



ECONOMIC DEVELOPMENT PARTNERSHIP of NORTH CAROLINA

NC Megasite Readiness

PROGRAM REPORT

May 2023

JLL

MAYNARDNEXSEN

TIMMONS GROUP

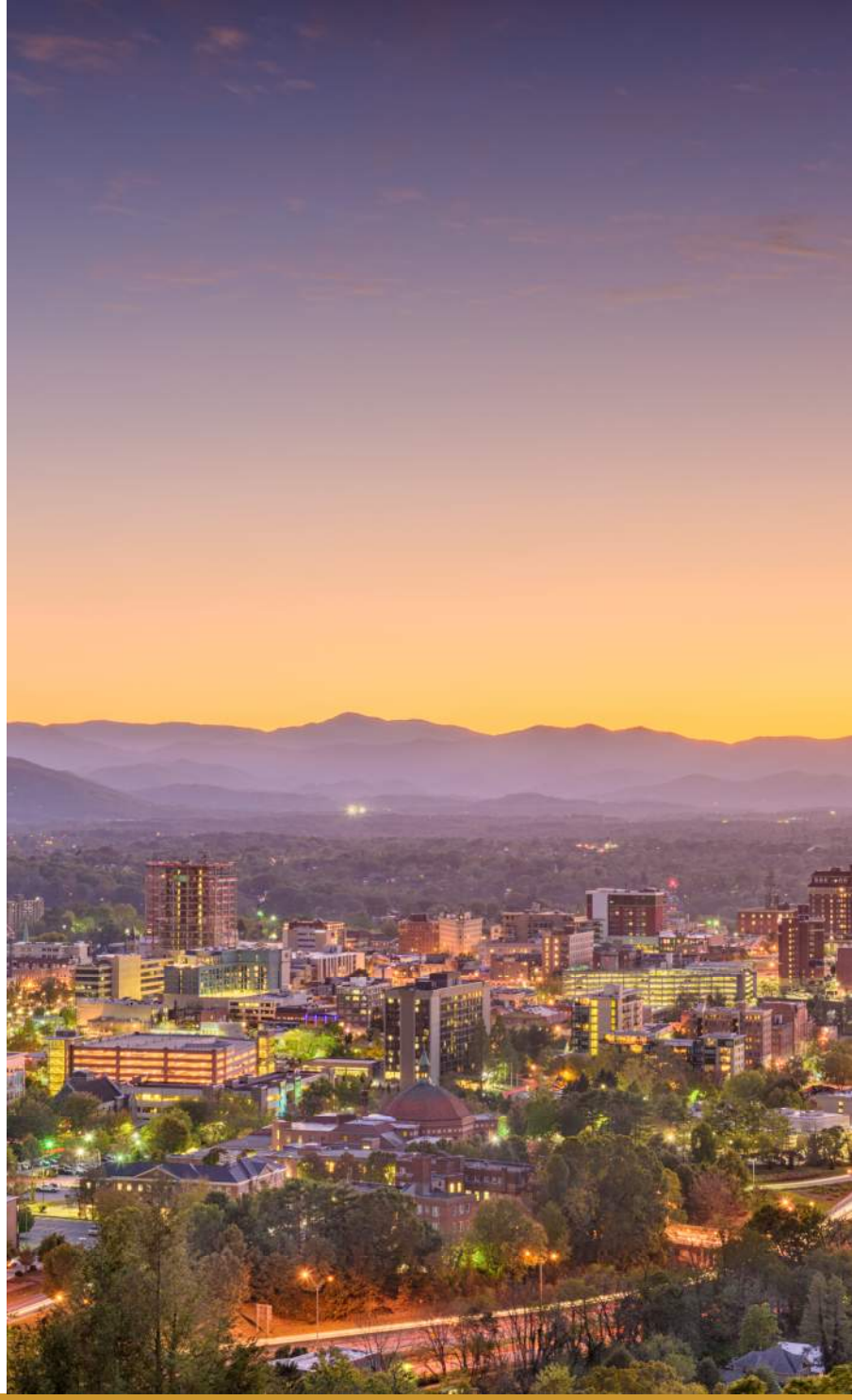
Contents

I. Background

Background

2021 and 2022 were exceptionally good years for economic development in North Carolina. The Economic Development Partnership of North Carolina (EDPNC) and the North Carolina Department of Commerce collectively announced job creation and capital investment commitments in 2021 and 2022 that shattered previous records. That success was driven primarily by a several very large projects, including Toyota's electric vehicle (EV) battery project in Liberty, VinFast's EV assembly and battery project in Moncure, and Wolfspeed's semiconductor project in Siler City. However, that success created challenges for the North Carolina's business recruitment efforts, especially its ability to attract very large projects seeking large shovel-ready sites with robust utility needs. The large project announcements over the past two years have depleted the state's inventory of megasites (generally defined as 1,000+ acre industrial sites that could accommodate projects with 1,000+ jobs.) The number of companies seeking megasites across the nation is at an all-time high. This unprecedented demand for megasites is driven by a number of factors, including the needs of emerging industries (primarily EV assembly & batteries and semiconductor fabrication), lingering Covid-related supply chain issues, and geopolitical tensions across the globe. To bring that home, EDPNC is currently competing for 15 to 20 projects that require a megasite. In prior years, the state typically competed for a few megasite projects over an entire year.

Recognizing this challenge during its 2022 legislative session, North Carolina General Assembly created the Megasite Readiness Program and appropriated one million dollars to provide initial funding for the program. The General Assembly also directed EDPNC to engage a national site selection firm to evaluate North Carolina sites and identify up to five megasites best positioned to successfully serve major advanced manufacturing projects. After a public bid process, EDPNC engaged Jones Lang LaSalle (JLL) and its partner firms, Timmons Group and Nexsen Pruet (collectively, the JLL Team), to perform the analysis.



II. Scope of Work

Scope

The JLL team has been charged by EDPNC to complete an objective, data-driven, third-party assessment of potential megasites across the state and to provide a summary report that includes the following elements:

- A list of up to the five best megasites in North Carolina, including strengths and weaknesses of each site and estimated costs to make the sites shovel-ready;
- An evaluation of competitive sites for each of the named industry sectors: aerospace, automotive, clean energy, food processing, life sciences, and semiconductors; and
- A listing and analysis of competitive megasites in other states, focusing on the Southeast.

III. Methodology

Methodology

In order to select the best megasites in North Carolina, the JLL team intentionally implemented the same process it uses to identify, review, evaluate, and recommend sites to its corporate clients. It was important for the team to utilize the same general process that most companies and their site selection consultants will use to determine the location of their future megasite projects. To be competitive it is imperative that a megasite is able to demonstrate its merits through this process.

Identification

To identify as many potential megasites as possible, a request for proposals was issued to local economic developers in all 100 North Carolina counties. Local developers were encouraged to submit proposals for all potential sites that they were aware of, regardless of the readiness status of the site. There was only one eligibility requirement to submit a site: the site had to encompass 1,000+ contiguous acres. Ultimately, proposals for 30 sites were submitted.

In addition to soliciting sites from local developers, the JLL team solicited sites from statewide economic development partners, including power and rail providers. Those efforts did not result in the identification of additional sites submitted beyond the local developers. These partners provided additional detailed information on many of the sites submitted.

Methodology

Review and Evaluation

JLL team members individually reviewed all 30 site proposals and performed desktop reviews based on the following site criteria:

- Site control and ease of assemblage
- Site size & topography, ease of permitting & development
- Power
- Water
- Wastewater
- Natural Gas
- Roadway access
- Railway access
- Air and port accessibility
- Labor Availability

It should be noted that local developers were not asked to provide labor information with their site proposal submissions. Instead, the JLL team performed an independent labor analysis for each site submitted. The results of that analysis were used for the desktop reviews and for rank ordering the sites, as described below. Labor availability was the only site criteria that the JLL team attached an absolute minimum requirement to. If a site did not meet that minimum requirement, it was eliminated.

Ultimately, this information was used by the JLL team to evaluate all 30 sites and to narrow down to 11 sites that received site visits.

In-person site visits were then scheduled and carried out with representatives of the 11 sites over a three-day period. The site visits were designed and conducted to mirror a typical site visit: local economic developers and their partners presented the site to the JLL team, answered in-depth site criteria questions, and led the JLL team on windshield tour of the site. Local developers were given the opportunity to provide additional site information to the JLL team following the site visits.

Following the site visits, a number of sites were reviewed with applicable statewide partners to verify information and to fill in gaps in the information provided by local developers pertaining to site attributes such as power, natural gas and rail availability. Ultimately, all site information for the 11 sites was updated and used by the JLL team to collectively select the finalist sites.

IV. Megaproject Announcements & Analysis

Megaproject Announcements & Analysis

The JLL Team analyzed Megaproject announcements within the context of the following industries: Aerospace, Automotive Manufacturing (Conventional and EV), EV Battery Manufacturing, Clean / Alternative Energy, Food Processing, Life Sciences and Semiconductors.

For the purposes of this analysis, we analyzed project announcements that Included a minimum of 500 jobs announced or $500 million investment announced since 2016. This analysis was completed based upon research of project announcements and expansions, previous and current RFI's and RFP's and input from industry partners and EDPNC staff. It's important to note that it is anticipated with the unprecedented rise in construction costs and supply chain issues, these investment numbers will only increase over time.

The summary table below includes the base information developed from this analysis:

