Table of Contents

1. Bus Rapid Transit in Northwest Arkansas
   - Why Bus Rapid Transit ....................................................... 1-1
   - Project Goals ...................................................................... 1-4
   - The Study Process ................................................................. 1-4

2. Outreach – Listening to the Community
   - Introduction .......................................................................... 2-1
   - Community Meetings and Stakeholder Input ......................... 2-1
   - Survey Efforts ........................................................................ 2-4
   - Community Outreach Summary ............................................. 2-12

3. Existing Services
   - Introduction ............................................................................ 3-1
   - Peer Comparison ..................................................................... 3-1
   - Public Transit Providers Serving the US 71B Corridor ............... 3-2
   - Current Services along the UD 71B Corridor ............................. 3-6
   - Potential Cross-Corridor Connections ..................................... 3-14

4. Demographics, Land Use and Travel Patterns
   - Introduction ............................................................................. 4-1
   - Population Analysis ................................................................. 4-2
   - Transit Dependent Population ............................................... 4-5
   - Title VI Demographic Analysis ............................................... 4-10
   - Land Use Profile ..................................................................... 4-14
   - Regional Travel Patterns ....................................................... 4-18
   - Demographic, Land Use and Regional Travel Summary ........... 4-19

5. Service Area Needs and Ridership
   - Need – The Key Issue ............................................................. 5-1
   - Determining Potential Ridership .............................................. 5-2
6. Draft Plan for Smart BRT for Northwest Arkansas: Virtual Dedicated Lane Service

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>6-1</td>
</tr>
<tr>
<td>BRT – One Size Does Not Fit All</td>
<td>6-1</td>
</tr>
<tr>
<td>Smart BRT – A Truly Innovative Approach</td>
<td>6-3</td>
</tr>
<tr>
<td>Smart BRT – The Need for Speed</td>
<td>6-6</td>
</tr>
<tr>
<td>Potential Ridership</td>
<td>6-7</td>
</tr>
<tr>
<td>Smart BRT – The Service</td>
<td>6-7</td>
</tr>
<tr>
<td>Capital and Operating Costs</td>
<td>6-17</td>
</tr>
<tr>
<td>Funding Service</td>
<td>6-19</td>
</tr>
<tr>
<td>Summary</td>
<td>6-21</td>
</tr>
</tbody>
</table>
Chapter 1: Bus Rapid Transit in Northwest Arkansas

Northwest Arkansas is one of the fastest growing urban areas in the country and is clearly ready to take the next step in transit service: regional connectivity in Ozark Regional Transit (ORT) service.

To make another point: The area attracts people from all around the world and is a dynamic community driven by major corporations and the university. This is exactly the type of community and type of people that are attracted to transit.

This opportunity, combined with legendary traffic in the region indicates that the time to expand to meet this growing need is now. The Smart Bus Rapid Transit (BRT) with virtual dedicated lanes will put the region on the path to meeting the transportation needs of its citizens and visitors.

**WHAT IS BUS RAPID TRANSIT?**

Bus Rapid Transit (BRT) can connect the region with fast, frequent and dependable transit service in safety and comfort. There are a number of forms a BRT system can take and at the high end, the buses travel in dedicated lanes or right of way.
Chapter 1: Bus Rapid Transit in Northwest Arkansas

Smart BRT: A Truly Innovative Approach

Smart BRT with virtual dedicated lanes is an innovative new approach designed to combine detailed planning, highly trained staff and appropriate vehicles with an infusion of technologies and proper signage to ensure that buses can offer equivalent door-to-door travel time to a personal auto (or close to it) in comfort and convenience.

Northwest Arkansas is ready for expanded transit and can be in position for success. This plan proposes to use most elements of the BRT to enhance service and will be done without the massive costs associated with dedicated lanes, which are not feasible at this time.

Smart BRT can serve as a precursor to full dedicated lanes when demand warrants and funding is available as all other elements will already be in place.

The Need for Speed

The BRT is dependent to some degree on the all-important travel time. Survey respondents indicated that rapid service is a priority. The Smart BRT is designed to take advantage of every opportunity to move through the service area in a rapid manner. Signal prioritization can shave 5 – 10 minutes off travel time. Little things like a bus with large doors and rapid acceleration can reduce station time by 10 to 15 seconds for example. While that may not sound like much, when multiplied by 20 stops in an hour, travel time can be reduced by 3 to 5 minutes per hour. When combined these activities can make Smart BRT travel times competitive with the private auto on a door-to-door basis. An added benefit: Instead of driving, a rider can be reading a book, preparing for work or just closing their eyes.

A virtual Dedicated Lane

Most realistic for an area such as Northwest Arkansas is a Smart BRT where the vehicle operates in traffic, but has most of the BRT features to ensure rapid service with higher frequency (a virtual dedicated lane):

a. Frequency: Typically in BRT service during peak hours a bus arrives every 7.5 to 10 minutes, off peak hours will see a bus every 15 to 30 minutes.
Chapter 1: Bus Rapid Transit in Northwest Arkansas

b. Vehicles: All systems use large capacity vehicles with large doors for ease of access.

c. Stations: Limited stops with permanent shelters, raised platforms, using electronic signage and fare payment systems for the most patronized stations.

d. Signal Prioritization: The ability to sustain a green light when the bus is behind schedule.

e. Technologies: Full use of a variety of other technologies designed to minimize bus dwell time (when the bus is sitting at a station).

f. Well-trained and skilled bus operators and supervisors.

g. Branding: Service is typically branded separately and distinctly.
Chapter 1: Bus Rapid Transit in Northwest Arkansas

h. Connecting routes with timed meets.

i. Strategically located park and ride lots.

**PROJECT GOALS**

This study was conducted to determine the feasibility of a BRT type service along U.S. 71B in Northwest Arkansas. The project goals are as follows:

I. Determine Feasibility of BRT on US 71B
   a. Identify the needs in the entire corridor

II. Identify Potential Strategies
   a. Realistic based on current and near term future needs
   b. Cost – benefit

III. Develop Implementation Plan

**THE STUDY PROCESS**

The study process included a variety of tasks leading up to the Implementation Plan. Each of these tasks resulted in a technical memorandum that detailed the documentation to support the need and service design. This plan now includes the following chapters:

- Chapter 2: Outreach and Stakeholder Input – A robust approach was used to ensure all voices were heard. This consisted of public meetings, stakeholder meetings, business surveys, general public surveys and targeted surveys.

- Chapter 3: Review of Existing Services – The focus is on routes that as currently configured operate on part of US 71B.

- Chapter 4: Demographics, Land Use and Travel Patterns Review – An analysis of the region’s population and travel patterns.

- Chapter 5: Assessment of Needs – Needs were identified based on the extent of existing services and comparing them to the demographics and travel patterns.

- Chapter 6: Selection of Alternatives and Draft Plan

Those persons interested in understanding the detailed analysis are referred to the four technical memoranda in Attachment I.
Chapter 2: Outreach- Listening to the Community

INTRODUCTION

Ozark Regional Transit (ORT) wanted to hear from residents and stakeholders regarding the potential for BRT type service in Northwest Arkansas. The outreach effort for this BRT study was wide ranging and extensive. Critical elements of the outreach included the following approaches which will be summarized in this chapter:

- **Community public meetings** – Four public meetings were held in April 2017.

- **Stakeholder interviews** – Interviews were conducted with representatives of cities, large businesses, chambers of commerce, planning agencies, transit systems and other interested parties.

- **Public, commuter and business surveys** – Over 1,000 public surveys were completed and more than 40 business/human service agency surveys were completed.

- **Advisory Committee** – All planning documents will be reviewed by the advisory committee.

COMMUNITY MEETINGS AND STAKEHOLDER INPUT

As part of this feasibility study a series of community meetings were conducted in the region. These meetings provided the opportunity to introduce the Bus Rapid Transit (BRT) concept, discuss the transportation needs in the area and obtain community input on how potential BRT services could help to improve mobility in the US 71B corridor.

Community meetings were scheduled and conducted as follows:

- **Springdale:** Tuesday, April 11, 5:30-7:00 p.m.
- **Fayetteville:** Wednesday, April 12, 4:00-7:00 p.m.
- **Bentonville/Rogers:** Thursday, April 13, 2:00-4:00 p.m.
- **Lowell:** Thursday, April 13, 4:30-7:00 p.m.

In conjunction with community meetings, individual interviews were conducted with key stakeholders to discuss the BRT concept and obtain their comments on what results they would like to see from this study. The study team reached out to each city. The following agencies and organizations were interviewed:
Chapter 2: Outreach

- Fayetteville Chamber of Commerce
- Springdale Chamber of Commerce
- Northwest Arkansas Regional Planning Commission
- Lowell City Staff
- Northwest Arkansas Council
- Fayetteville Mayor and City Staff
- Representatives from Georges, Walmart, JB Hunt and Tysons Food
- Walton Family Foundation
- Ozark Regional Transit and Razorback Transit

Northwest Arkansas is a diverse region with a strong international flavor as people from all around the world come to this area to work. With a major university and headquarters for one of the largest companies in the world, there were many voices interested in BRT, as it would fill the need to connecting the cities. Service needs, route design, station location, operational considerations were all discussed in detail with the community and local stakeholders. Following is a summary of community comments.

Service Needs

- Stakeholders noted that there are transportation needs between Bentonville and Fayetteville but most importantly just going from one city to the next can be difficult.

- BRT service would benefit the community as a whole and in particular workers and students at major regional employers, colleges, universities and medical facilities in the region.

- Improved transit services are often a major discussion among local planning agencies and businesses.

Route Design

- Residents stated that service should operate along the entire corridor and not just in sections.

- While the alignment of the route on US 71B was the focus of this study it was noted that meaningful connections to other areas in the region would be needed.

Station Placement

- It is important that the route service major destinations (employment, medical, shopping) as well as origins with park and ride stations, and stations near neighborhoods.
• Stations should be limited to keep the express nature of the route but be frequent enough to serve the areas needed.

**Park and Ride Considerations**

Park and ride locations should be placed strategically throughout the corridor to maximize accessibility for residents.

**Need for Multi-Modal Connections**

Many stakeholders expressed the need for BRT services to connect with other modes of transportation. Specifically they mentioned connections with bicycling, which is very popular in the area; they also noted that stations and buses must accommodate bikes.

**Service Considerations**

Many stakeholders expressed the desire to see a service that can compete with an automobile in travel times along the corridor.

**Fare Structure**

Fares should be competitively priced and the fare system should not infringe on the bus dwell time at each station. Fare free service was seen as a way to generate the most ridership and should be considered as a promotional/start-up event at a minimum.

**Hours of Operation**

There was agreement that minimum hours for BRT service needs to be from 6:00 a.m. to 9:00 p.m., Monday through Friday. Some stakeholders noted additional need for “night owl” service between Bentonville and Fayetteville.

**Connecting to Other Transportation Options**

• Essential to the success of a limited stop express service includes the ability of transit to feed the route. This could include accessible pathways, park and ride locations and connecting public transit, in this case both Razorback Transit (RT) and Ozark Regional Transit (ORT).

• Currently buses have bike racks and stakeholders reported they are used frequently. Building upon this, a more formal bike share program could be considered.
The Northwest Arkansas Council expressed need for a Guaranteed Ride Home (GRH) program so that BRT customers have another option if they use the service for work trips.

**Expanded Outreach Efforts**

Stakeholders expressed the need for an effective marketing campaign to ensure success of BRT service. Outreach that targeted millennials was suggested and included a need to ensure information on services would be available through the ORT App.

**SURVEY EFFORTS**

This planning effort consisted of three rounds of surveys focusing on:

- The general public
- Commuters, targeting major employers
- Businesses

Overall, the surveys indicated that there is significant interest in a robust transit service in the US 71B corridor. A BRT service can benefit commuters, students, transit dependent populations and choice riders. Community members stated the desire to use the service for both commuting and personal trips. There was stated desire to see frequent, low-fare, safe service that connects to major destinations and other modes. Rapid service was also a factor among participants. Many private sector employers expressed interest in sponsorships and partnerships to better serve their employees and support the service.

The results of the public and commuter surveys showed many similarities. Two thirds of over 1,000 respondents stated that they would use the service at some point. Most importantly, respondents overwhelmingly stated that they would like fast and frequent service that uses real time information with clean vehicles, safe stations and ideally a mobile application. There was also an unusually high number of affluent (over $100,000 in annual income) respondents. While this lends itself to the ability to charge higher fares it should be noted that many responses were completed online and major corporate employers were targeted. There are many lower income workers along the corridor that may not have responded to the surveys that would greatly benefit from a low fare service along the corridor.

