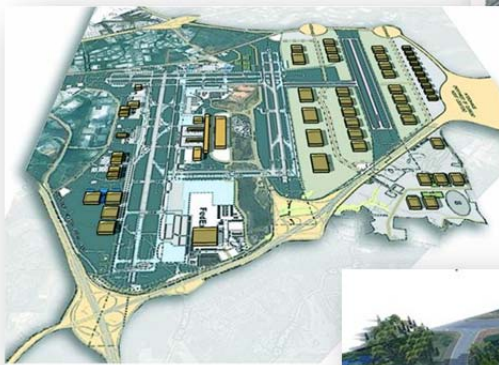


# SEVEN PORTALS STUDY

*An Investigation of Economic Development in  
North Carolina Through Logistics Villages*

Piedmont Triad Region

Final Report



December 31, 2011

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<p>Abstract</p> <p>The goal of this study was investigating potential logistics villages within one of the seven economic development regions across the state, specifically the Piedmont Triad Region. The initial focus was proximity for air, rail, and highway connectivity at potential sites, but the study discovered other possibilities for successful villages. Each village is evaluated for strengths, weaknesses, and needs, with emphasis on identifying what infrastructure improvements are needed to support such a village at that location. The study does not recommend specific sites above others. The major findings from this study are incorporated into a master report covering the entire state titled <i>Seven Portals Study – An Investigation of How Economic Development Can be Encouraged in North Carolina Through Infrastructure Investment</i>.</p> <p>Through research, data analyses, and outreach efforts to businesses, economic development offices, local officials, and planning offices, five potential logistics villages, including the Aerotropolis Complex at Piedmont Triad International Airport, were investigated for their strengths, weaknesses and needs in support of major shipment activity. The region is focusing business development in these areas: logistics and distribution, advanced manufacturing (furnishings, nanotech), life sciences (regenerative medicine, biotech), and creative enterprise in the arts (cultural enhancements leading to improved quality of life).</p>					
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# **Seven Portals Study**

*An Investigation of Economic Development in North Carolina  
Through Logistics Villages*

## **PIEDMONT TRIAD PARTNERSHIP REPORT**

**By**

**Kathryn Dobie, Ph.D., CTL**  
UPS Professor  
Director, Transportation Institute  
North Carolina A&T State University

**Takaruda Mutamba**  
Graduate Student  
North Carolina A&T State University

**For the**

**Governor's Logistics Task Force  
and  
The North Carolina Department of Transportation**

**Final Report**

**December 31, 2011**

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## **Disclaimer**

The contents of this report reflect the views of the authors and not necessarily the views of the University. The authors are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the North Carolina Governor's Office, the North Carolina Department of Transportation, the North Carolina Department of Commerce, nor any other state agency or state authority at the time of publication. This report does not constitute a standard, specification, or regulation.

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### **NC A&T State University**

**Dr. Kathryn Dobie** – UPS Professor, Director of the Transportation Institute, lead investigator and lead writer.

**Ms. Takaruda Mutamba** – Graduate Student, investigator and writer.

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## Executive Summary

The goal of this study was investigating potential logistics villages within one of the seven economic development regions across the state. The initial focus was proximity for air, rail, and highway connectivity at potential sites, but the study discovered other possibilities for successful villages. Each village is evaluated for strengths, weaknesses, and needs, with emphasis on identifying what infrastructure improvements are needed to support such a village at that location. The study does not recommend specific sites above others. The major findings from this study are incorporated into a master report covering the entire state titled *Seven Portals Study – An Investigation of How Economic Development Can be Encouraged in North Carolina Through Infrastructure Investment*.

An examination of the economic development patterns and resultant distribution needs of the Triad Region of North Carolina reveals the need to facilitate connectivity between those areas which already serve or have the potential to serve as loci for economic growth in the region. It is equally important to provide statewide, nationwide, and global access for North Carolina-based companies. Without transportation infrastructure, jobs and economic activity cannot exist.

The Piedmont Triad Region consists of twelve counties located in the mid part of the state. A regional focus on economic development has spurred efforts to coordinate opportunities for workforce development, higher education, infrastructure networks, and attract an array of businesses that contribute to the continued economic and job growth of the region.

The Piedmont Triad Partnership is a key player in the transformation of the region. In conjunction with the U.S. Department of Labor through their WIRED grant – Workforce Innovations in Regional Economic Development – the Partnership led a large scale effort focused on strengthening the Region’s global competitiveness through the integration and collaboration of regional economic workforce development programs.

The three overarching goals of the region are:

- The Triad Region will be recognized as the **Premier Logistics Center of the East Coast of the United States** providing air, highway, and rail infrastructure within and easily accessible to companies operating in the region. Currently the lack of direct rail service to the North Carolina Ports and the ease of using ports to the north and south have resulted in companies using ports in other states.
- The continued **Growth of the Aviation Cluster**, composed of companies that engage in aircraft design and construction, aviation parts manufacturers, and aviation services providers continues to generate economic and job growth. The greatest level of activity in this cluster is currently taking place on and around the Piedmont Triad International Airport. However, aviation-related activity is rapidly spreading throughout the region, notably in Winston-Salem and Davidson County.

- Fulfilling the potential of the **Aerotropolis/NC Center for Global Logistics** initiative which targets the melding of business, education, research, and planned economic development to provide a blueprint for a vibrant future for the Triad Region and the entire state. The elements of the initiative operate synchronously to provide the leverage and critical mass necessary to encourage economic development, job growth, and educational opportunity throughout the entire region and state.

### **Logistics Villages**

Five “logistics villages” are identified in this report. While they each have their individual identity and mix of infrastructure resources, the synergistic opportunities that are afforded by capitalizing on their collective strength will be highlighted throughout the report.

#### ***Logistics Village 1 – Aerotropolis Village***

The competitive environment of today requires businesses to develop global supply chains based on speed, flexibility, and connectivity. An essential element is the ability to move product quickly. To accommodate this need, more and more businesses are drawn to locations with easy access to air transportation. In essence, the airport drives the development of multi-modal transportation and logistics hubs, where business and technology parks, industrial parks, distribution centers, and information and communications technology (ICT) complexes radiate along connecting surface transportation corridors. As a result, economic growth, based on the influx of businesses that are transportation/logistics dependent, can be evident as far as 60 minutes drive time from the airport.

The Aerotropolis City in the Triad Region is centered on the Piedmont Triad Regional Airport. A 60-mile radius from the Piedmont Triad Regional Airport encompasses the majority of the region and in some cases spills over into surrounding regions.

#### ***Logistics Village 2 – Winston-Salem/Smith Reynolds Airport/Forsyth County***

Smith Reynolds Airport has the potential to provide the Aerotropolis city additional airport assets focused on the ability to provide unscheduled, time-sensitive service to corporate and air ambulance and other medically-oriented services. It is located minutes from downtown Winston-Salem, North Carolina, off NC51 at 3801 North Liberty Street, Winston-Salem NC. The primary focus of the Airport is to provide an effective base of operations for corporate aircraft, air charter services, general aviation, and air cargo. Smith Reynolds Airport's facilities are ideally suited for aircraft maintenance, repair and overhaul (MRO) operations and a variety of aviation-related industrial and commercial development applications.

The recent addition of **Dynamic Aviation**, a leading provider of innovative aviation solutions to government and commercial organizations worldwide, and the commitment of **NS Aviation** to establish an aviation maintenance firm is expected to employ 300 people and provide service to up to 50 Boeing 737-type aircraft a year, illustrate the importance of Smith-Reynolds Airport to the growing aviation cluster in the Triad Region.

***Logistics Village 3 – Alamance County Industrial Development Area and Burlington-Alamance Regional Airport***

Alamance County promotes itself as being in the Carolina Corridor. Interstate 40/85 runs through Alamance County and businesses located in the Burlington/Mebane area have easy access to Interstates 77 and 73/74 to the west and Interstate 95 and the Ports at Wilmington and Morehead City. Being positioned midway between RDU with the UPS Hub and PTI with the FedEx Air Hub provides an additional resource to businesses choosing to locate here. Burlington and Mebane are served by both Amtrak and Norfolk Southern Railway.

Alamance County has a number of industrial parks with easy access to I-40/85. The abundance of spec buildings and build-ready sites complete with all utilities illustrates the level of growth that will emanate from the area. The industrial development sites have easy access to I-85 and I-40 between Greensboro and Raleigh in a location that is part of a development crescent from Charlotte to Winston-Salem including Raleigh.

The 600 acre North Carolina Industrial Center is the site of the Kidde safety products manufacturer's 244,000 square foot expansion which is expected to create 100 new jobs and cost \$7.6 million.

The intermodal classification yards in Charlotte and the proposed Rail Park in Mebane would provide connectivity between regions that would benefit both as well as the state as a whole. Rail connectivity also holds the possibility of improving access to the NC ports and increasing demand at the ports. There are also increased possibilities for the Burlington-Alamance Regional Airport to expand and serve as a significant contributor to the economic growth of the Triad Region.

Overall, the location affords companies a high degree of flexibility due to the array of transportation services available.

***Logistics Village 4 – Moore/Montgomery Area, The Heart of NC Mega Site***

The Heart of North Carolina Mega Park is located off Hwy 220 (Future I-73/74) between the Star (Spies Rd) and Biscoe (Hwy 24/27) Exits. The Interstate provides connectivity from Wilmington and also with I-40, I-85, and I-95. Hwy 24/27 provides an uncongested connection to Charlotte.

The existing mega-site which includes portions of Moore and Montgomery Counties consists of a total of 3,000 acres with the potential to expand to 4,000 acres. Currently 445 acres have been identified as heavy industrial, 1600 acres have been identified as medium/light industrial and 368 acres have been identified as commercial/office/retail.

Rail service at the site is provided by the Aberdeen Carolina & Western Railway (ACWR), a shortline that operates from Charlotte on the east and to Aberdeen, with a line that runs northeast from Star to Gulf. ACWR interchanges in Charlotte with CSX and Norfolk Southern, in Norwood with the Winston Salem Southbound Railway, in Gulf with Norfolk Southern, and in Aberdeen with CSX and the Aberdeen & Rockfish Railroad. This network allows customers

easy access to Class 1 rail links going to the Ports of Wilmington and Morehead City and to destinations throughout the US. The interchange with the Winston Salem Southbound Railway which is jointly owned by CSX and Norfolk Southern provides service to the Winston-Salem and Greensboro area of the Piedmont Triad.

Efforts are underway to secure Foreign Trade Zone status for all or part of the Mega Park

#### ***Logistics Village 5 – Davidson County***

Davidson County is centrally located between New York, N.Y. and Miami, Fla., and between Washington, D.C. and Atlanta, GA., and less than an hour's drive from the Piedmont Triad International Airport (35 miles). It is approximately 120 miles from Raleigh and 70 miles from Charlotte. Thomasville-Lexington has been designated as a North Carolina micro area.

The future industrial park is located in the I-85/Business 85 and Hwy 29 area. The proposed 2,700 acre industrial park is designed to attract heavy industrial users. This provides an additional base for future economic and job growth. This location provides excellent access to Interstate 40 for East/West freight flows, Interstate 85 and HWY 29 for North/South freight flows. Access to intermodal resources in Charlotte is easily attainable. Future direct access to Norfolk Southern would further enhance freight flows for heavy industrial occupants of the industrial park.

#### **Conclusions**

The overall objective for the identification of logistics villages throughout the state is to create an efficient network of transportation infrastructure resources and production and distribution nodes to enhance the free flow of freight within North Carolina and interfacing with national and global markets. The examination of the resources within the Triad Region serves to illustrate the economic and employment potential of such an endeavor. Individual logistics village sites must be considered as part of an interdependent whole connected by the transportation infrastructure in order to properly evaluate their contribution to the economic and employment future of North Carolina.

# 1 Introduction

The Piedmont Triad Region consists of twelve counties located in the mid part of the state. A regional focus on economic development has spurred efforts to coordinate opportunities for workforce development, higher education, infrastructure networks, and attract an array of businesses that contribute to the continued economic and job growth of the region.

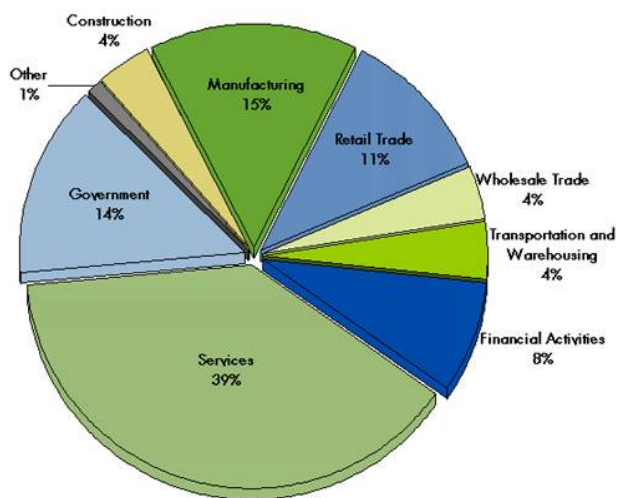
A network of Interstate Highways provides the arterial routes for freight flow throughout the triad region. Interstates 77, 73, and 85 provide the basic north/south flows, Interstate 40 provides the primary east/west flow, Interstates 74 and the 73/74 provide a NW/SE flow, and Interstates 785, 285, and 840 provide additional access to the region. The region has easy access to rail services by CSX and Norfolk Southern through their Charlotte facilities, air freight access using The Piedmont Triad International Airport in Greensboro, Smith-Reynolds Airport in Winston-Salem, and access to the Raleigh-Durham and Charlotte Airports. The net result is an interconnected transportation system which provides for the transport of freight throughout the state and into neighboring states, serving to attract a mix of Global companies.

Infrastructure needs include the completion of highway improvements now planned or underway. Public-private partnerships are anticipated, supported by tolling for such improvements. Norfolk Southern and CSX track improvements are also important if freight throughput goals are to be achieved.

## 1.1 Overview of the Triad Region

### General

- North Carolina ranks #1 for business climate in Site Selection magazine. Lowest in the nation in union enrollment, the state boasts no inventory or intangibles taxes and offers tax credits and assistance for several business initiatives.
- The Piedmont Triad is the twelve-county region in central North Carolina composed of Alamance, Caswell, Davidson, Davie, Forsyth, Guilford, Montgomery, Randolph, Rockingham, Stokes, Surry and Yadkin counties.
- Greensboro, Winston-Salem and High Point are the primary metropolitan centers of the area. Together, these cities rank 37th in size among U.S. cities, following Nashville at 36th.
- The region's population of more than 1.5 million is growing, along with a workforce of more than 815,000.



**Figure 1-1: Distribution of the Workforce Among Major Industries in the Triad Region**

The Piedmont Triad Region has emerged as the location of choice for a diverse community of global companies, operating in virtually every sector of industry and commerce. Well known as a national center for manufacturing and logistics, the Piedmont Triad is also home to an increasing number of corporate headquarters and medical/health care industries. Growing international business concerns, innovative manufacturing resources, cutting-edge technological research and rich cultural development are branding the Piedmont Triad as the Right Place and the Right Pace for globally connected business growth.

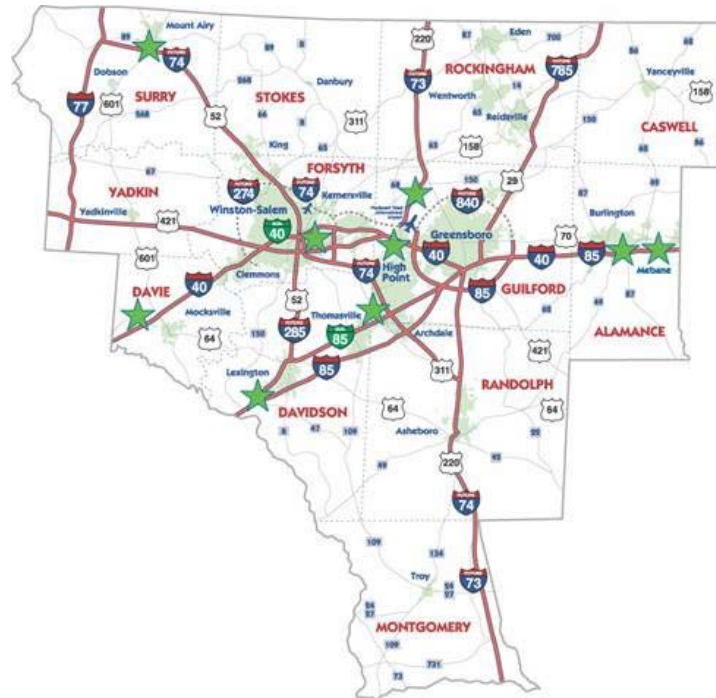
Eleven four-year colleges and universities with a collective enrollment of 50,000, three research universities and two research parks, and nine community colleges with outreach to 50,000 students support the people and the industries of the region. Combined with a moderate climate, natural beauty and comfortable quality of life, the excitement of lifelong learning makes the Piedmont Triad a lively and attractive place to live and work.

### ***Interstate Infrastructure***

A network of Interstate Highways provides the arterial routes for freight flow throughout the Triad region. Interstates 77, 73, and 85 provide the basic north/south flows while Interstate 40 provides the primary east/west flow. Additionally, Interstate 74 and the 73/74 provide a NW/SE flow. Interstates 785, 285, and 840 provide additional connective access to the region. The net result is an interconnected Interstate system which provides for the transport of freight throughout the state and into neighboring states.

Interstate connections to neighboring states:

- VA and SC (I-73)
- VA and SC (I-74)
- VA and SC (I-85)
- TN and SC (I-77)
- TN (I-40)



**Figure 1-2: Map of the Triad Region**

Half of the United States is accessible from the Triad Region in 1 to 2 days.



**Figure 1-3: National Highway Access Time**

Highway infrastructure needs:

- Completion of the outer loop around Greensboro (I-840)
- Completion of the Kernersville connector
- Rehabilitation of the Yadkin River bridge (in progress)
- Completion of other highway improvement projects currently in progress



### Rail Infrastructure

Rail access in the Triad Region is provided by a mix of Class 1 and Short Line railroads. Access to the ports of Wilmington (CSX) and Morehead City (NS) is primarily accomplished via intermodal yards in the Wilmington area. Due to the fact that direct access to CSX and NS is not available in the Triad Region, Intermodal freight traffic into the region is primarily accomplished via motor carriers. A mitigating factor is the availability to Class 1s through the short lines.

Rail infrastructure needs:

- Intermodal access

**Table 1-1: Rail Access in the Triad Region**

Class 1 Railroads		Class 1 Affiliation	Interchange with Class 1	Miles of Track in NC	Commodities Carried	Total Tonnage
	CSX Transportation			1,121		
	Norfolk Southern Corp.			1,301		
Local Rail Affiliated with a Class 1						
	High Point, Thomasville & Denton	CSX & NS		20	Grain, sand, gravel, stone, forest products, paper products, coal, coke, cement, clay, fertilizer, aluminum, chemicals, iron, steel	
	Winston-Salem Southbound	CSX & NS		90	Grain, sand, gravel, stone, forest products, paper products, coal, coke, cement, clay fertilizer, aluminum, chemicals, iron, and steel.	21,000 carloads per year
Independently Owned						
	Aberdeen Carolina & Western Railway		CSX & NS	146	Primarily forest and agricultural products	
	Yadkin Valley Railway		NS	93	Poultry feed ingredients, wood products, steel, plastics, propane, ethanol	12,700 carloads annually
State Owned						
	North Carolina Railroad		CSX & NS	317		1 million carloads of freight, 300,000 passengers

### ***Public Air Infrastructure***

The larger airports in the Triad region are Piedmont Triad International, Smith-Reynolds Airport, Burlington-Alamance Regional Airport, and Mount Airy/Surry County Airport. The Piedmont Triad International airport located in Greensboro handles both passenger and freight traffic. In 2009 it served a total of 1,714,424 passengers and moved a total of 152,071,408 lbs. of freight. The Smith-Reynolds Airport located in Winston-Salem primarily handles light freight, corporate flights and charter air operations. The Burlington-Alamance Regional Airport operations are primarily oriented toward charter jets and single engine freight carriers. The Mount Airy/Surry County Airport is seeking to build a 1,200 foot extension to its current runway in order to attract corporate jet traffic.

