Northwest Arkansas Transit Development Plan

Final Report

Prepared for:

NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION

AHTD

Ozark Regional Transit

RAZORBACK TRANSIT

Submitted by:

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December 2010

Executive Summary

The Northwest Arkansas Regional Planning Commission (NWARPC), in conjunction with the Arkansas State Highway and Transportation Department (AHTD), Ozark Regional Transit (ORT) and Razorback Transit, has undertaken the development of this Transit Development Plan (TDP) to chart a "blue print" for expanding transit services in the Northwest Arkansas region. This report presents a summary of the work completed for this TDP. The objective was to identify near-term (1-2 years), short-range (3-5 years) and long-range (6-10 years) service recommendations that result in expanded opportunities for Northwest Arkansas residents to utilize transit, boosting ridership in a manner that improves service productivities. Eight (8) Technical Memorandums have been prepared during the course of this project. Four (4) meetings were also conducted with a Project Advisory Committee during the course of this study.

The Northwest Arkansas region has experienced tremendous growth in recent years. The existing population of Bentonville and Washington Counties is estimated to be about 450,000. By 2035, the population of these two counties is projected to be 677,000. Institutions and industries that have been fueling this rapid growth include:

- Educational institutions, such as the University of Arkansas and the Northwest Arkansas Community College;
- Healthcare institutions, such as the Mercy Health System, the Northwest Health System and the Washington Regional Medical Center; and
- Major corporations that are headquartered in Northwest Arkansas, such as Wal-Mart, Tyson Foods and J.B. Hunt.

The rapid population growth in the region has been accompanied with increased traffic congestion. As land use densities continue to increase in the region, there is growing recognition that alternative travel modes must be developed and expanded. This recognition has been documented in the following recent survey efforts:

- The NWARPC is presently updating its Long-Range Transportation Plan. During the public outreach portion of this project, participants were asked to identify how transportation funds should be allocated through a "coin toss". Participants were given 10 coins and asked to distribute those coins to various transportation program options. Over 1,200 coins were collected. Improved bus transit received the largest number – 330 coins (27%).
- An on-line survey was also conducted by the NWARPC in support of its Long-Range Transportation Plan. Respondents of this survey also identified a strong desire to see increased public transportation services in the Northwest Arkansas region over other transportation strategy options.
- The University of Arkansas Community and Family Institute completed a Northwest Arkansas Community Survey in 2010. Respondents identified the existing lack of public transportation as a source of discontent and felt that transportation was one of the biggest challenges facing the region.

Existing transit services in the Northwest Arkansas region are presently provided by Razorback Transit and Ozark Regional Transit (ORT). Razorback Transit provides fixed-route and paratransit services that are targeted primarily towards University of Arkansas students, staff and faculty. Service is provided off-campus to surrounding areas in Fayetteville, but with a focus on serving transportation service needs for the University of Arkansas. Razorback Transit provides high levels of transit service during the school year and is well utilized, but operates at significantly reduced service levels when school is not in-session. Daily ridership during the 2010 Fall Semester was averaging close to 11,000 passenger trips.

ORT is the regional transit service provider, with routes operating in both Benton and Washington Counties. Despite its limited funding support, ORT does a noteworthy job in providing extensive geographic coverage with those funds. However, this geographic coverage is achieved through circuitous routes, often with infrequent service levels and a limited span of service. All service operated by ORT is with body-on-chassis (i.e., small) buses. Daily ridership in Fall 2010 was averaging just over 1,000 passenger trips.

The existing transit system is inadequate to meet both the current and growing transportation needs of the Northwest Arkansas region. An expanded transit system is necessary if the region desires to make transit a viable transportation alternative to the single occupant vehicle. Recommendations presented in this TDP identify how transit services can be expanded to meet this objective. As previously noted, the following three service plan periods were defined for the ten-year TDP.

- The ***Near-Term Plan*** reflects Years 1-2 of the 10-year TDP time period. No additional funds have been assumed for transit during this time period. Thus, near-term recommendations focus on cost neutral service adjustments that will increase efficiencies.
- The ***Short-Range Plan*** reflects Years 3-5 of the TDP. The TDP assumes additional funds are available for transit during this time period. Recommendations reflect the transition of the existing limited transit network to a more robust regional network.
- The ***Long-Range Plan*** reflects Years 6-10 of the TDP. Recommendations reflect the continued growth of transit services, with expanded geographic coverage, longer spans of service on routes and the introduction of weekend service.

Prior transit studies in the Northwest Arkansas region have proposed consideration of a regional rail line. Development in the Northwest Arkansas is very linear along the I-540 corridor. Thus, a regional rail line may be a viable transit mode worthy of consideration sometime in the future. However, any rail system requires a strong background bus network. That network does not exist in Northwest Arkansas today. Thus, recommendations in this TDP are focused solely on bus service improvements.

A major benefit of the TDP service plans is increased accessibility to transit. The table below presents existing population and employment that is within ¼ mile of proposed transit services in each TDP service plan. Transit accessibility in the Near-Term Plan reflects minimal change from existing accessibility. However, accessibility increases significantly with the proposed Short-Range and Long-Range service plans.

Table ES-1
2010 Population and Employment within ¼ Mile of Proposed Transit Service

Demographic		Near-Term	Short-Range	Long-Range
Population	Population Within ¼ Mile	95,036	130,591	199,273
	% of Regional Population	21.8%	30.0%	45.8%
Employment	Employment Within ¼ Mile	105,328	128,657	156,263
	% of Regional Employment	45.6%	55.7%	67.7%

Tables ES-2 and ES-3 present a summary of operating requirements for each TDP service plan. Expansion of service will result in the need for $22.7 million to cover annual operating and maintenance expenditures for the two transit systems upon full implementation of the TDP. New equipment and facilities will also be needed, such as expanded bus fleets (including large buses), passenger transit centers, a new maintenance facility, and improved passenger amenities at bus stops. Almost $63 million

has been identified for vehicle and facility improvements. It will be important to include funding for pedestrian access improvements at bus stops (e.g., sidewalks, crosswalks and pedestrian signals). The proposed expansion of bus service in this TDP includes service on major roadways. Routes serving those major roadways should be operated with large buses (i.e., 30-40' buses). Safety (pedestrian and vehicular) must be considered with the placement of bus stops on those major roadways, and bus pull-out lanes should be pursued where appropriate.

Table ES-2
Ozark Regional Transit – Current and Projected Fixed-Route Operating Requirements

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	12	11	34	59
Annual Hours	29,116	29,116	122,655	234,032
Annual Miles	496,862	488,788	1,570,137	3,178,511
Annual O&M Costs	$2,600,000	$2,600,000	$10,744,900	$20,201,600

Table ES-3
Razorback Transit – Current and Projected Fixed-Route Operating Requirements

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	16	17	18	18
Annual Hours	33,210	33,437	36,426	36,426
Annual Miles	378,622	378,909	394,997	394,997
Annual O&M Costs	$2,350,000	$2,363,6000	$2,542,900	$2,542,900

The financial analysis that was completed for this TDP identifies projected costs (operations and maintenance, and capital) and potential revenue sources over the TDP's 10-year period. The expansion of transit services will require a significant commitment of local funding. Recent studies indicate that a ¼ cent sales tax in Washington and Benton Counties can raise $15 million per year. This amount would be sufficient to fund the transit service and facility improvements identified in this TDP, should local government leaders decide to pursue a ¼ sales tax ballot initiative. It should be noted that both ORT and Razorback Transit may soon be losing federal operating assistance formula funds because of the region's recent population increases (regions over 200,000 in population cannot use certain Federal Transit Administration funds to cover operations costs). Thus, revenues from a sales tax initiative could be used to cover this anticipated loss in federal funds and the expansion of transit services as proposed in this TDP.

Should the Northwest Arkansas region move forward with the expansion of transit services, consideration should be given to governance and service provision options. As previously noted, presently Razorback Transit's service is focused on the University of Arkansas and ORT is the regional transit service provider. This TDP assumes no change in this service provision structure. However, other options could be explored in conjunction with a sales tax initiative. For example, Razorback Transit could be the designated transit service provider within Fayetteville, with ORT being the designated service provider for all other local and regional route service. Another potential scenario could be the provision of all transit services within the region by one operator. Alternative scenarios such as these do have implications in areas such as fare structure, staffing and facility needs.

Finally, it is important to note that the expansion of transit services in the Northwest Arkansas region should be part of a comprehensive strategy that offers viable choices to the single vehicle occupant. This strategy should include other initiatives such as carpool and vanpool programs, and other transportation demand management (TDM) strategies.

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1.0 Introduction

The Northwest Arkansas Regional Planning Commission (NWARPC) led the effort to complete a Transit Development Plan (TDP) for the Northwest Arkansas region. The overall objective of this project was to identify near-term, short-range and long-range service recommendations that provide an integrated regional public transportation network and expand opportunities for Northwest Arkansas residents to utilize this network. Several work tasks were completed to achieve this objective including:

- **Staff and Public Input**
  Valuable input was solicited regarding issues, concerns, suggestions, perceptions and needs. Consultant staff elicited input from ORT and Razorback transit administrative staff, drivers and dispatchers. Several interviews and group presentations provided input from a cross-section of community stakeholders and major employers. Riders and non-riders completed transit opinion surveys at public outreach forums.

- **Data Collection**
  Existing data and previous studies were assembled and reviewed. A ridecheck survey was administered on 100 percent of ORT's and Razorback Transit's fixed-route weekday service. The ridecheck survey collected boarding and alighting activity by stop, trip and route, as well as on-time performance information at time points. An on-board survey was also administered on both transit systems to collect trip data (such as trip origin, destination, trip purpose, etc.), and demographic data (such as age and gender, household income, vehicles owned, etc.).

- **Field Work**
  Consultant staff spent a substantial amount of time conducting field work, riding bus routes, driving alignments, and talking to drivers on the routes, as well as investigating segments of the service area that presently do not have route coverage.

- **Latent Demand Analysis**
  Using data obtained from the U.S. census and the Northwest Arkansas Regional Council of Governments, the latent demand analysis assessed existing population, household and employment distributions and trip-making patterns in the region, including subsets of population over 65 years old, population below the poverty line, disabled population, and zero-vehicle households. The analysis also collected demographic data from the NWARPC for horizon year 2035 to show growth areas in the region.

- **Existing Service Evaluation**
  A comprehensive evaluation of ORT and Razorback Transit systems and route characteristics was completed through assimilation and analysis of the data collected, particularly the ridecheck survey efforts. Route coverage, historical ridership and service productivity measures were reviewed, and individual route profiles were developed. These profiles provide a detailed assessment of current route characteristics and route strengths and weaknesses. Data was assessed by route direction, segment and stop.

- **Near-Term, Short-Range and Long-Range Service Plan Recommendations**
  Results from the various work tasks described above were used to develop specific route recommendations for the Near-Term (1-2 year), Short-Range (3-5 year) and Long-Range (6-10 year) time periods. Operating statistics and costs and capital needs were identified for each plan, including vehicle requirements and interlines.

- **Financial Analysis**
  Annual operating and maintenance costs and capital costs were identified for the TDP's ten-year time period. Potential federal, state, farebox and other revenue sources were identified for this time period to determine local funding requirements for full implementation of the TDP service plan proposals.

Specific findings from the above-noted work tasks were documented in the following Technical Memorandums prepared as part of this TDP work effort. These documents are referenced throughout this final report and serve as a resource should more detail be desired on a particular task:

- *Technical Memorandum #1 – Documentation of Staff Input*
- *Technical Memorandum #2 – Documentation of Public Input*
- *Technical Memorandum #3 – Ridecheck Survey Methodology and Results*
- *Technical Memorandum #4 – On-Board Survey Methodology and Results*
- *Technical Memorandum #5 – Existing Service Evaluation*
- *Technical Memorandum #6 – Latent Demand Analysis*
- *Technical Memorandum #7 – Service Plan Recommendations*
- *Technical Memorandum #8 – TDP Financial Analysis*

This report begins with a summary of staff (Section 2.0) and public (Section 3.0) input. Findings from the ridecheck (Section 4.0) and on-board survey (Section 5.0) efforts are presented next. Section 6.0 summarizes existing ORT and Razorback Transit service and performance characteristics. This is followed by a latent demand analysis of the Northwest Arkansas region (Section 7.0). The Near-Term, Short-Range and Long-Range Service Plan recommendations are presented in Section 8.0. The final section of this report (Section 9.0) presents a financial analysis of the TDP service plan (anticipated costs and potential revenue sources).

2.0 Staff Input

An initial task of the TDP effort involved interview sessions with staff from both Ozark Regional Transit and Razorback Transit. These interview sessions included supervisors, bus operators and other transportation staff, and occurred August and September 2010. This input was used to identify strengths and weaknesses of both systems as service recommendations were developed throughout the project.

2.1 Ozark Regional Transit Staff Comment Summary

Ozark Regional Transit (ORT) fixed route drivers, supervisors and Transportation staff were invited to participate in one of two drop-in meetings to offer service-related feedback that could help guide NWARPC TDP process. The first meeting was between 2 p.m. and 4 p.m. on Wednesday, August 4th. The second meeting was between 9:00 a.m. and 11:00 a.m. on Friday, August 6th. These time periods were chosen to ensure opportunities for afternoon drivers to comment prior to their shift and morning drivers to comment after their shift. Ten questions were posed to the staff to initiate dialogue and allow common themes to emerge. The questions for discussion and their corresponding responses were:

1. **Who rides ORT?**

   People who don't drive, captive riders, seniors, disabled, growing non-English speaking population, fixed income, college students, low income, dialyses patients, persons who suffer from seizures

2. **What are the most popular/busiest stops in the ORT system?**

   Walmart (any), NWA Mall, North Hills Medical Park, NWACC, Scottsdale Mall, Fayetteville Library, VHS, Social Security, Rogers City Hall, Harps; Harps is not as big a destination anymore

3. **Are there route segments that are unutilized?**

   Route 44 segments east of Walmart on Walnut, would be more productive to go to Pinnacle Hills development, Route 40 Dawn Drive, Sycamore Street, locations for turnarounds that are out of the way (Route 43 White, Baccus, 40th, old St Mary's Hospital and Route 54 White/54th, Baccus)

4. **Are there additional places that ORT needs to serve based on customer requests?**

   Pinnacle Hills, Mercy Hospital, Wedington (Betty Joe), Siloam Springs (casino), Crossover Road (Hwy 45), 71 Business to Lowell/Rogers, US 412, I-540, Walton, MLK, Joyce, Centerton to Walmart HQ, Madison County, Elkins, Rogers/Bentonville – East end of 102 for $7 haircuts, Samaritan House, New Links Apartments (Rainbow Curve) in Bentonville, Rainbow Curve & Walton (Hotel), 8th & Walton, homeless services (SW 14th & I Street), SW 28th, Touchstone, Dialyses, Harps on Garden, Mission & Crossover (Grad students), corridors – Huntsville, Sunset, New Hope Drive (east of 71), 8th Street, Easy Street (Rogers), 412 to Siloam Springs, needs to serve high schools and junior schools to retain common riders, Walmart (Pleasant Grove in Lowell), St. Mary's Hospital, Farmington High School (college classes)

5. **Does the service need to operate earlier? Later?**

   Should start earlier to catch commuter shifts at 7 a.m. perhaps 5-5:30 a.m.; should run later (more pressing) at least one hour, maybe 9, 10 or 11 p.m. to accommodate employees and college students (NWACC Bentonville), need Saturday service, Sunday service not needed

6. **How well do connections work? Where are the problems?**

   Mostly work pretty well, drivers hold for five minutes, limited staging space at NWA Mall, Route 54 challenged to make connections, afternoon traffic corrupts connections

7. **Are there running time shortfalls? Where/when?**

   Route 40 – not bad when there are no wheelchairs, Lifestyles makes it too tight, too many deviations for available running time

   Route 41 – under control, Razorback Road is problematic during school, too many deviations for available running time, 12th & Washington

   Route 42 – good shape, no problem

   Route 43 – o.k. but would be problematic if service ran all day, tight, too many traffic lights, driving in and out of library, schools, etc.

   Route 44 – low ridership volume, easy to maintain schedule, loose, relaxed schedule, could do more

   Route 46 – covers a lot of ground and easy to lose time, very tight, power chairs, minimal ridership at senior center

   Route 47 – fine, sitting time at one end but allows for wheelchair delays

   Route 50 – only one trip so no problems, no ridership, doesn't run early enough in the afternoon

   Route 54 – so far, so good, needs adjustment at NWACC to make connections further downstream, schedule is very dependent on college students and the NWACC schedule

   Route 55 – 10-minute one-way trip is too constrained, would operate better at 30-minute frequency, no riders, scheduled break interferes with connections

8. **What delays you most?**

   Traffic light timing (College Avenue @ VA Hospital), traffic, flag stops, wheelchairs, disabled passengers, waiting for connections, fare media

9. **Name three things that work really well at ORT**

   Mechanics/maintenance, dispatch, driver courtesy, good people, treated with respect, teamwork, personal service

10. **Name three things that ORT struggles with**

    Scheduling, quick to reprimand, slow to show appreciation, unnecessary radio communications (transfers), payscale, living wage, all forms of communication (admin, training, etc.), route directions (turn by turn) out of date, level of service (frequency), lack (or knowledge) of written procedure, operators feel many procedures unnecessary

2.2 Razorback Transit Staff Comment Summary

Razorback Transit fixed route drivers, supervisors and Transportation staff were invited to participate in a drop-in meeting to offer service-related feedback that could help guide NWARPC TDP process. The meeting was conducted between 1 p.m. and 4 p.m. on Wednesday, September 8th. This time period was chosen to ensure opportunities for afternoon drivers to comment prior to their shift and morning drivers to comment after their shift. The date was selected to ensure maximum bus operator participation and staffing associated with the start of the University of Arkansas school year. Given the unique mission and operating conditions at Razorback Transit, a more free-flow discussion of operating concerns and input was conducted. Highlights from those discussions are outlined below:

Areas that need service

- East area of Fayetteville – east of College
- The Cliffs Apartments, out on Crossover Road
- North/south route along Hwy 112
- Joyce & Crossover – social security office over there
- The Links apartment complex out on Wedington (they have their own private shuttle to U of A)
- Turtle Creek Road/Turtle Creek Apartments – upper end and student housing
- Salvation Army at 15th St. and US 71
- The Meadowlands out on Wedington
- The Wal-Mart on Hwy 62 towards Farmington and housing ¼-½ mile past the Wal-Mart
- Holland, Camellia areas in Farmington
- South part of town along Hwy 71 – lower income area
- Up and down Crossover (Hwy 265, East side of US 71)
- Old Wire Road
- Mission and Crossover
- Township Road
- Drake and Gregg (apartments going up in there – one for disabled, one for students)
- U of A electrical engineering area on south 71

Run Time issues

- Brown Route – have to hustle to make trip in 20 minutes
- Blue route

Other Items

- Transfers to ORT occur at Hillcrest Towers, at Mall, at Methodist church, at Library and Central Parking
- Razorback yard will need to be expanded if bus service is to be expanded
- Too much bus service on short routes that have common stops (e.g., along Pomfret, Green routes)
- Red route could use another bus to attract more riders with 30-minute service instead of 60-minutes. Route should also start earlier (6:30 a.m.)
- Purple routing should be added to the Green Reduced schedule
- Maple Hill and Maple Hill Express – perhaps too much service to Maple Hill between the two routes
- Extra personnel needed for cleaning buses. Buses look kind of scrappy. Would provide Razorback with a more positive image.
- Note that Tan and Green are running 2 buses in the a.m. until ridership calms down (beginning at 7:00).
- Paratransit – Razorback PT gets complaints from riders about ORT paratransit. People tend to gravitate towards Razorback PT instead of ORT paratransit when there's a choice – mostly because of the free fare, but also because ORT seems to refuse service to customers more often.
- Paratransit use is high near the intersection of Drake & Gregg.
- Razorback Transit bus operators are not familiar with ORT schedules and are at a loss when trying to assist passengers who are trying to navigate between the two systems

3.0 Public Input

Another key task of the TDP was the collection of public input from riders, non-riders and representatives of key stakeholder groups. This input was used to identify strengths and weaknesses of the current public transportation systems and opportunities for future transit services in the region. It is also important to note that this was not the only means of soliciting public input for this project. An on-board survey was also conducted as part of this TDP. Its findings are presented in Chapter 5 of this report.

3.1 Public Input Summary

An important part of the TDP is to reach a broad constituency within the community to solicit input on routes, schedules and service types. This will ensure that the community is involved, given ample opportunity to provide input, and made aware that their issues have been heard and understood.

To achieve these goals, two (2) community meetings were held at strategic locations throughout the TDP study area. This included Tuesday, September 7th at the Fayetteville Public Library from 2 to 6 p.m.; and Thursday, September 9th at the Center for Non-Profits at St. Mary's in Rogers from 2 to 6 p.m. Both locations were selected based on their access to public transit to ensure fair access for all. The community meetings were advertised on-board all ORT and Razorback Transit buses (see Figure 3-1) as well as through local print and television news media outlets. To increase the meeting's reach, the effort was co-located with the NWARPC's Long Range Transportation Plan's public input sessions. The Fayetteville meeting was attended by 81 participants. The Rogers meeting was attended by 47 participants.

Figure 3-1
On-Board Public Meeting Advertisement

Both meetings were conducted in an "open house" format. The consultant team set up a table with maps of the existing transit service and solicited participants to show them where additional transit service was warranted. A survey was also provided to gauge their familiarity as well as their perceptions of public transit in the area (see Figure 3-2). At the end of the survey form, participants were encouraged to offer ideas and thoughts regarding their perceived strengths, weaknesses and future transit needs in the region.

Figure 3-2

Northwest Arkansas Transit Opinion Survey

The Northwest Arkansas RPC is presently evaluating ways to improve transit service across the region. Please take a minute to help us by filling out this survey regarding your opinions of bus service. ***Thank you for your help!***

1. How familiar are you with ORT and/or Razorback Transit public transportation services?

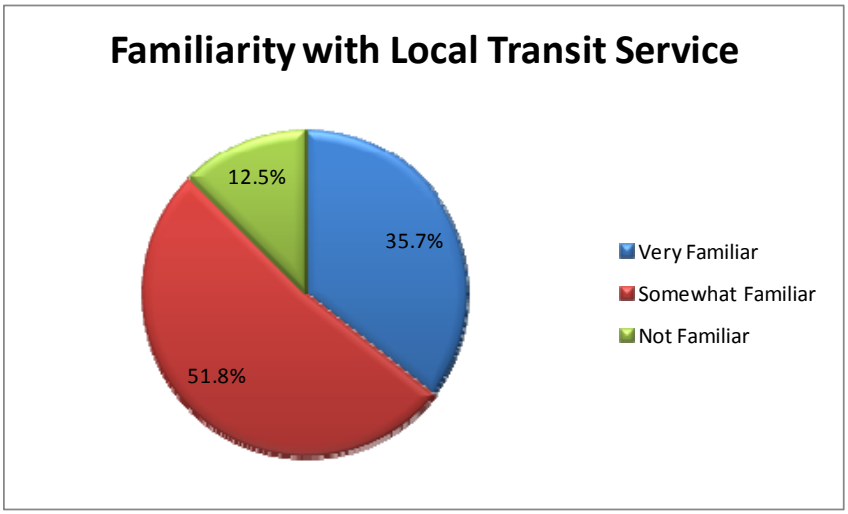
☐ 1 Very Familiar ☐ 2 Somewhat Familiar ☐ 3 Not Familiar At All

2. How important are the following characteristics to making you more likely to ride transit?	Very Important	Somewhat Important	Not Important	Not Sure
a. Frequent bus service	☐ 1	☐ 2	☐ 3	☐ 4
b. Direct bus routes to destinations	☐ 1	☐ 2	☐ 3	☐ 4
c. Reliable bus travel times	☐ 1	☐ 2	☐ 3	☐ 4
d. Late evening service	☐ 1	☐ 2	☐ 3	☐ 4
e. Saturday & Sunday service	☐ 1	☐ 2	☐ 3	☐ 4
f. Express or limited-stop bus services	☐ 1	☐ 2	☐ 3	☐ 4
g. Park-and-Ride facilities	☐ 1	☐ 2	☐ 3	☐ 4
h. Community shuttles near my home or office	☐ 1	☐ 2	☐ 3	☐ 4
i. Availability of schedule & route information	☐ 1	☐ 2	☐ 3	☐ 4
j. Cost of bus fares	☐ 1	☐ 2	☐ 3	☐ 4
k. Security on buses & at transit stations	☐ 1	☐ 2	☐ 3	☐ 4
l. Cleanliness of buses & transit stations	☐ 1	☐ 2	☐ 3	☐ 4
m. Courtesy/friendliness of bus drivers	☐ 1	☐ 2	☐ 3	☐ 4
n. Sidewalk & bike access to bus stops	☐ 1	☐ 2	☐ 3	☐ 4
o. Employer incentives to use transit services	☐ 1	☐ 2	☐ 3	☐ 4
p. Automobile traffic congestion	☐ 1	☐ 2	☐ 3	☐ 4
q. High automobile fuel or parking prices	☐ 1	☐ 2	☐ 3	☐ 4
r. Other: _____	☐ 1	☐ 2	☐ 3	☐ 4

3. Please list any major destinations you would like to see served by an improved regional transit system.

57 respondents completed the questionnaire. Of those, an overwhelming majority had at least some level of familiarity with the local transit service with 36% identifying as being "very familiar", 52% being "somewhat familiar" and 12% as "not familiar" (see Figure 3-3).

Figure 3-3



The second section of the survey was oriented toward attitudinal perceptions of what makes service successful. All characteristics ranked between "very important" and "somewhat important". With a score of "1" identifying "very important" characteristics and "3" identifying "not important" characteristics, Table 3-1 ranks the averages of the responses for each of the service characteristics outlined in Question 2.

Table 3-1
Transit Opinion Survey Service Characteristics Rankings

Ranking	Service Characteristic	Average Score (1-3)
1	Frequent Bus Service	1.15
2	Reliable Bus Travel Times	1.25
3	Availability of Route and Schedule Information	1.33
4	Cleanliness of Buses and Transit Stations	1.44
5	Direct Bus Routes to Destinations	1.45
6	Security on Buses and at Transit Stations	1.52
6	Sidewalk and Bike Access to Bus Stops	1.52
8	Courtesy and Friendliness of Bus Operators	1.66
9	Community Shuttles Near My Home or Office	1.73
10	Automobile Traffic Congestion	1.77
10	Cost of Bus Fares	1.77
12	High Automobile Fuel or Parking Process	1.78
13	Saturday and Sunday service	1.79
14	Park-and-Ride Facilities	1.85
15	Late Evening Service	1.87
16	Employer Incentives to Use Transit Service	1.90
17	Express or Limited-Stop Bus Services	1.94

The final section of the survey solicited input for destinations that respondents would like to see served in a new, expanded regional transit system. At the Fayetteville meeting, respondents' most common requests indicated that they would like to see service to:

1. NWA Regional Airport (9 comments)
2. Springdale/Downtown Springdale (5 comments)
3. Wedington Corridor/West Fayetteville (5 comments)
4. Bentonville/Downtown Bentonville (4 comments)
5. West Fork (4 comments)

At the Rogers meeting, the most frequent requests were:

1. Pinnacle Hills Mall Area (5 comments)
2. Mercy/St. Mary's Hospital (4 comments)
3. NWA Regional Airport (2 comments)

3.2 Stakeholder Input Summary

A Project Advisory Committee (PAC) was assembled to monitor and provide input throughout the TDP process. This diverse panel consisted of stakeholders from the NWARPC, ORT and Razorback Transit management, the local jurisdictions, community interest groups and the riding public. During the first PAC meeting in August 2010, members were asked for their input regarding the strengths and weaknesses of the current system, characteristics of an expanded transit network, needed complementary infrastructure (e.g. sidewalks), and transit infrastructure. Some of the comments received were:

- Friendly, timely, helpful, and safe drivers
- Express route from Fayetteville to Rogers is excellent. Timely service.
- Need a commuter service – to plants, Wal-Mart, Tyson – what are the best starting and ending times?
- People with impediments can't get jobs without consistent transportation
- Will need additional mobility infrastructure -- need better sidewalk system
- ORT has to charge and Razorback doesn't (students pay fees) – this can become confusing to some
- Need to coordinate better with Razorback; more of a seamless system
- Without the frequency, not really serving the working public
- NWACC – campus in Bella Vista not served
- ORT – serves a large area, but doesn't have the frequency
- ORT routes are generally loops – not designed as a service of 1st choice, but rather as a last resort
- Paratransit – must schedule in advance -- this is a problem if there is an emergency
- ORT is not a service of speed, but one of necessity
- How important is front door service?
- Must have a multi-modal system
- Install shelters – share these with ORT and Razorback
- Difficult to find out about public transit
- Bus stops and schedules are not visible enough
- There is a possibility of many more people riding the bus if it were easier to ride; but a choice rider might only ride once because the system is so disjointed
- The smaller buses are perceived as paratransit only
- The bad stigma of riding the bus – as "losers" – must stress the environment as the correct thing to do…marketing is important
- Need a robust bus system before starting a train system
- State won't let transit facilities (like shelters) in their Right-of-Way
- Other states such as Louisiana allow for shelters in the ROW as long as there is visibility and no advertising

In addition to the PAC, the Consultant Team also reached out to two of Northwest Arkansas' leading employers – Tyson Foods and Wal-Mart.

Tyson Foods

On September 9, 2010, a meeting was held with Patrick Pilkington and Russell Tooley of Tyson Foods. The purpose of the meeting was to gain a better understanding of Tyson's processing and administrative operations. This discussion included estimated number of employees and operating hours at the major facilities within the Northwest Arkansas region. Locations with parking shortfalls and higher numbers of

entry-level wage earners were of particular interest. Tyson also indicated a need to provide transit access to their employment center which is located in Lowell just off of Business 71. At the conclusion of the meeting, Tyson representatives agreed to work with the Consulting Team to provide home zip code/work location pairings to assist with future local and targeted express service planning efforts.

Wal-Mart

On September 8, 2010, a meeting was held with Mike Duncan of Wal-Mart. Like the meeting with Tyson, this meeting was also designed to seek transit service opportunities to Wal-Mart's major facilities – particularly the headquarters complex along 8th Street in Bentonville. The discussion included past survey efforts and an understanding of how employees currently navigate the sprawling complex. Wal-Mart's primary need is for on-campus circulation. However, they are also extremely sensitive to the perception of the company benefiting from tax-payer funded initiatives. Thus, they lean toward self-funding if service to the Wal-Mart Headquarters were to be implemented. Regardless, Mr. Duncan shared information regarding the "four corners" service plan that identified areas in which the highest densities of Wal-Mart's corporate employees lived. Routes were designed and nearly implemented two years ago. However, when gas prices subsided, the plans were shelved awaiting executive approval.

4.0 Ridecheck Survey

Understanding boarding and alighting activity at a stop level basis, and understanding on-time performance at a trip level are key elements in the assessment of current route strengths, weaknesses and service performance. A ridecheck survey was utilized to conduct detailed analyses regarding existing transit operations. These analyses included maximum load analyses, the identification of route and route segment productivity strengths and weaknesses, the identification of poor performing trips that could be eliminated, and the analyses of time schedules, resulting in recommendations to increase or decrease running times.

4.1 Methodology

A ridecheck survey was conducted on 100 percent of ORT's and Razorback Transit's weekday fixed route service. The objective of the ridecheck survey was to compile boarding and alighting information by bus stop and by trip for all routes for weekday service. On-time performance was also compiled at major time points of each route. Various summaries depicting detailed and aggregated information were developed for use in evaluating the effectiveness and efficiency of the existing service.

For the ridecheck survey, there were approximately 194 Razorback Transit weekday platform hours and 141 ORT platform hours surveyed. The preparation for the surveys was done from August 25th to September 10th, 2010. The Razorback Transit field work was conducted on September 14th & 15th; the ORT field work was conducted on September 16th, 2010.

There are currently several methods utilized to collect ridecheck information. These are generally categorized into automatic passenger collection, hand held units, and the manual method. The manual method was used to collect the information. This method consisted of a surveyor tabulating boardings, alightings, and arrival times at timepoints and recording them on a pre-printed bus stop listing.

The surveys were conducted by AJM Consulting, as a subcontractor to Connetics Transportation Group. AJM worked closely with ORT and Razorback Transit during the preparation for and conduct of the survey. Temporary surveyors were hired through Express Personnel in Springdale.

4.2 Survey Results

The ridecheck master files were summarized into six Excel worksheet reports. These reports are as follows:

- Route Totals ;
- Max Load Summaries by Trip and Route;
- Boardings, Alightings, and Loads by Trip by Route;
- Aggregated Boardings, Alightings, and Total Activity and Load by Route;
- On Time Performance by Route; and
- On Time Performance Time Point Comparisons by Trip.

Following are summaries of ridecheck counts by route for Razorback Transit (Table 4-1) and ORT (Table 4-2). More detailed reports were provided electronically via an Excel spreadsheet as well as within individual route profiles found in *Technical Memorandum 5 – Existing Service Evaluation*.

Table 4-1
Summary of Razorback Transit
Ridecheck Survey Counts

Route Name	Ons	Offs	Total	% of Total
Blue	2,334	2,334	4,668	24.2%
Brown	492	492	984	5.1%
Gray	439	439	878	4.6%
Green	2,345	2,345	4,690	24.3%
Maple Hill	249	249	498	2.6%
Pomfret	737	737	1,474	7.6%
Purple	456	456	912	4.7%
Red	549	549	1,098	5.7%
Route 56	478	478	956	5.0%
Tan	783	783	1,566	8.1%
Yellow	463	463	926	4.8%
Blue Reduced	187	187	374	1.9%
Green Reduced	128	128	256	1.3%
TOTALS	**9,640**	**9,640**	**19,280**	**100.0%**

Notes:
1. Two missed trips on Blue route.
2. One missed trip on Grey route.
3. One missed trip on Green route.
4. One missed trip on Pomfret route.
5. Two missed trips on Tan route.
6. Two missed trips on Yellow route.

Table 4-2
Summary of Ozark Regional Transit
Ridecheck Survey Counts

Route No.	Route Description	Ons	Offs	Total	% of Total
40	Fayetteville-Springdale NB	120	112	232	
	Fayetteville-Springdale SB	104	112	216	
	Route 40 Total	*224*	*224*	*448*	26.6%
41	6th Street	178	178	356	21.1%
42	Springdale East	98	98	196	11.6%
43	Robinson/Huntsville EB	3	1	4	
	Robinson/Huntsville WB	3	5	8	
	Route 43 Total	*6*	*6*	*12*	0.7%
44	Rogers	47	47	94	5.6%
46	Bentonville	76	76	152	9.0%
47	Zion/Joyce & N. Hills Medical	32	32	64	3.8%
50	Lincoln/Fayetteville Express NB	3	3	6	
	Lincoln/Fayetteville Express SB	2	2	4	
	Route 50 Total	*5*	*5*	*10*	0.6%
54	NWACC/U of A Express NB	69	70	139	
	NWACC/U of A Express SB	86	85	171	
	Route 54 Total	*155*	*155*	*310*	18.4%
55	Springdale Crosstown	21	21	42	2.5%
TOTALS		**842**	**842**	**1,684**	**100.0%**

Notes:
1. Route 57 (Washington County Courthouse) not surveyed.
2. One missed trip on Route 54.
3. Two missed trips on Route 55.

5.0 On-Board Survey

The purpose of an on-board survey is to better understand the trip-making characteristics and the demographics of existing riders as these are key elements in the assessment of bus route strengths, weaknesses and service performance. On-board survey information helps to determine how the bus systems are being utilized (e.g., how many trips are related to work, shopping, college, etc.). Survey results also provide useful information about existing riders (e.g., access to a car and average household income, etc.) and rider opinions on various characteristics of bus service.

5.1 On-Board Survey Methodology

At the time of the survey, Razorback Transit operated approximately weekday 194 platform hours. Given Razorback Transit's high passenger volume per trip, one-half (97) of these platform hours were scheduled for the on-board survey. ORT operated about 141 platform hours on weekdays. 100 percent of this service was surveyed since ORT carries far fewer passengers per trip across a larger, more diverse service area. Preparation for the surveys was done between August 25th and September 10th, 2010. The Razorback on-board survey was conducted on September 14 and 15, 2010 with some follow-up surveying done on the Green and Blue routes in October (to enhance overall response rates for those routes). ORT was surveyed on September 16, 2010. Both on-board surveys were conducted by trained temporary personnel riding on the buses, distributing and collecting survey forms.

The surveys were conducted by AJM Consulting, as a subcontractor to Connetics Transportation Group. AJM worked closely with Razorback Transit and ORT during the preparation and conduct of the surveys. The temporary surveyors were hired through Express Personnel in Springdale.

A single on-board survey instrument was developed and reviewed with NWARPC, Razorback Transit and ORT staff. The survey instrument consisted of two sections. The first section asks the respondent to "tell us about your trip". There were questions pertaining to trip purpose, trip origin and destination locations, and boarding and alighting locations. The second section asked the respondent to "tell us about yourself". There were questions pertaining to number of household vehicles; respondent's age, gender, household income and typical transit usage. ORT surveys were printed double-sided, with one side in English and the other side in Spanish. Razorback Transit's surveys were printed in English only. Figure 5-1 presents the English version of the ORT on-board survey instrument. Figure 5-2 presents the Razorback Transit survey instrument.

After the survey, completed survey forms were processed and tabulated into a database. A survey expansion factor was calculated by dividing the average daily ridership from September 2010 for the routes being surveyed by the number of completed survey forms for those routes. The boarding, alighting, origin and destination addresses included in each record were geocoded using the on line geocoding software – www.batchgo.com. Significant manual work was included in the geocoding process. This work included rationalizing various addresses and converting landmark information to geocodable addresses.

In total, 185 completed forms were collected from the Ozark Regional Transit survey which surveyed 100 percent of weekday bus trips. The recorded daily ridership on ORT's routes for September 16 was 895 (Route 57 was not surveyed, and therefore is not included in this total). Thus, the survey response rate for ORT was 20.7 percent.

Figure 5-1
Ozark Regional Transit On-Board Survey Instrument

Ozark Regional Transit Rider Survey

SERIAL #:

STAFF USE ONLY
Route #: Time: am/pm

The Northwest Arkansas Regional Planning Commission, Ozark Regional Transit and Razorback Transit are presently evaluating ways to improve transit service across the region. Please take a minute to help us by filling out this survey regarding bus service. ***Thank you for your help!***

PLEASE TELL US ABOUT THIS TRIP

1a. Where did you START this One-Way trip? (Check one)

- ☐ 1 Work
- ☐ 2 Home/Dorm
- ☐ 3 School (K-12)
- ☐ 4 Shopping
- ☐ 5 Medical or Dental
- ☐ 6 Social or Recreation
- ☐ 7 College/University (student)
- ☐ 8 Other_____

1b. Which is located at: (Starting Place in Question 1a)

_____
Street Address or Nearby Intersection
(i.e. 123 Main St. or Main St & 1st Ave)

_____
Nearby Building/Landmark *(i.e. NWA Mall)*

_____
City Zip (if known)

2a. Where is the ENDING PLACE you are going now on this One-Way Trip? (Check one)

- ☐ 1 Work
- ☐ 2 Home/Dorm
- ☐ 3 School (K-12)
- ☐ 4 Shopping
- ☐ 5 Medical or Dental
- ☐ 6 Social or Recreation
- ☐ 7 College/University (student)
- ☐ 8 Other_____

2b. Which is located at: (Ending Place in Question 2a)

_____
Street Address or Nearby Intersection
(i.e. 123 Main St. or Main St & 1st Ave)

_____
Nearby Building/Landmark *(i.e. Bernice Jones Center)*

_____
City Zip (if known)

3. PLEASE RATE THE FOLLOWING SERVICE CHARACTERISTICS

		Very Good	Good	Okay	Poor	Very Poor	N/A
a.	Frequency of bus service	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
b.	Areas that are served by bus routes	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
c.	Ease of connections between routes	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
d.	Length of bus travel times	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
e.	Hours of bus service	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
f.	Availability of schedules & route information	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
g.	Cost of the bus fare	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
h.	Sense of security on buses	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
i.	Cleanliness of buses	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
j.	Courtesy/friendliness of bus drivers	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
k.	Overall Service	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

PLEASE TELL US ABOUT YOU

4. How <u>OFTEN</u> do you ride Ozark Regional Transit?
☐ 1 Less than once a month ☐ 4 2-3 days a week
☐ 2 Once or twice a month ☐ 5 4 or more days/week
☐ 3 1 day a week

5. How <u>OFTEN</u> do you ride Razorback Transit?
☐ 1 Less than once a month ☐ 4 2-3 days a week
☐ 2 Once or twice a month ☐ 5 4 or more days/week
☐ 3 1 day a week ☐ 6 Never

6. During the past week, how many times have you used a taxi because transit service was not available?
☐ 1 0 ☐ 2 1 ☐ 3 2 ☐ 4 3 ☐ 5 4 or more

7. I am: ☐ 1 Male ☐ 2 Female

8. My age is:
☐ 1 Under 16 ☐ 2 16-24 ☐ 3 25-34 ☐ 4 35-44
☐ 5 45-54 ☐ 6 55-64 ☐ 7 65 or Over

9. Are you a college student?: ☐ 1 Yes ☐ 2 No
☐ 1a U of A ☐ 1b NWACC ☐ 1c Other _____

10. My home zip code is: _____

11. How many live in your household (Including yourself)?
☐ 1 1 ☐ 2 2 ☐ 3 3 ☐ 4 4 ☐ 5 5 or more

12. How many vehicles are in your household?
☐ 1 0 ☐ 2 1 ☐ 3 2 ☐ 4 3 ☐ 5 4 or more

13. Do you have a valid driver's license?: ☐ 1 Yes ☐ 2 No

14. My household's total annual income is:
☐ 1 Under $10,000 ☐ 4 $35,000-$49,999
☐ 2 $10,000-$19,999 ☐ 5 $50,000-$74,999
☐ 3 $20,000-$34,999 ☐ 6 $75,000 or more

PLEASE USE THE REVERSE SIDE TO SHARE ANY ADDITIONAL COMMENTS OR SERVICE IDEAS YOU MAY HAVE

Figure 5-2
Razorback Transit On-Board Survey Instrument

Razorback Transit Rider Survey

SERIAL #:

STAFF USE ONLY
Route #:_____ Time: _____ am/pm

The Northwest Arkansas Regional Planning Commission, Razorback Transit and Ozark Regional Transit are presently evaluating ways to improve transit service across the region. Please take a minute to help us by filling out this survey regarding bus service. ***Thank you for your help!***

PLEASE TELL US ABOUT THIS TRIP

1a. Where did you START this One-Way trip? (Check one)

- ☐ 1 Work
- ☐ 2 Home/Dorm
- ☐ 3 School (K-12)
- ☐ 4 Shopping
- ☐ 5 Medical or Dental
- ☐ 6 Social or Recreation
- ☐ 7 College/University (student)
- ☐ 8 Other_____

1b. Which is located at: (Starting Place in Question 1a)

_____
Street Address or Nearby Intersection
(i.e. 123 Main St. or Main St & 1st Ave)

_____
Nearby Building/Landmark *(i.e. NWA Mall)*

_____
City Zip (if known)

2a. Where is the ENDING PLACE you are going now on this One-Way Trip? (Check one)

- ☐ 1 Work
- ☐ 2 Home/Dorm
- ☐ 3 School (K-12)
- ☐ 4 Shopping
- ☐ 5 Medical or Dental
- ☐ 6 Social or Recreation
- ☐ 7 College/University (student)
- ☐ 8 Other_____

2b. Which is located at: (Ending Place in Question 2a)

_____
Street Address or Nearby Intersection
(i.e. 123 Main St. or Main St & 1st Ave)

_____
Nearby Building/Landmark *(i.e. U of A Library)*

_____
City Zip (if known)

3. PLEASE RATE THE FOLLOWING SERVICE CHARACTERISTICS

		Very Good	Good	Okay	Poor	Very Poor	N/A
a.	Frequency of bus service	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
b.	Areas that are served by bus routes	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
c.	Ease of connections between routes	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
d.	Length of bus travel times	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
e.	Hours of bus service	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
f.	Availability of schedules & route information	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
g.	Sense of security on buses	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
h.	Cleanliness of buses	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
i.	Courtesy/friendliness of bus drivers	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
j.	Overall Service	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

PLEASE TELL US ABOUT YOU

4. How OFTEN do you ride Razorback Transit?

- ☐ 1 Less than once a month
- ☐ 2 Once or twice a month
- ☐ 3 1 day a week
- ☐ 4 2-3 days a week
- ☐ 5 4 or more days/ week

5. How OFTEN do you ride Ozark Regional Transit?

- ☐ 1 Less than once a month
- ☐ 2 Once or twice a month
- ☐ 3 1 day a week
- ☐ 4 2-3 days a week
- ☐ 5 4 or more day/week
- ☐ 6 Never

6. During the past week, how many times have you used a taxi because transit service was not available?

☐ 1 0 ☐ 2 1 ☐ 3 2 ☐ 4 3 ☐ 5 4 or more

7. I am: ☐ 1 Male ☐ 2 Female

8. My age is:

☐ 1 Under 16 ☐ 2 16-24 ☐ 3 25-34 ☐ 4 35-44
☐ 5 45-54 ☐ 6 55-64 ☐ 7 65 or Over

9. Are you a college student?: ☐ 1 Yes ☐ 2 No

☐ 1a U of A ☐ 1b NWACC ☐ 1c Other _____

Please complete Questions 10-14 only if you are NOT a U of A student

10. My home zip code is: _____

11. How many live in your household (Including yourself)?

☐ 1 1 ☐ 2 2 ☐ 3 3 ☐ 4 4 ☐ 5 5 or more

12. How many vehicles are in your household?

☐ 1 0 ☐ 2 1 ☐ 3 2 ☐ 4 3 ☐ 5 4 or more

13. Do you have a valid driver's license?: ☐ 1 Yes ☐ 2 No

14. My household's total annual income is:

- ☐ 1 Under $10,000
- ☐ 2 $10,000-$19,999
- ☐ 3 $20,000-$34,999
- ☐ 4 $35,000-$49,999
- ☐ 5 $50,000-$74,999
- ☐ 6 $75,000 or more

PLEASE USE THE REVERSE SIDE TO SHARE ANY ADDITIONAL COMMENTS OR SERVICE IDEAS YOU MAY HAVE

There were 841 completed survey forms collected from Razorback Transit. Approximately 50 percent of Razorback Transit's daily bus trips had a surveyor on-board. Razorback Transit's average daily ridership during September was 11,030. Approximately 5,500 riders had an opportunity to fill-out a survey (assuming half of Razorback Transit's daily ridership was on a surveyed bus). Thus, about 15 percent of the riders on surveyed buses completed a survey; a robust response rate considering the shorter trip lengths on Razorback Transit.