**General Public Survey**

General public surveys are an essential component in the development of public transit feasibility studies. A survey was conducted as part of this study regarding the practicability of BRT service along US Business 71. The purpose of the survey was three-fold:
1. Assess attitudes of the general public to determine if there is an interest in a “higher level of bus service” along US Business 71 between Fayetteville and Bentonville.

2. Identify major origins and destinations.

3. Identify potential services and amenities that would encourage the public to ride the bus.

**Survey Analysis Summary**

The major results from this survey is that the service will be used most heavily during the peak commuting hours, service needs to be fast and frequent, and connections to major employment destinations are needed.

**Who are the Respondents?**

- **Age.** Of the 515 respondents, 354 (68.7%) are between the ages of 25 and 54. Stratifying the age category further, persons between ages 25 and 34, persons between ages 35 and 44 and persons between ages 45 and 54 each account for roughly 22 percent of the respondents.

- **Income.** Of the 513 respondents, 132 (25.7%) indicated their income is above $100,000 annually. Not far behind, persons with an annual income between $45,001 and $65,000 ranked 2nd place – 124 (24.2%). These are unusually high numbers of middle income or higher respondents.

- **Employment status.** Of the 515 respondents, 392 (76.1%) indicated they are employed full-time.

**Travel Patterns**

In an effort to determine potential travel patterns, respondents submitted origin and destination zip codes. There were seventy respondents who indicated their travel pattern is within Springdale and 70 respondents who indicated their travel pattern is within Fayetteville. When combining the travel patterns of respondents between Springdale and Fayetteville, this becomes the third most evident travel pattern.

**Ideal Bus Stops**

In an effort to determine potential bus stops, respondents were asked to identify ideal bus stop locations along US Business 71 between Bentonville and Fayetteville. Based on the responses, 16 destinations were often mentioned (see Table 2-1).
Table 2-1: Desired Bus Stop Locations

<table>
<thead>
<tr>
<th>Bentonville</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bentonville Square</td>
</tr>
<tr>
<td>2. Walmart</td>
</tr>
<tr>
<td>3. Walmart Home Office</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rogers</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Downtown Rogers</td>
</tr>
<tr>
<td>5. Frisco Station Mall</td>
</tr>
<tr>
<td>6. Pinnacle Hills Promenade</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Springdale</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Springdale High School</td>
</tr>
<tr>
<td>8. Northwest Arkansas Mall</td>
</tr>
<tr>
<td>9. Downtown Springdale</td>
</tr>
<tr>
<td>10. Walmart</td>
</tr>
<tr>
<td>11. Don Tyson Parkway</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fayetteville</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Fiesta Square</td>
</tr>
<tr>
<td>13. Evelyn Hills Shopping Center</td>
</tr>
<tr>
<td>14. Fayetteville Square</td>
</tr>
<tr>
<td>15. Downtown Fayetteville</td>
</tr>
<tr>
<td>16. Northwest Medical Center</td>
</tr>
</tbody>
</table>

Time Periods

Respondents were asked to identify time periods they are most likely to ride the bus. As expected, the majority of respondents indicated they would ride the bus during peak periods, 34.5 percent, during the morning peak and 38.8 percent during the evening peak (see Figure 2-1).

Services and Amenities

Respondents were asked to identify what services and amenities would persuade them to utilize the bus service. Of the thirteen categories, 65.4 percent of respondents indicated that if real time bus arrival were available, they would most definitely use the service. Closely behind are clean vehicles (64.0%); a sense of safety on-board vehicles and at stations (64.0%); and a smartphone application to plan a trip (55.4%). About one-half of riders indicated rapid service as very important.

Bus Frequency Arrival

Respondents were asked, “How frequently should the bus operate?” Of the 324 respondents, almost half (46.0%) indicated the ideal bus frequency is fifteen minutes (see Figure 2-2).
Figure 2-1: Time Period’s Respondents Most Likely to Ride the Bus

![Bar chart showing the percentage of respondents likely to ride the bus at different times of the day.]

Figure 2-2: Bus Frequency by Respondent

![Bar chart showing the frequency of bus services at different intervals.]

Commuter Surveys

The commuter survey effort was set with a more narrowed focus on origins and destinations and commuting service preferences and parameters. The Project Team targeted employees of major employers in the region to gain a better understanding of their commute patterns and attitudes toward potential BRT service.
Like the public survey, there was an expressed need to serve the cities along the corridor such as Springdale and Rogers. Additional similarities were the desire to see fast, frequent and safe service that is comfortable and affordable.

**Commuter Survey Summary**

A total of 696 surveys were completed on Survey Monkey. The average completion rate was 98.4 percent for the valid responses. Overall, the completion rate was high with no question getting lower that 95 percent of valid responses.

**Who are the respondents?**

- **Age.** Of the 696 respondents, 256 (36.7 percent) are between the age of 35 and 44 years old. Not surprisingly for an employee and commuter survey ages 25 to 54 account for 80 percent of the total responses. For the previous general public survey, 68.7 percent of the respondents were between the age of 25 and 54.

- **Income.** Of the 696 respondents, 246 (35.3 percent) indicated their annual income is above $100,000. Persons with an annual income between $65,001 and $85,000 ranked 2nd place – 108 (15.5 percent). In the previous general public survey 25.7 percent indicated their income is above $100,000 annually. Not far behind, persons with an annual income between $45,001 and $65,000 ranked 2nd place with 24.2 percent.

**Origin and Destination**

Respondents were asked to give the relative location of their homes and places of employments. Table 2-2 displays the commute travel matrix of the survey respondents. As shown the most common commutes are intra city with resident living and working in the City of Bentonville and Fayetteville.

Employees commuting from one end of the corridor to the other (Fayetteville to Bentonville 4.5 percent, Bentonville to Fayetteville 3.5 percent) account for only 8 percent of the survey responses. Many residents live and travel to adjacent cities with Springdale to Fayetteville having the highest response rate (8.3 percent).

**Commute Factors**

In an effort to determine peak travel times, respondents were asked their arrival and departure times at their place of employment. The largest responses were between 7:31 a.m. and 8:00 a.m. in the morning and between 5:01 p.m. and 5:30 p.m. in the afternoon.
Table 2-2: Commuter Travel Matrix

<table>
<thead>
<tr>
<th>Origin</th>
<th>City</th>
<th>Bentonville</th>
<th>Rogers</th>
<th>Lowell</th>
<th>Springdale</th>
<th>Fayetteville</th>
<th>Total Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonville</td>
<td>91 (13.3%)</td>
<td>0</td>
<td>17 (2.4%)</td>
<td>6 (0.8%)</td>
<td>24 (3.5%)</td>
<td>138 (27%)</td>
<td></td>
</tr>
<tr>
<td>Rogers</td>
<td>45 (6.6%)</td>
<td>7 (1%)</td>
<td>5 (0.7%)</td>
<td>9 (1.3%)</td>
<td>10 (1.4%)</td>
<td>76 (14.9%)</td>
<td></td>
</tr>
<tr>
<td>Lowell</td>
<td>10 (1.4%)</td>
<td>6 (0.8%)</td>
<td>4 (0.5%)</td>
<td>6 (0.8%)</td>
<td>4 (0.5%)</td>
<td>30 (5.8%)</td>
<td></td>
</tr>
<tr>
<td>Springdale</td>
<td>22 (3.2%)</td>
<td>6 (0.8%)</td>
<td>11 (2%)</td>
<td>32 (4.6%)</td>
<td>57 (8.3%)</td>
<td>128 (25%)</td>
<td></td>
</tr>
<tr>
<td>Fayetteville</td>
<td>31 (4.5%)</td>
<td>6 (0.8%)</td>
<td>15 (2%)</td>
<td>5 (0.7%)</td>
<td>81 (11.8%)</td>
<td>138 (27%)</td>
<td></td>
</tr>
<tr>
<td>Total Destination</td>
<td>199 (39%)</td>
<td>25 (4.9%)</td>
<td>52 (10.1%)</td>
<td>61 (11.9%)</td>
<td>176 (34.5%)</td>
<td>510 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Trips made outside of the US 71B corridor are excluded from this analysis.

**Commute Duration**

To understand how long residents spend commuting, respondents were asked to give their average morning and evening commute durations. This data can be used to determine a range of trip duration that will make BRT competitive with the personal vehicle. Figures 2-3 and 2-4 display the average commute durations by number of respondents.

**Figure 2-3: Average Morning Commute Duration**

![Average Morning Commute Duration](image.png)
BRT Attitudes and Amenities

To help assess the feasibility of BRT service on the US 71B corridor respondents were asked several questions about the aspects of service that may help them ride.

- Two thirds of the respondents stated that they would use BRT service to access employment if frequency and travel times were convenient.
- On average respondents stated that $2 per one-way trip was the desired fare.
- Headways (frequency) of 10 to 15 minutes were the most desired.
- There was a relative equal distribution of desired amenities with frequent service, rapid service, real-time bus information, smartphone app, shelters at stations, and well-lit stations being the most desired amenities.

Business Surveys

Business surveys are an essential component in the development of public transit feasibility studies. A survey was conducted as part of this study regarding the practicability of BRT service along US Business 71. The purpose of the business survey was two-fold:

1. Identify employee transportation issues and needs.
2. Determine if businesses are interested in financially supporting a higher level of service along US Business 71 corridor.

**Survey Response Summary**

A total of 40 companies completed the survey on Survey Monkey. Please note that the largest companies: Wal-Mart, JB Hunt, Tysons Foods and Georges were all interviewed individually and their responses are in the stakeholder section.

**Shifts**

Employers were asked to identify their typical employee shift times and approximate how many employees work during the shift. Based on the responses, there were three common shift times identified:

- Shift No. 1. The majority of the respondents indicated their employees work between the hours of 7 a.m. and 6 p.m.
- Shift No. 2 and Shift No. 3. These shift periods vary among the companies. No two companies have identified the same Shift 2 and Shift 3 time periods.

**Employee Modal Choice**

Employers were asked to identify how their employees currently travel work (respondents were able to select more than one mode). Of the 23 respondents that answered this question with 22 (95.7%) indicating their employees travel alone, by car. Notably, there are nine who utilize a bicycle for work-related trips. The remaining modal choices are less than five (Carpool 3, Walk 3, Other 2, ORT 1, Razorback Transit 1, Uber 1, Unknown 1).

**Employee Transportation Issues**

Employers were asked, “Have your employees indicated that transportation is a problem traveling to/from work?” Of the 21 responses, sixteen employers indicated that their employee’s specified transportation is a problem.

**Employee Hiring and Retention**

Employers were asked, “Has your company/agency identified transportation as an issue in hiring and retaining employees?” Of the 20 companies/agencies that responded to this question, 7 (35.0%) indicated – yes.
Programs, Services and Incentives

Employers were asked, “In the past, or currently, does your company/agency offer any type of the following programs, services, or incentives?” Employers currently offer flexible work schedules (12) and telecommuting options (10).

Comments

- “A transit system should enable riders to work--strong Wi-Fi, adequate seating room and schedules that allow early and late travel.”

- “Reasonable fees but self-sustaining.”

- “We’re really small, so many of these options would not work for us. Personally, I live near 71 in Springdale and would take the bus to work in Fayetteville if it were an option. It would make it possible for our family to need only one car.”

- “The planning should consider adjusting the current working hours to ease the transportation issues.”

- “Probably should ask in this survey who these business and agencies serve. The people we serve have the transportation issues, not our employees.” It should be noted that these questions were asked in the general public surveys and public meetings.

COMMUNITY OUTREACH SUMMARY

This study has included a robust community and stakeholder outreach effort. The activities of this effort have consisted of:

- Four community public meetings.

- Over ten stakeholder interviews with cities, large businesses, chambers of commerce, planning agencies, transit systems and other interested parties.

- Public and business surveys with over 1,000 total responses.

The focus of community and stakeholder outreach activities was to assist in ascertaining the level of support, demand and feasibility of a BRT service on the US 71B corridor. Major findings include:

- Approximately 35% of survey respondents stated that they would use the service during morning and evening peak travel times. Peak travel times are also the major shift times for employers on the corridor.
Chapter 2: Outreach

- The top five desired service amenities desired by survey respondents are real time bus arrival information, clean vehicles, a sense of safety on vehicles and at stations, a smartphone application to plan a trip and rapid service.