### ***Foreign-Trade Zone Resources***

Foreign-trade zones (FTZ) can provide manufacturers, distributors, etc. with numerous benefits such as:

- Relief from inverted tariffs
- Duty exemption on re-exports
- Duty elimination on waste, scrap, and yield loss
- International returns
- Country-of-origin labeling
- Weekly entry savings
- Duty deferral

Companies located in FTZs can maximize cash flow while minimizing taxes and fees. FTZ 230 is located in the Piedmont Triad Region. Site locations for FTZ 230 are:

- Piedmont Triad International Airport – 2,800 acre tract of the airport property adjacent to the city limits
- Alamance County – 994,000 sq. ft. of industrial and warehouse space in Burlington, Haw River, and Mebane
- High Point – 447 acres of industrial property located in Kivett Drive Industrial Park, Piedmont Corporate Park, Premier Center Business Park, and Piedmont Centre
- Mt. Airy/Surry County – 125 acres of industrial property located in the Piedmont Triad West Corporate Park and Westwood Industrial Park
- Winston-Salem – 78 acres with distribution space in Salem Business park
- Lexington – 188 acres at Interstate 85 in the Lexington Business Center
- Davie County - 131 acres off Interstate 40 in SouthPoint Business Park
- Thomasville – 500,000 sq. ft. of general purpose space at Vault Logistics.

### ***Educational Resources***

The Piedmont Triad is home to nine branches of the community college system with 28 campuses and centers. The community colleges provide training for companies creating jobs in North Carolina as well as preparing students to continue their studies in the regions four year institutions.

Piedmont Triad universities offering doctoral programs include UNC Greensboro, NC A&T University, Elon University and Wake Forest University. With the exception of Elon University, these schools are classified as research universities with "high research activity" by the Carnegie Foundation for the Advancement of Teaching.

Research institutions are centers of innovation and learning, and are a vital part of the infrastructure that advances the region's global relevance and economic prowess. Piedmont Triad Research Park and Gateway University Research Park are two excellent examples of research institutions that exist in the Piedmont Triad strengthening the Piedmont Triad's dedication to a technology-focus.

***The North Carolina Center for Global Logistics***, is located at Guilford Technical Community College's new Northwest Campus in Guilford County located near PTI airport. By 2012, the center will move from the Piedmont Triad Partnership offices on Gallimore Dairy Road to the new 100 acre northwest campus for Guilford Technical Community College. The North Carolina Center for Global Logistics was created through a collaborative public/private partnership between regional educational institutions. The center will provide a state-of-the-art industry clearinghouse for inquiries, education, outreach and research. Services to be offered at the center include; logistics and supply chain education for new students, businesses and continuing education; research programs and consulting as well as logistics conference capabilities. A state-of-the-art teaching warehouse will also be located within the center building.

The institutions having a strong commitment to the success of the Center are Elon University, High Point University, UNCG, Wake Forest University, Winston-Salem State University, N.C. A&T State University, UNC School of the Arts, Bennett College, Greensboro College, Guilford College, Salem College, Davidson County Community College, Guilford Technical Community College, Forsyth Technical Community College, Randolph Community College, Rockingham Community College, Piedmont Community College, Montgomery Community College and Surry Community College.

Members of the regional Logistics & Distribution Roundtable, Old Dominion Freight Line, Epes Logistics, Tyco Electronics, Volvo Logistics, Fastenal and Polo Ralph Lauren have been instrumental in collaborating with the participating educational institutions in developing the model for the Center.

Objectives of the North Carolina Center for Global Logistics are to:

- Provide qualified supply chain & logistics employees to regional industries
- Grow industry involvement in education
- Grow the breadth and technology of the program
- Add more and varied curriculum options such as in-depth warehousing and distribution
- Meet the needs of area professionals who want to expand their career with certificate and degree programs
- Continue to expand participation in Articulation agreements with participating educational institutions which will provide students the opportunity to progress from certificates to advanced degrees in supply chain/logistics
- Offer logistics subject matter expertise to regional and state economic development, workforce development and educational facilities.

### ***Logistics and Distribution***

Success in the 21st century global economy is tied to the ability of a region to move products. There is no better location for companies that manufacture or distribute goods than the Piedmont

Triad due to the region's central Mid-Atlantic location and unparalleled network of Interstate highways. The Piedmont Triad has a competency in distribution and logistics that is unmatched in the eastern United States. Within three to five years, the Piedmont Triad Region will be recognized as the fastest growing and most business-friendly global logistics center on the U.S. East Coast.

Current economic development efforts centered on the distribution capabilities of the region include:

- FedEx has established a major air cargo hub at the Piedmont Triad International Airport that is effectively linked by highway to other regions, including Charlotte. Other carriers are expected to provide air cargo services in the future. High speed rail service is projected to provide service in the future, contributing to the connectivity within the region and between regions in central North Carolina. The area will become, in fact a major "Aerotropolis" such as the facility in Alliance, Texas. A key business target supporting aviation will be the emergence of the region as an east coast hub for perishable, high value, and lightweight air freight
- The establishment of Honda Jet's new corporate headquarters and manufacturing facility at the Piedmont Triad International Airport and the establishment of the Honda Jet engine manufacturing facility at the Burlington-Alamance airport facility, combined with other manufacturing and distribution in the region, is an example of the manufacturing and aviation-centered growth sought by the region.
- The location of the newest FedEx Ground facility and a new Caterpillar manufacturing facility in the Kernersville area further demonstrate the varied economic opportunities that are available in the region.
- An example of Greensboro's logistics leadership position is the fact it co-leads (with Memphis) the Department of Labor's Workforce Innovative Regional Economic Development initiative in transportation and distribution.
- The expansion of Old Dominion Freight Lines regional footprint by opening 'Vault Logistics,' a third party warehousing and logistics provider.

Key issues to be addressed include:

- Developing public and private sector partnerships to create the logistics vision.
- Coordinating with other partnerships to maximize all advantages and minimize disadvantages
- Enhancing access to ports in NC as well as Charleston, Norfolk, and Savannah
- The need for an entity to identify and coordinate planning and marketing efforts, which should be located in Greensboro. High level board with Governor's involvement in Board selection, and across State agencies such as Labor, Commerce, Transportation, along with Universities, Community colleges, Partnerships, and Private sector—shippers and carriers.

- Sustainability and innovative transportation strategies

### **Infrastructure needs:**

#### Greensboro (PTI)

The focus is on providing uncongested service in the region.

- 68 High Point to PTI
- 68/40
- 68/311
- Sandy Ridge Road
- I-40/W-S Connector
- North Greensboro portion of I-840
- 2 Lane I-40 between 311 and the split
- I-85 over the Yadkin River
- 220 North/68 North/I-73 connector from south of Greensboro to North 220
- Hwy 68 interchange providing greater accessibility to PTI

#### Winston-Salem (Smith-Reynolds)

- Smith Reynolds Airport is located minutes from downtown Winston-Salem, North Carolina, off US 52 at 3801 North Liberty Street
- The runway and associated technology coupled with the available hangers and maintenance and fueling services positions Smith-Reynolds airport as a location of choice for corporate jets. In addition, these same attributes will be an asset as efforts are made to attract additional freight and charter jet carriers.
- The closing of the North Liberty St exit off US 52 would cause access issues for the airport and companies with facilities on airport property.
- The presence of a Norfolk Southern yard across the street from the airport is not considered to be part of the immediate strategy for the airport. To integrate freight movement between the airport and the rail facility would be difficult with the current road configuration.
- Complete bridge and road repairs for I-40 Business through downtown Winston-Salem.
- Complete eastern leg of I-74 which will provide a bypass around Winston-Salem between US 52 and US 311 and will reduce travel times for all users moving along and through that corridor.
- Complete I-274 west of US 52 to I-40 which will create a northwestern loop around Winston-Salem, relieving some through travel from using downtown routes.

#### Surry County (Mount Airy)

- Eastern leg of I-74 which will drivers to bypass Winston-Salem and cut 20 minutes off the trip to PTI – objective: attract business that want to be closer than 1 hour to an airport.

#### Burlington (Alamance-Burlington)

- Widen US 70 in Guilford and Alamance counties to a 4-lane highway. Reduce normal congestion and increase safety. Also reduce heavy congestion when I 40/85 traffic is detoured due to construction or accidents.

- Widen NC 54 through Burlington beginning at NC 100/NC 49 to US 70.
- 2 stage relocation of NC 119 to a newly constructed 4 lane bypass from the I 40/85 bridge to Mrs. White Lane. Includes an elevated railroad crossing.
- Widening of NC 62 from US 70 to the northern end of Ramada Road close to I 40/85

### Water/Sewer

#### Greensboro/Winston-Salem/Highpoint

- Randleman Dam creation has alleviated water issues in the area.

#### Burlington

- Lake Cammack resources are sufficient for the area

### Communication

- The Triad region is served by 12 different telecom providers with AT&T being the principle supplier.
- Overall the telecom infrastructure is excellent
- Spotty or non-existent wireless service is found in parts of Surry, Yadkin, Stokes, and Caswell counties.

### Rail

- Norfolk Southern and CSX track improvements are also important if freight throughput goals are to be achieved.

#### 1.1.1 **Piedmont Triad Partnership**

The Piedmont Triad Partnership is an award-winning, private, non-profit economic development organization which markets the 12-county Piedmont Triad Region domestically and internationally.

The Piedmont Triad Partnership is a key player in the transformation of the region. In conjunction with the U.S. Department of Labor through their WIRED grant—Workforce Innovations in Regional Economic Development—the Partnership led a large scale effort focused on strengthening the Region’s global competitiveness through the integration and collaboration of regional economic workforce development programs. The grant ran from 2006 through the summer of 2010 and served as a catalyst for many successful programs touching hundreds of organizations and thousands of individuals across the region.

In close cooperation with the North Carolina Department of Commerce and local economic development agencies, the Piedmont Triad Partnership is the region's major resource for sustaining competitive global advantage. Activities of the Piedmont Triad Partnership include marketing and public relations, workforce development and training, regional cluster development and regional advocacy to support the region's growing reputation as a superior location for commerce. The Piedmont Triad Partnership is a member of the newly formed Piedmont Triad Economic Development Council (PTEDC).

Four industry sectors lie at the heart of the piedmont's strategy:

- Logistics and distribution
- Advanced manufacturing
  - Furnishings
  - Nanotech
- Life Sciences
  - Regenerative medicine
  - Biotech
- Creative enterprise in the arts (cultural enhancements leading to improved quality of life)

Table 1-2 provides an overview of the industry and educational providers in the Triad Region.

**Table 1-2: Industry Overview for the Triad Region**

Table 1-1 Industry Overview for Region				
Industry Code	Industry Category	Establishments	Employees	
	<b>Agricultural</b>			
1111	Oilseed and Grain Farming	8	27	
1112	Vegetable and Melon Farming	6	25	
111332	Grape Vineyards	3	12	
11191	Tobacco Farming	14	81	
1121	Cattle Ranching and Farming	27	159	
1122	Hog and Pig Farming	7	37	
1123	Poultry and Egg Production	13	252	
	<b>Raw Materials</b>			
111421	Nursery and Tree Production	27	195	
1133	Logging	44	233	
21231	Stone Mining and Quarrying	23	280	
212313	Crushed Granite Mining and Quarrying	15	193	

213111	Drilling Oil and Gas Wells	4	26	
	Durable Goods Manufacturing			
321	Wood Product Manufacturing	158	4,187	
327	Nonmetallic Mineral Product Mfg	115	2,184	
331	Primary Metal Manufacturing	28	1,683	
332	Fabricated Metal Product Manufacturing	300	7,440	
333	Machinery Manufacturing	140	5,261	
334	Computer and Electronic Product Mfg	54	3,785	
335	Electrical Equipment and Appliances	46	4,097	
336	Transportation Equipment Manufacturing	64	5,152	
337	Furniture and Related Product Mfg	285	10,944	
	Non Durable Goods Manufacturing			
31121	Flour Milling and Malt Manufacturing	3	34	
3114	Fruit, Vegetable, & Specialty Foods Mfg	6	197	
311612	Meat Processed from Carcasses	6	296	
311615	Poultry Processing	4	1,615	
3118	Bakeries and Tortilla Manufacturing	53	1,113	
31211	Soft Drink and Ice Manufacturing	6	320	
31213	Wineries	11	182	
3122	Tobacco Manufacturing	11	4,557	
313	Textile Mills	143	9,836	
314	Textile Product Mills	71	1,670	
315	Apparel Manufacturing	95	6,972	
316	Leather and Allied Product Manufacturing	10	232	
322	Paper Manufacturing	67	3,836	
323	Printing and Related Support Activities	236	3,850	
324	Petroleum & Coal	6	22	



	<b>Products Manufacturing</b>			
<b>325</b>	<b>Chemical Manufacturing</b>	<b>111</b>	<b>6,764</b>	
<b>326</b>	<b>Plastics &amp; Rubber Products Manufacturing</b>	<b>99</b>	<b>6,418</b>	
	<b>Hospitality Sector</b>			
<b>721</b>	<b>Accommodation/Hotels</b>	<b>244</b>	<b>4,882</b>	
<b>722</b>	<b>Food Services and Drinking Places</b>	<b>2,755</b>	<b>49,733</b>	
	<b>Education</b>			
<b>6111</b>	<b>K-12</b>	<b>513</b>	<b>43,640</b>	
<b>6112</b>	<b>Community Colleges</b>	<b>19</b>	<b>6,181</b>	
<b>6113</b>	<b>4-Year Colleges/Graduate Schools</b>	<b>21</b>	<b>16,813</b>	
<b>6114</b>	<b>Business, Computer &amp; Management Training</b>	<b>41</b>	<b>418</b>	
<b>61142</b>	<b>Computer Training</b>	<b>8</b>	<b>28</b>	
<b>61143</b>	<b>Management Training</b>	<b>32</b>	<b>366</b>	
<b>6115</b>	<b>Technical and Trade Schools</b>	<b>34</b>	<b>180</b>	
<b>61161</b>	<b>Fine Arts Schools</b>	<b>53</b>	<b>800</b>	
	<b>Total All Industries</b>	<b>38,732</b>	<b>655,105</b>	
	<b>Total Private Industry</b>	<b>37,625</b>	<b>562,534</b>	
	<b>Total Federal Government</b>	<b>221</b>	<b>6,915</b>	
	<b>Total State Government</b>	<b>213</b>	<b>18,957</b>	
	<b>Total Local Government</b>	<b>672</b>	<b>66,699</b>	

Source: North Carolina Employment Security Commission, Quarterly Census of Employment and Wages, 2010 Quarter 1

Table 1-3 provides an overview of employment data for the region

**Table 1-3: Region Employment Data**

Projected Labor force				Projected Employment		
County	2009	2014	Difference	2009	2014	Difference
Alamance	71,061	75,908	4,847	61,064	68,700	7,636
Caswell	10,823	10,482	(341)	8,645	9,023	378
Davidson	78,452	81,056	2,604	66,644	72,803	6,159
Davie	20,784	22,984	2,200	18,058	20,961	2,903
Forsyth	175,066	188,067	13,001	151,064	170,653	19,589
Guilford	252,034	269,969	17,935	219,281	246,365	27,084
Montgomery	11,760	11,836	76	9,653	10,383	730
Randolph	75,725	79,519	3,794	65,950	72,617	6,667
Rockingham	46,415	46,812	397	39,689	42,225	2,536
Stokes	24,781	25,003	222	20,862	22,309	1,447
Surry	33,933	34,721	788	29,801	31,888	2,087
Yadkin	18,904	19,651	747	17,044	18,365	1,321
<b>Total PT Region</b>	<b>819,738</b>	<b>866,008</b>	<b>46,270</b>	<b>707,755</b>	<b>786,292</b>	<b>78,537</b>

## 1.2 Goals of the Region

The identification of the specific industry clusters that are the core competencies of the region has been crucial as efforts to spur economic growth have gathered momentum. An important element of this strategy is to recognize and grow the infrastructure, education and other elements necessary to support selected target clusters. It is equally important to remain open to opportunities that are afforded by the growth of previously unidentified innovative new industry sectors as well as the expansion of existing industry sectors that due to growth in demand or innovative opportunities require additional infrastructure or educational resources.

### 1.2.1 Goal 1 - Premier Logistics Center on the East Coast

The overall goal of the Triad Region is to be recognized as the **Premier Logistics Center of the East Coast of the United States**. Air, highway, and rail infrastructure within and easily

accessible to companies operating in the region are necessary to make this possible. The one transportation element that is not as strong involves providing easily accessible, congestion-free access to deep water ports. The lack of direct rail service to the North Carolina Ports and the ease of using ports to the north and south (e.g. Norfolk and Charleston) lead to under utilization of resources at the Ports of Wilmington and Morehead City.

### 1.2.2 Goal 2 - Growth of the Aviation Cluster

The Aviation Cluster is composed of companies that engage in aircraft design and construction, aviation parts manufacturers, and aviation services providers. The greatest level of activity in this cluster is currently taking place on and around the Piedmont Triad International Airport. However, activity in the aviation cluster is rapidly spreading throughout the region, creating job opportunities and increasing economic activity. Evidence of the increasing importance of the aviation cluster throughout the region includes:

- The location of Honda Jet Headquarters and manufacturing at PTI
- The location of the Honda Jet engine manufacturing facility at Burlington/Alamance Regional Airport
- Growth of TIMCO at PTI
- TIMCO seat manufacturing being established in Davidson County
- Establishment of NS Aviation at Smith/Reynolds Airfield in Winston-Salem
- Establishment of Dynamic Aviation at Smith/Reynolds Airfield in Winston-Salem

These examples serve as evidence that the aviation services industry has experienced phenomenal growth in the Piedmont Triad region. Regional highway and airport infrastructure and educational support are instrumental in the continued growth of the aviation industry sector.

### 1.2.3 Goal 3 - Logistics Initiative – Aerotropolis/NC Center for Global Logistics Center

The third overall goal of the Triad Region is to bring to fruition the economic promise of the Aerotropolis project coupled with the education and research promise of the North Carolina Center for Global Logistics.

- The Piedmont Triad Airport serves as the central economic engine in the development of multi-modal transportation and logistics hubs, where business and technology parks, industrial parks, distribution centers, and information and communications technology (ICT) complexes radiate along connecting surface transportation corridors. As a result, economic growth, based on the influx of businesses that are transportation/logistics dependent, can be evident as far as 60 minutes drive time from the airport. In the case of the Piedmont Triad Region, the 60 minute drive time encompasses the entire region in addition to areas some adjoining economic regions.
- The North Carolina Center for Global Logistics was created through a collaborative public/private partnership between regional educational institutions and corporate partners. The center will provide a state-of-the-art industry clearinghouse for inquiries, education, outreach and research. Services to be offered at the center include; logistics

and supply chain education for new students, businesses and continuing education; research programs and consulting as well as logistics conference capabilities.

