North Carolina Logistics Initiative

Defense • Industry • Community • Infrastructure











Challenging Circumstances

Since the end of the Cold War, the U.S. military has discussed privatization of some of its traditionally organic maintenance functions. Today, as a result of the wartime stresses of the past decade, the discussion has reached a new fervor. While billions of dollars are dedicated annually to help meet the increasing demand, the sheer scale and scope of repairing vehicles and equipment returning from overseas coupled with shrinking defense budgets and new performance targets (including cost, energy, and the environment) has created a need to improve the way this work is accomplished. Specifically, performing ground systems maintenance in NC makes sense. It's good business for the military, for the defense contractors, and for North Carolina.

North Carolina is Meeting the Challenge

A careful examination of the circumstances suggests that NC has an advantage over other locations to perform ground systems maintenance including:

Proximity to End-Users

Home to seven U.S. military installations including Fort Bragg and Camp Lejeune, North Carolina is an epicenter for the U.S. military with nearly ***50% of the east coast's active duty ground combat units***. These military installations are often the primary destination for returning ground systems in need of reset or repair, therefore performing their maintenance in NC reduces transportation costs, minimizes lost time in the maintenance cycle, and significantly decreases risk.

Infrastructure Capacity

The state boasts two maritime ports that have decades of experience supporting the military's needs, with both recognized as strategic certified ***Ports of Embarkation***. North Carolina's ***railroads*** traverse north-to-south and east-to-west and are operated by CSX and Norfolk-Southern with connections to two maritime ports and to the nation. The ***Global TransPark*** in Kinston accommodates the world's largest cargo aircraft with ease and is an Aerial Port of Embarkation as certified by the U.S. Transportation Command. Additionally, the state is served by five major interstates: I-40, I-95, I-85, I-77, and I-74. Finally, the ***highways*** linking the eastern part of the state lack the congestion that limits other ports on the east coast.

Workforce

Over 6,700 service men and women choose to leave the military each year in North Carolina - many of the experienced professionals, who immediately join NC's ***skilled*** and ***reliable*** maintenance workforce. Initiatives such as PipelineNC.com , ihiremilitary.com and MatchForce.org all demonstrate NC's commitment to retaining its valuable military workforce after they complete their tours of duty. The state's community college system is world-class in its defense-related curricula and is actively partnering with our military installations to ensure that the emerging workforce is prepared for a fast-paced and ever-changing private sector environment.

Business Climate

North Carolina is a right-to-work state, continually ranked as ***one of the nation's top places to do business***. From its favorable tax structure to its low unemployment rate, there are many reasons why NC is the third fastest growing state in the nation. Military jobs in North Carolina grew by nearly 20% in the past five years and defense-related businesses moving to the state have more than kept up with that pace. The state's Military Business Center, Defense Business Association, Military Foundation and other organizations are all emblematic of NC's commitment to aggressively support those defense-related businesses interested in locating their operations here.

CNBC & Forbes Magazine ranked North Carolina as the #3 Best Place for Business

Current Practices

Logistics Barriers and Solutions

The prolonged length of military combat operations strains vehicles and equipment and requires a coordinated approach to ensure combat readiness. When considering ground systems maintenance, the volume and complexity of repairs requires a coordinated approach that includes in-theater, domestic depots, and private industry. If left to the military capacity alone, the combined volume of the Army and Marine Corps' significant reset and repair needs would exceed their ability to complete this mission in a timely manner and the cost would be excessive. Therefore, contractors will play a significant role in the overall program.

Congress appropriates billions of dollars annually to this effort and the military is looking to stretch these dollars through increased efficiency. The resulting demand for private contractors to participate in these activities means that the value of grounds systems maintenance is an industry poised to balloon in the years to come.

Contractors will need to be competitive on a host of sustainable performance measures including: cost, time, and impacts to the environment.

Logistics drives future decision-making.

Performing this essential maintenance and reset in NC represents one of the greatest opportunities for cost savings for DoD without diminishing the military mission. The Defense Research Board (DRB) has established a thoughtful vision for future defense logistics that is integrated, synchronized, and real-time. Furthermore, the DRB recommends that the military embrace private sector best practices that reduce costs including the use of an Integrated supply chain, shorter transport distances, skilled labor, favorable business climate, and being closer to the customer. Collectively, these steps would help meet these emerging performance goals.