- The vast majority of survey respondents desire at least 15 minute headways during peak travel times.

- Desired station locations are concentrated at major employment locations along the corridor.

- The Northwest Arkansas Council stated that they talk to between 400-500 employers each year and improved transit services comes up often in these discussions. The businesses in the area, especially Walmart and George’s, attract employees from parts of the country where transit services are readily available. These employees expect to have transit options when moving to Northwest Arkansas and lament that the region has limited options beyond a single occupant car.

- Stakeholders suggested park and ride locations be placed at each end of the route as well as at a number of locations with easy and rapid access for people choosing to park and ride.

- Many stakeholders expressed the need for BRT services to connect with other modes of transportation. Specifically they mentioned connections with bicycle pathways, which is very popular in the area and noted that stations and buses must accommodate bikes.

- There was agreement amongst community members and stakeholders that BRT services should have a competitive fare, to attract customers. Fare technology should be employed to improve ease of boarding and dwell times along the route.

- 38 percent of employers surveyed stated that at least some of their employees have indicated transportation issues.

- 12 employers indicated interest in a sponsorship opportunity with the BRT service.
Chapter 3: Existing Services

Introduction

This chapter identifies and quantifies all service on, adjacent to or crossing over US 71 Business (US 71B) between Fayetteville and Bentonville to be used as a benchmark for potential Smart Bus Rapid Transit (BRT) service on US 71B, as well as to determine the routes that would feed to Smart BRT.

It should be noted that Smart BRT will be dependent to some extent on connecting fixed routes and other feeder buses. This effort will lay the groundwork for identifying which routes should be modified to better complement the Smart BRT service.

Peer Comparisons

As part of this process it is appropriate to compare service in Northwest Arkansas to similar sized urban areas. Each service, city or region has its own context and operating environment and conditions, so it is important to state that this is not about determining which transit systems are best. It should be noted that most of these peers have separate university systems that are not included in this analysis.

The analysis focuses on the number of vehicles that operate in peak service and the amount of trips per capita – two important measures of service. Peak vehicles allude to the level of service available in the community and trips per capita denote how often the service is used by residents. Figure 3-1 details the findings. The service level in Northwest Arkansas is far lower than any of the other cities, with Wichita, the next smallest system carrying almost five times the per capita ridership. As discussed in the needs chapter (5). Public transit in Northwest Arkansas is well behind the other regions in any reasonable measurement.

Figure 3-1: Peer Comparison
A major difference between Northwest Arkansas and these peer regions is that Northwest Arkansas doesn’t have a dominant transit city and/or a dedicated funding source. This is a major disadvantage for transit.

**PUBLIC TRANSIT PROVIDERS SERVING THE US 71B CORRIDOR**

The first step in this process is to review the existing services in the study area. Two public transit providers serve the study area: ORT and Razorback Transit (RT).

**Ozark Regional Transit**

ORT is a private non-profit organization that provides public transit services in Benton, Carroll, Madison, and Washington Counties. Headquartered in Springdale, Arkansas, the organization is governed by a board of directors comprised of representatives of each county and the Cities of Springdale, Fayetteville, Bentonville, and Rogers.

ORT operates fixed route service in Benton and Washington Counties, and demand response service in all four counties. Americans with Disabilities Act (ADA) paratransit service is provided within three-quarters of a mile of fixed routes for individuals with disabilities who are unable to use fixed route service.

ORT fixed routes are the focus of this section, specifically those that currently serve the US 71B corridor. ORT operates thirteen fixed routes in and connecting Fayetteville, Springdale, Johnson, Rogers, and Bentonville. (A fourteenth route, Route 620, was converted to demand response service beginning April 10, 2017.) There is no service connecting all of the cities at this time. ORT’s system schematic as of September 2016 is shown in Figure 3-2.

ORT fixed routes operate Monday through Friday. Most routes operate on hourly headways, beginning between 6:00 a.m. and 7:05 a.m. and ending between 7:05 p.m. and 7:30 p.m. Route 490, a limited-stop express route connecting the University of Arkansas, Northwest Arkansas Mall, and Northwest Arkansas Community College in Springdale and Bentonville, operates later in the evening. A reduced schedule is operated outside of the academic year.

ORT fixed route fares are follows:

- $1.25 for regular adult riders
- $1.00 for youth ages 6 - 18 and University of Arkansas students
- $0.60 for seniors 60 – 74, disabled individuals, and Medicare cardholders with valid ID
- Free for seniors 75+, veterans with a service-connected ID, and children under age 6.

Transfers between ORT routes are free. Multi-ride passes are also available.
Figure 3-2: ORT Fixed Route System Schematic, September 2016

All ORT buses are equipped with bicycle racks and free Wi-Fi service. ORT offers travel training to make it easier for people with disabilities to learn to ride fixed route service independently.

Table 3-1 presents general system-wide operating statistics for ORT fixed routes for each of the past three calendar years.

Table 3-1: Ozark Regional Transit Operating Statistics, CY2014-2016

<table>
<thead>
<tr>
<th>Fixed Route Service</th>
<th>CY2014</th>
<th>CY2015</th>
<th>CY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Passengers</td>
<td>274,441</td>
<td>287,458</td>
<td>288,602</td>
</tr>
<tr>
<td>Total Revenue Hours</td>
<td>39,944</td>
<td>50,257</td>
<td>50,606</td>
</tr>
<tr>
<td>Total Revenue Miles</td>
<td>689,894</td>
<td>864,338</td>
<td>883,533</td>
</tr>
<tr>
<td>Trips Per Hour</td>
<td>6.87</td>
<td>5.72</td>
<td>5.70</td>
</tr>
<tr>
<td>Miles per Hour</td>
<td>17.27</td>
<td>17.20</td>
<td>17.46</td>
</tr>
</tbody>
</table>

As shown in this table, ORT fixed route service levels and ridership have grown in recent years, providing almost 289,000 trips during calendar year 2016. System wide productivity during 2016 was 5.70 passenger trips per revenue vehicle hour.

Razorback Transit

Razorback Transit is the transit system for the University of Arkansas, operated out of the University’s Transit and Parking Department in Fayetteville. Razorback Transit operates ten fixed routes, paratransit, and late-night demand response service within Fayetteville. Figure 3-3 presents a screen capture of Razorback Transit’s fixed route network operating from the real-time map on its website.

Nine of the fixed routes connect at a central transfer point on campus known as Union Station at 361 N. Garland Avenue next to the university’s Arkansas Union building. The only route that does not serve Union Station, Route 13, provides cross-campus service and parking lot connections, intersecting with two of the other Razorback routes at peripheral locations.

During the academic year (mid-August to mid-May), all ten routes operate Monday through Friday, 7:00 a.m. to 6:00 p.m., on headways that range from seven to thirty minutes. Seven of the routes also operate on reduced headways (e.g., 30 to 60 minutes) evenings until 10:30 p.m. and Saturdays. Reduced service is operated during the summer and university breaks.

Razorback Transit is open to the public and is free of charge to all riders.
Figure 3-3: Razorback Transit Fixed Routes

Source: UA website, [http://campusmaps.uark.edu](http://campusmaps.uark.edu), accessed 4/6/17
Table 3-2 presents general system-wide operating statistics for ORT fixed routes for the past three fiscal years (July 1-June 30).

Table 3-2: Razorback Transit Operating Statistics, FY2014-2016

<table>
<thead>
<tr>
<th>Fixed Route Service</th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Passengers</td>
<td>1,969,318</td>
<td>1,996,376</td>
<td>1,817,664</td>
</tr>
<tr>
<td>Total Revenue Hours</td>
<td>40,077</td>
<td>43,934</td>
<td>44,258</td>
</tr>
<tr>
<td>Total Revenue Miles</td>
<td>415,503</td>
<td>464,199</td>
<td>484,355</td>
</tr>
<tr>
<td>Trips Per Hour</td>
<td>49.14</td>
<td>45.44</td>
<td>41.07</td>
</tr>
<tr>
<td>Miles per Hour</td>
<td>10.37</td>
<td>10.57</td>
<td>10.94</td>
</tr>
</tbody>
</table>

As shown in this table, Razorback Transit carried close to two million passengers in FY2014 and FY2015, and more than 1.8 million riders in FY2016. Productivity in FY2016 was 41.07 passenger trips per revenue vehicle hour. The university website indicates that peak ridership periods are from 8:00 a.m. to 9:30 a.m. and from 11:00 a.m. to 12:30 p.m., and buses are often full during peak periods.

**CURRENT SERVICES ALONG THE US 71B CORRIDOR**

Both ORT and Razorback Transit operate fixed route service along portions of the US 71B corridor, as displayed in Figures 3-4, 3-5, and 3-6. The routes which operate along some portion of the corridor for more than a couple of blocks include ORT Routes 1, 2, 3, 4, 11, 51, 52, 61, and Razorback Transit Red Route. These routes are summarized in Table 3-3 and discussed for both transit systems, followed by a summary of ridership on each of these routes. Ultimately some of these routes will be duplicative in part when Smart BRT is implemented and will need to be revised to either complement Smart BRT or redirected to some other function.

---

Figure 3-4: ORT and Razorback Transit Routes that Serve the US 71B Corridor
Figure 3-5: ORT and Razorback Transit Routes that Serve the Fayetteville and Springdale Area of the US 71B Corridor
Figure 3-6: ORT Routes that Serve the Rogers and Bentonville Area of the US 71B Corridor
### Table 3-3: ORT Routes that Currently Serve the US 71B corridor between Fayetteville and Bentonville

<table>
<thead>
<tr>
<th>Route</th>
<th>Hours of Weekday Service</th>
<th>Saturday Service</th>
<th>Trip Generators Along US 71B Corridor</th>
<th>Trip Generators Off-Corridor</th>
<th>Connections with Other Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6:00 am - 7:30 pm (hourly)</td>
<td>None</td>
<td>Grove Apts., Grandview Apts., Tyson’s Mexican Original</td>
<td>UA, Walmart, Fayetteville Public Library, Crown Ridge Apts., Washington Co. Operations, Fayetteville HS, 7hills Center</td>
<td>Hillcrest Towers: 2, 4, Brown; UA Lot 56: 490, Green, Purple</td>
</tr>
<tr>
<td>2</td>
<td>6:00 am - 7:30 pm (hourly)</td>
<td>None</td>
<td>Marvin Food Stores, Lifesource International</td>
<td>Cliffs Apts., Karcher, Fayetteville Public Library, Cooperative Emergency Outreach, Shenandoah Mobile Home Park, Fayetteville Senior Center, Nantucket Apts.</td>
<td>Hillcrest Towers: 1, 4, Brown</td>
</tr>
<tr>
<td>3</td>
<td>6:45 am - 7:20 pm (hourly)</td>
<td>None</td>
<td>Northwest Arkansas Mall, UA Uptown Campus</td>
<td>Walmart, Target, Washington Regional, HealthSouth Rehab Hospital, Eye Center, Oak Glen Mobile Home Park, Valley Lake Apts., Fayetteville Athletic Club, Vantage Point, Social Security Office, Park Apts., DHS</td>
<td>Northwest Arkansas Mall: 4, 61, 490, Red</td>
</tr>
<tr>
<td>4</td>
<td>6:00 am - 7:30 pm (hourly)</td>
<td>None</td>
<td>Northwest Arkansas Mall, UA Uptown Campus, Fiesta Square</td>
<td>Hillcrest Towers, Walton Arts Center, VA Medical Center, Colt Square, Spring Creek Center</td>
<td>Hillcrest Towers: 1, 2, Brown; Northwest Arkansas Mall: 3, 61, 490, Red</td>
</tr>
<tr>
<td>11</td>
<td>7:05 am - 7:05 pm (hourly)</td>
<td>None</td>
<td>Walmart, Benton Co. Senior Center, Harps</td>
<td>Brightwater Center for the Study of Food, Bentonville Public Library, Bentonville Square, Touchstone Apts., Northwest Health System</td>
<td>Northwest Arkansas Community College: 51, 490</td>
</tr>
</tbody>
</table>
### Chapter 3: Existing Services

