etc.). Together, these responses suggest that improvements to pedestrian and bicycle infrastructure might capture a small portion of non-recreational trips, but they would also encourage healthier lifestyles in general.

Figure 3-8: Options Considered Other Than Driving Alone



A number of open-ended questions were asked to encourage submitting specific thoughts and information on needs or safety concerns for personal automobiles, public transit, and pedestrians and bicyclists, as well as overall perceptions of the transportation system. Every response, including specific locations with needs, is documented as part of **Appendix B** but a summary of the responses is provided below.

Personal Automobiles

Infrastructure

- Need more/better signage – especially to share the road, warn of truck traffic, alignments as well as speed limit signs
- Need better lighting in rural areas – especially at intersections
- Increased truck traffic is a concern – especially along RT 63
- Safety concerns associated with farm equipment and Amish buggies on the road with fast vehicles and trucks
- Concerns with poor roadway designs – curves, superelevations, drainage/ponding
- Need to improve rail crossings – safety & capacity

- Need to provide bike lanes or better/wider shoulders
- Need to increase sidewalks

Services & Programs

- Maintenance concerns – pot holes, guide railing, pavement markings, snow removal/weather protection, view obstructions (vegetation)
- Need to educate regarding special vehicles on the roadways – farm equipment, Amish buggies
- Speed enforcement and general roadway law enforcement is needed – especially in more rural areas
- Educate both drivers and pedestrians/bicyclists on road safety and regulations

Other

- Concerned with increased driver distractions
- Concerned with animal collisions
- Drivers should stop passing on the right – unsafe for peds/bikes in shoulder

Public Transit

Infrastructure

- Need proper/improved signage at bus stops
- Need more shelters, benches and lighting at bus stops
- Need better access to bus stops – sidewalks, snow removal, etc
- Need better security at stops and on buses – cameras, additional staff on buses
- First step on buses is high and difficult to climb
- Need seat belts on buses
- Concerned with the spread of germs on buses – provide hand sanitizers on the buses

Services & Programs

- Need to increase/change service times to coordinate with work schedules
- Need to improve reliability
- Shuttles to Rochester are often full and therefore uncomfortable
- Concern with driver abilities/safety – especially in winter
- Need help getting on bus
- Perception that focus is on serving students and ARC clients – special needs population
- Need to cross serve with Wyoming County
- Need to market/promote LATS services – a number of people noted they didn't know enough about the service to comment

Pedestrian/Bicycle

Infrastructure

- Generally not enough bike/ped infrastructure – bike lanes, sidewalks, wide shoulders, bike racks, etc
- Need better connections between villages and commercial properties
- Need better connections between different commercial properties along the same roadway
- Need pedestrian level lighting
- Need better ADA compliance
- Need to better maintain existing infrastructure – crumbling sidewalks, lack of snow removal, poor drainage
- Improve warning signage at crossings or along roadways that are frequently used by bike/peds

Services & Programs

- Need education for drivers, pedestrians and bicyclists on rules of the road and safety
- Unleashed dogs are a safety concern
- Need better overall enforcement of laws (right of way, speeds, dog control)

Other

- Concerns over increased truck traffic
- Each group (drivers and ped/bike) blame each other for lack of concern for safety or being distracted

Overall Perceptions

Most comments noted when asked to document overall perceptions of the transportation system echoed responses provided previously. The most common responses were “average”, “good”, “good for a rural area”, and “good for autos but nothing else”. There were a few comments that mentioned the idea of considering or promoting light rail with direct lines to Rochester and preserving existing rights of way to ensure this possibility. The importance of educating the public on services provided, safety and regulations regarding the rules of the road were also repeatedly noted.

While the purpose of the survey was to gather thoughts on needs and gaps in the system, which tend to have a negative connotation, there were numerous positive responses as well. Most notably, people mentioned that they believed the roadways were well maintained considering the climate, rural setting and funding issues for municipalities. There were some positive comments regarding LATS service and their friendly drivers and staff. One respondent praised volunteers and was thankful for the Department of Social Services transportation broker.