"Army extends RFI for HMMWV Recap"

www.globalsecurity.org

"Contractors Advised to Look at Carbon Footprint as Agencies Strive for Sustainability"

Daily Environment Report™

Approximately 30% of the total budget for grounds system maintenance for the Marine Corps and Army was spent by U.S. based private contractors.

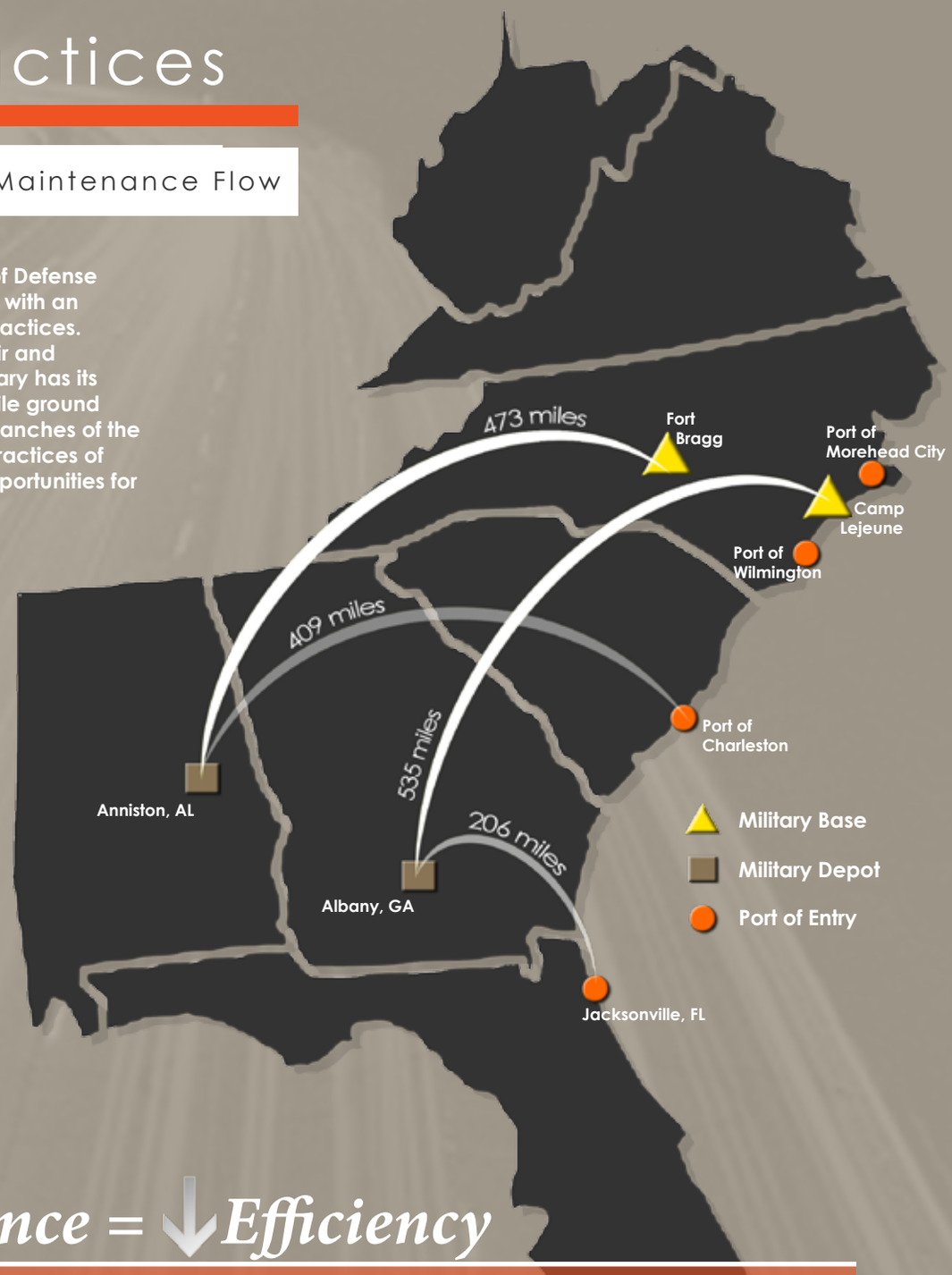
Current Practices

Traditional Depot-Level Maintenance Flow

To realize ***savings***, the Department of Defense and its supporting industry should begin with an examination of current transportation practices. When considering ground systems repair and reset activities, each branch of the military has its own protocols, routes and facilities. While ground maintenance needs to exist within all branches of the military, evaluating the current freight practices of the Army and Marines sheds light on opportunities for enhanced ***efficiency***.

