Chapter 4

Service and Organizational Alternatives

INTRODUCTION

The first three chapters of the WPRTA CTSP described the CTSP process, documented transit needs in the region and outlined the services currently available. The development of these data collection and analysis tasks showed that there are unmet transit needs in the study area, as well as opportunities to improve productivity. The purpose of this fourth chapter is to provide a series of service and organizational alternatives that could be implemented to either meet these needs or improve productivity. Preliminary alternatives were discussed with staff in April, 2010 and were further developed for consideration in this chapter. WPRTA has also initiated a number of new initiatives this year, and these are discussed for inclusion in the plan, but without the full discussion of advantages, disadvantages, or costs, as they are already in process. Service alternatives are presented first, followed by the organizational alternatives. These alternatives were presented to the TAB in May, 2010 and to the Governing Board in June, 2010.

SERVICE ALTERNATIVES

The service alternatives are presented in four sections: potential changes to the existing fixed-route transit network in Hickory, Conover, and Newton; potential changes to the demand-response network that is in place throughout the region, potential quality of service improvements, and potential new services.

Potential Improvements to the Existing Fixed-Route Transit Network

The four fixed routes that serve the Cities of Hickory, Conover, and Newton currently offer a basic level of transit service for the three cities. The focus of the fixed-route alternatives is to offer potential strategies to either improve the productivity of a particular route, or offer service to a specific origin or destination that was suggested by

riders and/or the public via the survey efforts. General improvements such as longer hours of service and increased frequency are also discussed. These fixed-route service alternatives are not presented in priority order at this time. Prioritization of alternatives occurred after the TAB discussion of the alternatives and the public meetings. It should also be noted that three of the fixed routes (West Hickory, NC127/Springs Road, and Hickory/Conover/Newton) are currently interlined such that changes to one will likely affect the entire route network.

Fixed-Route Alternative #1: Adjust the Tate Boulevard/Conover Route

The data analysis concerning the fixed routes showed that one of the routes, Tate Boulevard/Conover, exhibits low productivity for a fixed-route at 3.6 passenger trips per revenue hour. An examination of the route and schedule provided some insight as to why this route is not performing as well as the others. The following alternatives are offered as strategies to improve the performance of this route.

Tate Boulevard/Conover Segment Changes

- Discontinue service along 4th Street SW and Reese Drive, re-routing to use US 70 between Fairgrove Church Road and 1st Avenue S. This routing will also eliminate County Home Road and the Canova Shopping Center, both of which are served by the Hickory/Newton/Conover Route. Also eliminate loop on Emmanuel Church Road and S. McLin Creek Road. A map of these segment changes is provided as Figure 4-1.

- While ridership on the Tate Boulevard/McDonald Crossing segments is currently not that strong, a new VA Clinic will be opening soon at McDonald Crossing and there is a new call center (Fiserv) that currently employs 150 people and will eventually employ 400 people.

- ***Advantages and Disadvantages***: These changes will reduce the route mileage by 7.7, will offer a more direct route through Conover, will add service along the US 70 Corridor in Conover, and will displace only a few riders, some of whom will still be served by the Hickory/Conover/Newton Route.

- ***Costs:*** There will be minor cost savings associated with fewer miles.

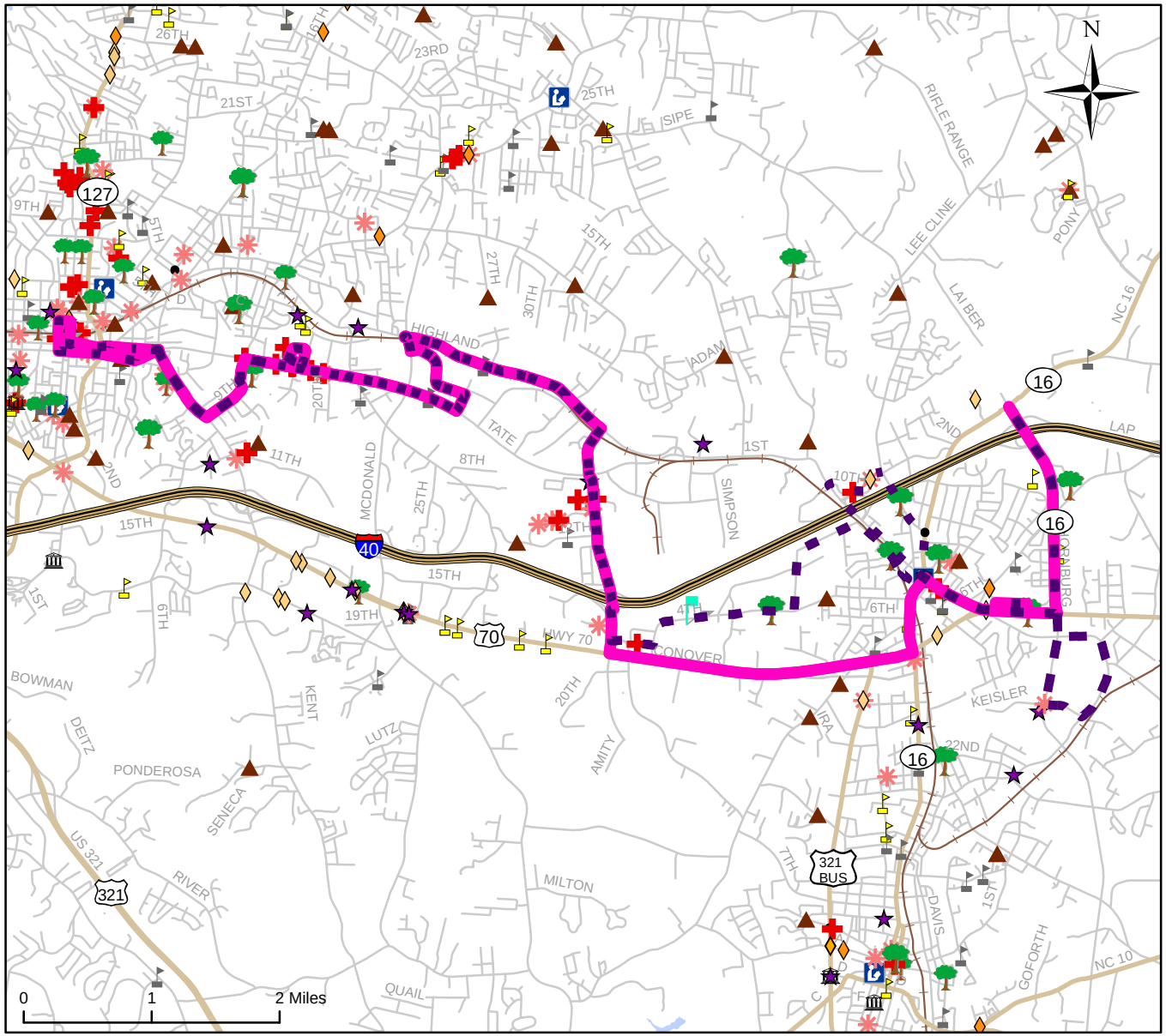
Fixed-Route Alternative #2: Split the NC127/Springs Route into Two Routes

Currently the NC127/Springs Road Route operates as a loop, in one direction, on hourly headways. This route serves a number of housing areas, as well as a portion of the Route 127 Corridor. The concept of splitting the route has two purposes: 1) to

Figure 4-1: Fixed-Route Alternative #1, Adjust the Tate Boulevard/Conover Route

Legend

- Proposed Tate Blvd/Conover Changes
- Original Tate Blvd/Conover Route
- Streets
- Major Highways
- Interstate Highways
- Railroads
- Multi-Unit Housing
- Major Employer
- Medical Services
- Educational Facility
- Day Care Center
- Public Library
- Municipal Services
- Human Service Agency
- Retail Destination
- Grocery or Pharmacy
- Park/Recreational Opportunity
- Transportation Center



Notes: Trip generators compiled through a variety of online sources, including county, city, and town websites; agency/organization websites; and Google searches. Sources: Western Piedmont Council of Governments, ESRI Data CD.

provide north-south linear service along the NC127 Corridor; and 2) to allow for service to be extended to several currently unserved apartment complexes on the eastern portion of the existing route. The routes could be renamed NC127 and Northeast Hickory. A map of these two proposed routes is provided as Figure 3-2.

- ***NC127 Description***: this route would provide linear, bi-directional service for the primarily commercial NC127 Corridor. It would originate at the Transfer Center and terminate at the apartment complex located at NC127 and 40th Avenue Drive, NE. This route would be nine miles in length.

- ***Northeast Hickory Description***: The Northeast Hickory Route would originate at the Transfer Center and travel NE along 8th Street NE and east along 9th Ave. NE, and then 16th and 20th St. NE, and north along 16th St. NE. The exact path of travel would still need to be developed, but the concept is to serve the multi-family housing areas of Northeast Hickory. Two segments would be eliminated (26th Ave. NE and 5th St, NE). These segments have few riders and each will be within ½ a mile of either the NC127 Route or the new East Hickory Route. This route would be 13.5 miles in length.