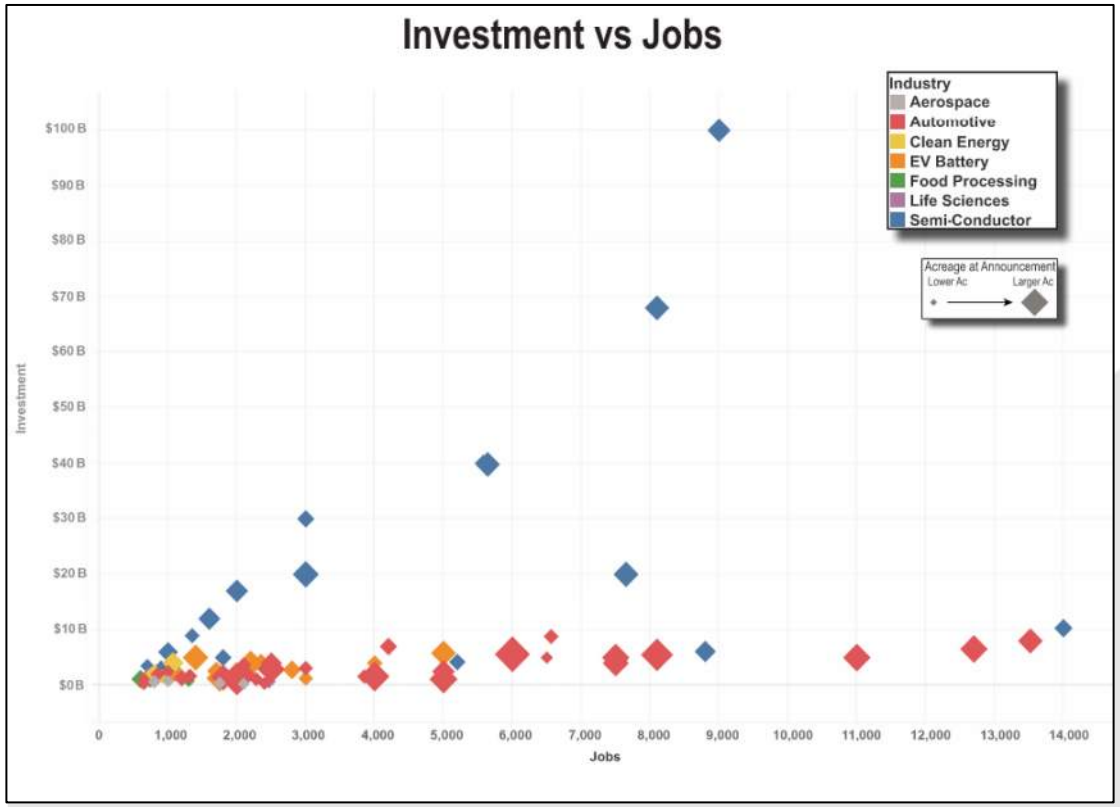
Industry Category	Announced Investment ($ Billion)	Announced Jobs	Facility Size (SF)	Acreage (ac)	Power (MW)	Water (MGD)	Sewer (MGD)	Natural Gas (MCFH)
	Range	Range	Range	Range	Range	Range	Range	Range
Aerospace	$0.15 - $2.2 Bil	800 - 5,000	115,000 - 1,200,000	65 - 400	2 - 50	0.1 - 1.0	0.1 - 1.0	100 - 500
Automotive (OEM, Man. & Incl. E.V.)	$0.3 - $8.8 Bil	650 - 13,500	150,000 - 20,000,000	180 - 3,600	100 - 350	0.1 - 20	0.1 - 3.5	100 - 600
Clean Energy	$0.7 - $4.0 Bil	200 - 2,000	160,000 - 2,400,000	100 - 2,000	2 - 20	0.05 - 2.8	0.01 - 2.5	2 - 100
EV Battery	$0.1 - $5.8 Bil	1,100 - 5,000	120,000 - 4,500,000	120 - 1,825	50 - 250	1.0 - 5.5	0.15 - 2.2	100 - 600
Food Processing	$0.75 - $1.1 Bil	400 - 1,300	300,000 - 1,300,000	200 - 600	1 - 50	0.25 - 1.0	0.25 - 1.0	2 - 100
Life Sciences	$0.55 - $2.1 Bil	150 - 1,000	62,000 - 1,000,000	150 - 600	2 - 50	0.4 - 1.5	0.25 - 1.0	Unavailable
Semiconductor	$0.55 - $100 Bil	700 - 14,000	350,000 - 6,000,000	25 - 1,800	200 - 1,100	0.2 - 45	0.5 - 41	50 - 1,000

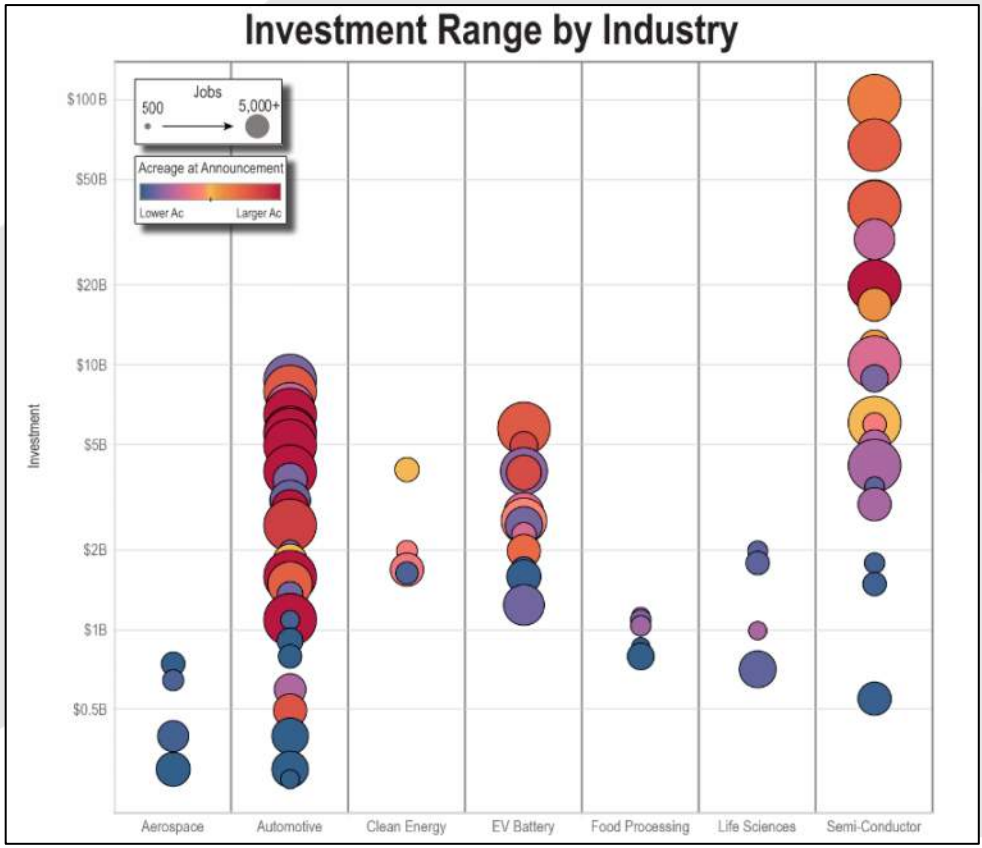
** Recent NC Prospect (industry unknown) - $68B, 82 MGD Water, 42 MGD Wastewater, 1,500 acres, 8,100 jobs*

Megaproject Announcements & Analysis

The JLL Team analyzed over 60 of these recent Megaproject announcements within the context of this megasite study for all of the identified target industries: Aerospace, Automotive Manufacturing (Conventional and EV), EV Battery Manufacturing, Clean / Alternative Energy, Food Processing, Life Sciences and Semiconductors.

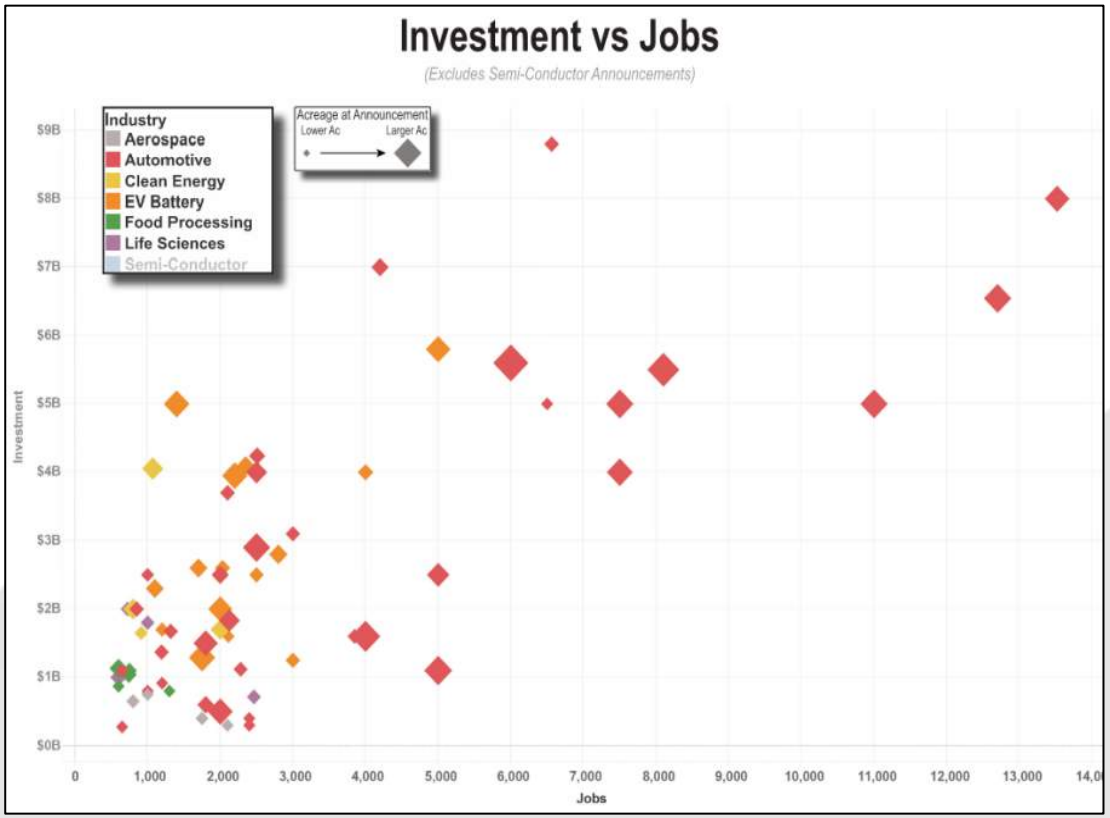
Below are distribution graphs regarding investments and jobs created for the respective announcements:

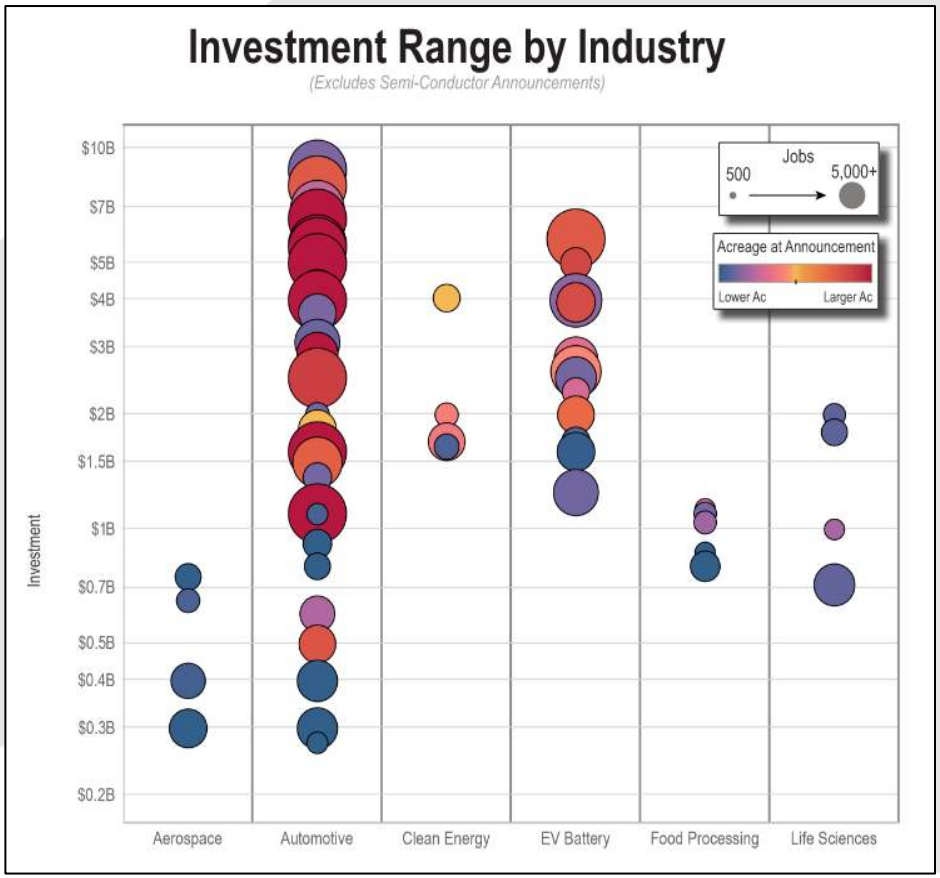




Megaproject Announcements & Analysis

Given the size of the semi-conductor announced investments relative to the other Megaproject announcements, we have provided distribution graphs for the target industries EXCLUDING the semiconductor announcements.