- The institutions having a strong commitment to the success of the Center are Elon University, High Point University, UNCG, Wake Forest University, Winston-Salem State University, N.C. A&T State University, UNC School of the Arts, Bennett College, Greensboro College, Guilford College, Salem College, Davidson County Community College, Guilford Technical Community College, Forsyth Technical Community College, Randolph Community College, Rockingham Community College, Piedmont Community College, Montgomery Community College and Surry Community College.

The economic and education elements of the Logistics Initiative operate synchronously to provide the leverage and critical mass necessary to promote the development of economic development, job growth, and educational opportunity throughout the entire region and state.

## 2 Suggested Logistics Villages

### 2.1 *Logistics Village 1 – Aerotropolis City*

The competitive environment of today requires businesses to develop global supply chains based on speed, flexibility, and connectivity. An essential element is the ability to move product quickly. To accommodate this need, more and more businesses are drawn to locations with easy access to air transportation. In essence, the airport drives the development of multi-modal transportation and logistics hubs, where business and technology parks, industrial parks, distribution centers, and information and communications technology (ICT) complexes radiate along connecting surface transportation corridors. As a result, economic growth, based on the influx of businesses that are transportation/logistics dependent, can be evident as far as 60 minutes drive time from the airport. This phenomenon has resulted in the development of the Aerotropolis, an airport-based economic development engine.

In the case of the Triad Region, the role of the Piedmont Triad International Airport (PTI) has gained increasing importance in the economic development of the Triad Region due in part to the opening of the FedEx Mid-Atlantic sort hub and the establishment of Honda Jet's US headquarters and manufacturing facility at PTI. The development of the Aerotropolis Airport City has begun to, and will continue to, impact the freight flows and economic growth of the entire 12 county region, North Carolina, and beyond. The more immediate area around PTI is attractive for businesses needing speed, agility, and accessibility such as time-sensitive manufacturing and distribution and regional corporate headquarters and air-travel intensive professionals. Further, the availability of a comprehensive transportation infrastructure, including highway, rail, port, and air access, when combined with the existing logistics companies/assets and a comprehensive perspective of land and utility availability, and workforce development, certainly creates a strong environment for continued business growth and development resulting in economic prosperity for the region and the state.

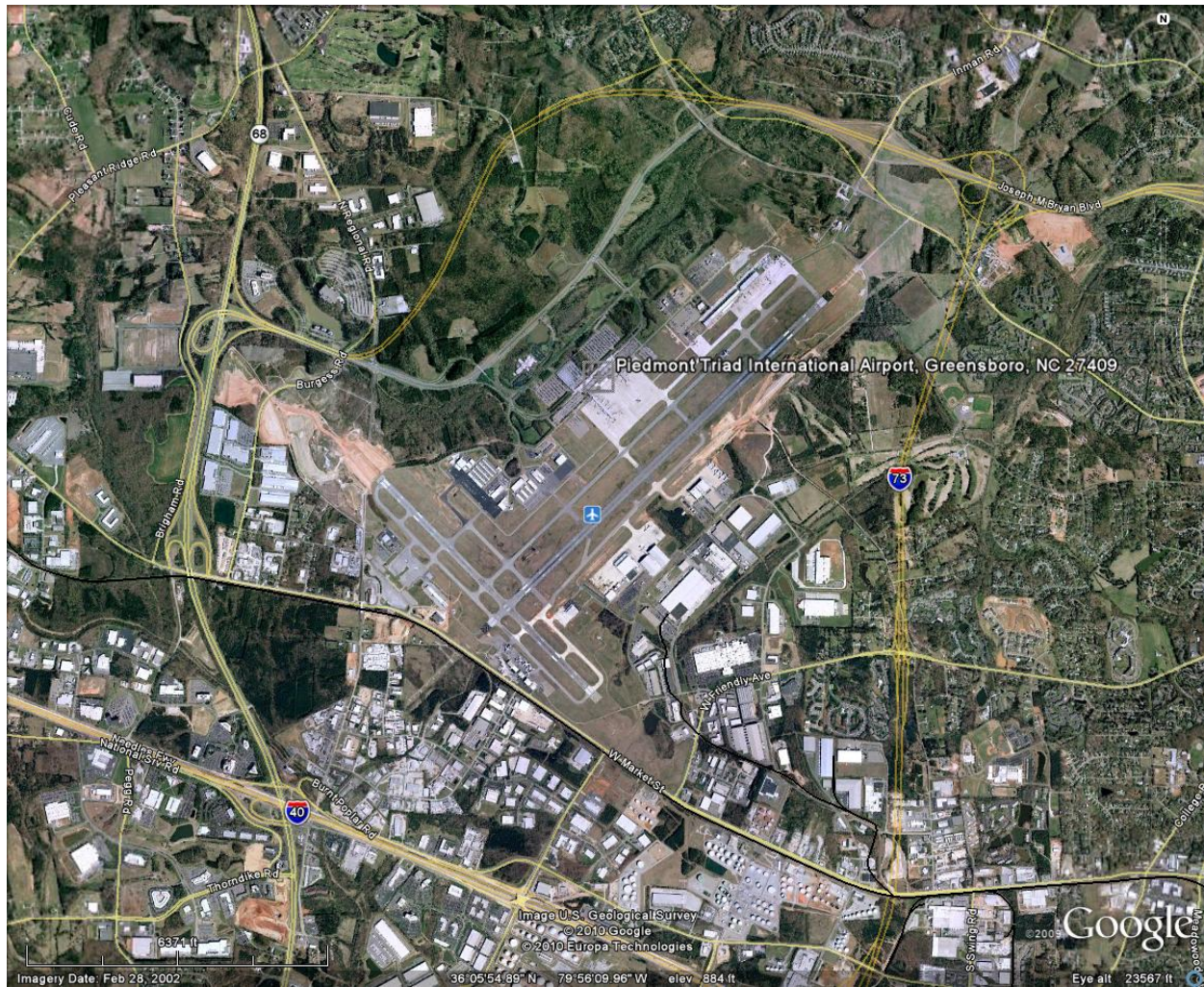
#### 2.1.1 **Current**

The location of the FedEx Sort Hub at PTI has been the catalyst for the current airport-based economic development efforts throughout the Triad Region. Prior to opening the FedEx facility, numerous infrastructure issues had to be addressed. The most obvious was the addition of a 9,000 ft runway parallel to the existing 10,001 ft runway to accommodate the additional traffic that would be generated. Building the runway required the building of 37.6 square feet of bridges and 150,000 lane miles of roadway to accommodate relocation of existing roads. Before the FedEx facility even came on line, the project had generated 16,300 jobs and an estimated \$7.5 billion in economic impact. Another recent addition has been the Honda Aircraft Company which built its world headquarters at PTI.

At the current time there are 50 companies with 4,500 employees located on the PTI campus. This includes major aircraft maintenance facilities Timco, Cessna, Comair, Atlantic Aero and Landmark Aviation. An aerial photo of the current PTI campus provides a picture of the starting



point for the development of an economic engine that has the potential to develop into a major distribution hub for the Eastern United States.

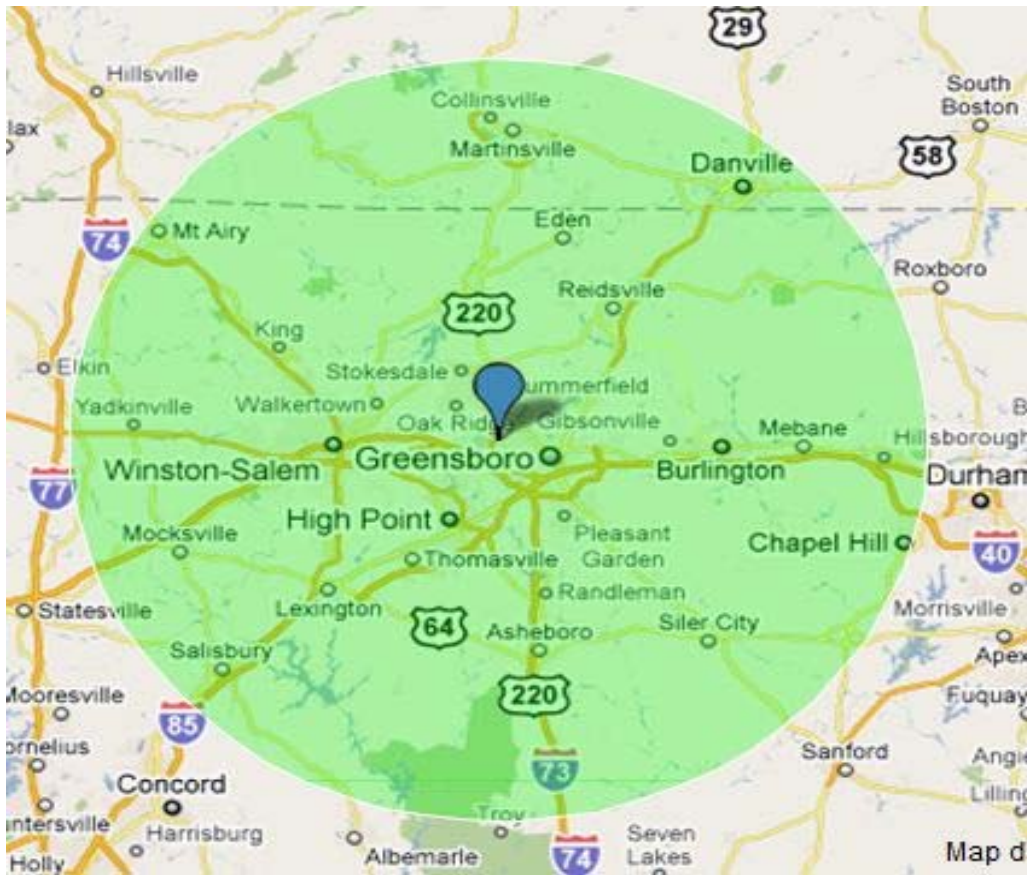


(Source: GoogleEarth, Inc.)

**Figure 2-1: Aerotropolis City**

The importance of labor availability cannot be underestimated. Within a 50-mile radius of the Piedmont Triad Airport there are 1,020,782 employable persons. At the current time the unemployment rate is 11.3%. The following figure, Figure 2-2, shows that the 50-mile radius extends into Virginia.





**Figure 2-2: Aerotropolis Employment Figures – 50-mile radius**

### 2.1.2 Projected Economy and Trade Patterns

Expectations of economic growth for the Aerotropolis and adjacent areas are likely to be based on the advantages afforded by the FedEx Air Sort Hub and a range of distribution facilities with connectors to a network of Interstate highways to facilitate freight flow into and out of the Region.

At this time the airport complex itself houses a number of aircraft maintenance and construction firms. It is reasonable to expect that these firms will expand in response to an improved economic climate. One of these companies, TIMCO, has already made a commitment for expansion into Davidson County with an aircraft seat manufacturing facility which is expected to employ 500 workers. As Smith-Reynolds Airport in Winston-Salem continues its efforts to attract aviation-related companies, a synergism with the aviation-related companies that are currently located at PTI and those which will locate at the Piedmont Triad International Airport will grow. In addition there are the possible synergies that may develop between the aircraft manufacturing and support infrastructure at PTI and the Spirit airframe assembly facility based at Kinston which would attract further expansion of aircraft manufacturing and maintenance operations. Similar synergies between the HondaJet manufacturing facility at PTI and the

HondaJet engine manufacturing facility at the Burlington-Alamance airport already exist and can be expected to expand.

In the future, as the economy improves, the operations of FedEx in the region will increase. Due to congestion issues at the air freight facilities in the Northeast, e.g. Kennedy in NY and Liberty at Newark, it is possible that there would be an increase in international air cargo transported into and out of PTI.

An additional potential area of development and growth for PTI is in the area of time sensitive, climate controlled transportation and distribution. PTI is geographically positioned to serve East Coast and International markets. There are opportunities to capitalize on the time sensitive, temperate controlled needs of the biotechnology, regenerative medicine, pharmaceutical, and nanotechnology industry sectors in the Triad and beyond. Other product markets would include inbound flowers and food stuffs from Central and South America.

The projections of region-wide growth rest on the ability to acquire the needed land for expansion and to plan and build a comprehensive highway access network which requires the completion of I-73, I-840, and improvements to Hwy 68 including an interchange providing greater accessibility to PTI. Infrastructure changes to the airport itself include the addition of a third runway, a new air traffic control tower, and the establishment of a Federal inspection station. Normal airfield maintenance and improvements will be needed. The premise of the growth plan is that economic development is a priority.

As part of the infrastructure development in and around PTI, it should be noted that there is a Piedmont Area Rapid Transit (PART) intermodal rail and bus terminal planned for 12 acres west of Regional Road near the intersection of Arrow Road and West Market St. Construction is scheduled to be completed by 2013. The projected construction of the proposed 35,000 square-foot building which will house the administrative headquarters and the regional terminal will provide an additional level of regional transportation for the citizens within the region. The location facilitates the ability of PART riders to catch buses or other modes of transportation near the Piedmont International Airport. The net result will be greater accessibility to employment sites for riders.

The following illustrations provide a picture of the planned growth of the Aerotropolis over the next 30 years. The focus is on the land and infrastructure needs and projected development on and around airport property. It must be remembered that over this time period, a comprehensive plan for economic development focusing on the unimpeded flow of freight throughout the region will also be implemented. The group responsible for this effort is the Land and Infrastructure Resources Committee of the NC Center for Global Logistics Board. This group comprises regional planners from Piedmont Triad county and municipal governments, representatives from PART, regional commercial developers, economic developers, the Aerotropolis project and NC Center for Global Logistics staff as well as many other interested parties.