5.2 ORT On-Board Survey Results

Overall, the on-board survey data suggest that ORT's bus system ridership is heavily influenced by socio-economic characteristics and transit dependence. Pertinent rider characteristics are as follows:

- Riders use ORT service for a variety of reasons. Home-to-work-related travel is less than 11 percent of overall travel purposes. There is a significant amount of college-related travel on ORT.
- ORT has a stable base of regular riders, with 94 percent indicating they ride at least once a week.
- 40 percent of ORT's riders also indicate they use Razorback Transit service at least once a week.
- Over 30 percent of ORT's riders indicate they have required the use of taxi service to make a trip at least once in the past week.
- The largest majority of ORT's ridership base falls in the category of 35 to 44 years old.
- 54 percent of ORT's riders have no vehicle at home. 54 percent also indicated they have no driver's license.
- 72 percent of ORT's ridership reported an average household income of less than $20,000.

Overall, riders have a positive perception of ORT's service characteristics that rates between "very good" and "good". For more detailed analyses including responses to individual questions, please refer to *Technical Memorandum 4 – On-Board Survey Methodology and Results*.

For ORT there were 154 geocodable trip origin locations and 137 geocodable trip destination locations (out of 185 survey responses). There were 121 surveys with both a geocodable trip origin and destination location. Figure 5-3 presents geocoded trip origin and destination pairings across the entire ORT service area. Figure 5-4 presents geocoded trip origins and destination pairings in the Bentonville/Rogers area, and Figure 5-5 presents geocoded trip origins and destination pairings in the Fayetteville/Springdale area (unfactored). In most cases, trip origins and destinations fall on or within ¼ mile of fixed route alignments and are generally north-south oriented.

Figure 5-3
Surveyed ORT Trip Origin and Destination Locations
Systemwide

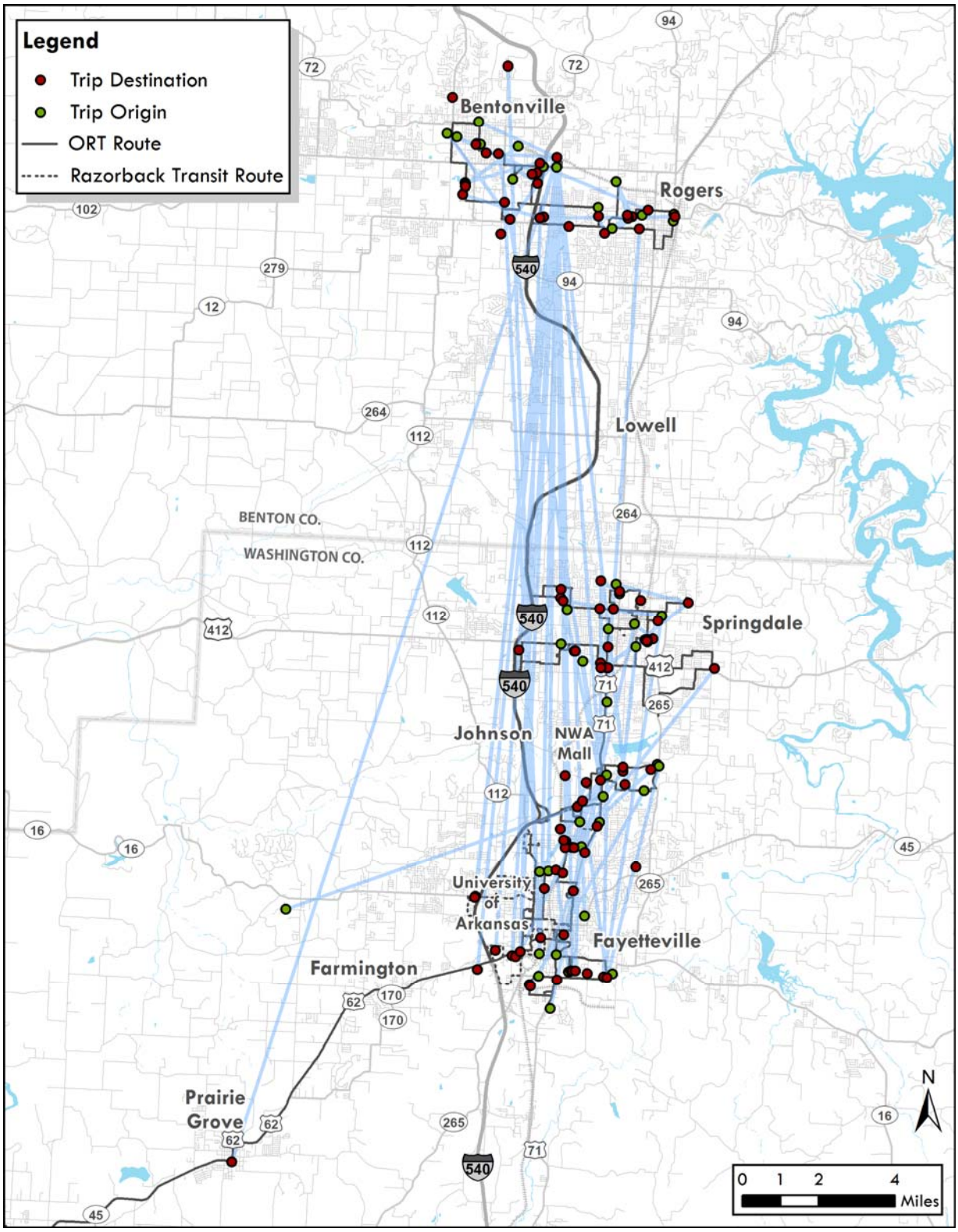


Figure 5-4
Surveyed ORT Trip Origin and Destination Locations
Bentonville/Rogers Area

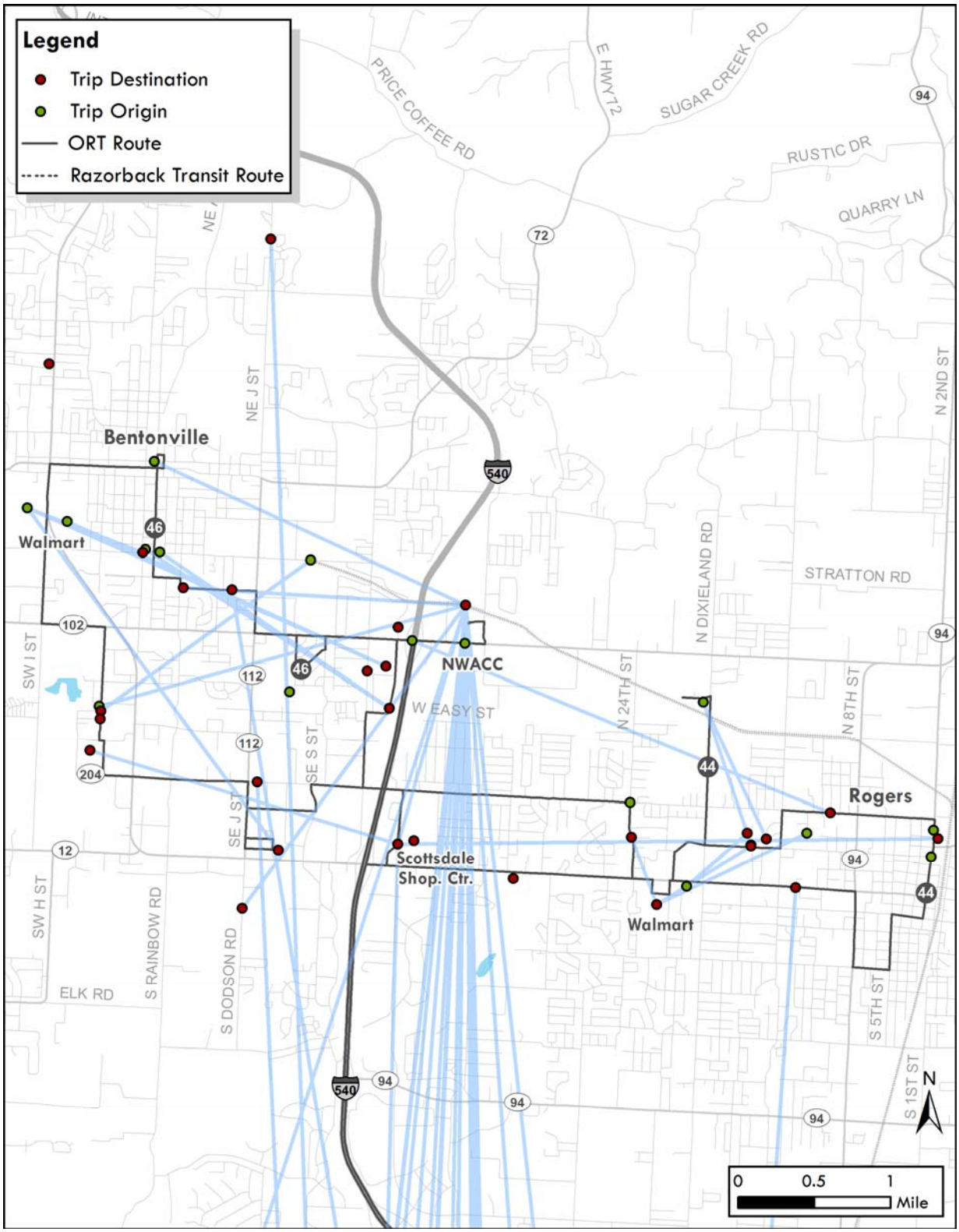
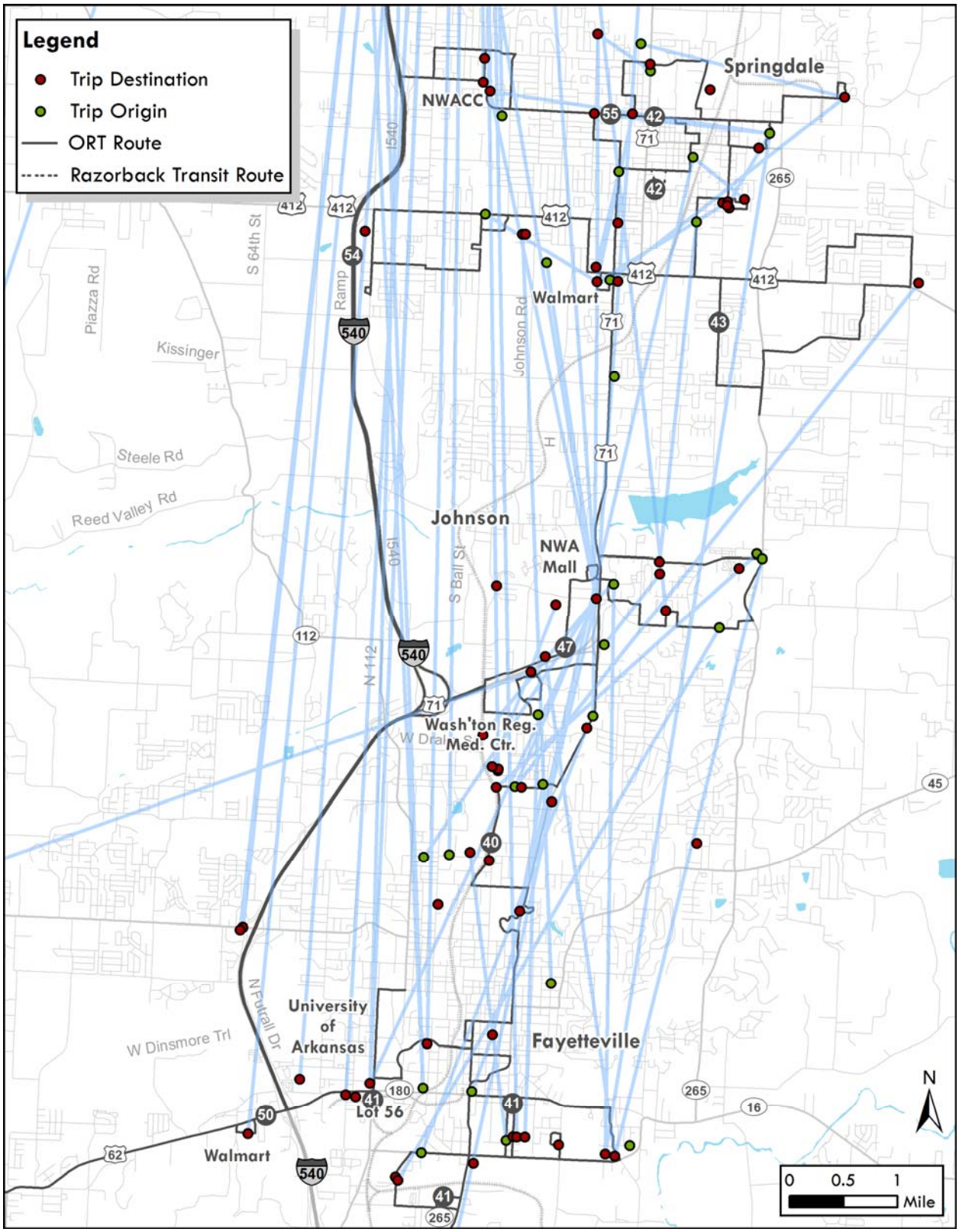


Figure 5-5
Surveyed ORT Trip Origin and Destination Locations
Fayetteville/Springdale Area



5.3 Razorback Transit On-Board Survey Results

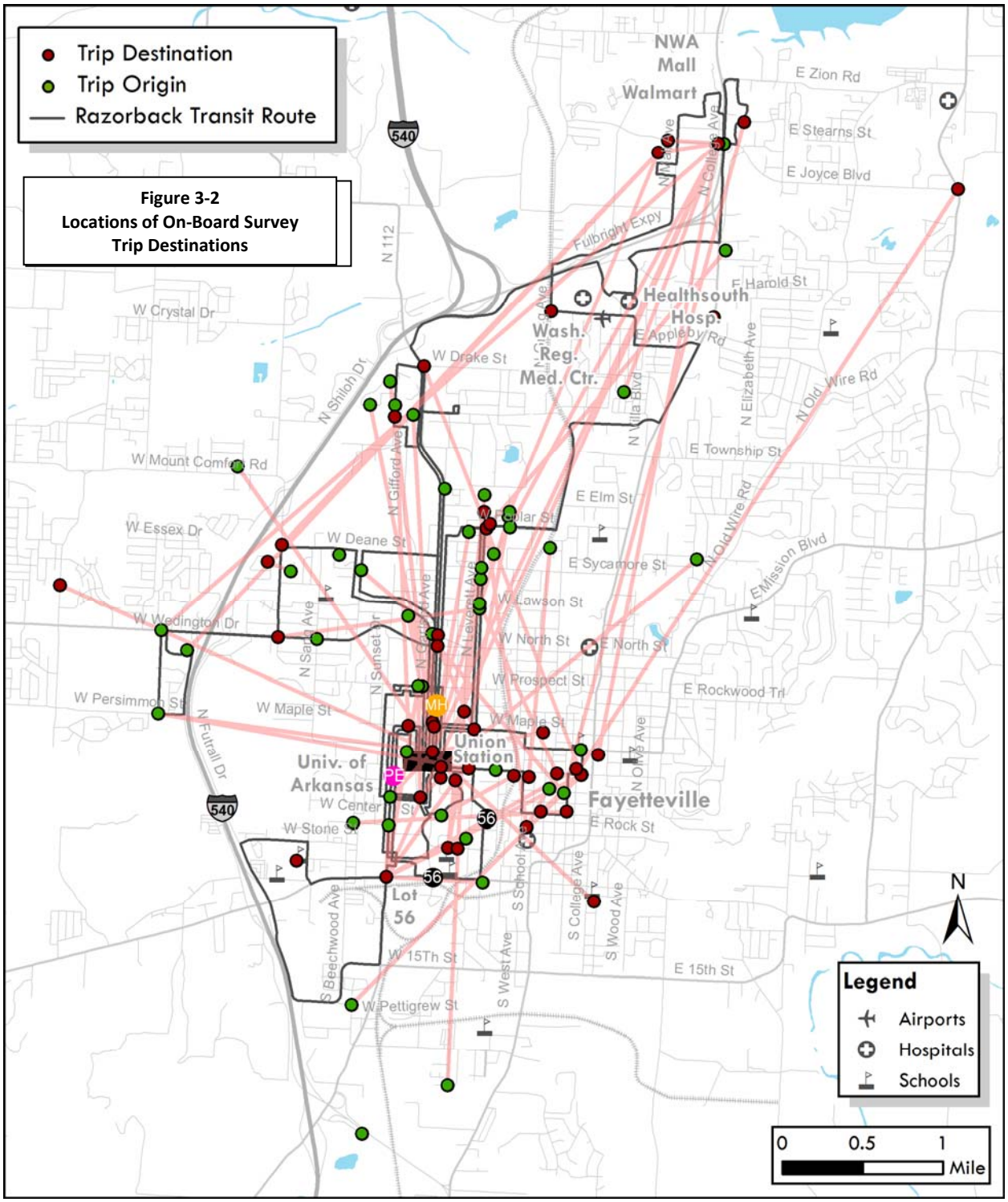
As expected, Razorback Transit's ridership is heavily dominated by University of Arkansas students. Pertinent rider characteristics are as follows:

- Almost 85 percent of Razorback Transit's ridership indicated they are students, with 97 percent of those students being University of Arkansas students.
- Home/college and on-campus college-related travel account for two-thirds of all Razorback Transit travel.
- 94 percent indicate they ride Razorback Transit at least twice a week.
- 85 percent of riders indicate they have never ridden ORT service.
- Two-thirds of Razorback Transit's ridership falls within the 16 to 24 age bracket.

Overall, riders have a positive perception of Razorback Transit's rating service characteristics between "very good" and "good". For more detailed analyses including responses to individual questions, please refer to *Technical Memorandum 4 – On-Board Survey Methodology and Results*.

For Razorback Transit, a large majority of the records were from common origins and destinations (e.g., Maple Hall, Pomfret Hall). Many students also listed the bus stop as their trip origin or destination, instead of the particular building (e.g., Lot 56, Union Station). So, the geocoding exercise for Razorback Transit focused on origins and destinations for survey respondents that indicated they were not a University of Arkansas student. There were 91 geocodable trip origin locations and 75 geocodable trip destination locations (out of 101 non-U of A survey responses). There were 71 surveys with both a geocodable trip origin and destination location. Figure 5-6 presents geocoded trip origins and destination pairings in the Fayetteville area for Razorback Transit (unfactored). Trip origins and destinations generally fall on or within ¼ mile of fixed route alignments. Many of the trip origins and destinations are on the University of Arkansas campus and may be faculty and staff-related transit trips. Pairings to and from the Northwest Arkansas Mall were also very prominent.

Figure 5-6
Surveyed Razorback Transit Trip Origin and Destination Locations



6.0 Existing Service Evaluation

A detailed evaluation of existing Razorback Transit and Ozark Regional Transit (ORT) bus service was completed to identify route strengths and weaknesses. Several data sources were used to complete this evaluation of existing transit services. Data provided by Razorback Transit and ORT that were used in this evaluation include:

- Individual route schedules;
- Current headway sheets; and
- Daily and Monthly ridership reports.

As part of this TDP work effort, extensive fieldwork was also completed by CTG service planners. Existing ridership and service productivity measures were reviewed and developed into a systems-level evaluation. Individual route profiles were then provided. These profiles present a detailed assessment of current route characteristics and route strengths and weaknesses. Besides field observations and productivity measures, much of the route-level analysis was based on the collected ridecheck survey data. This extensive analysis, including the individual route profiles for ORT and Razorback Transit, can be found in *Technical Memorandum 5 – Existing Service Evaluation*.

6.1 Ozark Regional Transit System Level Analysis

ORT provides regularly scheduled fixed-route and on-demand paratransit services for Benton and Washington Counties. Fixed-route service is provided to the most densely populated areas including Bentonville, Fayetteville, Springdale and Rogers. In general, service operates hourly on weekdays only between 7:00 a.m. and 5:00 p.m. with on-demand service available on Saturdays when arranged in advance. There is no Sunday service. Figure 6-1 presents the systemwide fixed-route alignments for ORT. Figures 6-2 and 6-3 present a more close-up view of the fixed-route service in Benton and Washington Counties, respectively. It is important to note; Route 54 is the only means of connectivity between the two counties' services.

Service spans and frequencies are constant throughout the year on almost all ORT routes. The only exception is Route 54, which operates a reduced level of frequency when NWACC is not in session. Tables 6-1 and 6-2 present each route's span of service, frequencies and estimated service statistics for ORT's weekday service for regular and reduced schedules. Annualized service statistics for ORT based on the current operating scenario (October 2010) are as follows:

- Maximum buses in operation – 12
- Annual revenue bus-hours of service – 29,116
- Annual revenue bus-miles of service – 496,862

Figure 6-1
Ozark Regional Transit
Systemwide Route Alignments

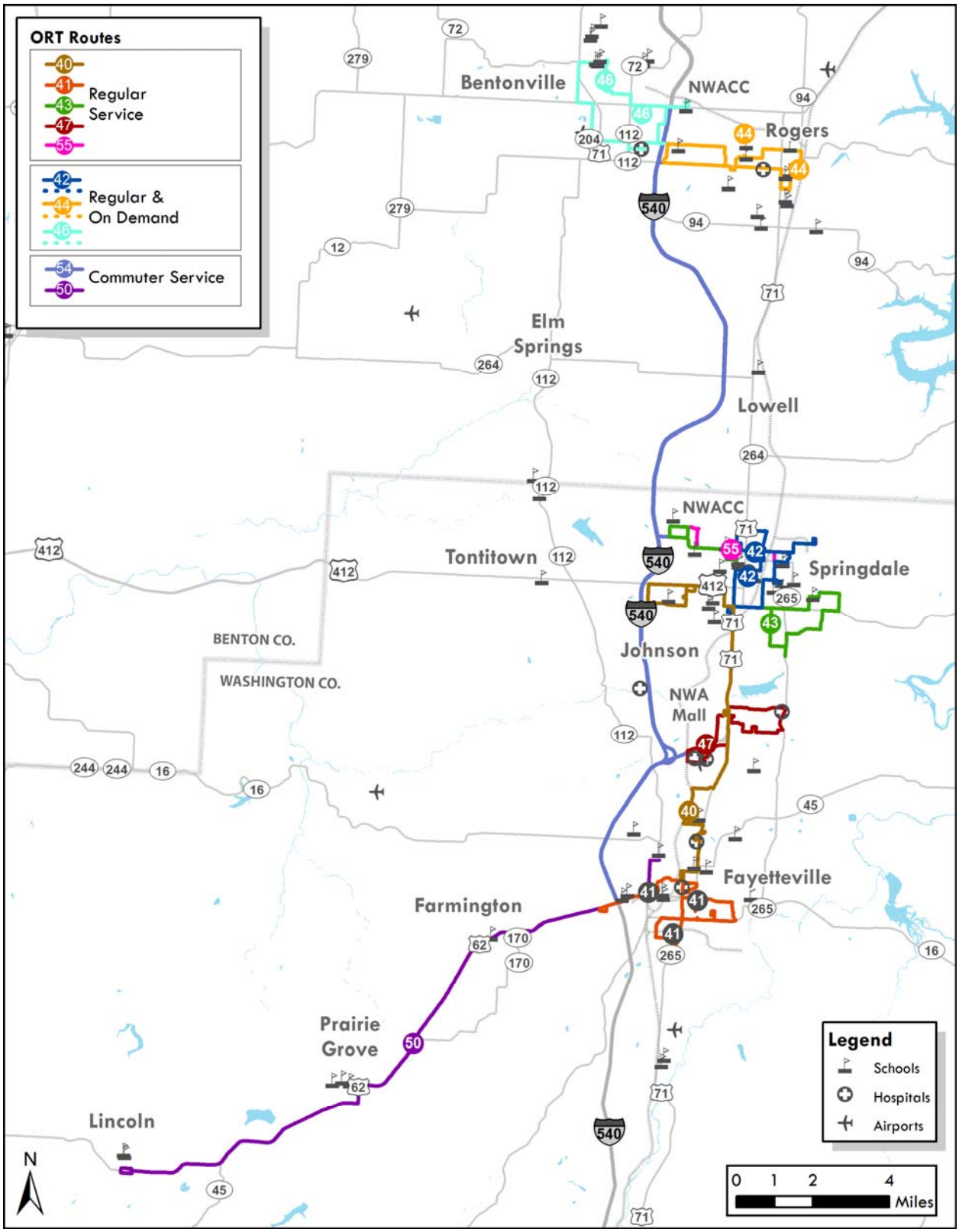


Figure 6-2
Ozark Regional Transit
Benton County Route Alignments

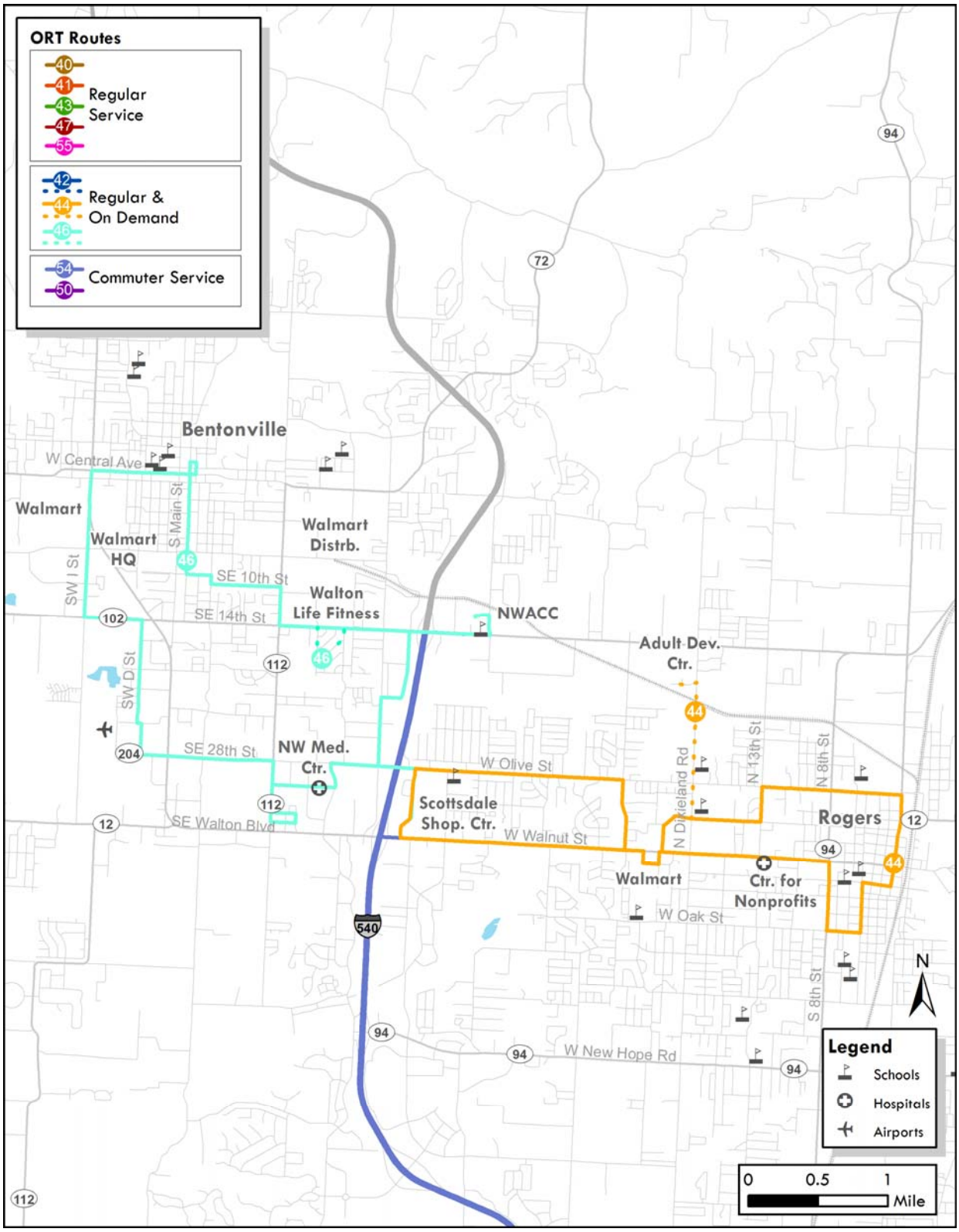


Figure 6-3
Ozark Regional Transit
Washington County Route Alignments

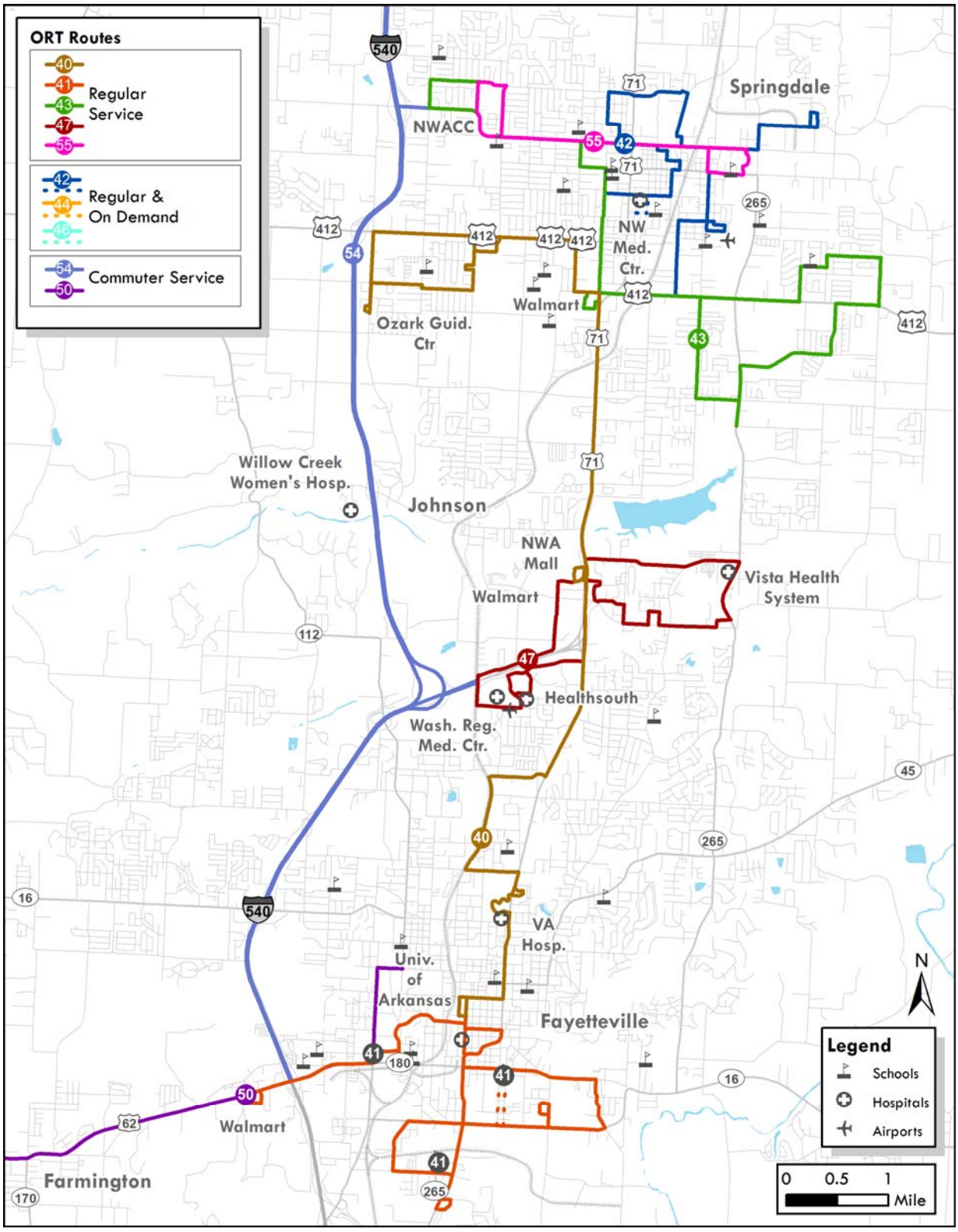


Table 6-1
Ozark Regional Transit
Existing Weekday Operating Plan – Regular Schedule

Route #	Route Description	Start of First/ Last Trips	Total Hours	Service Frequency				Daily Trips	Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
				AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
40	Fayetteville/Springdale	0630 - 1800	11.5	60	60	60	n/a	12	120	0	0%	120	28.4	24.0	24.0	340.8	2.00	2.00	2.00	0.00
41	6th Street	0700 - 1700	11.0	60	60	60	n/a	11	60	0	0%	60	14.9	11.0	11.0	163.9	1.00	1.00	1.00	0.00
42	Springdale East	0700 - 1700	11.0	60	60	60	n/a	11	60	0	0%	60	11.2	11.0	11.0	123.2	1.00	1.00	1.00	0.00
43	E Robinson Ave/W Huntsville Ave	0722 - 1622	3.0	60	60	60	n/a	3	60	0	0%	60	16.3	3.0	3.0	48.9	1.00	1.00	1.00	0.00
44	Rogers North	0635 - 1635	10.5	60	60	60	n/a	11	60	0	0%	60	10.2	11.0	11.0	112.2	1.00	1.00	1.00	0.00
46	Bentonville	0645 - 1645	10.5	60	60	60	n/a	11	60	0	0%	60	12.7	11.0	11.0	139.7	1.00	1.00	1.00	0.00
47	Zion/Joyce	0700 - 1800	11.5	30	60	60	n/a	14	30	0	0%	30	5.3	7.0	7.0	74.2	1.00	0.50	0.50	0.00
	North Hills Medical	0800 - 1600	9.0	n/a	60	60	n/a	9	30	0	0%	30	6.0	4.5	4.5	54.0	0.00	0.50	0.50	0.00
50	Lincoln/Fayetteville Commuter Exp	0700 - 1705	0.0	1 trip	n/a	1 trip	n/a	2	60	0	0%	120	18.8	2.0	2.0	37.6	1.00	0.00	1.00	0.00
54	NWACC/University of Arkansas Exp	0640 - 1615	10.0	60	60	60	n/a	20	60	0	0%	120	34.2	20.0	20.0	684.0	2.00	2.00	2.00	0.00
55	Springdale Crosstown	0640 - 1820	11.8	20	20	20	n/a	34	20	0	0%	20	7.8	12.0	12.0	265.2	1.00	1.00	1.00	0.00
TOTALS								**138**						**117**	**117**	**2,044**	**12.0**	**11.0**	**12.0**	**0.0**

AM = Before 9:00 am
Midday = 9:00 am to 3:00 pm
PM =3:00 pm to 6:30 pm
Eve. = After 6:30 p.m.

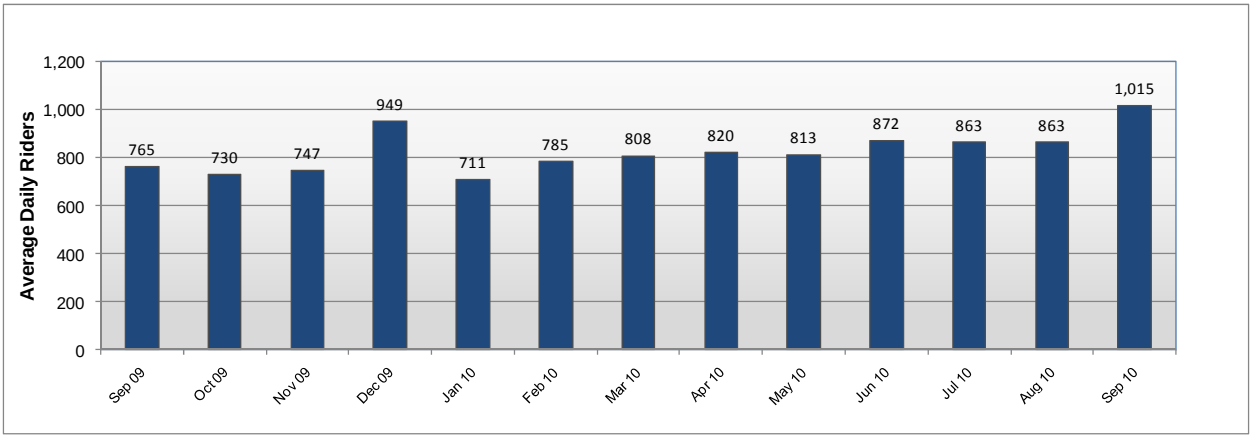
Table 6-2
Ozark Regional Transit
Existing Weekday Operating Plan – Reduced Schedule

Route #	Route Description	Start of First/ Last Trips	Total Hours	Service Frequency				Daily Trips	Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
				AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
40	Fayetteville/Springdale	0630 - 1800	11.5	60	60	60	n/a	12	120	0	0%	120	28.4	24.0	24.0	340.8	2.00	2.00	2.00	0.00
41	6th Street	0700 - 1700	11.0	60	60	60	n/a	11	60	0	0%	60	14.9	11.0	11.0	163.9	1.00	1.00	1.00	0.00
42	Springdale East	0700 - 1700	11.0	60	60	60	n/a	11	60	0	0%	60	11.2	11.0	11.0	123.2	1.00	1.00	1.00	0.00
43	E Robinson Ave/W Huntsville Ave	0722 - 1622	3.0	60	60	60	n/a	3	60	0	0%	60	16.3	3.0	3.0	48.9	1.00	1.00	1.00	0.00
44	Rogers North	0635 - 1635	10.5	60	60	60	n/a	11	60	0	0%	60	10.2	11.0	11.0	112.2	1.00	1.00	1.00	0.00
46	Bentonville	0645 - 1645	10.5	60	60	60	n/a	11	60	0	0%	60	12.7	11.0	11.0	139.7	1.00	1.00	1.00	0.00
47	Zion/Joyce	0700 - 1800	11.5	30	60	60	n/a	14	30	0	0%	30	5.3	7.0	7.0	74.2	1.00	0.50	0.50	0.00
	North Hills Medical	0800 - 1600	9.0	n/a	60	60	n/a	9	30	0	0%	30	6.0	4.5	4.5	54.0	0.00	0.50	0.50	0.00
50	Lincoln/Fayetteville Commuter Exp	0700 - 1705	0.0	1 trip	n/a	1 trip	n/a	2	60	0	0%	120	18.8	2.0	2.0	37.6	1.00	0.00	1.00	0.00
54	NWACC/University of Arkansas Exp	0640 - 1615	10.0	125	155	125	n/a	10	63	0	0%	125	34.2	11.7	11.7	342.0	1.00	1.00	1.00	0.00
55	Springdale Crosstown	0640 - 1820	11.8	20	20	20	n/a	34	20	0	0%	20	7.8	12.0	12.0	265.2	1.00	1.00	1.00	0.00
TOTALS								**128**						**108**	**108**	**1,702**	**11.0**	**10.0**	**11.0**	**0.0**

AM = Before 9:00 am
Midday = 9:00 am to 3:00 pm
PM =3:00 pm to 6:30 pm
Eve. = After 6:30 p.m.

Monthly ridership reports from ORT were graphed to determine ridership trends over the past 13 months. Figure 6-4 presents these trends at the systemwide level.