V. Competitive Megasites

Competitive Megasites

Historically the “megasite” has been targeted toward automotive OEM assemblers who require upwards of 1,000+ contiguous acres, substantial utility infrastructure, and efficient transportation assets. For decades the rise of globalization meant domestic manufacturing investments were becoming increasingly rare. Faced with greater competition for these transformational projects, communities sought to garner the attention of ‘site-selectors’ through land assets. Over the years numerous certified ‘shovel-ready’ sites emerged across the United States designed to reduce risk associated with development. By investing in site assembly, due diligence and preparation, communities positioned themselves to attract the next mega-project. However, for many years numerous near-perfect megasites sat on the market. At the time a mega-project had its pick of a dozen or more high quality and affordable sites across the country. Today the supply of ‘shovel ready’ megasites appears to be limited.

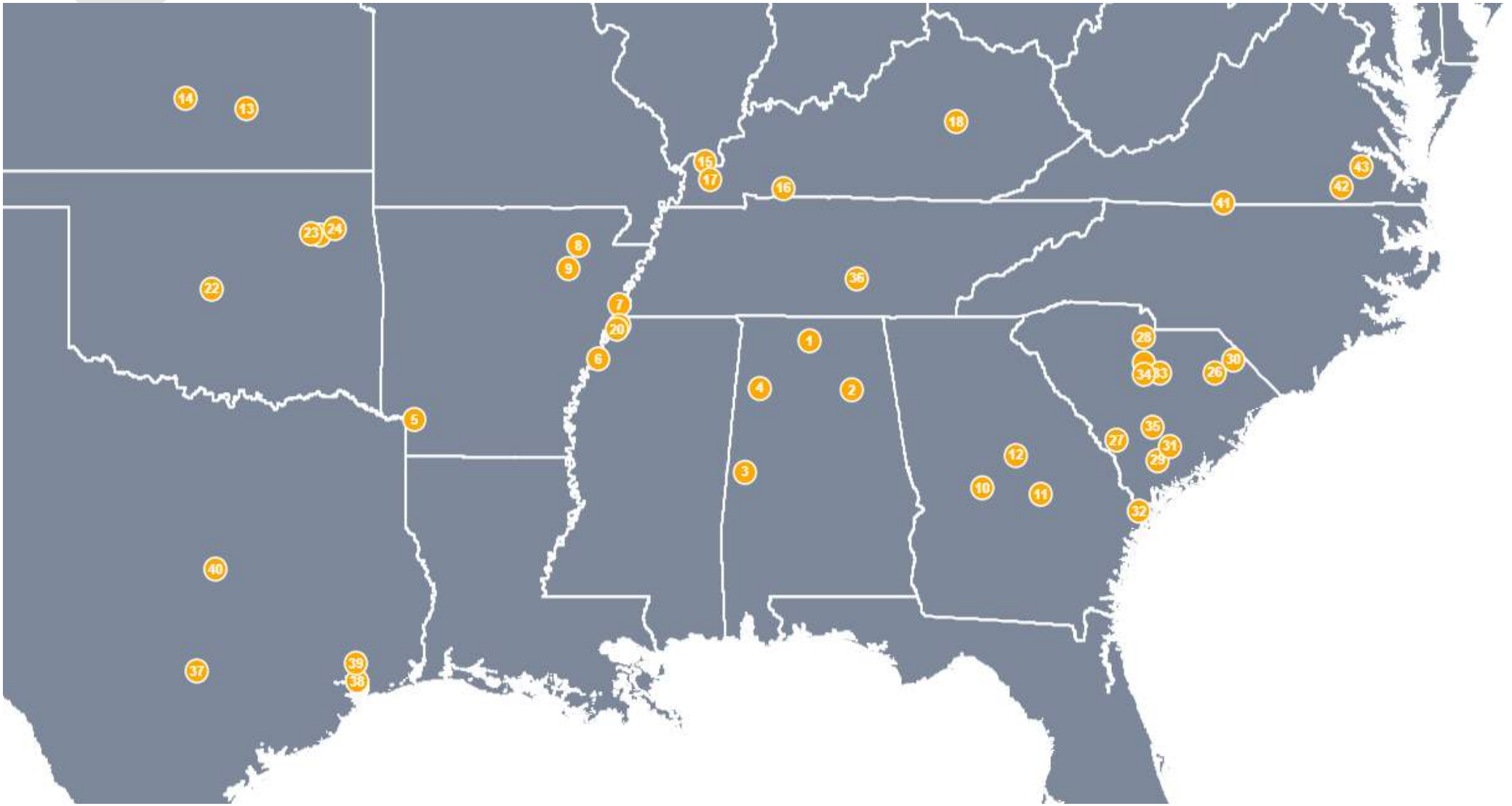
In recent years reshoring and emerging technologies have generated unprecedented levels of domestic manufacturing investment. In a span of twenty-four months nearly every quality megasite in the U.S. has been acquired by some type of next generation manufacturing project. Sites which were on the market for a decade are now receiving multiple offers in a span of weeks and months. Behind this investment rush is a substantial shift in global supply chains. As manufacturers seek to adapt through rapid strategic expansions, project timelines have become increasingly aggressive. Consequently, more users are willing to compromise on potential operating deficiencies in favor of meeting their project schedules.

Of the 40+ ‘megasites’ remaining in the Southeastern United States very few are without significant development challenges. Considering the time and capital investment required to prepare a large shovel-ready industrial site it is highly unlikely that we will see new supply of “ready to go” mega-sites for quite some-time. As demand for development persists well prepared sites, which may have been overlooked in the past, are in a better position than ever as companies are willing to overlook some obvious flaws and take on the development challenges due to location and market drivers.

	Site Name	County	State	Site Acreage
1	Murphy Site	Limestone	AL	1,300
2	NEAR Mega-Site	Etowah	AL	1,091
3	Crossroads of America	Greene	AL	1,240
4	Black Creek	Marion	AL	1,600
5	REDI Arkansas Manufacturing Center	Miller	AR	1,350
6	Helena Harbor Industrial Park	Phillips	AR	4,000
7	West Memphis I-40 Megasite	Crittendon	AR	1,800
8	Lawrence County Mega Site	Lawrence	AR	2,426
9	Newport Mega Site	Jackson	AR	1,000
10	Middle Georgia Megasite	Peach	GA	1,113
11	Heart of Georgia Mega Site	Laurens	GA	1,999
12	Silbey Smith Industrial Park	Baldwin	GA	1,643
13	El Dorado Industrial Area	Butler	KS	1,600
14	K-96 Industrial Complex	Reno	KS	1,009
15	Ohio River Triple Rail Industrial Site	McCracken	KY	1,001
16	Commerce Park II	Christian	KY	1,001
17	West Kentucky Megasite	Graves	KY	2,112
18	Begley Site	Madison	KY	1,008
19	Northwest Mississippi Mega Site	DeSoto	MS	1,665
20	Tunica Mega Site	Tunica	MS	2,221
21	Tulsa Port of Inola	Rogers	OK	2,500
22	OKC 577	Oklahoma	OK	577
23	Robson East	Tulsa	OK	1,000
24	MidAmerica Industrial Park	Mayes	OK	400
25	I-77 International Megasite	Fairfield	SC	1,141
26	White Hawk Commerce Park	Florence	SC	1,779
27	South Carolina Adv. Technology Park	Barnwell	SC	1,606
28	Magnolia Industrial Park	Chester	SC	1,700
29	Colleton Mega Site	Colleton	SC	1,481
30	I-95 Megasite	Clarendon	SC	1,417
31	Winding Woods	Dorchester	SC	1,092
32	Sherwood Tract	Jasper	SC	1,438
33	Central SC Megasite	Kershaw	SC	1,426
34	Blythewood Industrial Park	Richland	SC	1,349
35	Orangeburg County Power site	Orangeburg	SC	745
36	Middle Tennessee I-24 Industrial Site	Coffee	TN	1,855
37	Lockhart Mega Site	Caldwell	TX	1,800
38	TGS Cedar Port Industrial Park	Chambers	TX	11,000
39	Gulf Inland Logistics Park	Liberty	TX	1,157
40	McGregor MegaSite	McLennan	TX	2,012
41	Southern Virginia Megasite	Pittslylvania	VA	1,015
42	Mid-Atlantic Advanced Mfg Center	Greensville	VA	1,570
43	Sussex Megasite	Sussex	VA	1,130

Competitive Megasites

Below is the distribution of the megasites in the Southeast (outside of North Carolina) currently being marketed for mega-projects.



VI. Finalist Sites

Finalist Sites

As noted above, the JLL team was charged with identifying up to the five best megasites in North Carolina. After an in-depth review and evaluation of the 30 sites submitted and additional consideration of the 11 sites that received a site visit, it was clear to the JLL team that North Carolina has one competitive megasite (shovel-ready megasite) and six sites that have demonstrated the most potential to become competitive megasites. For that reason, the following seven sites were selected as finalist sites.

Shovel-Ready Megasite

- Kingsboro Business Park, Edgecombe County

Best Potential Megasites (in no particular order)

- Brunswick County
- Wilson County
- Nash County
- Pitt County
- Cumberland County
- Rowan County

Finalist Site – Kingsboro Business Park

Site Name	Kingsboro Business Park
Acreage	2,187 Avail. Acres
Zoning / Land Use	M-2
4 Lane	US-64 / 0.0 mi
Interstate	I-95 / 14 mi
Water	Edgecombe County / 16” / 0.0 mi
Sewer	Edgecombe County / 30” Gravity / 0.0 mi
Natural Gas	Piedmont Natural Gas
Power	Edgecombe-Martin EMC
Telecom	Brightspeed

Site Background & History

The Kingsboro Business Park is located in central Edgecombe County, bound to the north by US-64 Alternate, bound to the east by Harts Mill Run Road, and bisected by US-64. Currently, the site is zoned for Heavy Industrial (M-2) use and previously was used for agriculture and silviculture. Nearby businesses include Corning Distribution Center, I & N Mini Mart, a QVC distribution center, and East Carolina Agricultural & Education Center. In evaluating this site, several factors were considered including but not limited to: site control and assemblage, site size and acreage, proximity and location, transportation infrastructure, wet and dry utility infrastructure, environmental features, and labor availability.

To date, the site has completed the following due diligence items: a preliminary geotechnical survey and report, a Phase 1 Environmental Site Assessment, a wetlands delineation with a valid U.S. Army Corps of Engineers letter of confirmation, an ALTA boundary survey completed by a licensed land surveyor, a 1’ topographic survey completed by a licensed land surveyor, a cultural resource review and summary, and a threatened & endangered species review and summary. Currently underway are a groundwater study, a Traffic Impact Analysis for OEM, and a Noise, Light, and Vibration study. All infrastructure needed to serve industrial prospects are either in place on-site or should be, based on a qualified professionals review, able to be constructed in 12 months or less. Additionally, all associated infrastructure-related permitting issues (wetlands, E&S, T&E, etc.) have been mitigated through construction or identified and quantified for all remaining improvements.

Summary of Parcel Control & Assemblage

The site consists of 12 parcels, totaling approximately 2,187 acres, all under public ownership and available for purchase. Kingsboro Business Park’s parcels are divided by US-64, US-64 Alternate, Dunbar Road, and Kingsboro Road. Previously on parcel 3799-96-4599, within the largest contiguous area, there was a housing development. There are no remaining buildings on this parcel but there are remaining subdivision access roads.