<table>
<thead>
<tr>
<th>Route</th>
<th>Hours of Weekday Service</th>
<th>Saturday Service</th>
<th>Trip Generators Along US 71B Corridor</th>
<th>Trip Generators Off-Corridor</th>
<th>Connections with Other Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>7:05 am - 7:05 pm (hourly)</td>
<td>None</td>
<td>Frisco Station Mall, Center for Nonprofits, Supermercado La Villita</td>
<td>Rogers Regional Sports Complex, Turtle Creek Apartments, Adult Wellness Center, Walmart, Harp’s Grocery, Rogers Activity Center, Northwest Park, Rogers Apts.</td>
<td>Northwest Arkansas Community College: 11, 490; Frisco Station Mall: 52</td>
</tr>
<tr>
<td>52</td>
<td>7:05 am - 7:05 pm (hourly)</td>
<td>None</td>
<td>Frisco Station Mall, Center for Nonprofits, Supermercado La Villita</td>
<td>Adult Wellness Center, Rogers Public Library, Rogers Aquatics Center, Mercy Medical Center, Neighborhood Market, Rogers Technology HS</td>
<td>Frisco Station Mall: 51</td>
</tr>
<tr>
<td>61</td>
<td>6:30 am - 7:30 pm (hourly)</td>
<td>None</td>
<td>Northwest Arkansas Mall, Walmart (Springfield)</td>
<td>Foxfire Apts., Neighborhood Market, Springdale PO, Spring Meadows Apts., Links Apts., Convention Center, South Coast Baking Company, Ozark Guidance Center</td>
<td>Northwest Arkansas Mall: 3, 4, 490, Red; Walmart: 62, 63, 64</td>
</tr>
<tr>
<td>Red</td>
<td>6:45 am - 9:38 pm (every 20 mins to 5:40)</td>
<td>7:00 am - 9:38 pm (hourly)</td>
<td>Northwest Arkansas Mall, UA Uptown Campus</td>
<td>UA campus, Walmart (Fayetteville), Washington Regional Medical Center, numerous apartments, park &amp; ride locations</td>
<td>Northwest Arkansas Mall: 3, 4, 61, 490; UA Union Station: other Razorback Routes</td>
</tr>
</tbody>
</table>
Razorback Transit

Red Route

The Red Route (also known as Route 26 and Route Red Reduced 6) operates between University of Arkansas Union Station and Northwest Arkansas Mall. It operates bidirectional service south of Millsap Road, and a one-way loop at its northern end. The Red Route serves the US 71B corridor (N. College Avenue, northbound only) between Millsap Road and E. Shepherd Lane.

The Red Route connects with ORT Routes 3, 4, 61, and 490 at Northwest Arkansas Mall, and connects with other Razorback Transit routes at University of Arkansas Union Station.

Current Corridor Ridership

Table 3-4 presents the 2016 ridership on each of the routes identified as serving some portion of the US 71B corridor.

As noted in Table 3-4 and described for each applicable route, most of the time just part of these routes operates along the US 71B corridor. Only Route 4 operates predominantly along the corridor and it generates about 11.5 one-way trips per hour. Route 61 also serves a significant portion of the corridor and its ridership is 15.1 one-way trips per hour. Lastly, Route 1 serves the lower portion of the corridor and it has 12.4 one-way trips per hour. These three routes are the highest productivity routes in ORT’s system.

Ridership on the other routes includes passengers who may not be traveling along the corridor. Given the number of trip generators off-corridor, it is reasonable to assume that on-corridor travel does not represent the majority of the ridership.

Although ridership on the Red Route exceeds the subtotal of all of the other routes, the Red Route also operates a much higher level of service and is fare-free. Weekday frequencies on the Red Route are much higher (three times per hour) than the ORT routes (hourly) until 6:00 p.m. The Red Route also operates Saturdays (which ORT routes do not) and later in the evening than ORT routes do on weekdays. Additionally, many of the ORT routes have loop designs, which tend to be less attractive to “choice” riders than bidirectional routes. Average operating speed for 2016 was 13.2 miles per hour.
Table 3-4: 2016 Operating Statistics of Transit Routes Serving US 71B Corridor

<table>
<thead>
<tr>
<th>ORT Route Number</th>
<th>2016** Passenger Trips</th>
<th>2016** Revenue Vehicle Hours</th>
<th>Trips per Hour (Productivity)</th>
<th>2016** Revenue Vehicle Miles</th>
<th>Miles per Hour (Operating Speed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>42,650</td>
<td>3,441</td>
<td>12.4</td>
<td>46,019</td>
<td>13.4</td>
</tr>
<tr>
<td>2*</td>
<td>24,110</td>
<td>3,437</td>
<td>7.0</td>
<td>54,435</td>
<td>15.8</td>
</tr>
<tr>
<td>3*</td>
<td>12,886</td>
<td>3,180</td>
<td>4.1</td>
<td>41,321</td>
<td>13.0</td>
</tr>
<tr>
<td>4</td>
<td>38,584</td>
<td>3,359</td>
<td>11.5</td>
<td>44,015</td>
<td>13.1</td>
</tr>
<tr>
<td>11*</td>
<td>18,826</td>
<td>3,053</td>
<td>6.2</td>
<td>43,404</td>
<td>14.2</td>
</tr>
<tr>
<td>51*</td>
<td>18,944</td>
<td>3,055</td>
<td>6.2</td>
<td>45,742</td>
<td>15.0</td>
</tr>
<tr>
<td>52*</td>
<td>11,937</td>
<td>3,064</td>
<td>3.9</td>
<td>54,005</td>
<td>17.6</td>
</tr>
<tr>
<td>61*</td>
<td>49,074</td>
<td>3,248</td>
<td>15.1</td>
<td>49,074</td>
<td>15.1</td>
</tr>
<tr>
<td>ORT Subtotal</td>
<td>217,011</td>
<td>25,836</td>
<td>8.4</td>
<td>378,015</td>
<td>14.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Razorback Transit Route</th>
<th>2016** Passenger Trips</th>
<th>2016** Revenue Vehicle Hours</th>
<th>Trips per Hour (Productivity)</th>
<th>2016** Revenue Vehicle Miles</th>
<th>Miles per Hour (Operating Speed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red*</td>
<td>254,800</td>
<td>8,610</td>
<td>29.6</td>
<td>113,995</td>
<td>13.2</td>
</tr>
<tr>
<td>Corridor Total</td>
<td>471,811</td>
<td>34,446</td>
<td>13.7</td>
<td>492,010</td>
<td>14.3</td>
</tr>
</tbody>
</table>

*Indicates routes that also operate significantly off-corridor.

**ORT reports on a calendar year basis; Razorback uses fiscal year (July 1-June 30).

Current Operating Speed

Operating speed is a critical calculation in the development of a schedule. The use of signal priority for buses can increase the operating speed, allowing for a bus to be time competitive with the automobile. The current routes as shown in Table 3-4 have an average operating speed of 14.6 miles per hour.

With signal priority, some systems have increased operating speed by 25 percent or more. This could also be the case in this service as there are many backups at traffic lights that sometimes extend up to one half mile in Bentonville. The ability to get through those lights quicker will make a difference.
Chapter 3: Existing Services

**Potential Cross-Corridor Connections**

**Current Cross-Corridor Transit Routes**

Routes that cross the US 71B corridor have the potential to serve as “feeder” or connecting routes to a new route on the corridor. Feeder service with timed meets increases the usability of a route that has limited stops and direct routing, two characteristics of reliable express transit service. Figures 3-7, 3-8, 3-9 and 3-10 indicate the cross-corridor routes and the locations where they intersect the corridor. These locations are good candidates for a Smart BRT bus station locations for both the feeder route and the corridor route.

**Pedestrian/Bicycle Trails**

Trails that cross the US 71B corridor have the potential to serve as “feeder” routes for bicyclists (ORT buses are equipped with bike racks) and pedestrians. Figure 3-11 indicates locations where trails cross the corridor. These locations may be good candidates for bus station locations for the corridor route. Additionally, some stations will not directly intersect with a trail, but will be close enough for a bicyclist to be able to connect to a bus.
Figure 3-7: ORT and Razorback Routes that Cross the US 71B Corridor (Potential Feeder Routes)
Figure 3-8: ORT Routes that Cross the Fayetteville Area of the US 71B Corridor (Potential Feeder Routes)
Figure 3-9: ORT Routes that Cross the Springdale Area of the US 71B Corridor (Potential Feeder Routes)
Figure 3-10: ORT Routes that Cross the Rogers and Bentonville Area of the US 71B Corridor (Potential Feeder Routes)
Figure 3-11: Trails that Cross the US 71B Corridor
Chapter 4: Demographic, Land Use and Travel Patterns

**INTRODUCTION**

This chapter will analyze the demographic makeup along the US 71B corridor as it relates to a smart bus rapid transit (BRT) service. The analysis focused on demographic cohorts that have a substantial impact on transit service and demand. Additionally, Title VI populations examined to ensure that historically marginalized populations are not disproportionately impacted by service changes.

For the purposes of this study, the focus will be on the following demographic cohorts:

- Population density - persons per square mile
- Employment density - jobs per square mile
- Poverty - people per square mile falling below the national poverty level
- Minority population - people per square mile who are non-white or of Hispanic origin
- Autoless households - households per square mile with no vehicle available
- Senior population - people per square mile who are age 65 or older
- Youth population - people per square mile who are age 18 or younger
- Persons with disabilities - people per square mile who have a disability
- Limited English Proficiency (LEP) - households per square mile with limited English

This chapter will look at major land uses throughout the corridor including major employment locations, large educational institutions, and regional medical facilities. A summary of regional travel patterns will also be presented.

**Remix Transit Planning Tool**

For this project, the demographic analysis included the use of Remix software. Remix allows the user to design routes and immediately understand the cost and demographic impact of a proposed change. The tool pulls Ozark Regional Transit (ORT) and Razorback Transit (RT) existing transit networks into the program so that various alternatives can be evaluated quickly. The tool uses the 2013 American Community Survey (ACS), based on a five year period from 2009 - 2013. Data is provided at the block group level. Employment densities for the United States are provided by the 2012 Longitudinal Employer-Household Dynamics survey.

---

1 Remix uses the Workplace Area Characteristics (WAC) file of segment JToo (All Jobs), variable C000 (Total number of jobs) for each state and state equivalent.
Chapter 4: Demographic, Land Use and Travel Patterns

**Population Analysis**

Population is a key indicator of what types of transit services might be viable. Rapid growth is the best way to describe the area’s demographics. Table 4-1 shows the U.S. Census population counts for cities in the US 71B corridor from 1990-2010.

This area continues to be a major draw for young people and major employment with the University of Arkansas and headquarters of Walmart, J.B. Hunt, Georges and Tysons.

**Table 4-1: Historical Populations**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonville</td>
<td>12,021</td>
<td>20,308</td>
<td>35,862</td>
<td>68.94%</td>
<td>76.59%</td>
<td>198.33%</td>
</tr>
<tr>
<td>Bella Vista</td>
<td>9,083</td>
<td>15,842</td>
<td>26,588</td>
<td>74.41%</td>
<td>67.83%</td>
<td>192.72%</td>
</tr>
<tr>
<td>Fayetteville</td>
<td>43,013</td>
<td>59,384</td>
<td>73,966</td>
<td>38.06%</td>
<td>24.56%</td>
<td>71.96%</td>
</tr>
<tr>
<td>Lowell</td>
<td>1,370</td>
<td>5,460</td>
<td>7,346</td>
<td>298.54%</td>
<td>34.54%</td>
<td>436.20%</td>
</tr>
<tr>
<td>Rodgers</td>
<td>25,674</td>
<td>39,912</td>
<td>56,331</td>
<td>55.46%</td>
<td>41.14%</td>
<td>119.41%</td>
</tr>
<tr>
<td>Springdale</td>
<td>30,481</td>
<td>47,484</td>
<td>71,083</td>
<td>55.78%</td>
<td>49.70%</td>
<td>133.20%</td>
</tr>
<tr>
<td><strong>Corridor Totals</strong></td>
<td><strong>121,642</strong></td>
<td><strong>188,390</strong></td>
<td><strong>271,176</strong></td>
<td><strong>54.87%</strong></td>
<td><strong>43.94%</strong></td>
<td><strong>122.93%</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Census and American Community Survey

Table 4-2 features recent population estimates from the ACS. The data shows that since 2010, all cities in the corridor have experienced at least some population increases. Bella Vista, Springdale and Fayetteville have experienced the slowest growth. Bentonville and Lowell have the highest growth rates with Bentonville growing over 16 percent from 2010 to 2014.