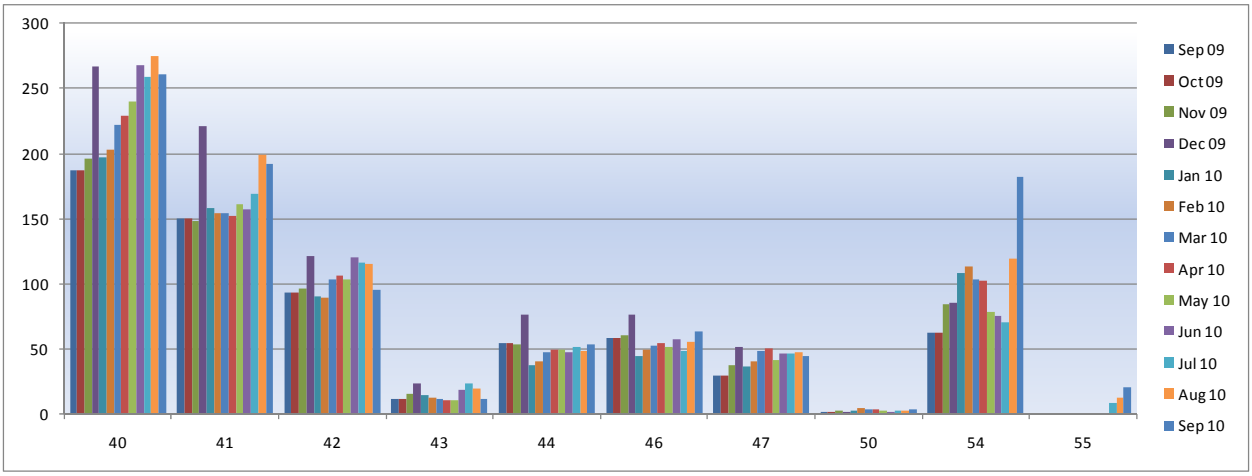
Figure 6-4
Average Systemwide Weekday Ridership (September 2009 through September 2010)



Average weekday ridership in September 2010 grew 33% when compared to September 2009. September 2010 was also the highest ridership month during this time period. This was followed closely by December 2009, when a free-ride promotion was in effect.

Individual route ridership was also compared during this same 13-month time period as presented in Figure 6-5.

Figure 6-5
Average Route-Level Weekday Ridership (September 2009 through September 2010)



Route 40 consistently carries the highest average weekday ridership and has demonstrated steady growth during the past year. When combined with Route 41's ridership, these two routes represent almost half of all daily ridership on ORT. Routes 42 and 54 have also performed well. In fact, Route 54 has experienced the most recent dramatic growth of all ORT routes when comparing September 2009 to September 2010. The two Benton County routes (Routes 44 and 46, excluding Route 54) represent 15% of ORT's daily ridership.

Ridership data from ORT was used to determine service productivity measures. Specifically, ridership productivity was measured on the basis of riders per revenue bus-hour, riders per revenue bus-mile and riders per bus trip. September 2010 ridership data was used to determine current weekday productivity measures. Table 6-3 presents these measures and rankings. Overall, ridership for ORT is modestly productive, given its available resources. Systemwide productivity measures are as follows:

Weekdays	Weekday Riders per Bus-Hour – 8.8
(Sept. 2010)	Weekday Riders per Bus-Mile – 0.5
	Weekday Riders per Bus Trip – 6.7

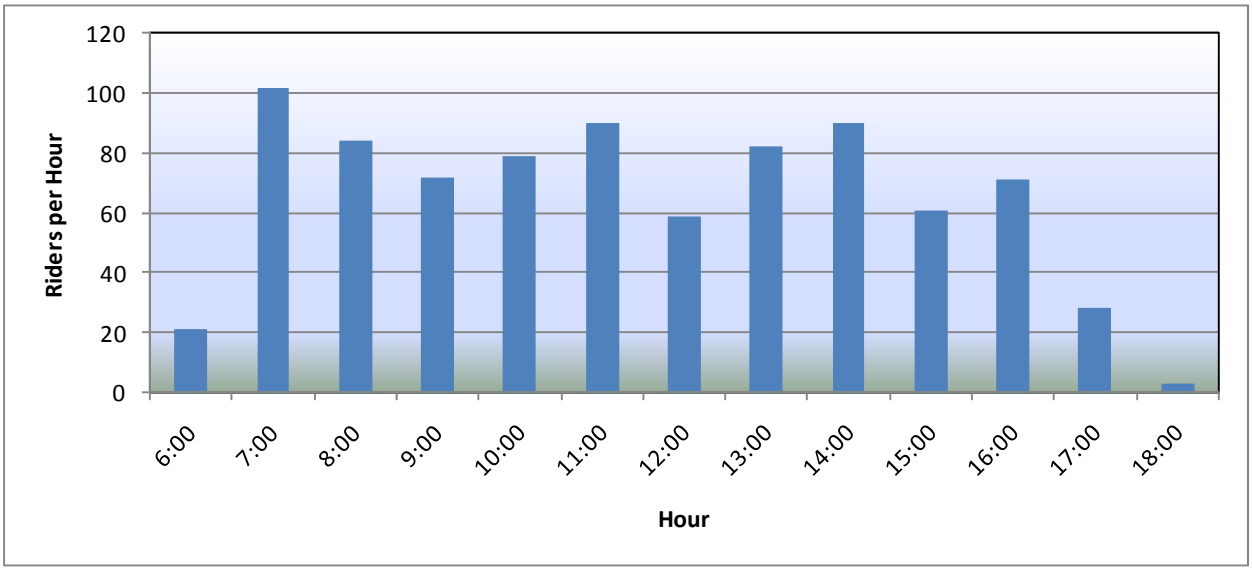
Table 6-3
Ozark Regional Transit
Ridership Productivity

Service Period	Route	Riders	Riders/ Hour	Rank	Riders/ Mile	Rank	Riders/ Trip	Rank
Weekday	40	261	21.8	1	1.5	1	21.8	1
	41	192	17.5	2	1.2	2	17.5	2
	42	95	8.6	4	0.8	3	8.6	4
	43	12	4.0	7	0.2	8	4.0	7
	44	54	4.9	6	0.5	4	4.9	6
	46	64	5.8	5	0.5	5	5.8	5
	47	44	3.8	8	0.3	6	1.9	8
	50	3	1.5	10	0.1	9	1.5	9
	54	182	9.1	3	0.3	7	9.1	3
	55	20	1.7	9	0.1	10	0.6	10

Routes 40 and 41 rank very high in all three productivity measures, performing two to three times better than the systemwide averages. Routes 42 and 54 perform near the system average in riders per hour while Routes 43, 44, 46 and 47 perform just below average in this criterion. Routes 50 and 55 perform well below the systemwide average in all three productivity measures.

Figure 6-6 illustrates systemwide ridership by time of day. Ridership is strongest during the 7:00 a.m. hour when passengers are destined for work and school trips. The next strongest periods are 11:00 a.m. and 2:00 p.m. The weakest time periods are at the start and end of the service day. However, consideration should be given since some services are not operating during these hours. When these are excluded, the 5:00 p.m. and 12:00 p.m. become the least utilized service hours.

Figure 6-6
Ozark Regional Transit System
Ridership By Time-of-Day



Figures 6-7, 6-8 and 6-9 illustrate cumulative ridership activity (boardings and alightings) at all ORT bus stops. It is important to note, the scales for each map is unique.

In Benton County, NWACC and Scottsdale Shopping Center were the most active stops. This comes as no surprise as NWACC is a major regional destination and ORT carries a significant student ridership base. The Scottsdale Shopping Center stop also experienced significant ridership activity by virtue of being the only connecting point between Route 44, 46 and the rest of the ORT system.

In Springdale, NWACC's Washington County campus was the busiest stop. Again, this is supported by the high levels of student ridership.

In Fayetteville, there were four stops that experienced significant activity – Northwest Arkansas Mall, Hillcrest Towers, Lot 56 and the MLK Jr. Wal-Mart. The Northwest Arkansas Mall, Hillcrest Towers and Lot 56 are major connection points in both the ORT and Razorback Transit systems. The mall is also a major employment and shopping destination as is the MLK Jr. Wal-Mart.

Figure 6-7
Ozark Regional Transit System
Cumulative Ridership At Bus Stops – Bentonville/Rogers Area

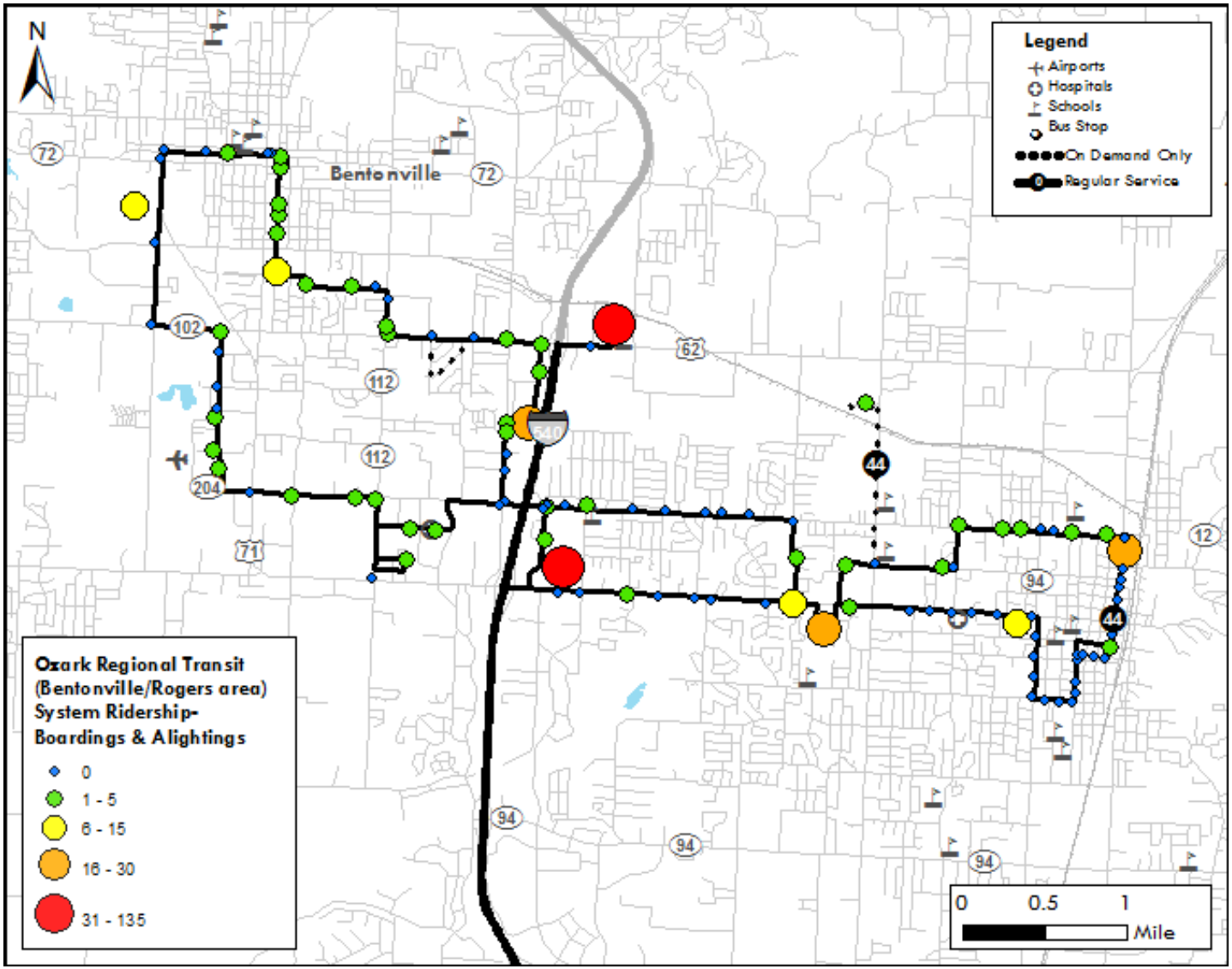


Figure 6-8
Ozark Regional Transit System
Cumulative Ridership At Bus Stops – Springdale Area

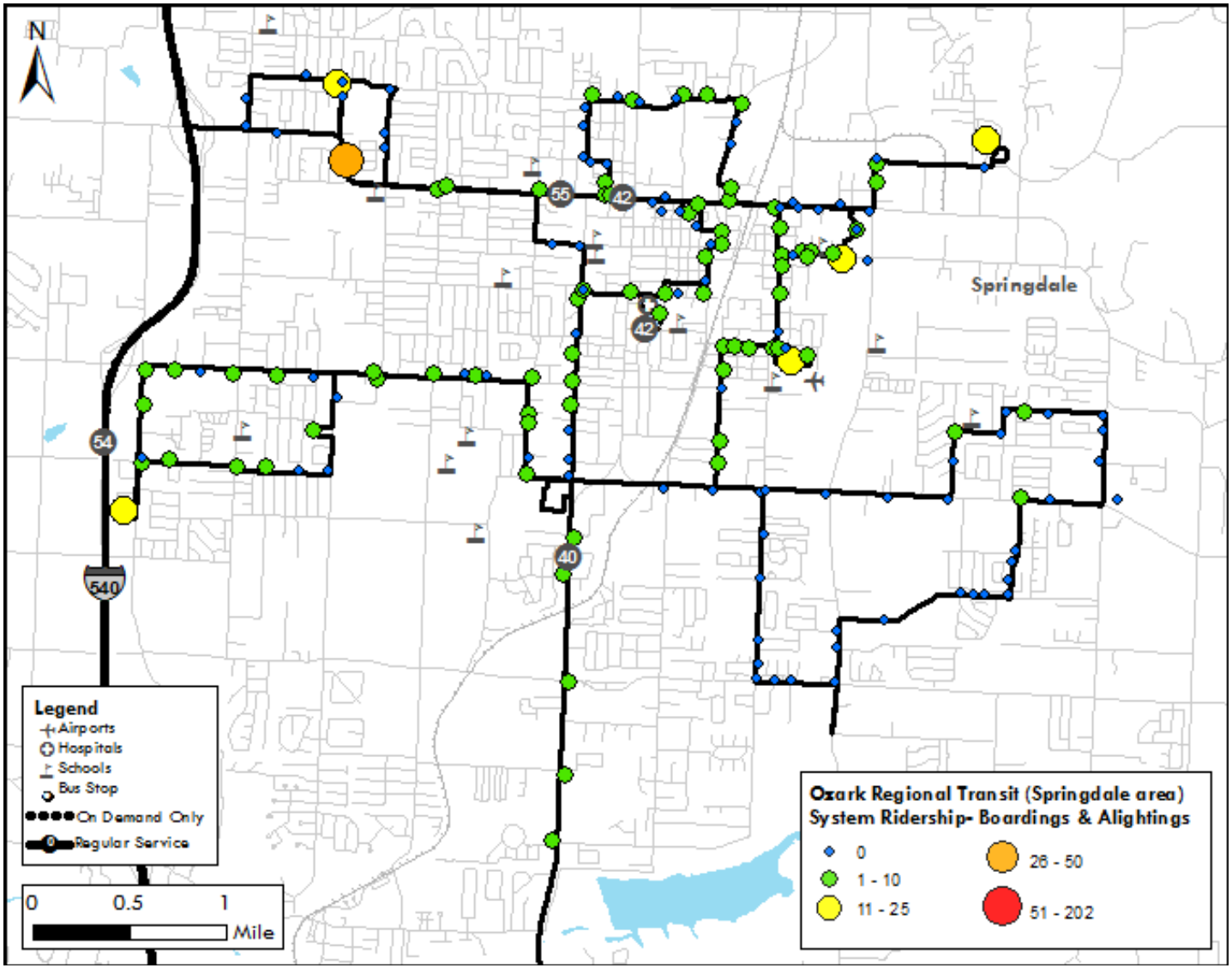
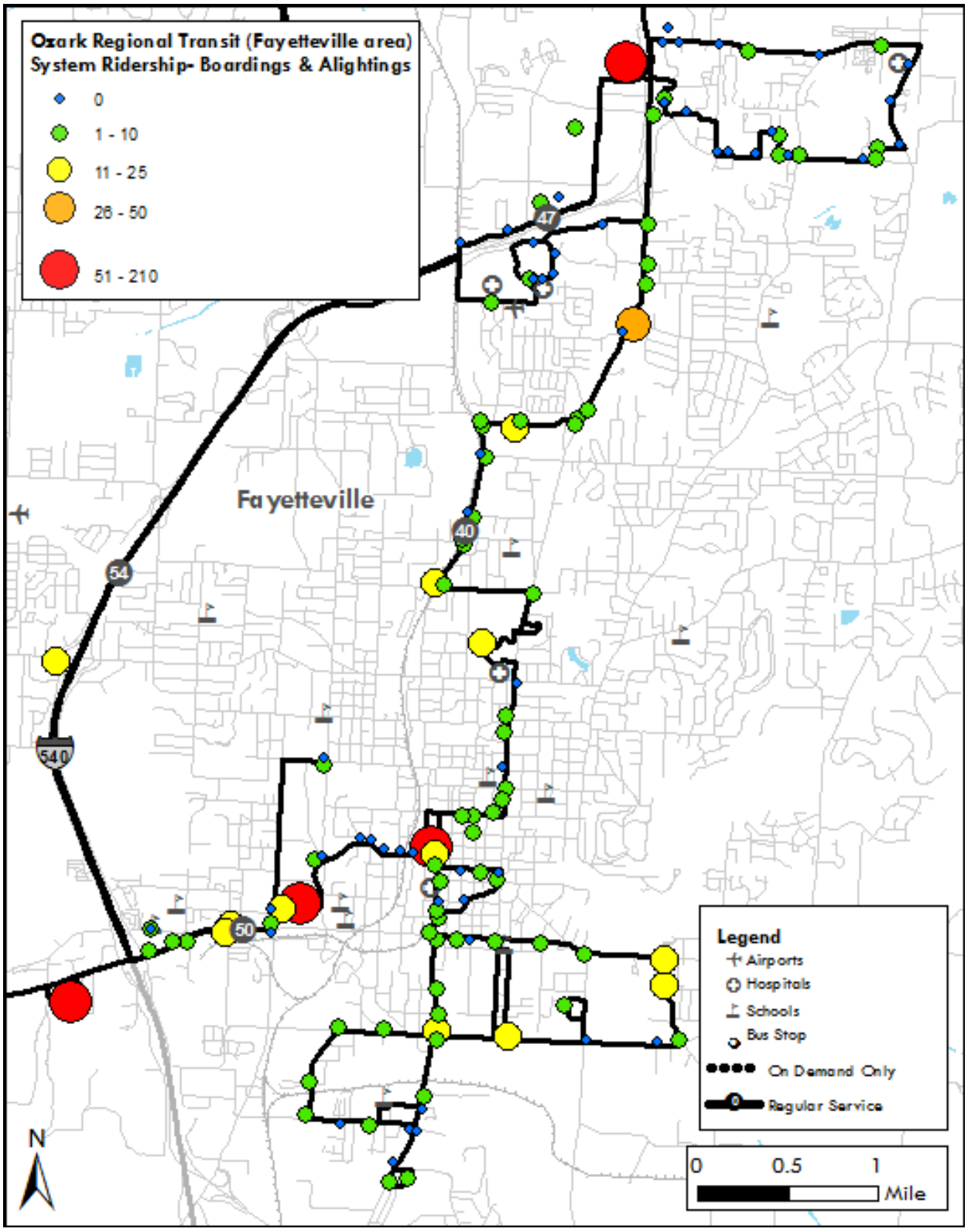


Figure 6-9
Ozark Regional Transit System
Cumulative Ridership At Bus Stops – Fayetteville Area



6.2 Razorback Transit System Level Analysis

Razorback Transit provides fare-free fixed-route and paratransit services on the University of Arkansas campus and to the area surrounding the campus. The service is open to students, faculty, staff and to the general public. Service levels and geographic coverage varies considerably depending on if the University is in-session. In general, the service plans operated by Razorback Transit are as follows:

- During the Fall and Spring school sessions, Razorback Transit operates 11 routes from approximately 7:00 a.m. to 6:00 p.m., with all but one route meeting at Union Station – Razorback Transit's transfer hub that is located immediately south of the Student Union building.
- During the evenings and on Saturdays when the U of A is in-session, Razorback Transit operates a "Reduced" schedule with four routes (from approximately 6:00 to 10:30 p.m.).
- The "Reduced" schedule is also in effect in the summer on weekdays only (from 7:00 a.m. to 6:00 p.m.).
- During Finals Week, Razorback Transit operates a "One Bus" schedule during Finals week, where all routes are in-service, but with only one bus assigned to each route. Thus, routes that currently have 2 or more buses assigned have reduced service frequencies during Finals week.
- Special football shuttle service is also operated on Saturdays when the University of Arkansas has a home football game (Silver and Gold route service).

Figure 6-10 presents the Full-Service system and Figure 6-11 presents the Reduced Route system for Razorback Transit.

Service frequencies vary on Razorback Transit routes depending on the route, time of day and service scenario (i.e., full vs. reduced schedule). Tables 6-4 through 6-7 present each route's span of service, frequencies and estimated service statistics for each Razorback Transit service scenario. The weekday full service schedule includes the increased morning service frequency Razorback Transit added this fall to the Tan and Green routes. Estimated annual service statistics for Razorback Transit for 2011/2012 based on these operating plan scenarios are as follows:

- Maximum buses in operation – 16
- Annual revenue bus-hours of service – 33,210
- Annual revenue bus-miles of service – 378,600

Figure 6-10
Razorback Transit
Full Schedule Route Alignments

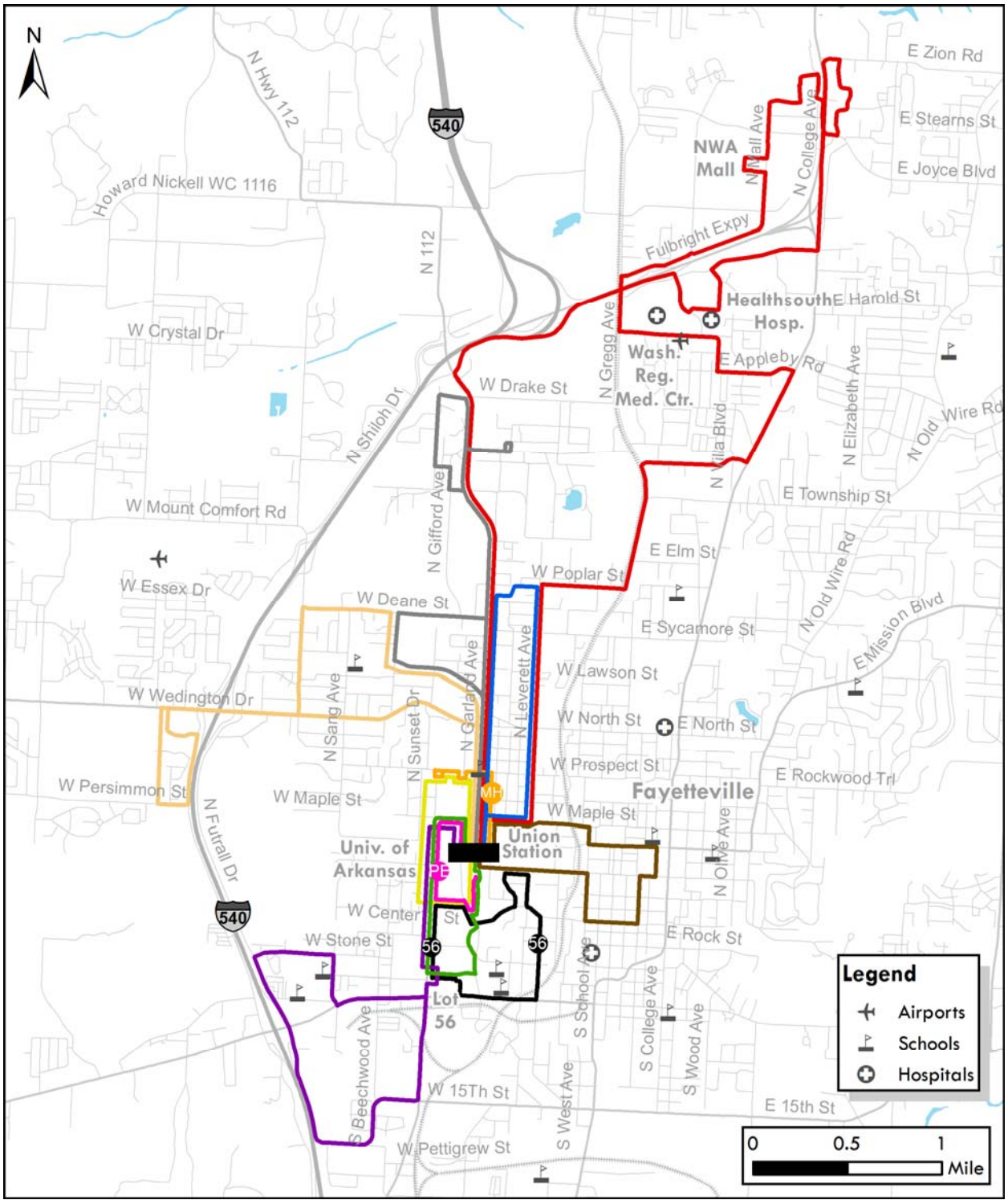


Figure 6-11
Razorback Transit
Reduced Schedule Route Alignments

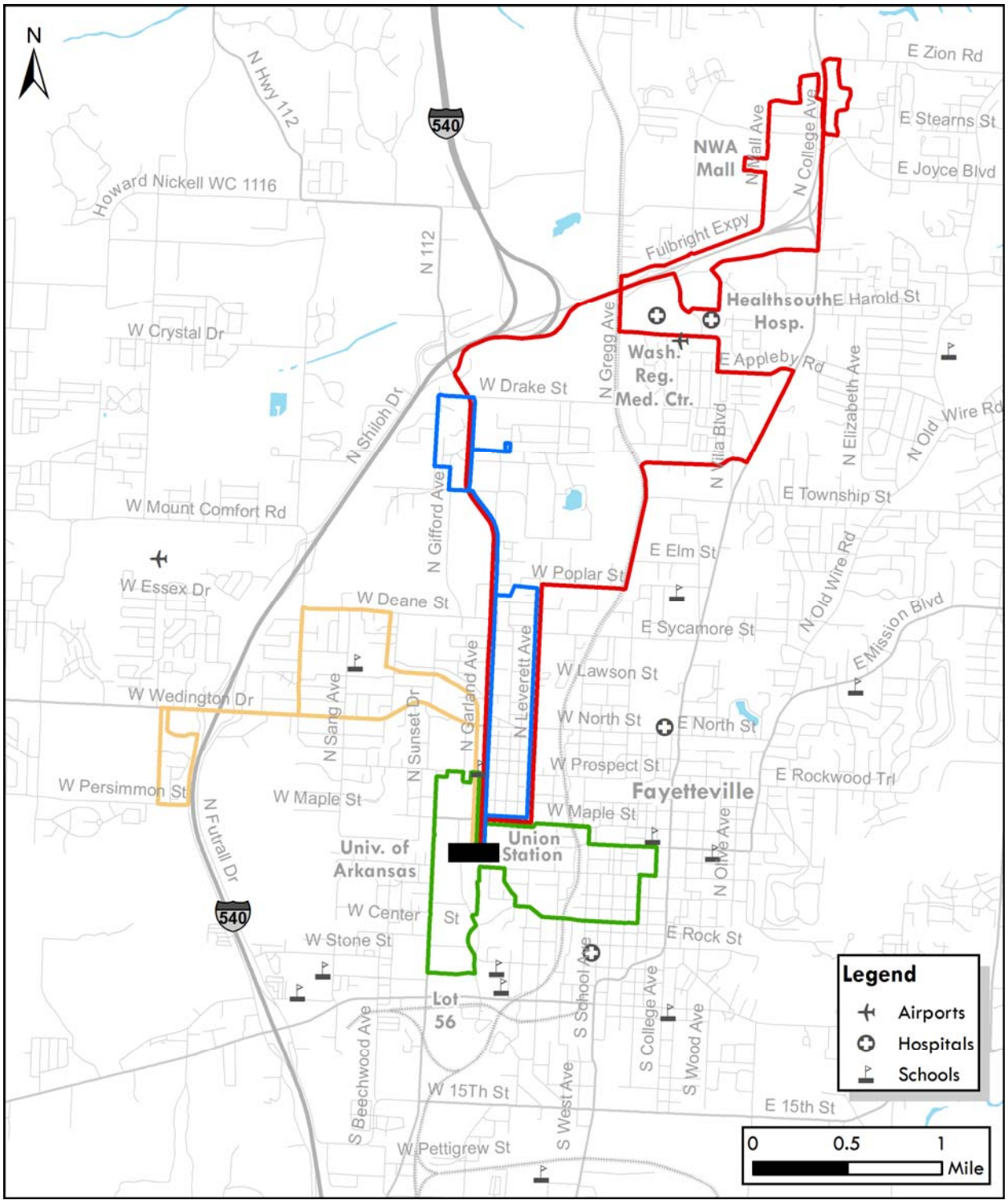


Table 6-4
Razorback Transit
Existing Full Service Weekday/Weekday Evening Operating Plan

Route #	One Way?	Start of First/ Last Trips	Total Hours	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
				Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	Early	AM	Mid/PM	Evening
Blue	Y	7:03 am-5:50 pm	11.0	10	7	10	n/a	70	15.0	5	25%	20	3.3	18.0	24.9	231.0	2.00	3.00	2.00	0.00
Blue Reduced	Y	6:00-10:10 pm	4.0	n/a	n/a	n/a	30	8	n/a	n/a	n/a	n/a	6.3	2.9	4.0	50.4	0.00	0.00	0.00	1.00
Gray	Y	7:00 am-5:45 pm	11.0	30	30	30	n/a	21	25.0	5	17%	30	6.6	9.2	11.0	138.6	1.00	1.00	1.00	0.00
Brown	Y	7:03 am-5:33 pm	10.5	20	20	20	n/a	31	15.0	5	25%	20	2.9	8.0	10.7	89.9	1.00	1.00	1.00	0.00
Green	Y	7:00 am-5:50 pm	11.0	7	7	10	n/a	72	15.0	5	25%	20	2.3	18.5	25.6	165.6	3.00	3.00	2.00	0.00
Green Reduced	Y	6:00-10:10 pm	4.0	n/a	n/a	n/a	30	8	n/a	n/a	n/a	n/a	5.4	3.5	4.0	43.2	0.00	0.00	0.00	1.00
Purple	Y	6:55 am-6:00 pm	11.0	30	30	30	n/a	22	24.0	6	20%	30	6.4	8.8	11.0	140.8	1.00	1.00	1.00	0.00
Red	Y	7:00 am-9:10 pm	14.0	60	60	60	60	15	50.0	10	17%	60	14.2	12.5	15.0	213.0	1.00	1.00	1.00	1.00
Tan	Y	6:55 am-10:10 pm	15.0	15	15	30	30	34	25.0	5	17%	30	7.1	14.6	17.5	241.4	2.00	2.00	1.00	1.00
Yellow	Y	6:56 am-5:46 pm	11.0	16	16	16	n/a	41	14.0	2	13%	16	2.1	9.8	11.2	86.1	1.00	1.00	1.00	0.00
Rte 56	Y	7:00 am-5:40 pm	10.5	20	20	20	n/a	32	13.0	7	35%	20	2.7	6.9	10.7	86.4	1.00	1.00	1.00	0.00
MH Expr	Y	7:04 am-5:38 pm	10.5	16	16	16	n/a	39	14.0	2	13%	16	1.4	9.3	10.7	54.6	1.00	1.00	1.00	0.00
Pomfret	Y	7:06 am-6:01 pm	11.0	12	12	12	n/a	55	10.0	2	17%	12	6.0	9.3	11.2	330.0	1.00	1.00	1.00	0.00
TOTALS								**448**						**131**	**167**	**1,871**	**15.0**	**16.0**	**13.0**	**4.0**

Early = Before 7:30 a.m.
AM = 7:30 to 9:30 a.m.
Mid/PM = 9:30 a.m. to 6:00 p.m.
Eve. = After 6:00 p.m.

Table 6-5
Razorback Transit
Existing Reduced Service Saturday Operating Plan

Route #	One Way?	Start of First/ Last Trips	Total Hours	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Saturday			Bus Requirements			
				Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM Pk	Midday	PM Pk	Evening
Blue	Y	7:03 am-10:00 pm	15.5	30	30	30	30	31	22.0	8	27%	30	6.3	11.4	15.5	195.3	1.00	1.00	1.00	1.00
Tan	Y	7:10 am-10:00 pm	15.5	30	30	30	30	31	25.0	5	17%	30	7.1	12.9	15.5	220.1	1.00	1.00	1.00	1.00
Green	Y	7:00 am-10:00 pm	15.5	30	30	30	30	31	26.0	4	13%	30	5.4	13.4	15.5	167.4	1.00	1.00	1.00	1.00
Red	Y	7:00 am-9:00 pm	14.0	60	60	60	60	15	50.0	10	17%	60	14.2	12.5	15.0	213.0	1.00	1.00	1.00	1.00
TOTALS								**108**						**50**	**62**	**796**	**4.0**	**4.0**	**4.0**	**4.0**

Early = Before 7:30 a.m.
AM = 7:30-9:00 a.m.
Mid/PM = 9:00 a.m. to 6:00 p.m.
Eve. = After 6:00 p.m.

Table 6-6
Razorback Transit
Existing Reduced Service Summer Operating Plan

Route #	One Way?	Start of First/ Last Trips	Total Hours	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
				Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM Pk	Midday	PM Pk	Evening
Blue Reduced	Y	7:03 am-5:30 pm	11.0	30	30	30	n/a	22	22.0	8	27%	30	6.3	8.1	11.0	138.6	1.00	1.00	1.00	0.00
Tan Reduced	Y	7:10 am-5:30 pm	11.0	30	30	30	n/a	22	25.0	5	17%	30	7.1	9.2	11.0	156.2	1.00	1.00	1.00	0.00
Green Reduced	Y	7:00 am-5:30 pm	11.0	30	30	30	n/a	22	24.0	6	20%	30	5.4	8.8	11.0	118.8	1.00	1.00	1.00	0.00
Red Reduced	Y	7:00 am-5:00 pm	10.0	60	60	60	n/a	11	50.0	10	17%	60	14.2	9.2	11.0	156.2	1.00	1.00	1.00	0.00
TOTALS								**77**						**35**	**44**	**570**	**4.0**	**4.0**	**4.0**	**0.0**

Early = Before 7:30 a.m.
AM = 7:30 to 9:30 a.m.
Mid/PM = 9:30 a.m. to 6:00 p.m.
Eve. = After 6:00 p.m.

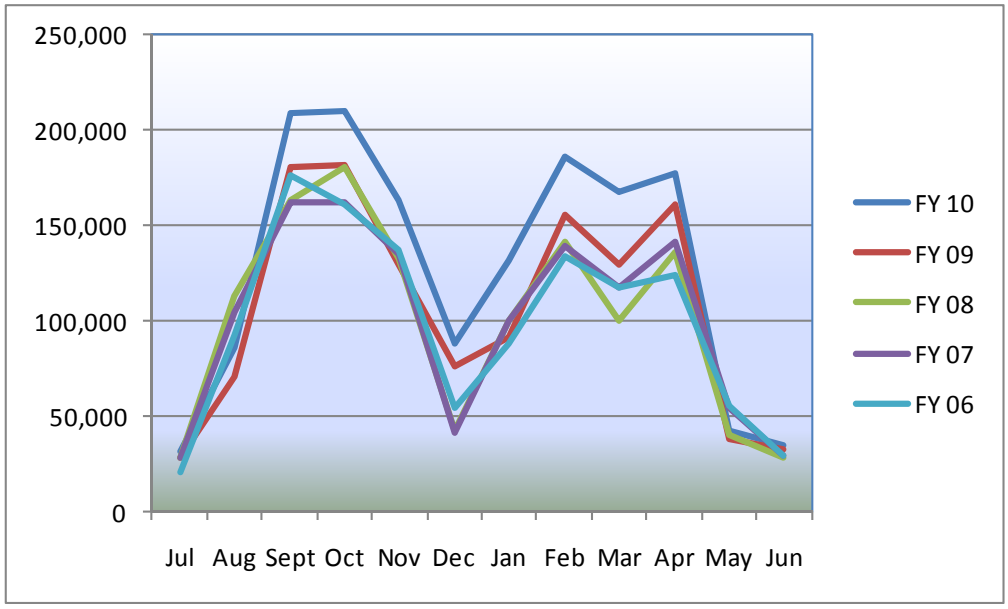
Table 6-7
Razorback Transit
Existing One Bus per Route/Finals Week Operating Plan

Route #	One Way?	Start of First/ Last Trips	Total Hours	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
				Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	Early	AM	Mid/PM	Evening
Blue	Y	7:03 am-5:50 pm	11.0	20	20	20	n/a	33	15.0	5	25%	20	3.3	8.5	11.3	108.9	1.00	1.00	1.00	0.00
Gray	Y	7:00 am-5:45 pm	11.0	30	30	30	n/a	21	25.0	5	17%	30	6.6	9.2	11.0	138.6	1.00	1.00	1.00	0.00
Brown	Y	7:03 am-5:33 pm	10.5	20	20	20	n/a	31	15.0	5	25%	20	2.9	8.0	10.7	89.9	1.00	1.00	1.00	0.00
Green	Y	7:00 am-5:50 pm	11.0	20	20	20	n/a	33	15.0	5	25%	20	2.3	8.5	11.3	75.9	1.00	1.00	1.00	0.00
Purple	Y	6:55 am-6:00 pm	11.0	30	30	30	n/a	22	24.0	6	20%	30	6.4	8.8	11.0	140.8	1.00	1.00	1.00	0.00
Red	Y	7:00 am-5:00 pm	10.0	60	60	60	n/a	11	50.0	10	17%	60	14.2	9.2	11.0	156.2	1.00	1.00	1.00	0.00
Tan	Y	7:10 am-5:30 pm	10.5	30	30	30	n/a	20	25.0	5	17%	30	7.1	8.8	10.5	142.0	1.00	1.00	1.00	0.00
Yellow	Y	6:56 am-5:46 pm	11.0	16	16	16	n/a	41	14.0	2	13%	16	2.1	9.8	11.2	86.1	1.00	1.00	1.00	0.00
Rte 56	Y	7:00 am-5:40 pm	10.5	20	20	20	n/a	32	13.0	7	35%	20	2.7	6.9	10.7	86.4	1.00	1.00	1.00	0.00
MH Expr	Y	7:04 am-5:38 pm	10.5	16	16	16	n/a	39	14.0	2	13%	16	1.4	9.3	10.7	54.6	1.00	1.00	1.00	0.00
Pomfret	Y	7:06 am-6:01 pm	11.0	12	12	12	n/a	55	10.0	2	17%	12	6.0	9.3	11.2	330.0	1.00	1.00	1.00	0.00
TOTALS								**338**						**96**	**121**	**1,409**	**11.0**	**11.0**	**11.0**	**0.0**

Early = Before 7:30 a.m.
AM = 7:30 to 9:30 a.m.
Mid/PM = 9:30 a.m. to 6:00 p.m.
Eve. = After 6:00 p.m.

Monthly ridership reports from Razorback Transit were graphed to determine ridership trends over the past five years. Figure 6-12 presents these trends.

Figure 6-12
System Monthly Ridership (FY 2006 through FY 2010)



Annual fixed route ridership averaged 1.2 million from FY 2006 to FY 2009. In FY 2010, annual fixed route ridership increased to over 1.5 million. As shown in the above graph, September usually has the highest ridership in each year.

Daily ridership reports for the past year were also collected from Razorback Transit from August 1, 2009 through July 31, 2010. This data was sorted and summarized to determine general ridership characteristics for each service scenario operated by Razorback Transit. Specifically, ridership was evaluated for the full service scenario during the fall and spring semesters, and for the reduced service scenarios on weekday evenings, Saturdays and in the summer. Ridership during finals week or football Saturdays was not included in this analysis. Tables 6-8 and 6-9 present average, minimum and maximum daily ridership by route for these different scenarios. Some general conclusions from this analysis are as follows:

- FY 2009 Fall average ridership was over 9,000, which is slightly higher than Spring average ridership (almost 8,500).
- The Green and Blue routes have the highest ridership of all Razorback Transit routes, and account for about one half of all Razorback transit ridership.
- Weekday evening ridership averages about 400 passengers, with the Blue Reduced route typically having the highest ridership in the evenings.
- Saturday ridership averages about 1,000 riders, with the Red Route having the highest ridership of the four Saturday routes.
- In the summer, ridership averages over 1,500 passengers per day.

Table 6-8
Razorback Transit
FY 2009/FY 2010 Ridership Characteristics
During Fall/Spring School Sessions

Route	Route	Fall Session			Spring Session		
		Average	Min	Max	Average	Min	Max
Weekdays	Green	2,487	1,112	3,090	2,013	1,306	2,664
	Blue	2,261	1,238	3,594	2,098	1,371	2,659
	Brown	442	304	563	422	191	609
	Pomfret	778	269	1,611	711	115	1,074
	Route 56	356	191	475	317	57	405
	Yellow/Maple Hill	790	304	2,147	1,218	646	2,005
	Tan	684	377	939	574	215	758
	Purple	443	0	873	368	188	784
	Red	493	240	611	479	314	574
	Grey	326	237	392	283	191	359
	Total	**9,061**	**4,272**	**14,295**	**8,483**	**4,594**	**11,891**
Weekday Eve's.	Green Reduced	110	45	274	89	30	165
	Blue Reduced	140	0	231	143	66	212
	Tan Reduced	69	28	162	61	13	178
	Red Reduced	100	52	212	104	1	175
	Total	**419**	**125**	**879**	**397**	**110**	**730**
Saturdays	Green Reduced	224	106	349	203	117	269
	Blue Reduced	211	87	285	249	104	325
	Tan Reduced	143	107	176	148	72	200
	Red Reduced	408	100	529	411	99	515
	Total	**987**	**400**	**1,339**	**1,012**	**392**	**1,309**

Table 6-9
Razorback Transit
FY 2009/FY 2010 Ridership Characteristics
During Summer

Route	Summer		
	Average	Min	Max
Green Reduced	389	227	568
Blue Reduced	466	170	667
Tan Reduced	281	156	396
Red Reduced	433	306	538
Total	**1,568**	**859**	**2,169**

Razorback Transit provided daily ridership by route for September 2010 for use in this study. This data identifies a total of 234,128 passengers using fixed route services during the month of September (not including Football shuttles). This represents a 12% increase in ridership over September 2009. Table 6-10 presents average daily ridership during the month of September. The Tan Route has seen a significant increase in ridership. In fact, Razorback Transit has added a morning bus to the Tan Route and to the Green Route to handle large ridership volumes.