4. Public Meeting

When Technical Memorandum #1 was completed and submitted, a public information meeting (or open house as it was advertised) was held in order to present the data in the report as well as gather input from the public. The meeting was held from 5:00 to 7:00 PM on November 27, 2012 at the Big Tree Inn in Geneseo. The room was organized in an open house format with "stations" that provided information and maps for different aspects of the project:

- Welcome & sign-in station
- Introduction & Background – included project vision and purpose, study area and key destinations, environmental considerations, and county demographics
- Auto/Truck inventory
- Air/Rail/Water access inventory
- Walk/Bike inventory
- Transit
- Public survey & comments

As a result of a promotional campaign that included email notifications, flyers, and press releases to local publications, approximately 50 people attended the meeting. The following comments were submitted:

- A group of SUNY Geneseo employees would like to have the pilot LATS route from Nunda to Geneseo back as a permanent service
- Consider the potential to use air transport for life threatening or unique/special needs cases – equipping capability in the County Air Fields & Dansville
- Would like to consider passenger train from Geneseo to Rochester
- Consider bike sharing
- Need to connect trails
    - Between York (Greigsville at RTS 36 & 63) and Geneseo/Leicester
    - Between Geneseo and the Genesee Valley Greenway (consider using Big Tree Lane)
    - Little Italy Trail from Groveland Secondary Trail to Genesee Valley Greenway (mostly following abandoned railway beds)

Detailed meeting summary and detailed comments are provided in **Appendix C**.

5. Summary of Needs from Existing Studies

Technical Memorandum #1 summarized the key recommendations from the numerous existing studies and plans that have been reviewed. This section of Technical Memorandum #2 summarizes the needs that were identified which led to the recommendations made or inferred from the recommendations themselves. The needs are organized by type of need – capital improvement/infrastructure, services and programs, and policy and planning. The tables are further broken down by mode of transportation with specific projects or locations identified, where applicable. **Appendix D** includes a more detailed list of the needs separated by mode and then by document.

5.1 Infrastructure Needs

Table 5-1: Infrastructure Needs from Existing Studies

Infrastructure			
Mode	**Need**	**Document(s)**	**Location (county-wide or specific)**
Multi-Modal	Improve trailhead parking & amentities	GTC TIP: 2011-2014, GTC Regional Trails (2002/2004)	County-wide
	Along Genesee Valley Greenway	*GTC TIP: 2011-2014*	*County-wide*
Multi-Modal	Roads & bridges need to accommodate pedestrians/bicyclists as well as vehicles	GTC Regional Trails (2002/2004)	County-wide
Multi-Modal	Insufficient rail access points (bulk & intermodal rail transfer facilities)	GTC Regional Freight/Goods Movement Plan	County-wide
Public Transit	Need bus shelters and other amenities at bus stops	GFL Public Transit-Human Services Plan (2011)	County-wide
	Need bus shelter on the north side of Center St near Main St	RT 39/North St/Court St Corridor (2011)	Village of Geneseo - north side of Center St near Main St
Auto/Truck/ Ped/Bike	Need wayfinding signage for visitors	GTC LRTP 2035, GFLRPC Regional Tourism Sign Study (2001), GTC Regional Trails (2002/2004)	County-wide
	Additional information needed to characterize origins/destinations along Court St	*RT 39/North St/Court St Corridor (2011)*	*Village of Geneseo*
Auto/Truck/ Ped/Bike	Delineate gateways at entrance to Village & Town of Lima from NYS Route 15A north	NYS Route 15A Charrette Workshop	Lima
Auto/Truck/ Ped/Bike	Install landscaping	NYS Route 15A Charrette Workshop	Lima