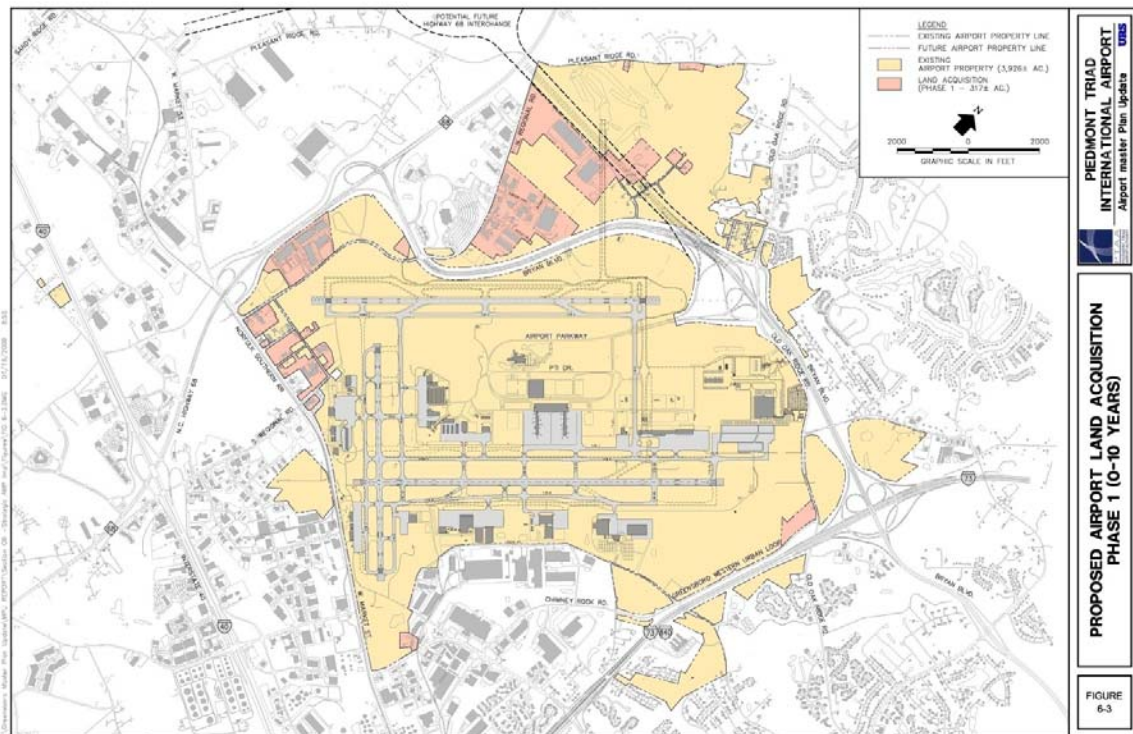


Figure 2-3: Future Aerotropolis Expansion 0-10 years

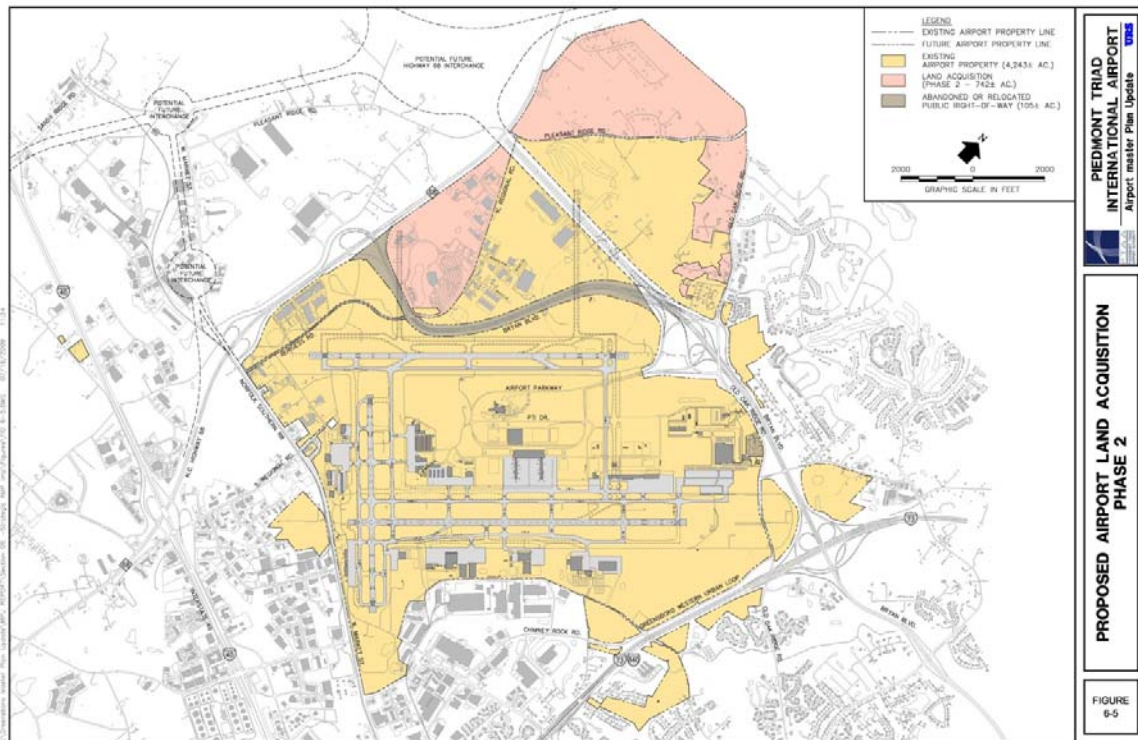


Figure 2-4: Future Aerotropolis Expansion Phase 2

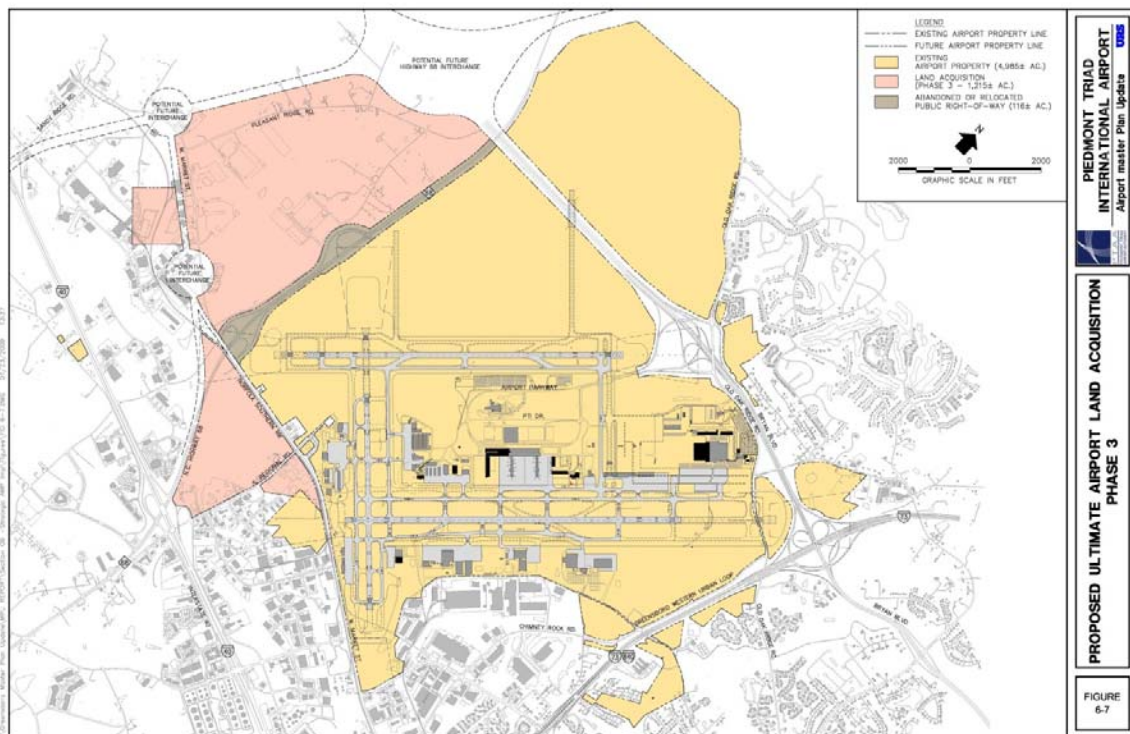
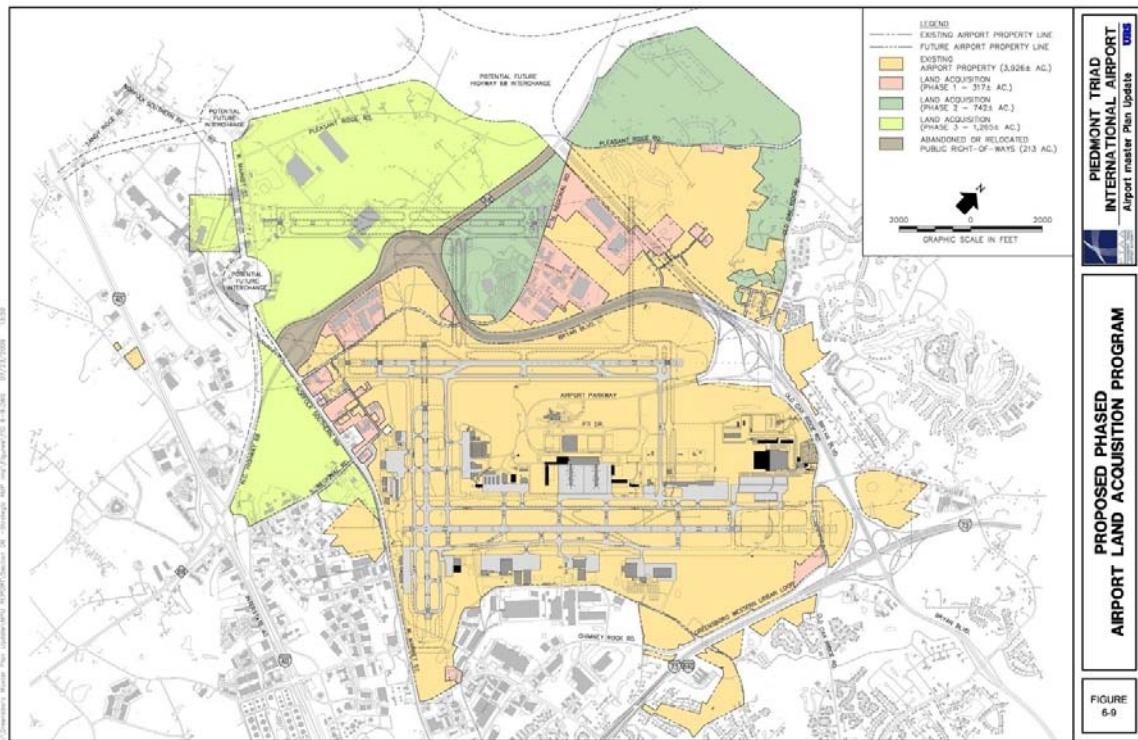


Figure 2-5: Future Aerotropolis Expansion Phase 3



**Figure 2-6: Proposed Phased Airport Land Acquisition Program**

## 2.2 **Logistics Village 2 – Winston Salem/Smith-Reynolds Airport/Forsyth County**

Smith Reynolds Airport has the potential to provide the Aerotropolis city additional airport assets focused on the ability to provide unscheduled, time-sensitive service to corporate and air ambulance and other medically-oriented services. It is located minutes from downtown Winston-Salem, North Carolina, off NC51 at 3801 North Liberty Street, Winston-Salem NC 27105. The primary focus of the Airport is to provide an effective base of operations for corporate aircraft, air charter services, general aviation, and air cargo. Smith Reynolds Airport's facilities are ideally suited for aircraft maintenance, repair and overhaul (MRO) operations and a variety of aviation-related industrial and commercial development applications.

### ***Airfield Infrastructure***

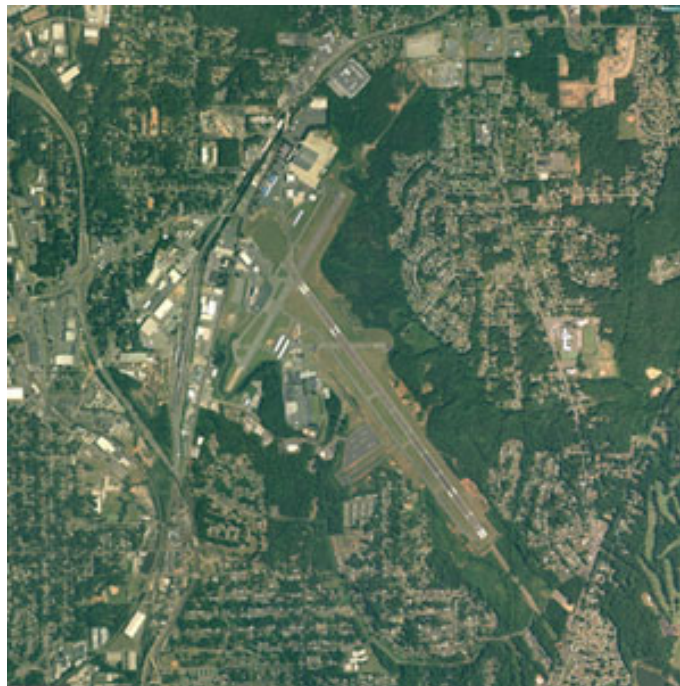
The primary runway is runway 15/33 which is 6,665 feet long and 150 feet wide. It is constructed of asphalt and is grooved to provide additional traction. In 2008 the runway was resurfaced and marked with precision and non-precision markings. The airport has an ILS or localizer approach to Runway 33, GPS approaches to Runways 15 and 33 and a VOR/DME approach to runway 15. To aid pilot visibility during instrument conditions, runway end identifier lights (REILs) are installed near the threshold of Runway 15; whereas, a medium intensity approach lighting system with runway alignment indicator lights (MALSR) is installed prior to the end of Runway 33. This runway currently has adequate approach instrumentation to meet demand through the planning period.



In July 2010, the Airport Commission of Forsyth County with assistance from the Federal Aviation Administration (FAA) and the North Carolina Department of Transportation (NCDOT), completed the Runway Safety Area (RSA) project off the end of Runway 33 at Smith Reynolds Airport in Winston-Salem. Due to existing terrain and land restrictions at the Airport, the project required new technology which is referred to as Engineered Materials Arresting System (EMAS). The EMAS technology provides safety benefits in cases where land is not available. Runway 4/22 is INT's crosswind runway which is 3,398 feet long and 150 feet wide. The runway is in need of repair. It is used by small general aviation aircraft or by flight schools to conduct their training activities. Runway 4-22 currently does not have the instrumentation or the lighting necessary to accommodate aircraft operations during instrument conditions.

Each runway at INT is supported by a full length parallel taxiway. Taxiway A serves Runway 15/33 to the west with taxiway connectors B, C, D, and E; whereas, Runway 4/22 is served by the full-length parallel Taxiway F and connector J. Taxiway A provides access to/from both runways to the terminal apron and Taxiway H provides access to/from the large maintenance hangar areas to taxiway F. Taxiways M and N provide access to the centrally located T-hangars.

Paved apron areas are required for the parking of based aircraft in the form of tie-downs and also for transient aircraft parking in the form of open ramp. There are multiple apron areas located throughout the airfield at INT for aircraft parking; however many of these aprons are directly associated with nearby hangars where private business is conducted.



**Figure 2-7: Smith-Reynolds Airport**

The terminal building was constructed in 1941 and is located on the west side of the airport, adjacent to Taxiway F, with surface access via Norfleet Street and Liberty Street. The terminal building was previously used by commercial airline passengers until 2000, when US Airways ceased commuter operations at INT.

The Aircraft Rescue and Fire Fighting (ARFF) facility is located on the south side of the airfield between runways 4-22 and 15-33 and is accessible from N. Liberty Street by taking Fairchild Rd. to the west until it turns into Aviation Drive. Aviation Drive leads directly to the ARFF facility, airport maintenance, and to the Heritage maintenance hangar.

### 2.2.1 **Current**

The airport has experienced financial difficulties due to the cessation of operations by Pace Airlines. However, there are currently negotiations in progress to secure tenants for that facility. There are numerous office, hanger, airline and charter space opportunities at the airport in addition to land that is available for development. A 63,000 sq ft facility is available that is best suited for warehouse or light industrial operations. Smith-Reynolds Airport is located in an economic development zone which provides a number of economic incentives.

#### ***Annual Operations by Type for CY2009***

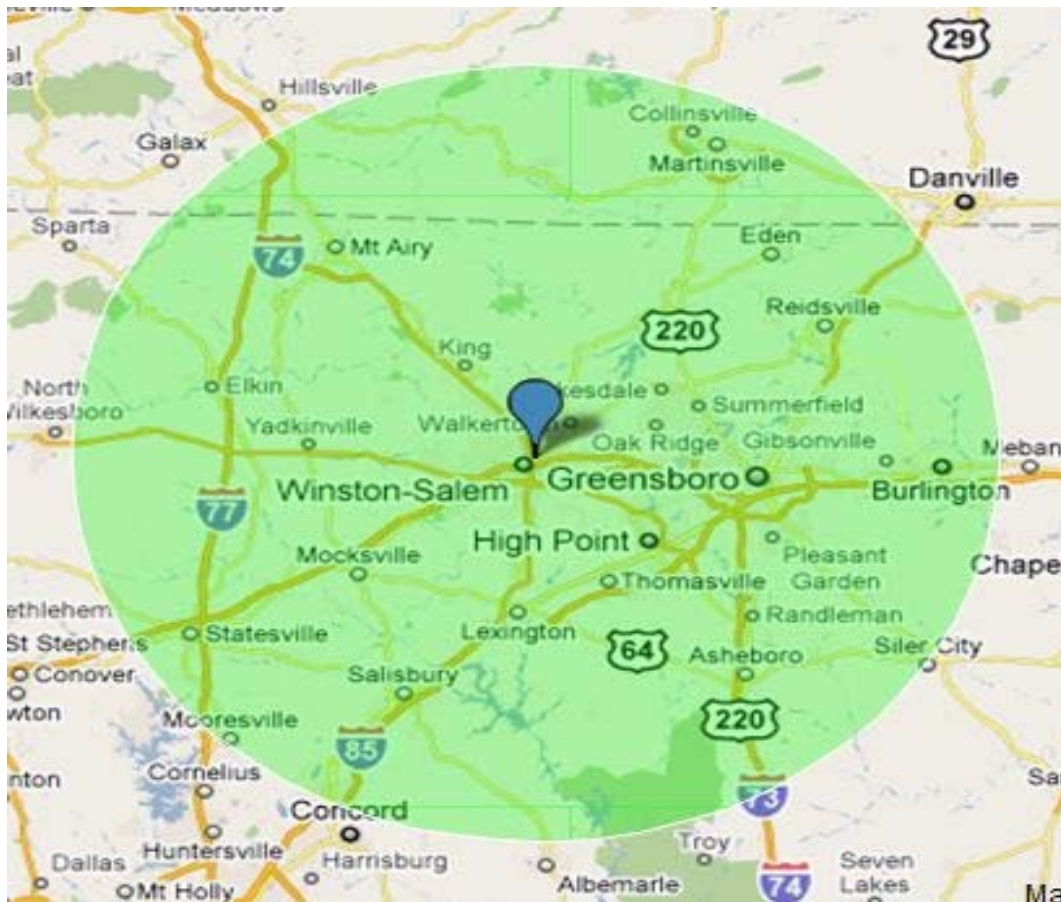
Training 20%

Other Local 6%

IFR Itinerate 28%

VFR Itinerate 45%

Labor availability within 50 miles of Winston-Salem is 1,027,236 includes 1,020,782 employable persons. At the current time the unemployment rate is 11.4%. The following figure, Figure 2-8, shows that the 50-mile radius extends into Virginia.



**Figure 2-8: Winston-Salem 50-mile Employment Radius**

## 2.2.2 Projected Economy and Trade Patterns

Dynamic Aviation is a leading provider of innovative aviation solutions to government and commercial organizations worldwide. This Virginia-based company is launching a new commercial jet service starting that is expected to begin flying passengers across the U.S. and around the world in early November. The new jet charter airline will serve the federal government and a wide array of commercial customers, including corporate travel groups, tour operators, collegiate-athletic teams and other entities that have needs for customized, reliable jet charter services. The airline is capable of worldwide charter, including routes between the U.S. and the Caribbean and Mexico. Currently the company operates one MD-88 jet and a second aircraft is slated to be delivered in mid-December. Dynamic Aviation joins the growing family of aviation companies in Winston-Salem and the Piedmont Triad region of North Carolina. The location and facilities of Smith Reynolds Airport will enable the airport to be position itself as the airport of choice for an air ambulance service and other air transport services that would meet the time-sensitive medical and pharmaceutical transport needs.

Successful completion of current negotiations with NS Aviation provides a tenant for the space vacated by Pace Airlines. This aviation maintenance firm is expected to employ 300 people and provide service to up to 50 Boeing 737-type aircraft a year. NS Aviation provides aviation maintenance related services that would add to the services currently available at Smith-Reynolds Airport and makes a significant addition to the growing aviation cluster in the Triad Region.

The manager of Smith-Reynolds Airport has indicated that the runway and associated technology coupled with the available hangers and maintenance and fueling services positions Smith-Reynolds Airport as a location of choice for corporate jets. In addition, these same attributes will be an asset as efforts are made to attract additional freight and charter jet carriers.

### ***Infrastructure Issues***

The closing of the North Liberty St exit off US 51 would cause access issues for the airport and companies with facilities on airport property.

The presence of a Norfolk Southern (Winston Salem Southbound) yard across the street from the airport is not considered to be part of the immediate strategy for the airport, but provides an opportunity for companies operating in this portion of the Piedmont Triad Region.

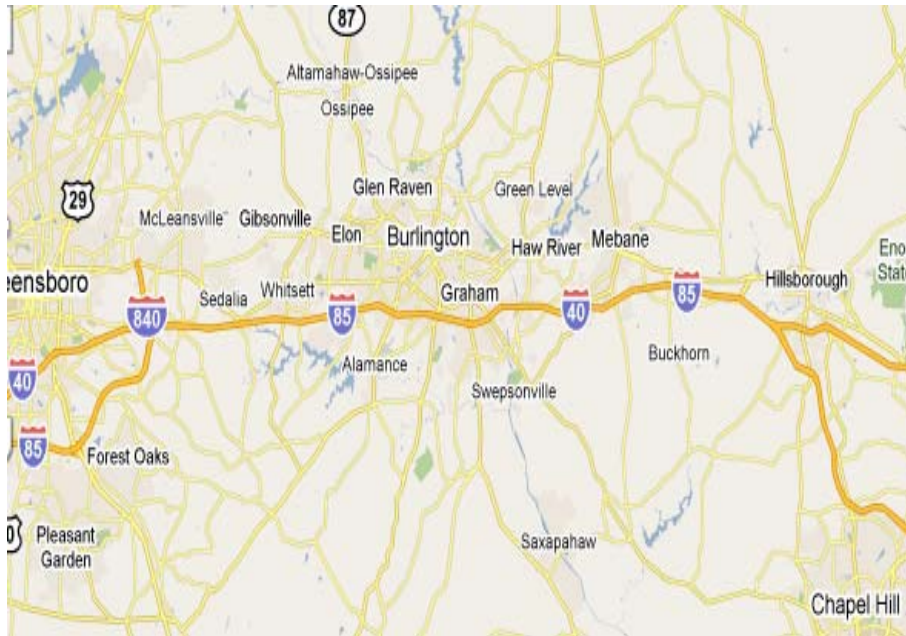
### ***Forsyth County***

Forsyth County is home to the new Caterpillar manufacturing facility that will produce axles for heavy mining equipment. The 850,000 sq ft facility is expected to employ 329 full time workers and 118 contract workers when it is completed. The facility represents a \$426 million investment in the Kernersville area. Another major investment in the Kernersville area was made by FedEx for a ground shipping hub. This facility provides an additional transportation resource for the area and employs 260 full and part time employees in addition to about 200 independent contractors.

## **2.3      *Logistics Village 3 – Alamance County Industrial Development Area and Burlington – Alamance Regional Airport***

Alamance County has the enviable advantage of being located where I-40 and I-85 come together between the fast growing metropolitan areas of the Triad and the Triangle. This location provides industry with access to the major east/west corridor in North Carolina with a minimum of the congestion found in the Triad or Triangle metropolitan areas.





**Figure 2-9: Alamance County Industrial Development Area**

### 2.3.1 Current

Alamance County has a number of industrial parks with easy access to I-40/85. The abundance of spec buildings and build-ready sites complete with all utilities illustrates the level of growth that will emanate from the area. The three largest of these industrial parks are The Burlington Commerce Park, Central Carolina Industrial Center, and the North Carolina Industrial Center.