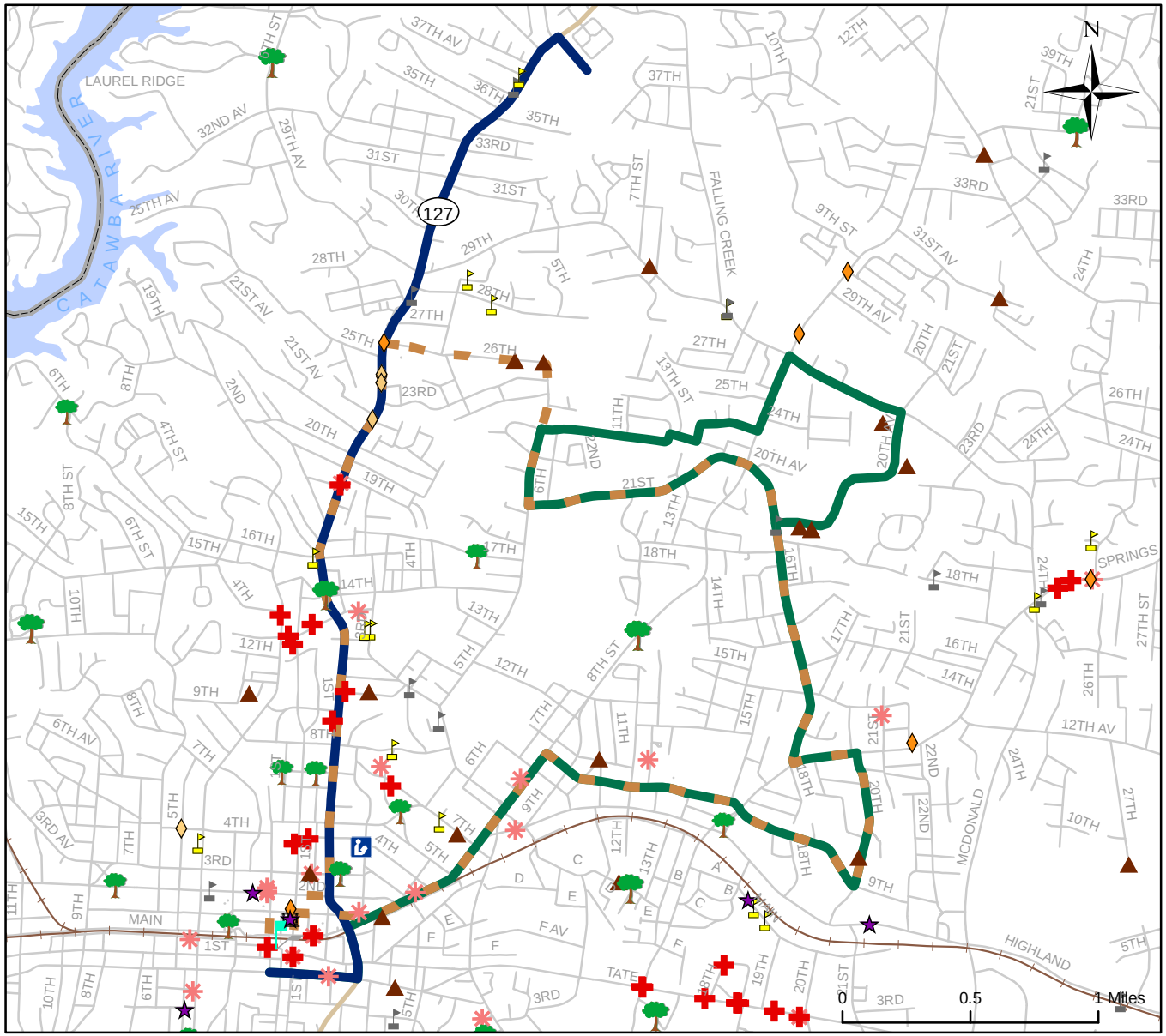
- ***Advantages and Disadvantages:*** Splitting the route would provide convenient, bi-directional, linear, corridor service along NC127, which would be helpful for all Greenway riders. The NC127 Route would also extend service to areas north of the current service area, including the Belle Hollow shopping area, which was requested by riders. The Eastern Hickory portion would provide more frequent, bi-directional service to a number of housing locations, including those that are currently served and some new ones, such as Catawba Ridge and Catawba Place. The major disadvantage of this alternative is cost, as it splits one route into two.

- ***Cost:*** This alternative adds a route, which means that a vehicle is required, as well as the operating expenses. A light transit vehicle is recommended ($65,000). The fully allocated annual operating expenses are estimated to be $177,000, based on 12.5 daily service hours (weekday) and eight hours on Saturdays, at $49.10 per service hour. This alternative would also extend the Americans with Disabilities Act (ADA) service area farther north in the NC127 Corridor, which would add some additional incremental costs as well (depending upon the level of ADA demand in this area).

Figure 4-2: Fixed-Route Alternative #2, Split NC 127/Springs Road Route

Legend

- Proposed NC 127 Route
- Proposed Northeast Hickory Route
- Original NC 127/Springs Road Route
- Streets
- Major Highways
- Railroads
- WPRTA Service Area Counties
- Multi-Unit Housing
- Major Employer
- Medical Services
- Educational Facility
- Day Care Center
- Public Library
- Municipal Services
- Human Service Agency
- Retail Destination
- Grocery or Pharmacy
- Park/Recreational Opportunity
- Transportation Center



GREENway PUBLIC TRANSPORTATION

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Notes: Trip generators compiled through a variety of online sources, including county, city, and town websites; agency/organization websites; and Google searches. Sources: Western Piedmont Council of Governments, ESRI Data CD.

Fixed-Route Alternative #3: Adjust Interlining between Residential Routes and Hickory/Conover/Newton Route

The current interlining arrangement is such that two of the vehicles begin service by running the West Hickory Route and then the NC127/Springs Road Route. The vehicle then serves the Hickory-Conover-Newton Route, then the Newton-Conover-Hickory Route. A third vehicle starts in Newton, serves the Newton-Conover-Hickory Route, then the West Hickory Route, then the NC127/Springs Road Route, and then the Hickory-Newton-Conover Route. This arrangement works well from a scheduling perspective, but it means that if someone is on the West Hickory Route and wants to travel toward Conover, they have to either wait 30 minutes at the Transfer Center or stay on the bus and travel on the NC127/Springs Road Route. A similar situation occurs in the reverse direction for the NC127/Springs Road passengers. If they are traveling from Conover, they must either ride through the West Hickory Route or wait at the Transfer Center for 30 minutes.

An alternative to this arrangement would be to change the interlining so that a vehicle performs one 30-minute Hickory-area route, then the two-hour round trip to Newton and back, and then the other 30-minute Hickory-area route. This arrangement should work, given that the entire block of work remains about three hours.

- ***Advantages and Disadvantages:*** The advantage of changing the interlining arrangement is that travel time would be reduced for people in the Hickory area who transfer to and from the Hickory-Conover-Newton route. The disadvantages are that a significant amount of detailed scheduling work would need to be done to implement the new arrangement and there would be a change to the public timetables, which could be disruptive to long-time users.

- ***Costs:*** The costs associated with changing the interlining are relatively minor and would include those costs associated with developing the new schedules and any small incremental costs that may arise from minor changes in miles/hours that could occur.

Fixed-Route Alternative #4: Split the Hickory-Conover-Newton Route

The Hickory-Conover-Newton fixed-route is the spine of the fixed-route network. The most resources are devoted to this route and the productivity of this route is the highest in the network. As the most productive route, it may not be a good idea to split it, but it is presented as an alternative because there may be some merit to the concept and it should be discussed. The concept is to split the route somewhere in the vicinity of Fairgrove Church Road. The Fairgrove Church Road area is about the mid-point of the route and includes major destinations such as the Catawba Valley

Medical Center and the Department of Social Services (DSS).

- ***Advantages and Disadvantages:*** Splitting the route would allow each of the two new segments to operate on a one-hour cycle, making it easier to interline with other routes and improving schedule reliability. Choosing the Fairgrove Church Road area would also create a mini-hub that could be fed by the deviated fixed routes and demand-response routes throughout the County and the region. The major disadvantage to splitting the route is that it would necessitate a transfer for people who were traveling from Conover/Newton to Hickory and back.

- ***Costs:*** This alternative is cost neutral with regard to operations, but there would be some minor costs associated with implementation (i.e., re-printing schedules, educating riders).

Five- Route Alternative #5: Extend the Service Day

Service on the fixed routes and ADA paratransit service (weekday) starts between 5:45 a.m. and 6:50 a.m., depending upon the route, and ends between 4:40 p.m. and 6:50 p.m., again depending upon the route. Saturday service is operated from about 8:45 a.m. to about 4:45 p.m. Riders indicated that longer hours of service are needed for the fixed routes.

This alternative proposes to start service an hour earlier for the Hickory/Conover/Newton route, which would have implications for the West Hickory and NC127/Springs Road route as well. This alternative also proposes to operate the three primary routes an additional three hours in the evening to make the service available for retail employees to get home from work. The evening service may operate using a different configuration, given that demand is likely to be lower than it is during the typical service day.

- ***Advantages and Disadvantages:*** The primary advantage to extending the hours of service is that it provides riders with more flexibility to access jobs, evening classes, and typical errands. The disadvantages are costs and lower productivity, as service at either end of the service day is typically not as productive in terms of passengers per hour.

- ***Costs:*** If four hours of service were to be added each service day on all of the routes, and ADA complementary paratransit, a total of about 20 service hours would be added each service day, for an annual total of 5,620 additional service hours at a fully-allocated cost of about $276,000 annually. No additional vehicles are needed for this alternative. If this alternative is

chosen, it could be implemented in increments (i.e., one additional hour per year) to spread the cost increase out over several years. It should be noted that extending service hours is an appropriate use of Job Access and Reverse Commute (JARC) funds.

Fixed-Route Alternative #6: Improve Service Frequency

Service on three of the fixed routes is operated on hourly headways, while service on the Tate Boulevard Route is operated on two-hour headways. Improved frequency of service was indicated as a need by current transit riders. This proposal improves headways to one hour on the Tate Boulevard Route and proposes to provide 30-minute peak-period service on the three other routes.

- ***Advantages and Disadvantages:*** Offering more frequent service provides more travel options for riders, offering greater flexibility and convenience. The major disadvantages to offering more frequent service are costs and the loss in productivity. For example, when service is doubled, costs are doubled, but ridership is typically not doubled. While the current ridership numbers do not necessarily support additional frequency (i.e., current service is not over-crowded and the trips per hour are relatively low for fixed-route service), there is somewhat of a cause and effect relationship between frequency and ridership. For example, people may not be riding currently because hourly or once every two-hour service does not meet their travel needs.

- ***Costs:*** If service frequencies were improved during peak periods (i.e., for six hours per day, weekday only) on the three interlined routes and improved for the entire day for Tate Boulevard (weekday only), the total additional service hours would be 7,140 and the total additional annual fully-allocated operating expenses would be about $350,000. This alternative would also require four additional vehicles. If light transit vehicles were used the capital cost would be $260,000.

Fixed-Route Alternative #7: Provide Sunday Service

Greenway Public Transportation does not currently operate on Sundays. This is typical of transit services in North Carolina, only a few of which currently offer Sunday service. This alternative proposes to offer some limited transit services on Sundays, similar to the current Saturday schedule.

- ***Advantages and Disadvantages:*** Providing Sunday service would provide mobility for transit riders on Sundays. The disadvantages are that ridership would likely be relatively low and providing Sunday service would mean

that Greenway Public Transportation would be in operation seven days a week, creating the need for an additional day of supervision.

- ***Costs:*** Assuming the Saturday schedule would be offered, there would be 32 fixed-route service hours and an additional eight ADA paratransit hours, for a total of 40 service hours per Sunday. Assuming 52 Sundays, the total annual service hours would be 2,080 and the fully allocated annual operating expenses would be about $102,000. No additional vehicles would be needed.

Fixed-Route Alternative #8: Taylorsville Shuttle Adjustment

During the course of the CTSP, a fixed-route circulator service was implemented by Greenway Public Transportation in the Town of Taylorsville, at the request of the Town of Taylorsville. This route has not performed well thus far, likely due to the relatively low population densities found in Taylorsville. The focus of this alternative is to change the shuttle from a fixed-route mode to a deviated fixed-route mode and from a five day a week service to a three day a week service. This will allow the route to serve additional areas, provide a service type that is more in keeping with the lower densities found in Taylorsville, and reduce the operating expenses. This alternative is not a direct result of the CTSP process, but is mentioned so that current Greenway services are accurately reflected in this CTSP.

Potential Changes to the Demand-Response Network

The demand-response component of the Greenway Public Transportation network is currently the largest service component, operating about 67,000 annual service hours at a cost of just over $ 2.9 million. As such, improvements in productivity for the demand-response component of the transit program provide a significant opportunity to either extend service to more people and/or reduce operating expenses.