Table 6-10
Razorback Transit
September 2010 Average Daily Ridership

Route	Route	Fall Session Average	Min	Max
Weekdays	Green/Green Red'd.	2,929	1,929	3,515
	Blue/Blue Red'd.	2,651	2,052	3,055
	Brown	516	370	633
	Pomfret Express	812	610	1,011
	Route 56	485	393	646
	Yellow	480	0	641
	Maple Hill Express	197	134	325
	Tan/Tan Red'd.	1,245	965	1,522
	Purple	587	467	801
	Red/Red Red'd.	722	536	874
	Grey	406	304	554
	Total	**11,030**	**7,760**	**13,577**
Saturdays	Green Reduced	255	196	313
	Blue Reduced	299	269	328
	Tan Reduced	161	160	161
	Red Reduced	539	527	551
	Total	**1,253**	**1,152**	**1,353**

Razorback Transit bus operators keep track of student vs. non-student ridership through the use of on-board "clickers". Judgment is used by the bus driver in determining if a rider is a student. For September 2010, non-student usage on weekday routes was estimated at 15 percent, as shown in Table 6-11. Non-student ridership was highest on the Brown and Red routes. These are the two routes that serve major destinations away from campus (downtown Fayetteville and the Northwest Arkansas Mall area). On weekends, Razorback Transit drivers estimated that 73% of all riders were non-students. The on-board survey that was conducted as part of this TDP work effort indicates that about 85 percent of Razorback Transit riders identified themselves as students, consistent with bus driver estimates.

Table 6-11
Razorback Transit
September 2010 Average Daily Ridership

Route	Route	Student	Non-Student
Weekdays	Green/Green Red'd.	91.5%	8.5%
	Blue/Blue Red'd.	88.6%	11.4%
	Brown	44.9%	55.1%
	Pomfret Express	99.1%	0.9%
	Route 56	94.8%	5.2%
	Yellow	97.2%	2.8%
	Maple Hill Express	96.3%	3.7%
	Tan/Tan Red'd.	82.0%	18.0%
	Purple	90.5%	9.5%
	Red/Red Red'd.	37.1%	62.9%
	Grey	84.5%	15.5%
	Total	**84.7%**	**15.3%**
Saturdays	Green Reduced	24.8%	75.2%
	Blue Reduced	30.7%	69.3%
	Tan Reduced	34.0%	66.0%
	Red Reduced	24.6%	75.4%
	Total	**27.3%**	**72.7%**

Ridership data from Razorback Transit was used to determine service productivity measures. Specifically, ridership productivity was measured on the basis of riders per revenue bus-hour, riders per revenue bus-mile and riders per bus trip. September 2010 ridership data was used to determine current weekday, weekday evening and Saturday productivity measures. Average ridership from this past summer was used to estimate summer productivity measures. Tables 6-12 and 6-13 present these measures and rankings. Overall, ridership for Razorback Transit is very productive. Systemwide productivity measures are as follows:

Weekdays	Weekday Riders per Bus-Hour – 66.0
(Sept. 2010)	Weekday Riders per Bus-Mile – 5.9
	Weekday Riders per Bus Trip – 24.6
Saturday	Saturday Riders per Bus-Hour – 16.3
(Sept. 2010)	Saturday Riders per Bus-Mile – 1.3
	Saturday Riders per Bus Trip – 9.4
Summer	Weekday Riders per Bus-Hour – 35.7
(Summer 2010)	Weekday Riders per Bus-Mile – 2.8
	Weekday Riders per Bus Trip – 20.4

Table 6-12
Razorback Transit
Ridership Productivity
During Fall/Spring School Sessions

Service Period	Route	Riders	Riders/ Hour	Rank	Riders/ Mile	Rank	Riders/ Trip	Rank
Weekday	Red	580	52.7	5	3.7	8	52.7	2
	Blue	2,464	98.6	2	10.7	2	35.2	4
	Green	2,801	109.8	1	17.0	1	38.9	3
	Tan	1,152	65.8	4	4.8	6	54.9	1
	Route 56	485	44.1	8	5.6	4	15.6	9
	Yellow	480	43.6	9	5.6	5	11.7	10
	Grey	406	36.9	10	2.9	10	19.3	6
	Purple	577	50.2	6	4.1	7	26.2	5
	Brown	516	46.9	7	5.7	3	16.6	8
	Pomfret	812	73.8	3	2.5	11	17.3	7
	Maple Hill	197	17.9	11	3.6	9	5.1	11
Weekday Eve.	Red Red'd.	142	35.5	2	2.5	3	35.5	1
	Blue Red'd.	187	41.6	1	3.7	1	20.8	2
	Green Red'd.	128	28.4	3	3.0	2	14.2	3
	Tan Red'd.	93	20.7	4	1.5	4	10.3	4
Saturday	Red Red'd.	411	27.4	1	1.9	1	27.4	1
	Blue Red'd.	249	16.1	2	1.1	3	8.0	2
	Green Red'd.	203	13.1	3	1.2	2	6.5	3
	Tan Red'd.	148	9.5	4	0.7	4	4.8	4

Table 6-13
Razorback Transit
Ridership Productivity
During Summer

Route	Riders	Riders/ Hour	Rank	Riders/ Mile	Rank	Riders/ Trip	Rank
Red Red'd.	433	39.4	2	2.8	3	39.4	1
Blue Red'd.	466	42.4	1	3.4	1	21.2	2
Green Red'd.	389	35.4	3	3.3	2	17.7	3
Tan Red'd.	281	28.1	4	1.8	4	12.8	4

The Green, Tan and Blue Routes rank very high in riders per bus-hour and riders per bus-mile on weekdays when school is in-session. Productivity measures drop off in the evenings, on Saturdays and in the summer. However, the productivity measures still are solid when compared to typical industry standards. The weakest performing routes appear to be the Maple Hill Express route on weekdays, and the Tan Reduced Route on weekday evenings, Saturdays and during the summer.

A weekday ridecheck survey was conducted on September 14, 2010 for all Razorback routes. Passenger boardings and alightings were recorded at every stop, and departure and arrival times were recorded at timepoints. Pertinent systemwide ridership characteristics observed from the ridecheck survey data are as follows:

- Blue and Green Route ridership represents about ½ of all daily ridership on Razorback Transit.
- Ridership volumes are typically heaviest in the morning hours, as illustrated in Figure 6-13.
- 40% of all ridership activity occurred at Union Station. Thus, a majority of Razorback Transit riders have Union Station as one end of their transit trip.
- 12% of all ridership activity occurred at Lot 56.
- There were 33 surveyed trips with maximum loads of 40 or more passengers. Another 32 surveyed trips had maximum loads of 30 to 39 passengers. The heaviest maximum load was 69 passengers on the Green Route.

Figure 6-13
Razorback Transit System Ridership
By Time-of-Day

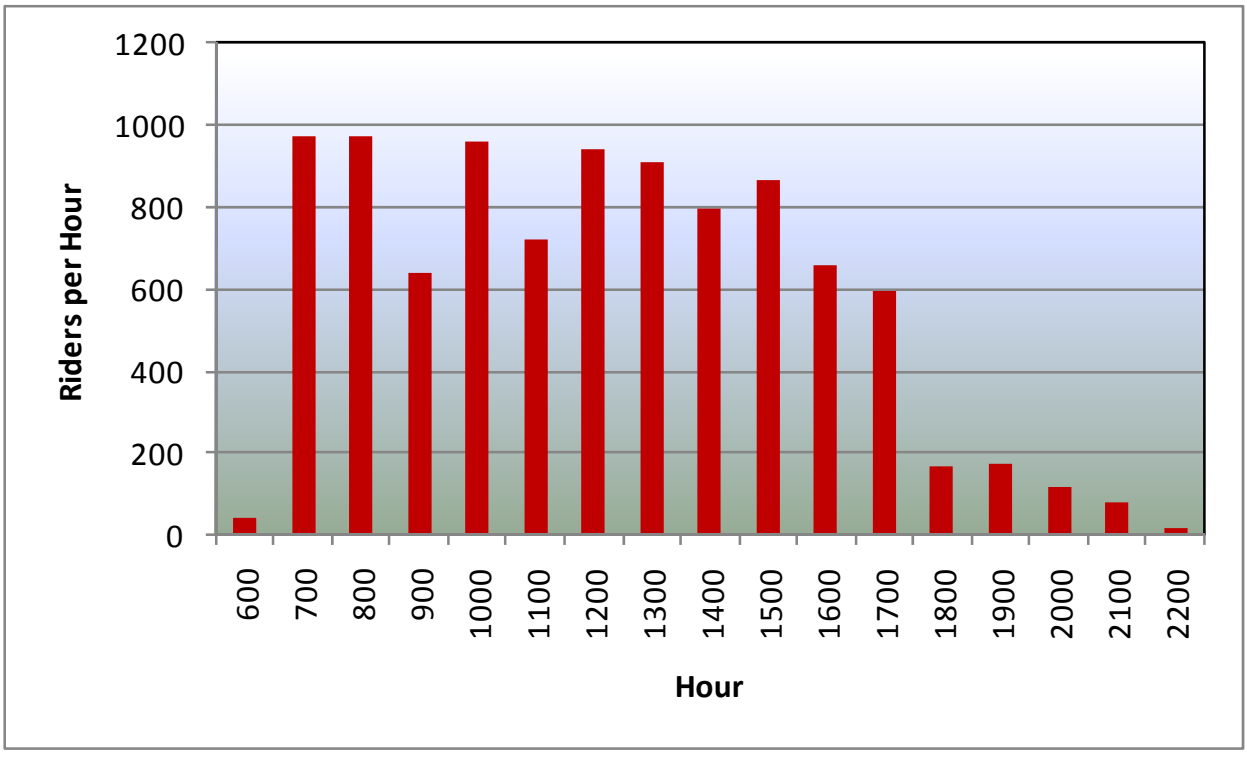
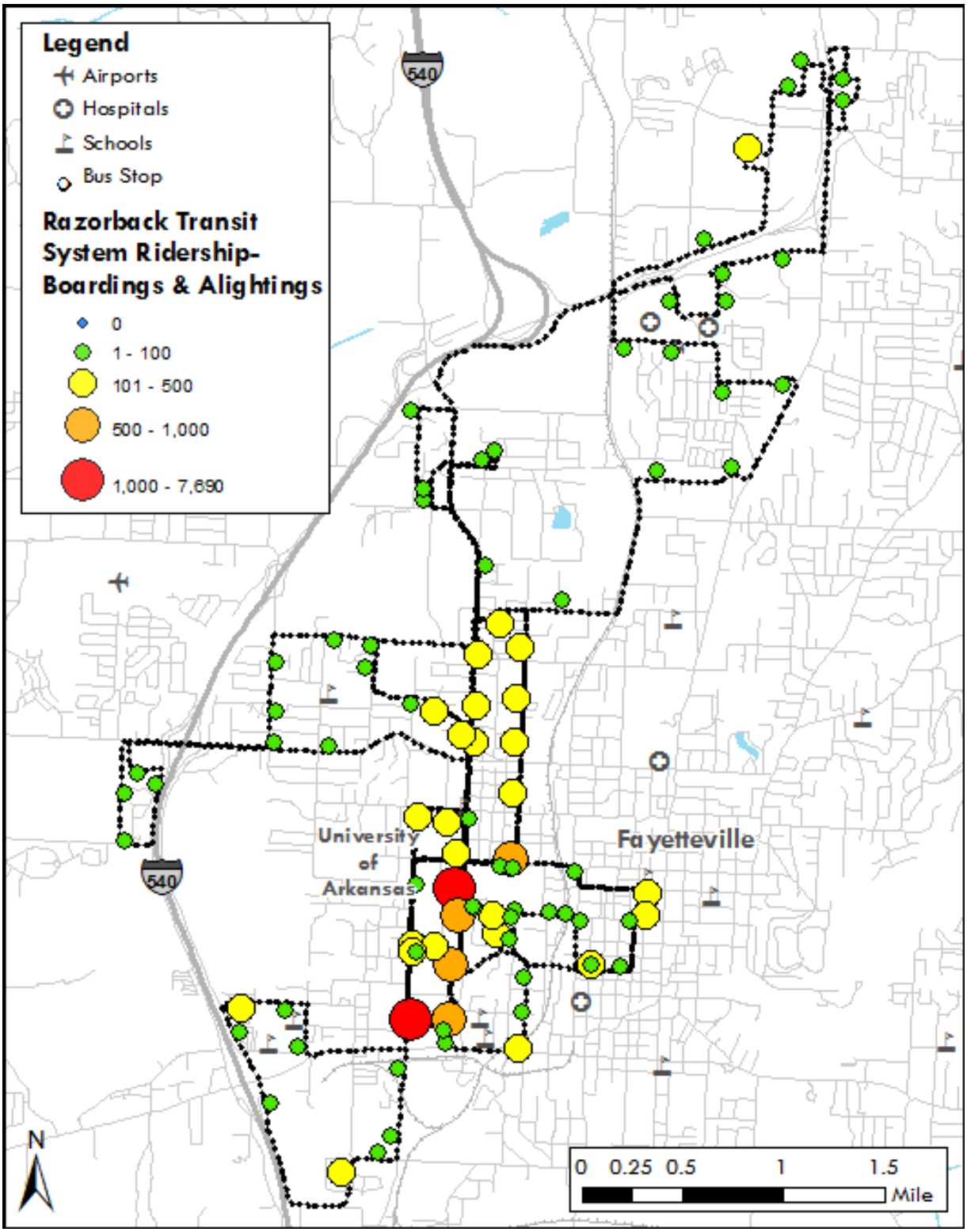


Figure 6-14 illustrates cumulative ridership activity at all Razorback Transit stops. Stops with the highest ridership activity were:

- Union Station – 40% of all ridership activity
- Lot 56 (all stops at Lot 56) – 11.5% of all ridership activity
- Pomfret Hall – 3.6% of all ridership activity
- Maple and Leverett – 3.5% of all ridership activity
- Brough Commons – 3.3% of all ridership activity

Figure 6-14

Razorback Transit System Cumulative Ridership
At Bus Stops



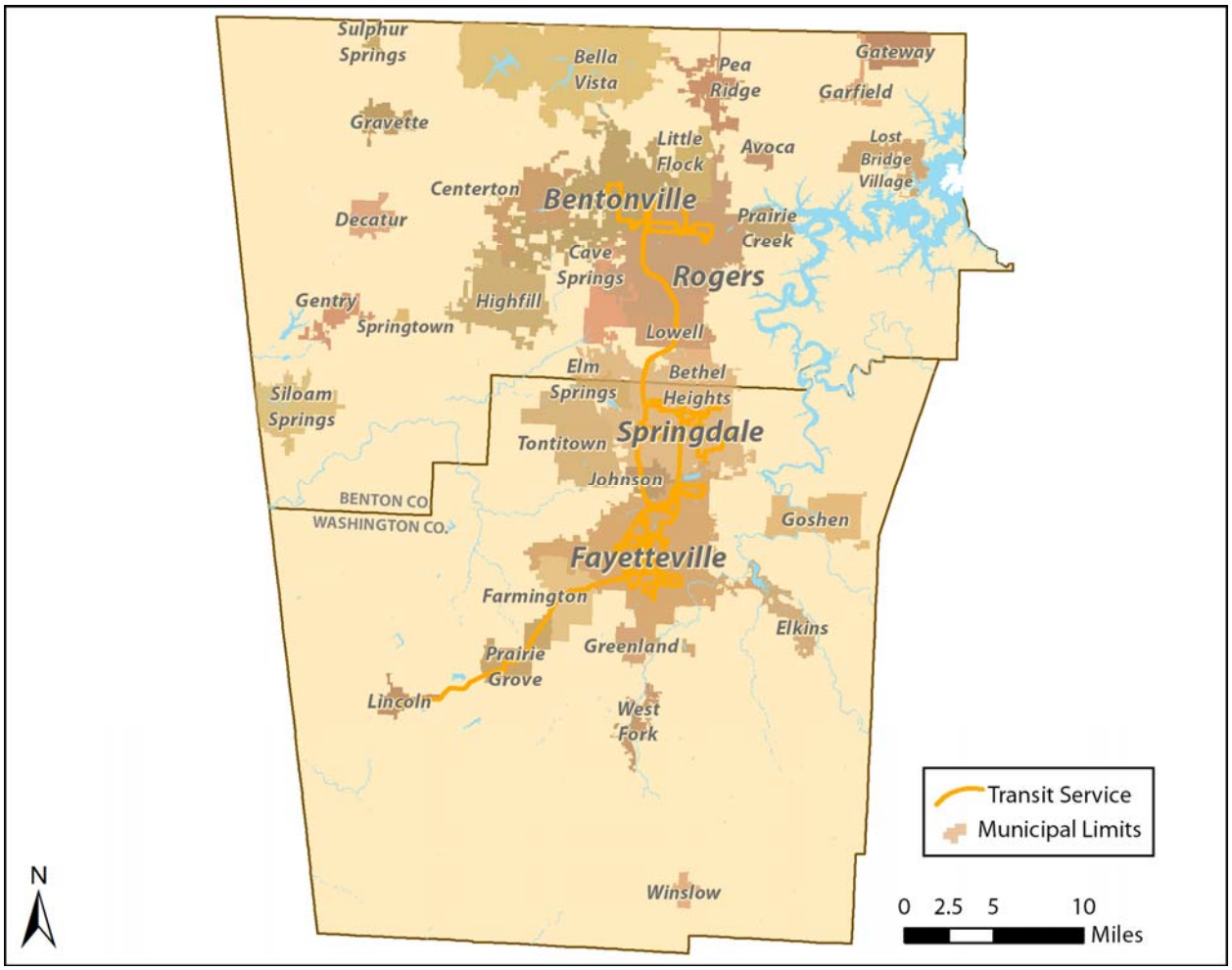
7.0 Latent Demand Analysis

The purpose of the latent demand analysis is to identify geographic areas where there may be potential opportunities for service expansion and improvements. Demographic data characteristics and growth projections have been identified for Benton and Washington Counties. Findings from this analysis will be used to identify service improvements that address service needs in unserved and underserved areas. Highlights from the Latent Demand Analysis are presented in the following pages. For more extensive analysis, please refer to *Technical Memorandum 6 – Latent Demand Analysis*.

7.1 Methodology

The Northwest Arkansas Regional Planning Commission planning area encompasses Benton and Washington Counties as well as the largest cities of Bentonville, Fayetteville, Rogers and Springdale which are all located within the US Census-defined urbanized area of Northwest Arkansas. Figure 7-1 highlights the areas of other key municipalities within the region as well as current ORT and Razorback Transit routes. Municipal (city and town) limits are a logical upper-limit scale to which latent demand analysis will be based. The Transportation Analysis Zone (TAZ) will be used as the smallest unit of analysis.

Figure 7-1
Northwest Arkansas Regional Planning Area



The methodology employed for the Northwest Arkansas Latent Demand Analysis utilized the following data sources:

- Geographic, political and transportation geodata provided by the Northwest Arkansas Regional Planning Commission (NWARPC).
- Population, household and employment estimates from the NWARPC Transportation Analysis Zone (TAZ) files for 2005 and 2010, shown with an overlay of public transportation service.
- Population subsets of students K-12 (aged 5 through 17), students aged 18 and over, and population aged 65 and over from the 2010 TAZ file, also shown with transit service.
- Data for minorities, households below poverty, households with zero vehicles and households with one or more disability came from year 2000 of the US Census. Due to the age of data, percentages of these targeted demographic groups were applied to the projection year 2010 under the assumption these groups in 2000 would comprise similar percentages within the population in 2010 and would be located in similar locations. Additionally, because these data populated census tracts, proportion of TAZ area within census tract was used to adjust demographic percentages for the final result, which is shown with the transit service overlay.
- Locations of major employment and activity centers came from 2008 employment data from InfoUSA and were mapped with transit service.
- Longitudinal Employment–Household Dynamics data came from the 2007 US Census Bureau and were used to show labor commute sheds countywide in Benton and Washington Counties as well as targeted areas of employment, such as Bentonville, Rogers, Springdale and Fayetteville, based on employment data from the NWARPC 2010 TAZ file. As with previous datasets, transit service was shown as an overlay.
- Population, household and employment projections came from the Northwest Arkansas Regional Planning Commission Transportation Analysis Zone files for horizon years 2010 and 2030. Transit service was likewise included in these maps.

The maps resulting from this methodology were used to build a list of areas with potential latent demand.

The two-county Northwest Arkansas region is served by a variety of transportation providers (such as hospitals, hotels, senior facilities or activity centers) operating at the local level. However, for the purposes of this analysis, ORT and Razorback Transit are the public transportation agencies under consideration, and the terms “public transportation” and “transit” may be used interchangeably to refer to ORT, Razorback Transit or both where applicable.

7.2 Existing Population

Year 2010 estimated population data provided by the NWARPC 2010 TAZ reflects an overall population of 453,435, of which 219,673 (50.4%) resides in Benton County and 215,780 (49.6%) resides in Washington County. Benton County population has increased by 11 percent and Washington County population has increased by approximately 19 percent since 2005. Thus, both counties experienced similar size and growth characteristics over the past five years. Year 2010 population estimates are not available at the city level. However, 2009 city population estimates are available as shown in Table 7-1.

Table 7-1
2009 City Population Estimates

Benton County Cities		Washington County Cities	
Avoca	465	Elkins	2,522
Bella Vista	25,483	Elm Springs	1,309
Bentonville	36,855	Farmington	4,682
Bethel Heights	1,598	Fayetteville	77,142
Cave Springs	1,797	Goshen	1,149
Centerton	8,637	Greenland	1,237
Decatur	2,064	Johnson	3,317
Garfield	485	Lincoln	2,083
Gateway	545	Prairie Grove	3,903
Gentry	3,129	Springdale	68,487
Gravette	2,660	Tontitown	2,057
Highfill	848	West Fork	2,337
Little Flock	3,251	Winslow	395
Lowell	7,420	**Incorporated**	170,620
Pea Ridge	4,778		
Rogers	59,014		
Siloam Springs	14,872		
Springtown	127		
Sulphur Springs	719		
Incorporated	174,747		

7.3 Major Employers

Employment data comes from the 2008 edition of employment from InfoUSA, provided by the Northwest Arkansas Regional Planning Commission. Major employment was chosen to be all companies of all types over 50 employees in size. The resulting data shows the location of companies between 50 and 10,000 employees.

For Benton County, the majority of large companies are located in Bentonville and Rogers with some in Gentry and Siloam Springs (see Figure 7-2). Many are located near or on ORT service routes with the exception of companies located in Siloam Springs and Gentry. Figure 7-3 provides a closer view of the Bentonville and Rogers areas. The largest employers in Benton County are as follows in Table 7-2.

Table 7-2
Top Five Employers in Benton County

City	Name	Employees	Type of Company
Bentonville	Wal-Mart Stores, Inc.*	10000	Department Stores
Bentonville	Sam's Club*	5000	Exporters (Wholesale)
Gentry	McKee Foods Corp.	1550	Bread/Other Bakery Prod-Excl. Cookies (Mfg.)
Lowell	J. B. Hunt Transport Svc., Inc.	1200	Trucking, Local Cartage
Bentonville	Wal-Mart	1000	Distribution Centers (Wholesale)

**These locations may actually count the total number of employees on payroll and not the number of employees who work at the headquarters locations.*

Figure 7-2
Major Employers in Benton County

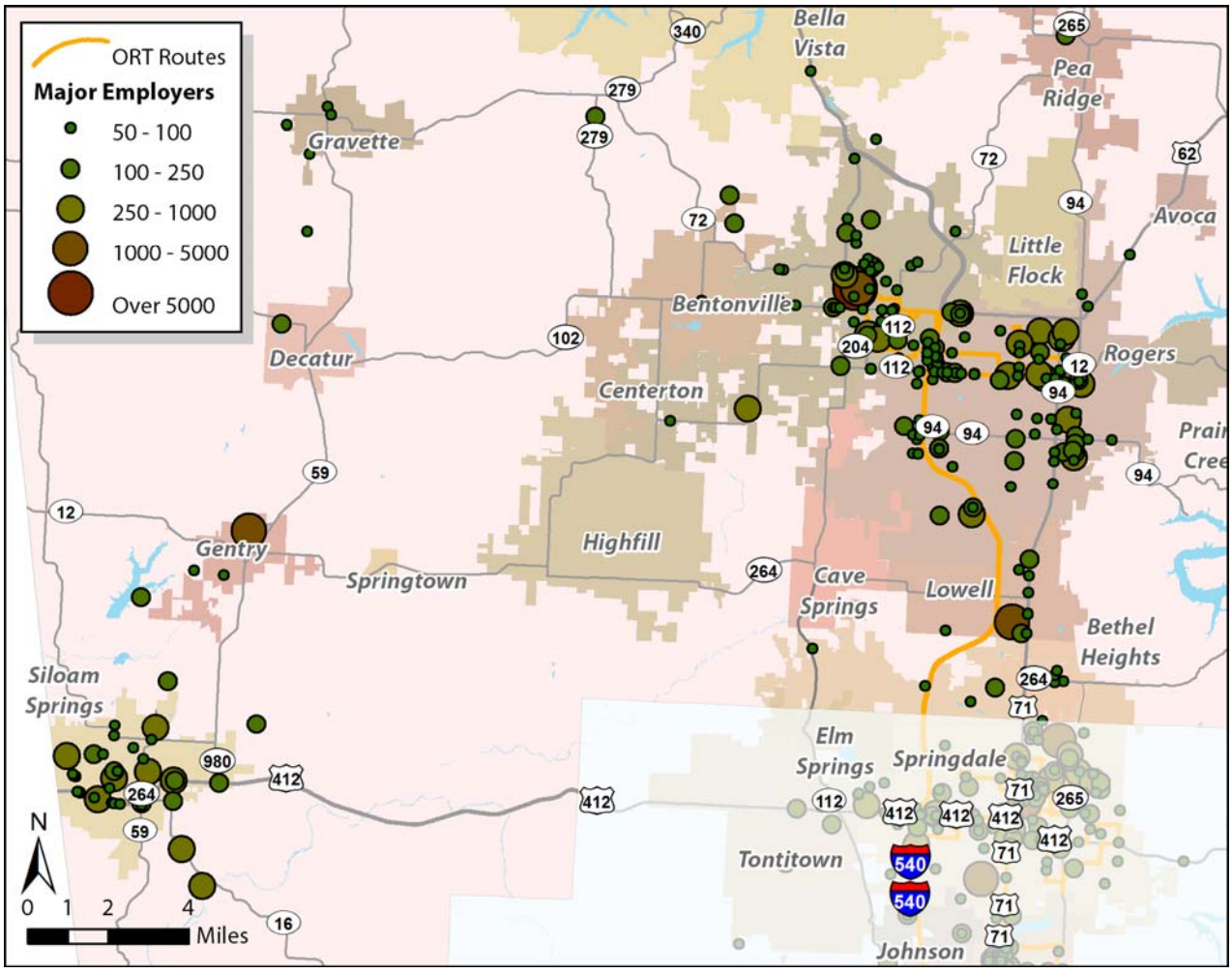
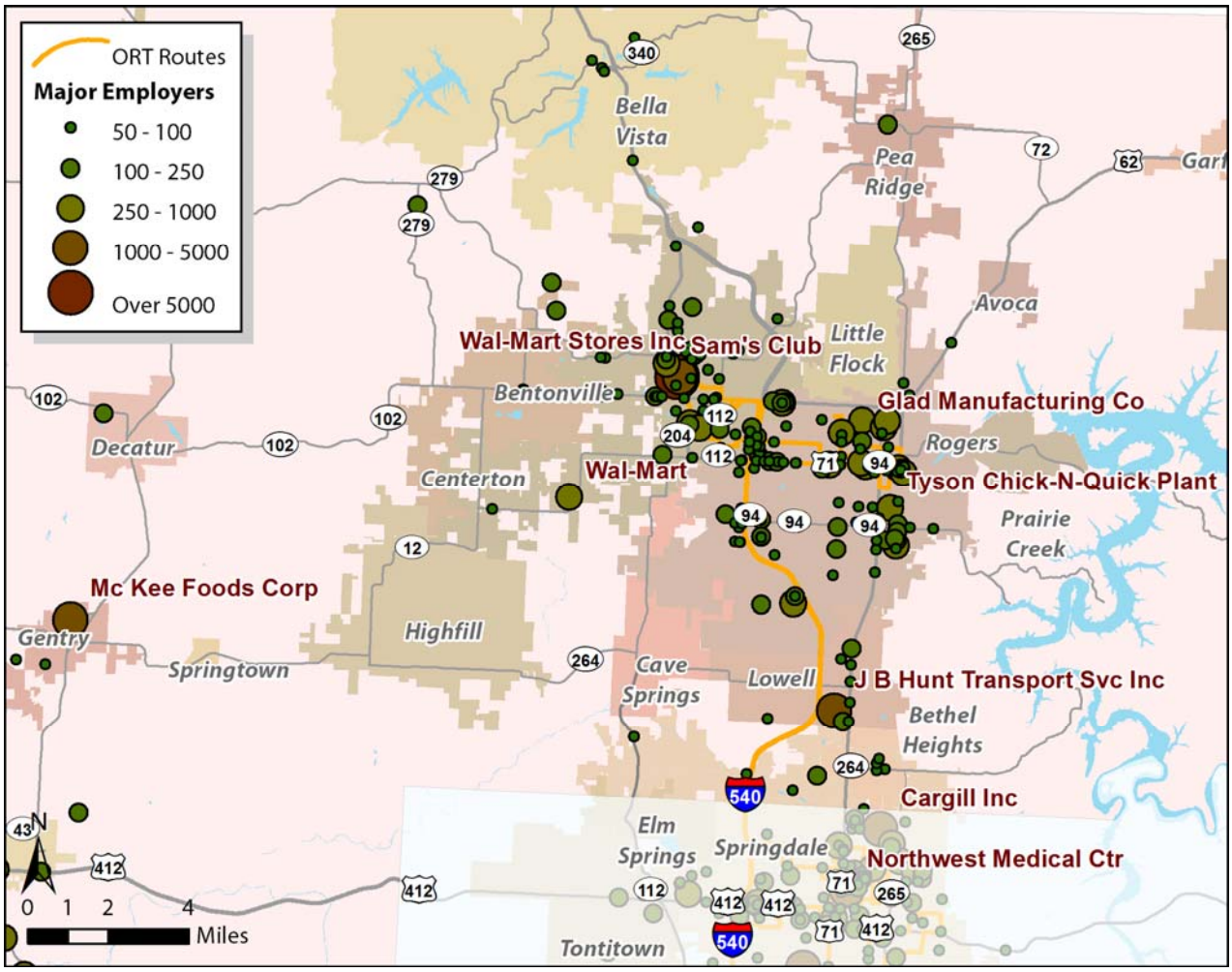


Figure 7-3
Central Benton County Major Employers



Major employers in Washington County are primarily located near major north-south corridors in the cities of Fayetteville and Springdale with smaller companies extending south along the US 62 corridor, as shown in Figure 7-4. A closer view of the Fayetteville and Springdale areas, listing the names of employers in those areas is provided in Figure 7-5. The largest employers in Washington County are as follows in Table 7-3.

Table 7-3
Top Five Employers in Washington County

City	Name	Employees	Type of Company
Fayetteville	University of Arkansas	4,008	Schools-Universities & Colleges Academic
Fayetteville	Washington Regional Med. Ctr.	2,001	Clinics
Springdale	Northwest Medical Ctr.	1,800	Hospices
Springdale	Tyson Foods, Inc.	1,600	Farms
Fayetteville	Superior Industries Intl., Inc.	1,450	Automobile Parts & Supplies (Mfg.)
Springdale	Cargill, Inc.	1,100	Poultry Processing Plants (Mfg.)

Figure 7-4
Major Employers in Washington County

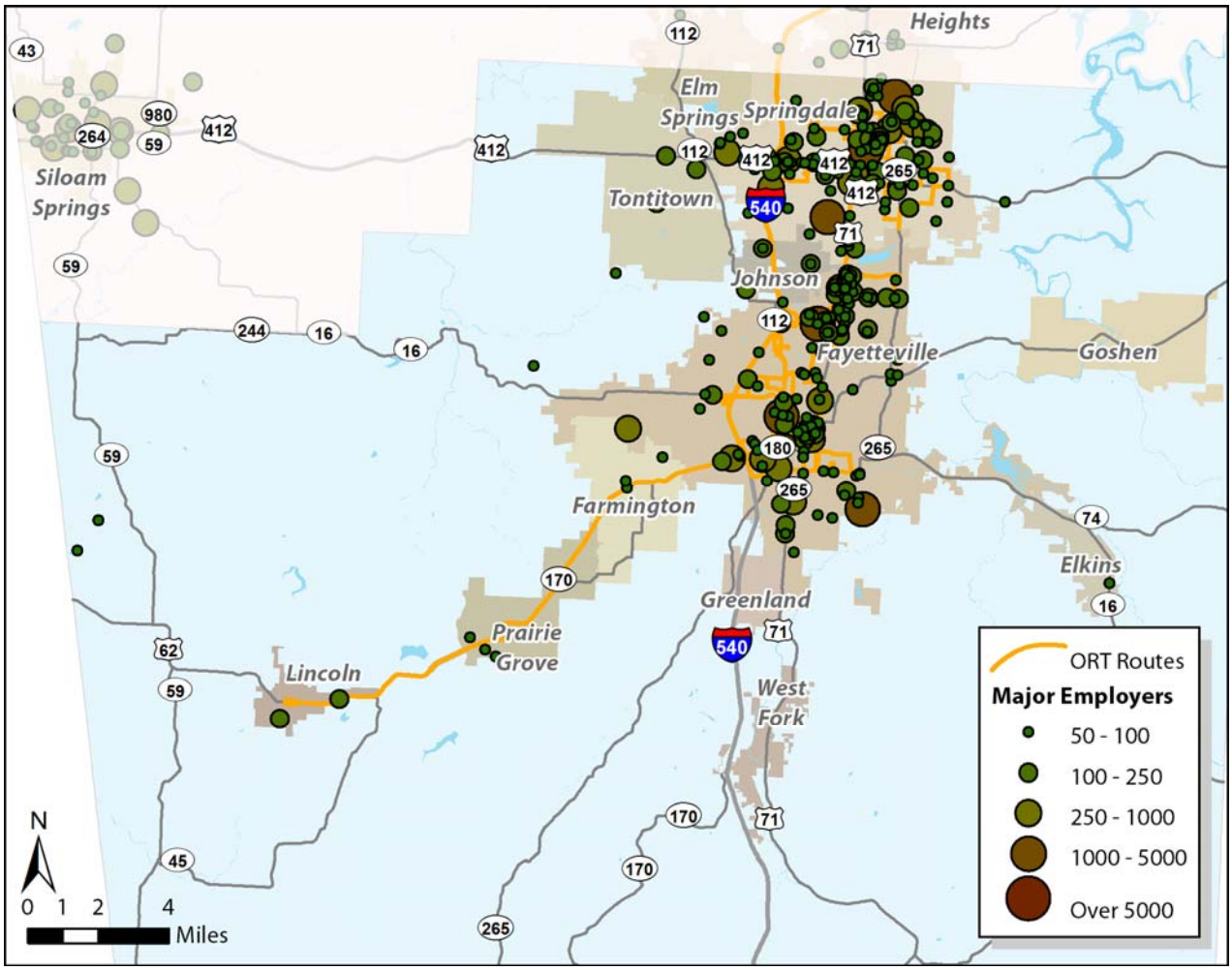
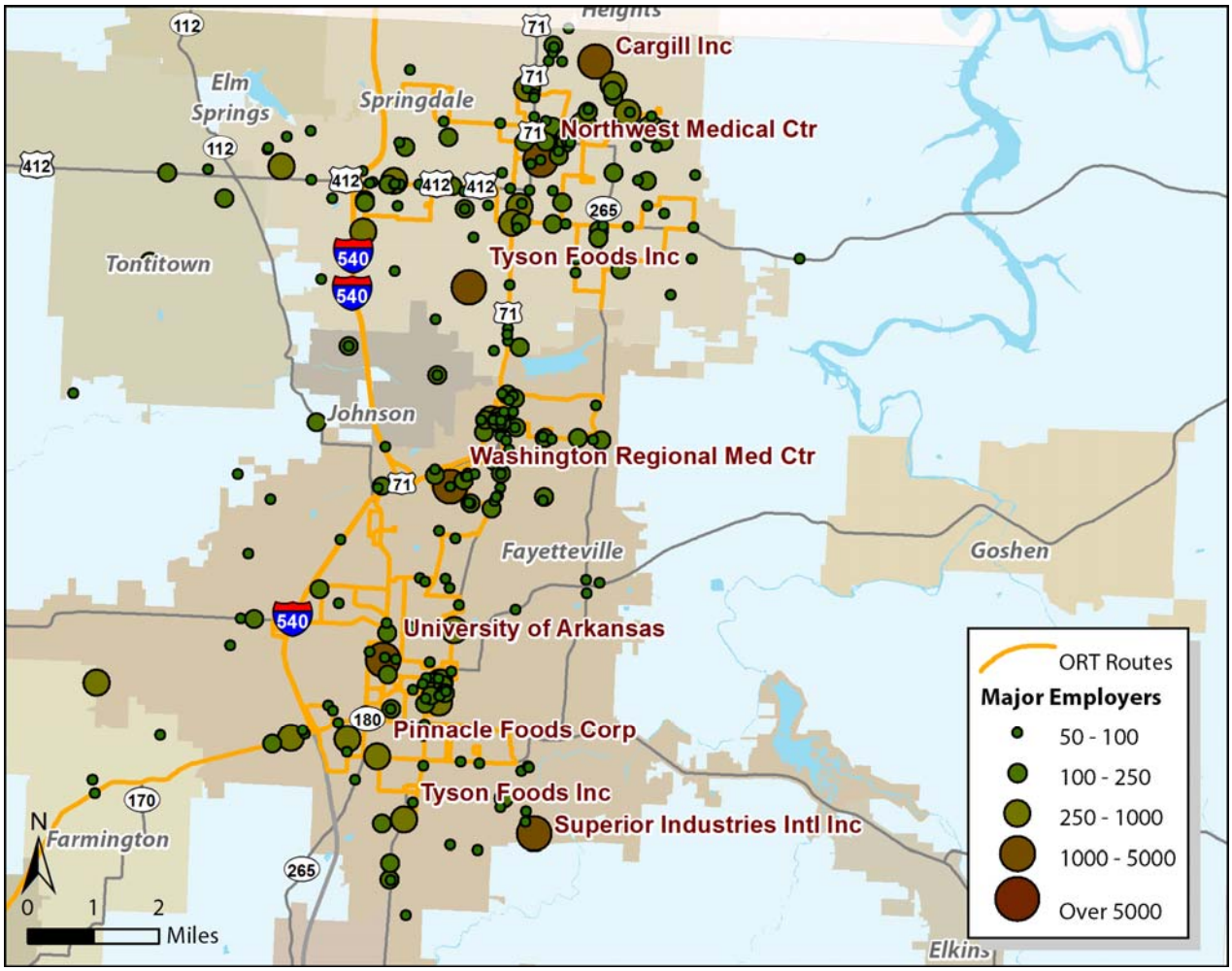


Figure 7-5
Fayetteville & Springdale Area Major Employers



7.4 Future Population Projections

Population projections come from the Traffic Analysis Zone (TAZ) files provided by the Northwest Arkansas Regional Planning Commission. Household population for the year 2030 was compared against population for the year 2010 to yield percent change over those 20 years. Anticipated population gains for Benton and Washington Counties are as follows:

Table 7-4
Current, Future and Percent Change in Population for Both Counties

County	2010 Population	2030 Population	Change (%)
Benton	219,673	351,109	59.8%
Washington	215,780	326,624	51.4%
Total	**435,453**	**677,733**	**55.6%**

Figure 7-6 presents population changes by TAZ for Benton County between 2010 and 2030. The greatest gains in population appear to be in parts of the county west of Lowell, Rogers and Bentonville, but not as far west as AR 59. This may indicate a continuing trend of low-density development away from traditional population centers. Conversely, areas in downtown Bentonville and Rogers are anticipated to have minimal population changes over the next two decades, and even some losses.

Figure 7-6
2010-2030 Population Growth in Benton County

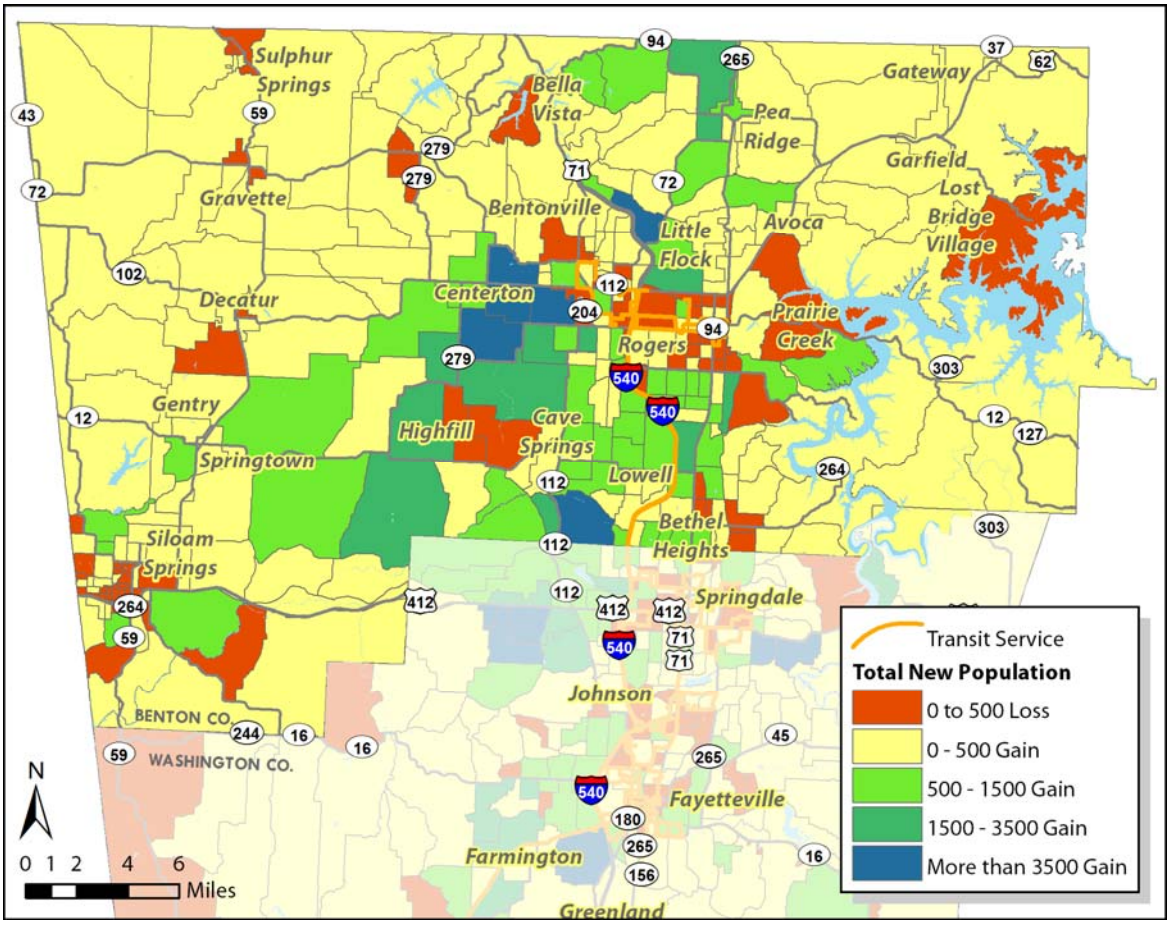


Figure 7-7 presents forecasted 2030 population densities for Benton County in units of persons per acre. Much of the growth, as explained previously, will occur just west of I-540 outside of Bentonville and Rogers. However, most of the density will remain in the central cities of Bella Vista, Bentonville, Rogers, Cave Springs, Lowell and Bethel Heights, in other words, around the I-540 corridor. Densities of between 1 and 10 persons per acre will be common in these areas.