The largest of these industrial parks, the North Carolina Industrial Center (NCIC), was a finalist site for the Mercedes assembly plant which eventually located in Georgia. This 600+ acre site is located in Mebane at exit 153. The site is separated from the Interstate by the Central Carolina Industrial Center which is a 91 acre corporate park that has nearly reached capacity. A Rail Park is proposed to occupy a portion of the northern-most section of the NCIC. This would require the construction of a 100 ft spur into the industrial area from the intersection with the Norfolk Southern rail line. The rail park and the continuance of the spur further into the industrial area have already been engineered. The proposed relocation of Hwy 119 (Mebane Bypass) will increase accessibility to all phases of the NCIC.

Water and sewer are in place for phases 1 and 2 of the NCIC. Water and sewer will be provided to the remaining portion of the industrial area as needed.





**Figure 2-10: Burlington Commerce Park**

Overview: Located in Burlington (Exit 145), this 75-acre mixed-use park includes retail, office, hospitality, and industrial users. One large 25.59 acre tract is available and zoned commercial.



**Figure 2-11: Central Carolina Industrial Center**

Overview: CCIC is a 91-acre corporate park, located in Mebane at Exit 153, with over 700,000 square feet of existing space. Current construction is under way for a 42,000 sq. ft. flex space on lot #9 of the park.



**Figure 2-12: North Carolina Industrial Center**

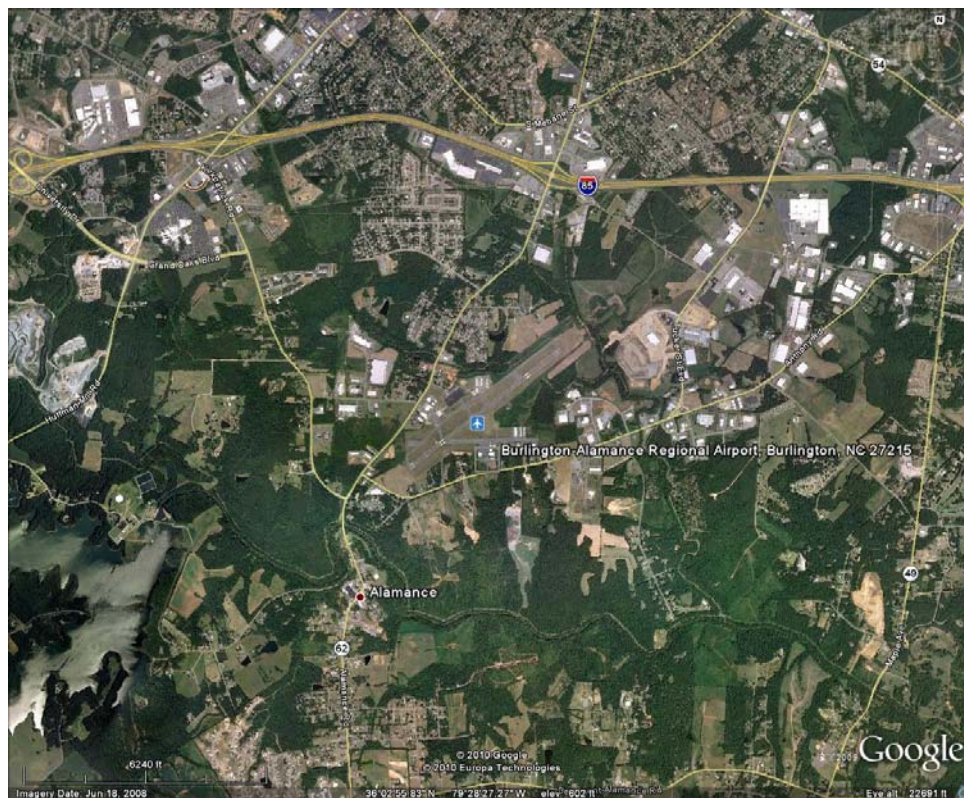
Overview: Developed by Samet Corporation, NCIC is a 603-acre mixed-use development, located in Mebane, ideal for office, manufacturing and distribution facilities. This property was once under consideration for the Mercedes Benz facility. The North Carolina Industrial center is about 20% developed. The seven current tenants have over eight hundred employees and contribute about \$72 million in tax base and \$338,400 in yearly local taxes. When completely occupied, it is projected that more than 4000 will be employed and have a tax base of \$360 million. Plans for expanding the current tenant base include data centers, in addition to the current light industrial, manufacturing and distribution uses. Infrastructure work needed to

implement these plans includes the road construction needed to connect to the new N.C. 119 on the eastern border.

### Transportation Infrastructure

Alamance County promotes itself as being in the Carolina Corridor. Interstate 40/85 runs through Alamance County and businesses located in the Burlington/Mebane area easy access to Interstates 77 and 73/74 to the west and Interstate 95 and the Ports at Wilmington and Morehead City. Being positioned midway between RDU with the UPS Hub and PTI with the FedEx Air Hub provides an additional resource to businesses choosing to locate here. Burlington and Mebane are served by both Amtrak and Norfolk Southern Railway. There are additional Norfolk Southern resources located in the area. Burlington-Alamance Regional Airport, PTI, and RDU provide service to businesses located in the area.

***Burlington-Alamance Regional Airport*** is located three miles southwest of the central business district of Burlington at 3441 N. Aviation Drive. This general aviation airport covers 340 acre and has a single runway. The primary focus of the airport is small planes, corporate jets, and single engine freight carrier. The single runway, 6/24 has been recently extended from 5,000 feet to 6,400 feet. The primary impetus for extending the runway was to accommodate the new Honda Aero headquarters and manufacturing plant. Currently the airfield does not have a control tower and is unlighted.



**Figure 2-13: Aerial View of Burlington-Alamance Regional Airport**

(Source: GoogleEarth, Inc.)



### Rail

Norfolk Southern rail services are available in the area. There is a break bulk facility in Winston Salem. There is an open dock located on a spur in the Graham area which provides small load service. There is an unused RORO facility in the Greensboro area. At issue is the need to partner with Norfolk Southern to improve the existing facilities and provide a regular level of service to respond to the needs of existing industries and attract new industries who are seeking rail service availability.

Current workforce availability within 50 miles of the Burlington/Alamance area is 1,435,372 employable persons. The current unemployment rate is 10.2%.

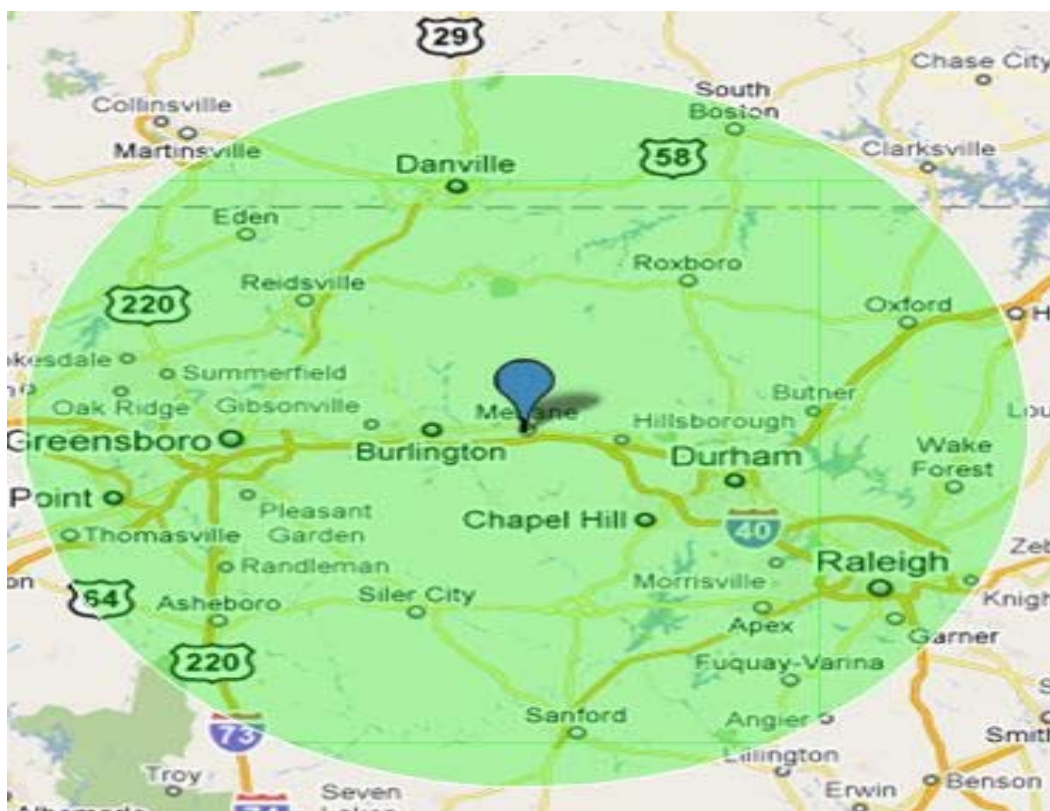


Figure 2-14: Burlington/Mebane 50 Mile Employment Radius

### 2.3.2 Projected Economy and Trade Patterns

The industrial development sites have easy access to I-85 and I-40 between Greensboro and Raleigh in a location that is part of a development crescent from Charlotte to Winston-Salem including Raleigh. Companies locating here have excellent access to the major industrial development areas of the state and are within 2 days time of customers east of the Mississippi.

With the intermodal classification yard located in Charlotte and the new yard being built, the development of the proposed Rail Park in Mebane would provide a connectivity between regions that would benefit both as well as the state as a whole. Rail connectivity also holds the possibility of improving access to the NC ports and increasing demand at the ports.

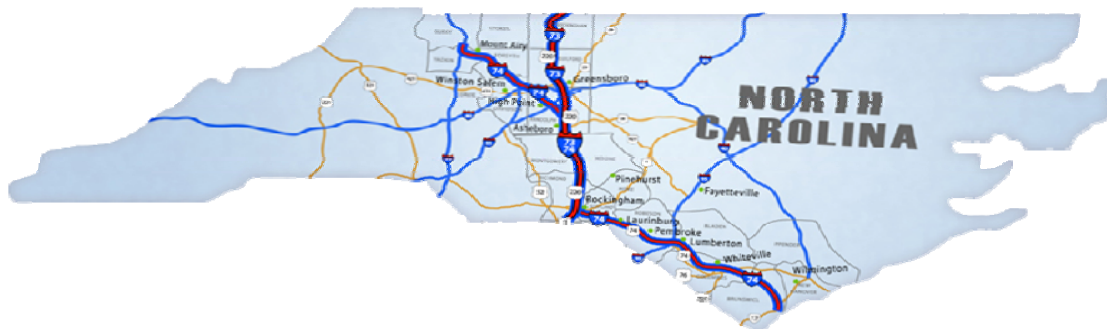
A combination of events has increased the possibilities for the Burlington-Alamance Regional Airport to expand as serve as a significant contributor to the economic growth of the Triad Region.

- The extension of the runway to 6,400 feet opens up the possibility for increased light air freight traffic to support the current business growth in the area.
- The location of Honda Aero at the airport serves as a prime example of the possibilities to be gained by leveraging the general location of Burlington with its easy access to I-40/85, airport support, and lower levels of congestion than that found in the Raleigh/Durham and Greensboro areas.
- Easy access to the package transporters FedEx at PTI and UPS at RDU.
- Located mid-way between the air freight capacity of PTI and RDU.

The location affords companies a high degree of flexibility due to the array of transportation services available.

## 2.4 **Logistics Village 4 – Moore-Montgomery Area** **The Heart of NC Mega Site**

The Heart of North Carolina Mega Park is located off Hwy 220 (Future I-73/74) between the Star (Spies Rd) and Biscoe (Hwy 24/27) Exits. The Interstate provides connectivity from Wilmington and also with I-40, I-85, and I-95. Hwy 24/27 provides an uncongested connection to Charlotte.



A portion of the industrial park lies within Montgomery County and the remainder is located in Moore County. The North Carolina Department of Commerce 3J Tax credit designation for Montgomery County is Tier 1, while Moore County is Tier 3. Therefore the entire development area is designated as Tier 1. In addition, Montgomery and Moore counties are both designated as economic HUB Zones. Being in an attainment area for air quality, The Heart of North Carolina Mega Park has also been identified as a “Green Development” area.

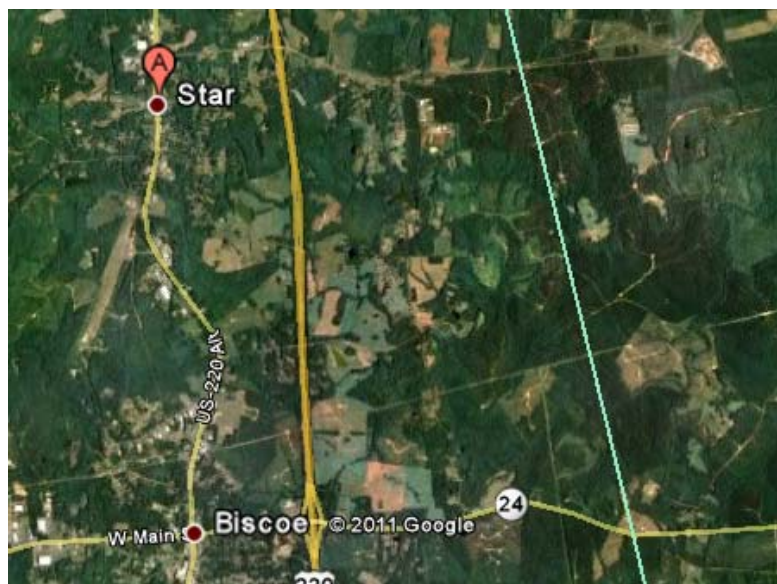


Figure 2-15: Mega Park Aerial View

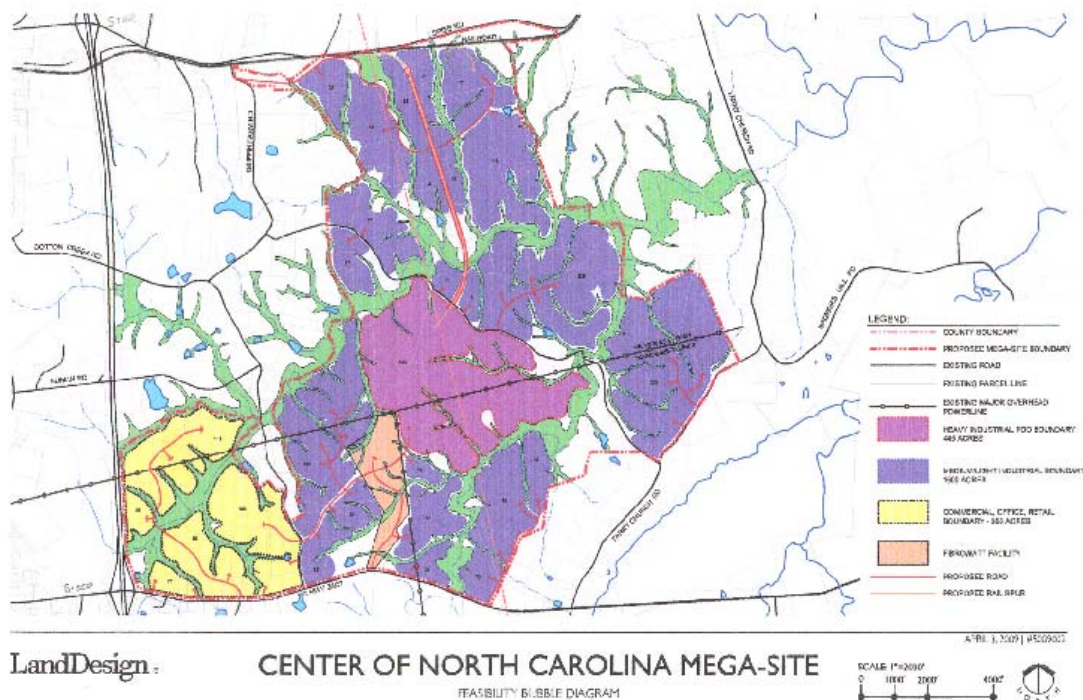


Figure 2-16: Mega Park Land Use Drawing

The existing mega-site consists of a total of 3,000 acres with the potential to expand to 4,000 acres. Currently 445 acres have been identified as heavy industrial, 1600 acres have been



identified as medium/light industrial and 368 acres have been identified as commercial/office/retail.

#### 2.4.1 Current

Montgomery County was once an active hosiery manufacturing location. As a result of the loss, there are a number of manufacturing buildings available for alternative manufacturing uses. There is still a large foundry in operation. The Montgomery Economic Development group has worked to develop a viable industrial and commercial structure to attract commercial enterprises and tourist venues.

In cooperation with Moore County, the Heart of North Carolina Mega Park has been developed as a 503C3 corporation intended to improve the economic climate of both counties. The cooperation will serve to maximize the use of the joint assets in the area including rail, utilities, etc. It also promotes a cooperative approach to highway upgrades intended to facilitate N/S and E/W individual and commercial movement.

#### Transportation Infrastructure

**Rail** service at the site is provided by the Aberdeen Carolina & Western Railway (ACWR), a shortline that operates from Charlotte on the east and to Aberdeen, with a line that runs northeast from Star to Gulf. ACWR interchanges in Charlotte with CSX and Norfolk Southern, in Norwood with the Winston Salem Southbound Railway, in Gulf with Norfolk Southern, and in Aberdeen with CSX and the Aberdeen & Rockfish Railroad. This network allows customers easy access to Class 1 rail links going to the Ports of Wilmington and Morehead City and to destinations throughout the US. The interchange with the Winston Salem Southbound Railway which is jointly owned by CSX and Norfolk Southern provides service to the Winston-Salem and Greensboro area of the Piedmont Triad.



Figure 2-17: Aberdeen, Carolina and Western Rail Routes

Rail infrastructure characteristics determine the level of service that can be provided by an individual rail carrier. When a system or network consisting of more than one rail carrier is considered, the service level of the whole is dependent on the carrier with the weakest infrastructure. The Aberdeen Carolina & Western Railway consists of 150 miles of quality rail infrastructure. Over \$30 Million have been invested over last decade to improve the ACWR corridor. Many sections have been upgraded to 141 lb. continuous welded rail which increases dependability and safe handling. Because of these upgrades, the rail infrastructure can handle 90 car unit trains at 286,000 pounds per car. This infrastructure is equivalent to that found on class I rail lines.

The level of track improvements combined with a high level of customer service has positioned the ACWR to meet the service requirements for occupants of The Heart of North Carolina Mega Park. Service to current customers in the area requires the transportation of profolite and mineral products, wood chips, butane, and swine and poultry feed. The current infrastructure combined with 15 fully operable locomotives that are used for rail freight transportation and power agreements to use locomotives from either CSX or NS when handling unit trains for larger customers ensure the capacity to service potential increased demand from customers located in The Heart of North Carolina Mega Park.

Direct rail service is provided to firms currently in the Mega Park area. The most recent company locating near the Mega Park is doing so because they have direct rail service to the NC ports. ACWR intends to partner with NCDOT, Montgomery County, and Moore County to develop a rail yard at the north end of the site which will serve all rail customers at the Mega Park, including inland port needs e.g. intermodal service. Construction of a rail spur into the mega park is needed to facilitate freight movement into and out of manufacturing and distribution sites.