**Table 4-2: Recent Population Trends**

<table>
<thead>
<tr>
<th>County</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2010-2014 Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonville</td>
<td>35,862</td>
<td>36,962</td>
<td>38,368</td>
<td>40,167</td>
<td>41,613</td>
<td>16.04%</td>
</tr>
<tr>
<td>Bella Vista</td>
<td>26,588</td>
<td>26,991</td>
<td>27,405</td>
<td>27,600</td>
<td>27,688</td>
<td>4.14%</td>
</tr>
<tr>
<td>Fayetteville</td>
<td>73,966</td>
<td>75,580</td>
<td>77,033</td>
<td>79,019</td>
<td>80,621</td>
<td>9.00%</td>
</tr>
<tr>
<td>Lowell</td>
<td>7,346</td>
<td>7,524</td>
<td>7,705</td>
<td>7,938</td>
<td>8,334</td>
<td>13.45%</td>
</tr>
<tr>
<td>Rodgers</td>
<td>56,331</td>
<td>57,780</td>
<td>59,044</td>
<td>60,092</td>
<td>61,464</td>
<td>9.11%</td>
</tr>
<tr>
<td>Springdale</td>
<td>71,083</td>
<td>72,322</td>
<td>73,620</td>
<td>75,295</td>
<td>76,565</td>
<td>7.71%</td>
</tr>
<tr>
<td><strong>Corridor Totals</strong></td>
<td><strong>271,176</strong></td>
<td><strong>277,159</strong></td>
<td><strong>283,175</strong></td>
<td><strong>290,111</strong></td>
<td><strong>296,285</strong></td>
<td><strong>9.26%</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Census and American Community Survey
Population Forecast

Future forecasts for the region anticipate significant population growth. The overall region is expected to experience just over a 22 percent growth rate during the period from 2020 to 2030. During this period, the region is expected to grow from 541,697 persons to 659,113 persons, an increase of about 117,415. The largest population growth is expected in Benton County which is expected to grow from 298,572 to 372,831 by 2030, an increase of over 74,000 people. Washington County is also anticipated to see significant population increases within this timeframe (43,156 persons). Table 4-3 provides the forecasted population growth for the region out to 2030.

Table 4-3: Population Forecasts

<table>
<thead>
<tr>
<th>County</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benton</td>
<td>298,572</td>
<td>335,701</td>
<td>372,831</td>
</tr>
<tr>
<td>Washington</td>
<td>243,126</td>
<td>264,704</td>
<td>286,281</td>
</tr>
<tr>
<td><strong>Regional Totals</strong></td>
<td><strong>541,697</strong></td>
<td><strong>600,405</strong></td>
<td><strong>659,113</strong></td>
</tr>
</tbody>
</table>


Population Density

One of the most important factors in determining an appropriate transportation mode for a community is population density. Population density is often used as an indicator of the type of public transit services that are feasible within a study area. Typically an area with a density of 1,000 persons per square mile will be able to sustain some form of daily fixed route transit service. An area with a population density over 2,000 persons per square mile may be able to sustain enhanced transit service such as Bus Rapid Transit (BRT).

Figure 4-1 shows the corridor population density at the census block group level. Not surprisingly the most densely populated areas are in the core of the cities along the corridor. The corridor sustains over 3,000 people per square mile between Bentonville and Rogers and between Springdale and Fayetteville. Small pockets of population density in each city exceed 12,000 people per square mile.

Transit Dependent Populations

Public transportation needs are defined in part by identifying the relative size and location of those segments within the general population that are most likely to be dependent on transit services. This includes individuals who may not have access to a personal vehicle or are unable to drive themselves due to age or income status. The results of this demographic analysis highlight geographic areas with the greatest need for transportation.

---

2 University of Arkansas Little Rock: Institute for Economic Advancement. Population Estimates and Projections
Figure 4-1: Population Density in the US 71B Corridor
Chapter 4: Demographic, Land Use and Travel Patterns

Senior Adult Population

One of the socioeconomic groups covered in this analysis is the senior adult population, individuals ages 65 and older. Persons in this age group may begin to decrease their use of a personal vehicle and rely more heavily on public transit. Figure 4-2 shows the relative concentration of seniors in the region. Within a quarter of a mile of the initial proposed transit station 11 percent of the population is over age of 65.

Individuals with Disabilities

Figure 4-3 illustrates the individuals with disabilities along the US 71B corridor. The Remix planning tool uses American Community Survey to obtain data for the disabled population. Persons who have disabilities that prevent them or make it more difficult to own and operate a personal vehicle often rely on public transit for their transportation needs. Areas along the corridor with high or very high concentrations of individuals with disabilities include the area along the border of Rogers and Bentonville, northwest Springdale and certain block groups in Fayetteville. With the draft station locations approximately 10 percent of the population within a quarter mile of the transit stations has a disability.

Zero Car Households

Households without at least one personal vehicle are more likely to depend on the mobility offered by public transit. Displaying this segment of the population is important since many land uses in the region are at distances too far for non-motorized travel. Figure 4-4 displays the number of autoless households in each block group along the US 71B corridor. Areas with very high numbers of autoless households include the southeast portion of Bentonville, the northeast portion of Springdale, and the areas adjacent to the University of Arkansas in Fayetteville. Within a quarter mile of the draft station alignment, 7.3 percent of the population is in a household without an automobile.

Youth Population

The youth population is often used as an identifier of transit dependent population. Persons ages 10 to 18 either cannot drive or are just beginning to drive and often do not have a personal automobile accessible to them. For this population, public transit is often the means that offers mobility. Figure 4-5 illustrates the concentrations of youth populations along the US 71B corridor. Portions of Springdale and Rogers contain very high youth populations relative to the study area. Within a quarter mile of the draft station alignment 23 percent of the population is under age 18. This is the highest percentage of any transit dependent population along the corridor.
Figure 4-2: Senior Population per Square Mile in the US 71B Corridor
Figure 4-3: Persons with Disabilities per Square Mile in the US 71B Corridor
Figure 4-4: Zero Car Households in the US 71B Corridor
Figure 4-5: Youth Population per Square Mile in the US 71B Corridor
TITLE VI DEMOGRAPHIC ANALYSIS

The Civil Rights Act of 1964, Title VI prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal subsidies. This includes agencies providing federally funded public transportation. The following section examines the minority and below poverty level populations along the US 71B corridor.

Minority Population

It is important to ensure that areas with an above average percentage of racial and/or ethnic minorities are not negatively impacted by any proposed alterations to existing public transportation services. Figure 4-6 illustrates the concentration of minority populations in the study area. The eastern portion of Springdale is the only area in the corridor with over 10,000 people per square mile who are minorities. Fayetteville and Rogers also have areas with higher concentration of minority populations. Minorities make up 28 percent of the population within a quarter mile of the draft transit station locations.

Below Poverty Populations

The second group included in the Title VI analysis represents those individuals who earn less than the federal poverty level. This segment of the population may find it a financial burden to own and maintain a personal vehicle, thus relying on public transit as their primary means of transportation. Figure 4-7 depicts the population per square mile of individuals living below the federal poverty level. Springdale and Rogers are the only cities with areas of over 5,000 residents per square mile living below the poverty level. Within a quarter mile of the draft transit station locations, 23 percent of the population lives below the poverty level.

Limited-English Proficiency

In addition to providing public transportation for a diversity of socioeconomic groups, it is also important to serve and disseminate information to those of different linguistic backgrounds. As shown in Figure 4-8 the highest concentrations of individuals along the US 71B corridor with limited English proficiency are in Springdale, Rogers and adjacent to the University of Arkansas in Fayetteville. Five and one half percent of the population within a quarter mile of the draft transit station locations has limited English proficiency.
Figure 4-6: Minority Population per Square Mile in the US 71B Corridor
Figure 4-7: Below Poverty Population Density in the US 71B Corridor
Figure 4-8: Population Density of Individuals with Limited English Proficiency in the US 71B Corridor
LAND USE PROFILE

Employment Density

Northwest Arkansas is home to several large local, regional and national employers. Companies like Walmart, J.B. Hunt, Tysons, George’s and the University of Arkansas create an economic and employment ripple effect in the region. As these companies grow and the regional population grows, the demand for more employment and services grows as well.

Major employment centers can create significant demand for transit service. Issues like large concentrations of lower income employees, traffic congestion at commuting times, and parking availability contribute to the demand for transit services. The US 71B corridor has a heavy concentration of employment and commercial destinations. All of these locations will be well served by a robust regional transit service such as Smart BRT.

Figure 4-9 details the employment density along the US 71B corridor. As shown, the highest amount of jobs per square mile are in Bentonville, Springdale (near George’s), and Fayetteville (near University of Arkansas). Within a quarter mile of the draft transit station locations there are almost 29,000 jobs. If that boundary is expanded to a half mile, the number of jobs adjacent to the transit stations surpasses 67,000.

Regional Trip Generators

Identifying regional trip generators serves to complement the previous demographic analysis by indicating where transit services may be most needed. Trip generators attract transit demand and include common origins and destinations. Examples include higher level educational facilities, major employers, regional medical facilities, and Veteran Affair’s Facilities. Trip generator categories and locations are briefly detailed below. Regional trip generators are shown in Figure 4-10.
Figure 4-9: Employment Density in the US 71B Corridor
Figure 4-10: Regional Trip Generators in the US 71B Corridor
Educational Facilities

Many individuals that comprise the school age population are unable to afford or operate their own personal vehicle. Based on the ridership levels seen at RT, there is evidence that this segment of the population is reliant upon public transportation. Additionally, many faculty and staff members are associated with educational institutions as a place of employment. Some of the major educational facilities in the region include:

- University of Arkansas
- John Brown University
- Northwest Arkansas Community College
- Ecclesia College
- Harding University Northwest Arkansas Professional Center
- Northwest Technical Institute

Major Employers

This section examines the top regional employers in the region (those with more than 500 employees). Providing transit services to major employment locations is advantageous to both employees, as the individual is provided with direct access to their occupation and subsequent source of income, and employer, as this entity will offer assurance that their current or potential workforce will have diverse options for accessing the destination. For the purposes of transit planning, school districts and large employers where employment is dispersed and not geographically concentrated in large numbers is excluded from this analysis. Some of the major employers on or adjacent to the US 71B corridor include:

- Walmart
- Tysons Foods
- JB Hunt Transport Services
- Mercy Health System of Northwest Arkansas
- University of Arkansas
- George’s
- Washington Regional Medical Center
- Northwest Health Systems
- US Veterans Medical Center
- Superior Industries International
- Rockline Industries

Major Medical Facilities

Major medical facilities, classified as regional and general hospitals, represent a significant destination for users of public transportation. Older adults and persons with
disabilities often rely more heavily upon the services offered by medical facilities than other population segments. Since this group represents a large faction of the transit dependent population, it is imperative that these facilities are made accessible through public transit services. The major regional medical facilities on or adjacent to the US 71B corridor include:

- Mercy Health System of Northwest Arkansas
- Washington Regional Medical Center
- Northwest Health Systems
- US Veterans Medical Center
- University of Arkansas Medical Services

**Veteran Affairs Medical Facilities**

The Department of Veterans Affairs (VA) oversees a network of medical centers and smaller community based services. Locating transportation to these facilities can be a major barrier for veterans who rely on services that these facilities provide. A large regional VA Hospital is located along US 71B in Fayetteville.

**Human Service Locations**

Human service organizations often serve clients that are dependent on transportation services. These organizations can help low income residents, senior adults and/or people with disabilities. Throughout Northwest Arkansas there are human service locations that provide services such as food assistance, workforce assistance, health care, training, adult daycare, and other important human and social services.

**Regional Travel Patterns**

Travel between the cities in Northwest Arkansas is common for a variety of trip purposes. Many commuters live adjacent to US 71B and commute to another city along the corridor. Students at community colleges and the University of Arkansas also travel from other communities along the corridor to access their place of education. The large VA facility in Fayetteville has a regional draw as do many of the other regional medical facilities along the corridor.

Figure 4-11 shows the intra- and intercity daily travel patterns along the US 71B corridor\(^3\). As shown, the majority of trips in the region are intra-city trips, that is, the origin and destination are within the same city. However, there are a substantial number of trips

---

\(^3\) Data for the regional travel pattern illustration is from the travel demand model developed by the Northwest Arkansas Regional Planning Commission.
made between cities along the corridor on a daily basis. The majority of intercity trips are made between Rogers and Bentonville (86,784 daily trips) as well as between Fayetteville and Springdale (79,624 daily trips). Other substantial intercity connections are between Rogers and Fayetteville (9,530 daily trips) and between Springdale and Bentonville (11,334 daily trips).