Greenway Public Transportation staff have recognized this and have been taking steps independent of the CTSP to improve productivity. The following steps have already been taken:

- Larger vehicles with more wheelchair-seating capacity have been ordered. This change will allow Greenway to schedule more riders, both ambulatory and disabled, per vehicle trip. This change addresses the problem that Greenway had been having with productivity -- at times a vehicle had to be dispatched for one person, not because the rider was in a remote location, but because the wheelchair capacity of the vehicle assigned to the area was already filled.

- Selected subscription routes are being transitioned from demand-response to deviated fixed routes. The first three pilot routes are focused on the Catawba County DSS senior nutrition routes. The new deviated fixed routes will serve most of the clients currently served by the subscription route; will tie into the fixed-route network; and will be open to the public. Riders can call ahead if they wished to be picked up within ¾ mile of the route, or they can meet the route at designated time points/stops. The areas that will be served by these routes are: West Hickory, East Hickory, and Newton. Preliminary routes are under development by Greenway. Larger vehicles will be used so that there is capacity for general public riders. This change will offer more options for general public riders and will allow S.5307 funds to be used in part for the services.

The focus of the CTSP alternatives with regard to the demand-response service network is to continue to look at opportunities for productivity improvements. These alternatives are described below.

Demand-Response Alternative #1: Continue Transition to Deviated Fixed Routes, Where Feasible

The focus of this alternative is to continue to transition selected demand-response services to deviated fixed routes, beginning with the ongoing subscription routes and phasing in the larger vehicles to accommodate additional general public demand. The concept is to maximize the capacity of the vehicle trips that Greenway is already running, both to add more general public availability and to increase productivity. This concept is only viable where there is already some demand and some density of origins and destinations. The suggested runs that could potentially be operated as deviated fixed routes are:

- Alexander County
  - Alexander In-Town
  - Hickory
  - Possibly the Friendship and Stony Point Nutrition runs

- Burke County
  - Burke-Morganton Area run
  - Vocational Rehabilitation
  - Hickory
  - Nutrition

- Caldwell County
  - Caldwell County Community College and Technical Institute

  - Caldwell Nutrition
  - McLeod Center, Hickory

- Catawba County
  - East Hickory Nutrition(currently under development)
  - West Hickory Nutrition (currently under development)
  - Newton Nutrition (currently under development)

This concept may also be a way to offer corridor and/or circulator services (see section on new transit services, below) without incurring significant new expenses or duplicating existing services in the region.

- ***Advantages and Disadvantages:*** Providing service on a deviated fixed-route basis, rather than on a pure demand-response basis, institutes some parameters of service for the riders and serves to manage the demand. By managing the demand for service, more passenger trips per hour can be provided and more people can be served. This type of service can also serve to maximize federal transit revenues, as the routes will have general public capacity (with light transit vehicles, rather than vans). The current contractual revenues can be matched with the federal transit revenues to stretch both farther. The disadvantages of implementing this type of arrangement is that some of the requested trips will fall outside of the pre-determined limits of the deviation. These trips could be put onto a demand-response vehicle or perhaps provided by a partner/subcontractor (see Organizational Alternative #5).

- ***Costs:*** This alternative is relatively cost-neutral with regard to operating costs, as the concept is to use a similar number of vehicles to do more trips. The capital costs include the purchase of larger vehicles, some of which have already been purchased, and bus stop signs. Each light transit vehicle is estimated to cost about $65,000. Bus stop signs are about $100 per sign, installed. If 20 stops are included, this capital expense would be about $2,000.

Demand-Response Alternative #2: Install Mobile Digital Computers (MDC) and Automatic Vehicle Locators (AVL)

This alternative is also already in the process of being implemented, as Greenway has been approved for MDCs and AVLs via an American Recovery and Reinvestment Act (ARRA) grant. MDCs are computers that are installed on-board each vehicle. The MDCs transmit the drivers' manifests and allow the driver to record the details of the trip, as each rider is picked-up. This eliminates the need for the paper records to be entered at the end of each service day. AVLs are devices that attach to each vehicle and record the geographic position, transmitting that data back to the

dispatcher. AVLs are a valuable tool for demand-response programs, as the dispatcher can assign a trip (such as a will-call) by seeing where the vehicles actually are, rather than calling drivers via the radio and asking them. Both of these technologies typically improve productivity.

Potential Quality of Service Improvements

The results of the public and rider surveys reflected a desire for quality of service improvements for the existing Greenway services, including better customer service, particularly via the telephone, improved access to information, and additional bus stop amenities. This quality of service improvements are discussed below.

Quality of Service Improvement #1: Improved Telephone Customer Service

Survey respondents indicated that they had trouble getting a live person when they called to schedule a trip. Greenway has been working on this issue, as riders have complained to them as well as via the CTSP public and rider surveys. Currently there are two reservationists as well as a dispatcher who answer the phone. This level of staffing is higher than when the survey was done (at that time there was only one reservationist and the dispatcher). If either of the two schedulers is available, they will also help answer the phone. Additional improvements that could be implemented are as follows:

- Identify the busiest time for the call-center, along with how long it takes to respond during this time. Place an outgoing message on the hold line that indicates when the busy time is and when a better time to call may be.

- Stagger the work hours of the three people who answer the phone to:
  -- Make sure all three are available during the busiest period
  -- Allow for a longer period of coverage for "live voice"

- Consider funneling cancellations to an automatic line so a person is not tied up for that type of call.

- Ensure that "where is my ride" calls are funneled to the dispatcher, rather than tying up a reservationist.

If these measures are still inadequate to provide a reasonable level of customer service (i.e., hold time of two minutes or less), then Greenway should consider adding a part-time position during the busiest calling period and one or two additional incoming lines.

- ***Advantages and Disadvantages:*** Improving telephone customer service is important for Greenway, as the first contact with Greenway by customers is typically via the telephone. A good telephone experience will help riders feel confident in the system, serving as a good marketing opportunity. Improving the call center function will also reduce stress for the people who answer the phone, as the callers will be less frustrated by the experience.

- ***Costs:*** If a part-time staff person and an additional line are needed, the estimated annual costs are $24,000 in staffing (based on $12 per hour, six hours per day, 255 days per year, with 30% fringe) and $800 per year for two additional phone lines.

Quality of Service Improvement #2: Improved Access to Information

About half of the respondents to the public survey indicated that there is a need for improved access to transit information. The focus of this alternative is to improve the marketing function so that people know about Greenway Public Transportation, including what services are provided and how to use them. Since the survey effort, Greenway has been improving its marketing function, including implementing the following major initiatives:

- Launched a "One Day Week Campaign" on local radio, print, and in local movie theaters.
- Developed a Spanish version of the Ride Guide.
- Printed a new brochure for the urbanized-area fixed routes.
- Improved the website.
- Implemented the fleet re-branding.
- Developed revenue-enhancing, advertising partnerships with WHKY radio, Bark Mobile, and McDonalds.
- Worked with sponsors to implement "fare-free Fridays."
- Continued outreach to local community groups, such as Centro Latino, to educate the public about the services provided by Greenway and offer travel training.
- Ordered information tubes that will provide transit information at 350 urban-area bus stops.
- Continued work with local media outlets to ensure that free and low-cost public service announcement opportunities are maximized.

These activities are serving to improve access to transit information in the four counties and should be continued and expanded for the five-year planning period.

Quality of Service Improvement #3: Bus Stop Amenities

Survey respondents also indicated that there is a need for additional bus stop amenities. Greenway is already in the process of providing these amenities through a bus stop improvement program, using ARRA funding. The grant includes funding for 25 shelters, six solar lighting fixtures, and 350 bus stop signs and information tubes. These amenities will help improve the transit experience for riders and will also help with system marketing and the provision of transit information throughout the community. The total expenses for the bus stop improvement program will be $406,500 and is 100% funded through ARRA.

Potential New Services

The results of the needs analysis indicated that there are unmet public transportation needs for corridor services, connecting towns and cities in the region, and for circulator services, which would provide community transportation services within particular cities/towns. These potential new services are discussed in the following alternatives.

New Service Alternative #1: Corridor Service Between Morganton and Hickory

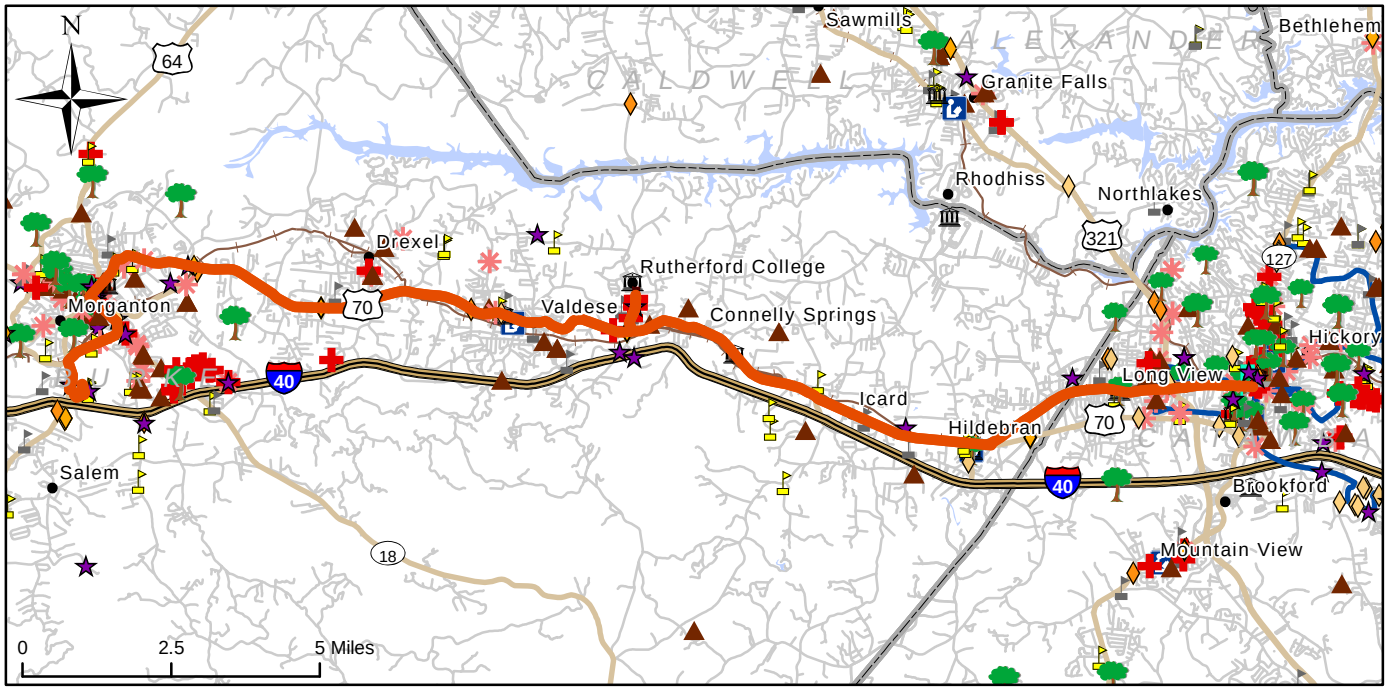
The most frequently indicated intra-regional link on the public opinion survey was for service between Morganton and Hickory. This link would connect a number of jurisdictions and could serve as a trunk line for the demand-response vehicles to feed along the way. The route would originate at the new transfer center in downtown Hickory (1st Avenue SW) and then travel west on 1st Avenue SW, which becomes Old US 70 and then 70A in Long View. The route would then travel west on US 70 through Hildebran, Icard, and Connelly Springs. In Rutherford College the route would divert north on Malcolm to serve the Valdese Memorial Hospital and surrounding medical destinations and then continue west on US70 to downtown Morganton and then on to the terminus at the Western Piedmont Community College (WPCC). The east bound route would run a similar route, except in those locations where there are one-way paired streets. A map of the proposed route is provided in Figure 4-3. The proposed route is 50.7 miles roundtrip, which would likely necessitate a 3-hour cycle time.