ACWR Infrastructure Expenditures by Year

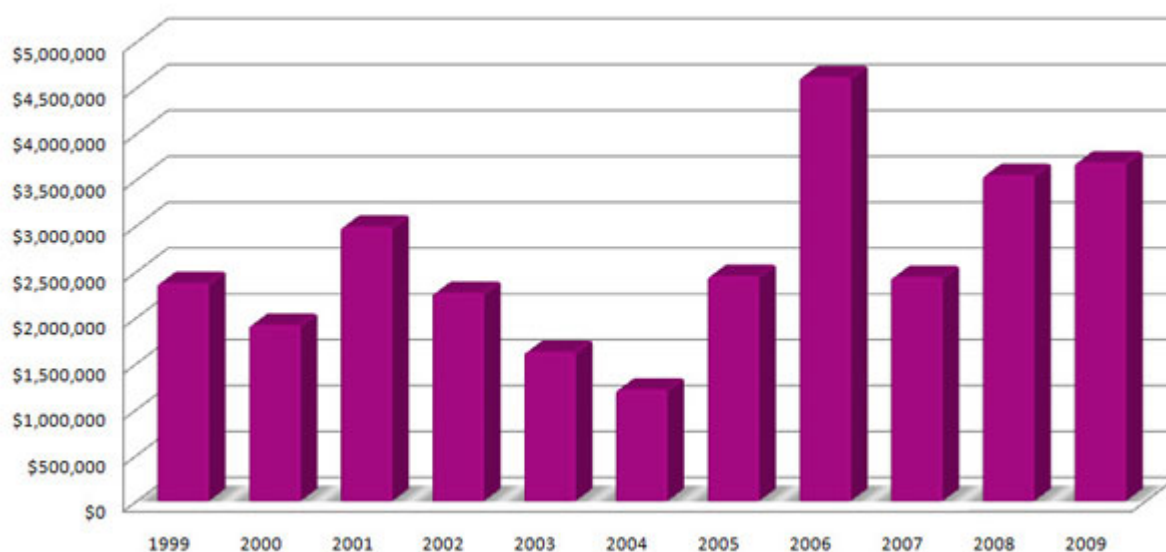


Figure 2-18: ACWR Improvement Expenditures



**Air** service to the Heart of North Carolina Mega Park is provided by the proximity of this location to numerous airport facilities. PTI with its air freight capacity and FedEx air hub is located 55 miles away. This puts the site within the 60 mile circumference that constitutes the primary aerotropolis economic impact generator. Charlotte Douglas airport is 80 miles away, and RDU is 88 miles away.

The local Montgomery County Airport currently consists of a single 4001x75 ft. runway. It is suitable for light air traffic. There are medium intensity runway edge lights but no control tower. However, the airport is only 4 miles from the Heart of North Carolina Mega Park and has the potential to provide corporate jet and light freighter access with improvements including a 1500 ft extension to the runway. This possibility has been discussed with NCDOT.

**Highway** access to the Heart of North Carolina Mega Park is provided by Hwy 220 (Future I-73/74) between the Star (Spies Rd) and Biscoe (Hwy 24/27) Exits. The Interstate provides connectivity from Wilmington and also with I-40, I-85, and I-95. Hwy 24/27 provides an uncongested connection to Charlotte. Roads adjacent to the Mega Park are Hwy 24/27, Tarry Church Road, and Spies Rd. Currently Cotton Creek Road and Griffin Farm Road provide access into the Mega Park. Many of these roads are 2 lanes and will need improvements in the future.

The Heart of North Carolina Mega Park's unique location at the geographical center of North Carolina provides reasonable truck travel time to the major cities and ports.

- Greensboro 50 minutes
- Raleigh 90 minutes
- Charlotte 90 minutes
- Fayetteville 90 minutes
- Port of Wilmington 3 hours
- Port of Charleston 4 hours
- Port of Morehead City 4 hours
- Virginia Ports, Norfolk 4 hours, 50 minutes
- Atlanta 5.5 hours

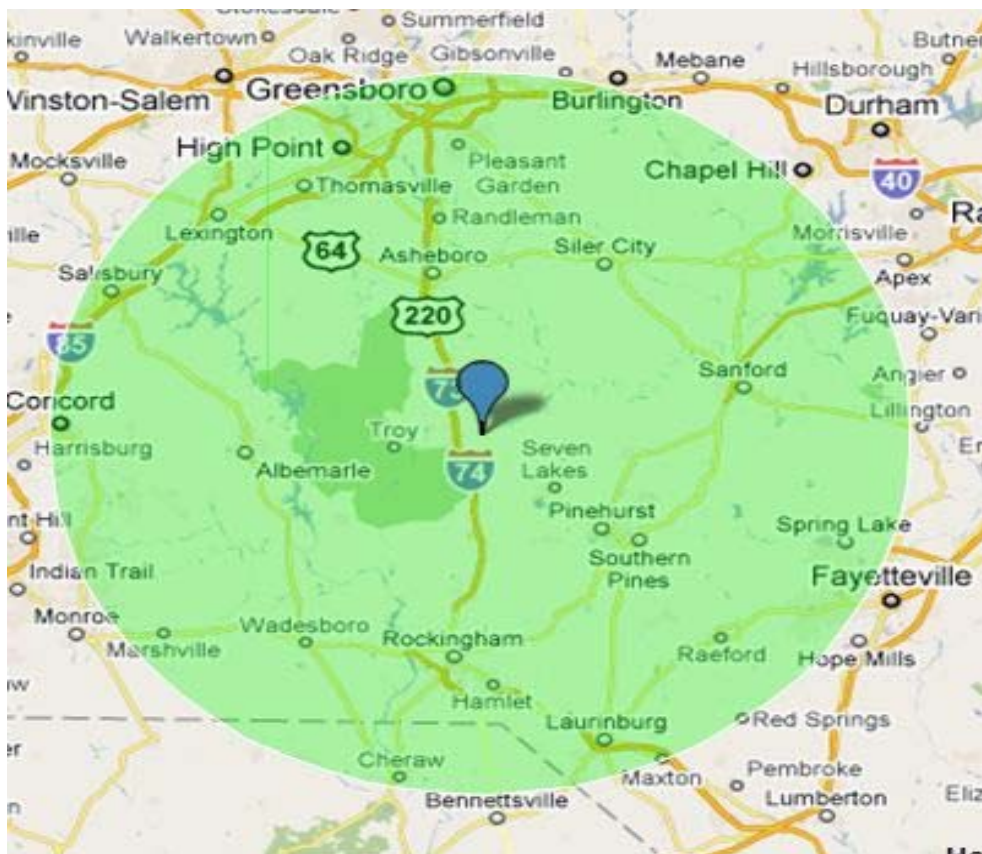
### ***Utility Infrastructure***

The Heart of North Carolina Mega Park is served by a complete array of services. Power is provided by Progress Energy and Randolph Electric Membership Corporation. The main power grid crosses the property. Water is provided by Montgomery County. The need for addition water resources is projected to be met through use of the Randleman Dam. Sewer is not presently on site but will be provided by the Town of Star and the Town of Biscoe. Natural Gas is available if needed.

### ***Foreign Trade Zone Status***

The Montgomery County Economic Development Commission is currently exploring the possibility of Foreign Trade Zone status for all or some part of The Heart of North Carolina Mega Park.

**Workforce Development** is provided by Montgomery Community College, 10 miles away, and Sandhills Community College, 31 miles away.



**Figure 2-19: Heart of NC Mega Site 50-mile Employment Radius**

Within a 50-mile radius of the Montgomery Mega-site, there are 790,739 employable persons. The unemployment rate is currently 11.9%.

## 2.4.2 Projected Economy and Trade Patterns

Rail services will be a key feature for the success of the Heart of North Carolina Mega Park. Occupants will be able to use rail to implement intermodal transportation strategies, access customers nationwide, and ports throughout the US. Direct access to the North Carolina Ports has the potential to increase usage of the ports to ship and receive products. It also serves to indicate the need to increase access to the Port of Wilmington to increase international trade opportunities throughout NC.

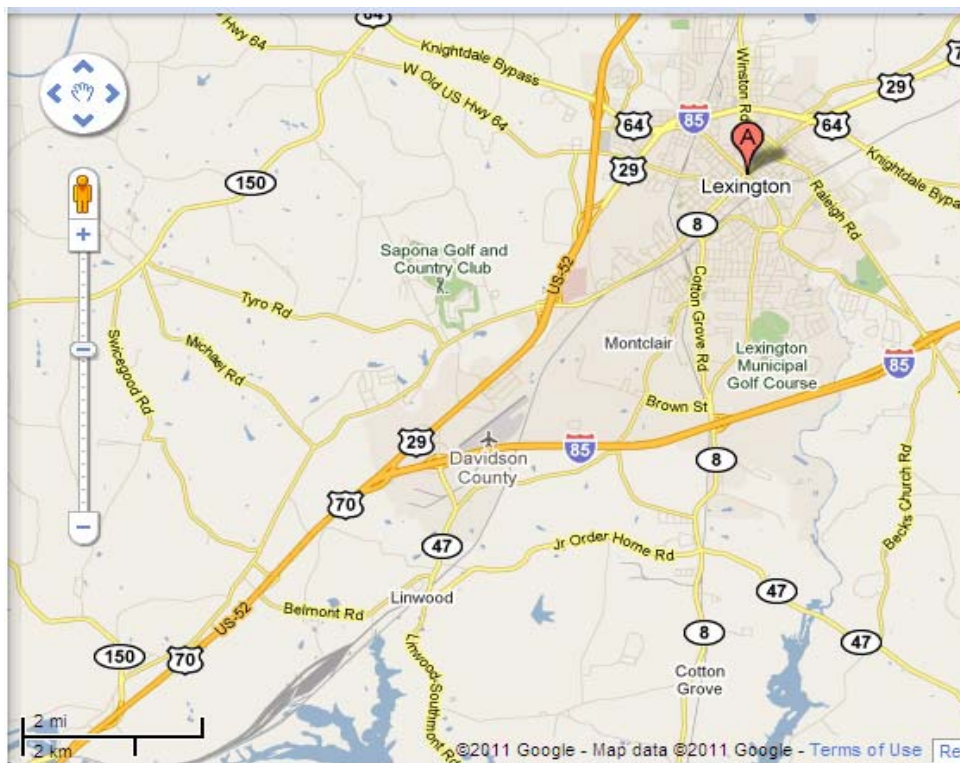
Highway access is also an important element for the success of the Heart of North Carolina Mega Park. With easy access to Hwy 220 (future I-73/74) from 2 exits freight movement onto the highway is important. The improvements to Hwy 24/27 at the Biscoe exit need to be matched with improvements to the Star exit (Spies Rd.). In addition, the completion of 74 from Charlotte

to Wilmington provides access to I-95, complete shoulder work to bring 73/74 up to Interstate standards, improvements to 24/27, entrances into the mega park, and improvements to Spies Road including a rail crossing are needed.

Current economic development efforts have resulted in the decision of one company to locate in the area due to the availability of rail service to the Wilmington Port area. Frontier Logistics, which serves the plastics industry, has announced the decision to locate in Star, crediting the transportation network. A third company is investigating the possibility of establishing an electric generation facility using poultry litter as fuel.

## 2.5 **Logistics Village 5– Davidson County**

Davidson County is centrally located between New York, N.Y. and Miami, Fla., and between Washington, D.C. and Atlanta, GA., and less than an hour's drive from the Piedmont Triad International Airport (35 miles). It is approximately 120 miles from Raleigh, N.C. and 70 miles from Charlotte, N.C. Thomasville-Lexington has been designated as a NC micro area. A micropolitan area is defined as a rural county whose largest city does not exceed a population of 50,000.



**Figure 2-20: Davidson County Industrial Development Area**

Davidson County was long a leader in furniture manufacturing. Along with furniture manufacturing, Davidson County is also home to manufactures of textile products, chemical products, electronic connectors, batteries and plastics.

Davidson Community College has been instrumental in in developing a highly trained workforce

to meet the needs of companies serving the local, national, and international economy. Davidson County Community College has received high honors for its contribution in educational excellence.

An indication of the economic health of Davidson County is the broad array of companies and their associated employment. A prime example of the ability of Davidson County to attract growing businesses is the decision of TIMCO to establish its seat manufacturing division in Wallburg. This 120,000 sq ft project represents a \$5 million investment and the potential employment of 500 people. This project illustrates the importance of matching the existing resources of the area with the needs of potential industrial development. In this case employees with furniture making skills will be employed to make airplane seating.

The following table identifies the company/industry and employment range of the largest employers as of the 1<sup>st</sup> quarter 2010.

**Table 2-1: Davidson County Top 25 Industry and Employment Figures**

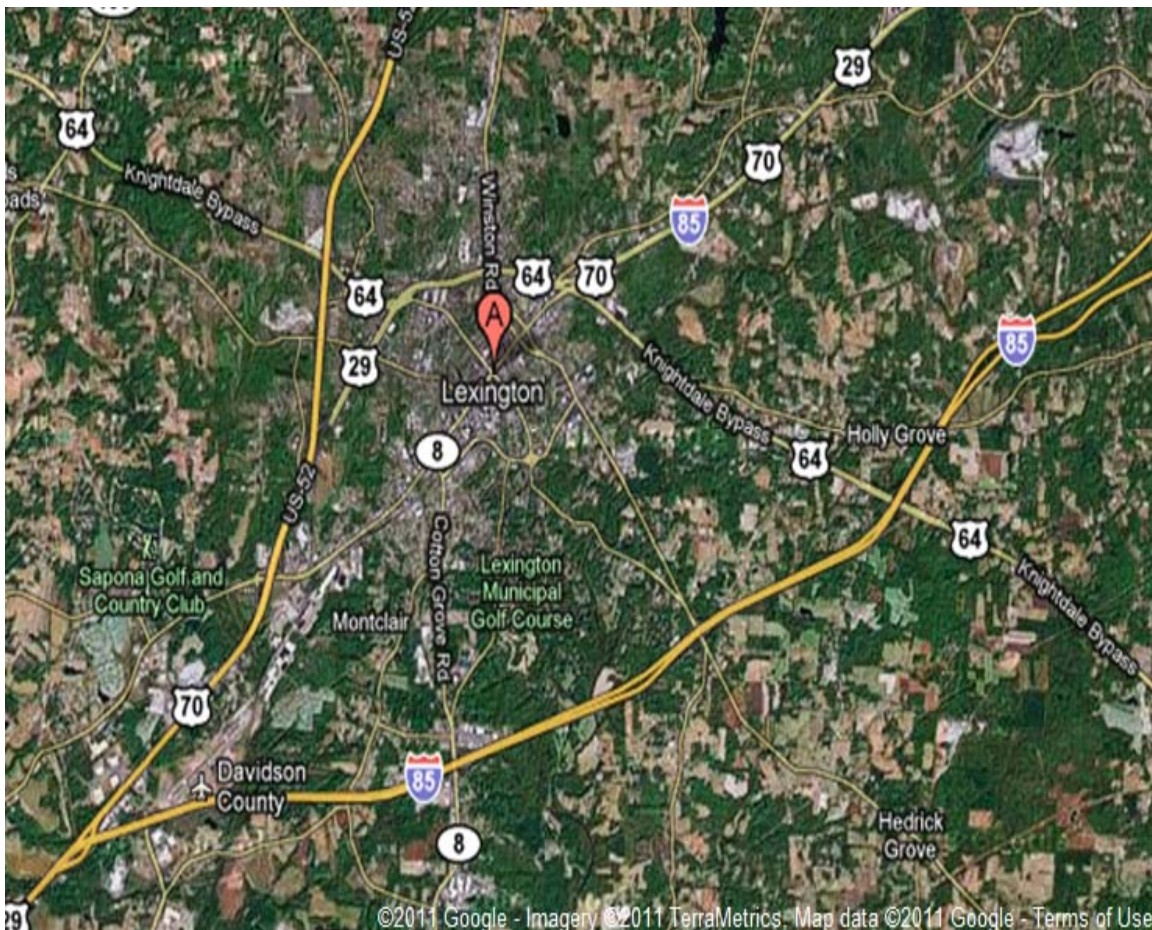
Rank	Company Industry	Employment range
1	Davidson Co. Board Of Education (Education & Health Services)	1,000+
2	County Of Davidson (Public Administration)	1,000+
3	Atrium Companies Inc (Manufacturing)	500-999
4	Wal-Mart Associates Inc (Trade, Transportation & Utilities)	500-999
5	Lexington Memorial Hospital (Education & Health Services)	500-999
6	Davidson Co. Community College (Education & Health Services)	500-999
7	Lexington City Schools (Education & Health Services)	500-999
8	Thomasville Medical Center (Education & Health Services)	500-999
9	Old Dominion Freight Line (Trade, Transportation & Utilities)	500-999
10	Thomasville City Schools (Education & Health Services)	250-499
11	Food Lion LLC (Trade, Transportation & Utilities)	250-499
12	PPG Industries Inc (Manufacturing)	250-499
13	Bradley Personnel Inc (Professional & Business Services)	250-499
14	Jeld-Wen (Manufacturing)	250-499
15	City Of Lexington (Public Administration)	250-499
16	Leggett & Platt Incorporated (Manufacturing)	250-499
17	RCR Race Operations LLC (Leisure & Hospitality)	250-499
18	City Of Thomasville (Public Administration)	250-499
20	Lowes Home Centers Inc (Trade, Transportation & Utilities)	250-499
20	Thomasville Furniture Inc (Manufacturing)	100-249
21	Lexington State Bank (Financial Activities)	100-249
22	Asco Switch Enterprises LLP (Trade, Transportation & Utilities)	100-249
23	Carilion Labs LLC (Education & Health Services)	100-249
24	Facility Logistic Services LLC (Trade, Transportation & Utilities)	100-249
25	Century Hosiery Inc (Manufacturing)	100-249

Source: County Profile Contact (919) 715-6374 Commerce Economic Development Contact (919) 733-4977



### ***Future Industrial Park***

The future industrial park is located in the I-85/Business 85 and Hwy 29 area. The proposed 2,700 acre industrial park is designed to attract heavy industrial users. This provides an additional base for future economic and job growth.



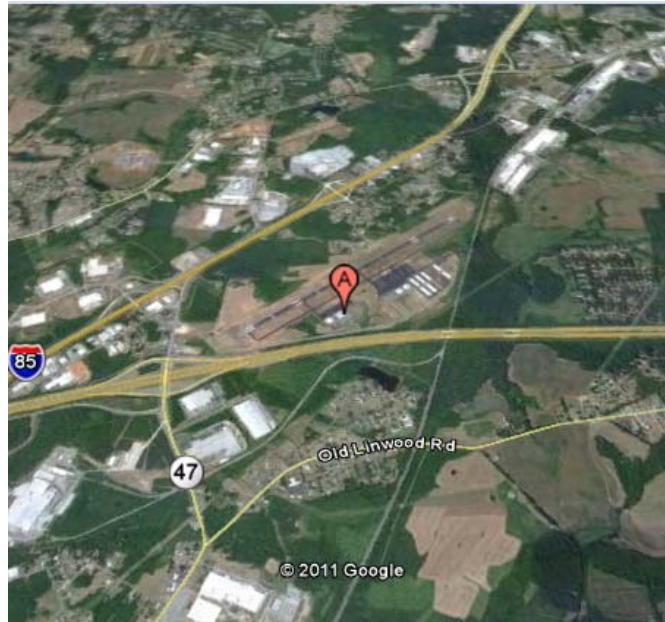
**Figure 2-21: Davidson County Industrial Development Area Aerial View**

Advantages of this location include ready access to I-85, projected direct access to Norfolk Southern, and the proximity to intermodal facilities in Charlotte.