This aspect of regional travel patterns coupled with the demographic, land use, and public outreach demonstrates that there is a great potential for two-way commutes along the corridor. Due in part to the major concentrations of employers throughout the service area and the diverse urban area with people from all over the world (many of whom expect robust transit services) the potential for successful smart BRT service is great.

**DEMOGRAPHIC, LAND USE AND REGIONAL TRAVEL SUMMARY**

The Northwest Arkansas area is a dynamic community where transit needs to play catchup, particularly compared to its peer regions (as shown in Chapter 3 of this plan). The region is particularly young and diverse. Connectivity to Razorback Transit along with the young and diverse community provides ample potential for a two-directional commute along the US 71B corridor.

The US 71B corridor is bustling with economic activity. Four major corporations (Walmart, J.B. Hunt, Tyson’s, and George’s) are headquartered within a half mile of the road, and there are many other large employment facilities there as well. For the most part, the corridor is lined with commercial land uses with several basic goods and services and significant employment opportunities. The highway is adjacent to several major medical facilities and is home to a large regional VA hospital. Within a quarter mile of the draft transit station locations there are almost 29,000 jobs. If that is expanded to a half mile the number of jobs adjacent to the transit stations goes up to more than 67,000.
TOTAL DAILY CITY TO CITY TRIPS = 208,928
(Trips where both the origin and destination is within each of the six cities)

Based on the usage of shuttle/feeder service to the BRT stations.

TOTAL DAILY INTRA-CITY TRIPS = 444,601

Figure 4-11: Regional Travel Patterns

Not to scale.
The population of Northwest Arkansas is rapidly growing. As large companies and the University of Arkansas continue to attract talent from all over the world, demand for robust transit services is only going to increase. While the US 71B corridor is primarily a commercial artery, many residents live adjacent to the highway. Within the initial draft alignment, over 9,000 residents live within a quarter mile of a proposed transit station. Almost 35,000 residents live within a half mile of the initial station locations. Of those residents:

- 22% live below the poverty level
- 28% are minorities
- 7% have no vehicle
- 6% have limited English proficiency
- 12% are above the age of 65
- 24% are below the age of 18
- 10% have a disability

The unique makeup of the region and corridor both in terms of demographics and land use, lends itself to enhanced public transit service. The US 71B corridor can support a BRT type of service with the right mix of local support and service parameters. These aspects will be detailed in subsequent chapters of this plan.
Chapter 5: Service Area Needs and Ridership

One can drive between cities in the region, ride a bike on the greenway or even walk between the cities, but one often cannot take transit to get there.

**NEED - THE KEY ISSUE**

The Northwest Arkansas urban area has a distinct shortage of transit service with much of that shortage centered on the lack of connectivity between cities. Unfortunately, this shortage is all too common in urban areas like Northwest Arkansas. That is, urban areas without a “transit dominant city.” This vagary of geography puts Ozark Regional Transit (ORT) and the region at a significant disadvantage in funding and the provision of service, while ratcheting up the need for service.

To illustrate this point, when comparing the Northwest Arkansas service area to similar sized urban areas and considering the presence of a major university, this region is underserved with 15 full time peak fixed route public transit vehicles.

Looking at similar sized urban areas with dominant cities (according to the latest National Transportation Database) demonstrates this point (Figure 5-1):

**Figure 5-1: Peer Vehicle Comparison**
Wichita has 38 peak fixed route vehicles (not including Wichita State's fleet).
Knoxville, with a major university, has 59 peak buses
Des Moines, without a major university, has 108 peak buses

The comparison of per capita ridership tells a similar story (Figure 5-2).

**Figure 5-2: Peer Per Capita Ridership Comparison**

![Ridership Per Capita](chart)

**Northwest Arkansas - Dynamic and Fast Growing: This is Exactly the Type of Community and Type of People that are Attracted to Smart Transit**

Northwest Arkansas is one of the fastest growing regions in the nation. To make another point: the area attracts people from all around the world and is a dynamic region driven by major corporations and a major university. The region also has some very significant employment densities throughout the service area. These are all substantial positives for transit usage.

**DETERMINING POTENTIAL RIDERSHIP**

The service area sees a multi-directional commute as the largest destinations are at each end of the service area with multiple large destinations spread from Bentonville to Fayetteville (Figure 4-11). This by itself gives ORT the advantage of a two way commute.
Potential Ridership

The KFH Group has been conducting these types of analyses for over 22 years. We rely on a number of estimation models/methodologies combined together. Unfortunately, reliance on traditional transportation models is typically ineffective in areas such as Northwest Arkansas. According to the authors of the - Northwest Arkansas Transportation Alternatives Analysis (Pg. 2):

“While the model has served the area well for automobile-based planning of the regional street and highway plan, it is extremely limited in its ability to estimate demand for alternative transit facilities.”

Determining needs for an area such as Northwest Arkansas cannot rely on a traditional model and in fact there are a number of other methodologies that can accurately measure need and potential ridership.

Multiple Approaches to Ridership Estimation

It can be reasonably established that region has service levels far below its potential when:

- Looking at peers
- Considering the dynamic community
- Generating high employment densities

Ridership estimation assumes the level of service selected for this plan:

1. A high level of BRT service: 10 minute peak and 30 minute off peak headways
2. 6 a.m. to 10 p.m. service hours, Monday through Friday
3. Revisions to existing service to complement BRT
4. Signal prioritization
5. Enhanced stations with some elevated platforms
6. Comfortable reliable buses
7. Well trained staff
8. Fare free for 6 – 12 months

The KFH Group used three approaches to ridership estimation. For those interested in the detailed analysis it can be found in Technical Memorandum No. 3. These estimates are most likely to be accomplished over a 2 – 3 year horizon as the service matures. The processes included:

- **Mode Split** – Using mode split, the study team looks at the overall number of one way trips taken in the region on a daily basis. Using a mode split consistent with much of the nation, this would result in 4,200 daily intercity trips daily (using a 2 percent mode
split for intercity trips) and 1,100 daily intra-city trips (using a one-quarter percent mode split). The total ridership in this scenario is **5,300** daily trips and **1.35 Million** one way trips annually.

- **Service Elasticities** – How service type and levels affect ridership. Elasticities allow us to estimate the effect of improvements on the service. Estimates yield a productivity of over 35 one way trips per hour, or **5,880** one way trips per day and almost **1.45 million** trips annually (weekdays).

- **Per Capita Ridership** – a look at the overall level of transit (Figure 5-2). Increasing per capita ridership to the next lowest systems in our peer group from 1 trip per capita to 6 trips per capita yields about 1.8 Million annual trips system wide. Subtracting out the existing 300,000 annual trips yields **1.5 million** trips annually or **6,000** daily trips.

These three approaches converge in their estimates that the Smart BRT can generate **1.3 Million to 1.5 Million** trips annually and **5 -6,000** one way trips per day and possibly boost service levels on the feeder routes.
Chapter 6 – Draft Plan for Smart BRT for Northwest Arkansas: Virtual Dedicated Lane Service

**INTRODUCTION**

The Northwest Arkansas urban area has a distinct shortage of transit service with much of that shortage centered on connectivity between cities. Unfortunately, this shortage is all too common in urban areas like Northwest Arkansas without a “transit dominant city.” This vagary of geography puts Ozark Regional Transit (ORT) at a significant disadvantage in funding and the provision of service.

At the same time:

1. Northwest Arkansas is one of the fastest growing regions in the nation,
2. The area attracts people from all around the world and
3. This is a dynamic region driven by major corporations and a major university.

The analysis conducted in support of this planning process indicates that demand for service is significant and a quality service would generate over 5,000 one way trips per day after 2 – 3 years of operation. This also accounts for the legendary traffic in the region.

The route will follow US 71B from the south side of Fayetteville to the northern points of Bentonville, 27 miles in distance. Figure 6-1 illustrates the route that will be utilized.

**BRT - ONE SIZE DOES NOT FIT ALL**

There are a variety of strategies that can be deployed in the name of Bus Rapid Transit. The study team considered the options based on: the understanding of demographics and travel patterns, need, funding, sustainability and suitability for the service area.
Figure 6-1: Smart BRT Route
This is a feasibility study and as part of feasibility, the study team considered need, practicality and sustainability:

- **Need**, while there is significant need for a BRT type service, the densities do not yet support dedicated lane (or full) BRT.

- Foremost in terms of **practicality**, the public and local governments made it clear that a dedicated lane on US 71B at this time was impractical. During peak hours, eliminating one of two lanes in each direction for a bus every 10 minutes would be problematic.

- **Sustainability** is required to implement a project of any size. Unlike most BRT projects, there is no dominant transit city that can ensure sustainability. Unless Ozark Regional Transit (ORT) is able to generate dedicated funding source(s), sustainability will be the overriding issue and will dictate the level of service.

---

**SMART BRT: A TRULY INNOVATIVE APPROACH**

Smart BRT with a virtual dedicated lane is an innovative new approach designed to combine detailed planning, highly trained staff and appropriate vehicles with an infusion of technologies and proper signage to ensure that the buses can offer equivalent to a personal auto (or close to it) door to door travel time in comfort and convenience.

This approach proposes to use most elements of the BRT to enhance service. This will all be done without dedicated lanes which are not feasible at this time. This Smart BRT can also serve as a **precursor** to full dedicated lanes when demand warrants and funding is available as all other elements will already be in place.

Most realistic for an area such as Northwest Arkansas is a Smart BRT with virtual dedicated lanes where the vehicle operates in traffic, but has most of the BRT features to ensure rapid service with higher frequency:
a. **Frequency**: Typically in BRT service during the peak hours a bus arrives every 7.5 to 10 minutes, off peak hours will see a bus every 15 – 30 minutes.

b. **Vehicles**: All use large capacity vehicles with large doors for ease of access.

c. **Stations** – Limited stops (typically every mile) with permanent shelters, raised platforms, using electronic signage and fare payment systems for the most patronized stations.

d. **Signal Prioritization** – The ability of a bus to sustain a green light when the bus is behind schedule.

e. **Technology** - Full use of a variety of other technologies designed to minimize bus dwell time (when the bus is sitting at a station).

f. **The People** - Well trained and skilled bus operators and supervisors are always critical to success.

g. **Branding** - Service is typically branded separately
h. **Connections** - Connecting routes with timed meets.

i. **Park and Ride** - Strategically located park and ride lots.

Please note that this plan is the culmination of analysis and research detailed in four technical memoranda issued previously. For in-depth analysis of needs, review of existing services, calculations of service levels and potential strategies, the reader is directed to Technical Memoranda 1, 2, 3 and 3A. The data used and modified in this review (where appropriate), were developed and calculated in Technical Memorandum No. 3.

**The Nature of the Pilot Project**

As with many businesses, a new service takes time to mature. A pilot project such as this also needs time to mature, given the investment in infrastructure and vehicles. At the same time success must be properly defined in terms of performance. Expectations should be tempered with the understanding that the system will take time to reach its goals and many factors will influence the ridership.

**Timeframe for a Pilot**

Typically, a pilot project should last at least one year and up to three years, particularly if there are extensive infrastructure costs. Supported by a strong marketing campaign, the consultants recommend a 2 year pilot project with the ability to make adjustments as needed to ensure success.

**Performance Measures**

Defining expectations and success is essential to evaluation. While there are a number of key performance measures that should be monitored by the system, there are just a few needed to define and measure success for the pilot project:

- **Ridership and Productivity** – Productivity measures ridership per hour, typically called one way passenger trips per vehicle hour. This is the key performance measure to determine ridership success. Ultimately this service should be averaging about 25 – 30 one way trips per vehicle hour during most of the day. A more modest goal for the first year should be between 10 and 15 one way trips per vehicle hour. This productivity level assumes low or no fare for the pilot.

- **Sustainability** – Sustainability is required for success if the service is to continue past the pilot. Sustainability is measured by the level of financial commitment each community is willing to make. Prior to and after implementation, commitments should be sought for the future (assuming the system meets the
minimum acceptable service level). Targets should be set – for example, 50 percent of the future local funding commitment should be secured in the first year.

The exact performance measures will be determined once all issues that affect ridership are settled. For example, fares will have a significant impact on ridership and revenue.

**SMART BRT – THE NEED FOR SPEED**

The objective of this Smart BRT service is to ensure that the bus can travel as rapidly as possible through the corridor in a safe and comfortable manner, while ensuring equitable service for all. There are a number of elements that are used to meet the demands of this rapid service.