Figure 7-7
2030 Population Densities in Benton County

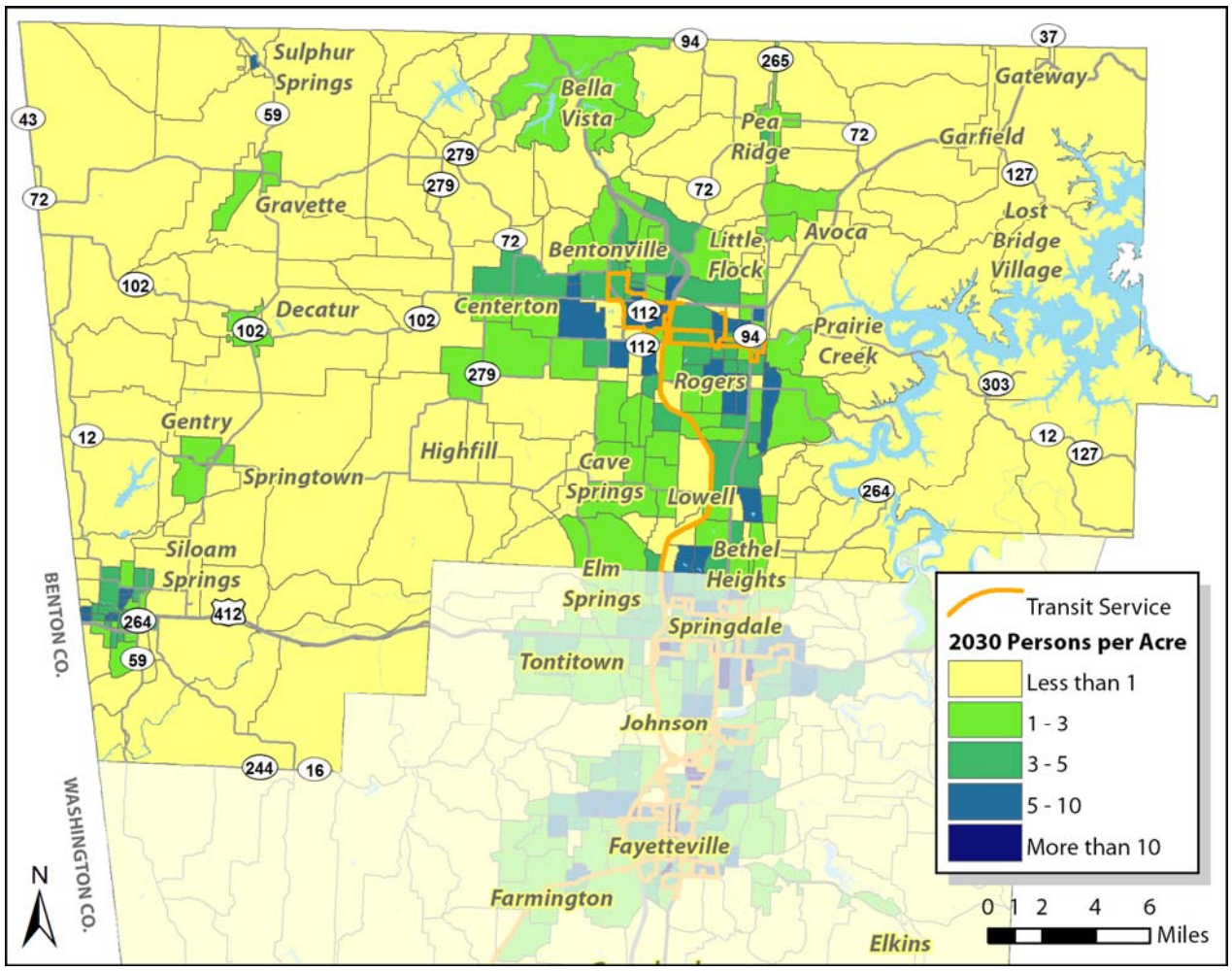


Figure 7-8 presents the projected population change for Washington County. Areas generally outside of central Fayetteville and Springdale are expected to see the highest increases. Tontitown is expected to see the highest increases of population change, with areas outside of Prairie Grove and Farmington also seeing significant growth. Springdale is anticipated to see slight population loss in its core area.

Figure 7-8
2010-2030 Population Growth in Washington County

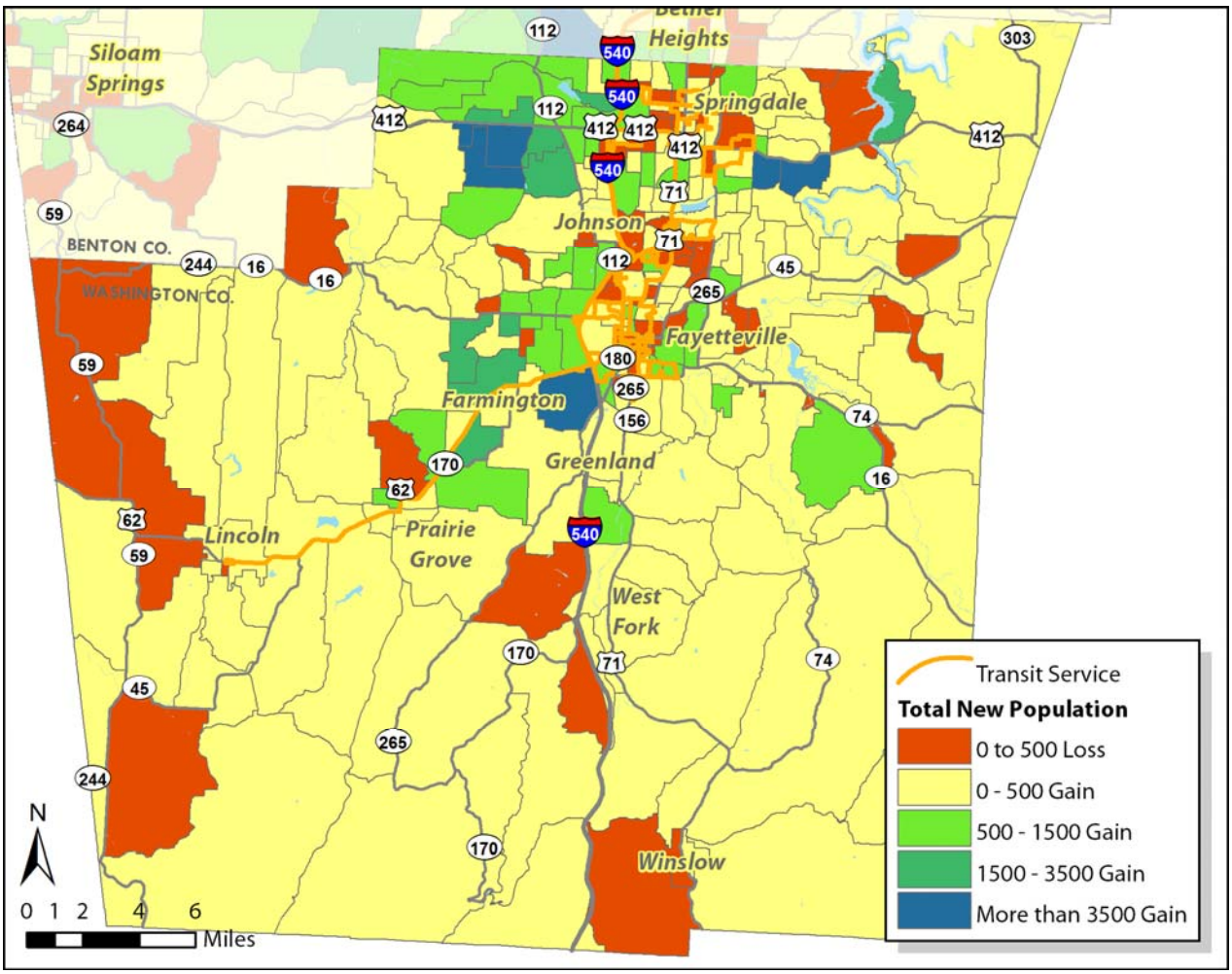
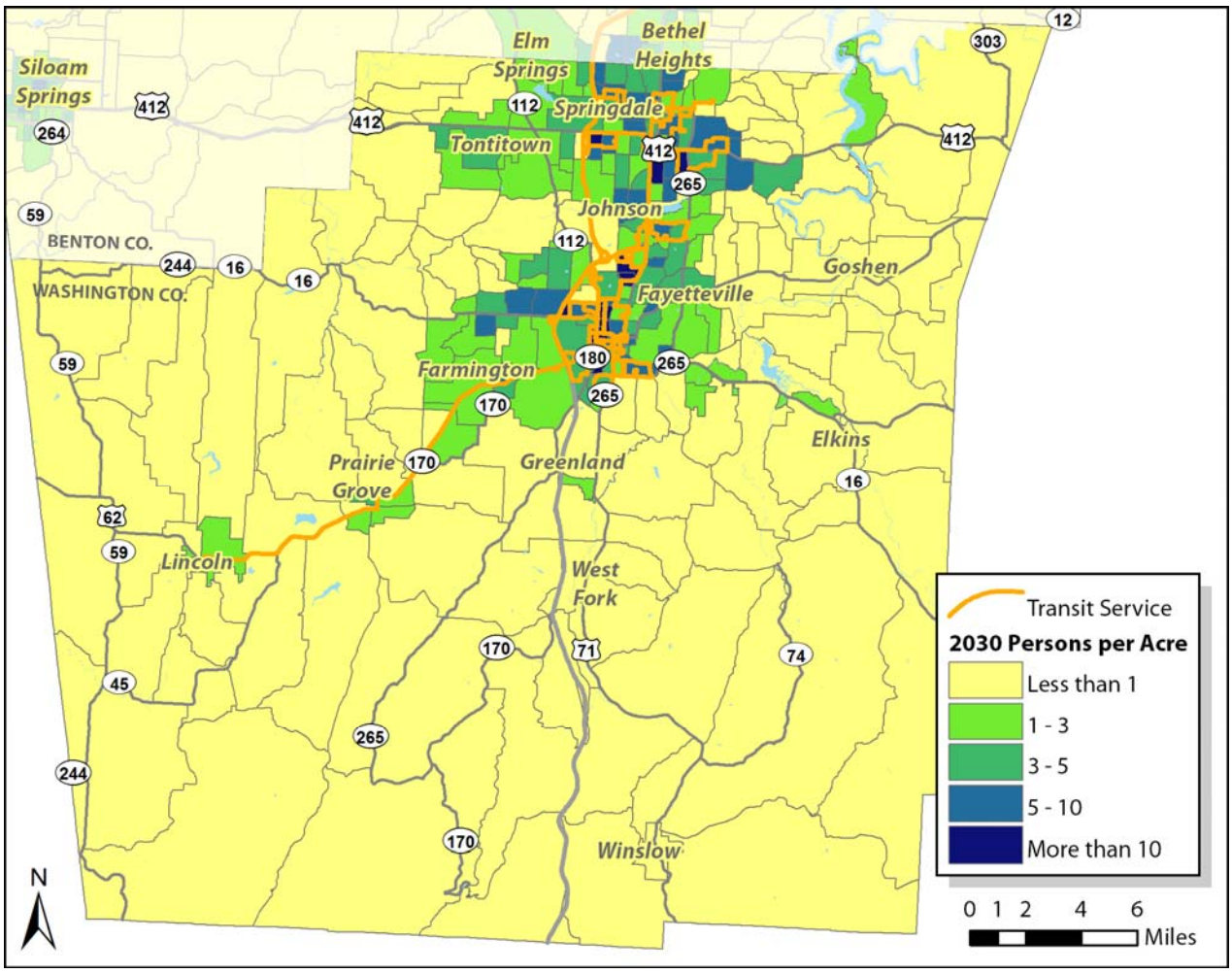


Figure 7-9 presents anticipated 2030 population densities for Washington County. The highest density continues to occur in downtown Fayetteville and Springdale with lessening densities occurring away from these core areas. Densities higher than 20 persons per acre are forecasted for areas around the University of Arkansas campus as well as downtown Springdale. Areas along US 71 are expected to intensify as well.

Figure 7-9
2030 Population Densities in Washington County



7.5 Future Employment Projections

Employment projections also come from the Traffic Analysis Zone (TAZ) files provided by the Northwest Arkansas Regional Planning Commission. Employment for the year 2030 was compared against employment for the year 2010 to yield percent change over those 20 years. Anticipated employment gains for Benton and Washington Counties are as follows:

Table 7-5
Current, Future and Percent Change in Employment for Both Counties

County	2010 Employment	2030 Employment	Change (%)
Benton County	113,023	177,651	57.2%
Washington County	117,961	176,597	49.7%
Total	**230,984**	**354,248**	**53.4%**

Figure 7-10 presents employment changes by TAZ for Benton County between 2010 and 2030. The greatest gains in employment appear to be occurring in the core of Bentonville and Rogers, primarily along the I-540 and US 71 corridor, towards the northwest area of Bentonville, and in Lowell. Density patterns (shown in Figure 7-11) are similar to existing patterns, with increased intensities.

Figure 7-10
2010-2030 Employment Growth in Benton County

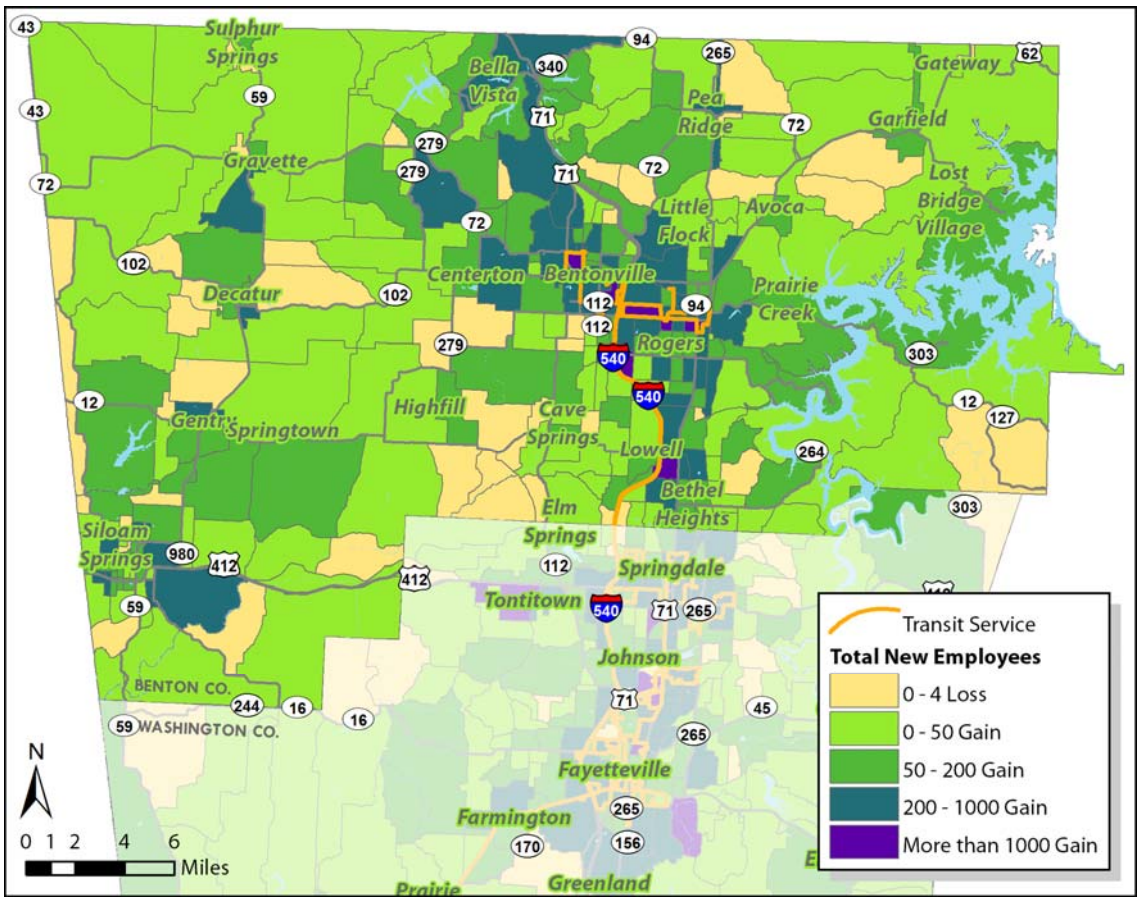


Figure 7-11
2030 Employment Densities in Benton County

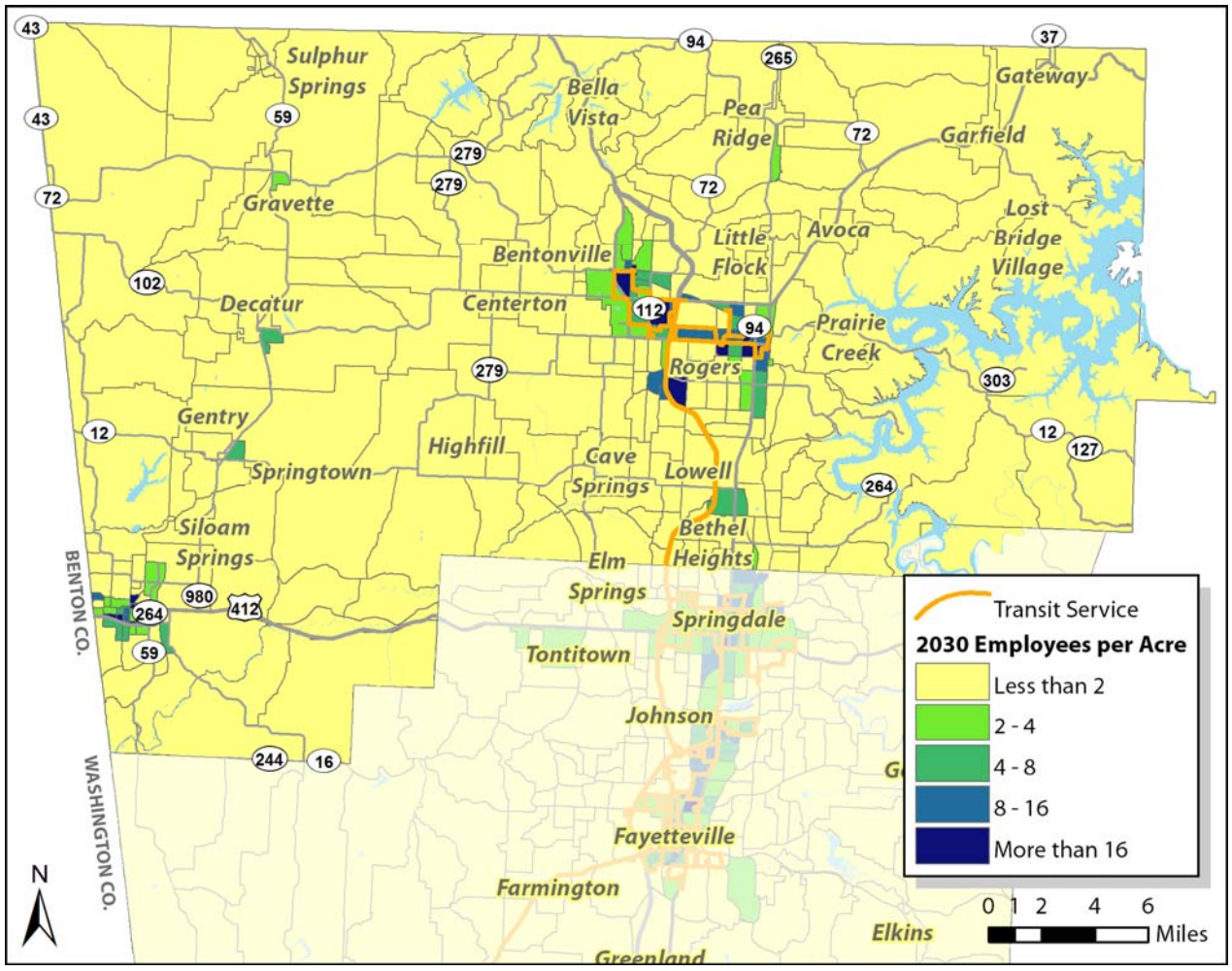


Figure 7-12 presents the projected employment change for Washington County. Areas with large gains of employment include Tontitown, the central area of Springdale (along the Sunset Avenue corridor), the Northwest Arkansas Regional Mall area, and south of Fayetteville. The greatest densities of employment are primarily along Business US 71, as shown in Figure 7-13.

Figure 7-12
2010-2030 Employment Growth in Washington County

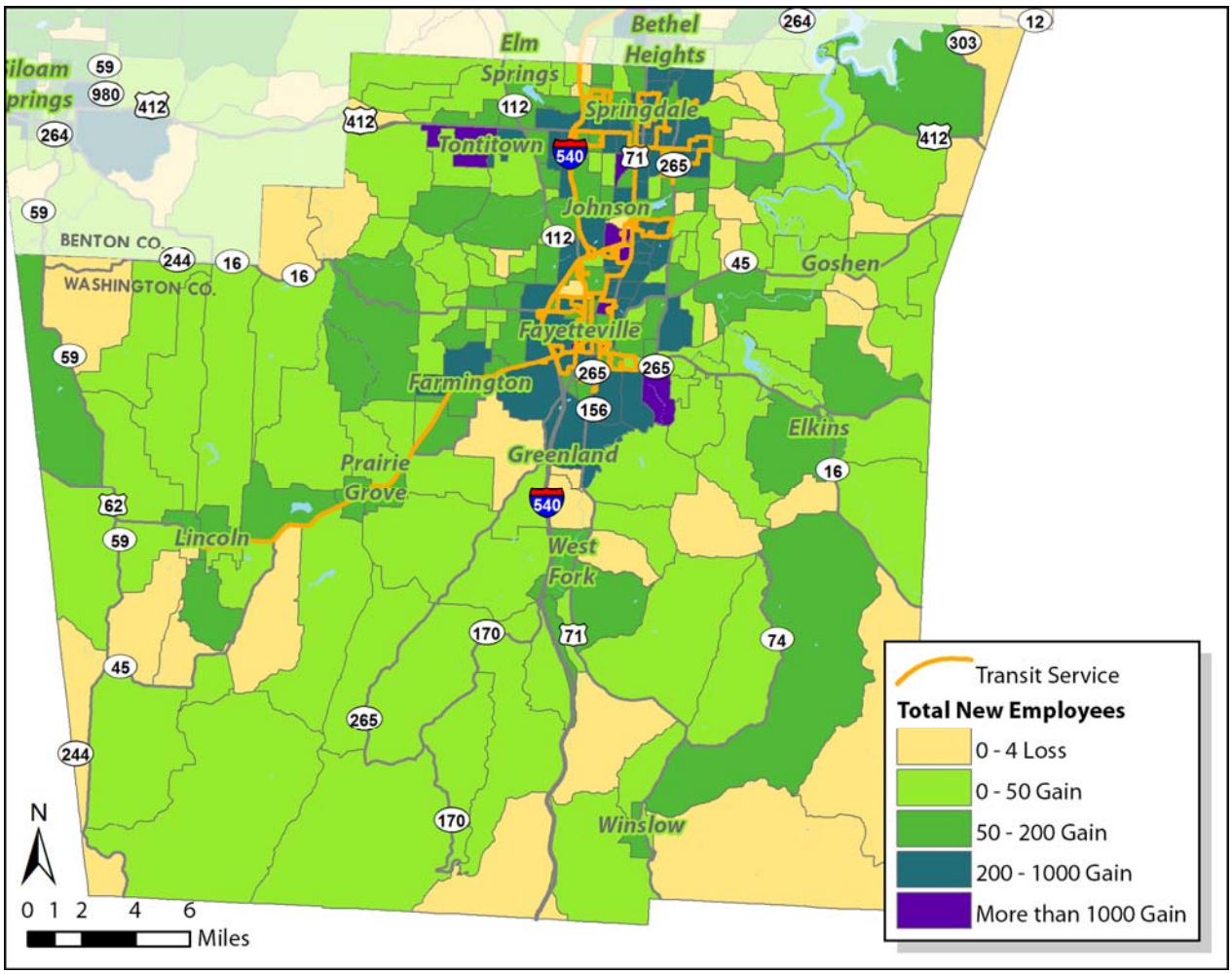
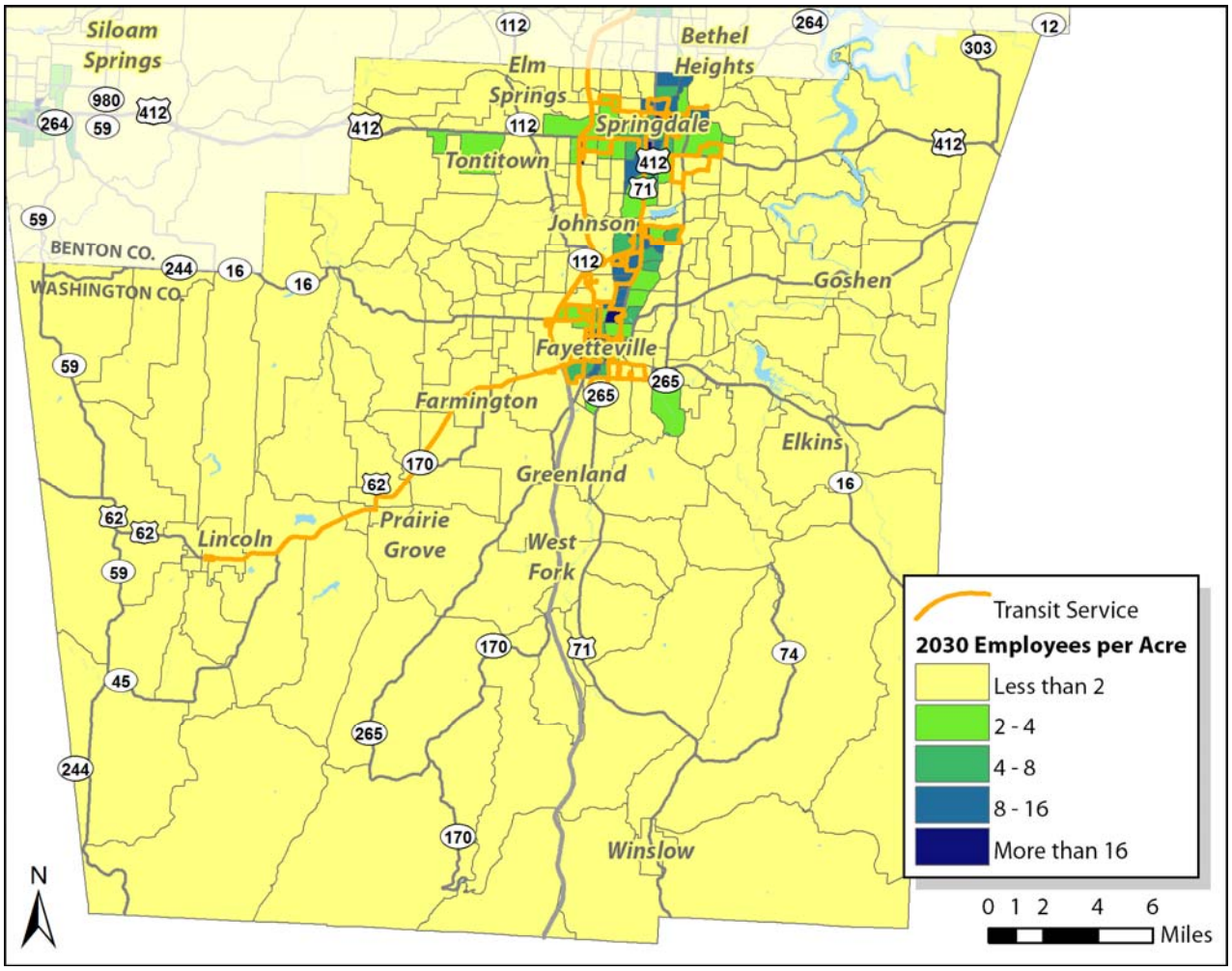


Figure 7-13
2030 Employment Densities in Washington County



7.6 Potential Transit Service Needs

The demographic data and growth elements presented in *Technical Memorandum 6 – Latent Demand Analysis* were compared to the existing transit network to determine areas where new transit services or expanded transit services may be warranted. Potential service expansion needs were identified as follows:

Benton County

- ***New Growth Areas*** – Population forecasts reflect significant growth in areas west of Bentonville and west/southwest of Rogers. New local route services may be warranted in these areas.
- ***Low Income Areas*** – The demographic analysis identified some concentrations of low income/zero auto households east of Rogers where expanded/new local transit services may be warranted.
- ***Elderly Services*** – The community of Bella Vista has a fairly high concentration of elderly citizens, along with the central area of Rogers and Siloam Springs. Services oriented towards the elderly should be considered for these areas.
- ***Siloam Springs*** – This community is located in the far west portion of Benton County. There are concentrations of population and employment in this community, but there is no existing transit service. Local route service with connections to Bentonville/Rogers should be considered.

- ***Commuter Services*** – Benton County is home to major employers, such as Wal-Mart. Analysis presented in this Technical Memorandum has identified concentrations of employees that live along the I-540 corridor. Regional commuter services to these major employment centers warrants consideration.

Washington County

- ***New Growth Areas*** – Population forecasts reflect significant growth in areas west of I-540, directly west of Springdale (Tontitown), the east side of Springdale, West Fayetteville and Farmington. New local route services may be warranted in these areas.
- ***Low Income Areas*** – The demographic analysis identified moderate concentrations of low income/zero auto households southwest of Fayetteville.
- ***University of Arkansas*** – The University of Arkansas has a student population of close to 20,000 undergraduates and graduates. Student transit service needs are presently accommodated by Razorback Transit, although there may be potential to increase usage through route alignment and service frequency modifications. Faculty and staff come from longer distances, with many coming from the Springdale area. Expanded transit service to the University of Arkansas from other areas of the region is likely warranted.
- ***Commuter Services*** – Besides the University of Arkansas, there are other major employers in Washington County including Tyson Foods in south Springdale. Washington Regional Medical Center and the Northwest Medical Center in Springdale are two major medical facilities with large employment bases. There is also a significant amount of retail employment around the Northwest Arkansas Mall area. Travel to these areas comes from all over the two-county area, and may warrant regional/commuter transit services.

There are other factors to consider besides the proximity of a transit route alignment when traveling to a particular destination. Those factors include: route alignment directness, span of service, availability of weekend service and service frequencies. For example, the central areas of Bentonville and Rogers are served by ORT routes. But, one can argue that these areas are underserved, for these routes operate in loop patterns (resulting in long transit travel times), at infrequent service levels (60-minute frequencies) and they do not operate in the evenings or on weekends. Residents that have access to an automobile are unlikely to consider using transit under these conditions. Thus, there is a market for increasing transit usage in existing service areas by addressing service deficiencies. It is, of course, important to note that these existing deficiencies exist today because of funding constraints.

The last two maps shown in Figures 7-14 and 7-15 display a comprehensive view of all demographic groups outlined in the previous chapters of this Technical Memorandum. Figure 7-14 identifies current data while Figure 7-15 shows the projected data to 2030. Color scales range from light green (low density) to dark blue (high density) but are depicted at different scales. Together, these two maps identify the areas with the strongest propensity for transit use but do not depict specific numbers here.

Figure 7-14
2010 Comprehensive Transit Propensity

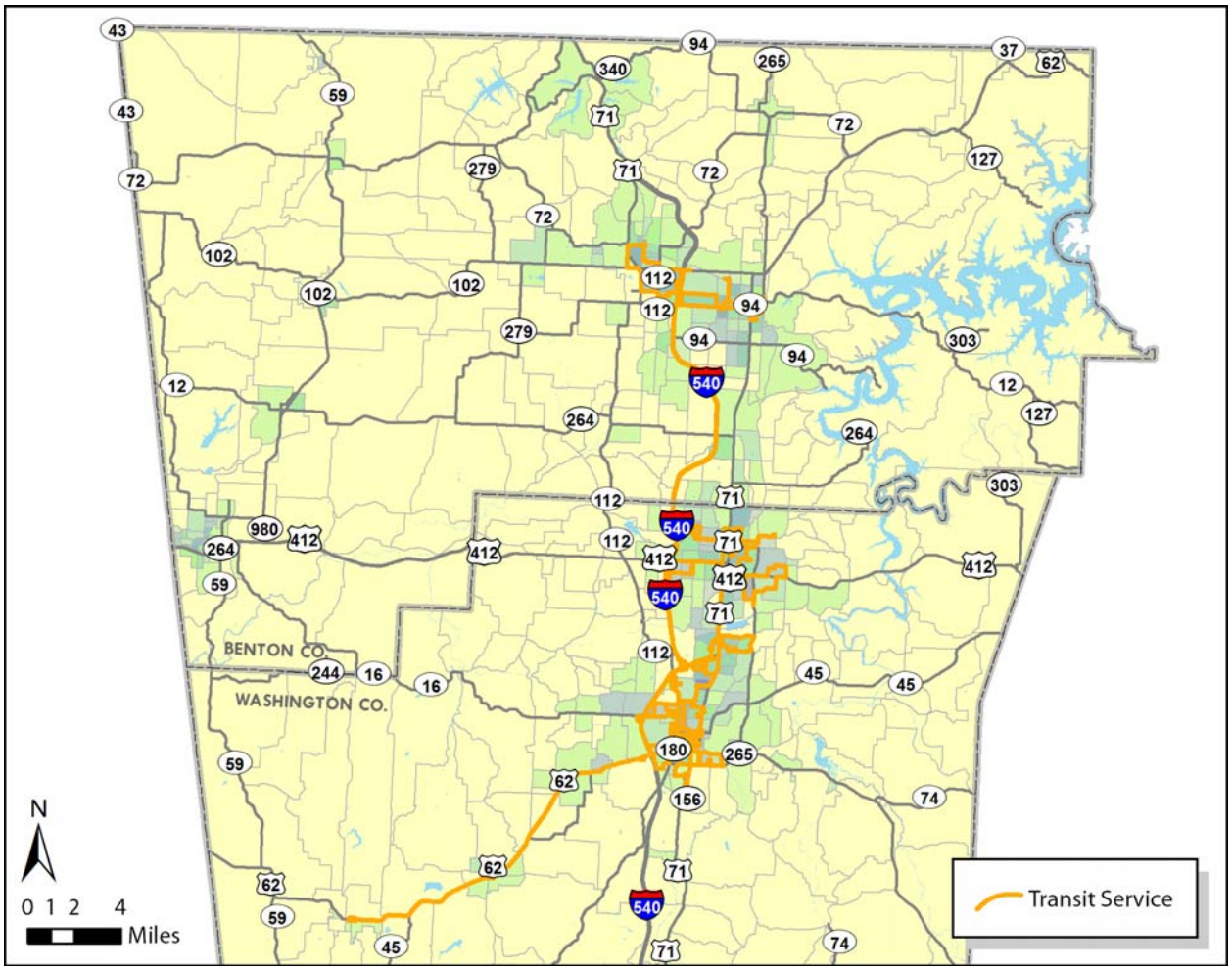
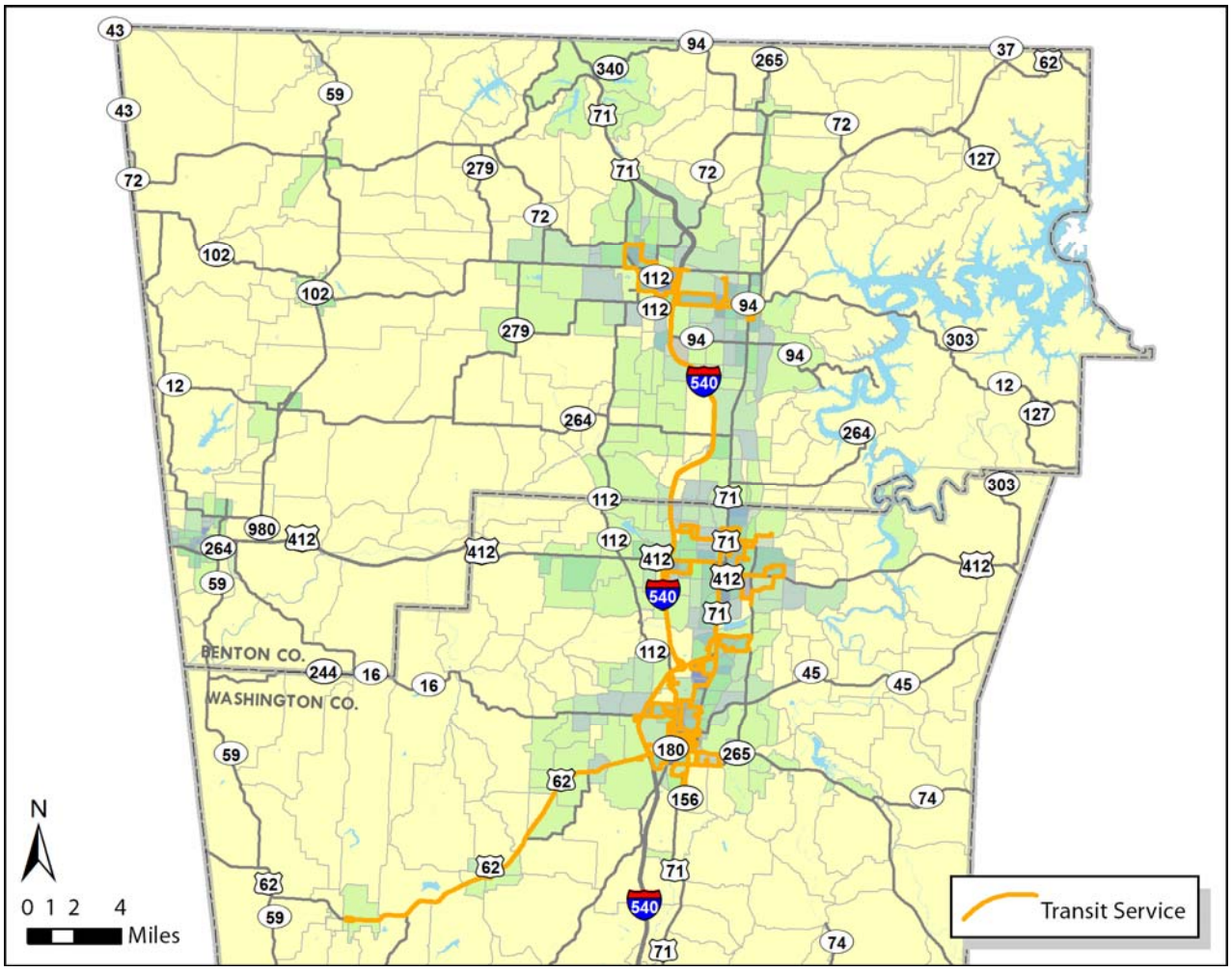


Figure 7-15
2030 Comprehensive Transit Propensity



8.0 Service Plan Recommendations

The service plan recommendations are the culmination of data collected over the past several months, measuring existing service performance, customer demand and projected growth in the region. The recommended service changes for both ORT and Razorback Transit are presented over three distinct time horizons – near-term (1-2 years), short-range (3-5 years) and long-range (6-10 years and beyond).

Ozark Regional Transit

Specifically for ORT, the near-term plan recommends immediate route changes designed to improve service efficiency and delivery, apply resources where they are most needed, and optimize the route network based upon current and projected conditions within the service area. This plan is intended to be cost-neutral with no growth in service hours. On the other hand, the short-range plan assumes significant growth with the passage of a dedicated funding source. Areas that are currently served and that have proven productive are streamlined and in many cases, provided with higher quality, bidirectional service. A limited amount of evening service as well as new service area is also introduced. The Long-Range Service Plan is even more aggressive in its expansion and assumes the addition of weekend service plus new service models that include flex-zone and rural connector routes.

The new route structure introduced in the Short-Range and Long-Range Service Plans also comes with a new nomenclature. For clarity within this TDP, short-range and long-range routes will be identified with a prefix that indicates the type and/or primary location of their service. However, as service is implemented, the prefix system can be applied or a more traditional numeric system can be adopted.

Route Prefix	Service Type/Area
R	Regional Crosstown Service
B	Benton County (Bentonville, Lowell, Rogers, etc.) Local Service
S	Springdale Local Service
F	Fayetteville Local Service
FZ	Community-Based Flex Zone Service
RC	Commuter-Based Rural Connector Service

Razorback Transit

At Razorback Transit, the near-term plan assumes a modest amount of growth to accommodate existing overloads and peak crowding conditions. Where practical, routes have been streamlined to provide more direct travel to areas where service is in highest demand. An effort to promote consistency between daytime and evening service structure has also been applied. The short-and Long-Range Service Plans for Razorback Transit are identical and assume a limited amount of growth above that which is presented in the near-term plan. This conservative approach is based on the assumption that Razorback Transit maintains its mission to focus on University of Arkansas campus circulation and student-oriented housing in the immediate vicinity of the college. As such, Ozark Regional Transit is relied upon more heavily to reach potential student housing that is located further off-campus. With this reliance also comes the recommendation and assumption that a reciprocal use agreement can be reached between the two transit providers. Such an agreement would lighten the paratransit burden that Razorback Transit assumes in areas that compete directly with Ozark Regional Transit, particularly for riders who are not associated with the university.

The following subsections will present multiple sets of service plans for each of the three planning horizons (near-term, short-range and long-range). Maps and route level-descriptions for ORT's proposed services in Benton County (Bentonville, Lowell, Rogers, etc.), Springdale and Fayetteville as well as

Razorback Transit's proposed services will be outlined within each set of service plans. In the Short-Range Service Plan, regional routes and facilities will be added. Flex zone and rural connector services will be identified in the Long-Range Service Plan.

8.1 Near-Term Service Plan

For ORT, the Near-Term Service Plan represents a cost-neutral approach in service hours. Therefore, much of the current service structure's characteristics are maintained. There are no new routes introduced. In fact, one route - Route 50 - is eliminated due to poor performance. The resources garnered from that route as well as other underutilized trips are reinvested into service with greater ridership potential. Figures 8-1, 8-2 and 8-3 present revised system maps for the ORT Near-Term Service Plan in Benton County, Springdale and Fayetteville, respectively. Table 8-1 presents operating hours and frequency, running times and route distances, and hours, miles and peak bus requirements.