### ***Air***

Fly High Lexington, a private company, has been contracted to assume managerial responsibility for the Davidson County Airport. As a result it is expected to play a far greater role in the economic development efforts of Davidson County. Plans include an active marketing effort to increase patronage and to lease out the 30,000 sq feet of available hanger space. The airport has a 5000 ft runway and an instrument landing system. At the current time, the airport has 2 anchor tenants, RCAir, which serves the Childress Racing Team, and the Wake Forest University Medical Center AirCare1.

Fly High Lexington serves as the airport's fixed base operator and provides maintenance and other services to those using the airport facilities. They are especially interested in attracting corporate jet traffic to the region. One of their competitive features is the ability to deliver jet fuel at a lower price than is available at the Piedmont Triad Airport. The ability of a smaller full service facility is lower congestion and a higher level of customer service. In order to meet their strategic goals, Fly High will be working closely with the Davidson County economic developers and the Piedmont Triad Partnership.



**Figure 2-22: Davidson County Airport**

The current workforce availability for the Davidson County/Lexington Industrial Park includes 1,397,416 persons. The unemployment rate is currently 11.3%.

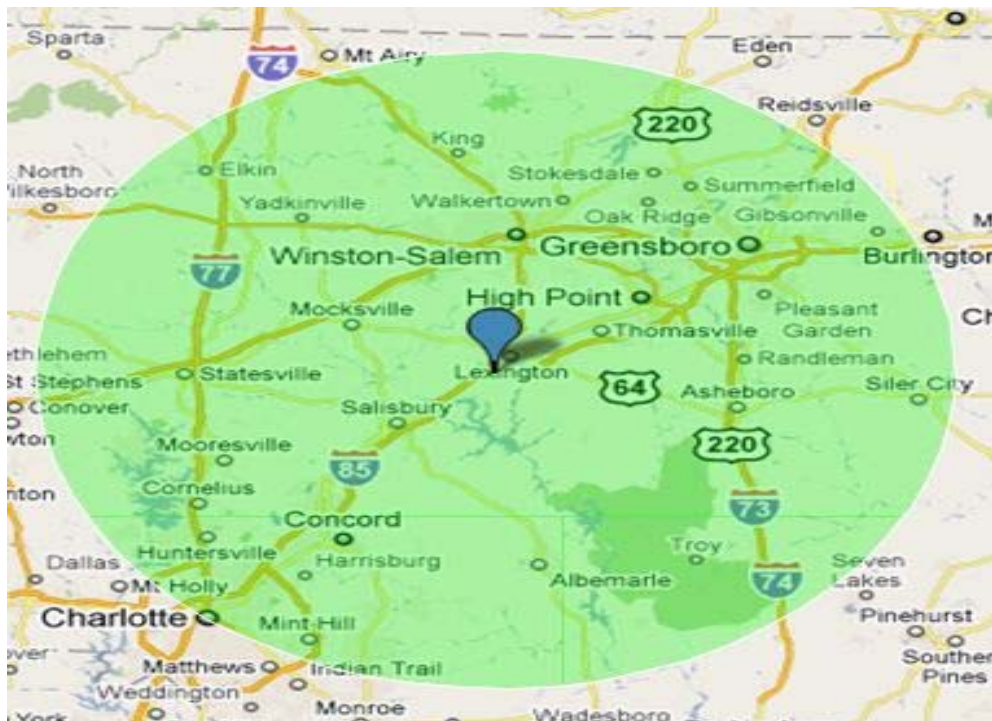


Figure 2-23: Davidson County 50-mile Employment Radius

### 3 Summary

A survey of the five logistics village sites in the Piedmont Triad Region presents a portrait of active participation by the Piedmont Triad Partnership, individual economic development entities, airport managers, and educational institutions to attract businesses to the region. These business enterprises range from bio tech research and development, to aerospace design and manufacturing, to specialty products, and services such as distribution information technology and beyond. It is this breadth that is going to provide depth for economic and job growth throughout the region and into surrounding areas.

Each logistics village site has a unique strategy, vision, and infrastructure resource base. However, upon close examination, there are many similarities among the villages.

- Education/Workforce Training Resources
  - While sites that are in individual counties have their individual community colleges which provide targeted workforce development/education to meet the needs of companies in the immediate area, all community college resources are available to meet training needs. In fact there has been a deliberate attempt not to duplicate expensive program resources in institutions that are in close proximity to each other.
  - The North Carolina Center for Global Logistics is the product of a consortium of 2 and 4 year institutions working together to provide a centralized point of information regarding the logistics/supply chain resources available in the region.
  - Four year institutions in the region offer an array of supply chain courses and degrees from the BS to Ph.D. levels in engineering and Business disciplines.
  - When viewing the workforce and unemployment figures for each logistics village, it must be noted that the 50 mile radius maps overlap to a great extent.
- Economic Development Organization Cooperation
  - The Piedmont Triad Partnership serves as the overall economic development entity in the region. The wired grant provided the impetus for the county- and city-level economic development entities to work together and promote the regional advantages when seeking to attract businesses to the area.
  - A listing of the collaborators who have participated in the development of the regional concept and who provided the information used to prepare this report is found in Appendix B.
  - The unique features of each development area make it possible to match businesses with location as each economic development entity seeks to attract businesses needing their particular set of resources. At the same time they are producing employment



opportunities for workers in the entire region.

- **Transportation Infrastructure Connectivity**
  - Each of the individual logistics village sites has access to the **Interstate Network** which binds the region and state together and affords global access through connections to air freight, rail, and ocean shipping resources. The regions **Trucking** assets provide the majority of freight movements in and through the region, supporting intrastate, interstate, and international commerce.
  - **Air** transport is easily accessible from all the logistics village sites. PTI offers global air freight access (Charlotte and Raleigh are also available), Smith-Reynolds, Alamance, and Davidson County offer additional light freight opportunities, and Moore/Montgomery is exploring the possibility of runway extension which would also afford the opportunity for light freight shipments.
  - **Rail** access is more limited in the region. Moore/Montgomery has access to both CSX and Norfolk Southern through the Aberdeen, Carolina, and Western Railway. However, rail access in the future could be made available to other sites if demand warranted. In addition, all of the sites have easy access to the Class I Rail infrastructure centered around Charlotte NC.

In April 2011, the Aberdeen, Carolina, and Western Railway was awarded \$553,458 through the Short Line Infrastructure Assistance program to fund track and bridge improvements.

  - Direct **Port** access is limited. The need to create both less congested highway access and direct dock to rail access would greatly improve the ability of companies to utilize the North Carolina port resources.
- **Job Creation**
  - The level of job creation in the Piedmont Triad Region that is attributable to a combination of the availability of industrial and distribution sites and the cooperative efforts of the regional economic development entities is illustrated by the Job Creation listing in Appendix C.

### 3.1 ***Logistics Villages Compared***

Table 3-1 presents a matrix comparing the five logistics villages identified within the Triad Region.

**Table 3-1 Logistics Villages Comparison Matrix**

Measure	Subgroup	Village 1	Village 2	Village 3	Village 4	Village 5
		<b>Greensboro</b>	<b>Winston Salem/Smith Reynolds Airport</b>	<b>Burlington/Alamance</b>	<b>Moore-Montgomery</b>	<b>Davidson County</b>
Facility Type		Air, truck,	Air, truck, rail access	Air, truck, rail access	Rail, truck	Air, truck, rail access
Target Industries		Aircraft manufacturing Biotechnology, regenerative medicine, pharmaceutical, nanotechnology, flowers, food	Aircraft maintenance, Aviation related industries, Biotechnology, regenerative medicine	Aircraft manufacturing, data centers, light industrial, manufacturing, distribution	Manufacturing, green energy, distribution	Heavy Manufacturing
Speed of Implementation		existing	existing	existing	In process/1-5 years	In process/ 1-5 years?
Transportation Infrastructure						
	Highway	I-85,I-40, US68 <i><b>In progress I840,I74,I73, ,I73</b></i>		I-85,I-40,I-840, <i><b>In progress I74,I73,</b></i>	I-85,I-40, I-95, Hwy 24/27	I-85, Business 85, Hwy 29
	Rail	Amtrak & Norfolk Southern Railroad	Winston-Salem Southbound Shortline owned by NS and CSX	Amtrak & Norfolk Southern Railroad	Aberdeen Carolina, Western Railway (ACWR) short line	Norfolk Southern
	Air	Heavy Freight, Commercial	Light freight, corporate, charter, medical potential	Light freight, corporate	Corporate	Light freight, corporate, medical
	Existing Runways	5R23L-10,000 ft 5R23R-9,000 ft 14/32 -6380 ft	15/33- 6,665 ft 4/22- 3,398	6/24-5,000 ft	4,001 ft-	5000ft

	Runway Extension potential	3 <sup>rd</sup> PLN CPBL 2,000 ft		1,400 ft in progress	1,500 ft CPBL	
	Maritime (ship/barge)					
	Air	Air traffic control tower, 3 <sup>rd</sup> runway, Federal inspection station 1  Highway- 68/40, 68/311; I73 connector; HWY 68 interchange; I-840;	Air -Runway4/22 needs repairs, instrumentation & lighting Highway - Closing of US51 causing access issues to airport; Complete road & bridge repair on Business 40; I74 in Mount Airy	Safety upgrades, Hangar construction in progress Highway- Widen US70 to 4 lanes	Rail yard at North end site, Control tower at airport, Foreign Trade Zone Status	
		200 acres		<b>Burlington Commerce Park</b> 25.59 acres  <b>Central Carolina Industrial Center-91 acres</b>  <b>North Carolina Industrial Center</b> - 603 acres Spec buildings, Build ready sites	3,000 acres Acreage potential 4,000 acres	2,700 acres

Infrastructure-Other						
	Communications	Broadband	Broadband	Mebtel/ Fibre optic (broadband)	Broadband	Broadband
	Power	Duke Power		Duke Power	Progress Energy, Randolph Electric	
	Water	Randleman Dam added to water supply		Lake Cammack	Montgomery County	
	Sewer	City of Greensboro	City of Winston Salem	City of Mebane	Currently unavailable at site to be provided by Town of Star & Town of Biscoe	
Labor Force						
	Availability	Skilled	Skilled	Skilled	Skilled	
	Education Programs to Support local industry	UNC Greensboro, NC A&T, Wake Forest, High Point, Winston-Salem State Universities. Piedmont Triad & Gateway University Research Parks, GTCC, Guilford, Greensboro, Forsyth Technical, Randolph, Bennett Colleges	Wake Forest, High Point, Winston-Salem State Universities. Piedmont Triad & Gateway University Research Parks, Forsyth Technical	Alamance Community College, Elon University	Montgomery Community College, Sandhills Community College	Davidson County Community College
Specialty Criteria**	Foreign Trade Zone	Foreign Trade Zone		Foreign Trade Zone	Economic Hub Zone, Green Development Area, Foreign trade zone potential	Foreign trade zone in Lexington

Abbreviations used  
 PLN- Planned  
 CPBL- Capability

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## Appendices

### Appendix A: Presentation Slide Sets

# SEVEN PORTALS STUDY RESULTS

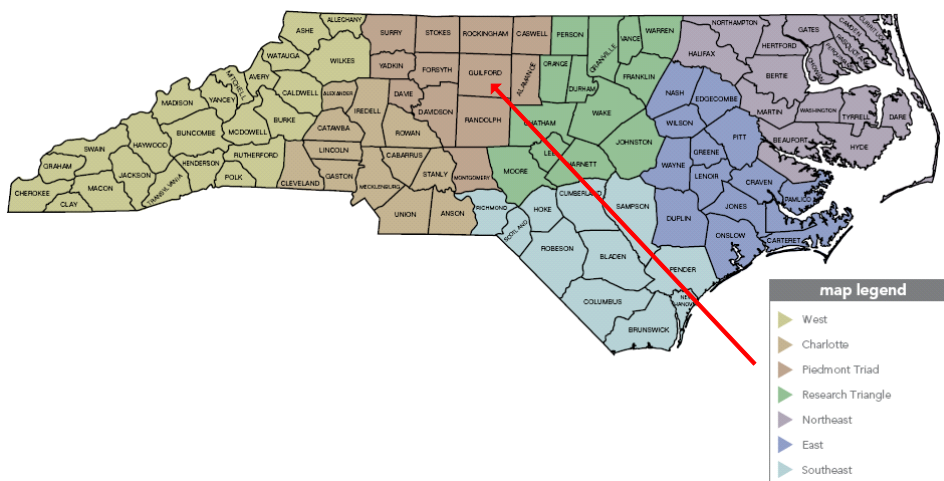
Presentation to  
*Governor's Logistics Task Force*

December 15, 2010

By  
Dr. Kathryn Dobie  
North Carolina A&T State University



Seven Portals Study Team slide 1



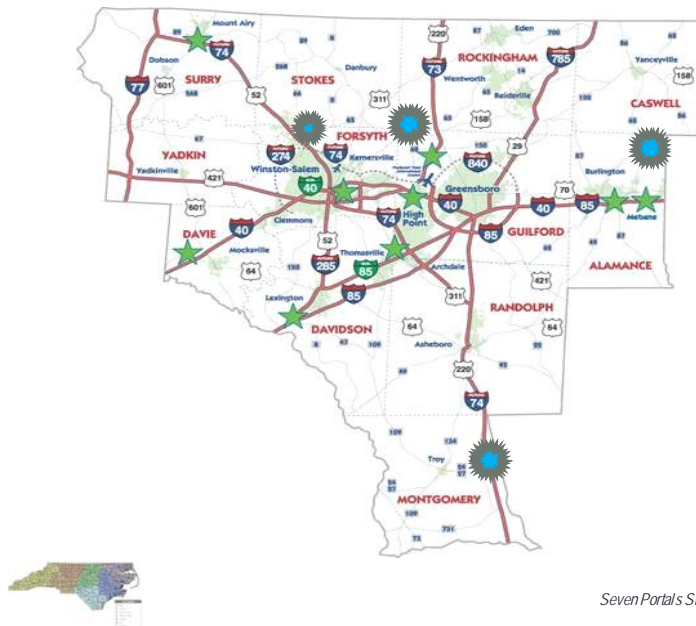
Seven Portals Study Team slide 2

## Piedmont Triad Region

- 12 county region in central North Carolina
- Greensboro, Winston-Salem and High Point together ranked 37<sup>th</sup> in size among US cities
- 1.5 million people / workforce in excess of 810,000
- 11 colleges and universities and 9 community colleges
- North Carolina Center for Global Logistics
- Foreign Trade Zone 230
- Interstate Highway Infrastructure
  - N/S flow I-77, I-73, I-85
  - E/W flow I-40
  - NW/SE flow I-74 and I-76/3/74
  - Connectors I-785, I-285, I-840
- Rail
  - Class 1s (Norfolk Southern and CSX) and short lines
- Air
  - PTI, Winston-Salem, Burlington-Alamance, other...



Seven Portals Study Team slide 3



Seven Portals Study Team slide 4



## Logistics Village 1- Aerotropolis Airport City - PTI

- Strengths
  - Located with easy access to Interstates 40,85, 73/74, and 840
  - Projected economic reach 60-75 miles
  - 4,000 acre campus
  - Airfield facilities include 3 runways (10,001, 9,000, 6,380 ft.)
  - 50 companies with 4,500 employees located on the PTI campus
  - FTZ 230 with 2,800 acre tract of airport property adjacent to city limits
  - Smith-Reynolds airport in Winston-Salem provides complementary time-sensitive, unscheduled air services (e.g. air ambulance, specialty regenerative and pharmaceutical medical products)
  - Extensive network of industrial and distribution facilities
  - Available land suited for industrial and distribution facilities
  - Availability of needed utilities – water, sewer, gas
  - Wireless and other optics availability
- Weaknesses
  - Closest rail/intermodal service in Charlotte
  - Highway infrastructure
  - Air traffic control etc. upgrades



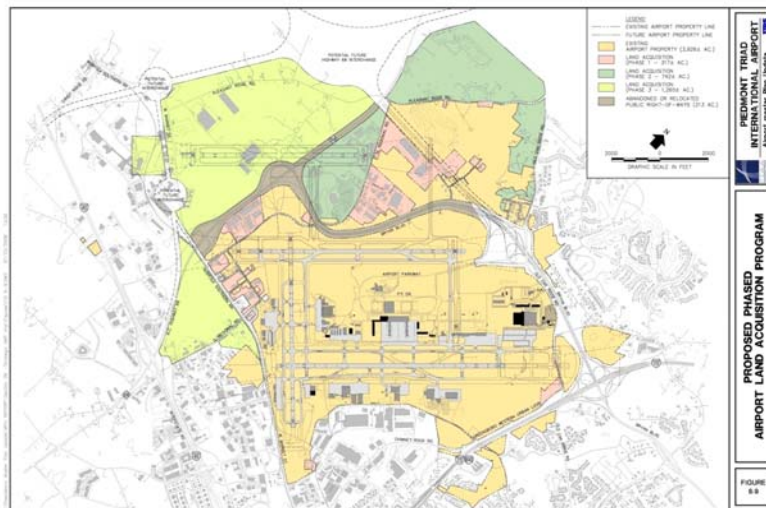
Seven Portals Study Team slide 5

## Logistics Village 1- Aerotropolis Airport City - PTI

- Needs
  - Highway connections with Hwy 68, completion of I-73, I-840, Hwy 311
  - Additional runway, new air traffic control tower, establish of Federal inspection station
  - Rail Service
  - Rail service to NC Ports



Seven Portals Study Team slide 6



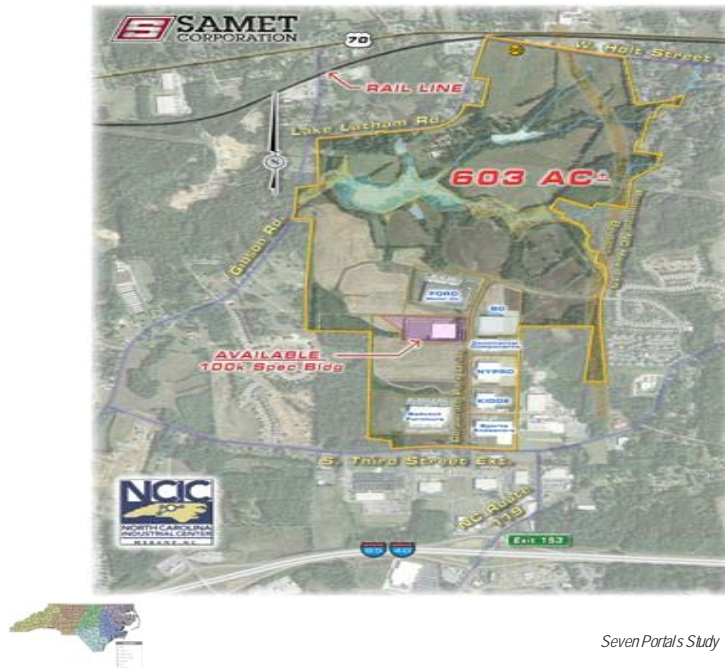
Seven Portals Study Team slide 7

## Logistics Village 2 - Burlington/Alamance

- **Strengths**
  - Between the fast growing areas of the Triad and the Triangle
  - Access to the major east/west corridor in North Carolina
  - Absence of congestion
  - Many industrial parks with easy access to I-40/85.
    - The three largest of these industrial parks are The Burlington Commerce Park, Central Carolina Industrial Center, and the North Carolina Industrial Center.
  - Honda Aero at the airport
    - serves as a prime example of the possibilities to be gained by leveraging the general location of Burlington with its easy access to I-40/85, airport support, and lower levels of congestion than that found in the Raleigh/Durham and Greensboro areas.
- **Weaknesses**
  - Lack of attractive rail service
  - Rail access (NCIC) by NS spur
  - Highway infrastructure (The proposed relocation of Hwy 119 (Mebane Bypass) would increase accessibility to all phases of the NCIC.)
- **Needs**
  - Rail and highway investments
  - Port access