Summary of Water Infrastructure

The site is served by Edgecombe Water & Sewer for water. According to Edgecombe, there is approximately 1.5 million gallons per day (MGD) available water capacity within their system today but expected to have 5.0 MGD available at the site by 2024. Currently, the site is serviced by a 16” waterline located on site. The site would be served from the City of Rocky Mount Water Treatment Plant, located approximately 13 miles from the site with a permitted capacity of 26 MGD and present available capacity of 11 MGD. There is also a nearby water tank with a capacity of 1 million gallons that has been designed to service the site.

Finalist Site – Kingsboro Business Park

Summary of Wastewater Infrastructure

The site is also served by Edgecombe Water & Sewer for sewer. The estimated capacity of sewer available at the site is 1.5 MGD via an existing 30" gravity sewer line on-site. The site would be served from the Rocky Mount Wastewater Treatment Plant, located approximately 8 miles from the site with a permitted capacity of 21 MGD and present available capacity of 10 MGD. It was also noted that the primary limiting factor for increasing sewer capacity was the existing pump station, which could be upgraded so that the capacity at the site is increased to 4 MGD within 18 months.

Summary of Dry Utility Infrastructure

POWER: This site would be "Customer Choice" based on the build-out with Edgecombe-Martin County Electric Membership Corporation (Edgecombe-Martin EMC) being the primary provider and Dominion Power being the secondary. According to Edgecombe-Martin County EMC, there are 115kV and 230kV transmission lines on-site. There is also a 12.47 kV distribution line and a substation on site. An additional substation can be added to meet prospects' needs, if necessary. Current available power capacity at the site is 18 MW.

GAS: This site is in Piedmont Natural Gas service territory. The nearest existing gas main is a 6" high pressure line (greater than 60 psi) located on site. Based on the information provided, the site can accommodate a large industrial user (greater than 75,000 MCF/month or 100 MCF/hour) within 12 months.

FIBER: The site is currently serviced by Brightspeed, which can be upgraded to meet prospects' needs.

Summary of Transportation and Access

LOCAL ACCESS: Site plans include many access points along Kingsboro Road, Leonard Wiggins Parkway, and US-64 Alternate. Access roads may depend on the phase of buildout.

4-LANE / INTERSTATE HIGHWAY ACCESS: Kingsboro Business Park has excellent access to US-64 (future I-87), a 4-lane divided highway, with Exit 478 located within the site. Interstate 95 is 14 miles west of the site via US-64. I-587 is approximately 30 miles southwest via I-97 and runs west through Raleigh, Durham, Greensboro, and Winston-Salem.

Finalist Site – Kingsboro Business Park

Summary of Railway Access

Kingsboro Business Park is a CSX Select Site. It features a CSX Class 1 Rail Line with 3.25 miles of rail frontage on the north side of the track and 2.4 miles on the south side of the track. The site has great access to major markets via CSX's rail network and is strategically located between Miami and New York City. There is also a Carolina Connector (CCX) intermodal terminal located 12 miles north of the site. Future rail spurs are planned throughout the site, including the primary pad area graded for Triangle Tyre previously.

Summary of Site Features

SITE USE & TOPOGRAPHY: The site has one pad, pad B, which has previously been graded. Two other pads on site, pads A and C, have received permits for grading. The remaining area of the site has both cleared and forested areas. Elevations range from EL30 within the northeastern portion of the site to EL130 in the eastern portion of the site near Deerwalk Road. Within areas not included in pads A, B, and C the topography appears moderately flat, with any areas of higher slope appearing near environmental features in the northern portion of the site.

ENVIRONMENTAL: Kingsboro Business Park appears to have wetlands and streams throughout the site, with a floodplain in the northeastern portion. This floodplain is Zone AE, and therefore no further study is recommended. Wetlands and stream impacts have been minimized in site buildout plans to-date.

OTHER CONSIDERATIONS: Located in Edgecombe County, part of the Carolinas Gateway Partnership and Foreign Trade Zone #214, Kingsboro Business Park is a valuable megasite. This CSX select site has many unique features including ample transportation opportunities and extensive completed due diligence. The site is situated on US-64, which is intended to be upgraded and changed to I-87. US-64 runs directly to I-95, which connects major cities along the entire east coast from New York to Miami. US-64 also provides access to I-40, which runs east to west through North Carolina cities such as Raleigh, Durham, Greensboro, and Winston-Salem.

Finalist Site – Kingsboro Business Park

Summary of Air & Port Accessibility

Some notable drive times from the site include the Morehead City Port and the Port of Norfolk, VA, which are both less than a two and a half hour drive. Wilmington Port is just over two and a half hours away, and the Port of Charleston, SC is approximately five hours away. Raleigh-Durham International Airport (RDU) is approximately an hour drive and Pitt-Greenville Regional Airport (PGV) is approximately a 40-minute drive.

Port	Distance
Morehead City	100 mi
Norfolk, VA	100 mi
Wilmington	120 mi
Charleston, SC	251 mi
Airport	**Distance**
Raleigh Durham	63 mi
Pitt-Greenville	25 mi

Summary of Labor Availability

With a total labor force of 200,100 within 45-minutes the Kingsboro site is well positioned to support the staffing requirements of many manufacturing requirements. In theory the site should support up to 2,000 full-time employees without risking saturation. The latest unemployment rate of 5.2 percent suggests that labor competition may be somewhat lower compared with markets around the country. Additionally, the labor force participation rate of 63 percent is slightly above the national average. An estimated 8,400 business professionals reside within a 45-minute drive of the site with a location quotient of 0.62. While the location quotient may imply less than ideal concentration, it should not deter most manufacturing projects unless the project is heavily dependent on its indirect workforce. The site also reaches 920 industrial engineers, equating to a location quotient of 1.98. This could prove a particularly attractive location for manufacturers concerned about securing engineering talent. The Kingsboro site captures 19,600 production workers within the labor shed, representing a location quotient of 1.56. This strong concentration of production workers should be attractive to most manufacturing projects.

Finalist Site – Kingsboro Business Park

Strengths

- The only shovel-ready megasite in the study with full site due diligence completed
- CSX Select Site boasting tremendous rail potential
- CCX Intermodal facility nearby
- Publicly owned
- Good wet utility capacity for a megaproject
- Natural gas availability
- Major power transmission on site
- Existing pad-graded site
- Seasoned economic development team with experience in industrial land development

Weaknesses

- Labor availability
- Some environmental features for development of another major pad site

Finalist Site – Kingsboro Business Park

Recommended Infrastructure Improvements & Anticipated OOM Costs

- Complete & update due diligence studies, to include water & wastewater preliminary engineering reports and transportation studies to determine recommended improvements and associated costs
- Interchange improvements at US 64 and Kingsboro Road (1225)
- Improvements to ALT 64
- Construct dedicated water line to serve the site for heavy water user
- Construct 2 MG elevated water tank on site
- Construct dedicated wastewater pump station and dedicated force main to WWTP to serve heavy water user
- Existing 500+/- acre pad site from Triangle Tire project, no pad grading recommended

Due Diligence Studies:	$ 2,000,000
Transportation OOM Costs:	$ 20,000,000
Water OOM Costs:	$ 76,500,000
Wastewater OOM Costs:	$ 40,000,000
Pad Ready Site Development:	N/A
Total OOM "All in" Costs:	*$ 138,500,000*

Finalist Site – Brunswick County

Site Name	Brunswick County Site
Acreage	1,000+ Avail. Acres
Zoning / Land Use	I-G / RR
4 Lane	US-74/76 / 0.0 mi
Interstate	I-140 / 8 mi
Water	Brunswick County / 16” / 0.0 mi
Sewer	Brunswick County / 8” FM / 0.0 mi
Natural Gas	Piedmont Natural Gas
Power	Duke Energy Progress
Telecom	FOCUS Broadband

Site Background & History

The Brunswick County Site is located in Brunswick County, west of I-140, east of Lake Waccamaw, and directly north of US-74. It borders Columbus County and is less than 4 miles south of Pender County. Currently, the majority of the site is zoned for Industrial-General use (I-G) and is used for forestry. Some of the smaller potential expansion properties are zoned Rural Residential (RR). The I-G District is intended for industrial enterprises engaged in manufacturing, processing, the assembly of goods, etc. Areas within this district will have access to major thoroughfares, rail service, and in-place infrastructure such as water, sewer, and/or natural gas. The site is directly across US-74 from the 1,040-acre International Logistics Park and nearby businesses include Tri-Tech Forensics and various commercial locations such as gas stations and restaurants.

In evaluating this site, several factors were considered including but not limited to: site control and assemblage, site size and acreage, proximity and location, transportation infrastructure, wet and dry utility infrastructure, environmental features, and labor availability.

To date, the site has the following due diligence completed: a preliminary geotechnical survey and report, a Phase 1 Environmental Site Assessment, a wetlands delineation with a valid U.S. Army Corps of Engineers letter of confirmation, a cultural resource review and summary, and a threatened & endangered species review and summary. Improvements to the site are currently underway and include fiber extension, water line extension, finalizing infrastructure to the site, and securing a wetlands impact application to minimize time in beginning construction. Based on this thorough due diligence, the Brunswick County Site is an NC Certified Site.

Summary of Parcel Control & Assemblage

The site is primarily made up by a single owner who openly advertises the site for industrial use. This primary parcel and ownership comprise approximately 1,000+ acres of the site. The additional properties noted help better configure the site for a large user. Currently, the largest contiguous area of the site – even with the additional properties included – is approximately 370 acres south of Northwest Road and north of the transmission line bisecting the middle of the site. However, in discussions with Duke, significant planning has occurred with an established schedule outlined for moving those transmission lines. The remaining areas would remain separated by Northwest Road NE, Port Royal Road NE, Bear Branch Lane NE, CSX rail and additional transmission infrastructure.

Finalist Site – Brunswick County

Summary of Water Infrastructure

The site is served by Brunswick County Public Utilities for water. According to Brunswick County, there is approximately 1 million gallons per day (MGD) of capacity available at the site via an existing 16" waterline located on site. The site would be served from the Northwest Water Treatment Plant, located approximately 10 miles from the site with a permitted capacity of more than 50 MGD and present available capacity of 12 MGD. There is also a nearby 500,000 gallon water tank that has been designed to service the site

Summary of Wastewater Infrastructure

The site is also served by Brunswick County Public Utilities for sewer. The estimated capacity of sewer available at the site is 200,000 gallons per day via an existing 8" force main located on site. The site would be served from the Northwest Wastewater Treatment Plant, located over 10 miles from the site with a permitted capacity of 5 MGD and present available capacity of 3 MGD. It was also noted that the primary limited factor for increasing sewer capacity was the existing pump station, which could be upgraded if needed.

Summary of Dry Utility Infrastructure

POWER: The site is primarily located in Duke Energy Progress service territory. There are three (3) existing transmission lines that cross through the site, a 230 kV line and two (2) 115 kV lines. Based on discussions with Duke Energy, all three (3) lines can be moved if needed for prospective development. The estimated timeline for moving the lines is approximately three (3) years. Duke Energy considers this site one of the best sites in the state from a power perspective and has been vetted for up to 760 MW with about an eight (8) year ramp up schedule to meet prospective end user's demands.

GAS: This site is in Piedmont Natural Gas service territory. The nearest existing gas main is a 20" medium pressure line (11-60 psi) located on site. Improvements can be made to the existing service to accommodate medium (less than 75,000 MCF/month or 100 MCF/hour) to large (more than 75,000 MCF/month or 100 MCF/hour) industrial sites in 12-24 months.

FIBER: The site is currently serviced with fiber by FOCUS Broadband.

Summary of Transportation and Access

LOCAL ACCESS: The site's main access would come from US-74/76 with potential for secondary access from Northwest Road.