For Razorback Transit, the Near-Term Service Plan represents a nearly cost-neutral approach in service hours with only 237 hours added annually. With such modest gains, much of the current service structure's characteristics are maintained. However, there are still routes with crowding conditions to be addressed. Thus, one route is eliminated due to poor performance and a new route is created. Two other routes also see improvement to morning peak frequency to address chronic crowding. Figure 8-4 presents the revised system map for the Razorback Transit Near-Term Service Plan. Table 8-2 presents operating hours and frequency, running times and route distances, and hours, miles and peak bus requirements.

Figure 8-1
Benton County Near-Term Service Plan

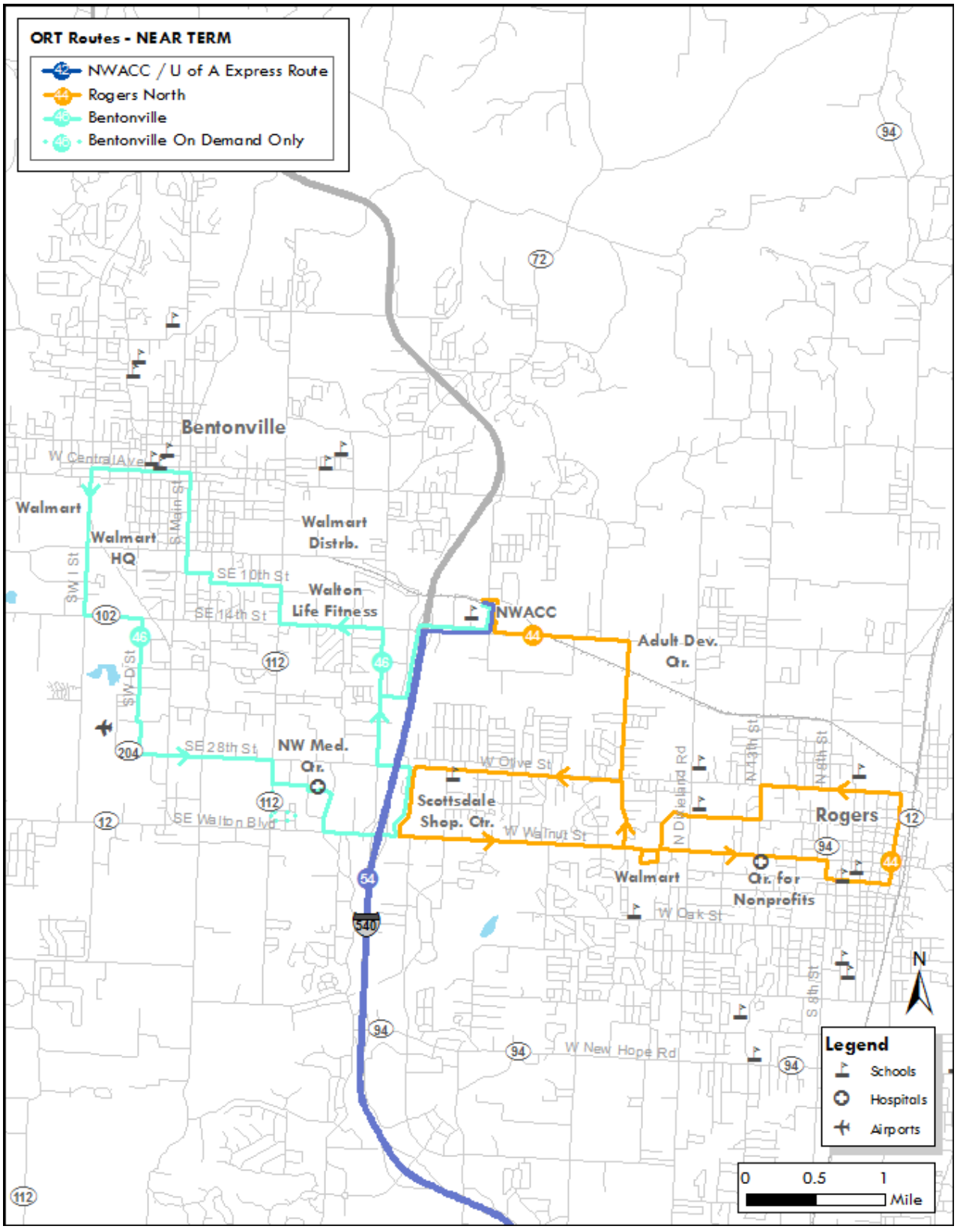


Figure 8-2
Springdale Near-Term Service Plan

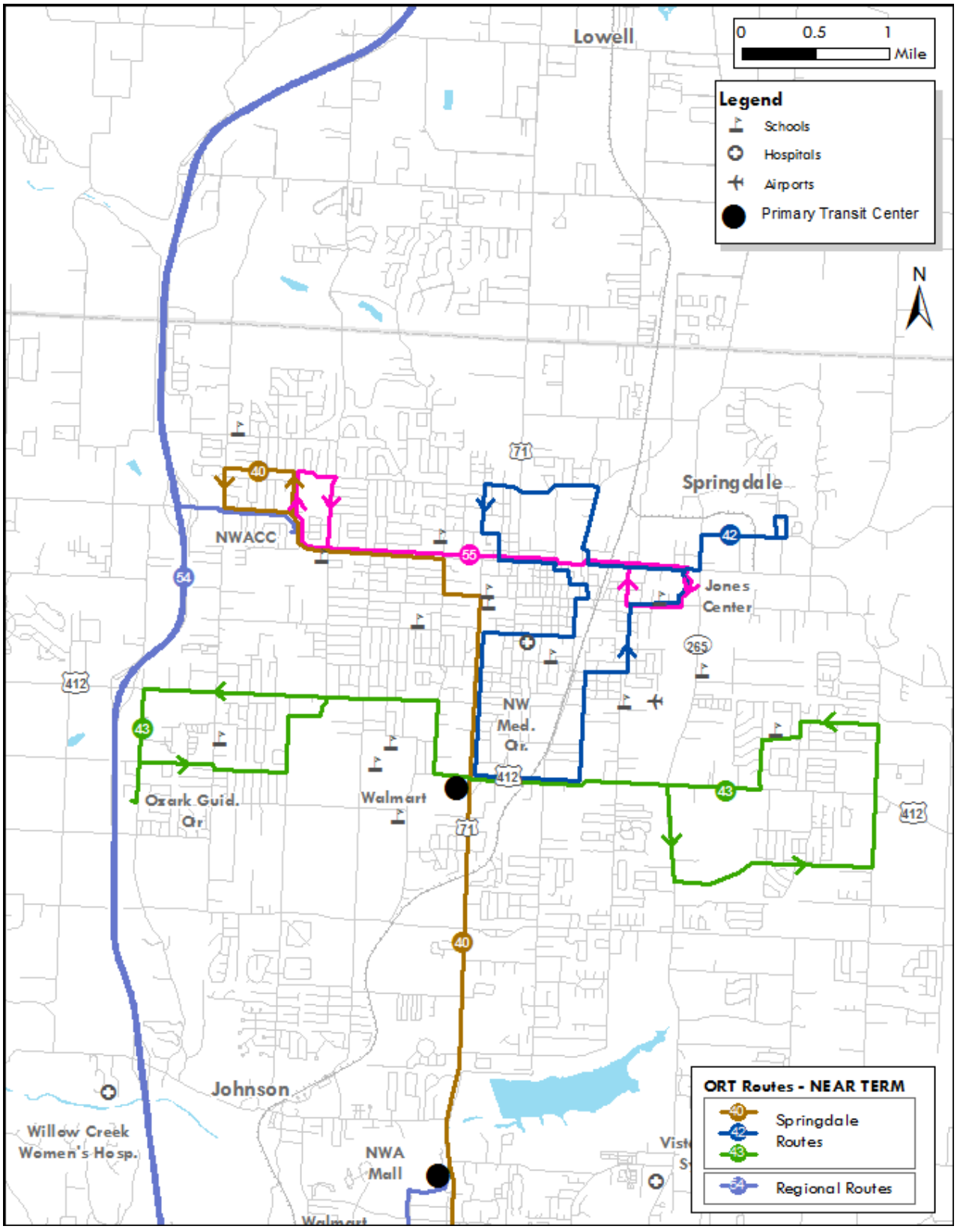


Figure 8-3
Fayetteville Near-Term Service Plan

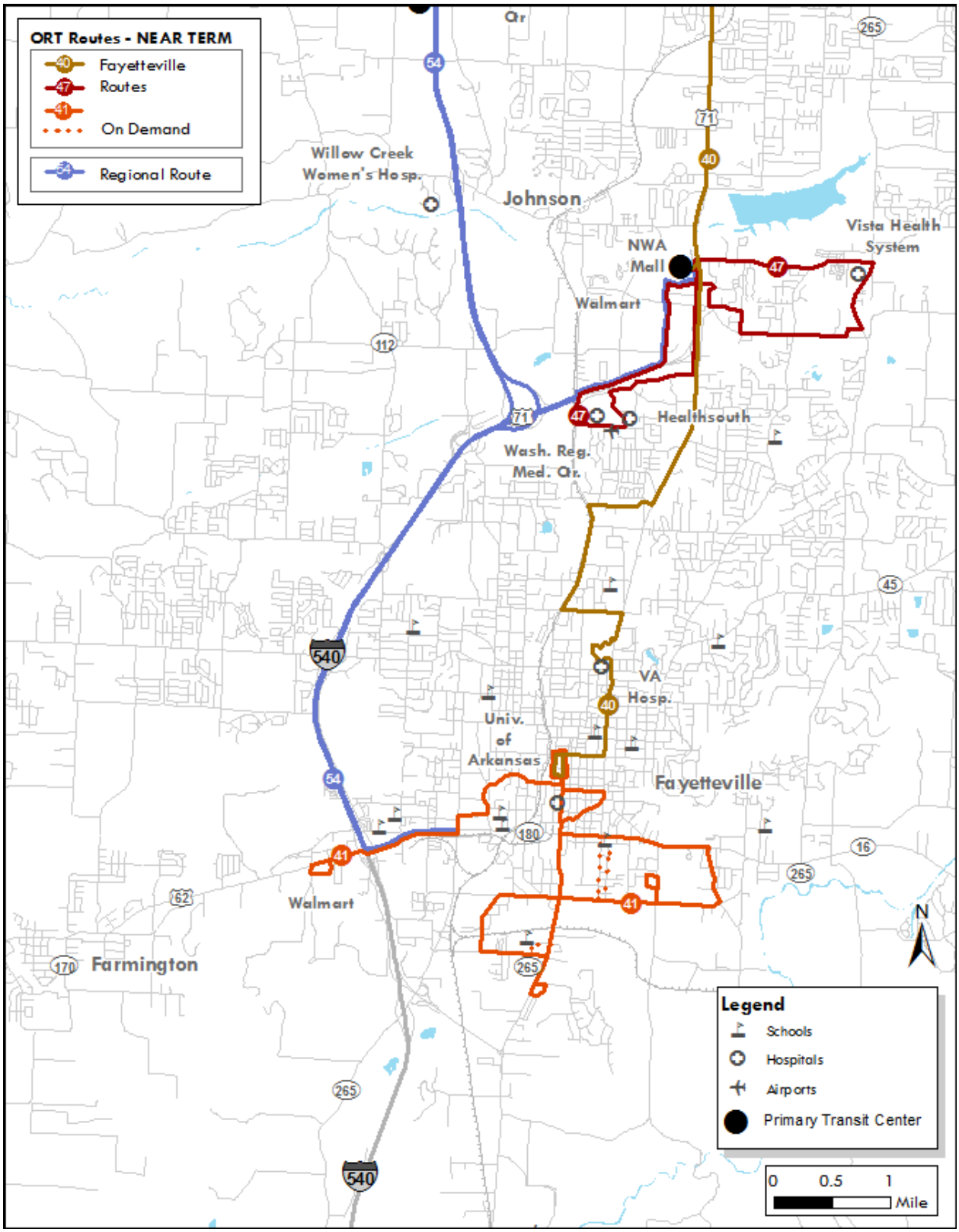


Table 8-1
Ozark Regional Transit Near-Term Service Plan Service Statistics

Full Service Weekday Schedule

Route #	Route Description	Start of First/ Last Trips	Service Frequency				Daily Trips	Midday Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
			AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
40	Fayetteville/Springdale	0630 - 1800	60	60	60	n/a	12	120	0	0%	120	29.0	24.0	24.0	348.0	2.00	2.00	2.00	0.00
41	6th Street	0700 - 1700	60	60	60	n/a	11	60	0	0%	60	14.9	11.0	11.0	163.9	1.00	1.00	1.00	0.00
42	Springdale East	0700 - 1700	60	60	60	n/a	11	60	0	0%	60	11.2	11.0	11.0	123.2	1.00	1.00	1.00	0.00
43	E Robinson Ave/W Sunset Ave	0700 - 1700	60	60	60	n/a	11	60	0	0%	60	15.0	11.0	11.0	165.0	1.00	1.00	1.00	0.00
44	Rogers North	0635 - 1635	60	60	60	n/a	11	60	0	0%	60	13.7	11.0	11.0	150.7	1.00	1.00	1.00	0.00
46	Bentonville	0645 - 1645	60	60	60	n/a	11	60	0	0%	60	12.6	11.0	11.0	138.6	1.00	1.00	1.00	0.00
47	Zion/Joyce	0900 - 1600	n/a	60	60	n/a	8	30	0	0%	30	5.3	4.0	4.0	42.4	0.00	0.50	0.50	0.00
	North Hills Medical	0930 - 1630	n/a	60	60	n/a	8	30	0	0%	30	6.0	4.0	4.0	48.0	0.00	0.50	0.50	0.00
54	NWACC/University of Arkansas Exp	0640 - 1615	60	60	60	n/a	20	60	0	0%	120	34.2	20.0	20.0	684.0	2.00	2.00	2.00	0.00
55	Springdale Crosstown	0700 - 1600	30	30	30	n/a	19	30	0	0%	30	7.8	9.5	9.5	148.2	1.00	1.00	1.00	0.00
TOTALS							**122**						**117**	**117**	**2,012**	**10.0**	**11.0**	**11.0**	**0.0**

Reduced Service Weekday Schedule (NWACC Out of Session)

Route #	Route Description	Start of First/ Last Trips	Service Frequency				Daily Trips	Midday Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
			AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
40	Fayetteville/Springdale	0630 - 1800	60	60	60	n/a	12	120	0	0%	120	29.0	24.0	24.0	348.0	2.00	2.00	2.00	0.00
41	6th Street	0700 - 1700	60	60	60	n/a	11	60	0	0%	60	14.9	11.0	11.0	163.9	1.00	1.00	1.00	0.00
42	Springdale East	0700 - 1700	60	60	60	n/a	11	60	0	0%	60	11.2	11.0	11.0	123.2	1.00	1.00	1.00	0.00
43	E Robinson Ave/W Sunset Ave	0700 - 1700	60	60	60	n/a	11	60	0	0%	60	15.0	11.0	11.0	165.0	1.00	1.00	1.00	0.00
44	Rogers North	0635 - 1635	60	60	60	n/a	11	60	0	0%	60	13.7	11.0	11.0	150.7	1.00	1.00	1.00	0.00
46	Bentonville	0645 - 1645	60	60	60	n/a	11	60	0	0%	60	12.6	11.0	11.0	138.6	1.00	1.00	1.00	0.00
47	Zion/Joyce	0900 - 1600	n/a	60	60	n/a	8	30	0	0%	30	5.3	4.0	4.0	42.4	0.00	0.50	0.50	0.00
	North Hills Medical	0930 - 1630	n/a	60	60	n/a	8	30	0	0%	30	6.0	4.0	4.0	48.0	0.00	0.50	0.50	0.00
54	NWACC/University of Arkansas Exp	0640 - 1615	125	155	125	n/a	10	78	0	0%	155	34.2	11.7	11.7	342.0	1.00	1.00	1.00	0.00
55	Springdale Crosstown	0700 - 1600	30	30	30	n/a	19	30	0	0%	30	7.8	9.5	9.5	148.2	1.00	1.00	1.00	0.00
TOTALS							**112**						**108**	**108**	**1,670**	**9.0**	**10.0**	**10.0**	**0.0**

AM = Before 9:00 am
Midday = 9:00 am to 3:00 pm
PM =3:00 pm to 6:30 pm
Eve. = After 6:30 p.m.

Figure 8-4
University of Arkansas – Razorback Transit Near-Term Service Plan

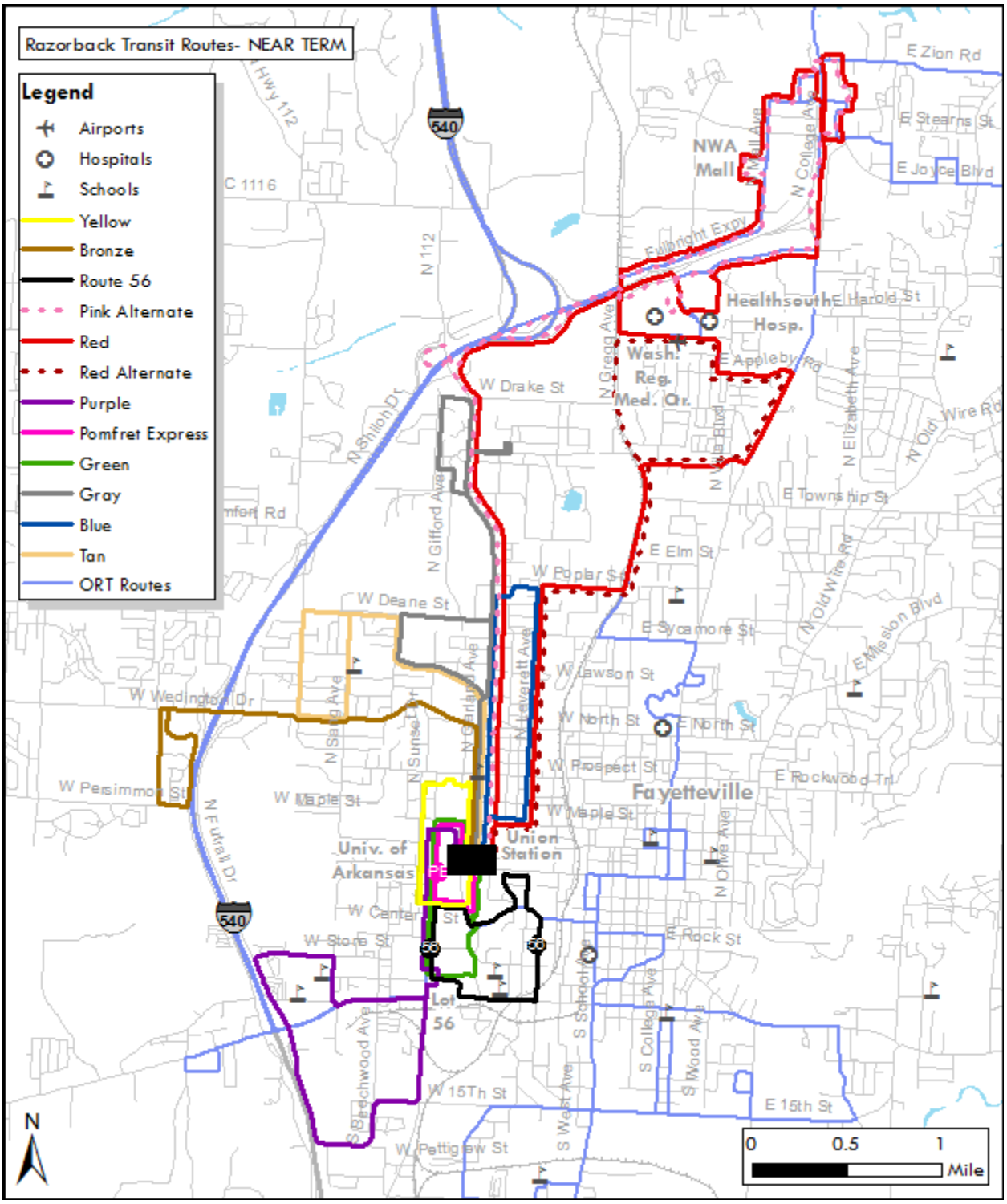


Table 8-2

Razorback Transit Near-Term Service Plan Service Statistics

Full Service Weekday and Weekday Evening Schedule (Fall/Spring Semesters)

Route #	Start of First/ Last Trips	Service Frequency					Midday/PM Period Cycle Time				One-Way	Average Weekday			Bus Requirements			
		Early	AM	Mid/PM	Eve.	Daily Trips	Time (Min.)	Layover Time	% Layover	Cycle Time	Distance (Miles)	In-Serv. Hours	Rev. Hrs.	Rev. Miles	Early	AM	Mid/PM	Evening
Blue	7:03 am-10:00 pm	5	5	10	20	91	15.0	5	25%	20	3.3	23.3	31.0	300.3	4.00	4.00	2.00	1.00
Gray	7:00 am-5:45 pm	30	30	30	n/a	21	25.0	5	17%	30	6.6	9.2	11.0	138.6	1.00	1.00	1.00	0.00
Brown	7:03 am-5:33 pm	20	20	20	n/a	31	15.0	5	25%	20	2.9	8.0	10.7	89.9	1.00	1.00	1.00	0.00
Green	7:00 am-5:50 pm	5	5	10	n/a	79	15.0	5	25%	20	2.3	20.3	27.0	181.7	4.00	4.00	2.00	0.00
Green/Brown	6:00-10:10 pm	n/a	n/a	n/a	30	8	n/a	n/a	n/a	n/a	5.4	3.5	4.0	43.2	0.00	0.00	0.00	1.00
Purple	6:55 am-6:00 pm	30	30	30	n/a	22	24.0	6	20%	30	6.4	8.8	11.0	140.8	1.00	1.00	1.00	0.00
Red	7:00 am-9:10 pm	60	60	60	60	15	50.0	10	17%	60	14.2	12.5	15.0	213.0	1.00	1.00	1.00	1.00
Tan 1	7:00 am-6:00 pm	30	30	30	40	22	22.0	8	27%	30	5.3	8.1	11.0	116.6	1.00	1.00	1.00	0.00
Tan 2	7:00 am-6:00 pm	30	30	30	n/a	21	25.0	5	17%	30	6.2	9.2	11.0	130.2	1.00	1.00	1.00	0.00
Tan 1//2 Com'd.	6:00 to 10:00 pm	n/a	n/a	n/a	40	6	n/a	n/a	n/a	n/a	8.0	3.2	4.0	48.0	0.00	0.00	0.00	1.00
Rte 56	7:00 am-5:40 pm	20	20	20	n/a	32	13.0	7	35%	20	2.7	6.9	10.7	86.4	1.00	1.00	1.00	0.00
Yellow	6:56 am-5:46 pm	16	16	16	n/a	41	14.0	2	13%	16	2.1	9.8	11.2	86.1	1.00	1.00	1.00	0.00
Pomfret	7:06 am-6:01 pm	12	12	12	n/a	55	10.0	2	17%	12	6.0	9.3	11.2	330.0	1.00	1.00	1.00	0.00
TOTALS						**444**						**132**	**169**	**1,905**	**17.0**	**17.0**	**13.0**	**4.0**

One Bus per Route Schedule (Weekdays and Select Saturdays)

Route #	Start of First/ Last Trips	Service Frequency					Midday/PM Period Cycle Time				One-Way	Average Weekday			Bus Requirements			
		Early	AM	Mid/PM	Eve.	Daily Trips	Time (Min.)	Layover Time	% Layover	Cycle Time	Distance (Miles)	In-Serv. Hours	Rev. Hrs.	Rev. Miles	Early	AM	Mid/PM	Evening
Blue	7:03 am-5:50 pm	20	20	20	n/a	33	15.0	5	25%	20	3.3	8.5	11.3	108.9	1.00	1.00	1.00	0.00
Gray	7:00 am-5:45 pm	30	30	30	n/a	21	25.0	5	17%	30	6.6	9.2	11.0	138.6	1.00	1.00	1.00	0.00
Brown	7:03 am-5:33 pm	20	20	20	n/a	31	15.0	5	25%	20	2.9	8.0	10.7	89.9	1.00	1.00	1.00	0.00
Green	7:00 am-5:50 pm	20	20	20	n/a	33	15.0	5	25%	20	2.3	8.5	11.3	75.9	1.00	1.00	1.00	0.00
Purple	6:55 am-6:00 pm	30	30	30	n/a	22	24.0	6	20%	30	6.4	8.8	11.0	140.8	1.00	1.00	1.00	0.00
Red	7:00 am-5:00 pm	60	60	60	n/a	11	50.0	10	17%	60	14.2	9.2	11.0	156.2	1.00	1.00	1.00	0.00
Tan 1	7:10 am-5:30 pm	30	30	30	n/a	21	22.0	8	27%	30	5.3	7.7	10.5	111.3	1.00	1.00	1.00	0.00
Tan 2	7:00 am-6:00 pm	30	30	30	n/a	21	25.0	5	17%	30	6.2	9.2	11.0	130.2	1.00	1.00	1.00	0.00
Rte 56	7:00 am-5:40 pm	20	20	20	n/a	32	13.0	7	35%	20	2.7	6.9	10.7	86.4	1.00	1.00	1.00	0.00
Yellow	6:56 am-5:46 pm	16	16	16	n/a	41	14.0	2	13%	16	2.1	9.8	11.2	86.1	1.00	1.00	1.00	0.00
Pomfret	7:06 am-6:01 pm	12	12	12	n/a	55	10.0	2	17%	12	6.0	9.3	11.2	330.0	1.00	1.00	1.00	0.00
TOTALS						**321**						**95**	**121**	**1,454**	**11.0**	**11.0**	**11.0**	**0.0**

Table 8-2 (continued)
Razorback Transit Near-Term Service Plan Service Statistics

Reduced Weekday Schedule (Summer)

Route #	Start of First/ Last Trips	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
		Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM Pk	Midday	PM Pk	Evening
Blue	7:03 am-5:30 pm	20	20	20	n/a	34	15.0	5	25%	20	3.3	8.5	11.3	112.2	1.00	1.00	1.00	0.00
Tan 1/2 Com'd.	7:10 am-5:30 pm	40	40	40	n/a	17	32.0	8	20%	40	8.0	9.1	11.3	136.0	1.00	1.00	1.00	0.00
Green/Brown	7:00 am-5:30 pm	30	30	30	n/a	22	24.0	6	20%	30	5.4	8.8	11.0	118.8	1.00	1.00	1.00	0.00
Red	7:00 am-5:00 pm	60	60	60	n/a	11	50.0	10	17%	60	14.2	9.2	11.0	156.2	1.00	1.00	1.00	0.00
TOTALS						**84**						**36**	**45**	**523**	**4.0**	**4.0**	**4.0**	**0.0**

Full Service Saturday Schedule (Fall/Spring Semesters)

Route #	Start of First/ Last Trips	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Saturday			Bus Requirements			
		Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM Pk	Midday	PM Pk	Evening
Blue	7:03 am-10:00 pm	20	20	20	20	48	15.0	5	25%	20	3.3	12.0	16.0	158.4	1.00	1.00	1.00	1.00
Tan 1/2 Com'd.	7:10 am-10:00 pm	40	40	40	40	24	32.0	8	20%	40	8.0	12.8	16.0	192.0	1.00	1.00	1.00	1.00
Green/Brown	7:00 am-10:00 pm	30	30	30	30	31	24.0	6	20%	30	5.4	12.4	15.5	167.4	1.00	1.00	1.00	1.00
Red	7:00 am-9:00 pm	60	60	60	60	15	50.0	10	17%	60	14.2	12.5	15.0	213.0	1.00	1.00	1.00	1.00
TOTALS						**118**						**50**	**63**	**731**	**4.0**	**4.0**	**4.0**	**4.0**

Early = Before 7:30 a.m.
AM = 7:30-9:00 a.m.
Mid/PM = 9:00 a.m. to 6:00 p.m.
Eve. = After 6:00 p.m.

8.2 Short-Range Service Plan

For ORT, the Short-Range Service Plan represents an aggressive expansion in service hours based on the anticipated passage of a dedicated revenue stream for operations and capital. As such, the system undergoes a significant redesign. Regional routes that connect transfer points in Bentonville, Rogers, Springdale and Fayetteville are established. Local routes become far less circuitous, deferring to more direct corridor-oriented service. A modest number of new service areas are also established. With this expansion in routes and services, also comes the establishment of transfer facilities, some of which will be expanded into Park & Rides in the Long-Range Plan. These facilities are outlined in the following maps along with the newly designed route alignments (see Figures 8-5 through 8-8). Table 8-3 presents operating hours and frequency, running times and route distances, and hours, miles and peak bus requirements for the ORT Short-Range Service Plan.

With the major restructuring of ORT service implemented in the short-range plan, more significant modifications are recommended for Razorback Transit as well. Razorback Transit routes that have historically carried a higher percentage of general public riders than students are yielded to ORT. Additional streamlining that improves student housing access is also implemented. Figure 8-9 depicts the recommended short-range service modifications for Razorback Transit. Table 8-4 presents operating hours and frequency, running times and route distances, and hours, miles and peak bus requirements.

In the near-term plan, existing and new sites have been identified for transfer facilities. These locations serve as regional hubs for local services to connect, often meeting with longer regional routes. There are two levels of facilities outlined within this service plan. Primary Transit Centers are typically larger and serve a more regional need. Their size range from eight to ten bays, depending on the anticipated number of routes served and vehicle arrivals and departures each hour. Primary Transit Centers are usually located at or near a regional destination for shopping or employment such as a college or shopping mall. Secondary Transit Centers (also referred to as Neighborhood Transfer Centers) are smaller in scale with three to six bays. They may often be co-located with local shopping, medical or some other popular destination whose draw isn't as distant. Either size transit center can be designed in a linear or loop configuration, depending on property availability. Park & Ride facilities may also be co-located with either size facility.

In the short-range plan, the following transit centers are proposed:

Location	Primary/ Secondary	Buses per Peak Hour*
Bentonville Walmart	Secondary	7
NWACC Main Campus	Primary	10
Rogers Walmart	Secondary	8
Springdale Walmart	Primary	8
East Springdale	Secondary	6
Downtown Fayetteville	Primary	20