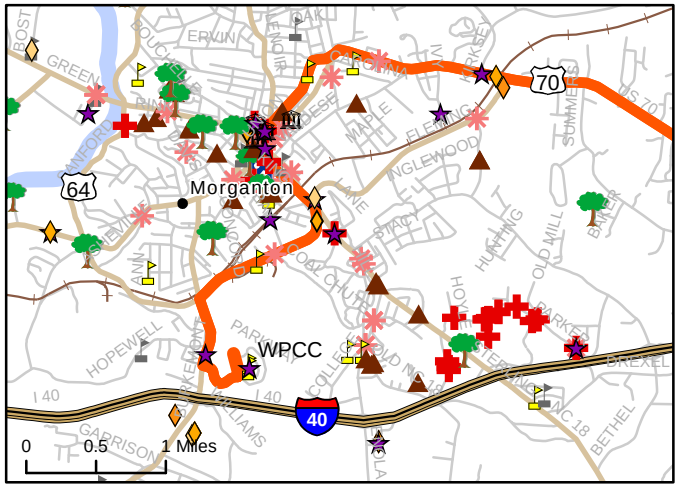
It is possible that this corridor service could be operated in conjunction with an existing subscription/demand-response run that Greenway already operates. Under any scenario, the goal will be to manage the demand between Hickory and Morganton by encouraging existing demand-response riders to use the corridor deviated fixed-route.

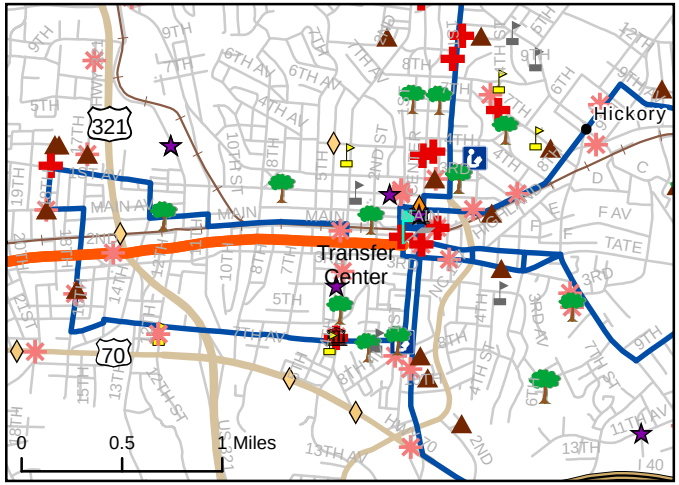
Figure 4-3: New Service Alternative #1, Corridor Service between Morganton and Hickory

Legend

- US 70 Corridor Service
- Existing Fixed-Route Service
- Streets
- Major Highways
- Interstate Highways
- Railroads
- WPRTA Service Area Counties
- Multi-Unit Housing
- Major Employer
- Medical Services
- Educational Facility
- Day Care Center
- Public Library
- Municipal Services
- Human Service Agency
- Retail Destination
- Grocery or Pharmacy
- Park/Recreational Opportunity
- Transportation Center







Notes: Trip generators compiled through a variety of online sources, including county, city, and town websites; agency/organization websites; and Google searches. Sources: Western Piedmont Council of Governments, ESRI Data CD.

- ***Advantages and Disadvantages:*** This proposal connects Morganton to Hickory, serving a number of communities along the way and meeting one of the most frequently requested needs from the public survey. This route would also provide service to WPCC, which was mentioned via the survey. In addition, this link is located within the Urbanized Area, making it eligible for S.5307 funds. The only real disadvantage for this alternative is cost.

- ***Cost:*** If this route were to be initially operated Monday through Friday for two four-hour peak periods using one vehicle, the annual service hours would be 2,040 and the corresponding fully-allocated operating expenses would be about $91,808 annually (using $45 per service hour). Using two vehicles would double the operating expenses to $185,616 annually. Some of these expenses could be re-captured by Greenway if demand is managed in such a way as to be able to reduce the current demand-response services in the corridor, and replacing it with deviated fixed-route corridor services. The capital costs include one or two vehicles ($65,000 or $130,000) and bus stop signs ($4,000).

New Service Alternative #2: Corridor Service between Lenoir and Hickory

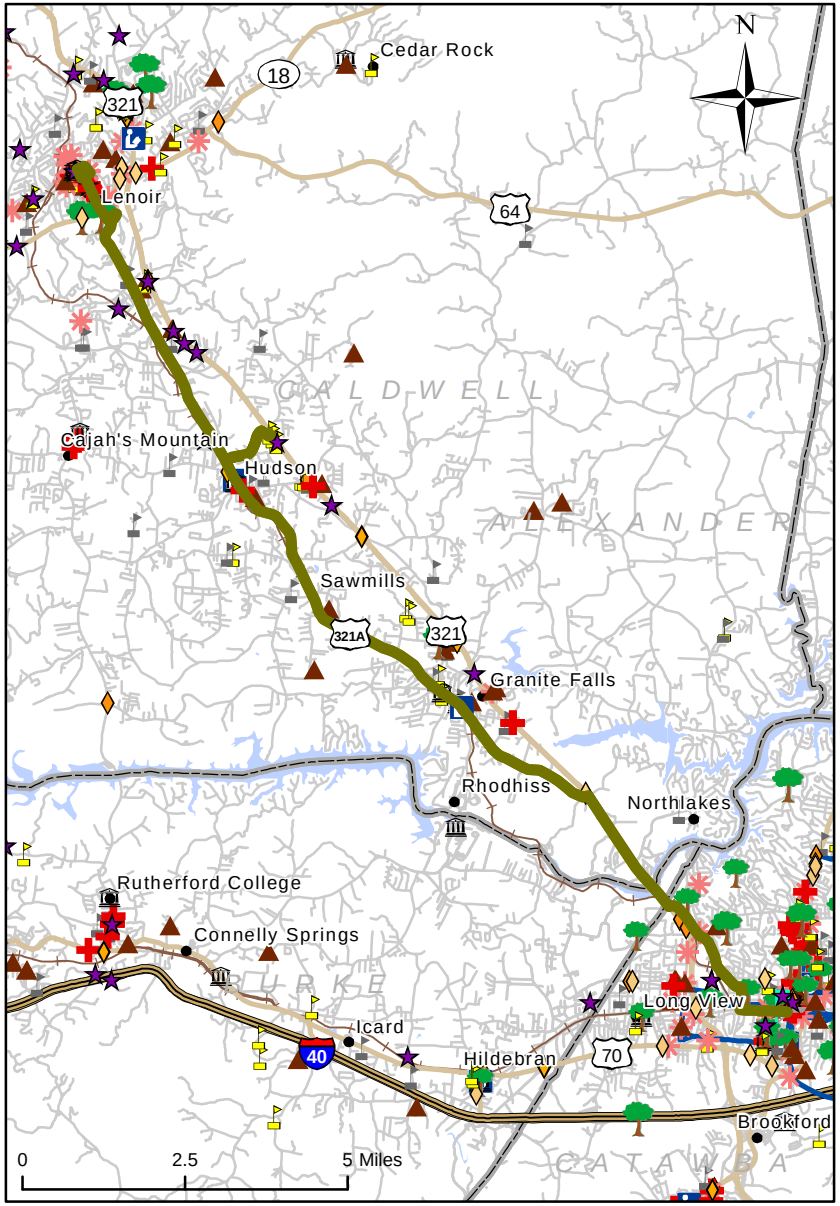
The US321/321A Corridor between Lenoir and Hickory, primarily within Caldwell County, includes the two anchor cities and the towns of Hudson, Sawmills, Granite Falls, and Rhodhiss. This link would connect these jurisdictions and could serve as a trunk line for the demand-response vehicles to feed along the way. This route could also provide a link through Northwest Hickory, which was requested by riders. The proposed route would originate at the Hickory Transfer Center and then use 1st Avenue SW to a right on 9th St., SW. The route would then make a left on 3rd Avenue, NW, which turns into Old Lenoir Road. The route would follow Old Lenoir Road to US321 North, crossing briefly into Burke County, and then into Caldwell County. The route would then make a left onto 321A and serve Granite Falls, Sawmills, and Hudson. In Hudson, the route would divert onto Mount Herman Road to serve Caldwell Community College and Technical Institute, and then return back to 321A and north to downtown Lenoir, where the route would terminate. The return trip would follow the same path, including the diversion to the Community College (with the exception of the one-way pairs). The roundtrip route length is 40.6 miles, which would likely result in a 2 to 2.5 hour cycle time. Figure 4-4 provides a map of the route.

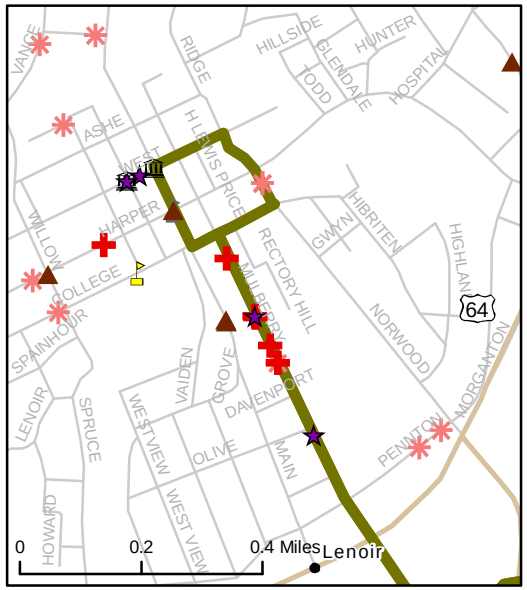
- ***Advantages and Disadvantages:*** This proposal connects Hickory and Lenoir, serving a number of communities along the way and meeting the second most frequently requested need from the public survey. This route would also provide service to Caldwell Community College and Technical Institute, from both Hickory and Lenoir, which was mentioned via the survey. In addition, this link is located within the Urbanized Area, making it eligible for S.5307 funds. The only real disadvantage for this alternative is cost.