Table 5-1 cont.: Infrastructure Needs from Existing Studies

Mode	Need	Document(s)	Location (county-wide or specific)
Auto/Truck	Need to address bridge weight & clearance issues to remove trucks from local roads	GTC Regional Freight/Goods Movement Plan	County-wide
Auto/Truck	Need to provide better security at truck rest stops or locate them in more populated areas to discourage criminal activity	GTC Regional Freight/Goods Movement Plan	County-wide
Auto/Truck	Need operational improvements along RT 39/North St/Court St corridor	RT 39/North St/Court St Corridor (2011)	Village of Geneseo
Auto/Truck	Need to address safety concerns at certain locations due to truck traffic - slow moving vehicles (school buses/agricultural equip), speeds, community/environmental impacts	RT 63 Corridor Study (2003-2007)	County-wide
	Consider impacts on the York school near RT 36	*RT 63 Corridor Study (2003-2007), York Comp Plan (2006)*	*York*
	Alignment of RT 20A/RT 63 intersection	*RT 63 Corridor Study (2003-2007)*	*Geneseo*
	RT 36	*RT 63 Corridor Study (2003-2007)*	*County-wide*
	Chandler Rd	*RT 63 Corridor Study (2003-2007)*	*York*
	RT 5 in Batavia	*RT 63 Corridor Study (2003-2007)*	*Batavia*
	RT 20A overlap in Geneseo	*RT 63 Corridor Study (2003-2007)*	*Geneseo*
Auto/Truck	Need to improve congestion in some areas	Numerous studies/plans	County-wide
	Village of Avon due to limited roadway access options	*Village of Avon Comp Plan (2010)*	*Village of Avon*
	Along RT 20A in Geneseo	*Town of Geneseo Outside Village (2008)*	*Geneseo*
	Within Village of Geneseo	*Village of Geneseo Comp Plan*	*Village of Geneseo*
Auto/Truck	Road improvements needed to support agriculture industry	Groveland Farmland Protection	Groveland/County-wide
Auto/Truck	Need for safety improvements	Numerous studies/plans	County-wide
	Along RT 20A in the hamlet of Lakeville	*Town & Village of Livonia Comp Plan (2004)*	*Livonia*
	RT 63 & Chandler Rd	*York Comp Plan (2006)*	*York*
	Fowlerville Rd	*York Comp Plan (2006)*	*York*
Auto/Truck	Calm traffic along NYS Route 15A north of the Village of Lima	NYS Route 15A Charrette Workshop	Lima
Auto/Truck	Need for an access road to serve Gateway Park development	Town & Village of Livonia Comp Plan (2004)	Livonia
Truck/Rail	Need to improve capacity and safety at at-grade crossings on rail lines	GTC Regional Freight/Goods Movement Plan	County-wide

Table 5-1 cont.: Infrastructure Needs from Existing Studies

Mode	Need	Document(s)	Location (county-wide or specific)
Truck/Rail	Need to mitigate noise & emissions impacts from freight movement	GTC Regional Freight/Goods Movement Plan	County-wide
Rail/Truck	Provide advanced clearance signage for the rail bridge underpass on RT 63 in Greigsville	York Comp Plan (2006)	York
Ped/Bike	Improve ped/bike safety	Numerous studies/plans	County-wide
	Inadequate & unsafe pedestrian crossings along Route 20A due to sight distance & traffic volumes - especially at Commercial St	*Town/Village of Livonia Comp Plan (2004)*	*Livonia*
	RT 63 near York school	*RT 63 Corridor Study (2007)*	*York*
	RT 63 at Greigsville & Piffard (Genesee Valley Trail)	*York Comp Plan (2006)*	*York*
	RT 39/North St/Court St corridor	*RT 39/North St/Court St Corridor (2011)*	*Village of Geneseo*
	RT 20A corridor	*NYS RT 20A Access Management Plan (2007), Livonia Comp Plan (2004)*	*Geneseo, Livonia*
	Enhance bicycle/pedestrian facilities	*NYS Route 15A Charrette Workshop*	*Lima*
	Concern about ped/bike safety	*Town of Conesus Trans & Safety Management (2004), Town of Conesus Comp Plan (2005)*	*Conesus*
	Concern about ped/bike safety	*Village of Dansville/Town of N Dansville Comp Plan*	*Dansville/N Dansville*
	Concern about ped/bike safety	*Town of Geneseo Outside Village (2008)*	*Geneseo*
	Concern about ped/bike safety	*Town & Village of Lima Comp Plan (2008)*	*Livonia*
Ped/Bike	Increase ped/bike infrastructure & improve connections between facilities	Numerous studies/plans	County-wide
	Need sidewalks along Lima & Avon Rds	*RT 39/North St/Court St Corridor (2011)*	*Village of Geneseo*
	Need bicycle infrastructure to encourage bicycling	*NYS RT 20A Access Management Plan (2007)*	*Geneseo*
	Close gaps in sidewalk & trail network in hamlet of Conesus & East Lake Rd	*Town of Conesus Trans & Safety Management (2004), Town of Conesus Comp Plan (2005)*	*Conesus*