** Peak Hour Buses based on complete implementation of Long-Range Plan*

Figure 8-5
Regional Routes and Transit Centers – Short-Range Service Plan

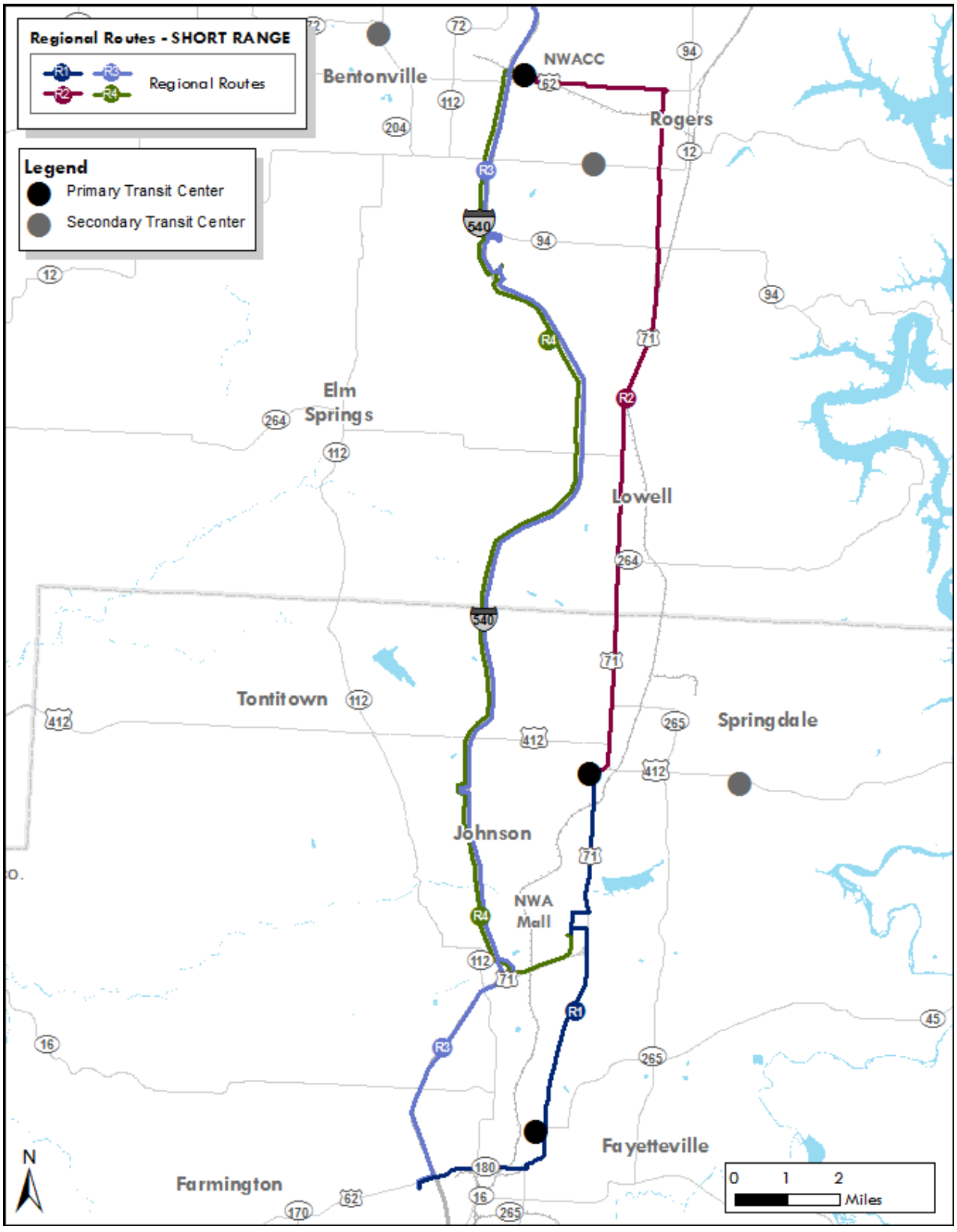


Figure 8-6
Benton County Short-Range Service Plan

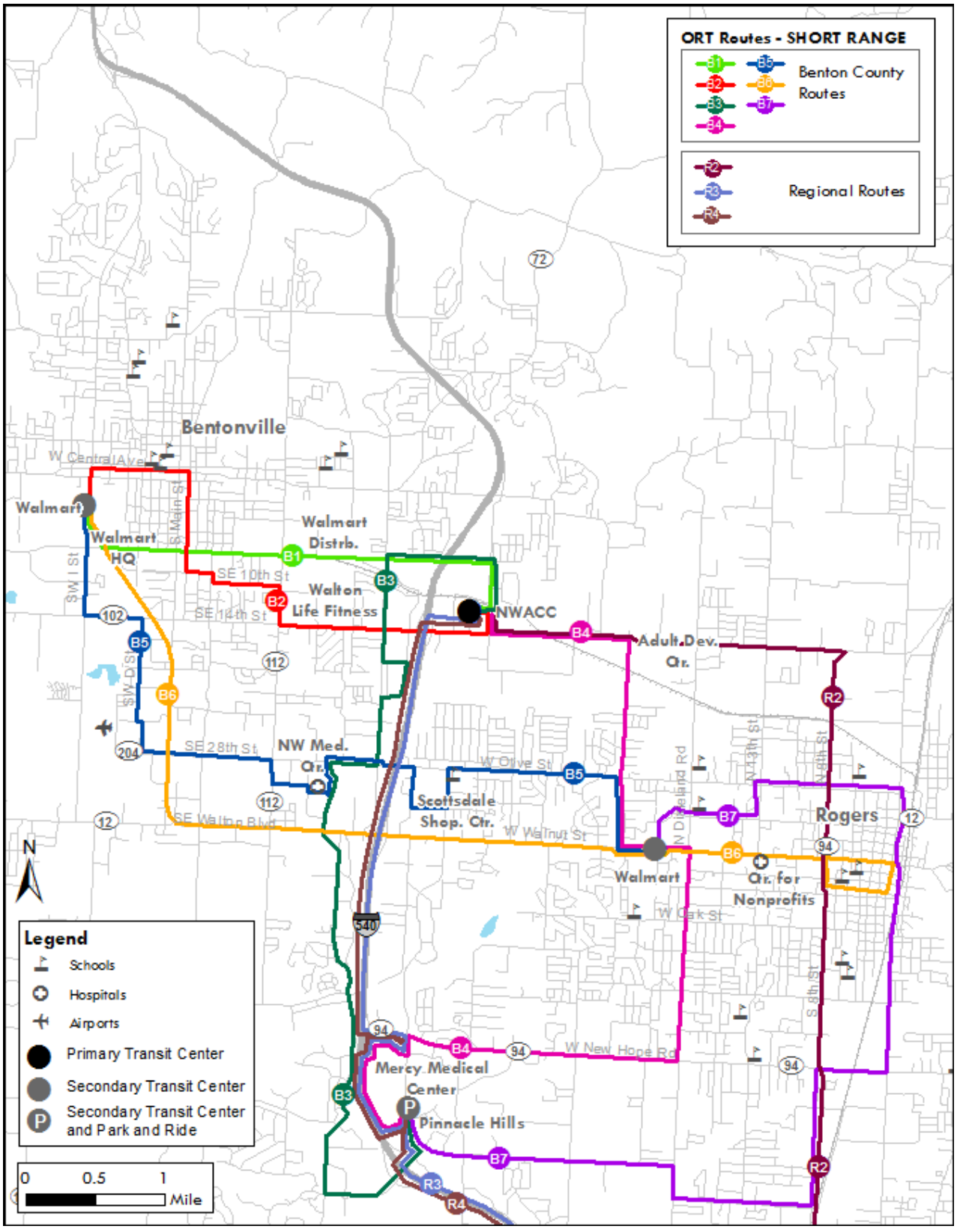


Figure 8-7
Springdale Short-Range Service Plan

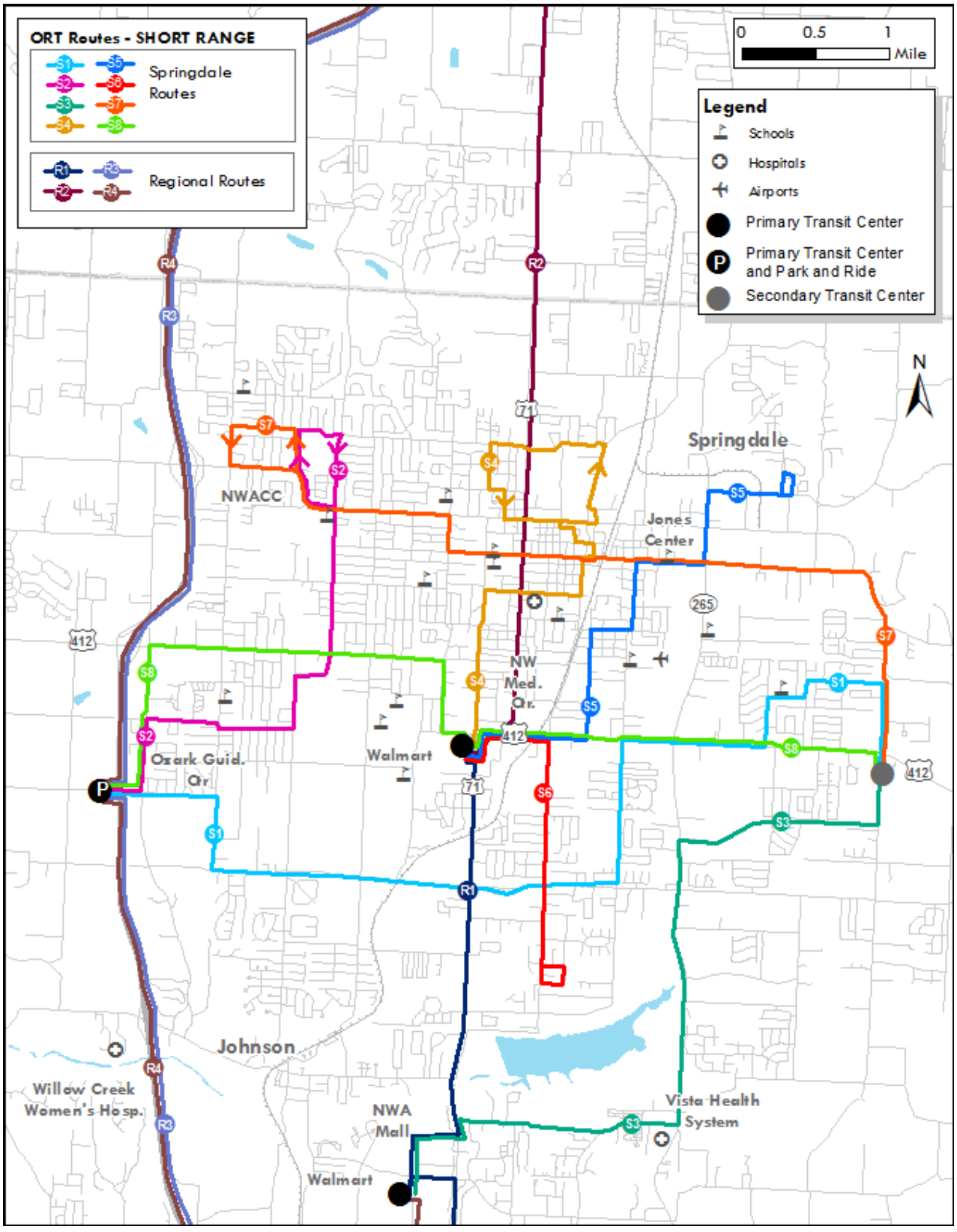


Figure 8-8
Fayetteville Short-Range Service Plan

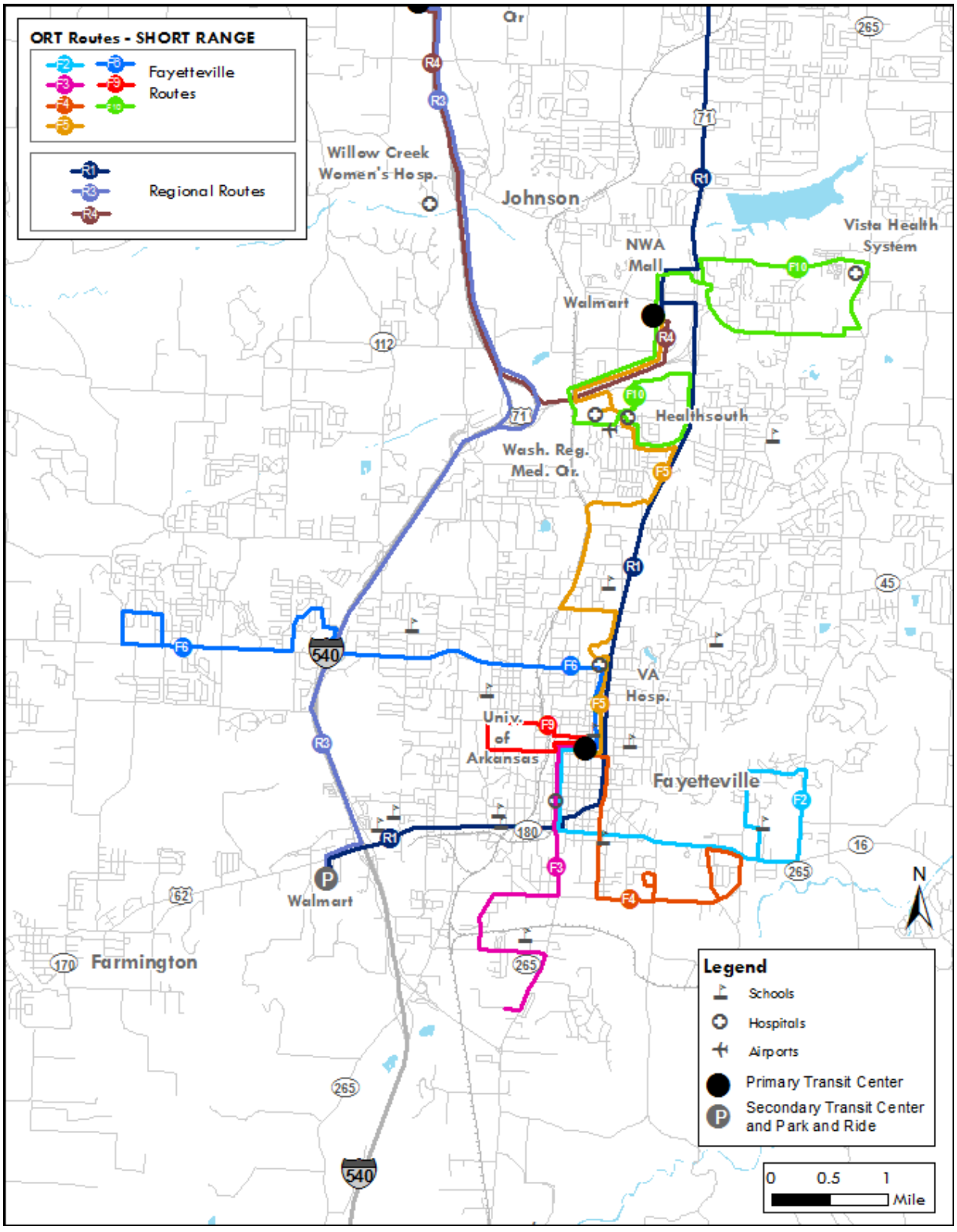


Table 8-3
Ozark Regional Transit Short-Range Service Plan Service Statistics

Weekday Schedule

Route #	Route #	Route Description	Start of First/ Last Trips	Bus Type	Service Frequency				Daily Trips	Midday Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
					AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
Fayetteville	F-2	Cliffs-Central Fayetteville	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	3.8	8.7	9.8	98.8	0.75	0.75	0.75	0.00
Routes	F-3	South Fayetteville - Bus 71	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.0	8.7	9.8	104.0	0.75	0.75	0.75	0.00
	F-4	South Fayetteville - East 15th	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.3	8.7	9.8	111.8	0.75	0.75	0.75	0.00
	F-5	North Fayetteville - Wash. Med. Ctr.	0600 - 1900	Standard	60	60	60	n/a	26	40	10	11%	90	8.0	17.3	19.5	208.0	1.50	1.50	1.50	0.00
	F-6	Wedington-Central Fayetteville	0600 - 2200	Standard	60	60	60	60	32	30	15	20%	75	6.7	16.0	19.3	214.4	1.25	1.25	1.25	1.00
	F-9	U of A/Central Fayett. Circ.	0600 - 2200	Standard	10	10	10	15	90	15	5	25%	20	2.5	22.5	29.0	225.0	2.00	2.00	2.00	1.00
	F-10	NWA Mall Area Circ.	0600 - 2200	Standard	60	60	60	60	16	45	15	25%	60	9.1	12.0	16.0	145.6	1.00	1.00	1.00	1.00
Fayetteville Route Totals															**93.8**	**113.0**	**1107.6**	**8.00**	**8.00**	**8.00**	**3.00**
Springdale	S-1	S. Springdale-Don Tysons Pkwy	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.6	11.7	13.0	171.6	1.00	1.00	1.00	0.00
Routes	S-2	Garrison-NWAC Springdale	0600 - 2200	Standard	60	60	60	60	32	23	14	23%	60	4.4	12.3	16.0	140.8	1.00	1.00	1.00	1.00
	S-3	N. Fayetteville-E. Springdale	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.9	11.7	13.0	179.4	1.00	1.00	1.00	0.00
	S-4	North Springdale to Backus	0600 - 1900	Cutaway	60	60	60	n/a	26	20	5	11%	45	3.8	8.7	9.8	98.8	0.75	0.75	0.75	0.00
	S-5	NE Springdale to Mountain	0600 - 1900	Cutaway	60	60	60	n/a	26	20	5	11%	45	4.2	8.7	9.8	109.2	0.75	0.75	0.75	0.00
	S-6	Turner St.	0600 - 1900	Cutaway	60	60	60	n/a	26	11	8	27%	30	2.7	4.8	6.5	70.2	0.50	0.50	0.50	0.00
	S-7	Huntsville-Emma	0600 - 2200	Standard	30	30	30	60	58	26	8	13%	60	6.5	25.0	28.5	377.0	2.00	2.00	2.00	0.83
	S-8	Sunset-Robinson	0600 - 2200	Standard	30	30	30	60	58	37	16	18%	90	8.0	35.6	42.5	464.0	3.00	3.00	3.00	1.17
Springdale Route Totals															**118.4**	**139.0**	**1611.0**	**10.00**	**10.00**	**10.00**	**3.00**
Benton Co.	B-1	NWACC to Bentonville Wal-Mart via 8th St.	0600 - 2200	Standard	60	60	60	60	32	15	5	14%	35	3.3	8.0	9.3	105.6	0.58	0.58	0.58	0.58
Routes	B-2	NWACC to Bentonville Wal-Mart via 14th St.	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.6	8.7	9.8	119.6	0.75	0.75	0.75	0.00
	B-3	NWACC to Pinnacle Hills via NW Medical	0600 - 2200	Standard	60	60	60	60	32	25	10	17%	60	6.5	13.3	16.0	208.0	1.00	1.00	1.00	1.00
	B-4	NWACC to Pinnacle Hills via Dixieland	0600 - 1900	Standard	60	60	60	n/a	26	33	10	13%	75	8.2	14.1	16.3	213.2	1.25	1.25	1.25	0.00
	B-5	Bentonville Wal-Mart to Rogers Wal-Mart via 28th/Olive	0600 - 1900	Standard	60	60	60	n/a	26	30	10	14%	70	6.7	13.0	15.2	174.2	1.17	1.17	1.17	0.00
	B-6	Bentonville Wal-Mart to Rogers via Walton/Walnut	0600 - 2200	Standard	60	60	60	60	32	35	15	18%	85	7.9	18.7	22.7	252.8	1.42	1.42	1.42	1.42
	B-7	Pinnacle Hills to Rogers Wal-Mart via W 2nd	0600 - 1900	Standard	60	60	60	n/a	26	45	20	18%	110	9.1	19.5	23.8	236.6	1.83	1.83	1.83	0.00
Benton County Route Totals															**95.3**	**113.0**	**1310.0**	**8.00**	**8.00**	**8.00**	**3.00**
Regional	R-1	US 71 - Fayetteville to Springdale	0600 - 2200	Standard	60	60	60	60	32	51	18	15%	120	11.0	27.2	32.0	352.0	2.00	2.00	2.00	2.00
Routes	R-2	US 71 - Springdale to B'ville	0600 - 2200	Standard	60	60	60	60	32	54	12	10%	120	16.2	28.8	32.0	518.4	2.00	2.00	2.00	2.00
	R-3	I-540 - NWACC to MLK Wal-Mart	0600 - 1900	Standard	60	60	60	n/a	26	52	16	13%	120	26.0	22.5	26.0	676.0	2.00	2.00	2.00	0.00
	R-4	I-540 - NWACC to NWA Mall	0600 - 1900	Standard	60	60	60	n/a	26	52	16	13%	120	22.4	22.5	26.0	582.4	2.00	2.00	2.00	0.00
Regional Route Totals															**101.1**	**116.0**	**2128.8**	**8.00**	**8.00**	**8.00**	**4.00**
TOTALS															**409**	**481**	**6,157**	**34**	**34**	**34**	**13**
Big Bus															**386**	**455**	**5,879**	**32**	**32**	**32**	**13**
Cutaway															**22**	**26**	**278**	**2**	**2**	**2**	**0**

Interline Assumptions:

F-2, F-3 and F-5 at Central Fayetteville T. Ctr.
F-4 and F-6 at Central Fayetteville T. Ctr.
S-4, S-5 and S-6 at Springdale Wal-Mart T. Ctr.
B-1 and B-6 are interlined at Bentonville Wal-Mart.
B-2 and B-4 are interlined at NWACC.
B-5 and B-7 are interlined at Rogers Wal-Mart.

Figure 8-9
University of Arkansas – Razorback Transit Short and Long-Range Service Plan

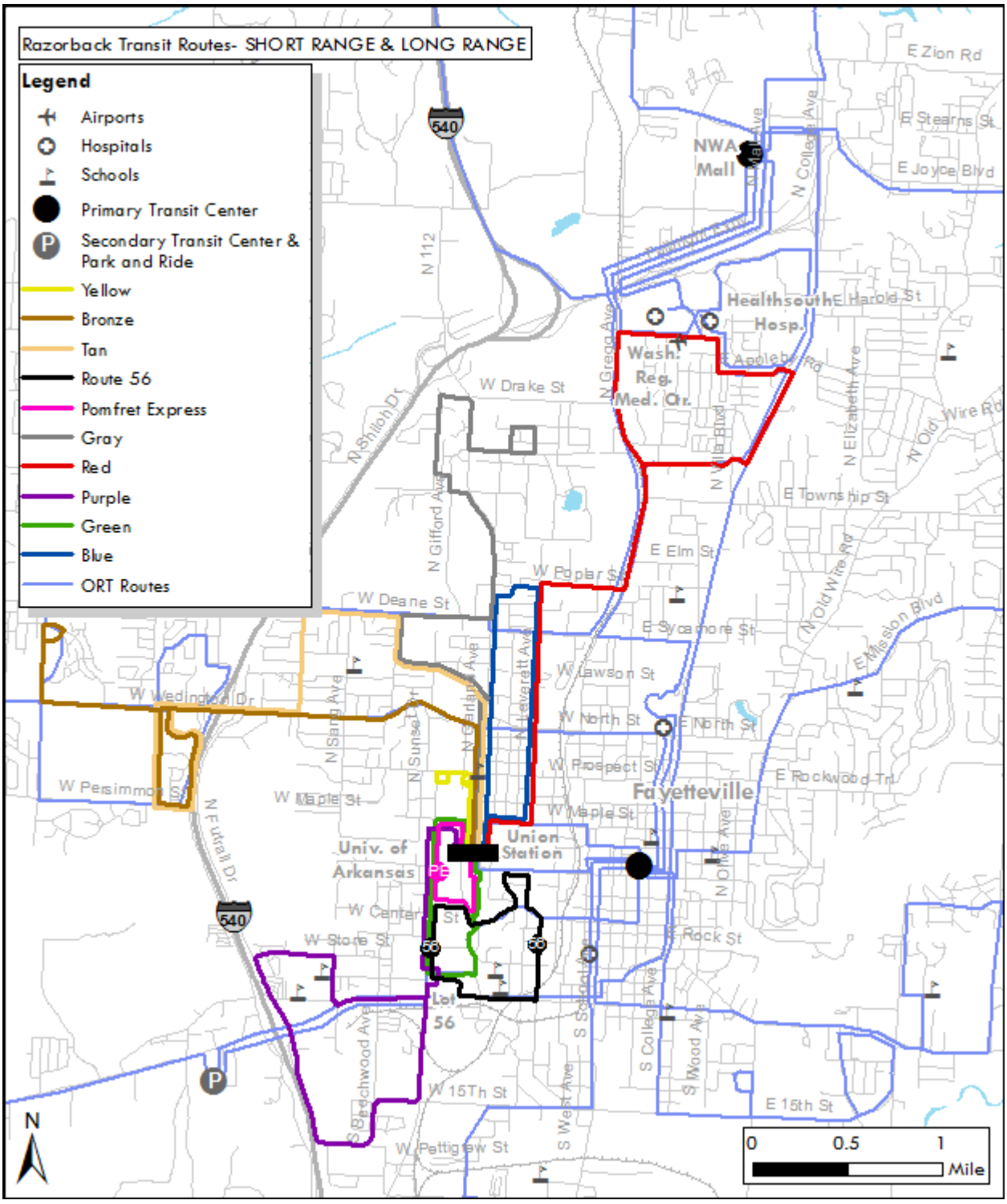


Table 8-4

Razorback Transit Short and Long-Range Service Plan Service Statistics

Full Service Weekday and Weekday Evening Schedule (Fall/Spring Semesters)

Route #	Start of First/ Last Trips	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
		Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	Early	AM	Mid/PM	Evening
Blue	7:00 am-10:00 pm	5	5	10	20	93	15.0	5	25%	20	3.3	23.3	31.0	306.9	4.00	4.00	2.00	1.00
Gray	7:00 am-6:00 pm	30	30	30	n/a	22	30.0	15	33%	45	7.4	11.0	16.5	162.8	1.50	1.50	1.50	0.00
Green	7:00 am-10:00 pm	4	4	7	20	123	15.0	6	29%	21	2.3	30.8	41.5	282.9	5.00	5.00	3.00	1.00
Purple	7:00 am-10:00 pm	30	30	30	30	30	24.0	6	20%	30	6.4	12.0	15.0	192.0	1.00	1.00	1.00	1.00
Red	7:00 am-10:00 pm	30	30	30	40	28	35.0	10	22%	45	8.8	16.3	20.5	246.4	1.50	1.50	1.50	1.00
Tan - Mt Comf.	7:00 am-10:00 pm	40	40	40	40	23	32.0	8	20%	40	8.0	12.3	15.3	184.0	1.00	1.00	1.00	1.00
Gold - Persim.	7:00 am-6:00 pm	40	40	40	n/a	17	37.0	3	8%	40	10.0	10.5	11.3	170.0	1.00	1.00	1.00	0.00
Rte 56	7:00 am-6:00 pm	20	20	20	n/a	34	13.0	7	35%	20	2.7	7.4	11.3	91.8	1.00	1.00	1.00	0.00
MH Exp	7:00 am-6:00 pm	16	16	16	n/a	42	14.0	2	13%	16	1.4	9.8	11.2	58.8	1.00	1.00	1.00	0.00
Pomfret Expr	7:00 am-6:00 pm	15	15	15	n/a	44	10.0	5	33%	15	6.0	7.3	11.0	264.0	1.00	1.00	1.00	0.00
TOTALS						**456**						**141**	**185**	**1,960**	**18.0**	**18.0**	**14.0**	**5.0**

One Bus per Route Schedule (Weekdays and Select Saturdays)

Route #	Start of First/ Last Trips	Service Frequency				Daily Trips	Midday/PM Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
		Early	AM	Mid/PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	Early	AM	Mid/PM	Evening
Blue	7:00 am-6:00 pm	20	20	20	n/a	34	15.0	5	25%	20	3.3	8.5	11.3	112.2	1.00	1.00	1.00	0.00
Gray	7:00 am-6:00 pm	40	40	40	n/a	17	30.0	10	25%	40	7.4	8.5	11.3	125.8	1.00	1.00	1.00	0.00
Green	7:00 am-6:00 pm	20	20	20	n/a	34	15.0	5	25%	20	2.3	8.5	11.3	78.2	1.00	1.00	1.00	0.00
Purple	7:00 am-6:00 pm	30	30	30	n/a	22	24.0	6	20%	30	6.4	8.8	11.0	140.8	1.00	1.00	1.00	0.00
Red	7:00 am-6:00 pm	40	40	40	n/a	17	35.0	5	13%	40	8.8	9.9	11.3	149.6	1.00	1.00	1.00	0.00
Tan - Mt. Comf.	7:00 am-6:00 pm	40	40	40	n/a	17	32.0	8	20%	40	8.0	9.1	11.3	136.0	1.00	1.00	1.00	0.00
Gold - Persim.	7:00 am-6:00 pm	40	40	40	n/a	17	37.0	3	8%	40	10.0	10.5	11.3	170.0	1.00	1.00	1.00	0.00
Rte 56	7:00 am-6:00 pm	20	20	20	n/a	34	13.0	7	35%	20	2.7	7.4	11.3	91.8	1.00	1.00	1.00	0.00
MH Exp	7:00 am-6:00 pm	16	16	16	n/a	42	14.0	2	13%	16	1.4	9.8	11.2	58.8	1.00	1.00	1.00	0.00
Pomfret	7:00 am-6:00 pm	15	15	15	n/a	44	10.0	5	33%	15	6.0	7.3	11.0	264.0	1.00	1.00	1.00	0.00
TOTALS						**278**						**88**	**113**	**1,327**	**10.0**	**10.0**	**10.0**	**0.0**

Table 8-4 (continued)
Razorback Transit Short and Long-Range Service Plan Service Statistics

Reduced Weekday Schedule (Summer)

Route #	Start of First/ Last Trips	Service Frequency					Midday/PM Period Cycle Time				One-Way	Average Weekday			Bus Requirements			
		Early	AM	Mid/PM	Eve.	Daily Trips	Time (Min.)	Layover Time	% Layover	Cycle Time	Distance (Miles)	In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM Pk	Midday	PM Pk	Evening
Blue	7:00 am-6:00 pm	20	20	20	n/a	34	15.0	5	25%	20	3.3	8.5	11.3	112.2	1.00	1.00	1.00	0.00
Red	7:00 am-6:00 pm	40	40	40	n/a	17	35.0	5	13%	40	8.8	9.9	11.3	149.6	1.00	1.00	1.00	0.00
Tan - Mt. Comf.	7:00 am-6:00 pm	40	40	40	n/a	17	32.0	8	20%	40	8.0	9.1	11.3	136.0	1.00	1.00	1.00	0.00
Green	7:00 am-6:00 pm	20	20	20	n/a	34	15.0	5	25%	20	2.3	8.5	11.3	78.2	1.00	1.00	1.00	0.00
Purple	7:00 am-6:00 pm	30	30	30	n/a	22	24.0	6	20%	30	6.4	8.8	11.0	140.8	1.00	1.00	1.00	0.00
TOTALS						**124**						**45**	**56**	**617**	**5.0**	**5.0**	**5.0**	**0.0**

Full Service Saturday Schedule (Fall/Spring Semesters)

Route #	Start of First/ Last Trips	Service Frequency					Midday/PM Period Cycle Time				One-Way	Average Saturday			Bus Requirements			
		Early	AM	Mid/PM	Eve.	Daily Trips	Time (Min.)	Layover Time	% Layover	Cycle Time	Distance (Miles)	In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM Pk	Midday	PM Pk	Evening
Blue	7:00 am-10:00 pm	20	20	20	20	46	15.0	5	25%	20	3.3	11.5	15.3	151.8	1.00	1.00	1.00	1.00
Red	7:00 am-10:00 pm	40	40	40	40	23	35.0	5	13%	40	8.8	13.4	15.3	202.4	1.00	1.00	1.00	1.00
Tan - Mt. Comf.	7:00 am-10:00 pm	40	40	40	40	23	32.0	8	20%	40	8.0	12.3	15.3	184.0	1.00	1.00	1.00	1.00
Green	7:00 am-10:00 pm	20	20	20	20	46	15.0	5	25%	20	2.3	11.5	15.3	105.8	1.00	1.00	1.00	1.00
Purple	7:00 am-10:00 pm	30	30	30	30	30	24.0	6	20%	30	6.4	12.0	15.0	192.0	1.00	1.00	1.00	1.00
TOTALS						**168**						**61**	**76**	**836**	**5.0**	**5.0**	**5.0**	**5.0**

Early = Before 7:30 a.m.
AM = 7:30-9:00 a.m.
Mid/PM = 9:00 a.m. to 6:00 p.m.
Eve. = After 6:00 p.m.

8.3 Long-Range Service Plan

For ORT, the Long-Range Service Plan builds upon the redesigned route network laid out in the short-range plan. Select routes with higher demand and productivity are identified for weekend service. Some also improve to 30-minute frequency on the weekdays. Two new service classifications are also added to ORT's repertoire. Flex zone service features on-demand zones that serve less densely populated areas. Each of these routes will be anchored at one of the transit centers but will have no specific routing. Instead, riders can call ahead (typically no less than two hours in advance) to schedule a pick-up. Likewise, the return trip can be accommodated by informing the bus operator or pre-arranging the trip. Rural Connector service also serves more remote areas but operates during the peak hours only. These routes may or may not have a flex component but will likely serve a central point in the community that could be used for informal park & ride, such as a grocery, before continuing to one of the transit centers. Figures 8-10, 8-11, 8-12 and 8-13 present revised system maps for the ORT Long-Range Service Plan region-wide and in Benton County, Springdale and Fayetteville, respectively. Figure 8-14 depicts proposed Flex Zone and Rural Connector routes. Table 8-5 presents operating hours and frequency, running times and route distances, and hours, miles and peak bus requirements.

Given the emphasis on Razorback Transit's core mission, all service modifications and improvements for Razorback Transit are accomplished during the near-term and short-range planning horizons. Thus, the Razorback Transit Long-Range Service Plan is identical to the short-range plan. However, improvements to coverage, frequency and service span are improved in the ORT Long-Range Service Plan, which greatly improves mobility options for students and University of Arkansas area residents.

In the long-range plan, new transit centers are added to the network to support the expansion of regional and local routes as well as the addition of new flex zone and rural connector service. As part of this expansion effort, park & ride facilities are provided at select sites along I-540. In the long-range plan, the following new transit centers are proposed, in addition to those that were implemented in the near-term plan:

Location	Primary/ Secondary	Buses per Peak Hour*
Pinnacle Hills	Secondary with Park & Ride	7
Arvest Ballpark	Primary with Park & Ride	11
NWA Mall/Walmart	Primary	12
MLK Walmart	Secondary with Park & Ride	7
Bella Vista	Park & Ride only	2