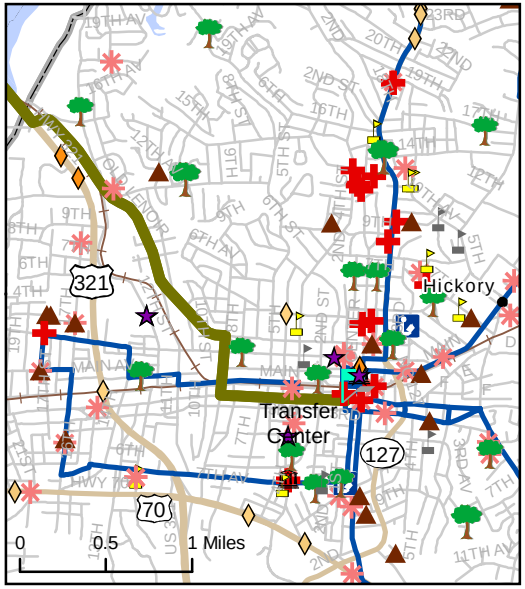
Figure 4-4: New Service Alternative #2, Corridor Service between Lenoir and Hickory

Legend

- US 321/321A Corridor Service
- Existing Fixed-Route Service
- Streets
- Major Highways
- Interstate Highways
- Railroads
- WPRTA Service Area Counties
- Multi-Unit Housing
- Major Employer
- Medical Services
- Educational Facility
- Day Care Center
- Public Library
- Municipal Services
- Human Service Agency
- Retail Destination
- Grocery or Pharmacy
- Park/Recreational Opportunity
- Transportation Center







GREENway PUBLIC TRANSPORTATION

KFH GROUP

Notes: Trip generators compiled through a variety of online sources, including county, city, and town websites; agency/organization websites; and Google searches. Sources: Western Piedmont Council of Governments, ESRI Data CD.

- ***Cost:*** If this route were to be initially operated Monday through Friday for two four-hour peak periods using one vehicle, the annual service hours would be 2,040 and the corresponding fully-allocated operating expenses would be about $91,808 annually (using $45 per service hour). Using two vehicles would double the operating expenses to $183,616 annually. Some of these expenses could be re-captured by Greenway if demand is managed in such a way as to be able to reduce the current demand-response services in the corridor, and replacing it with deviated fixed-route corridor services. The capital costs include one or two vehicles ($65,000 or $130,000) and bus stop signs ($4,000).

New Service Alternative #3: Corridor Service between Taylorsville and Conover

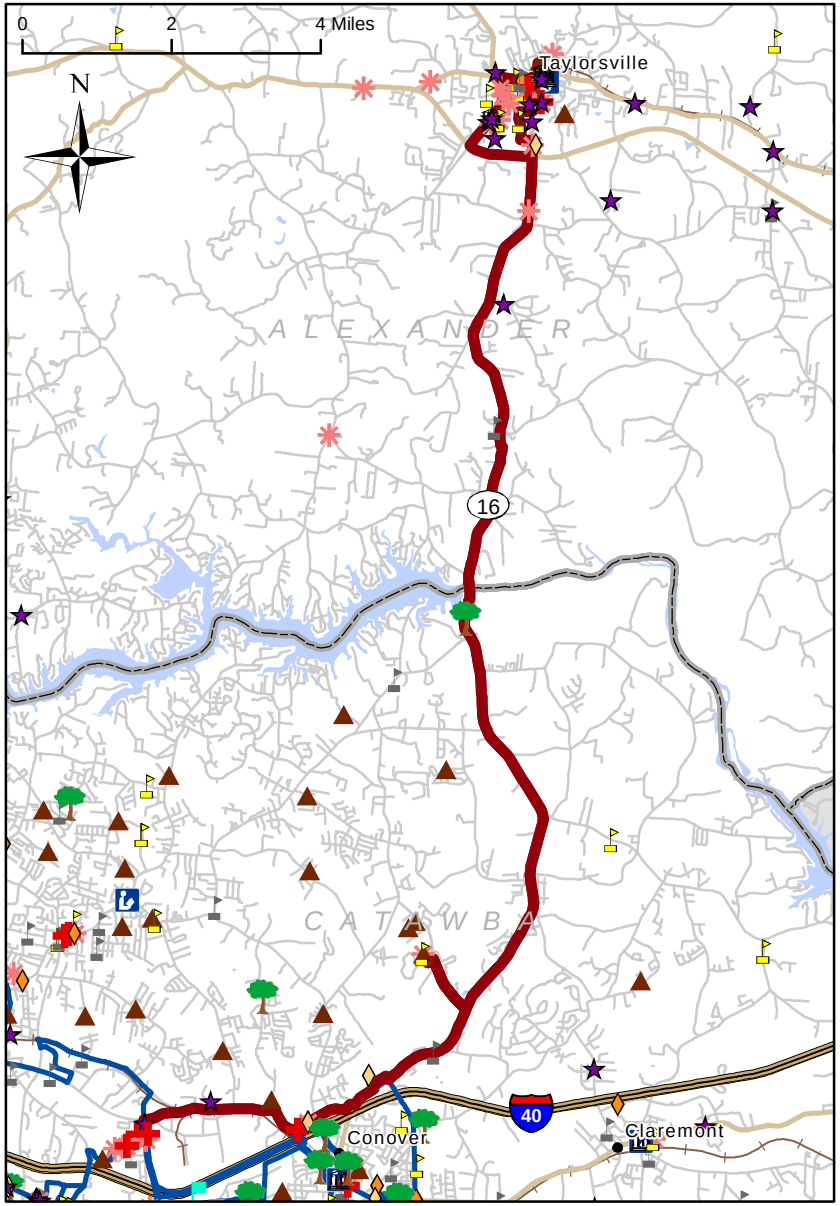
While not as populated as the previous two corridor alternatives, there is some need for service along the NC16 Corridor between Taylorsville and Conover, particularly because there is not a hospital in Taylorsville any longer. This corridor service could also pick up the Cline Village stop that was discontinued from the fixed-route services. This service concept originates at the Walmart in Conover, where passengers could transfer from the fixed routes, and then travel north on NC 16 through Oxford (detouring to serve Cline Village), and then cross over Lake Hickory to Alexander County. The route would continue into Taylorsville, serving the Catawba Valley Community College and Walmart, then into downtown Taylorsville. The route would make a short Taylorsville loop, including a right on Route 90, then a left on N. Center, then a left onto 2nd Ave N (site of affordable housing), then a left onto Old Wilkesboro Road, back to Route 90, then a right on Route 90, then a left on Liledoun Road to serve County buildings, then a left onto US 64, then exit South on NC 16 back to head back to Conover, again detouring to serve Cline Village. The routing through Taylorsville will likely need some additional detailed service planning to maximize the convenience for the riders. The route length is 36.8 miles, which would result in a two hour cycle time. A map of the route is shown in Figure 4-5.

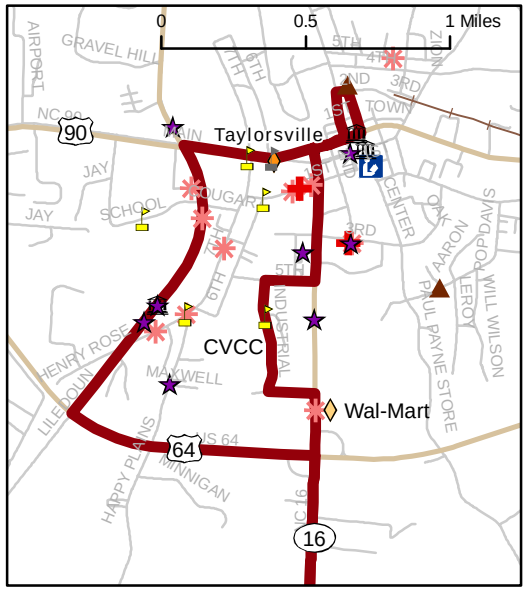
- ***Advantages and Disadvantages:*** This proposal connects Taylorsville to the Urbanized Area (Conover), serving Millersville, Oxford, and Cline Village along the way. This route would also provide service to the Catawba Valley Community College. This link is located primarily out of the urbanized area, making it eligible for S.5311 funds. The disadvantages associated with this corridor service are the low densities found along the route, which will limit ridership, and the cost.

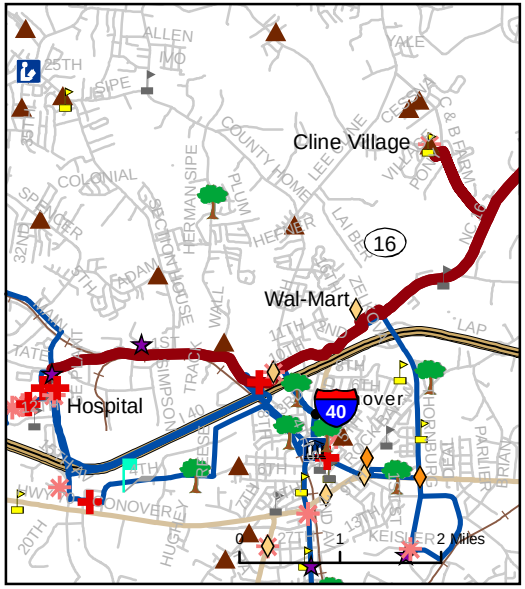
Figure 4-5: New Service Alternative #3, Corridor Service between Taylorsville and Conover

Legend

- NC 16 Corridor Service
- Existing Fixed-Route Service
- Streets
- Major Highways
- Interstate Highways
- Railroads
- WPRTA Service Area Counties
- Multi-Unit Housing
- Major Employer
- Medical Services
- Educational Facility
- Day Care Center
- Public Library
- Municipal Services
- Human Service Agency
- Retail Destination
- Grocery or Pharmacy
- Park/Recreational Opportunity
- Transportation Center







GREENway PUBLIC TRANSPORTATION

KFH GROUP

Notes: Trip generators compiled through a variety of online sources, including county, city, and town websites; agency/organization websites; and Google searches. Sources: Western Piedmont Council of Governments, ESRI Data CD.

- ***Cost:*** If this route were to be initially operated Monday through Friday for two four-hour peak periods using one vehicle, the annual service hours would be 2,040 and the corresponding fully-allocated operating expenses would be about $91,808 annually (using $45 per service hour). Some of these expenses could be re-captured by Greenway if demand is managed in such a way as to be able to reduce the current demand-response services in the corridor and replacing it with deviated fixed-route corridor services. The capital costs would include one vehicle ($65,000) and bus stop signs ($2,000).

New Service Alternative #4: Circulator Service in Morganton

As the largest City in Burke County and historically the "western capitol," Morganton is home to a number of significant destinations, such as Broughton Hospital, the North Carolina School for the Deaf, the J. Iverson Riddle Developmental Center, and Grace Hospital. The Burke County government offices are located in downtown Morganton and there are major employers and retail opportunities in the City, both downtown and along the commercial corridors. There is also a large senior community (Grace Ridge), and new multi-family houses downtown.

The purpose of the Morganton Circulator is to connect residential, retail, governmental, educational, and employment locations within the City. While the exact route will be determined when/if the service is implemented, Figure 4-6 provides a draft route. It is likely that any type of circulator will need to have a figure-eight/crosshair configuration to serve as many transit origins/destinations as is feasible, while maintaining convenient headways. The circulator could also be "branded" with a Morganton-specific theme. The draft circulator mile is 16.6 miles in length.