4-LANE / INTERSTATE HIGHWAY ACCESS: As mentioned above, the Brunswick County Site has excellent access to US-74/76, a 4-lane divided highway with future Interstate designation. It is adjacent to the site and has an existing entrance to access the site. Via US-7/76, I-140 is located approximately 8 miles east of the site and I-95 is approximately 65 miles west.

Finalist Site – Brunswick County

Summary of Air & Port Accessibility

Some notable drive times from the site include the Port of Wilmington, which is less than a 30-minute drive from the site; the Port of Morehead City, which is just over a two-hour drive from the site; and the Port of Charleston, SC, which is three and a half hours from the site. Wilmington International Airport (ILM) is less than a thirty-minute drive from the site. The Myrtle Beach International Airport is approximately 90-minutes from the site.

Port	Distance
Wilmington	15 mi
Morehead City	84 mi
Charleston	145 mi
Airport	**Distance**
Wilmington	16 mi
Myrtle Beach	60 mi

Summary of Labor Availability

The Mid-Atlantic Rail Site labor shed reaches 210,000 people within a 45-minute radius, making it suitable for projects that require between 1,000 and 2,000 employees. The labor force participation rate of 64 percent is about average. The unemployment rate of 3.8 percent indicates typical competition for workers in this area. From the perspective of indirect labor supply there are 8,200 business professionals accessible within the drive-time radius. The location quotient of 0.70 for this group indicates below average concentration in the area which may suggest lower prevalence of professionals than a typical market. The Mid-Atlantic site captures 230 industrial engineers in the 45-minute shed with a location quotient of 0.57. Industrial engineers are in high demand across the U.S. and may be a priority for more advanced operations requiring more than a few engineers on-site. In terms of direct labor the site reaches 9,900 production workers within a 45-minute radius. The location quotient of 0.90 for this group is somewhat below average, which could be sufficient for some projects, but may under-perform when compared to competing sites.

Finalist Site – Brunswick County

Recommended Infrastructure Improvements & Anticipated OOM Costs

- Complete & update due diligence studies, to include water & wastewater preliminary engineering reports and transportation studies to determine recommended improvements and associated costs
- Interstate standard grade separated interchange (Future I-74)
- Improvements to the Fertilizer Road / Northwest Road NE connector road to SR 87
- Intersection improvements at SR 87 and US 74
- Construct dedicated water line to serve the site for heavy water user
- Construct 2 MG elevated water tank on site
- Construct dedicated wastewater pump station and dedicated force main to WWTP to serve heavy water user
- Expand WWTP 6 MGD to accommodate 6+ MGD wastewater demand
- 500-acre Pad Ready Site Development (assumed $250,000 per acre all sites in study)

Due Diligence Studies:	$ 2,000,000
Transportation OOM Costs:	$130,000,000
Water OOM Costs:	$41,800,000
Wastewater OOM Costs:	$259,000,000
Pad Ready Site Development:	$125,000,000
Total OOM "All in" Costs:	*$557,800,000*

Finalist Site – Brunswick County

Strengths

- Future I-74 corridor with high visibility
- One of the best sites in the state for a high-power user: has been vetted up to 760 MW with Duke Energy
- CSX Select Site boasting tremendous rail potential
- Public control (existing option) the proposed site
- Significant transportation corridor (future interchange may be needed when Interstate)
- Port proximity (Wilmington)
- Some due diligence has been completed (wetland permitting, etc.)
- Potential ability to relocate power lines for the appropriate mega-project

Weaknesses

- Transmission Lines currently bisect the property
- Some environmental features throughout the property
- Labor availability
- Natural disaster risks - perception vs. reality
- Air connectivity - distance to viable international airport
- Limitations of the Port of Wilmington
- Limited sewer capacity for a megaproject

Finalist Site – Wilson County

Site Name	Wilson County Site
Acreage	1,000+ Avail. Acres
Zoning / Land Use	AR
4 Lane	NC-58
Interstate	I-587
Water	City of Wilson / 12” Waterline
Sewer	City of Wilson / 24” Gravity
Natural Gas	Wilson Energy
Power	Wilson Energy
Telecom	Greenlight Community Broadband

Site Background & History

The Wilson County Site is located in the eastern portion of Wilson County, North Carolina. The site is also east of the City of Wilson. Several industrial parks with existing companies are close to the site. Currently, the site is zoned for agricultural residential (AR). In evaluating this site, several factors were considered including but not limited to: site control and assemblage, site size and acreage, proximity and location, transportation infrastructure, wet and dry utility infrastructure, environmental features, and labor availability.

Summary of Water Infrastructure

The site is served by the City of Wilson for water. According to the City of Wilson, there is approximately 4 million gallons per day (MGD) of capacity available at the site via an existing 12” waterline. The site would be served from the Pine Street Plant with a permitted capacity of 22 MGD and present available capacity of 4 MGD. There is no nearby water tank available for additional capacity.

Finalist Site – Wilson County

Summary of Wastewater Infrastructure

The site is also served by the City of Wilson for sewer. The estimated capacity of sewer available at the site is 3 million gallons per day (MGD) via an existing 24" gravity sewer line. The site would be served from the Hominy Swamp Wastewater Treatment Plant, with a permitted capacity of 14 MGD and present available capacity of 3 MGD.

Summary of Dry Utility Infrastructure

POWER: The site is located in Wilson Energy service territory. According to the provider, the site could be supplied with power from a substation located in the vicinity of the site and supplied by two separate 115 kV transmission lines. Additionally, the North Campus could be served by two 23 kV, 3 phase distribution circuits (20 MVA each).

GAS: This site is in Wilson Energy service territory. The nearest existing gas transmission main is an 8" high pressure line (11-60 psi). The nearest gas distribution main is an 8" line. Piedmont Natural Gas also will have a transmission line near the property; therefore, the customer would have a choice in provider. The timeline for a medium to large sized industrial prospect (including demands greater than 75K MCF/month or 100 MCF/hour) would be 12-24 months.

available in three to six months. Greenlight is also able to provide a redundant diverse fiber connection back to Greenlight Data Center that can then be cross connected to carrier of choice, which will provide a fully redundant connection. .

Summary of Transportation Access

4-LANE / INTERSTATE HIGHWAY ACCESS: The site has great transportation access, offering multiple connections to larger road networks.

Finalist Site – Wilson County

Summary of Railway Access

The site does not have access to any nearby rail lines.

Summary of Site Features

SITE USE & TOPOGRAPHY: The site is currently used for farming and housing purposes; therefore, many areas are already cleared. The topography on the site appears flat as well, with any areas of slope appearing near environmental features onsite. Elevations range from EL120 towards the center and northern portions of the site, to EL100 near environmental features that pass through the site. In core areas of development, the site contains little topographic challenges.

ENVIRONMENTAL: Based upon desktop review of environmental features, there are several pockets of environmental features throughout the site. The two most obvious locations are the areas that fall within the existing swamps. There is an existing swamp on the eastern site boundary, where some wetlands are, as well as an existing 100-year floodplain line. The western boundary of the site also has an existing swamp, with similar environmental features of wetlands and an existing 100-year floodplain line. Small reaches of wetlands are scattered throughout the southern center of the site, but these areas have the potential to likely be avoided. Development of the site also has the potential to largely avoid the floodplain areas, however, further analysis may be needed prior to development for more detail on where the floodplain encroaches.

OTHER CONSIDERATIONS: The site is unique being in such close proximity to several major road networks as well as the close proximity to the city of Wilson. Existing industrial parks being close by are evidence of the strength of the location.

Finalist Site – Wilson County

Summary of Air & Port Accessibility

Some notable drive times from the site include the Wilmington Port, the Morehead City Port, and the Norfolk, VA Port, all approximately two hours away, and the Charleston, SC Port, approximately four hours away. Raleigh-Durham International Airport is approximately an hour drive. The Pitt-Greenville Airport is approximately a half hour drive.

Port	Distance
Morehead City	110 mi
Norfolk, VA	140 mi
Wilmington	130 mi
Charleston, SC	290 mi
Airport	**Distance**
Raleigh Durham	70 mi
Pitt-Greenville	35 mi

Summary of Labor Availability

The Wilson County Site boasts a 45-minute labor capture of 322,000, which could support projects in the 1,000 to 3,000 employee range. The latest unemployment rate of 5.7percent suggests a more favorable levels of competition as compared with most markets around the country. Additionally, the 63 percent labor participation rate tracks with the US average. The site has 12,700 business professionals within 45-minutes, although the location quotient of 0.65 is less than optimal. However, this would not deter projects predominantly focused on an hourly workforce. Furthermore, there are 1,100 industrial engineers in the labor shed with an impressive location quotient of 1.61. This would be attractive to numerous manufacturers who often cite engineering talent as significant challenge. In terms of production supply, the site reaches 27,300 workers within 45-minutes equating to an impressive location quotient of 1.50.

Finalist Site – Wilson County

Strengths

- Significant transportation corridor
- Proximity to Raleigh-Durham
- Seasoned economic development team with experience in industrial land development

Weaknesses

- Immediate access to the site will require dedicated interchange
- Environmental features throughout the site will define development of the site
- Local power provider (not Duke or Dominion)
- Limited wet utility capacity for megaproject
- No rail

Finalist Site – Wilson County

Recommended Infrastructure Improvements & Anticipated OOM Costs

- Complete due diligence studies, to include water & wastewater preliminary engineering reports and transportation studies & FHWA Interchange Justification Report (IJR) to determine recommended improvements and associated costs
- Construct dedicated water line to serve the site for heavy water user
- Construct 2 MG elevated water tank on site
- Expand WTP 10 MGD to accommodate 10+ MGD water demand
- Construct dedicated wastewater pump station and dedicated force main from site to WWTP to serve heavy water user
- Expand WWTP 6 MGD to accommodate 6+ MGD wastewater demand
- 500-acre Pad Ready Site Development

Due Diligence Studies:	$7,400,000
Transportation OOM Costs:	$130,000,000
Water OOM Costs:	$243,500,000
Wastewater OOM Costs:	$232,000,000
Pad Ready Site Development:	$125,000,000
Total OOM "All in" Costs:	*$737,900,000*

Finalist Site – Nash County

Site Name	Nash County Site
Acreage	1,000+ Avail. Acres
Zoning / Land Use	A-1
4 Lane	I-95
Interstate	I-95
Water	City of Rocky Mount / 8” Waterline
Sewer	City of Rocky Mount / 10” Gravity
Natural Gas	City of Rocky Mount Energy Resources
Power	City of Rocky Mount Energy Resources
Telecom	Lumen

Site Background & History

The Nash County Site is located in the northeastern portion of Nash County, North Carolina. The site is also just west of the Town of Whitakers. Currently, the site is zoned for agricultural use (A-1) but could be rezoned once acquired. In evaluating this site, several factors were considered including but not limited to: site control and assemblage, site size and acreage, proximity and location, transportation infrastructure, wet and dry utility infrastructure, environmental features, and labor availability.

Summary of Water Infrastructure

The site is served by the City of Rocky Mount for water. According to the City of Rocky Mount, there is approximately 1.5 million gallons per day (MGD) of capacity available at the site via an existing 8” waterline. The site would be served from the Sunset Avenue Water Treatment Facility, with a permitted capacity of 30 MGD and present available capacity of 10 MGD. There is also a nearby 500,000-gallon water tank that has been designed to service the site.

Finalist Site – Nash County

Summary of Wastewater Infrastructure

The site is also served by City of Rocky Mount for sewer. There is no current capacity available for sewer within the site vicinity. The closest sewer line is an existing 10'' gravity sewer line. The site would be served from the Tar River Regional Wastewater Treatment Plant, with a permitted capacity of 21 MGD and present available capacity of 11 MGD.