East coast Marine Corps units generally return overseas equipment through Blount Island, FL. From there, it moves to their Logistics Base on Albany, GA for *reset* and repair. The equipment is then sent to its end-users, primarily at Camp Lejeune, NC.

The Army largely returns material and equipment from overseas to the Port of Charleston, SC and then forwards freight to the Anniston Army Depot in Anniston, AL for reset and ***repair***. Equipment can then be sent to pre-positioning locations or to the post at Ft. Bragg, NC.



↑ *Distance* = ↓ *Efficiency*

Marine Reset Logistics - Traditional Port of Entry & Reset Facility

Transportation Route	Rail Miles	CSX Cost Model	NS Cost Model	Total Transit Hours
Jacksonville, FL-Albany, GA-Camp Lejeune, NC	908	$13,017	$7,291	171

Army Reset Logistics - Traditional Port of Entry & Reset Facility

Transportation Route	Rail Miles	CSX Cost Model	NS Cost Model	Total Transit Hours
Charleston, SC-Anniston, AL-Fort Bragg, NC	885	$9,992	$6,385	106

What If ...?

Optimum Logistics Environment

The current military practices are largely influenced by the circumstances of the past. If someone were asked to develop a strategy from scratch, careful consideration would conclude that an optimum freight logistics environment would include the following:

- A *maritime port* with capabilities to accommodate the type of loading and off-loading required to meet the military mission and a port with rail access that has available capacity to make the military mission a priority ,all connected to an uncongested highway and rail network that links repair and reset facilities to end users (military installations)
- An *inland port* that doubles as a multi-modal industrial park with unparalleled air-freight capabilities and opportunities for industrial users
- *Supporting facilities* to accommodate a diversity of mission needs at varying scales
- A mix of *development sites* that include pad-ready industrial sites as well as a mix of existing building inventories available for supporting activities
- The one constant is the location of the final destination of the equipment and vehicles that are a part of the ground support systems. When considering the Army and Marines, the greatest concentration of these military destinations is in the mid-Atlantic. Reducing the distance, time and energy required to transport the ground systems has the potential to result in significant *cost savings* to contractors and ultimately the U.S. military
- An *optimum center of gravity* for performing this function would be a 50-100 mile radius between port, reset-repair facility, and military installation: a characteristic exhibited by North Carolina's Logistics Village

Inland Port

- Heavy air-freight capable
- Highway/Interstate access
- Rail connection to maritime port
- Industrial development sites
- Proximity to military

Support Facilities

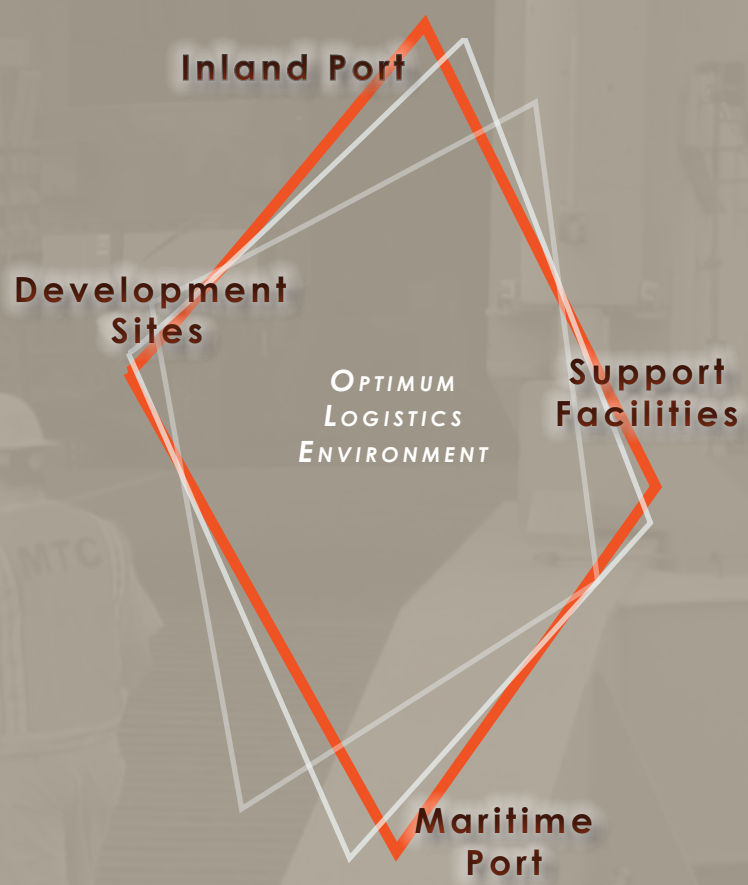
- Diverse size and geography
- Connections to inland and maritime ports
- Highway access
- Rail sidings with 1,000' tangent