Table 5-1 cont.: Infrastructure Needs from Existing Studies

Mode	Need	Document(s)	Location (county-wide or specific)
Ped/Bike cont.	*Close gaps in sidewalk network in Avon*	*Village of Avon Comp Plan (2010)*	*Avon*
	Improve the conditions of and increase ped/bike infrastructure	*Village of Dansville/Town of N Dansville Comp Plan*	*Dansville/N Dansville*
	Close gaps in sidewalk network in Town of Geneseo	*Town of Geneseo Outside Village (2008)*	*Geneseo*
	Close gaps in sidewalk network in Village of Lima	*Town & Village of Lima Comp Plan (2008)*	*Village of Lima*
	Close gaps in sidewalk netowrk in hamlet of Hemlock & between Lakeville & Livonia Center	*Livonia Comp Plan (2004)*	*Livonia*
Ped/Bike	Increase ped/bike infrastructure & improve connections between facilities - cont.	Numerous studies/plans	County-wide
	Improve amenities along Greenway Trail & in downtown Mt. Morris	*Mt. Morris Strategic Plan for Community Revitalization (2006)*	*Mt. Morris*
	Need to link regional trails	*West Sparta Comp Plan (2007), York Comp Plan (2006)*	*West Sparta, York*
	Sidewalks needed along RT 63 near York schools	*York Comp Plan (2006)*	*York*
Rail	Need to maintain, repair, rebuild key components of regional rail network	GTC Regional Freight/Goods Movement Plan	County-wide
Rail	Repair or restore the Portage Bridge to reduce weight & speed restrictions	NYS Rail Plan (2009), GTC Regional Freight/Goods Movement Plan	Portage
Rail	Improve access to regional priority economic development sites	GTC Regional Freight/Goods Movement Plan	County-wide
	Dansville Industrial Park - rail spur, intersection improvements on RT 36 & Maple St, remove truck prohibition, install wayfinding signage	*GTC Regional Freight/Goods Movement Plan*	*Dansville*
	Livonia Gateway Park Rd - construction of new road from Village of Livonia to RT 15 to provide access to industrial sites	*GTC Regional Freight/Goods Movement Plan*	*Livonia*
	Caledonia Industrial Development Area - improvements to RT 5 to accommodate truck traffic for future development	*GTC Regional Freight/Goods Movement Plan*	*Caledonia*
Air	Renovations needed at Dansville Airport	Village of Dansville/Town of N Dansville Comp Plan	Dansville/N Dansville
Boat/Marine	Enhance access & connections for boats - Conesus Lake, Genesee River, Hemlock Lake, Canaseraga Creek	GFL Regional Blueway Analysis (2010), Village of Avon Comp Plan (2010)	County-wide