Summary of Dry Utility Infrastructure

POWER: The site is located in City of Rocky Mount Energy Resources service territory. According to the provider, the City of Rocky Mount has a 69 kV transmission line that is in the vicinity of the site. The provider states there is potential to extend this transmission line to reach the site and build a substation, then build new distribution circuits to feed potential customers as needed. Three phase power is also available on site and 8 MW could be provided to potential end users.

GAS: This site is in City of Rocky Mount Energy Resources service territory. The nearest existing gas transmission main is a medium pressure line (11-60 psi). The nearest existing gas distribution main is a 6'' polyethylene line located onsite. The timeline for a medium sized industrial prospect (less than 75K MCF/month or 100 MCF/hour) would be less than 12 months.

provider, service to the site is not available currently, and would likely take over a year to extend service to the site.

Summary of Transportation Access

4-LANE / INTERSTATE HIGHWAY ACCESS: The site has excellent transportation access, specifically with its proximity to I-95. The site is also near US-64, a four-lane highway, and US-301, another major road network.

Finalist Site – Nash County

Summary of Railway Access

The site does not have access to any nearby rail lines.

Summary of Site Features

SITE USE & TOPOGRAPHY: The site is currently used for farming purposes, therefore, many areas are already cleared and flat. The topography on the site based on contours provided by the county appears flat as well, with any areas of slope appearing near environmental features onsite. Elevations range from EL140 towards the center of the site, to EL112 near an environmental feature that passes through the site, as well as near a swamp that sits along the site's northern edge. In core areas of development, the site contains little topographic challenges.

ENVIRONMENTAL: Based upon desktop review of environmental features, there is a small portion of wetlands and streams that cross the portion of the site. These features have the potential to be avoided in the southern development of the site. The northern edge of the site also has environmental features with the existence of the swamp. The northern boundary contains wetlands, streams, and existing 100 year and 500 year floodplains. Development of the site has the potential to largely avoid this area. Further analysis, however, would be needed prior to development for more detail on where the floodplain encroaches.

OTHER CONSIDERATIONS: The site is unique being in such close proximity to I-95 and existing industrial development.

Finalist Site – Nash County

Summary of Air & Port Accessibility

Some notable drive times from the site include the Wilmington Port, the Morehead City Port, and the Norfolk, VA Port, all approximately two hours away, and the Charleston, SC Port, approximately four hours away. Raleigh-Durham International Airport is less than a two hour drive. The Pitt-Greenville Airport is less than an hour drive.

Port	Distance
Morehead City	150 mi
Norfolk, VA	120 mi
Wilmington	160 mi
Charleston, SC	320 mi
Airport	**Distance**
Raleigh Durham	80 mi
Pitt-Greenville	60 mi

Summary of Labor Availability

Reaching a labor force of 142,000 people within a 45-minutes, the Nash County Site has a strong potential for smaller projects but may be a stretch for larger employers. In theory the site could support upwards of 1,500 employees without oversaturating the market. The latest unemployment rate of 5.2 percent suggests that labor competition may be somewhat lower compared with markets around the country. The labor force participation rate is 60% is slightly below average but not particularly concerning. The site captures 5,100 professionals within a 45-minute radius comprising a location quotient of 0.59. This suggests that the area has a relatively low concentration of business professionals compared to the national average. However, industrial engineering supply is quite strong in the area, with 660 engineers within the labor shed and an impressive location quotient of 2.21. This indicates that the area has a relatively high concentration of industrial engineers compared to most markets and will be particularly attractive to most manufacturing employers. The production supply is also strong in the area, with 14,000 employed and a location quotient of 1.75. This suggests that the area has a relatively high concentration of production workers. Overall, the Northern Nash Site has potential for development, especially for projects with greater automation and lower workforce requirements.

Finalist Site – Nash County

Strengths

- Proximity to I-95
- Likely relatively low acquisition cost
- Large contiguous areas of the site appear to be very developable
- Wet utility system capacities

Weaknesses

- Labor availability (especially if major employer lands at Kingsboro)
- Very rural
- Immediate access to the site will require dedicated interchange
- Local power provider (not Duke or Dominion)
- Some environmental features throughout the southern portion of the site
- No rail

Finalist Site – Nash County

Recommended Infrastructure Improvements & Anticipated OOM Costs

- Complete due diligence studies, to include water & wastewater preliminary engineering reports and transportation studies and FHWA Interchange Justification Report (IJR) to determine recommended improvements and associated costs
- Install interstate grade separated interchange
- Construct dedicated water line to serve the site for heavy water user
- Construct 2 MG elevated water tank on site
- Expand WTP 5 MGD to accommodate 10+ MGD water demand
- Construct dedicated wastewater pump station and dedicated force main from site to WWTP to serve heavy water user
- 500-acre Pad Ready Site Development

Due Diligence Studies:	$ 8,900,000
Transportation OOM Costs:	$145,000,000
Water OOM Costs:	$161,000,000
Wastewater OOM Costs:	$49,000,000
Pad Ready Site Development:	$125,000,000
Total OOM "All in" Costs:	*$488,900,000*

Finalist Site – Pitt County

Site Name	Pitt County Site
Acreage	1,000+ Avail. Acres
Zoning / Land Use	RA
4 Lane	US-13
Interstate	I-95
Water	Greenville Utilities Commission / 8”
Sewer	Greenville Utilities Commission / 15” Gravity
Natural Gas	Greenville Utilities Commission
Power	Greenville Utilities Commission
Telecom	Optimum

Summary of Water Infrastructure

The site is served by the Greenville Utilities Commission for water. The estimated capacity of water available at the site is 2 million gallons per day (MGD) via an existing 8” waterline. The site would be served from the Greenville Utilities Commission Water Treatment Plant, located with a permitted capacity of 32 MGD and present available capacity of 19 MGD. There is also a nearby water tank with a capacity of one million gallons.

Site Background & History

The Pitt County Site is located in the northern area of Pitt County, North Carolina. The site is also just north of the City of Greenville. Currently, the site is zoned for Rural Agricultural (RA) use, and according to the locality, Pitt County Planning is currently in the process of revising their comprehensive plan (Envision 2045). Surrounding development includes mostly residential and small, local businesses. In evaluating this site, several factors were considered including but not limited to: site control and assemblage, site size and acreage, proximity and location, transportation infrastructure, wet and dry utility infrastructure, environmental features, and labor availability.

Finalist Site – Pitt County

Summary of Wastewater Infrastructure

The site is also served by the Greenville Utilities Commission for sewer. There is no current sewer service on-site, however there is a pumpstation less than a mile from the site that could provide approximately 300,000 gallons per day (GPD) capacity with a 6" forcemain. There is another pumpstation in the vicinity of the site, with significantly more capacity. It is recommended that the Greenville Utilities Commission work with the developer to determine the most effective and efficient manner of sewer extension. There is a 15" gravity main in the vicinity of the site. The site would be served from the Greenville Utilities Wastewater Treatment Plant, with a permitted capacity of 17 MGD and present available capacity of 7 MGD.

Summary of Dry Utility Infrastructure

POWER: This site would be "Customer Choice" with Greenville Utilities Commission being the primary electrical provider and Edgecombe Martin Electric Membership Corporation being the secondary. Currently, there is 115 kV transmission line in the vicinity of the site and a new 115 kV transmission line near the site under construction. There is also a 15 kV distribution line on-site and a substation near the site. According to Greenville Utilities Commission, the site would likely require a dedicated substation. Current available power capacity at the site is 98 MW.

GAS: This site is in Greenville Utilities Commission service territory. The nearest existing gas main is a 10" medium pressure line (11-60 psi). Based on the information provided, the site can accommodate a medium industrial user (less than 75,000 MCF/month or 100 MCF/hour) or a large industrial user (greater than 75,000 MCF/month or 100 MCF/hour) in less than 12 months.

FIBER: The site is currently serviced by Optimum fiber.

Summary of Transportation Access

4-LANE / INTERSTATE HIGHWAY ACCESS: US 13 is near the site and is the closest 4-lane divided highway. I-587 is in the vicinity of the site and runs west, connecting with I-95 at Exit 43A, providing the site with access to the entire east coast.

Finalist Site – Pitt County

Summary of Railway Access

While rail is adjacent to the site, it is likely to be cost prohibitive to extend service to the most developable, southeastern portion of the site given the site's overall size and scale.

Summary of Site Features

SITE USE & TOPOGRAPHY: The site is currently used for agricultural and forestry purposes. Topography appears extremely flat based on generated contours, with there being no significantly high sloped areas that would cause concern. The site has a consistent elevation of EL50 throughout and may sit at a low in terms of the site's surrounding environment.

ENVIRONMENTAL: Based on environmental constraints mapping from national environmental data, the Pitt County Site has wetlands situated throughout, as well as a 100 and 500 year floodplain boundary encroaching on the site. These areas have the potential to be avoided with prior planning of the site's development, but further wetland and floodplain studies should be done to verify the extents of constraints.

OTHER CONSIDERATIONS: The site is approximately an hours' drive to the Virginia border and an hour and a half to Raleigh. With I-95 less than 50 miles from the site, there is excellent access to the east coast.

Finalist Site – Pitt County

Summary of Air & Port Accessibility

Some notable drive times from the site include the Port of Norfolk, VA and the Port of Morehead City, both of which are approximately a 2 hours' drive. The Port of Wilmington is approximately a 2.5-hour drive from the site. Pitt-Greenville Airport (PGV) is approximately a 15 minute drive from the site and Raleigh-Durham International Airport (RDU) is approximately a 90 minute drive.

Port	Distance
Morehead City	81 mi
Norfolk, VA	94 mi
Wilmington	113 mi
Airport	**Distance**
Pitt-Greenville	8 mi
Raleigh-Durham	81 mi

Summary of Labor Availability

The Pitt County Site's labor shed encompasses 112,000 people within a 45-minute radius, making it suitable for projects hiring no more than 1,000 employees according the one percent ratio. The labor force participation rate of 69 percent exceeds national average by a considerable margin. However, the low unemployment rate of 3.5 percent could indicate higher than typical competition for workers. From the perspective of indirect labor supply there are 8,276 business professionals accessible within the 45-minute radius. The location quotient of 0.61 for this group indicates below average concentration in the area which may suggest lower prevalence of professionals than a typical market. The site captures 570 industrial engineers in the 45-minute shed with a location quotient of 1.23. In terms of direct labor the site reaches 20,900 production workers within 45-minutes representing a strong location quotient of 1.66. Although the population reach is lower than many competing sites the concentration of industrial engineering and production roles suggest there is a cluster of manufacturing talent in the area. The Pitt site may not meet the minimum thresholds for larger scale projects but could prove viable for projects with smaller workforce requirements.