Maritime Facilities

- Highway and Interstate access
- Low congestion
- Ro-Ro capable
- Dedicated space for military
- Proximity to repair/reset facilities

Development Sites

- Permitted for industrial use
- Diverse size and location
- Tethered to support facilities
- Highway/rail access
- Proximity to military users
- Warehouse with 20' eaves

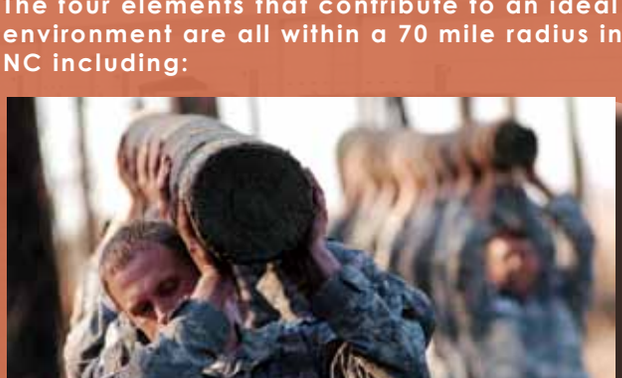


Defense Vision

Create an environment focused on serving the military and its supporting partners including private industry, where logistics activities can be seamlessly integrated between port, industry, and military installations. North Carolina's coordinated support of the resulting NC Logistics Village will provide a competitive edge for those choosing to locate in the vicinity leveraging our capable workforce, favorable business climate, and close proximity to military customers.

Benefits

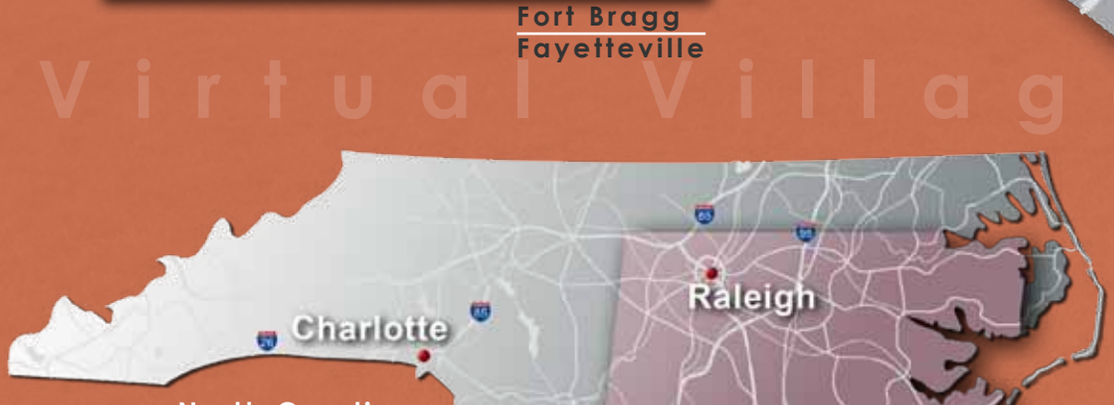
North Carolina is home to seven U.S. military installations including Camp Lejeune and Fort Bragg. The four elements that contribute to an ideal logistics environment are all within a 70 mile radius in Eastern NC including:



Fort Bragg
Fayetteville

Port Of Wilmingt
Wilmington

Virtual Village



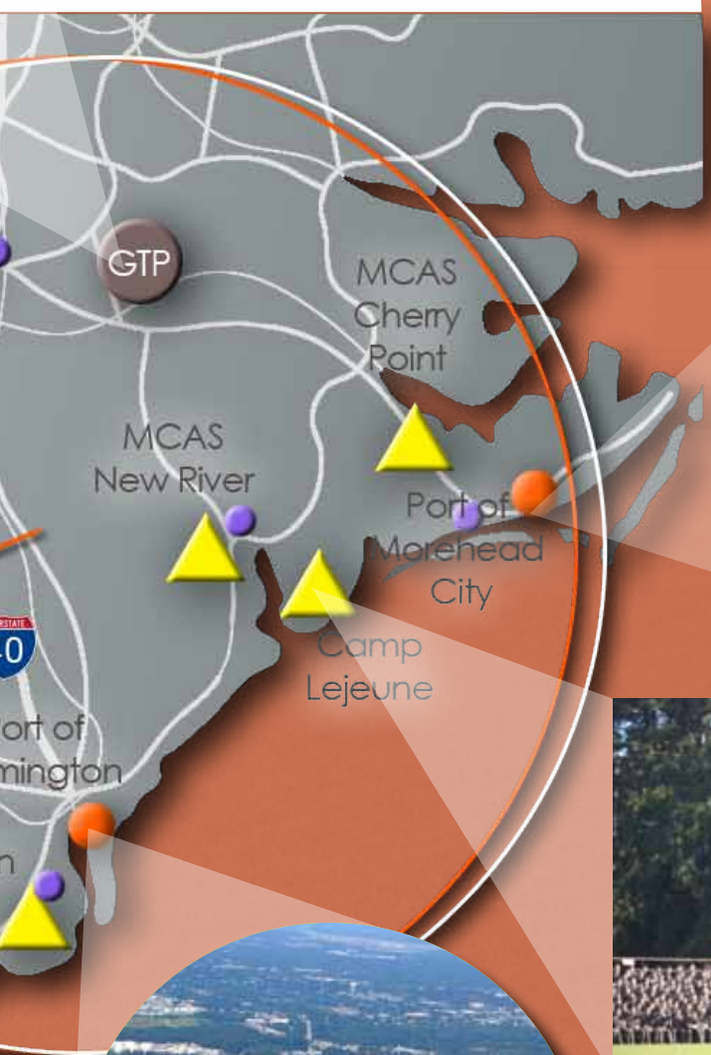
Imagine
the possibilities

Invest
in current infrast

GTP
Kinston

Potential Support Facility

North Carolina Logistics Village



- Inland Port: Global TransPark, Kinston, NC
- Maritime Ports: Wilmington and Morehead City, NC
- Supporting Facilities: Numerous sites where rail sidings and highway access can be leveraged to create geographic diversity and specialization of repair and reset support activities.
- Development Sites: pad-ready industrial sites as well as existing buildings suitable for ground systems maintenance

Port Of Morehead City
Morehead City

Camp Lejeune
Jacksonville

Increase

productivity & benefits to all

Capacities - Facilities - Investments

Reality

Ports

Wilmington

- A 42-foot navigational channel
- Modern transit and warehouse facilities, FTZ #66
- State-of-the-art cranes and support equipment
- Highway and rail access
- Ro-Ro capability
- Committed military capacity