Seven Portals Study Team slide 8



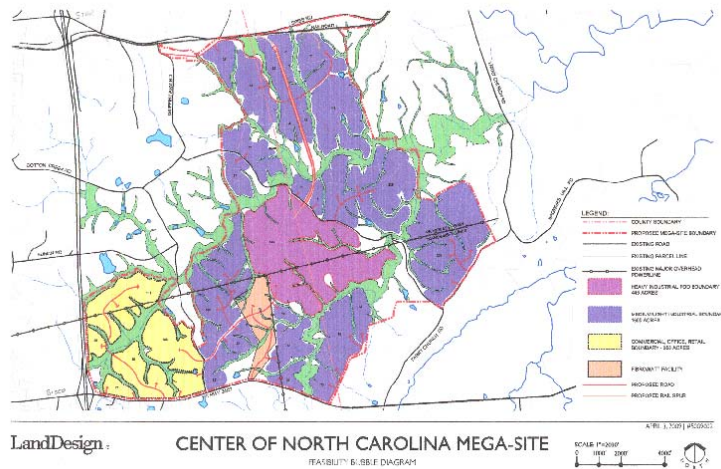
Seven Portals Study Team slide 9

## Logistics Village 3 – Montgomery County/The Heart of NC Mega Site

- Strengths
  - Accessible from both the Star and Biscoe exits on I-73/74
  - 3000 acres (can be 4000 acres)
  - Designations: Tier 1, Hub Zone, Air quality attainment area
  - Rail service provided by the Aberdeen, Carolina & Western Railway with connections to NS, CSX, Winston Salem Southbound Railway
  - Availability of Utilities (Electric, water, sewer, gas)
  - Lack of congestion on 24/27 to Charlotte
- Weaknesses
  - Intermodal access limited
  - Service to the NC ports
- Needs
  - Completion of 24/27 improvements, I-74
  - ACWR intermodal service capability, spur
  - Improvements to 2 lane road access



Seven Portals Study Team slide 10



Seven Portals Study Team slide 11

## Closing

The availability of a comprehensive transportation infrastructure including highway, rail, port, and air access, a comprehensive perspective of land, and utility availability, and workforce development and education provides an exponential magnification of the reach and economic impact of the aerotropolis itself.



Seven Portals Study Team slide 12

## APPENDIX B: Collaborators

Last Name	First Name	Title	Company
Smitley	Russ	Vice President - Marketing	Aberdeen Carolina & Western Railroad
Menzies	Robert	President	Aberdeen Carolina & Western Railroad
Williams	Mac	President	Alamance Co. Chamber of Commerce
Gansman	Bill	Director of Business Development	All-State Express, Inc.
Billups	Jim	Vice President	Anderson & Associates Inc.
Deyton	Camilla	Executive VP	APICS Piedmont Triad Chapter
Norwood	Keith	HR Mgr.	ArmaceLL LLC
Atkinson	Douglas	President	Atkinson Collaborative Enterprise LLC
Bryant	Nemiah	Loan Administration Officer	BB&T - Business Loan Div.
Herman	Mike	President	Best Services Group Inc.
Thompson	Lee	Board of Directors	Bookmarks Book Festival
Davidson	Mark	Lawyer	Brooks Pierce McLendon LLP
Pfohl	Bryan	Chair, Kerr-Tar COGWFD Bd.	Carolina Sunrock Corp.
Lugo	Rich	Vice President	Carson Delloso
Howard	Kevin	County Manager	Caswell County
Wall	Ronnie	Mayor	City of Burlington
Harkrader	Robert	Planning & E.D. Director	City of Burlington
Knight	William	Mayor	City of Greensboro
Hails	Richard	Planning Director	City of Greensboro
Smothers	Becky	Mayor	City of High Point
Hyder	David	Transportation Planning Administrator	City of High Point
Galanti	Heidi	Planning Dept.	City of High Point
Haith	Fredrick	Civil Engineer	City of Winston-Salem
Lassiter	Scott	President	City Transfer & Storage Co.
Blanks	Allison		CJMW Architecture
Drinkard	John	President	CJMW Architecture
Woolgar	Andy	Commercial Manager	Creation Sport USA
Jones	Brady	President	Crescent Manufacturing Inc
Jones	Frances		Curriculum Solutions
Moore	Steven		Dantherm Filtration
Rittling	Mary	President	Davidson Co. Community College
Googe	Steve	Executive Director	Davidson Co. Econ. Development Comm.
Cornman	Guy	Planning Director	Davidson County
Frontz	Leslie	Business Services Specialist	DavidsonWorks
Livengood	Cindy	Director	DavidsonWorks Inc.
Meadwell	Andrew	Planning Director	Davie County
Bralley	Terry	President	Davie County Economic Development Commission
Coleman	Jerry	President	DirectLink Courier Inc.
Bray	Randy	Logistics Manager III	DSC Logistics
Geib	John	Director, Economic Development	Duke Energy
Dunlap	Michael	President	Epes Carriers Inc.
Norcross	Paul	Managing Director	Exel Transportation
Midkiff	Jay	District Sales Manager	FedEx Corp. (Freight)

Stephens	Joseph	Managing Director	FedEx Express
Plyler	David	Commissioner	Forsyth Co. Board of Commissioners
Yevin	Bernie	Dean Business Info Tech. Div.	Forsyth Tech Community College
Green	Gary	President	Forsyth Technical Community College
Kitchen	Ed	Chairman	Gateway University Research Park
Wilson	Lawrence		Grad student at NCA&T
			Greensboro Economic Development Alliance
Lynch	Dan	President	Greensboro Economic Development Alliance
Rhyne	Robin	Vice President, New Business Development & Expansion Services	GSO/HP/Guilf.Co. Workforce Bd.
Plummer	Lillian	Executive Director	Guilford Co. Board of Commissioners
Parks	John	Commissioner	Guilford Co. Planning Dept.
Bruce	Bill	Planner II	Guilford Technical Community College
Cameron	Don	President	Guilford Technical Community College
Haderlie	Brian	Dean of Business & Industry Svrs.	Guy M. Turner Inc.
Clark	Jimmy	President	Harris Teeter
Moss	Rick	Director of Distribution	Heart of the Triad Stakeholders Committee
Morgan	Jimmy	Chairman, Citizen	High Point Economic Development Corp.
Hill	Loren	President	High Point Economic Development Corp.
Dunbeck	Sandy	Senior Vice President	High Point Surgery Center
White	Joan	Administrative Director	Isaacson Isaacson Sheridan & Fountain
Isaacson	Henry	Partner; Chair, PTAA Bd.	JBS Transportation Inc.
Gaffney	Steven	President	John S. Clark Company LLC
Johnson	Steve	Senior Vice President	Kaplan Company
Bumgarner	David	VP, Ops.	Kenan Transport Co.
Turner	Brian	Manager	Kerr-Tar Council of Governments
Gilreath	Vincent	Workforce Development Director	Lewis Storage Company
Lewis	Buster	President	Liberty Aircraft USA
Zimmerman	Nathan	Regional Sales Manager	Liberty Hardware
Turner	Tom	Vice President, Global Logistics	M33 Integrated Solutions
Riddle	Scott	Senior Partner	MarketPlace Management Inc.
Hull	Maurice		MGM Transport Corp.
Massood	Edward	COB	Montgomery Co. Board of Commissioners
Matheny	Jim	Commissioner	Montgomery County
Metzler	Lance	Manager	Montgomery Econ. Development Corp.
Stevens	Judy	Executive Director	Morgan Herring Morgan Green & Rosenblutt LLC
Morgan	Jim	Managing Partner	Moser Mayer Phoenix Assoc. PA
Mayer	Ken	Principal	NC Center for Global Logistics
Patterson	Kathleen		
Person-Whitley	Sheba	Executive Assistant to Dale Carroll	NC Dept of Commerce
Carroll	Dale	Deputy Secretary of Commerce/COO	NCDOC-Office of the Secretary
Smith	Melissa	Economic Developer	NCDOC-Piedmont Triad Region
Holmes	Terry	President & COO (Retired)	nCoat Inc.



Hauser	Dave	Executive Director	North Carolina Center for Global Logistics
Saylor	Scott	President	North Carolina Railroad Company
Wiley	Richard	Consultant	North Carolina Railroad Company
Allred	Mark	GIS Analyst	NW Piedmont Council Of Governments
Dolge	Matthew	Executive Director	NW Piedmont Council Of Governments
Hairston	Althea	Director, Workforce Development	NW Piedmont Council of Governments
Clayton	L.B.	VP of MidSouth Region	Old Dominion Freight Line Inc.
Congdon	David	CEO & President	Old Dominion Freight Line Inc.
Plemmons	Greg	Vice President	Old Dominion Freight Line Inc.
Cox	Dee Dee	Director HR Development	Old Dominion Freight Line Inc.
Brady	Bill	President	Packaging Service Solutions Inc.
McKinney	Brent	Executive Director	PART
Williams	Carla	Chairperson	PeeDee Region Workforce Board
Baker	Kevin	Executive Director	Piedmont Triad Airport Authority
Johnson	Ted	Executive Director (Retired)	Piedmont Triad Airport Authority
Powell	David	CEO/President	Piedmont Triad Partnership
Stuart	Kelly	VP Client Development	Piedmont Triad Partnership
Strode	Sheryll		PM Development LLC
Cochran	Ken	VP, Supply Chain Development	Polo Ralph Lauren
Lancaster	David	Executive Vice President	Priism Group
Robinson	Karl	President	R&R Transportation Inc.
Christopher	Hudnall	Chairman Retired	R. J. Reynolds, retired
McKim	Thomas	Chairman, Airport Commission	R.J. Reynolds
Renfro	Bonnie	President	Randolph Co. Econ. Development Corp.
Bennett	Lisa	Marketing & Research Mgr.	Randolph Co. Econ. Development Corp.
Parker	Linda	Director, PeeDee WF Board	Regional Partnership Consortium
Scarborough	Janice	Director	Regional Partnership Consortium
Strawsburg	Stephen	V.P. Public Issues	Reynolds American Inc.
Pervier	Graham	President	Rockingham County Partnership
Shotwell	Rodney	Superintendent	Rockingham County Schools
Miller	Judy	President	RSVP Communications
Eshelman	David	President and CEO	Salem Logistics
Hall	Brian	Real Estate Preconstruction Project Mgr.	Samet Corporation
Daugherty	Scott	Executive Director	SBTDC
Reid	Kristine	Human Resource Generalist	Sears Holdings
Bullins	Ronnie	President	Service Logistics Inc.
Ata	Shermin	Architect	Shermin Ata Architect PLLC
Davidson	Mark	Airport Director	Smith Reynolds Airport
Bugg	Kevin	Mayor Pro Tem	State Farm Insurance
Quinn	Brian	Plant Manager	Steelcase Inc.
Wood	Alan	Economic Development Director	Stokes County
Balwah	Wallace	President	Strategic Logistics Solutions LLC
Tucker	Todd	President	Surry Co. ED Partnership Inc.
Sisk	Chip	Industrial Real Estate Director	The Hollingsworth Companies
Lockwood	Dick		Time Warner Cable

Hatling	Jeff	Community Development Director	Town of Kernersville
Myers	Martin	Planner	Town of Lewisville
Womble	Ralph	Partner	Trade Street Partners
Sanford	Marlene	President	TREBIC
Cockerham	Trent	Chairman, NWPCOGWFD Brd.	Triad Medical Services Inc.
Spivey	Will	Managing Partner	Trone
Krull	Randy	Director, US Distribution Center Ops.	Tyco Electronics Ltd.
Kasarda	John	Director Institute of Private Enterprise	UNC Kenan-Flagler Business School
		Associate Dean - Research & Graduate	
Bhadury	Joyendu	Professions	UNCG - Bryan School of Business
Taube	Larry	Associate Professor	UNCG - Information Systems
Bolte	Terry	Account Manager	UPS Supply Chain Solutions
Weddle	Rita	Sr. Account Manager	UPS Supply Chain Solutions
Ledbetter	Megan		Village of Clemmons
Looper	Gary	Village Manager	Village of Clemmons
Alt	Susan	President	Volvo Logistics North America
Lukoff	Andrew	Interim President	Volvo Logistics North America Inc.
Hochwarth	Bob	Director Product Development	Volvo Logistics Region North America
King	David	President	Warehouse Design Inc.
Joines	Allen	President, Mayor	Winston-Salem Alliance
Leak	Bob	President	Winston-Salem Business Inc.
			Womble Carlyle Sandridge & Rice, PLLC
Chabon	Greg	Attorney	Womble Carlyle Sandridge & Rice, PLLC
			Womble Carlyle Sandridge & Rice, PLLC
Cashin	Mike	Attorney at Law	W-S/Forsyth County Planning Dept.
			Yadkin Co. Chamber of Commerce
Vaughan	Keith	Managing Member	Yadkin Co. Planning & Development
Norby	Paul	Planning Director	Yadkin Valley Railroad
Todd	Bobby	Executive Director	
Ong	Christopher	Director	
Coulthard	Maury	Manager	

APPENDIX C: Job Creation

Transportation, Logistics, Distribution and Manufacturing - Jobs Created July 1, 2010 through June 30, 2011

County	Date	Company	Project Name	City	Type of Company	Investment	Jobs	Square Feet	New or Existing
Guilford	7/9/10	Dynamic Express		Greensboro	third-party logistics company	\$0	10	278,000	New
Randolph	7/12/2010	Allen Precision		Asheboro	manufacture machine parts	\$3,000,000	20	50,000	expansion
Guilford	7/15/10	Poly Vinyl Creations		High Point	distributes vinyl, steel & aluminum building products	\$0	20		New
Forsyth	7/31/2010	Caterpillar		Winston-Salem	manufacture axle assemblies for large mining machines		512		New
Guilford	9/1/10	Cosmos Granite & Marble		High Point	Distribution Center Wholesale Granite and Marble	\$0	4		New
Guilford	9/6/2010	Greensboro Auto Auction		Greensboro	Wholesale auto auction	\$7,300,000	?	23 acres *	expansion
Davidson	9/24/2010	Valendrawers, Inc.		Lexington	manufacture and distribute drawer and door components	\$1,200,000	50		expansion
Guilford	9/25/10	Advanced Technology Sales & Service		High Point	Distirubtion Center for Sales & Service of Metal Fabrication Equipment	\$1,250,000	0		expansion
Guilford	9/27/2010	Keller Crescent		Greensboro	manufacture and distribute pharmaceutical inserts and outserts	\$2,300,000	25		expansion
Davidson	10/13/10	Save-A-Lot, Ltd.		Lexington	Distribution facility that will supply six corporate stores, 11 licensee retail stores and others in the surrounding region	\$24,450,000	43		New
Forsyth	10/22/2010	Foothills Brewery		Winston-Salem	Brewery and distribution center	\$2,000,000			expansion
Guilford	10/22/2010	Uniters North America		Greensboro	distribution center for manufacturer of security products		4	39,000	expansion
Guilford	11/5/2010	Genesis Aviation		Greensboro	FAA approved air station	\$1,200,000	20	50,000	expansion
Guilford	11/12/2010	Medi USA		Whitsett	Manufacturing, distribution, warehouse of compression, orthopedic, and prosthetics	\$1,500,000	0	30,000	expansion
Randolph	11/19/2010	Malt-O-Meal		Asheboro	manufacture and distribute food products	\$136,000,000	80		expansion
Randolph	11/19/2010	Florida Production Engineering		Asheboro	Manufacturer and distributor	\$2,800,000	96		New
Guilford	12/24/2010	Harris Teeter		Greensboro	Grocery distribution and warehouse	\$4,700,000		300,000	expansion
Rockingham	12/30/2010	Glidan Activewear		Eden	manufacture and distribute apparel	\$21,000,000	0		expansion
Guilford	12/31/2010	New Breed Logistics		High Point	Logistics 3PL		46		expansion
Guilford	1/8/11	New Classic Furniture		Greensboro	distribution center	\$0	0		New
Rockingham	1/14/2011	MillerCoors Brewing Company		Eden	manufacture and distribute beer		0	70,000	expansion
Montgomery	1/20/11	Frontier Logistics		Star	logistics provider for the plastics industry	\$5,500,000	71		New
Forsyth	1/27/2011	NS Aviation		Winston-Salem	Aircraft Maintenance and repair	\$1,270,000	308		New
Davie	2/14/2011	Avgol		Mocksville	manufacture and distribute lightweight and nonwoven fabrics	\$35,000,000	42		expansion
Davidson	3/1/2011	United Furniture		Lexington	Furniture manufacturing and distribution		200		expansion
Yadkin	3/4/2011	Lydall		Yadkinville	manufacturing & distribution of specialty thermal/acoustical products for automotive industry	\$18,500,000	170		New
Forsyth	3/8/2011	Hanesbrand		Winston-Salem	Distribution center reopens		61		existing
Guilford	4/1/2011	Polo Ralph Lauren		High Point	Distribution and warehouse for apparel	\$21,000,000	400		expansion
Yadkin	4/11/2011	Ecovolt Power		East Bend	Manufacture and Distribute ecologically friendly automotive starter batteries	\$20,000,000	61		New
Surry	4/12/2011	Pittsburg Glass Works	Project Clear	Elkin	Manufacture automotive glass	\$85,000,000	260	416,007	New
Guilford	4/11/2011	Zeihl-Abegg	Project Zebra	Greensboro	Manufacture and Distribute Industrial Fans	\$2,500,000	42	100,000	expansion
Guilford	4/1/2011	Mylan Pharmaceuticals		Greensboro	Distribute generic and specialty drugs	\$8,000,000		162,400	expansion
Forsyth	4/1/2011	T.W. Garner Food Co.		Winston-Salem	Manufacture and Distribute Texas Pete Hot Sauce	\$987,500		40,000	expansion
Rockingham	4/21/2011	Gerbing's Haeted Clothing		Stoneville	Manufacture and Distribute Harley-Davidson heated gear	\$10,000,000	158	88,000	new
Randolph	5/19/2011	Technimark		Asheboro	Manufacture and Distribute Molded Plastics	\$20,000,000	69		expansion
						\$436,457,500	2,772	1,623,407	

Quarter	Jobs	Investment	Sq. Ft.
3rd Q 2010	641	\$15,050,000	64,448,320 *
4th Q 2010	289	\$193,650,000	419,000
1st Q 2011	1,191	\$81,270,000	70,000
2nd Q 2011	990	\$167,487,500	806,407
3rd Q 2011			
4th Q 2011			