Finalist Site – Pitt County

Strengths

- Significant water & sewer available capacities
- Significant power capacities available
- Natural gas availability
- Very flat throughout the site
- Relative location to future I-87
- Regional airport nearby

Weaknesses

- Environmental features (wetlands, floodplains, drainage ditches, hydric soils, topography) throughout the site may limit site development with further study
- Rail may not be feasible to extend to the most developable portions of the site

Finalist Site – Pitt County

Recommended Infrastructure Improvements & Anticipated OOM Costs

- Complete & update due diligence studies, to include water & wastewater preliminary engineering reports and transportation studies to determine recommended improvements and associated costs
- Install 4 lane access road into the site
- Construct dedicated water line to serve the site for heavy water user
- Construct 2 MG elevated water tank on site
- Construct dedicated wastewater pump station and dedicated force main to WWTP to serve heavy water user
- 500-acre Pad Ready Site Development

Due Diligence Studies:	$10,000,000
Transportation OOM Costs:	$230,000,000
Water OOM Costs:	$44,200,000
Wastewater OOM Costs:	$41,800,000
Pad Ready Site Development:	$125,000,000
Total OOM "All in" Costs:	*$451,000,000*

Finalist Site – Cumberland County

Site Name	Cumberland County Site
Acreage	1,000+ Avail. Acres
Zoning / Land Use	A1 / R10 / R40 / RR / C1(P) / C(P) / C3 / M(P)
4 Lane	I-95
Interstate	I-95
Water	PWC / 16” Waterline
Sewer	PWC/ 54” Gravity
Natural Gas	Piedmont Natural Gas
Power	Duke Energy
Telecom	Segra (in 3-6 months)

Site Background & History

The Cumberland County Site is located in Cumberland County, south of Fayetteville. Currently, the site is zoned Agricultural District (A1), Residential District (R10 and R40), Rural Residential (RR), Planned Local Business District (C1(P)), Planned Commercial District (C(P)), Heavy Commercial District (C3), and Planned Industrial District (M(P)). In evaluating this site, site control and assemblage, site size and acreage, proximity and location, transportation infrastructure, wet and dry utility infrastructure, environmental features, and labor availability. To date, this site has not submitted any completed due diligence.

Summary of Water Infrastructure

The site is also served by PWC for sewer. The estimated capacity of sewer available at the site is 1.5 MGD via an existing 54” gravity sewer line. The site would be served from the Rockfish Wastewater Treatment Plant, with a permitted capacity of 21 MGD and present available capacity of 3.5 MGD.

Summary of Waste Water Infrastructure

The site is also served by PWC for sewer. The estimated capacity of sewer available at the site is 1.5 MGD via an existing 54” gravity sewer line. The site would be served from the Rockfish Wastewater Treatment Plant, with a permitted capacity of 21 MGD and present available capacity of 3.5 MGD.

Finalist Site – Cumberland County

Summary of Dry Utility Infrastructure

POWER: The site is primarily located in Duke service territory, although not the entire site is assigned. Three 230kV transmission lines are located on-site and power loads of over 100 MW could be served. Additional study would be needed to determine the exact capacity.

GAS: This site is in Piedmont Natural Gas service territory. The nearest existing gas main is a 6" high pressure line (>60 psi) located near the site and there is an 8" distribution line close to the site boundary. Improvements can be made to the existing service in order to accommodate medium (less than 75,000 MCF/month or 100 MCF/hour) to large (greater than 75,000 MCF/month or 100 MCF/hour) industrial sites in 12-24 months.

FIBER: The site is not currently serviced by any fiber providers, however, Segra could service the site in 3-6 months.

Summary of Transportation Access

4-LANE / INTERSTATE HIGHWAY ACCESS: The site has excellent access with its proximity to I-95 and NC-87. I-95 provides direct access to I-295 to the north, I-40 to the north, and I-74 to the south.

Finalist Site – Cumberland County

Summary of Railway Access

The site does not have access to any nearby rail lines.

Summary of Site Features

SITE USE & TOPOGRAPHY: The elevations on the site, based on Cumberland County GIS Data Viewer, range from EL78 to EL178.

ENVIRONMENTAL: Based on NWI, NHD, and FEMA data, there are streams throughout the site with associated wetlands, a creek bordering the boundary of the site, and floodplains along the bordering creek. The floodplains are zone AE and a 500-year floodplain, which means they are defined for development purposes.

OTHER CONSIDERATIONS: The site less than 100 miles from Raleigh-Durham International Airport (RDU), Wilmington International Airport (ILM) and the Port Wilmington. It is also approximately 200 miles from the Port of Morehead City and the Port of Charleston, SC. Fayetteville Regional Airport (FAY) is near the site.

Finalist Site – Cumberland County

Summary of Air & Port Accessibility

Some notable drive times from the site include the Wilmington Port, which is approximately 90 minutes away from the site. The Morehead City and Charleston, SC Ports are both approximately a three-hour drive from the site. The Port of Norfolk, VA is approximately a three and a half hour drive from the site. Raleigh-Durham International Airport (RDU) is just over an hour drive and the Fayetteville Regional Airport (FAY) is less than a 10-minute drive from the site.

Port	Distance
Wilmington	75 mi
Morehead City	125 mi
Charleston	136 mi
Airport	**Distance**
Raleigh Durham	62 mi
Fayetteville	2 mi

Summary of Labor Availability

The Cumberland County Site benefits from a labor shed of 245,000 within a 45-minute radius, making it suitable for manufacturing projects in the 1000 to 2000 employee range. The labor force participation rate is below average at 56 percent, which could be an indicator of an aging workforce. The latest unemployment rate of 4.8 percent exceeds the national average which could be attractive from a competition perspective. There are 10,400 professionals within the catchment area with a location quotient of 0.70, the below average concentration could suggest indirect talent may be somewhat more difficult to acquire than other markets. Similarly engineering talent could prove somewhat scarce, with less than 300 in the 45-minute radius and a location quotient of 0.55. On the other hand, production supply is strong for a market of this size with 21,200 employed and a location quotient of 1.52. These numbers could prove very compelling to numerous projects. Additionally, Fort Bragg in is an asset that is worth highlighting to prospective employers as it will not factor into most labor indicators. Former military members are often considered a highly desirable talent pipeline for numerous projects.

Finalist Site – Cumberland County

Strengths

- Tremendous power potential with (3) 230 kV lines
- Proximity to I-95
- Proximity to Fayetteville and Fort Bragg (labor)
- Seasoned economic development team with experience in industrial land development
- Primary landowner demonstrated willingness to sell for development
- Significant water system capacity

Weaknesses

- No Rail
- Interchange improvements, if needed, could be significant
- Unassigned territory for power service
- Limited sewer capacity for a megaproject

Finalist Site – Cumberland County

Recommended Infrastructure Improvements & Anticipated OOM Costs

- Complete due diligence studies, to include water & wastewater preliminary engineering reports and transportation studies & FHWA Interchange Modification Report (IMR) to determine recommended improvements and associated costs
- Construct dedicated water line to serve the site for heavy water user
- Construct 2 MG elevated water tank on site
- Construct dedicated wastewater pump station and dedicated force main from site to WWTP to serve heavy water user
- Expand WWTP 6 MGD to accommodate 6+ MGD wastewater demand
- 500-acre Pad Ready Site Development

Due Diligence Studies:	$6,000,000
Transportation OOM Costs:	$170,000,000
Water OOM Costs:	$44,200,000
Wastewater OOM Costs:	$235,000,000
Pad Ready Site Development:	$125,000,000
Total OOM "All in" Costs:	*$580,200,000*

Finalist Site – Rowan County

Site Name	Rowan County Site
Acreage	1,000+ Avail. Acres
Zoning / Land Use	RA
4 Lane	US-70
Interstate	I-77
Water	Salisbury-Rowan / 16” Waterline
Sewer	Salisbury-Rowan / 8” Gravity
Natural Gas	Piedmont Natural Gas
Power	Duke Energy Carolinas
Telecom	AT&T

Site Background & History

The Rowan County Site is situated centrally between the cities of Statesville and Salisbury. Currently, the site is zoned for residential agricultural (RA). In evaluating this site, several factors were considered including but not limited to: site control and assemblage, site size and acreage, proximity and location, transportation infrastructure, wet and dry utility infrastructure, environmental features, and labor availability.

Summary of Water Infrastructure

The site is served by Salisbury-Rowan Utilities for water. According to Salisbury-Rowan Utilities, there is approximately 1 million gallons per day (MGD) of capacity available at the site via an existing 16” waterline. The site would be served from Salisbury-Rowan Utilities Treatment Plant, with a permitted capacity of 24 MGD and present capacity of 14 MGD. There is no nearby water tank available for additional capacity.

Summary of Wastewater Infrastructure

The site is also served by Salisbury-Rowan Utilities for sewer. There is no current capacity available for sewer within the site vicinity. The closest sewer line is an existing 8’’ gravity sewer line. The site would be served from the Salisbury-Rowan Wastewater Treatment Plan (Grant Creek Train), with a permitted capacity of 13 MGD and present available capacity of 2.5 MGD.

Finalist Site – Rowan County

Summary of Dry Utility Infrastructure

POWER: The site is located in Duke Energy Carolinas service territory. According to the provider, there is a 230 kV transmission line located onsite. For projects 100-200 MW, they would consider service from the 230 kV. For other projects, there is a 100 kV transmission line located near the site. The nearest distribution line is a 24 kV onsite. The current power capacity available at the site is 10 MW, and three phase power is available.

GAS: This site is in Piedmont Natural Gas service territory. The nearest existing gas transmission main is a 20" high pressure line (>60 psi) located in the vicinity of the site. The nearest gas distribution main is a 4'' line near the site. The timeline for a medium to large sized industrial prospect (greater than 75K MCF/month or 100 MCF/hour) would be more than 24 months, although a further detailed analysis from Piedmont Natural Gas could change this timeline.

FIBER: The fiber provider for the site is AT&T. According to the provider, they can serve the site today. AT&T has fiber across the highway from the site and would just need permission from the railroad to cross the tracks for access.

Summary of Transportation Access

4-LANE / INTERSTATE HIGHWAY ACCESS: The site has excellent transportation access, specifically with its proximity to US-70, the closest four lane highway to the site. The site is also in the vicinity of I-77, which is east towards the city of Statesville. Access to the interstate from the site is straightforward, as US-70 leads to the direct interstate onramp.

Finalist Site – Rowan County

Summary of Railway Access

Norfolk-Southern rail runs through or is adjacent to multiple parcels within the site. Further analysis would be needed to determine number of spurs, turnout, and overall rail geometry.

Summary of Site Features

SITE USE & TOPOGRAPHY: The site currently has multiple uses onsite. There are also several existing single-family homes toward the northern and eastern portions of the site. There is an easement that runs through portions the site, for Duke Energy. There are also easements to provide access to some of the homes on site. The topography on the site based on topographic data appears moderately sloped throughout. Most areas of slope appear near environmental features onsite, or areas that have yet to be cleared. Elevations range from EL830 towards the southeast bounds of the site near the road, to EL720 towards the northern bounds of the site. In core areas of development, the site contains moderate topographic challenges.

ENVIRONMENTAL Based upon desktop review of environmental features, there is a small portion of streams that branch into portions of the site. These reaches have the potential to be avoided with appropriate site planning. The edge of the site also has an existing 100-year floodplain boundary and is classified as Zone AE by FEMA floodplain mapping. Development of the site has the potential to largely avoid this area. Further analysis, however, may be needed prior to development for more detail on where the floodplain encroaches.

OTHER CONSIDERATIONS: The site is unique in it being centrally located between multiple cities, multiple counties, and having quick and direct access to both a four-lane highway and interstate. Rail being adjacent to the site is also a strength.

Finalist Site – Rowan County

Summary of Air & Port Accessibility

Some notable drive times from the site include the Wilmington Port and the Charleston, SC Port, both approximately four hours away, and the Morehead City Port and the Norfolk, VA Port, both approximately five hours away. Charlotte-Douglas International Airport is less than a one-hour drive. The Piedmont Triad International Airport is approximately an hour drive.