**Technology**

This approach combines a variety of actions and technologies. Each activity or technology by itself is capable of reducing travel time – some can have a considerable impact, while others may only reduce round trip time by one minute (still important). Combined, they should improve operating speed considerably.

**Meticulous Planning and Testing**

The peer review tells us that planning and testing are critical elements to success. More than one system stumbled at the start. To avoid that, planning and testing will be essential:

1. Accurate schedules that are properly tested.
2. Assurance that the signal prioritization system is working and not negatively affecting any other roads (other than occasionally). This also requires extensive testing.

**Highly Trained Staff**

Just as important as flawless technology is well trained and experienced vehicle operators, road supervisors and dispatchers. They will be trained in all aspects of safety and vehicle operation in the BRT environment. Dispatchers will also be trained in the proper use of the technology to ensure that all service is operating on schedule. These skilled staff will ensure that the technology is maximized and that the vehicles average speed is maximized without ever compromising safety.
General Public Education

While marketing of the service will be critical to success, there should also be an education program so that the general public can understand how the service works and what the appropriate protocols include. For example:

1. The public needs to be informed that there should be no stopping or standing on the outer lanes. Signage may also be needed.

2. Buses will stop at stations just past the intersections (far side) as required with signal prioritization – it will be important for drivers of autos and trucks to stay back at least 75 feet or they may get stuck blocking an intersection. Buses should have appropriate signage on the back of each bus.

3. Understanding that this service can save time, be comfortable and allow passengers to be productive or to relax at the end of a long day.

Potential Ridership

Using our three ridership models, the potential ridership based on 10/30 minute headways is between 5,300 – 6,000 daily one way trips and between 1.35 Million and 1.5 Million riders annually, bringing Northwest Arkansas ridership numbers more in line with peer cities.

Smart BRT - The Service

The Route

As illustrated in Figure 6-1 above, the route will follow US 71B from the area around Martin Luther King Jr. Boulevard in Fayetteville to the vicinity of NW 3rd St. in
Bentonville. The route is about 27 miles long and is expected to take approximately one hour to travel the entire length or about the same time as a private auto.

**Service Levels**

The estimated service costs are based on the analysis conducted in Technical Memoranda Nos. 3 and 3A. For details on the calculations, see Technical Memorandum 3A. The costs are dependent on:

1. **The hours and days of service** – proposed for 6 a.m. to 10 p.m. Monday through Friday to start.

2. **The headways** - which will determine the operating costs, the number of buses and on board technologies. The buses will operate on 10 minute headways during peak hours 6:00 a.m. to 10 a.m. and 3:30 p.m. to 7 p.m. The buses will operate on 30 minute headways during all other hours.

3. **Station infrastructure** – the level of improvements and the number of ticket vending machines.

Much of the costs are driven by the vehicle headways. The study team looked at four sets of costs based on the number of peak vehicles, including a mandatory 20 percent spare ratio. The most effective approach for this time is the 10 minute/30 minute headway scenario. Table 6-1 details this service level.

**Table 6-1: Smart BRT Operating Service Levels**

<table>
<thead>
<tr>
<th></th>
<th>Headways</th>
<th>Peak Vehicles</th>
<th>Spare Vehicles</th>
<th>Annual Revenue Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart BRT</td>
<td>10 Minute (Peak)</td>
<td>17</td>
<td>4</td>
<td>38,633</td>
</tr>
<tr>
<td></td>
<td>30 Minute (Off-Peak)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Vehicles

The higher capacity, low floor buses combined with wide front and rear doors will allow for rapid boarding and alighting and ensuring that each bus has a minimum dwell time at each station. The bottom line: Saving a few seconds at each stop can reduce running time by 6 – 8 minutes per round trip.

Most passengers will purchase their ticket before boarding. Fare boxes and/or card readers will be able to scan smart cards or any type of tickets or telephone payment app. For those using cash, exact fare will be required – bills and coins. This will be done rapidly to reduce dwell time.

It will also be important for the buses to accelerate rapidly – again to save time on the road. The engine/transmission option that produces the most rapid acceleration should be procured.

The Stations

The station is transit’s front door and as such needs to be safe, accessible and welcoming. There are three types of stations proposed, based on number of riders, transfers and park and ride.

The plan for Smart BRT is a high level of stations to more closely match that of the full BRT with many stations having fare vending kiosks and all having real time information. The pilot project nature of this effort may call for a lower level of infrastructure at this time. In the future, as the service continues to grow and communities have committed to sustainability, funding should be available to allow the service to expand to keep up with the needs.

Figure 6-1 above illustrates the stations on the route map and Table 6-2 depicts the basic requirements and costs of each station.
### Table 6-2: Station Details

<table>
<thead>
<tr>
<th>Station Location</th>
<th>Distance from MLK Blvd. in Fayetteville (Miles)</th>
<th>Type of Station</th>
<th>Accessibility Needs</th>
<th>Other Improvements</th>
<th>Comments</th>
<th>Potential Station Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>US 71B and MLK</td>
<td>0</td>
<td>Park and Ride, Transfer</td>
<td>If in the street, a landing pad will be needed. If in the parking lot, pathways will be needed</td>
<td>Shelter, parking</td>
<td>Potential connection to Rte. 1 and 2, Greenway</td>
<td>$75,000. Full transfer stop option available ($240,000)</td>
</tr>
<tr>
<td>Dickson and West</td>
<td>1</td>
<td>Destination, transfer</td>
<td>Landing pads</td>
<td>Shelter northbound only</td>
<td>Potential connection to Rte. 4 and RT. One or two sides of the street to be determined</td>
<td>Station pair with kiosk on northbound side. $70,000</td>
</tr>
<tr>
<td>UAMS and VA</td>
<td>2</td>
<td>Destination</td>
<td>Landing pads</td>
<td>Shelters</td>
<td>Station location can be either on US 71B or on North St.</td>
<td>Station pair with kiosk on northbound side. $70,000</td>
</tr>
<tr>
<td>US 71B and Township</td>
<td>3.1</td>
<td>Origin and Destination</td>
<td>Landing pads on both sides to overcome verge</td>
<td>Shelters</td>
<td></td>
<td>Station pair with kiosks. $110,000</td>
</tr>
<tr>
<td>US 71B and Rolling Hills</td>
<td>3.8</td>
<td>Park and Ride, Transfer</td>
<td>Landing pads on both sides to overcome verge, sidewalk to park and ride lot</td>
<td>Shelters</td>
<td>Potential connection to Rte. 4, and Razorback Rte. 61</td>
<td>Station pair with kiosks. $110,000</td>
</tr>
<tr>
<td>Station Location</td>
<td>Distance from MLK Blvd. in Fayetteville (Miles)</td>
<td>Type of Station</td>
<td>Accessibility Needs</td>
<td>Other Improvements</td>
<td>Comments</td>
<td>Potential Station Costs</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------------</td>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>US 71B and Joyce Blvd.</td>
<td>5.1</td>
<td>Destination</td>
<td>Landing pads, crosswalks and sidewalks on both sides</td>
<td>Shelters</td>
<td>Potential connection to Rte. 4, and 61.</td>
<td>Station pair with kiosks. $110,000</td>
</tr>
<tr>
<td>US 71B and Zion near Mall</td>
<td>5.4</td>
<td>Destination</td>
<td>Sidewalks connecting to mall</td>
<td>Space for at least two buses</td>
<td>Potential connection to Rte. 3, 4, 61. Greenway crosses 1/4 mile north of Zion simple connection</td>
<td>Potential to use the existing mall stop with just the addition of a kiosk ($40,000) or a station pair on 71B with significant infrastructure improvements $110,000 not including crosswalks</td>
</tr>
<tr>
<td>US 71B and Tyson Dr.</td>
<td>7</td>
<td>Destination and Origins</td>
<td>Landing pads to overcome verges</td>
<td>Shelters</td>
<td>Need shuttle to Tysons</td>
<td>Station pair with kiosks. $110,000</td>
</tr>
<tr>
<td>US 71B and Robinson - Walmart</td>
<td>8</td>
<td>Destination, Park and Ride, Transfer</td>
<td>Full transfer center amenities with accessible pathways to streets</td>
<td>Full transfer amenities</td>
<td>This is a major transfer station. Potential connection to multiple routes. Greenway close.</td>
<td>Potential for park and ride and transfer station (full amenities) in partnership with Walmart. $280,000.</td>
</tr>
<tr>
<td>US 71B and Maple NW Medical Center</td>
<td>9</td>
<td>Destination, Transfer</td>
<td>Sidewalks. Need pads to overcome verges.</td>
<td>Shelters</td>
<td>Rte. 62</td>
<td>Station pair with kiosks. $110,000</td>
</tr>
<tr>
<td>Station Location</td>
<td>Distance from MLK Blvd. in Fayetteville (Miles)</td>
<td>Type of Station</td>
<td>Accessibility Needs</td>
<td>Other Improvements</td>
<td>Comments</td>
<td>Potential Station Costs</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>US 71B and Backus - Harps, Georges plant</td>
<td>10</td>
<td>Destination, Potential Park and Ride</td>
<td>Sidewalk on northbound side, landing pad on southbound side</td>
<td>Park and ride space in Harps lot</td>
<td>Greenway</td>
<td>Station pair (kiosks for startup optional). $30,000</td>
</tr>
<tr>
<td>US 71B and Wagon Wheel</td>
<td>12</td>
<td>Origin</td>
<td>Sidewalks and landing pads</td>
<td>Modest improvements - bench, small shelter</td>
<td></td>
<td>Station pair (kiosks for startup optional). $30,000</td>
</tr>
<tr>
<td>US 71B and JB Hunt Dr.</td>
<td>13.5</td>
<td>Destination</td>
<td>Shuttle bus service necessary. Crosswalks.</td>
<td>Modest improvements - bench, small shelter</td>
<td></td>
<td>Station pair (kiosks for startup optional). $30,000 not including crosswalks.</td>
</tr>
<tr>
<td>US 71B and Monroe</td>
<td>14</td>
<td>Origin, Destination</td>
<td>Sidewalks, landing pads and crosswalk</td>
<td>Shelters</td>
<td></td>
<td>Station pair (kiosks for startup optional). $30,000 not including crosswalks.</td>
</tr>
<tr>
<td>US 71B and West Post Rd</td>
<td>17</td>
<td>Origin</td>
<td>Sidewalks, landing pads and crosswalk</td>
<td>Needs pathway from development</td>
<td></td>
<td>Station pair (kiosks for startup optional). $30,000 not including crosswalks or extended sidewalks to adjacent land uses.</td>
</tr>
<tr>
<td>US 71B and Olrich</td>
<td>18.5</td>
<td>Origin</td>
<td>Crosswalk and landing pads</td>
<td></td>
<td></td>
<td>Station pair (kiosks for startup optional). $30,000 not including crosswalks.</td>
</tr>
<tr>
<td>US 71B and Poplar</td>
<td>19.8</td>
<td>Origin, Destination, Transfer</td>
<td>Landing pads and minor sidewalk improvements</td>
<td>Full transfer amenities</td>
<td>Potential connection to Rte. 51 and 52.</td>
<td>Major Station pair with full transfer amenities. $280,000</td>
</tr>
<tr>
<td>Station Location</td>
<td>Distance from MLK Blvd. in Fayetteville (Miles)</td>
<td>Type of Station</td>
<td>Accessibility Needs</td>
<td>Other Improvements</td>
<td>Comments</td>
<td>Potential Station Costs</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------------------------</td>
<td>-------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>US 71B Near Dixieland</td>
<td>21</td>
<td>Park and Ride, Destination</td>
<td>Crosswalks, sidewalks and landing pads</td>
<td>Shelters</td>
<td>Potential connection to Rte. 51 and 52. If stop is relocated to 21st St. no crosswalk infrastructure improvements are required and access to Walmart and the mall is easier.</td>
<td>Station pair with kiosks. $110,000 not including crosswalks. Potential for park and ride facilities working with the mall ($75,000)</td>
</tr>
<tr>
<td>US 71B and N. 46th St</td>
<td>22.5</td>
<td>Destination</td>
<td>Pathways into south side shopping, and minor crosswalk improvements</td>
<td>Shelters</td>
<td>Station pair with kiosks. $110,000</td>
<td></td>
</tr>
<tr>
<td>US 71B and Medical Center Parkway</td>
<td>23</td>
<td>Destination</td>
<td>Crosswalks, sidewalks and landing pads</td>
<td>Shelters</td>
<td>Station pair with kiosks. $110,000 not including crosswalks.</td>
<td></td>
</tr>
<tr>
<td>US 71B and SE.28th</td>
<td>25</td>
<td>Destination</td>
<td>Landing pads and modest sidewalk improvements</td>
<td>Shelter southbound only</td>
<td>Potential connection to Rte.11.</td>
<td>Station pair with kiosk on southbound side. $70,000</td>
</tr>
<tr>
<td>US 71B and SE 14th St</td>
<td>26</td>
<td>Origin, Destination</td>
<td>Shelter southbound only</td>
<td></td>
<td>Station pair with kiosk on southbound side. $70,000</td>
<td></td>
</tr>
<tr>
<td>WM H.O. (US 71B and 8th)</td>
<td>26.5</td>
<td>Destination</td>
<td>Sidewalks and crosswalks</td>
<td>Shelter southbound only</td>
<td>Potential connection to Rte. 11</td>
<td>Station pair with kiosk on southbound side. $70,000</td>
</tr>
<tr>
<td>WM Logistics</td>
<td>27.3</td>
<td>Destination, Park and Ride</td>
<td>Sidewalks and crosswalks</td>
<td>Full transfer amenities</td>
<td>Potential connection to Rte. 11</td>
<td>Single transfer facility, park and ride. $280,000</td>
</tr>
</tbody>
</table>