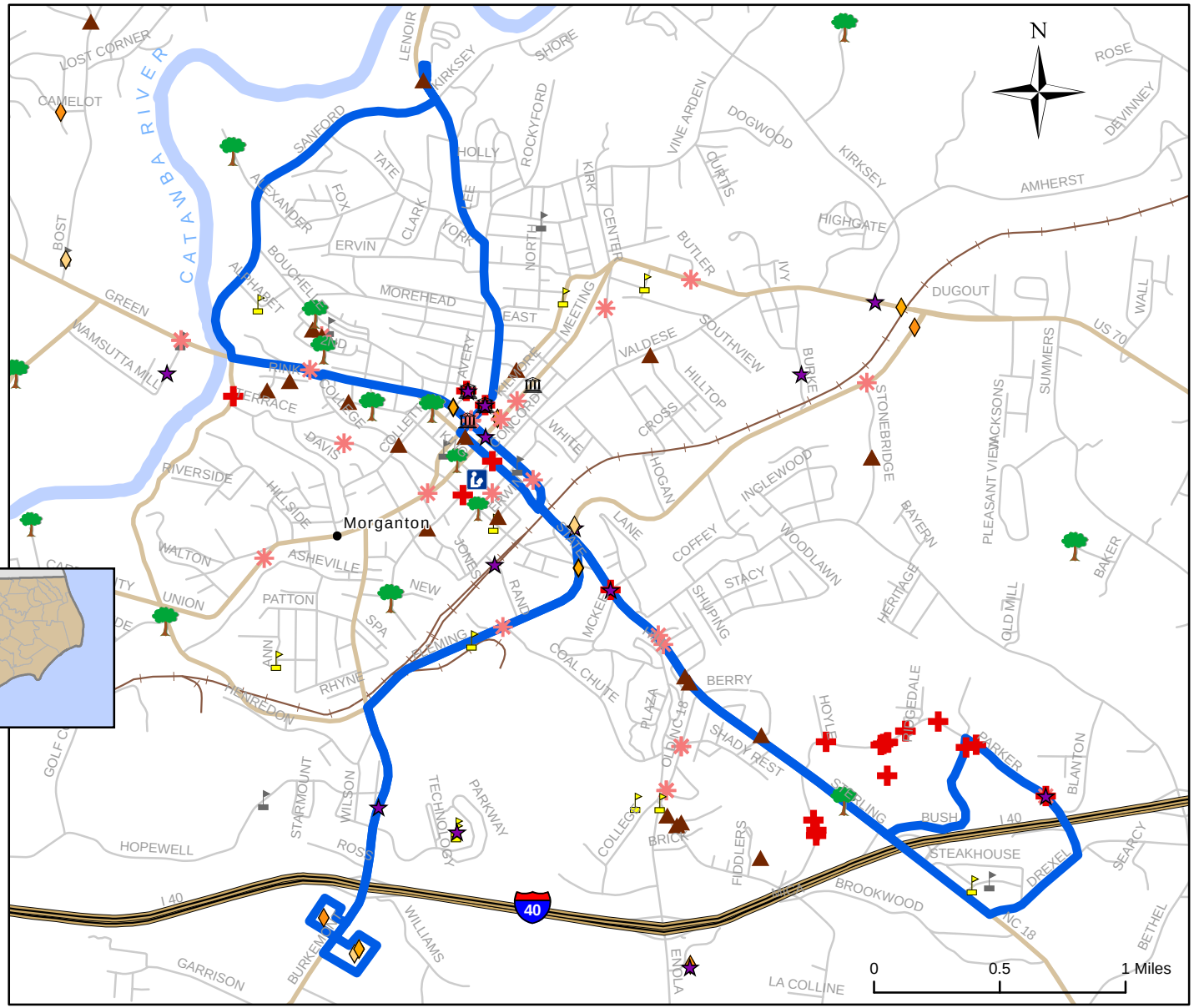
The circulator should also be timed to provide a transfer opportunity with either new corridor services along the US70 corridor, or with existing demand-response/deviated routes. As with other new services, Greenway should work to transition as many existing demand-response riders onto the circulator, if it could meet their travel needs. The circulator is proposed as a deviated fixed-route.

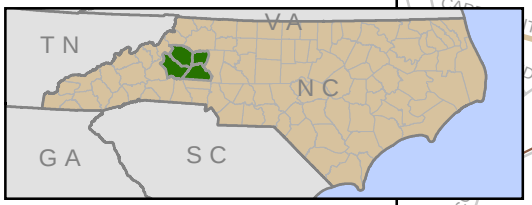
- ***Advantages and Disadvantages:*** A circulator service in Morganton would address local transit needs, offer a City amenity, and provide a way for Greenway to manage transit demand in the City. Morganton has been marketing itself as a good place for people to retire, and having access to local public transit is a useful amenity for seniors. The only real disadvantage to implementing this service is cost.

Figure 4-6: New Service Alternative #4, Circulator Service in Morganton

Legend

- Morganton Circulator
- Streets
- Major Highways
- Interstate Highways
- Railroads
- Multi-Unit Housing
- Major Employer
- Medical Services
- Educational Facility
- Day Care Center
- Public Library
- Municipal Services
- Human Service Agency
- Retail Destination
- Grocery or Pharmacy
- Park/Recreational Opportunity





Greenway Public Transportation Service Area

GREENway PUBLIC TRANSPORTATION

KFH GROUP

Notes: Trip generators compiled through a variety of online sources, including county, city, and town websites; agency/organization websites; and Google searches. Sources: Western Piedmont Council of Governments, ESRI Data CD.

- ***Cost:*** If this route were to be operated Monday through Saturday, for a 12-hour span of service weekdays and an 8-hour span on Saturdays, using one vehicle, the annual service hours would be 3,536 and the corresponding fully-allocated operating expenses would be about $159,000 annually (using $45 per service hour). Some of these expenses could be re-captured by Greenway if demand is managed in such a way as to be able to reduce the current demand-response services in Morganton, replacing it with the circulator. The capital costs include one vehicle ($65,000) and bus stop signs ($4,000). It should be noted that Morganton is within the Urbanized Area, so this route would qualify for funding assistance under S.5307. It would also be expected that the City would participate financially in supporting the service if it were to be implemented.

New Service Alternative #5: Circulator Service in Lenoir

As the largest City in Caldwell County, Lenoir has a number of significant transit origins and destinations. The Caldwell County government offices are located in downtown Lenoir, as is Caldwell Memorial Hospital, and there are major employers and retail opportunities in the City, both downtown and along the commercial corridors.

The purpose of the Lenoir Circulator is to connect residential, retail, governmental, educational, and employment locations within the City. While the exact route will be determined when/if the service is implemented, Figure 4-7 provides a draft route, which is a figure 8, serving downtown, the Department of Social Services, Walmart, the Caldwell County Library, and the commercial corridors along the way. This draft routing may need to be adjusted to include additional residential areas. Similar to the Morganton circulator, the Lenoir circulator could also be "branded" with a Lenoir-specific theme.

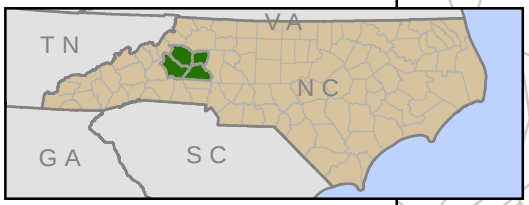
The circulator should also be timed to provide a transfer opportunity with either new corridor services along the US 321A corridor, or with existing demand-response/deviated routes. As with other new services, Greenway should work to transition as many existing demand-response riders onto the circulator, if it could meet their travel needs. The circulator is proposed as a deviated fixed-route.

- ***Advantages and Disadvantages:*** A circulator service in Lenoir would address local transit needs, offer a City amenity, and provide a way for Greenway to manage transit demand in the City. The only real disadvantage to implementing this service is cost.

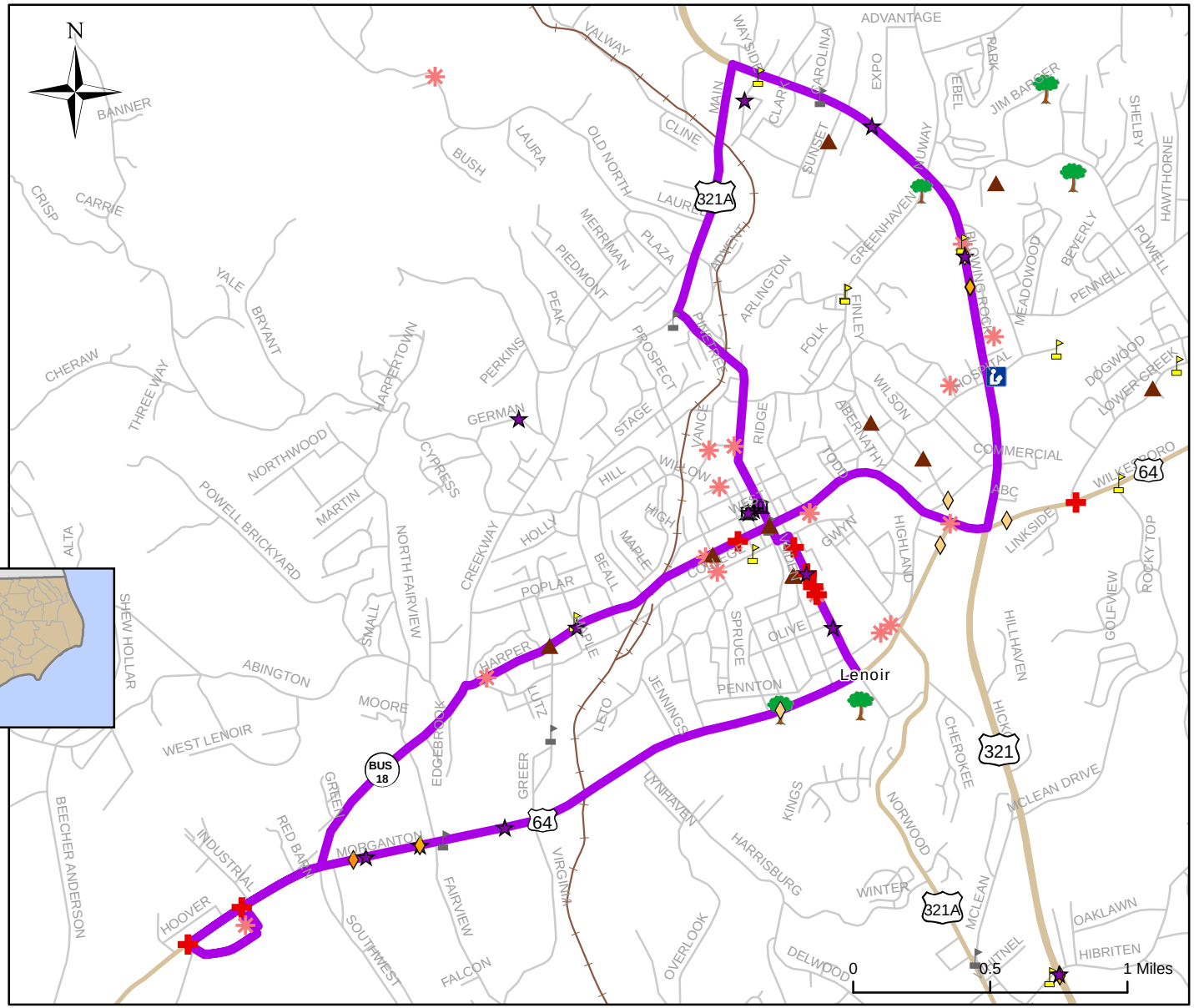
Figure 4-7: New Service Alternative #5, Circulator Service in Lenoir

Legend

- Lenoir Circulator
- Streets
- Major Highways
- Interstate Highways
- Railroads
- Multi-Unit Housing
- Major Employer
- Medical Services
- Educational Facility
- Day Care Center
- Public Library
- Municipal Services
- Human Service Agency
- Retail Destination
- Grocery or Pharmacy
- Park/Recreational Opportunity



Greenway Public Transportation Service Area



Notes: Trip generators compiled through a variety of online sources, including county, city, and town websites; agency/organization websites; and Google searches. Sources: Western Piedmont Council of Governments, ESRI Data CD.