Port	Distance
Morehead City	290 mi
Norfolk, VA	310 mi
Wilmington	230 mi
Charleston, SC	250 mi
Airport	**Distance**
Charlotte-Douglas	50 mi
Piedmont Triad	65 mi

Summary of Labor Availability

With a 45-minute labor force capture of 367.000 the Rowan County Site is well positioned to accommodate most manufacturing requirements with potential to support project employment upwards of 3,500 people. The 3.1 percent unemployment rate is below US average which could indicate a somewhat more competitive labor market. Furthermore, the site has a 64 percent labor force participation rate, which is slightly above the US average. There are 30,400 business professionals residing within the 45-minute labor shed, which is more than sufficient for almost any project. The Rowan County site also boasts a solid engineering base with 1,200 industrial engineers within the labor shed comprising a location quotient of 1.04. The proximity to Charlotte also means that staffing professional or indirect workforce should be relatively easy compared to more remote development opportunities. The sites greatest talent asset lies within its access to 53,000 production workers which comprise an excellent location quotient of 1.66.

Finalist Site – Rowan County

Strengths

- Significant transportation corridor
- Rail potential
- 230 kV Power Transmission Line onsite
- Initial landowner discussions and potential willingness to sell for development
- Labor availability

Weaknesses

- Rail complicates entry into site
- Pad site may be somewhat limited based on-site constraints (power easement, environmental, etc.)
- Interchange improvements at I-77, if needed, could be significant
- Limited Sewer Capacity

Finalist Site – Rowan County

Recommended Infrastructure Improvements & Anticipated OOM Costs

- Complete due diligence studies, to include water & wastewater preliminary engineering reports and transportation studies to determine recommended improvements and associated costs.
- Install grade separated interchange to cross into the site across the rail line
- Make improvements to Interchange to accommodate high volume user
- Construct dedicated water line to serve the site for heavy water user
- Construct 2 MG elevated water tank on site
- Construct dedicated wastewater pump station and dedicated force main from site to WWTP to serve heavy water user
- Expand WWTP 6 MGD to accommodate 6+ MGD wastewater demand
- 500-acre Pad Ready Site Development

Due Diligence Studies:	$5,000,000
Transportation OOM Costs:	$135,000,000
Water OOM Costs:	$101,000,000
Wastewater OOM Costs:	$302,000,000
Pad Ready Site Development:	$125,000,000
Total OOM "All in" Costs:	*$668,000,000*

VII. Potential Development Costs

Order of Magnitude (OOM) Cost Estimates

Order of Magnitude (OOM) Cost Estimates for Site & Infrastructure Development

Order of Magnitude (OOM) cost estimates were developed based upon available information provided by the submitting localities and best professional judgement utilizing known resources. NCDOT was engaged to review and vet potential transportation improvements to accommodate a 2,000+ employee mega-project for each site. It's important to note that further due diligence, preliminary engineering studies and transportation studies will be required to determine appropriate costs and timelines to deliver the infrastructure necessary to serve the respective mega-sites.

Order of Magnitude (OOM) Development Costs

Description	Pitt County Site	Brunswick County Site	Cumberland County Site	Nash County Site	Wilson County Site	Rowan County Site	Kingsboro – Edgecombe County Site
Due Diligence Costs (1)	$10,000,000	$2,000,000	$6,000,000	$8,900,000	$7,400,000	$5,000,000	$2,000,000
Transportation Costs – NCDOT Vetted (2)							
Transportation Improvements	$230,000,000	$130,000,000	$170,000,000	$145,000,000	$130,000,000	$135,000,000	$20,000,000
Jobs limitations due to transport. Network	2,000+ jobs	2,000+ jobs	2,000+ jobs	2,000+ jobs	2,000+ jobs	2,000+ jobs	2,000+ jobs
Water System Costs (3)							
Ex Available Water System Capacity (MGD)	19	12	26	10	4	14	11
Min WTP Expansion Required (MGD)	0	0	0	5	10	0	0
Water System Improvements	$44,200,000	$41,800,000	$44,200,000	$161,000,000	$243,500,000	$101,000,000	$76,500,000
Wastewater System Costs (3)							
Ex Avail. Wastewater System Capacity (MGD)	7	3	3.5	11	3	2.5	10
Min WWTP Expansion Required (MGD)	0	6	6	0	6	6	0
Wastewater System Improvements	$41,800,000	$259,000,000	$235,000,000	$49,000,000	$232,000,000	$302,000,000	$40,000,000
Total Due Diligence & OOM Infrastructure Costs	$326,000,000	$432,800,000	$455,200,000	$363,900,000	$612,900,000	$543,000,000	$138,500,000
"Pad Ready" Site Development Costs (500 Acres Total)	$125,000,000	$125,000,000	$125,000,000	$125,000,000	$125,000,000	$125,000,000	Pad Exists Today
Total "All In" OOM Development Costs (4)	$451,000,000	$557,800,000	$580,200,000	$488,900,000	$737,900,000	$668,000,000	$138,500,000

Notes:

(1) Due Diligence Costs developed based upon review of previous due diligence completed, review of best available desktop information combined with anticipated 2023 per acre unit costs for due diligence items completed on other similar size sites.

(2) Order of Magnitude (OOM) Transportation Costs were vetted with NCDOT staff and based upon anticipated improvements to serve the site to accommodate a 2,000+ employee mega-project.

(3) Order of Magnitude (OOM) Water and Wastewater System Costs based upon anticipated upgrades to provide a minimum of 10 MGD water treatment plant and 6 MGD wastewater treatment plant capacity to the site with dedicated water & wastewater infrastructure to serve site directly from the WTP and/or WWTP.

(4) Please note detailed preliminary engineering and transportation studies will need to be completed to verify anticipated costs and timelines associated with development of these sites in addition to identification of potential fatal flaws.

VIII. Conclusions

Summary of Conclusions

- North Carolina as a state is positioned well for continued investment by the targeted industries and just needs to provide the critical sites and infrastructure to meet those needs.
- Each site has its unique strengths and weaknesses. No site will be perfect for every mega-prospect. Since this is a high-level study, further study will be required on each new site
- 3 of the 7 targeted mega-industry sectors have potential water demands above 3 MGD: semiconductor plants, automotive OEM (includes EV) and EV battery plants. It's important to note that semiconductor plants can have water requirements exceeding 25 MGD.
- A site does NOT need to be a 1,000+ acre site to accommodate a targeted "mega-industry". It's important to note that a number of prospects and site selectors will ask for 1,000+ acres for the benefit of buffers, minimal community impact and supplier parks.
- It is normally a 5-15 year process from the time a mega-site is identified through development and realization of a project.
- All sites need to be vetted further with due diligence. Due diligence work can identify potential fatal flaws with a site that could eliminate the site from consideration.
- Markets are always changing, North Carolina needs to keep an eye out for changing demands (i.e. EV Battery plants or OEM's).
- Momentum towards Foreign Direct Investment (FDI) and onshoring calling for companies overseas to consider America.

IX. Limitations of Liability

Disclaimer and Limitations of Liability

The JLL Team completed this study utilizing best professional judgement based upon the information provided by the localities for each respective site listed in the report, and analysis based upon current market demands for the targeted mega-industries. Order of Magnitude (OOM) estimated development costs were based upon anticipated and reasonable transportation, water, and wastewater improvements necessary to accommodate a mega-project. It was assumed partner organizations and/or stakeholders such as natural gas, electric, fiber and rail would incur the costs of capital improvements to serve the site.

It's important to note that further study will be required for each site to determine the ultimate viability as a "megasite" as well as true costs and associated timelines for development. Should due diligence uncover fatal flaws for the long-term development of the site, then the site might be removed from consideration as a viable megasite for the State of North Carolina.

DUE DILIGENCE COSTS: Due diligence costs for undeveloped sites were estimated based upon a reasonable estimate for due diligence services with items such as master planning, preliminary engineering studies and associated cost estimates, traffic analysis and associated cost estimates, and site due diligence to include, but not be limited to survey, geotechnical, environmental, archeological, threatened and endangered species, etc.

TRANSPORTATION OOM COSTS: The JLL Team engaged NCDOT and vetted anticipated transportation improvements and associated costs for the subject sites that might be necessary to accommodate 2,000+ employees for the anticipated mega-projects. OOM costs were based upon anticipated 2023 construction costs and further studies will need to be completed to determine the ultimate costs of improvements.

WATER & WASTEWATER OOM COSTS: Water and wastewater OOM costs were based upon anticipated improvements to accommodate a site dedicated to a mega-project. For the purposes of this analysis, each site was evaluated based upon the ability to deliver a minimum of 10 million gallons per day (MGD) of water and minimum of 6 MGD of wastewater capacity to a site, with a dedicated water and sewer line to serve the site from the respective water or wastewater treatment plant. Unit prices utilized were based upon recent bids, feedback from industry suppliers and consultants and anticipated complexities of construction and permitting. OOM costs were based upon anticipated 2023 construction costs and further studies will need to be completed to determine the ultimate costs of improvements.

"PAD READY" SITE DEVELOPMENT COSTS: For the purposes of this study, we assumed a "shovel ready" or "pad ready" site is a site where the prospective company can start construction immediately upon receipt of local, state and federal permits to construct their facilities. For the purposes of developing OOM "pad ready" costs, the JLL team assumed a 500-acre pad ready site, or combination of pad ready sites to achieve 500 acres, could be potentially achievable for each site. However, this would require further study and evaluation as part of the due diligence phase of the work. Given the reluctance of regulatory agencies to issue a "speculative" permit to impact environmental features, it is assumed that a pad ready design can be completed, however, a permit can only be issued upon the submission of a legitimate site plan to the local, state and federal regulatory authorities.

Disclaimer and Limitations of Liability

Utility Assumptions

- WATER DEMANDS: 3 of the 7 target industries have water demands that could exceed 10 MGD, therefore the JLL team analyzed the sites for the ability to deliver a minimum of 10 MGD with dedicated water lines from the WTP to serve the prospective site and a dedicated 2 MG elevated water storage tank on-site.

- WASTEWATER DEMANDS: It was assumed the wastewater demand will equal 60% of water demand. Heavy water users typically use water for cooling and/or in processes therefore a minimum of 6 MGD sewer capacity with a dedicated pump station(s) and force directly from the site to the WWTP.

- WATER TREATMENT PLANT EXPANSION: For the purposes of this study, it is assumed an adequate water source is available. This would ultimately need to be vetted with North Carolina DEQ and local authorities to determine if adequate water source is available.

- WASTEWATER TREATMENT PLANT EXPANSION: For the purposes of this study, it is assumed that a permit can be expanded and/or new discharge permit issued for a WWTP discharge. This would ultimately need to be vetted with North Carolina DEQ and local authorities.

ENVIRONMENTAL JUSTICE, ARCHEOLOGICAL AND THREATENED & ENDANGERED SPECIES REVIEW: Given the limited time to accomplish this study, each of the new sites submitted will need a thorough vetting with the State of North Carolina Department of Environmental Quality (DEQ), Division of Historical Resources (SHPO) and other state and federal agencies involved with permitting for any potential Environmental Justice, Archeological and Threatened & Endangered Species issues that might exist on site.

PERMITTING REVIEW: A review of the submitted sites indicates that there will be wetlands impacts, either for infrastructure development or for site development. As such, each of the sites will need to go through Section 106 of NHPA review process, which will involve coordination between the US Army Corps of Engineers (COE) and North Carolina Divisional of Historical Resources (SHPO) prior to issuance of a permit. The permitting climate in North Carolina is generally business and economic development friendly, however, the regulatory environment is constantly changing and evolving. The State, Regional and Local entities involved with the development of these sites should keep a close eye on potential changes in the regulatory environment that might have a negative effect on site and infrastructure development.

Thank You

JLL MAYNARDNEXSEN TIMMONS GROUP