5.2 Services and Program Needs

Table 5-2: Services and Program Needs from Existing Studies

Services & Programs			
Mode	**Need**	**Document(s)**	**Location (county-wide or specific)**
Public Transit	Need efficiency & communications improvements for LATS	GTC TIP (2011-2014)	County-wide
Public Transit	Provide support for family & informal caregivers that provide transportation services	2020 Vision for Aging Services - SAGE (2011)	County-wide
Public Transit	Need affordable non-emergency transportation services for seniors	2020 Vision for Aging Services - SAGE (2011)	County-wide
Public Transit	Market & promote information regarding existing transportation services	GFL Public Transit-Human Services Plan (2011), Village of Avon Comp Plan (2010)	County-wide
Public Transit	Need to provide more efficient cross county or regional (Buffalo, Syracuse, Rochester) transport	GFL Public Transit-Human Services Plan (2011)	County-wide
	Express route to Rochester from Avon	*Village of Avon Comp Plan (2010)*	*Avon*
Public Transit	Need to accommodate non-typical commuter times (early and late shifts) and medical appointments	GFL Public Transit-Human Services Plan (2011)	County-wide
Public Transit	Need to continue and improve coordination across agencies and the region	GFL Public Transit-Human Services Plan (2011)	County-wide
Public Transit	Catholic Charities needs more staff to help coordinate drivers	GFL Public Transit-Human Services Plan (2011)	County-wide
Auto/Truck/ Ped/Bike	Need to promote livable communities and complete streets initiatives	2020 Vision for Aging Services - SAGE (2011)	County-wide
Auto/Truck	Need to enforce speed limits	RT 39/North St/Court St Corridor (2011), Town of Conesus Trans & Safety Management (2004)	Village of Geneseo, Town of Conesus
	Lima Rd	*RT 39/North St/Court St Corridor (2011)*	*Village of Geneseo*
	Within hamlet of Conesus and along Holmes Hill, Clark, Turkey Hill & Stagecoach Rds	*Town of Conesus Trans & Safety Management (2004)*	*Town of Conesus*
Truck/Rail	Need to increase awareness of importance of freight transportation	GTC Regional Freight/Goods Movement Plan	County-wide

5.3 Policy and Planning Needs

Table 5-3: Policy and Planning Needs from Existing Studies

Policy & Planning			
Mode	**Need**	**Document(s)**	**Location (county-wide or specific)**
All	Zoning & development regulations need to address parking, access management & pedestrian accommodations	RT 39/North St/Court St Corridor (2011)	Village of Geneseo
All	Preserve viewshed along NYS Route 15A	NYS Route 15A Charrette Workshop	Lima
All	Need funding options for transportation services & infrastructure	Numerous studies/plans	County-wide
Ped/Bike	Need coordination among trail owners and managers to support maintenance, promotion & fundraising efforts	GTC Regional Trails (2002/2004)	County-wide

6. Summary of Needs

As a result of analyses, stakeholder interviews, public outreach, and research into existing document and studies, a comprehensive list of needs and gaps in the existing transportation system has been compiled and is presented in this section of the technical memorandum. The more general needs have been summarized by mode of transportation then by infrastructure, service and program, or policy and planning need. The later sections note the specific needs per town or village. These needs will be considered as recommendations are progressed in a subsequent technical memorandum.

6.1. Summary of Needs by Mode

General

- Users to be served by the system
  - Employees – all shift times
  - Seniors – Medicaid/non-Medicaid eligible needs
    - Medicaid changes may affect operations/demand
    - Keep seniors at home longer
    - New employment that will serve seniors (i.e. home health care workers)
  - Disabled/Special needs – Medicaid/non-Medicaid eligible needs
  - Veterans
  - Younger generation (affected by school budget cuts)
  - Migrant Workers
  - Amish
  - English as a Second Language (ESL) populations
- Users need access to the following:
  - Workplaces
  - Medical appointments
  - Recreational/social/special events
  - Commercial establishments/areas
  - Food sources
  - Congregate sites (Dansville, Mt. Morris, Avon)
- Need to accommodate all modes– auto, bicycle/pedestrian, transit, rail, air
- Provide more multi-modal connections between historic properties, recreational trails/facilities, institutions, residential communities and commercial districts
- Potential for recreational trails to support tourism/economic development
- Need connections to Genesee Community College satellites (Lima/Dansville/Warsaw/Batavia)
- Need to consider needs of youth outside of school – transportation o after-school and weekend activities; access to parks and recreational activities; walkable communities
- Funding will continue to be an issue and will have direct/indirect impacts to services
  - Need to research and utilize grant funding

- Need to consider costs of not maintaining infrastructure – costs for vehicle service/replacement, increased travel time/delays, etc
- Need to consider impacts to services

Services and Programs

- Need for education regarding safety, available services, laws/regulations
- Need for parking enforcement in business districts and in rural shoulders
- Concerns regarding signage – too many, not the right signs, lack of enforcement