** Peak Hour Buses based on complete implementation of Long-Range Plan*

Figure 8-10
Regional Routes Long-Range Service Plan

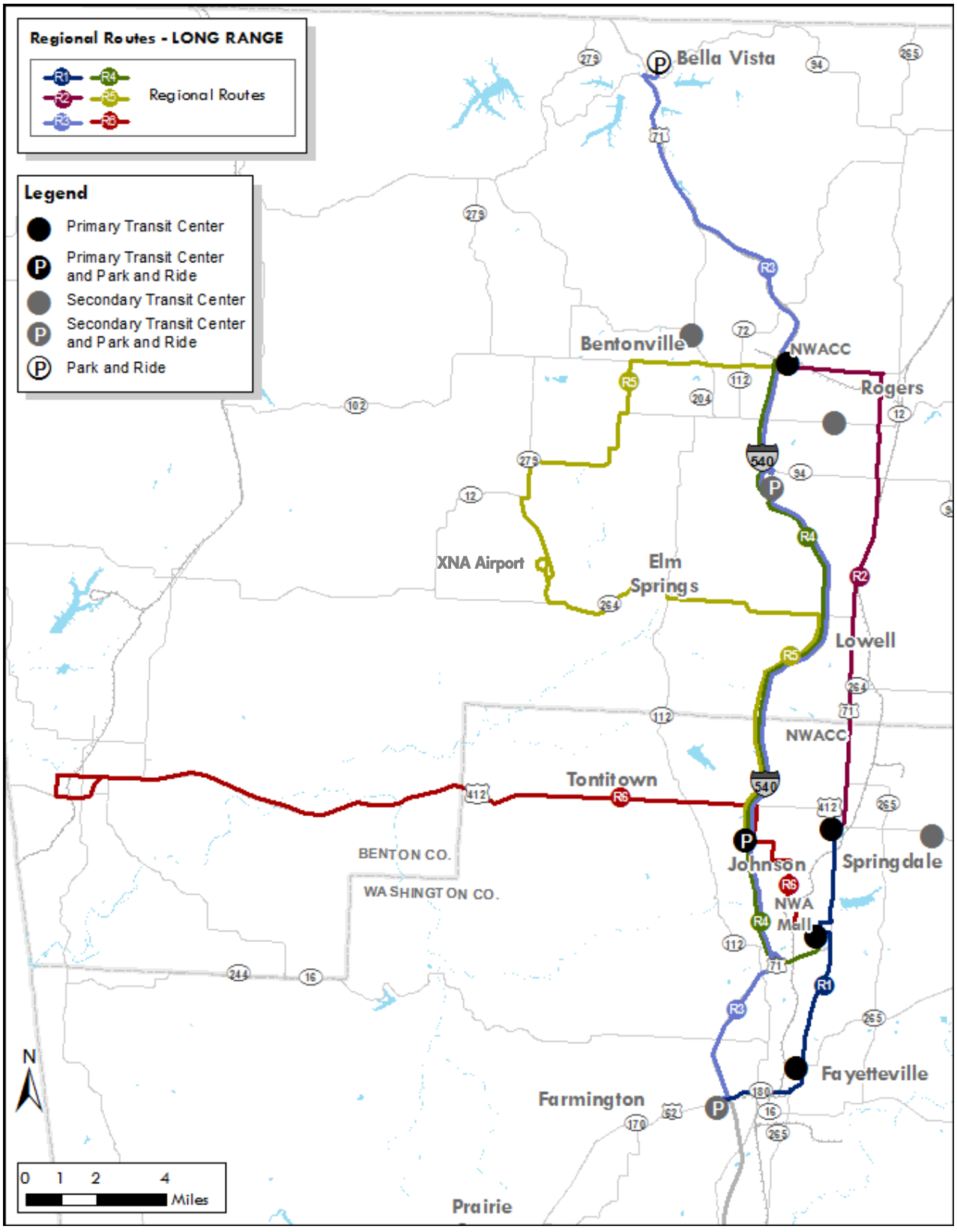


Figure 8-11
Benton County Long-Range Service Plan

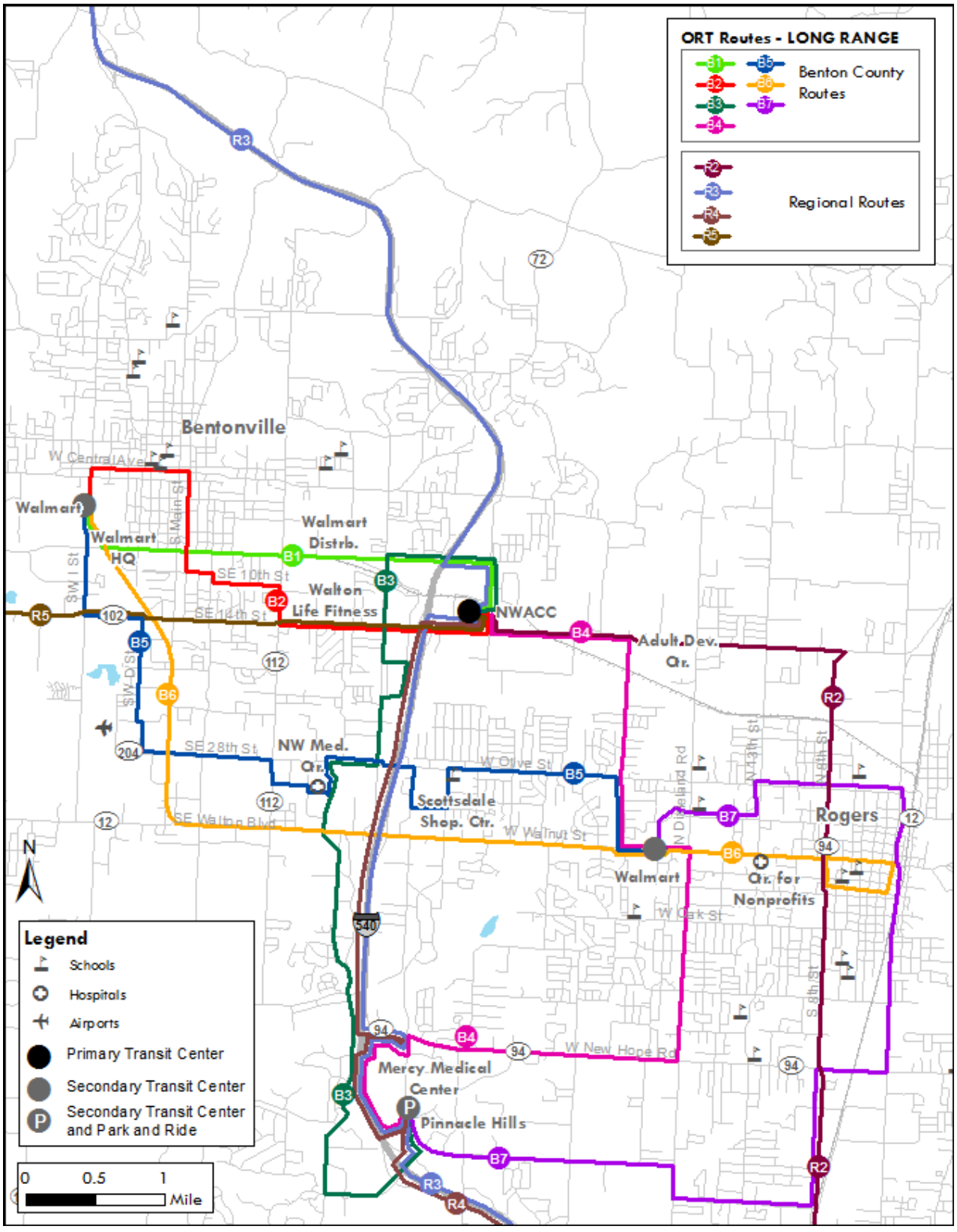


Figure 8-12
Springdale Long-Range Service Plan

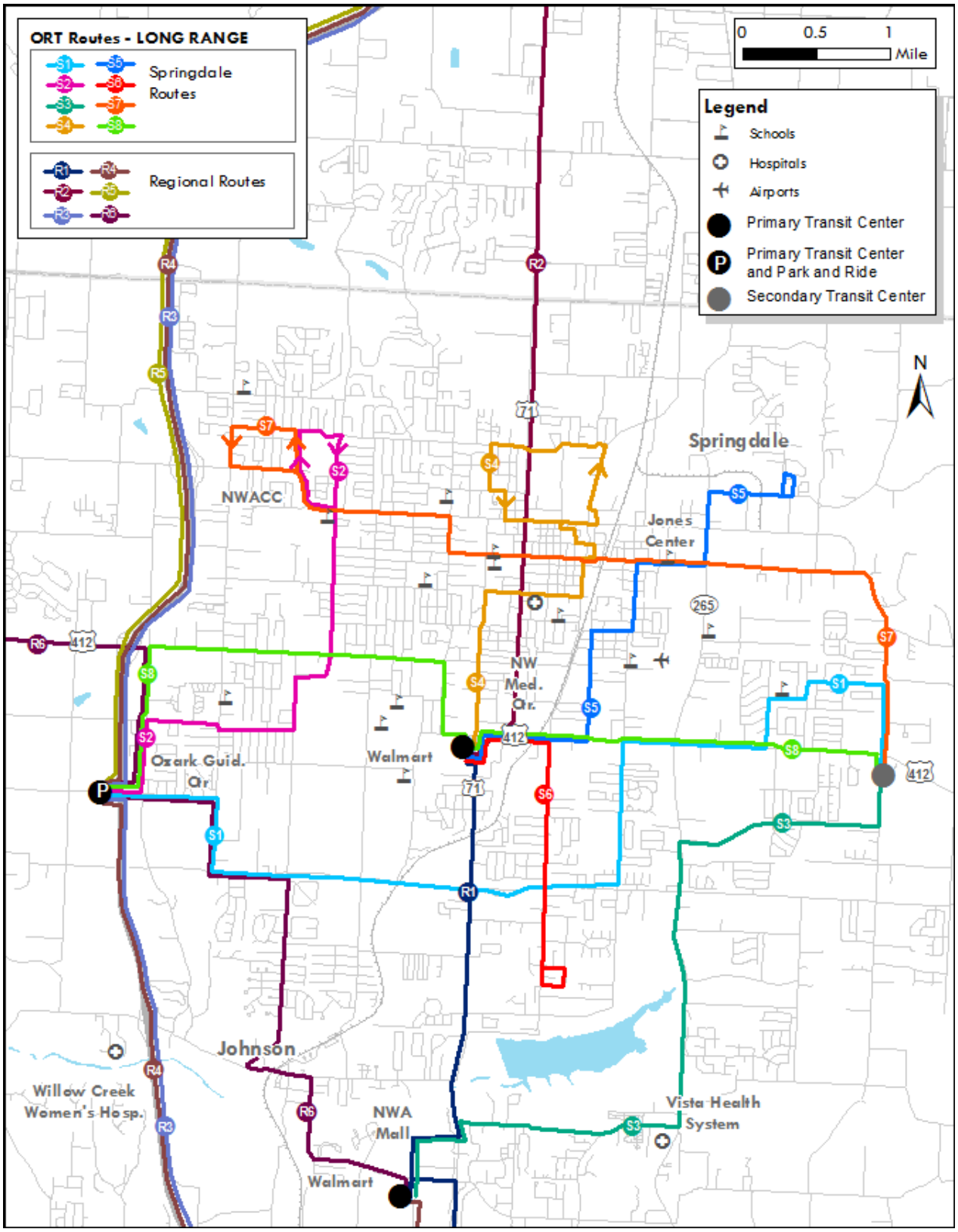


Figure 8-13
Fayetteville Long-Range Service Plan

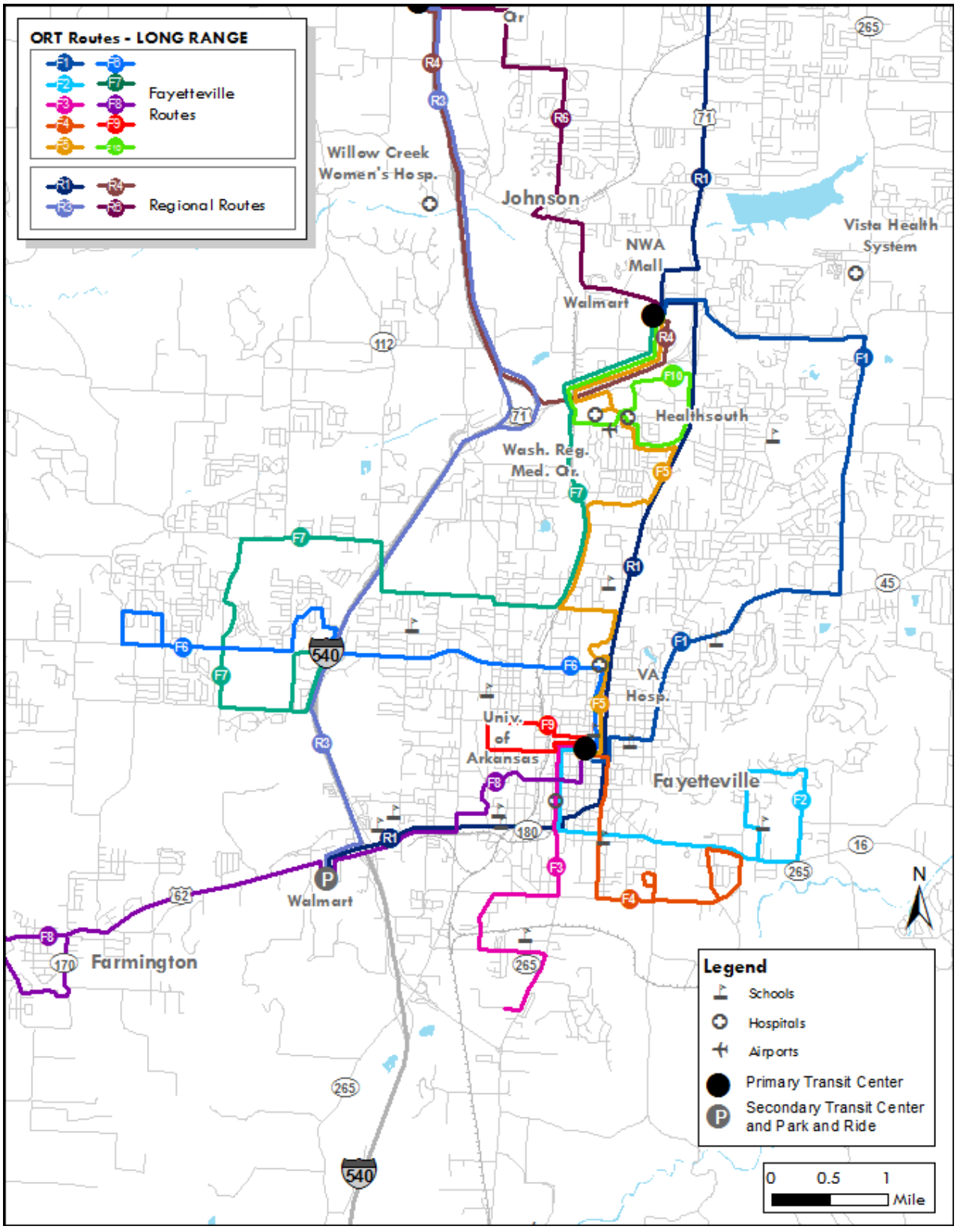


Figure 8-14
Flex Zones and Rural Connector Routes – Long-Range Service Plan

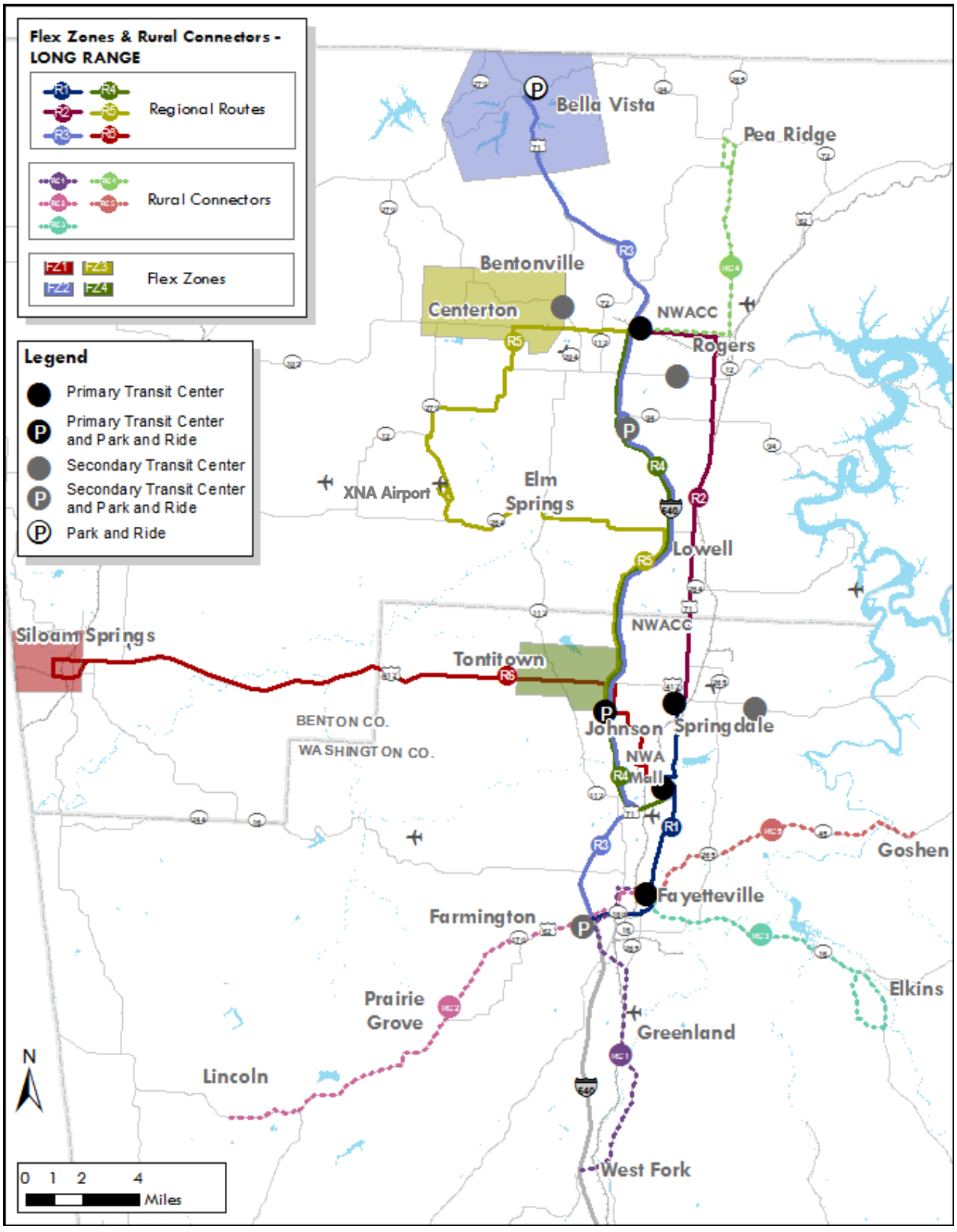


Table 8-5

Ozark Regional Transit Long-Range Service Plan Service Statistics

Weekday Schedule

Route #	Route #	Route Description	Start of First/ Last Trips	Bus Type	Service Frequency				Daily Trips	Midday Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
					AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
Fayetteville	F-1	NE Fayetteville - Mission/Crossover	0600 - 1900	Standard	60	60	60	n/a	26	40	10	11%	90	8.8	17.3	19.5	228.8	1.50	1.50	1.50	0.00
Routes	F-2	Cliffs-Central Fayetteville	0600 - 2200	Standard	60	60	60	60	32	20	5	11%	45	3.8	10.7	12.0	121.6	0.75	0.75	0.75	0.75
	F-3	South Fayetteville - Bus 71	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.0	8.7	9.8	104.0	0.75	0.75	0.75	0.00
	F-4	South Fayetteville - East 15th	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.3	8.7	9.8	111.8	0.75	0.75	0.75	0.00
	F-5	North Fayetteville - Wash. Med. Ctr.	0600 - 2200	Standard	60	60	60	60	32	40	10	11%	90	8.0	21.3	24.0	256.0	1.50	1.50	1.50	1.50
	F-6	Wedington-Central Fayetteville	0600 - 2200	Standard	30	30	30	60	58	30	15	20%	75	6.7	29.0	35.5	388.6	2.50	2.50	2.50	1.00
	F-7	Rupple-Mt. Comfort-Gregg	0600 - 1900	Standard	60	60	60	60	32	45	15	14%	105	9.3	24.0	28.0	297.6	1.75	1.75	1.75	1.75
	F-8	Farmington-U of A-Central Fayett.	0600 - 1900	Standard	60	60	60	n/a	26	35	20	22%	90	6.0	15.2	19.5	156.0	1.50	1.50	1.50	0.00
	F-9	U of A/Central Fayett. Circ.	0600 - 2200	Standard	10	10	10	15	90	15	5	25%	20	2.5	22.5	29.0	225.0	2.00	2.00	2.00	1.00
	F-10	NWA Mall Area Circ.	0600 - 2200	Standard	30	30	30	30	32	45	15	25%	60	9.1	24.0	32.0	291.2	2.00	2.00	2.00	2.00
Fayetteville Route Totals															**181.3**	**219.0**	**2180.6**	**15.00**	**15.00**	**15.00**	**8.00**
Springdale	S-1	S. Springdale-Don Tyson Pkwy	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.6	11.7	13.0	171.6	1.00	1.00	1.00	0.00
Routes	S-2	Garrison-NWAC Springdale	0600 - 2200	Standard	60	60	60	60	32	23	14	23%	60	4.4	12.3	16.0	140.8	1.00	1.00	1.00	1.00
	S-3	N. Fayetteville-E. Springdale	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.9	11.7	13.0	179.4	1.00	1.00	1.00	0.00
	S-4	North Springdale to Backus	0600 - 1900	Cutaway	60	60	60	n/a	26	20	5	11%	45	3.8	8.7	9.8	98.8	0.75	0.75	0.75	0.00
	S-5	NE Springdale to Mountain	0600 - 1900	Cutaway	60	60	60	n/a	26	20	5	11%	45	4.2	8.7	9.8	109.2	0.75	0.75	0.75	0.00
	S-6	Turner St.	0600 - 1900	Cutaway	60	60	60	n/a	26	11	8	27%	30	2.7	4.8	6.5	70.2	0.50	0.50	0.50	0.00
	S-7	Huntsville-Emma	0600 - 2200	Standard	30	30	30	60	58	26	8	13%	60	6.5	25.0	28.5	377.0	2.00	2.00	2.00	0.83
	S-8	Sunset-Robinson	0600 - 2200	Standard	30	30	30	60	58	37	16	18%	90	8.0	35.6	42.5	464.0	3.00	3.00	3.00	1.17
Springdale Route Totals															**118.4**	**139.0**	**1611.0**	**10.00**	**10.00**	**10.00**	**3.00**
Benton Co.	B-1	NWACC to Bentonville Wal-Mart via 8th St.	0600 - 2200	Standard	30	30	30	60	58	15	5	14%	35	3.3	14.5	16.9	191.4	1.17	1.17	1.17	0.58
Routes	B-2	NWACC to Bentonville Wal-Mart via 14th St.	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.6	8.7	9.8	119.6	0.75	0.75	0.75	0.00
	B-3	NWACC to Pinnacle Hills via NW Medical	0600 - 2200	Standard	60	60	60	60	32	25	10	17%	60	6.5	13.3	16.0	208.0	1.00	1.00	1.00	1.00
	B-4	NWACC to Pinnacle Hills via Dixieland	0600 - 1900	Standard	60	60	60	n/a	26	33	10	13%	75	8.2	14.1	16.3	213.2	1.25	1.25	1.25	0.00
	B-5	Bentonville Wal-Mart to Rogers Wal-Mart via 28th/Olive	0600 - 1900	Standard	60	60	60	n/a	26	30	10	14%	70	6.7	13.0	15.2	174.2	1.17	1.17	1.17	0.00
	B-6	Bentonville Wal-Mart to Rogers via Walton/Walnut	0600 - 2200	Standard	30	30	30	60	58	35	15	18%	85	7.9	33.8	41.1	458.2	2.83	2.83	2.83	1.42
	B-7	Pinnacle Hills to Rogers Wal-Mart via W 2nd	0600 - 1900	Standard	60	60	60	n/a	26	45	20	18%	110	9.1	19.5	23.8	236.6	1.83	1.83	1.83	0.00
Benton County Route Totals															**116.9**	**139.0**	**1601.2**	**10.00**	**10.00**	**10.00**	**3.00**
Regional	R-1	US 71 - Fayetteville to Springdale	0600 - 2200	Standard	30	30	30	60	58	51	18	15%	120	11.0	49.3	58.0	638.0	4.00	4.00	4.00	2.00
Routes	R-2	US 71 - Springdale to B'ville	0600 - 2200	Standard	60	60	60	60	32	54	12	10%	120	16.2	28.8	32.0	518.4	2.00	2.00	2.00	2.00
	R-3	I-540 - Bella Vista to MLK Wal-Mart	0600 - 1900	Standard	60	60	60	n/a	26	68	44	24%	180	34.0	29.5	39.0	884.0	3.00	3.00	3.00	0.00
	R-4	I-540 - NWAC to NWA Mall	0600 - 1900	Standard	60	60	60	n/a	26	52	16	13%	120	26.0	22.5	26.0	676.0	2.00	2.00	2.00	0.00
	R-5	Bentonville-XNA-Springdale	0600 - 1900	Standard	60	60	60	n/a	26	52	16	13%	120	30.0	22.5	26.0	780.0	2.00	2.00	2.00	0.00
	R-6	Shiloam Springs	0600 - 1900	Standard	60	60	60	n/a	26	50	20	17%	120	27.6	21.7	26.0	717.6	2.00	2.00	2.00	0.00
Regional Route Totals															**174.3**	**207.0**	**4214.0**	**15.00**	**15.00**	**15.00**	**4.00**
Flex Zone	FZ-1	Siloam Springs	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
Routes	FZ-2	Bella Vista	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
	FZ-3	Centerton	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
	FZ-4	Tontitown	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
Community Route Totals															**52.0**	**52.0**	**624.0**	**4.00**	**4.00**	**4.00**	**0.00**
Rural	RC-1	West Fork/Greenland	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	12.0	3.3	4.0	96.0	1.00	0.00	1.00	0.00
Connectors	RC-2	Lincoln/Prairie Grove	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	15.5	4.0	4.0	124.0	1.00	0.00	1.00	0.00
	RC-3	Elkins	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	10.5	3.3	4.0	84.0	1.00	0.00	1.00	0.00
	RC-4	Pea Ridge	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	8.5	2.7	4.0	68.0	1.00	0.00	1.00	0.00
	RC-5	Goshen	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	11.5	3.3	4.0	92.0	1.00	0.00	1.00	0.00
Rural Connector Route Totals															**16.7**	**20.0**	**464.0**	**5.00**	**0.00**	**5.00**	**0.00**
TOTALS															**660**	**776**	**10,695**	**59**	**54**	**59**	**18**
Big Bus															**569**	**678**	**9,329**	**48**	**48**	**48**	**18**
Cutaway															**91**	**98**	**1,366**	**11**	**6**	**11**	**0**

Interline Assumptions:

F-1 and F-8 at Central Fayetteville T.Ctr.
F-2, F-5 and F-7 at Central Fayetteville and N. Fayetteville T. Ctr's.
F-3 and every other F-6 at Central Fayetteville T. Ctr.
F-4 and every other F-6 at Central Fayetteville T. Ctr.
S-4, S-5 and S-6 at Springdale Wal-Mart T. Ctr.
B-1 and B-6 are interlined at Bentonville Wal-Mart.
B-2 and B-4 are interlined at NWACC.
B-5 and B-7 are interlined at Rogers Wal-Mart.

Table 8-5 (continued)

Ozark Regional Transit Long-Range Service Plan Service Statistics

Saturday Schedule

Route #	Route #	Route Description	Start of First/ Last Trips	Bus Type	Service Frequency				Daily Trips	Midday Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
					AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
Fayetteville	F-1	NE Fayetteville - Mission/Crossover	0600 - 1900	Standard	60	60	60	n/a	26	40	40	33%	120	8.8	17.3	26.0	228.8	2.00	2.00	2.00	0.00
Routes	F-2	Cliffs-Central Fayetteville	0600 - 2200	Standard	60	60	60	60	32	20	5	11%	45	3.8	10.7	12.0	121.6	0.75	0.75	0.75	0.75
	F-4	South Fayetteville - East 15th	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.3	8.7	9.8	111.8	0.75	0.75	0.75	0.00
	F-5	North Fayetteville - Wash. Med. Ctr.	0600 - 2200	Standard	60	60	60	60	32	40	10	11%	90	8.0	21.3	24.0	256.0	1.50	1.50	1.50	1.50
	F-6	Wedington-Central Fayetteville	0600 - 2200	Standard	60	60	60	60	32	30	15	20%	75	6.7	16.0	19.3	214.4	1.25	1.25	1.25	1.00
	F-7	Rupple-Mt. Comfort-Gregg	0600 - 1900	Standard	60	60	60	60	32	45	15	14%	105	9.3	24.0	28.0	297.6	1.75	1.75	1.75	1.75
	F-9	U of A/Central Fayett. Circ.	0600 - 2200	Standard	20	20	20	20	48	15	5	25%	20	2.5	12.0	16.0	120.0	1.00	1.00	1.00	1.00
	F-10	NWA Mall Area Circ.	0600 - 2200	Standard	60	30	30	60	26	45	15	25%	60	9.1	19.5	26.0	236.6	1.00	2.00	2.00	1.00
Fayetteville Route Totals															**129.5**	**161.0**	**1586.8**	**10.00**	**11.00**	**11.00**	**7.00**
Springdale	S-1	S. Springdale-Don Tysons Pkwy	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.6	11.7	13.0	171.6	1.00	1.00	1.00	0.00
Routes	S-2	Garrison-NWAC Springdale	0600 - 2200	Standard	60	60	60	n/a	26	23	14	23%	60	4.4	10.0	13.0	114.4	1.00	1.00	1.00	0.00
	S-3	N. Fayetteville-E. Springdale	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.9	11.7	13.0	179.4	1.00	1.00	1.00	0.00
	S-7	Huntsville-Emma	0600 - 2200	Standard	60	60	60	60	32	26	8	13%	60	6.5	13.8	15.5	208.0	1.00	1.00	1.00	0.83
	S-8	Sunset-Robinson	0600 - 2200	Standard	60	60	60	60	32	37	46	38%	120	8.0	19.5	29.5	256.0	2.00	2.00	2.00	1.17
Springdale Route Totals															**66.7**	**84.0**	**929.4**	**6.00**	**6.00**	**6.00**	**2.00**
Benton Co.	B-1	NWACC to Bentonville Wal-Mart via 8th St.	0600 - 2200	Standard	60	60	60	60	32	15	5	14%	35	3.3	8.0	9.3	105.6	0.58	0.58	0.58	0.58
Routes	B-2	NWACC to Bentonville Wal-Mart via 14th St.	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.6	8.7	9.8	119.6	0.75	0.75	0.75	0.00
	B-3	NWACC to Pinnacle Hills via NW Medical	0600 - 2200	Standard	60	60	60	60	32	25	10	17%	60	6.5	13.3	16.0	208.0	1.00	1.00	1.00	1.00
	B-4	NWACC to Pinnacle Hills via Dixieland	0600 - 1900	Standard	60	60	60	n/a	26	33	10	13%	75	8.2	14.1	16.3	213.2	1.25	1.25	1.25	0.00
	B-6	Bentonville Wal-Mart to Rogers via Walton/Walnut	0600 - 2200	Standard	60	60	60	60	32	35	15	18%	85	7.9	18.7	22.7	252.8	1.42	1.42	1.42	1.42
Benton County Route Totals															**62.8**	**74.0**	**899.2**	**5.00**	**5.00**	**5.00**	**3.00**
Regional	R-1	US 71 - Fayetteville to Springdale	0600 - 2200	Standard	30	30	30	60	58	51	18	15%	120	11.0	49.3	58.0	638.0	4.00	4.00	4.00	2.00
Routes	R-2	US 71 - Springdale to B'ville	0600 - 2200	Standard	60	60	60	60	32	54	12	10%	120	16.2	28.8	32.0	518.4	2.00	2.00	2.00	2.00
	R-3	I-540 - Bella Vista to MLK Wal-Mart	0600 - 1900	Standard	60	60	60	n/a	26	68	44	24%	180	34.0	29.5	39.0	884.0	3.00	3.00	3.00	0.00
	R-5	Bentonville-XNA-Springdale	0600 - 1900	Standard	120	120	120	n/a	13	52	16	13%	120	30.0	11.3	13.0	390.0	1.00	1.00	1.00	0.00
	R-6	Siloam Springs	0600 - 1900	Standard	120	120	120	n/a	13	50	20	17%	120	27.6	10.8	13.0	358.8	1.00	1.00	1.00	0.00
Regional Route Totals															**129.7**	**155.0**	**2789.2**	**11.00**	**11.00**	**11.00**	**4.00**
Flex Zone	FZ-1	Siloam Springs	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
Routes	FZ-2	Bella Vista	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
	FZ-3	Centerton	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
	FZ-4	Tontitown	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
Community Route Totals															**52.0**	**52.0**	**624.0**	**4.00**	**4.00**	**4.00**	**0.00**
TOTALS															**441**	**526**	**6,829**	**36**	**37**	**37**	**16**
Big Bus															**389**	**474**	**6,205**	**32**	**33**	**33**	**16**
Cutaway															**52**	**52**	**624**	**4**	**4**	**4**	**0**

Interline Assumptions:

F-2, F-5 and F-7 at Central Fayetteville and N. Fayetteville T. Ctr's.

F-4 and F-6 at Central Fayetteville T. Ctr.

B-1 and B-6 are interlined at Bentonville Wal-Mart.

B-2 and B-4 are interlined at NWACC.

Table 8-5 (continued)

Ozark Regional Transit Long-Range Service Plan Service Statistic

Sunday Schedule

Route #	Route #	Route Description	Start of First/ Last Trips	Bus Type	Service Frequency				Daily Trips	Midday Period Cycle Time				One-Way Distance (Miles)	Average Weekday			Bus Requirements			
					AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time		In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
Fayetteville	F-4	South Fayetteville - East 15th	0900 - 1900	Standard	n/a	60	60	n/a	20	20	5	11%	45	4.3	6.7	7.5	86.0	0.00	0.75	0.75	0.00
Routes	F-5	North Fayetteville - Wash. Med. Ctr.	0900 - 1900	Standard	n/a	60	60	n/a	20	40	40	33%	120	8.0	13.3	20.0	160.0	0.00	2.00	2.00	0.00
	F-6	Wedington-Central Fayetteville	0900 - 1900	Standard	n/a	60	60	n/a	20	30	15	20%	75	6.7	10.0	12.5	134.0	0.00	1.25	1.25	0.00
	F-10	NWA Mall Area Circ.	0900 - 1900	Standard	n/a	30	30	n/a	20	45	15	25%	60	9.1	15.0	20.0	182.0	0.00	2.00	2.00	0.00
Fayetteville Route Totals															**45.0**	**60.0**	**562.0**	**0.00**	**6.00**	**6.00**	**0.00**
Springdale	S-7	Huntsville-Emma	0900 - 1900	Standard	n/a	60	60	n/a	20	26	8	13%	60	6.5	8.7	10.0	130.0	0.00	1.00	1.00	0.00
Routes	S-8	Sunset-Robinson	0900 - 1900	Standard	n/a	60	60	n/a	20	37	46	38%	120	8.0	12.3	20.0	160.0	0.00	2.00	2.00	0.00
Springdale Route Totals															**21.0**	**30.0**	**290.0**	**0.00**	**3.00**	**3.00**	**0.00**
Benton Co.	B-1	NWACC to Bentonville Wal-Mart via 8th St.	0900 - 1900	Standard	n/a	60	60	n/a	20	15	5	14%	35	3.3	5.0	5.8	66.0	0.00	0.58	0.58	0.00
Routes	B-3	NWACC to Pinnacle Hills via NW Medical	0900 - 1900	Standard	n/a	60	60	n/a	20	25	10	17%	60	6.5	8.3	10.0	130.0	0.00	1.00	1.00	0.00
	B-6	Bentonville Wal-Mart to Rogers via Walton/Walnut	0900 - 1900	Standard	n/a	60	60	n/a	20	35	15	18%	85	7.9	11.7	14.2	158.0	0.00	1.42	1.42	0.00
Benton County Route Totals															**25.0**	**30.0**	**354.0**	**0.00**	**3.00**	**3.00**	**0.00**
Regional	R-1	US 71 - Fayetteville to Springdale	0600 - 2200	Standard	n/a	60	60	n/a	20	51	18	15%	120	11.0	17.0	20.0	220.0	0.00	2.00	2.00	0.00
Routes	R-2	US 71 - Springdale to B'ville	0600 - 2200	Standard	n/a	60	60	n/a	20	54	12	10%	120	16.2	18.0	20.0	324.0	0.00	2.00	2.00	0.00
Regional Route Totals															**35.0**	**40.0**	**544.0**	**0.00**	**4.00**	**4.00**	**0.00**
TOTALS															**126**	**160**	**1,750**	**0**	**16**	**16**	**0**
Big Bus															**126**	**160**	**1,750**	**0**	**16**	**16**	**0**
Cutaway															**0**	**0**	**0**	**0**	**0**	**0**	**0**

Interline Assumptions:

F-4 and F-6 at Central Fayetteville T. Ctr.

B-1 and B-6 are interlined at Bentonville Wal-Mart.

8.4 Operating Requirements

As mentioned previously in this chapter, the fixed-route operating requirements in the near-term plan are nearly cost-neutral for both ORT and Razorback Transit. However, the short-range plans represent significant growth for ORT with modest growth occurring at Razorback Transit. Likewise, the long-range plan also identifies strong growth in ORT's size while Razorback Transit remains constant. Operating requirements, including peak buses, annual hours and annual miles for ORT and Razorback Transit, are outlined in Tables 8-6 and 8-7 below.

Table 8-6
Ozark Regional Transit – Current and Projected Fixed-Route Operating Requirements

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	12	11	34	59
Annual Hours	29,116	29,116	122,655	234,032
Annual Miles	496,862	488,788	1,570,137	3,178,511

Table 8-7
Razorback Transit – Current and Projected Fixed-Route Operating Requirements

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	16	17	18	18
Annual Hours	33,210	33,437	36,426	36,426
Annual Miles	378,622	378,909	394,997	394,997

8.5 Capital Needs

Transfer Facilities

As the fixed-route transit grows, the need for safe, convenient locations to accommodate passenger transfers also increases. Serving an urbanized area of over 100 square miles only intensifies this need. In the complete build-out of the Long-Range Service Plan, there are ten transit centers plus one stand-alone park & ride facility recommended for construction. Of these ten transit centers, half are identified as primary transit centers and should be built with the capacity to accommodate between eight and 20 buses per hour. The remaining five transit centers are projected to be smaller in scale and should be capable of supporting six to eight buses per hour. Park & ride facilities are recommended to accompany three of the transit centers along the I-540 corridor. While current densities and ridership do not support higher capacity transit service in this corridor, property selection for the I-540-adjacent facilities should be selected prudently in the event future ridership and densities meet those criteria.

Location	Primary/ Secondary	Buses per Peak Hour*
Bentonville Walmart	Secondary	7
NWACC Main Campus	Primary	10
Rogers Walmart	Secondary	8
Springdale Walmart	Primary	8
East Springdale	Secondary	6
Downtown Fayetteville	Primary	20
Pinnacle Hills	Secondary with Park & Ride	7
Arvest Ballpark	Primary with Park & Ride	11
NWA Mall/Walmart	Primary	12
MLK Walmart	Secondary with Park & Ride	7
Bella Vista	Park & Ride only	2

** Peak Hour Buses based on complete implementation of Long-Range Plan*

Bus Stops and Amenities

Throughout the Razorback Transit system, bus stops are clearly marked with street-side signage, indicating the route that serves that location. ORT bus stops, however, are sparser and have only been installed at a small percentage of the locations served. Where stops do not exist, passengers instead "flag" or wave to the bus to indicate their desire to board. This creates a number of issues related to safety, consistency, customer awareness and maintenance of ORT's newly installed CAD/AVL technologies.

In the short and long-range plans, a general allocation has been assumed to install bus stops and amenities systemwide. Sidewalk and right-of-way improvements are also recommended in areas that lack adequate passenger waiting space. Priority should be given to apartment complexes and shopping centers where ORT currently serves internally. By improving street-side access to these properties, ORT will be able to streamline many of their routes and improve travel times for through-passengers. To round out the amenities program, the current shelter and bench program should be expanded as the more heavily utilized stops of the redesigned transit system emerge.

Vehicles

As both systems grow, new vehicles will need to be procured to accommodate expansion as well as replacements (Tables 8-8 and 8-9). In the short-range plan, ORT will transition the majority of its fleet to traditional 35' transit buses. A smaller number of cutaway buses, similar to those currently in use, will be maintained for neighborhood circulators and demand-response service. Razorback Transit's growth is projected to be more modest. Thus, their bus procurement is also expected to be more conservative. Given the high volumes of passengers carried, Razorback Transit will maintain the use of traditional 40' transit buses. On some routes such as Blue and Green, 60' articulated buses could be considered. However, the infrastructure at the Razorback Transit maintenance facility may not be able to accommodate these types of vehicles.

Table 8-8
Ozark Regional Transit – Current and Projected Fleet

	Current	Near-Term	Short-Range	Long-Range
Cutaway Buses				
Peak Requirement	12	11	2	11
Total Fleet	18	18	3	14
35' Buses				
Peak Requirement	0	0	32	48
Total Fleet	0	0	39	58
Demand Response				
Fleet	11	11	21	21
TOTAL FLEET	29	29	53	83

Table 8-9
Razorback Transit – Current and Projected Fleet

	Current	Near-Term	Short-Range	Long-Range
35'& 40' Buses				
Peak Requirement	16	17	18	18
Total Fleet	21	21	22	22
Demand Response				
Fleet	6	6	6	6
TOTAL FLEET	27	27	28	28

Operating Base

With the near doubling in fleet size anticipated in the short-range plan, ORT will easily outgrow its current operating base. A new operating base with the ability to park and maintain upwards of 100 buses should be considered. Increased space for expanded administrative staff and additional bus operators should also be accounted for in the new facility. The current ORT property may have sufficient property for construction. However, it may prove difficult to maintain efficient operations during this construction period. A more centralized site for the new operating base may be more advantageous. Ideally, property in Springdale with close proximity to I-540 would be selected; providing a centralized location while minimizing deadhead and overhead costs. Co-locating with the proposed Arvest Ballpark transit center and park & ride may provide additional opportunities for cost savings.

9.0 Financial Analysis

The Financial Analysis presents anticipated capital and annual operating and maintenance (O&M) costs for each phase of the TDP's defined time period – near-term (1-2 years), short-range (3-5 years) and long-range (6-10 years and beyond). Anticipated funds from passenger fares, federal and state sources are then identified, as well as funds required from local sources.

9.1 Existing Transit Revenues

Prior to determining financial requirements for the TDP service plans, it is important to have an understanding of how existing transit services are funded.

Existing Revenue Sources

Ozark Regional Transit's (ORT's) existing operating budget is approximately $2.6 million. Operating revenues for Ozark Regional Transit (ORT) come from a variety of sources.

- Federal 5307 (Small Urban Formula) - $1.16 million
- Federal 5311 (Rural Formula) - $50,000
- Federal 5316 (JARC) - $167,000
- State - $200,000
- Local Governments - $700,000
- Lifestyles & NWAC (local JARC match) -$167,000
- Miscellaneous (e.g., advertising) - $60,000
- Passenger Fares - $90,000

Razorback Transit's current operating budget is approximately $2.35 million. Primary sources of operating funds for Razorback Transit are as follows:

- Federal 5307 (Small Urban Formula) - $950,000
- State - $450,000
- Local Governments - $50,000 (Fayetteville)
- Miscellaneous (e.g., advertising) - $45,000
- University of Arkansas - $855,000

5307 Program

As noted above, both ORT and Razorback Transit receive a large portion of funding from the Federal Transit Administration's (FTA's) 5307 program. 5307 is a formula program. ORT and Razorback draw funds from 5307's "Small Urban Area" program (for urban areas under 200,000 population). These funds can be used for capital purchases (such as buses), operations and preventative maintenance. 5307 funds can be used for up to 50% of operations costs and 80% of capital costs. FTA 5307 funds flow first to the State, and then to the two transit agencies. ORT and Razorback Transit currently have an agreement in place that divides the Northwest Arkansas region's 5307 funds, with 55% going to ORT and 45% going to Razorback Transit.

It is anticipated that the 2010 Census will result in the Northwest Arkansas region being reclassified as a "Large Urban Area" under the 5307 program (i.e., the urbanized area population will be greater than 200,000). Transit agencies drawing funds from 5307 under the Large Urban Area portion of the program can use those funds only for capital purchases and preventative maintenance. 5307 funds will no longer be used towards operations. It is anticipated that Northwest Arkansas will be impacted by this program change in federal fiscal year 2014 (i.e., October 1, 2013). The estimated loss of 5307 funds that are

currently applied towards operations is $950,000 for ORT and $650,000 for Razorback Transit. The loss of 5307 funds towards operations will require replacement funding from other sources, if transit service in the Northwest Arkansas region is to remain at existing levels.

9.2 Cost Estimates

Implementation of TDP recommendations will increase the funding required for both annual operations and maintenance, and capital purchases. Following are estimates of those costs.

Operating and Maintenance Costs

Annual O&M costs were estimated by applying a cost per revenue-hour rate to the proposed ORT and Razorback Transit service plans. A rate of $60 per revenue-hour was applied to exiting ORT cutaway service and to Razorback service. A rate of $75 per revenue-hour was applied to regular fixed route ORT bus service in the short and long-range plans, when it is assumed ORT will be operating large buses and will require additional support staff. For ORT paratransit, it was assumed that paratransit costs would increase in conjunction with expanded local route service, and be equivalent to 20% of fixed route costs (based on ratios of paratransit costs to fixed route costs for peer systems). Table 9-1 presents anticipated costs for each service plan scenario. Costs are presented in current year (2011) dollars. As noted in this table, ORT's costs grow substantially for both the Short-Range and Long-Range scenarios.

Table 9-1
Annual O&M Cost Estimates (2011 dollars)

ANNUAL O&M COSTS	Existing	Change from Exist.	Near-Term	Change from N.T.	Short-Range	Change from S.R.	Long-Range
ORT O&M Costs							
Cutaway							
Rev. Bus-Hours	$29,116	0	29,116	-22,486	6,630	21,064	27,694
Hourly Cost	n/a	$60.00	n/a	$60.00	n/a	$60.00	n/a
Total O&M	$1,850,000	$0	$1,850,000	-$1,349,200	$500,800	$1,263,800	$1,764,600
Standard Bus							
Rev. Bus-Hours	n/a	0	0	112,710	112,710	88,224	200,934
Hourly Cost	n/a	$75.00	n/a	$75.00	n/a	$75.00	n/a
Total O&M	$0	$0	$0	$8,453,300	$8,453,300	$6,616,800	$15,070,100
Paratransit	***$750,000***	***$0***	$750,000	$1,040,800	$1,790,800	$1,576,100	$3,366,900
Total ORT O&M Cost	**$2,600,000**	**$0**	**$2,600,000**	**$8,144,900**	**$10,744,900**	**$9,456,700**	**$20,201,600**
Razorback Transit O&M Costs							
Rev. Bus-Hours	33210	227	33,437	2,989	36,426	0	36,426
Hourly Cost	n/a	$60.00	n/a	$60.00	n/a	$60.00	n/a
Total Razorback O&M Cost	**$2,350,000**	**$13,600**	**$2,363,600**	**$179,300**	**$2,542,900**	**$0**	**$2,542,900**
TOTAL REGIONAL O&M COSTS	**$ 4,950,000**	**$13,600**	**$4,963,600**	**$8,324,200**	**$13,287,800**	**$9,456,700**	**$22,744,500**

Note: Razorback Transit's annual costs are inclusive of both fixed route and paratransit costs.

Capital Costs

The TDP Short-Range and Long-Range service plans reflect significant expansion of transit services in the Northwest Arkansas region, and will require the purchase of new buses, enhanced passenger amenities at stops, the construction of new transit centers, park & ride lots and a new bus maintenance facility. Key assumptions used to develop capital cost estimates were as follows:

- A unit cost of $70,000 has been used for small body on chassis buses.
- A unit cost of $400,000 has been used for standard (30' to 40') buses.
- Bus expansion figures are based on vehicle requirements identified for each TDP phase.
- Bus replacement figures typically assume 2 to 3 replacement vehicles per year for both fixed-route and demand-response service.
- A unit cost of $1.25 million has been used for primary transit centers and $750,000 has been assumed for secondary transit centers. It is assumed that transit centers will typically be at locations that do not require the purchase of right-of-way (e.g., through developer land contributions, use of street right-of-way, etc.).
- A unit cost of $250,000 has been used for park & ride lots. It is assumed that park & ride lots will typically be at locations that do not require the purchase of right-of-way (e.g., through developer land contributions, lease arrangements with churches or shopping centers). The unit cost of $250,000 is assumed primarily for potential capital improvements (e.g., new access drives, re-paving of lots, signage).
- $15 million has been assumed for a new bus maintenance facility. This figure is based on cost estimates for other transit property bus maintenance facilities for similar sized systems (i.e., storage for 50 to 75 standard buses).
- An allowance has also been identified for bus stop enhancements, such as sidewalks, signalized crosswalks, bus stop signage and passenger shelters. The allowance has been assumed for both ORT and Razorback Transit.

The Near-Term Plan assumes only replacement vehicles per year for both ORT and Razorback Transit. No other capital costs are included in the Near-Term Plan. The Short-Term Plan requires significant expansion of vehicle fleet for ORT (standard buses). It also assumes the construction of primary and secondary transit centers (described in Chapter 8), a new maintenance facility and bus stop enhancements. Table 9-2 presents the capital cost requirements for each TDP phase. Costs are presented in 2011 dollars.

Table 9-2
TDP Capital Cost Estimates (2011 dollars)

Operator	Cost Item	Near-Term	Short-Range	Long-Range	Total 10-Year Costs
ORT	**Vehicle Capital Costs**				
	Cutaway Vehicles				
	Replacement Fleet Vehicles	6	2	3	11
	Expansion Fleet Vehicles	0	0	11	11
	Unit Cost	$70,000	$70,000	$70,000	n/a
	Total Cost	*$420,000*	*$140,000*	*$980,000*	$1,540,000
	Standard Bus				
	Expansion Fleet Vehicles	0	38	18	56
	Unit Cost	*$400,000*	*$400,000*	*$400,000*	n/a
	Total Cost	*$0*	*$15,200,000*	*$7,200,000*	$22,400,000
	D.R. (Paratranasit) Vehicles				
	Replacement Fleet Vehicles	6	9	15	30
	Expansion Fleet Vehicles	0	10	0	10
	Unit Cost	$70,000	$70,000	$70,000	n/a
	Total Cost	*$420,000*	*$1,330,000*	*$1,050,000*	$2,800,000
	Total Vehicle Costs	***$840,000***	***$16,670,000***	***$9,230,000***	**$26,740,000**
	Passenger Facility Capital Costs				
	Primary Transit Ctrs.				
	NWACC		$1,250,000		
	Springdale Wal-Mart		$1,250,000		
	Arvest Ball Park			$1,250,000	
	NWA Mall/Wal-Mart			$1,250,000	
	Downtown Fayetteville		$1,250,000		$6,250,000
	Secondary Transit Ctrs.				
	Bentonville Wal-Mart		$750,000		
	Rogers Wal-Mart			$750,000	
	Pinnacle Hills		$750,000		
	East Springdale		$750,000		
	MLK Wal-Mart			$750,000	$3,750,000
	Park-and-Ride Lots				
	Bella Vista			$250,000	
	Pinnacle Hills			$250,000	
	Arvest Ball Park			$250,000	
	MLK Wal-Mart			$250,000	$1,000,000
	Bus Stop Enhancements		$500,000	$500,000	$1,000,000
	Total Pass. Facility Costs	**$0**	**$6,500,000**	**$5,500,000**	**$12,000,000**
	Maintenance Facility Costs		**$15,000,000**		**$15,000,000**
TOTAL ORT CAPITAL COSTS		**$840,000**	**$38,170,000**	**$14,730,000**	**$53,740,000**

Table 9-2 (continued)
TDP Capital Cost Estimates (2011 dollars)

Operator	Cost Item	Near-Term	Short-Range	Long-Range	Total 10-Year Costs
Razorback	**Vehicle Capital Costs**				
	Standard Bus				
	Replacement Fleet Vehicles	4	6	10	20
	Expansion Fleet Vehicles	0	1	0	1
	Unit Cost	*$400,000*	*$400,000*	*$400,000*	n/a
	Total Cost	*$1,600,000*	*$2,800,000*	*$4,000,000*	$8,400,000
	D. R. (Paratransit) Vehicles				
	Replacement Fleet Vehicles	2	3	5	10
	Expansion Fleet Vehicles	0	1	1	2
	Unit Cost	*$70,000*	*$70,000*	*$70,000*	n/a
	Total Cost	*$140,000*	*$210,000*	*$350,000*	$700,000
	Bus Stop Enhancements	$0	$75,000	$75,000	$150,000
TOTAL RAZORBACK CAPITAL COSTS		**$1,740,000**	**$3,085,000**	**$4,425,000**	**$9,250,000**
TOTAL REGIONAL CAPITAL COSTS		**$2,580,000**	**$41,255,000**	**$19,155,000**	**$62,990,000**

9.3 Revenue Sources

Potential revenue sources that have been identified for this TDP include farebox revenues, federal funds, state funds and local funds. This chapter presents potential revenues for the first three revenue sources, and then identifies the amount of local funds required to match projected expenses.

Potential Farebox Revenues

Farebox revenues are based on projected ridership, multiplied by the average fare. Farebox revenues only apply to ORT service, since Razorback Transit does not charge a fare. This TDP assumes Razorback continues to be a fare-free system. Additional fare revenues could be generated if Razorback Transit were to charge for U of A trips. This will, however, require the purchase and installation of farebox machines on Razorback buses and cash handling staff and procedures at the maintenance facility. Consideration will also need to be given to potential bus loading impacts (i.e., longer times at bus stops) if fares were charged.

ORT Near-Term ridership is assumed to grow by 3 percent each year in response to proposed near-term recommendations in this TDP. ORT's current fixed route ridership averages about 7.5 riders per revenue bus-hour. This growth will raise average ridership to about 8 riders per revenue hour. For purposes of this TDP, short and long-range ridership (unlinked trips) was estimated by applying the following factors:

- Local Route Service – 18 riders per revenue-hour
- Regional Route Service – 15 riders per revenue-hour
- Rural/Flex Route Service – 7 riders per revenue-hour

Ridership per revenue-hour for other transit systems similar in size to what is proposed in the Short and Long-Range plans (such as Little Rock and Tulsa) ranges from 15 to 27 riders per revenue-hour, with an average of 20 riders per revenue-hour. This TDP assumes rates below the peer system average, for population and employment densities in the Northwest Arkansas region are generally lower than the peer systems.

The current cash fare for ORT is $1.25. For purposes of this TDP, the cash fare is assumed to remain the same (in 2011 dollars) for all future transit services. The average fare collected, however, will be less than the cash fare, due to pass discounts, elderly/student discounts, free transfers, etc. For purposes of this analysis, the average fare is assumed to be 70% of the cash fare, which is more than existing. It is important to note that as transit services are expanded in Northwest Arkansas, alternative fare structures should be considered, such as a zonal fare structure (i.e., fares that increase based on trip distance).

Table 9-3 presents potential farebox revenues from expanded ORT service. Revenues are presented in 2011 dollars. As previously noted, Razorback Transit is not included in this table; for it is assumed Razorback Transit continues to be fare-free.

Table 9-3
ORT Potential Farebox Revenues (2011 dollars)

	Near-Term	Short-Range	Long-Range
Local Route Service			
Rev. Bus-Hours	29,116	89,760	116,825
Annual Ridership	232,900	1,615,700	2,102,900
Cash Fare	$1.25	$1.25	$1.25
Average Fare Collected	$0.33	$0.88	$0.88
Annual Farebox Revenues	$76,900	$1,413,700	$1,840,000
Regional Route Service			
Rev. Bus-Hours	n/a	29,580	63,045
Annual Ridership	n/a	443,700	756,500
Cash Fare	$1.25	$1.25	$1.25
Average Fare Collected	$0.33	$0.88	$0.88
Annual Farebox Revenues	n/a	$388,200	$661,900
Rural/Flex Route Service			
Rev. Bus-Hours	n/a	n/a	21,064
Annual Ridership	n/a	n/a	147,400
Cash Fare	$1.25	$1.25	$1.25
Average Fare Collected	$0.33	$0.88	$0.88
Annual Farebox Revenues	n/a	n/a	$129,000
Demand Response	$75,000	$179,100	$336,700
TOTAL FAREBOX REVENUES	**$151,900**	**$1,981,000**	**$2,838,600**
(Fixed Route Farebox Recovery)	*4.2%*	*20.1%*	*15.6%*

Farebox revenues for D.R. - assumed to be 10% of O&M costs

Federal Funds

As noted earlier in this chapter, ORT and Razorback Transit presently receive 5307 funds that can be used towards capital purchases, preventative maintenance and O&M costs. In FY 2011, approximately $2.1 million went to Northwest Arkansas, with ORT receiving 55% and Razorback Transit receiving 45%. These funds come from the "small urban area" portion of the 5307 program. It is anticipated that the 2010 Census will result in the reclassification of the Northwest Arkansas region into "large urban area". ORT and Razorback Transit will still be eligible for 5307 formula funds. However, 5307 funds for large urban areas can only be applied towards capital purchases and preventative maintenance. The Arkansas State Highway and Transportation Department has estimated $32.6 million could be available through 5307 funds for capital purchases and preventative maintenance between 2012 and 2022. This estimate is based on current ORT and Razorback Transit services. Expanded transit services will bring more 5307 formula funds to the Northwest Arkansas region.

Other federal transit funds may also be available for Northwest Arkansas transit services, such as 5309 (the transit capital investment program) and 5316 (Job Access Reverse Commute – JARC). ORT currently receives JARC funds for NWACC and Lifestyles services. For purposes of this analysis, it is assumed that federal funding (primarily through 5307 and 5309) will be available for 80% of all capital costs. No federal funds have been assumed for operating after FY 2013. However, as noted above, 5307 funds can be applied to preventive maintenance.

ORT also receives some funds through 5311 for rural transportation. 5311 funds can be used for both operations and capital purchases. The amount currently received by ORT (approximately $50,000), is assumed to remain constant throughout the TDP's 10-year time period.

State Funds

State funds for transit are available through a statewide rental car tax. ORT receives about $200,000 in state funds through the rental car tax. Razorback Transit receives $450,000 in state funds. This funding stream is also assumed to remain constant annually through the TDP's 10-year time period for both transit systems (in current year dollars).

Miscellaneous Revenues

ORT and Razorback Transit also receive other miscellaneous revenues through sources such as advertising. It has been assumed those miscellaneous revenues will continue to be received throughout the TDP's 10-year time period, at about $50,000 each year for ORT and $50,000 each year for Razorback Transit (in current year dollars).

Cash Flow Analysis

Total expenses for the TDP have been estimated by summing up annual O&M cost and capital costs for each of the following TDP time periods:

- Near-Term – 2012-2013 (2-years)
- Short-Range – 2014-2017 (3 years)
- Long-range – 2018-2022 (5 years)

Table 9-4 presents a cash flow analysis for the TDP service plan. Costs presented in this table are in 2011 dollars. The Short-Range Plan assumes a 3-year implementation period (e.g., 1/3 of Short-Range service expansion projects are implemented in 2014, another 1/3 in 2015 and the last 1/3 in 2016). A 3-year implementation period is also assumed for the Long-Range time period (2020 through 2022).

Farebox, federal and state funding revenues that are presented in Table 4-2 are based on the assumptions presented in this Technical Memorandum. Local funding requirements were determined by subtracting known revenues from total expenses. In total, almost $112 million is estimated to be required from local funding sources over the 10-year time period.

At Razorback Transit, $855,000 is provided by the University of Arkansas. This amount is calculated based on student enrollment; thus is subject to fluctuations from year to year. However, this funding arrangement is typical of university-provided transit services across the country. For the purpose of this cash-flow analysis, the University of Arkansas contribution has been included in the "Local Funding" amount. Local funds for ORT service are currently obtained through the general budgets of local municipalities and counties. Transit is funded in many areas of the country through a dedicated tax – typically a sales tax or property tax. Analysis from a prior study has indicated a ¼ cent sales tax in Benton and Washington Counties will generate approximately $15 million/year in the two counties. Assuming a sales tax is put on the ballot and passed, 2014 is likely the soonest sales tax revenues could start being received. Thus, this tax could bring in $120 million between 2014 and 2022 (the last year of the TDP time period). As noted below, $112 million in local funds is anticipated to be required over the TDP ten-year time period. Thus, the Short-Range and Long-Range Plans presented in this TDP could be fully implemented, should a ¼ sales tax be adopted.

It is important to note that the likely loss of Federal 5307 funds towards operations costs in 2014 affects both ORT and Razorback Transit. Implementation of a ¼ cent sales tax could be applied towards both the loss of federal funds for existing services and the proposed expansion of transit services, as presented in this TDP. Thus, a cost sharing agreement outlining how local sales tax revenues (if put on the ballot and passed by the voters) are to be be split between ORT and Razorback Transit would be needed to ensure both systems remain viable.

Finally, it is important to note that this TDP has provided only a cursory review of funding requirements and potential funding sources. A more detailed assessment of costs and revenues will eventually be required, should officials in Northwest Arkansas decide to pursue a dedicated tax funding source for transit, such as a sales tax.

Table 9-4

Cumulative Expenses and Revenues – Local Funds Required (2011 dollars)

		Agency	Near-Term 2012-2013	Short-Range 2014-2017	Long-Range 2018-2022	10-Year TDP Period
Expenses	O&M	ORT	$5,200,000	$24,089,800	$72,637,900	$101,927,700
		Razorback	$4,727,200	$7,628,700	$12,714,500	$25,070,400
	Capital	ORT	$840,000	$38,170,000	$14,730,000	$53,740,000
		Razorback	$1,740,000	$3,085,000	$4,425,000	$9,250,000
	Total Expenses		**$12,507,200**	**$72,973,500**	**$104,507,400**	**$189,988,100**
Revenues	Farebox		$303,800	$4,113,900	$13,335,400	$17,753,100
	Fed. Funds - Operating		$1,600,000	$0	$0	$1,600,000
	Fed. Funds - Capital		$2,064,000	$33,004,000	$15,324,000	$50,392,000
	Fed. Funds - 5311		$100,000	$150,000	$250,000	$500,000
	State Funds		$1,300,000	$1,950,000	$3,250,000	$6,500,000
	Miscl. Funds		$300,000	$450,000	$750,000	$1,500,000
	Local Funds Req'd.		**$6,839,400**	**$33,305,600**	**$71,598,000**	**$111,743,000**
	Total Revenues		**$12,507,200**	**$72,973,500**	**$104,507,400**	**$189,988,100**

Note: Local Funds include those budgeted annually by the University of Arkansas for Razorback Transit service.