Morehead City

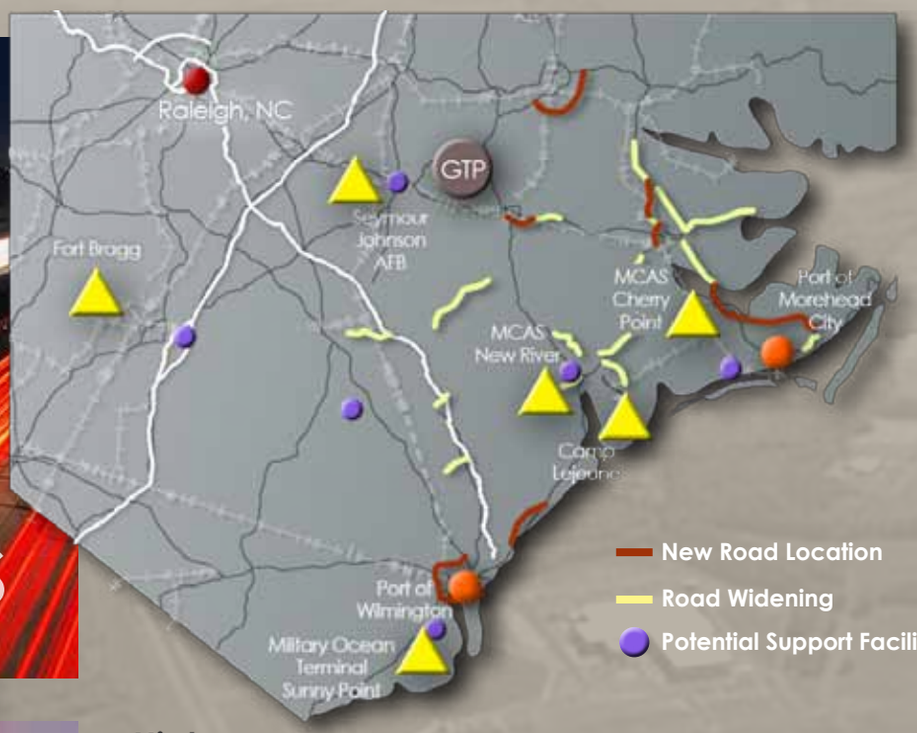
- A 45-foot navigational channel
- Access to I-95 and 40 via U.S. Highways 70 and 17
- Norfolk Southern rail service
- Ro-Ro capability
- Committed military capacity

Rail

- CSX and Norfolk Southern (class 1 railroads) serve NC sea ports
- 3,250 miles of track
- Work with communities to develop industrial sites
- 23 railroads operating in NC

Workforce

- North Carolina is a right-to-work state
- Experienced military personnel prepared to enter the private sector workforce
- Organizations like PipelineNC.com, ihiremilitary.com and MatchForce.org mobilized to assist the emerging workforce
- NC community college system actively partnering with military installations to prepare the emerging workforce



Highways

North Carolina continues to invest in the eastern region creating a highway network with excess capacity. The region has a transportation strategy including several significant funded projects including:

- **Kinston Bypass**
- **NC 11/241/24 Connector**
- **Highway 70 Upgrades**
- **Maysville Bypass**
- **NC 24 Upgrades**
- **Hampstead Bypass**

AIR: Global TransPark

- **11,500 x 150' grooved runway (supports the largest air-freight vehicles)**
- **Intermodal industrial park, FTZ#214**
- **Highway and rail accessible**
- **Entitled (property-tax exempt) development sites**
- **Environmentally permitted for 5,775 acres**

Site Availability

- **More than 100 identified sites throughout eastern NC entitled for industrial use**
- **Sites 5-1300+ acres in size**
- **More than 10,000 available acres**
- **Available economic incentives**
- **Buildings with minimum 20' eaves**
- **Locations with rail access, especially sidings with rail tangents 1000'-1500'**

Available Now

Why North Carolina?

Consider the Numbers

The east coast Marine units return material and equipment from overseas to Blount Island at the Port of Jacksonville, FL and then forwards freight to the Marine Corps Logistics Base (MCLB) in Albany, GA for reset and repair. The Army largely returns material and equipment from overseas to the Port of Charleston, SC and then forwards freight to the Anniston Army Depot in Anniston, AL for reset and repair. Equipment is then sent to pre-positioning locations or to Camp Lejeune, NC or Ft. Bragg, NC.

The North Carolina Logistics Village offers an alternative with performance characteristics that out perform current practices. Specifically, *gains are made in the following categories*: distance, cost, time, and CO_2 emissions. NC outperforms current practices on these performance metrics - even if the ports of entry remains Charleston, SC and Jacksonville, FL. Significant gains are achieved whether transport occurs by rail, motor carrier, or a combination of both. An example of the gains when considering rail transport is shown below.