- ***Cost:*** If this route were to be operated Monday through Saturday, for a 12-hour span of service weekdays and an 8-hour span on Saturdays, using one vehicle, the annual service hours would be 3,536 and the corresponding fully-allocated operating expenses would be about $159,000 annually (using $45 per service hour). Some of these expenses could be re-captured by Greenway if demand is managed in such a way as to be able to reduce the current demand-response services in Lenoir, replacing it with the circulator. The capital costs include one vehicle ($65,000) and bus stop signs ($4,000). It should be noted that Lenoir is within the Urbanized Area, so this route would qualify for funding assistance under S.5307. It would also be expected that the City would participate financially in supporting the service if it were to be implemented.

Summary of Service Alternatives

Table 4-1 provides a summary of the service alternatives.

ORGANIZATIONAL ALTERNATIVES

This section outlines a number of organizational alternatives. These alternatives do not focus on specific services, but rather on how the Authority can make changes and improvements to better serve the community, and/or save money. The organizational alternatives address revenue generation, community outreach, facilities, maintenance, partnerships, and travel demand management. For each of the organizational alternatives there is a description of the concept and a discussion of the potential outcomes and financial implications. Projects that the Authority has been working on independently of the CTSP process are included, but without a discussion regarding decision-making. These projects are included in this alternatives chapter because they are included in the plan.

Organizational Alternative #1: Develop Dedicated Local Transit Revenue

This CTSP process has revealed a number of unmet transit needs in the community and this chapter has outlined a variety of services that are expansionary in nature. While some projects can be implemented using existing funding, long-term financial stability is needed for Greenway. One way to achieve this stability is by developing a dedicated source of local revenue that can be used to match state and federal funds.

In North Carolina, there are currently two mechanisms that can be pursued to gain access to locally-generated, dedicated revenue. These mechanisms are a ¼ cent sales tax and/or a vehicle registration fee of up to $7.00 per vehicle.

Table 4-1: WPRTA CTSP Summary of Service Alternatives

Service Alternative	Purpose	Annual Operating Cost	Capital Needed	Capital Cost
Fixed-Route Alternative #1: Adjust the Tate Boulevard/Conover Route	To improve the productivity of the route.	Minor incremental savings	None	$ -
Fixed-Route Alternative #2: Split the NC127/Springs Road Route	To provide north-south linear service along NC127 and to allow service to be extended to several currently unserved apartment complexes.	$177,000	1 light transit vehicle	$ 65,000
Fixed-Route Alternative #3: Adjust Interlining	To reduce travel time between residential areas and commercial areas.	Minor incremental costs associated with minor changes in miles/hours.	None	$ -
Fixed-Route Alternative #4: Split the Hickory-Conover-Newton Route	To allow for improved interlining and schedule reliability and create a mini-transit hub in the Hospital area.	Minor costs associated with implementation.	None	$ -
Fixed-Route Alternative #5: Extend the Service Day	To provide riders with more flexibility to access jobs, evening classes, and typical errands.	$ 276,000	None	$ -
Fixed-Route Alternative #6: Improve Service Frequency	To provide more travel options for riders, offering greater flexibility and convenience.	$ 350,000	4 light transit vehicles	$ 260,000
Fixed-Route Alternative #7: Provide Sunday Service	To provide mobility for transit riders on Sundays.	$ 102,000	None	$ -
Fixed-Route Alternative #8: Adjust the Taylorsville Shuttle	To improve the productivity of the route.			

Table 4-1: WPRTA CTSP Summary of Service Alternatives

Service Alternative	Purpose	Annual Operating Cost	Capital Needed	Capital Cost
Demand-Response Alternative #1: Continue Transition to Deviated Fixed Routes	To maximize the the capacity of the vehicle trips that Greenway is already operating, both to add more general public availability and to increase productivity.	Minor costs associated with implementation	5 larger vehicles and bus stop signs (already programmed)	$ 858,000
Demand-Response Alternative #2: Install Mobil Digital Computers (MDC) and Automatic Vehicle Locators (AVL)	To improve productivity and data integrity.	$ -		$ 342,224
Quality of Service Alternative #1: Improved Telephone Customer Service	To provide better service to customers.	$ 24,800	Phone lines	included in operating expenses
Quality of Service Alternative #2: Improved Access to Information	To improve the marketing function. This alternative is not yet fully developed.			
Quality of Service Alternative #3: Bus Stop Amenities	To provide a more comfortable and safe experience for riders.	$ -	25 shelters, 6 solar light fixtures, and 350 bus stop signs with information tubes (already programmed-ARRA)	$ 406,500
New Service Alternative #1: Corridor Service between Morganton and Hickory	To connect Morganton to Hickory, serving a number of communities along the way and meeting one of the most frequently requested needs from the public survey.	$ 91,808	1 or 2 light transit vehicles and bus stop signs	$ 69,000

Table 4-1: WPRTA CTSP Summary of Service Alternatives

Service Alternative	Purpose	Annual Operating Cost	Capital Needed	Capital Cost
New Service Alternative #2: Corridor Service between Lenoir and Hickory	To connect Lenoir and Hickory, serving a number of communities along the way.	$ 91,808	1 or 2 light transit vehicles and bus stop signs	$ 69,000
New Service Alternative #3: Corridor Service between Taylorsville and Conover	To connect Taylorsville and Hickory, serving Cline Village along the way.	$ 91,808	1 light transit vehicle and 20 bus stop signs	$ 67,000
New Service Alternative #4: Circulator Service in Morganton	To connect residential, retail, governmental and employment locations within the City of Morganton.	$ 159,000	1 light transit vehicle and 40 bus stop signs	$ 69,000
New Service Alternative #5: Circulator Service in Lenoir	To connect residential, retail, governmental and employment locations within the City of Lenoir.	$ 159,000	1 light transit vehicle and 40 bus stop signs	$ 69,000
TOTAL		**$ 1,523,224**		**$ 2,274,724**

One-Quarter Cent Sales Tax

For the ¼ cent sales tax, the ***counties*** are authorized to levy a sales tax with a referendum called by the County Board of Commissioners, meaning that the sales tax must pass both the commissioners and the voters.

Table 4-2 provides the FY 2009 data concerning sales taxes in the four counties served by Greenway Public Transportation.

Table 4-2: Potential Revenue from 1/4 Cent Sales Tax for Transit

County		Taxable Sales, FY 2009		1/4 cent
Alexander	$	103,765,887	$	259,415
Burke	$	426,163,516	$	1,065,409
Caldwell	$	438,405,042	$	1,096,013
Catawba	$	1,654,738,905	$	4,136,847
Totals	$	2,623,073,350	$	6,557,683

As these data show, a ¼ cent sales tax would generate a significant level of financial assistance, probably more than is required for current transit demand in the region.

Vehicle Registration Fee

For the vehicle registration fee option, the ***counties*** are authorized to levy a vehicle registration fee of up to $7.00 per vehicle, rising to $8.00 per vehicle, effective July 1, 2010. This mechanism requires Commissioner approval, but not direct voter approval.

Table 4-3 shows the revenues that could be generated by county, based on an annual vehicle registration fee of between $1.00 and $7.00. As these data show, a fee of $5.00 or $6.00 would be sufficient to match current federal funds that come to the region for transit.

Table 4-3: Potential Revenue from Vehicle Registration Fees

			Total Collected if Implemented Vehicle Registration Fee at:						
County	**Number Registered Vehicles (per year)**	**Data Year**	**$1**	**$2**	**$3**	**$4**	**$5**	**$6**	**$7**
Alexander	42,226	CY 2009	$42,226	$84,452	$126,678	$168,904	$211,130	$253,356	$295,582
Burke	92,462	FY 2009	$92,462	$184,924	$277,386	$369,848	$462,310	$554,772	$647,234
Caldwell	80,096	FY 2009	$80,096	$160,192	$240,288	$320,384	$400,480	$480,576	$560,672
Catawba	178,000	2009	$178,000	$356,000	$534,000	$712,000	$890,000	$1,068,000	$1,246,000
TOTAL	392,784		$392,784	$785,568	$1,178,352	$1,571,136	$1,963,920	$2,356,704	$2,749,488

Notes: The Buke County contact specified that the number given was for notices sent out (not necessarily actual vehicles registered). The Catawba County number is a calculation for 12 months based on data from February through August 2009.

Discussion of the Options

A ¼ cent sales tax is likely to generate more revenue than is needed in the near-term for public transportation in the four counties and would require a referendum vote. The results of the public survey showed some support for this option, but none of the stakeholders in the region voiced support for a ¼ cent sales tax. The regional economy is still struggling and two of the counties (Alexander and Catawba) already have a local-option sales tax for other governmental purposes.

While there was less public support for a vehicle registration fee via the public opinion survey, the stakeholders overwhelmingly thought that this was a better option, particularly if a level lower than the maximum were to be chosen.

Given these data and opinions, a vehicle registration fee of $5.00 may be an appropriate course of action for Greenway to pursue. This fee, if enacted in all four counties, would generate $1,963,920 in local funds. This level of local transit funding would be close to matching the federal funds that are typically allocated to Greenway and would far exceed what the counties and cities currently contribute. Developing this level of local public transportation funding would give Greenway the ability to expand to meet the transit needs in the region, would provide the Authority with long-term financial stability, and would also give Greenway more flexibility in how it operates in contract work, as the revenues would not necessarily be needed as matching funds.

If Greenway decides to pursue a dedicated source of transit revenue, a working group of area stakeholders should be formed to help craft an educational campaign aimed at showing the benefits of implementing the fee, not only what it could allow in terms of transit service, but also how it could alleviate pressure on county budgets. This working group should include representatives from the local human service and senior citizen communities; Chambers of Commerce and economic development groups; major employers; hospitals; community college representatives; and users. It may be effective to form a separate group for each county, focusing on one county at a time. This tactic would allow familiarity between the working group and the commissioners, which may offer an increased chance of success.

Organizational Alternative #2: Standardize Billing Rate

The four transit programs that were previously in place in the region each had different billing rates, and some of the programs had multiple billing rates. Some of the rates had remained un-changed for several years, which was not a sustainable model. This situation has been difficult for Greenway, as some of the rates did not cover the cost of service, but Greenway did not want to increase rates so much so that contracts would be lost.