Policy and Planning

- Potential to use policies to stop sprawl and bring growth back into villages
- Town of Portage needs land use/zoning regulations
- Town of Ossian needs subdivision regulations
- Site plan review provisions need to be established in the Village of Leicester, Town of Portage, and the Town of Springwater
- Towns/villages need to establish access management provisions except the Town/Village of Geneseo, Groveland, the Town of Lima and the Town of Livonia
- The following towns/villages need to conduct a comprehensive plan: Town/Village of Leicester, Ossian, Portage and Springwater

Auto/Truck

Infrastructure

- Concern regarding the impact of increased traffic, especially trucks and farm equipment, on alternative modes of transportation and road condition
- Need to consider impacts of construction in rural areas (emergency vehicles)
- Concerned with special event traffic: air show, graduations, etc
- Need more/better signage – especially to share the road, warn of truck traffic, alignments as well as speed limit signs
- Need better lighting in rural areas – especially at intersections
- Concerns with poor roadway designs – curves, superelevations, drainage/ponding
- Need to improve rail crossings – safety & capacity
- Need to consider infrastructure that serves older drivers (larger street signs, design for longer reaction times, etc)

Services & Programs

- Maintenance concerns – pot holes, guide railing, pavement markings, snow removal/weather protection, view obstructions (vegetation)
- Need to educate regarding special vehicles on the roadways – farm equipment, Amish buggies
- Speed enforcement and general roadway law enforcement is needed – especially in more rural areas
- Educate both drivers and pedestrians/bicyclists on road safety and regulations

Other

- Concerned with increased driver distractions
- Concerned with animal collisions
- Drivers should stop passing on the right – unsafe for peds/bikes in shoulder

RGRTA/LATS

Infrastructure

- Need proper/improved signage at bus stops
- Need more shelters, benches and lighting at bus stops
- Need better access to bus stops – sidewalks, snow removal, etc
- Need better security at stops and on buses – cameras, additional staff on buses
- First step on buses is high and difficult to climb
- Need seat belts on buses
- Concerned with the spread of germs on buses – provide hand sanitizers on the buses
- Need to consider special needs when determining bus stop/crosswalk placement
- Buses look/feel institutional and are associated with special needs

Services & Programs

- Routes and schedules times need to be reevaluated on a regular basis
- Need for transit trips is mostly, but not exclusively, concentrated around the larger villages on the I-390 corridor (Geneseo, Mt Morris, Dansville)
- Need to service out of county commuters to Rochester and Buffalo
- Need better coordination between fixed-route services and various Dial-A-Ride services to provide greater and easier geographic access
- Need to improve reliability
- Need back-up system/ guaranteed ride home program
- Dial-a-ride service is limited – consider Ontario Co (CATS) as an example
- Need service to: Springwater, Mt Morris DSS campus, County probation/ courthouse, VA Hospitals
- Potential SUNY Geneseo service: Nunda – Mt. Morris – Geneseo
- Circulator transit routes through Geneseo at capacity
- Shuttles to Rochester are often full and therefore uncomfortable
- Some users need help getting on bus
- Need to better serve non-medical trips
- Need to cross serve with Wyoming County
- Need to market/promote LATS services – a number of people noted they didn't know enough about the service to comment or feel they focus on students and special needs population

Other Service Providers

- Need transport for off-hour/non-traditional work shifts
- Cost for transportation for non-Medicaid customers is prohibitive
- Need for transportation to special event (weddings/parties/etc)

Pedestrian/Bicycle

Infrastructure

- Bicycle/pedestrian infrastructure is not consistent; poorly maintained
- Need infrastructure at destinations/commercial establishments
- Most conservancy trails/lands are not connected
- Consider need of motorized wheelchairs and scooters: charging station access
- Need pedestrian level lighting
- Need better ADA compliance
- Improve warning signage at crossings or along roadways that are frequently used by bike/peds
- Greenway Trail
    - Need to address gaps-connections: Nunda/Hinsdale/York/Mt Morris-prison/Lehigh Valley/Geneseo
    - Need more parking
    - Need wayfinding signage between trails and along trails
- Connect trails between York and Geneseo/Leicester
- Develop Little Italy Trail from Groveland Secondary Trail to Genesee Valley Greenway