Army Reset Logistics - Changes in Port of Entry and Reset Facility

Transportation Route	Rail Miles	CSX Cost Model	NS Cost Model	Total Transit Hours	Lbs. of CO2
Charleston, SC - Anniston, AL - Ft. Bragg, NC	885	$9,992	$6,385	106	2,151
Wilmington, NC - Kinston, NC - Ft. Bragg, NC	297	$7,902	$3,972	78	722
% Reduction	66%	21%	38%	26%	66%
Morehead City, NC - Kinston, NC - Ft. Bragg, NC	225	$5,431	$3,542	43	547
% Reduction	75%	46%	45%	60%	75%

* Cost model are approximations used to generalize a baseline cost

Marine Reset Logistics - Changes in Port of Entry and Reset Facility

Transportation Route	Rail Miles	CSX Cost Model	NS Cost Model	Total Transit Hours	Lbs. of CO2
Jacksonville, FL - Albany, GA - Camp Lejeune, NC	908	$13,017	$7,291	171	2,206
Morehead City, NC - Kinston, NC - Camp Lejeune, NC	154	$4,600	$3,174	39	374
% Reduction	83%	65%	56%	77%	83%
Wilmington, NC - Kinston, NC - Camp Lejeune, NC*	227	$7,072	$3,543	75	552
% Reduction	75%	46%	51%	56%	75%

Army Reset Logistics - Changes in Reset Facility Only

Transportation Route	Rail Miles	Total Transit Hours	Lbs. of CO2
Charleston, SC - Anniston, AL - Ft. Bragg, NC	885	106	2,151
Charleston, SC - Kinston, NC - Ft. Bragg, NC	485	87	1,179
% Reduction	45%	18%	45%

Marine Reset Logistics - Changes in Reset Facility Only

Transportation Route	Rail Miles	Total Transit Hours	Lbs. of CO2
Jacksonville, FL - Albany, GA - Camp Lejeune, NC	908	171	2,206
Jacksonville, FL - Kinston, NC - Camp Lejeune, NC*	630	95	1,531
% Reduction	31%	44%	31%

* Assumes completed rail link between Castle Hayne, NC and Wallace, NC
* Additional transport model information can be found in the *NCLI Transportation Model* and *NCLI Transportation* memorandums on the enclosed disc.

↓ *Distance* = ↑ *Efficiency*

It's Already Happening

Firms like Oshkosh Defense have caught the wave. At its new Regional Logistics Center in Onslow County, Oshkosh Defense provides 1st through 5th echelon (depot-level) maintenance to a joint customer base that includes the Marine Corps, Army, Navy and Army National Guard and stretches from NC to Pennsylvania. Half of the company's Jacksonville employees transitioned from the military directly into their civilian jobs at Oshkosh Defense, further illustrating the availability of a ready-made workforce in this growing NC industry. The company is making plans to expand their operation.

North Carolina has a strong case to make for being the primary east coast location for joint ground systems maintenance.

Value Proposition

- Congress appropriates billions of dollars annually to this effort and the military is looking to stretch these dollars through increased efficiency
- Performance criteria to secure defense contracts will increasingly include cost, time, environmental impacts and life-cycle maintenance
- NC is an epicenter for the U.S. military with nearly 50% of the east coast's active duty ground combat units located within 70-mile radius
- Within that same 70-mile radius, NC has all of the vital components for an ideal logistics environment including ample capacity and capabilities at our ports, rail, highways, and industrial sites
- Over 6,700 service men and women exit the military each year in North Carolina - many of them experienced maintainers who immediately join NC's skilled and reliable maintenance workforce
- NC has a favorable business climate and a right-to-work state with low taxes, and incentives that align with supporting the military mission
- Performing ground systems maintenance and reset activities has proven to be more efficient when done in NC as compared to other locations

Additional information regarding these claims can be found on the enclosed disc.

"Oshkosh Defense has found the workforce in the Jacksonville area to be a diverse group of people with the willingness to learn, grow and flex based on the needs of our customers. Our business opportunities have grown over the past years partially due to our close proximity to Camp Lejeune; the proximity has also provided cost savings to both parties primarily in the areas of reduced logistics and transportation cost. "

Oshkosh Defense

"In more than 20 years in the Spring Lake, NC area, BAE Systems has found that the quality of its workforce, combined with the business support in the region have allowed the company to provide excellent service to its military customers."

Herb Muktarian, VP for Communications, BAE Systems

It makes sense. Check us out!

www.nceast.com & www.ncports.com