Using data from FY 2009, KFH Group staff and Greenway staff worked together to devise a shared-mileage based rate that would cover costs and allow for a contingency fund to be developed. This exercise was documented in Chapter 2, and resulted in a rate of $1.92 per shared mile.

Billing on a shared-mile basis ensures that costs are covered, but can be confusing to contracting agencies, whose monthly bills can vary quite a bit based on varying passenger loads. The Institute for Transportation Research and Education (ITRE) at North Carolina State University, as part of the 2009 Performance Plan and Analysis for Greenway, recommended that a flat/zone-based fee be implemented, but Greenway staff felt that they did not have a long enough history of financial and operating data to develop rates that would ensure that costs are covered.

The focus of this alternative is to continue to standardize rates for all Greenway contracts using the newly developed shared-mile rate (to be updated with 2010 data), and work towards developing a flat/zone-based fee structure in the future, perhaps for FY 2011. Greenway has had a staff change in the Finance Manager position, and the new Finance Manager needs to fully review contractual expense data prior to setting flat/zone rates.

Discussion

A flat/zone rate is appealing for contracting agencies, as the trip expenses will be known up front. Flat/zone rates are also compatible with general public trips, as they are more in keeping with a fare. Flat/zone rates are also easier to compute for the transit program, though Route Match can do the shared ride calculations. The down side to a flat/zone rate is the unknown element of ridership, which fluctuates. Under the shared-mileage rate, the expenses are always covered, which is why this method became so frequently used among North Carolina transit programs, many of which are private, non-profit agencies.

Organizational Alternative #3: Become a Ticket Agent for Intercity Bus Service

The Boone to Charlotte corridor has been selected by NCDOT for subsidized intercity bus service, using funds from the Federal S.5311(f) program. The leg from Hickory to Charlotte was also the number one intercity bus need listed on the public survey conducted for this CTSP.

A new bus transfer facility in downtown Hickory has recently been constructed. This facility allows for an off-street bus transfer opportunity and there is space for an intercity bus carrier to pull in. Greenway also has a staff person at the facility.

The focus of this alternative is for Greenway to become the Hickory ticket agent, selling tickets on behalf of the intercity bus carrier, for a small commission. This would maximize the use of the staff person assigned to the transfer center and also bring in a modest amount of revenue, depending upon the number of tickets sold.

The primary unknown for this alternative is whether or not the intercity bus carrier would be willing to divert from US321 into downtown Hickory for the passenger stop, or if they would prefer a stop closer to US321.

A related alternative, though not necessarily an organizational alternative for this CTSP, is the idea of adding Greyhound stops in Morganton and Hickory along the existing US40 Corridor route between Asheville and Winston-Salem. This Greyhound route currently operates closed door through the Greenway service area. As part of the North Carolina Intercity Bus Plan, ITRE staff have been negotiating with Greyhound concerning the possibility of adding these stops, as well as Statesville, to the east-west I-40 intercity bus service. The links between Asheville and Morganton and between Hickory and Statesville were the second and third most frequently mentioned links on the public opinion survey conducted for this CTSP.

Discussion

If the intercity bus carrier chooses downtown Hickory as a stop, then it would make sense for Greenway to become the ticket agent, particularly since the facility is already staffed. Using the transfer facility as an intercity bus stop also maximizes the connectivity for riders, as they can access the intercity bus stop via the Greenway regional system.

Organizational Alternative #4: Develop Transportation Demand Management Program

The needs analysis indicated that there may be a market for shared-ride programs, such as vanpooling and carpooling, to access areas outside of the immediate region such as Charlotte, Statesville, Winston-Salem, and Asheville. A potential way to implement a shared-ride program is to develop a broader transportation demand management (TDM) program.

The goal of a TDM program is to promote alternative transportation options to the single occupant vehicle, including carpooling, vanpooling, telecommuting, transit, bicycle, flexible work hours, compressed work weeks and parking policies/pricing strategies. NCDOT became active in supporting TDM programs as a way to decrease ground level ozone pollution from motor vehicles and mitigate the effects of increasing vehicle miles traveled (VMT) and NOx emissions.[1]

[1] TDM Program Overview, NCDOT-PTD.

Beginning in 2004, NCDOT began a funding assistance program for local TDM programs to fund 50 percent of their administrative costs. Eligible organizations must be public bodies responsible for promotion of TDM activities, with only one grantee per region.

Each TDM program that is funded is required to conduct specific TDM activities and must also calculate the VMT reductions that result from their efforts. The following six TDM strategies are listed in the grant guidance:

1. Conduct marketing efforts/activities identified in a marketing plan.

2. Coordinate with local transportation and land use planning efforts.

3. Facilitate ridematching services through ShareTheRideNC website.

4. Promote the Best Workplaces for Commuter program.

5. Collect and calculate data on VMT reductions through TDM activities.

6. Operate in a manner consistent with the NCDOT goals regarding making the transportation network safer, making the transportation network move people and goods more efficiently, and making the infrastructure last longer.[2]

The TDM grant funds are 100% state funds. These grants focus on administrative tasks and do not fund capital or actual vanpool operations, though they can be used to promote and oversee such programs.

The NCDOT-PTD TDM Program Manager indicated that if Greenway were to be interested in pursuing a TDM program, the first step would be to conduct a TDM visioning/feasibility study, gathering local stakeholders (including the PTD) to ensure that a TDM program would be viable in the region. S.5307 funds can be used in part to fund a TDM planning study. This type of study would be useful, as TDM programs do not work without interested participants.

- ***Advantages and Disadvantages:*** Developing a TDM program is compatible with Greenway's focus on environmental responsibility and could serve as a mechanism to increase ridesharing in the region. A TDM program that operates in conjunction with a transit program is a good fit, as the full spectrum of community mobility options are co-located. A TDM program in the region could also help with the region's air quality.

[2] TDM Program Overview, NCDOT-PTD, FY 2011 grant guidance.

The disadvantage of operating a TDM program in the Western Piedmont region is the possibility that people will not be interested in participating, as traffic congestion is not severe and parking is generally free. High fuel prices could spur interest, as could the heightened awareness of environmental issues.

- ***Costs:*** Prior to applying to the PTD for a TDM grant, Greenway would need to conduct a TDM feasibility study. The cost for such a study is likely to be in the $50,000 range, depending upon the particular scope of work. The primary expenses for a TDM program would include a staff person (salary and fringe) and marketing/printing. These costs are estimated to be about $80,000 annually.

Organizational Alternative #5: Further Develop Public/Private Partnerships

As Greenway transitions some of its demand-response service to deviated fixed-route service, there may be some trips that will be very expensive for Greenway to provide (i.e., trips that dispatch a vehicle for one person). This concept builds on the existing Medicaid brokerage idea, but focuses on further developing partnerships with private operators to provide these trips.

One example of a public/private partnership is a taxi-voucher program. A transit program in Maryland was recently awarded a grant from the United Way to buy-down the taxi fares for low-income riders. The transit program's limited hours are such that some riders use cabs for their return trips in the evening. The cab fares are cost-prohibitive for low-wage workers. The taxi voucher program that is being implemented will pay half of the taxi fare, with a $50.00 per month per client limit. The grant is small ($24,000), but is a good starting point for improving mobility during hours when public transit is not viable in rural areas.

Another example of public/private partnership is the rural vanpool program that is currently in place in North Carolina. If there is interest from area employers, they can call 2Plus, a private vanpooling company that works with NCDOT, to help set up rural vanpools for low-income workers to access jobs. Using JARC funds, the State subsidizes the fares for low-income workers who use the 2Plus vanpool program. 2Plus does all the legwork and bills NCDOT for the fare subsidies.

Organizational Alternative #6: Facilities

Independent of the CTSP, Greenway has been working on facility plans, including the development of an operating and maintenance facility, an administrative facility, and satellite facilities.

In 2009, Greenway completed a facility study, the purpose of which was to identify a site to be used as Greenway's operating and maintenance facility. The site chosen as a result of that planning process, is in Hickory, on the site formerly occupied by S&W Chemical Company. This 5.74-acre site is located at 1530 1st Avenue, SW. The FY 2011 capital budget includes funds to purchase the site ($380,000) and to begin architectural and engineering plans ($274,561). The estimated construction costs for the facility are just over $6.1 million.[3] A financial campaign will be needed to raise funds to construct this project.

In the course of discussing the facility, another potential site has been recommended to serve as an administrative center. The Warlong Glove Factory site, currently owned by the City of Conover, is located at the intersection of Conover Blvd. East and 3rd Street, SE in Conover. The City is looking for tenants for the site and has extended an offer for Greenway to use part of the site at no cost (i.e., rent-free). There will be costs associated with tenant fit-out, and these costs have been included in Greenway's FY 2011 Capital budget ($303, 464).

Greenway is also in the process of evaluating its satellite facilities in Taylorsville, Burke, and Caldwell Counties. The Taylorsville facility is located on Wittenburg Road, which is about five miles south of Taylorsville. The location of this facility is resulting in a significant level of deadhead mileage, as the large majority of the service in Alexander County ties into Taylorsville. However, the site is tied to the maintenance contract which expires in July 2011 and it is very reasonably priced ($175/month). Greenway should calculate the deadhead expenses versus the low lease expenses to determine if it should explore the possibility of re-locating the site to one in Taylorsville when the lease is up.

The Burke County facility is located at 300 N. Green Street in Morganton. This lease expires at the end of August 2010 and Greenway is actively looking for a new location and anticipates a lease arrangement.

In Caldwell County, the facility is located at 840 Connelly Springs Road. The lease is due to expire at the end of June, 2011. Staff indicated that they may wish to re-locate at the end of the lease due to parking constraints at the site.

Organizational Alternative #7: Bring Maintenance In-House

All of Greenway's fleet maintenance is currently performed by contractors. Outside of the CTSP process, Greenway staff evaluated the potential to bring the

[3] Greenway Public Transportation Maintenance, Administration, and Operations Facility Feasibility Study, URS, August, 2009.

maintenance function in-house, starting with the vans and eventually including the buses when the Authority has its own facility.

The staff evaluation concluded that it would be beneficial for the Authority to bring maintenance in-house for the following three primary reasons:

- In-house maintenance will be less expensive, with the potential to save over $100,000 annually by directly performing the van maintenance.
- There will be improved control over the quality and timeliness of vehicle maintenance, and
- The construction of a Greenway facility will allow for bus maintenance.

The schedule for the maintenance transition is as follows:

- The current van maintenance contracts expire in July 2011. At that time the van maintenance should be brought in-house, using a leased facility.
- Maintenance of buses should remain a contracted function until the Authority has an appropriate facility and should be re-bid in June 2011.

SUMMARY

This chapter has included a variety of potential alternatives, including those that are expansionary and those that serve to improve productivity. Ongoing initiatives by WPRTA have also been included, as they are a part of the five-year plan.

These alternatives were presented to the staff, the TAB, the Board, and the public during May and June, 2010. The TAB then prioritized the projects for inclusion in the five-year plan (Chapter 5).