Services & Programs

- Need education for drivers, pedestrians and bicyclists on rules of the road and safety
- Need better overall enforcement of laws (right of way, speeds, dog control)

Rail/Air/Water

- Dansville Industrial Park - rail spur, intersection improvements on RT 36 & Maple St, remove truck prohibition, install wayfinding signage
- Repair/restore the Portage Bridge to reduce weight and speed restrictions
- Need to increase/improve river/boating access including parking
- Need to continue to maintain Dansville Airport
- Consider the potential to use air transport for life threatening or unique/special needs cases – equipping capability in the County Air Fields & Dansville
- Would like to consider passenger train from Geneseo to Rochester

6.2. Summary of Needs by Location

Avon

- Improve condition of Rochester St from Avon to Rush
- Specific pedestrian/bicycle concerns
  - Close gaps in sidewalk network – Pole Bridge Rd, E River Rd, Barber Rd, RTS 5/20, RT 15, Lake Rd, Sutton Rd, Branson Hill Rd
  - Provide bike infrastructure
- Safety concern locations
  - Improve access to DEC offices on RTS 5/20
  - I-390 interchange with RTS 5/20 near Athena Dr
- Transit needs
  - Add route along Pole Bridge Rd
  - Consider express route to Rochester

Conesus

- High speeds
- Improve dirt roads
- Need to enforce speed limits
- Specific pedestrian/bicycle concerns:
  - Close gaps in sidewalk & trail network in hamlet of Conesus and E Lake Rd
  - Lack of pedestrian accommodations – especially RT 15
  - Need accommodations around Conesus Lake
- Safety concern locations
  - Turkey Hill Road, E/W Lake Rd, Clark Rd, Rowland Rd
  - W Lake/W Swamp Rd & Sliker Hill Rd
  - RT 15/Sliker Hill Rd/Stagecoach Rd

Dansville

- Dansville Industrial Park - rail spur, intersection improvements on RT 36 & Maple St, remove truck prohibition, install wayfinding signage
- Renovations needs at Dansville Airport
- Specific pedestrian/bicycle concerns
  - Improve the condition of and increase ped/bike infrastructure
  - Add sidewalk from Woodsville to Cumminsville to RT 36 plaza
  - RT 436 from Nunda to Dansville
- Provide transit service from Nunda to Dansville

Geneseo

Infrastructure

- Need more signed/marked crosswalks – potential for actuated signals/lights
    - Wegmans access on RT 20A
    - New senior development off Volunteer Road
    - Enhance crosswalks along Main St
- Riverside boat launch needs improvement
- Concern regarding traffic associated with potential new stadium for SUNY Geneseo near RT 63/Mary Jemison Dr (trucks/special events)
- Need to reduce congestion/need a center left turn lane along RT 20A , Main St, RT 39/North St/Court St corridor
- Need reduced speed limit posted on Megan Rd
- Need bicycle infrastructure to encourage bicycling
- Close gaps in sidewalk network outside of the village
- Improve wayfinding signage, including origins/destinations, for vehicles/peds/bikes
- Specific pedestrian/bicycle concerns:
    - Crosswalk on RT 20A: Prospect and Temple Hill St–poor visibility
    - Need sidewalks along Lima Rd, RT 39, Avon Rd, Country Club Rd, and Volunteer Rd
    - Demand for off-road trail from Fox Run to RT 20A
    - Sidewalks on north side of RT 20A but destinations on south side
    - NYSDOT increased speed limit to 35 MPH on RT 20A
    - Visibility on Main St near the bear statue
    - River is a barrier to connection to Greenway
    - Need access to Conesus Lake and its parks
    - Formalize worn path between Megan Dr & Walmart
    - Provide bike racks at Department of Social Services
- Safety concern locations:
    - North St/Court St/Main St intersection
    - RT 20A/Crossett Rd/Groveland Rd/Temple Hill intersection
    - Lima Rd - sharp curves/residential concentrations
    - RT 20A and Center St – consider signal/roundabout
    - RT 20A and Crossett Rd – consider roundabout
    - RT 20A and Millenium Dr. – consider signal
    - North St/Lima Rd/Highland Rd/Rorbach Ln
    - RT 63 & RT 20A
    - RT 63 & Jones Bridge Rd
- Specific transit needs:
    - Need to continue service from Geneseo to Nunda
    - Provide service between Geneseo to Groveland, Lakeville, Avon
    - Need a bus shelter on the north side of Center St near Main St