**Total**  
$2.1 million - $2.7 million
Basic Station Guidelines

While the study team with input from each of the cities have selected some stations, most were selected by the study team and the study committee. While it is anticipated that some of the stations may change, the following guidelines (especially related to safety) should be followed for any bus station:

- Stations about every 1 – 2 miles, typical of this type service
- About 50 stations (usually on both sides of the street), origin based (where people live), destination based stations as well as stations with cross route meets and park and ride lots
- All stations must be on the far side of intersection
- 3 types of stations
  - Minimal – Accessible pathways and shelter
  - Major Station – Accessible, raised platform, real time information, fare payment kiosk
• Transfer and/or Park and Ride – Space for multiple buses and amenities of a major station

• Accessibility and Safety at All Stations:
  • Pathways to intersection
  • Signal and Crosswalks – we never recommend stations where passengers have to cross US 71B without benefit of a cross walk and traffic signal
  • Safe and well lit
  • Appropriate landing pad

Technology – Moving Rapidly on the Corridor

ORT will coordinate a number of technologies to help reduce travel time:

1. **Signal Prioritization** – This is a key element of the Virtual Dedicated Lane. ORT will work with each city and Arkansas Department of Transportation (ArDOT) to ensure that each signal in the corridor allows buses that are operating behind schedule to maintain a green light (except when priority emergencies are taking place). It is important to ensure that all cities and the state are coordinated in order to maximize effectiveness. ORT will be required to work with each city’s system, which are different from each other.

2. **Protected Left Turns** – In the few instances when the bus leaves US 71B (major transfer and end points), the signal will allow for a protected left turn priority.

3. **Fare Payment** – One option is to operate fare free during the pilot project and forgoing about $600,000 for one year. Free fare will generate the highest ridership with the understanding that after one year a fare would be instituted. If implementing a fare, the objective here is for prepayment using a variety of approaches to ensure riders can board as rapidly as possible. This would include a variety of methods to pay the fare:
a. **Smart Fare Box** – Fully electronic fare boxes that can accept the variety of payment methods described below, can assist in the boarding process.

b. **Telephone app** - Interfacing with the fare box for payment.

c. **Fare Vending Machine** – All significant stations will have vending machines that can allow for payment using cash or credit card and customers can reload their smart card. The machines will accept: smart cards, credit cards, telephone app, paper tickets or exact change.

d. **Smart Card** - Can be reloaded at a fare vending machine (all major stops) using cash or a credit card or on a computer using a credit card. There are a variety of fare approaches that can influence riders to use a smart card, which would allow for the quickest boarding.

e. **Accepting Cash** – Exact fare in cash will be accepted at the fare box or at a vending machine.

4. **Real Time information** - At stations and on a telephone app. This will allow customers to gain confidence in the system, knowing when the bus will arrive. It also makes the service more convenient.
5. **Digital Communications** – The vehicle operator will have a series of digital codes to use in communicating issues to dispatch control center. This will cut communications time and allow the vehicle operator to focus on the vehicle operation.

6. **Active Monitoring of Service** – At this time, the best technology must work closely with the dispatchers to gain the “best of both worlds.” The dispatch control center will have screens that tell the dispatchers exactly where the vehicles are and how fast they are going. Seeing the big picture they can direct vehicles as needed.

**CAPITAL AND OPERATING COSTS**

The capital and operating costs for a Smart BRT are significant, yet well below the cost of a dedicated lane BRT. This next section reviews the capital, operating and startup costs required for the service to be successful.

**Capital Costs**

The most significant capital costs will be the stations, the buses, and the technology. These are reflected as follows:

**Buses and On Board Technology**

It is proposed that the service use medium duty buses. The base cost of these vehicles is about $330,000 each, a little more than one-half the cost of a heavy duty bus. On board technologies needed to ensure rapid movement through the service area include: automatic vehicle locators (AVL), multiple signal prioritization transponders (for each city’s signals), fully digital communications and electronic fare boxes, all estimated at $45,000 per vehicle. The study team also looked at the costs without the $15,000 electronic fare boxes but using telephone apps, station kiosks, on line and purchase at retail outlets. Fare free service for a pilot would also mitigate the need for a fare box. The various costs built into each vehicle are reflected in Table 6-3.
Table 6-3: Vehicle and Accompanying Technology Costs

<table>
<thead>
<tr>
<th></th>
<th>Unit Cost</th>
<th>21 Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Base Vehicle Cost</td>
<td>$330,000</td>
<td>$6,930,000</td>
</tr>
<tr>
<td>CAD AVL</td>
<td>$4,000</td>
<td>$84,000</td>
</tr>
<tr>
<td>Signal Preemption</td>
<td>$18,000</td>
<td>$378,000</td>
</tr>
<tr>
<td>Digital Communication</td>
<td>$9,000</td>
<td>$189,000</td>
</tr>
<tr>
<td>Fare Boxes</td>
<td>$15,000</td>
<td>$315,000</td>
</tr>
<tr>
<td><strong>Fully Loaded Vehicle Costs</strong></td>
<td><strong>$376,000</strong></td>
<td><strong>$7,896,000</strong></td>
</tr>
</tbody>
</table>

Stations

While the cost of BRT stations for this level of service typically top $4 Million, there is no need to spend at those levels at the current time. For BRT to be most successful however, stations should enhance rapid boarding and alighting.

The costs of stations are detailed in Table 6-2 depicted above. These costs range from **$2.1 Million to $2.7 Million** for a higher level of kiosks and some station enhancements.

Total Operating Costs

The operating costs are dependent on headways which determine the number of buses in service. Basic per hour costs for the 10/30 scenario are $85 per vehicle hour. These costs are listed in Table 6-4.

Table 6-4: Total Operating Costs

<table>
<thead>
<tr>
<th>Headways</th>
<th>Peak Vehicles</th>
<th>Spare Vehicles</th>
<th>Annual Revenue Hours</th>
<th>Annual Operational Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart BRT</td>
<td>17</td>
<td>4</td>
<td>38,633</td>
<td>$3.28 Million</td>
</tr>
</tbody>
</table>

Planning, Architectural and Engineering Requirements/Costs

Planning efforts will include: a detailed start-up and service plan with full schedules and run cuts as well as revisions to most other routes in ORT’s system. Stations will be located and then designed. Architectural, engineering and technology expertise will also
be needed for signal prioritization and signage. These various efforts will cost on the order of $2,000,000 - $2,500,000. These numbers are also depicted in Table 6-4.

**Marketing and Promotional Costs**

As with any business, a marketing and promotional effort for a new “start-up” service should include a variety of approaches, including high profile television, newspaper and radio spots, billboards strategically located, working with corporations as well as a variety of grass roots efforts. The television, radio, newspaper and billboards require funding, grass roots efforts and work with corporations requires staff time.

Based on start-up advertising campaigns in peer cities we estimate that the marketing efforts will be about $350,000 for staff time, branding, TV and radio spots (20 each), newspaper ads and other marketing efforts (Table 6-5). On-going marketing costs are built into the hourly operating costs.

**Table 6-5: Total Startup and Operating Costs**

<table>
<thead>
<tr>
<th></th>
<th>10 Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Operating Costs</strong></td>
<td>$3,280,000</td>
</tr>
<tr>
<td><strong>Startup Costs</strong></td>
<td>$2,850,000</td>
</tr>
<tr>
<td><strong>Marketing Costs</strong></td>
<td>$350,000</td>
</tr>
<tr>
<td><strong>Architectural &amp; Engineering Costs</strong></td>
<td>$2,500,000</td>
</tr>
<tr>
<td><strong>Total Capital Costs</strong></td>
<td>$10,851,000</td>
</tr>
</tbody>
</table>

**Total Costs**

The total operating costs are $3.28 million. Startup costs for architecture, engineering, planning and marketing costs are $2.5 Million. Table 6-5 also depicts the full capital costs of stations, buses and technology. When put together with the operating costs these costs represent the capital/infrastructure costs, start-up and one year of operating costs.

**FUNDING SERVICE**

There are few secrets to securing funding for a start-up, ongoing and sustainable service. Under any scenario, local governments, sponsors and/or residents through a tax will have to pay at least 50 percent of the operating costs and up to 20 percent of the capital costs on an on-going basis. As discussed previously, without a dedicated funding source, the
system will have to rely on each city contributing its fair share. This should ideally be in the form of long term binding agreement.

**Sustainability and Diversity**

Sustainability is critical to the success of a pilot project. That is, future funding commitments from the public and private sector should be secured prior to implementing a pilot project, assuming the pilot is successful. Without a pathway to sustainability any pilot project would be futile. Diversity is the key to sustainability and the system should secure:

1. Federal funding for vehicles, infrastructure improvements and possibly operating funds is typically available, with additional sources for BRT and special projects.
2. Local funds to match the Federal funding,
3. Private sector funding in the form of sponsorships and partnerships.

**Sponsorships - Public/Private Partnerships (P3)**

Sponsorships imply an agreement that benefits all parties. In a sponsorship program, one side receives revenue and support, while the other side receives advertising and promotional benefits commensurate with the cost. In fact, an LBRT service will benefit many businesses by supporting their employee’s transit needs as well as bringing customers to their businesses. It is reasonable to ask businesses who will benefit from service to become system sponsors or partners.

- **Hotels, major retail, and service sector**: These entities are across the region.
- **Other major employers**: Many employers that hire large numbers of low skilled employees.
- **Any other businesses that wish to advertise their services or company**: If desired, parts or all of buses can be wrapped for advertising purposes.

**Transit Sponsorships Opportunities**

Transit has a long history of providing advertising on and in buses for additional revenue. Many systems have engaged in advertising over the years, but a sponsorship program is more than simply advertising. Instead of the usual selling of just one form of advertising, the new entity should sell sponsorship packages. Since sponsorship and advertising funds are an important source of local funding, this program can help expand this effort.
Identifying Service

The program is designed to sell a service to both public and private sponsors. Possible services for sale can include:

- **Sponsorship Services at Any Level**
  - Recognize sponsor on the how-to-ride guide (system map and schedule), website, and other venues.
  - Recognize sponsorship on system literature and advertising.
  - Decal on side or back of bus.
  - Dedicated shuttle.
  - Special promotions sponsorship.

- **Higher Level Sponsorship Services (in addition to the above benefits)**
  - Company logo on system map.
  - Placing a shelter for customers and/or employees.
  - Placing a stop conducive to customers and/or employees. This could include going into a parking lot and stopping next to the facility.
  - Bus wrap or other advertising inside the bus.

**SUMMARY**

At this time, for the most part one can go from one city in the urban area to another by car, bicycle or walking, but for the most part, one can’t do it using transit.

The service area is basically linear in design but currently there is no linear service and there is little connectivity between cities. The needs in the service area are evident, but services are slow to grow due to the lack of a major local funding commitment to transit.

Smart BRT with a virtual dedicated lane can serve as the “backbone” for the entire network and can connect all of the cities, perhaps the highest un-met need in the area. This route will quickly become the dominant route with far and away the highest ridership and turn ORT into a true regional system.

The challenge is to ensure that the service is funded well enough so that it can succeed, rather than cut costs to save money, resulting in lower service quality, convenience and ultimately chances for success.