Services and Programs

- Need access management – update/progress draft report – especially along RT 20A
- Enforce speed limits – especially on Lima Rd & RT 20A
- Transit needs:
    - Need to continue service from Geneseo to Nunda
    - Provide service between Geneseo to Groveland, Lakeville, Avon

Policy and Planning

- Zoning & development regulations need to address parking, access management & pedestrian accommodations

Livonia

- Improve condition of Federal Rd
- Need an access road to serve Gateway Park Development
- Specific pedestrian/bicycle concerns:
    - W/E Lake Rd – limited right-of-way to accommodate bikes/pedestrians
    - Shelly Rd and state roads –shoulders accommodate bikes/pedestrians
    - Add sidewalk from Big Tree Rd to Old Hickory Golf Course
    - Inadequate & unsafe crossings along RT 20A – especially at Commercial St
    - Close gaps in sidewalk network in hamlet of Hemlock & between Lakeville & Livonia Center
- Safety concern locations
    - Sight distance issues at Stone Hill Rd & Branson Hill Rd
    - Along RT 20A in hamlet of Lakeville

Mt. Morris

- Need improved maintenance on RT 408 between Mt. Morris & Nunda
- Truck traffic a concern on Main Street in Mt. Morris
- Need parking and wayfinding: RT 63, RT 39 & RT 408 for all modes
- Improve amenities along Greenway Trail & in downtown Mt. Morris
- Specific pedestrian/bicycle concerns
    - Pedestrian crossing timings not sufficient
    - Need sidewalks on Mill St
    - Need to improve access to Letchworth as a major destination
    - Provide bike racks at Department of Social Services
- Safety concern locations
    - RT 408 & Main St
    - RT 408 & Ridge St
    - Stanley St & Grove St

York

- Provide advanced clearance signage for rail bridge underpass on RT 63 in Greigsville
- Safety concern locations
  - RT 63 – especially near school
  - RT 63 & Chandler Rd
  - RT 63 & Restof Rd
  - Fowlerville Rd
- Specific pedestrian/bicycle concerns
  - Sidewalk needed along RT 63 near school
  - Improve accommodations on RT 63 at Greigsville & Piffard – Genesee Valley Trail

Other

- Road improvements are needed to support agricultural industry – Groveland/county-wide
- Improvements to RT 5 to accommodate future truck traffic associated with Caledonia Industrial Development Area
- Safety concern locations
  - Leicester: intersection of Perry Rd & RT 36
  - Groveland/Mt. Morris: RT 408/I-390 interchange
  - Groveland/Geneseo: Jones Bridge Rd/RT 63 intersection – visibility
  - Groveland: I-390 interchange with RT 36 (Sonyea)
  - Fillmore: Speeds on River Rd
  - Caledonia: RT 5 & RT 36 circle
- Specific pedestrian/bicycle concerns
  - Narrow shoulders on RT 36 south of Caledonia
  - Close sidewalk gaps in Lima
  - Sidewalk improvements in Nunda
    - From village to Dollar General
    - Along Creek Rd (CR 15) between trailer park & village
    - Along Portage Rd (RT 436) and Fuller Rd – especially near athletic fields
    - Along RT 15A from Lima to Honeoye Falls (shared school district)
- RT 63
  - Concern regarding increase in truck traffic
  - Barrier between Geneseo and Greenway
  - Shoulders accommodate bikes/pedestrians

Appendix A:

Rider Survey Results

Appendix B:

Public Survey

Appendix C:

Public Meeting

Appendix D:

Summary of Needs from Existing Studies & Plans