



Secretary Larry D. Hall North Carolina Department of Military and Veterans Affairs

North Carolina boasts significant defense assets. According to the United States Department of Defense Office of Economic Adjustment State by State Report, in fiscal year 2017, DoD spending in North Carolina totaled \$3.3B, ranking the state 23rd nationally in total defense contracts spending. In addition, North Carolina is home to six active military installations, has over fifty percent of all Special Operations Forces and has the 3rd largest active duty presence in the nation.

With these active installations and a diverse industrial base, North Carolina has strong links to the military and the companies and people that support it. What North Carolina lacks, however, is a data-driven approach to quantifying the breadth of its defense sector – as well as its potential vulnerability and opportunities for enhancement



Executive Director Phil Mintz Industry Expansion Solutions North Carolina State University

and growth – amid a changing defense spending landscape.

In 2017, the North Carolina Defense Industry Diversification Initiative (NC DIDI) was established via a planning grant from the Department of Defense Office of Economic Adjustment (OEA). As Co-Chairs of the NCDIDI Advisory Board, it is our privilege to bring together partners and stakeholders from industry, government, and academia to improve the knowledge of the impact of the defense industry on North Carolina's economy.

As a preliminary step to helping local communities adapt to DoD program changes, expansions, and cutbacks, a DoD Supply Chain study was conducted in 2017-18. Today, data and information gathered for that study is being used to: 1) help identify suppliers and other sectors at risk in the event of a local company or plant closure; 2) identify potential new markets for these at risk firms; 3) identify local gaps in the supply chain where an OEM is using overseas suppliers and can help support reshoring efforts; 4) help point state, local and regional policy makers identify which existing assets can be aligned to respond to supply chain issues and opportunities.

We later traveled the state from Murphy to Manteo holding Supplier and Contractor Town Halls interviewing the states foremost authorities and stakeholders. Lastly, we sourced data from all the federal defense purchasing offices and federal spend records. All that has led us to having the state's most comprehensive defense cluster analysis, six regional defense industry profiles and a complete strategic plan. Our next task was to develop a commercialization project. We welcomed small-to-medium size manufacturers and service providers to apply to our commercialization program to receive services customized to suit their business. That successful work has expanded and continues.

This data-driven DoD supply chain initiative is critical to North Carolina. We know that defense program impacts come in all shapes and sizes and, when defense programs change or are cut, contractors and business and industry may be faced with budget cuts, staff layoffs, or closings. Via funding from OEA, NCDIDI is well positioned to implement a series of proven strategies at a statewide and regional level with a focus on regional job creation through business development, attraction and expansion, workforce development, and community economic diversification. We invite you to join us!

All the best,

Secretary Larry D. Hall North Carolina Department of Military and Veterans Affairs Executive Director Phil Mintz Industry Expansion Solutions North Carolina State University

Eastern Regional Defense Industry Profile



Counties included: Bladen, Brunswick, Carteret, Columbus, Craven, Duplin, Greene, Jones, Lenoir, New Hanover, Onslow, Pamlico, Pender, Robeson and Wayne

Snapshot of Defense Contractors in the Eastern Region

The Eastern region ranks 3rd in the state for the amount of DoD awards and 2nd in the number of DoD contractor establishments. In the period used (FY 13-17), the Eastern region's DoD awards fell sharply before rising in 2017, but not reaching 2013 levels. Construction is a significant industry in this region, and the top 25 contractors account for almost 68% of the region's awards, leaving the remaining 32% or 737 contractors to split \$546M in awards. Most of these awards went for base and operational support.

DEFENSE CONTRACTORS 762

DEFENSE CONTRACTS VALUE \$1.7 Billion

INDUSTRIES BY AWARD

- 1. Construction 65%
- 2. Professional, Scientific, & Technical Services 10%
- 3. Health Care & Social Assistance 7%
- 4. Administrative & Support & Waste Management & Remediation Services 6%
- 5. Wholesale Trade 3%

INDUSTRIES BY PERCENTAGE OF ESTABLISHMENTS

- 1. Construction 22%
- 2. Manufacturing 13%
- Professional, Scientific, & Technical Services 9%
- 4. Wholesale Trade 9%
- Administrative & Support & Waste Management & Remediation Services 8%

JOBS SUPPORTED BY DEFENSE CONTRACTS 23,895

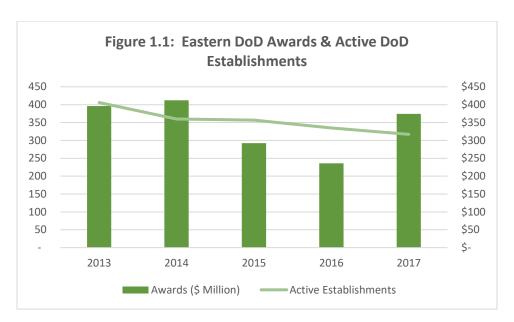
TOP CONTRACTORS BY AWARD

- 1. Benson Construction \$173M
- Coastal Enterprises of Jacksonville, Inc. \$101M
- 3. LTM Inc. \$84M
- 4. Joyce & Associates Construction, Inc. \$75M
- Military & Federal Construction Company, Inc. \$70M

Five Year Trends

Figure 1.1 and Table 1.2 below show that the value of prime and sub-awards to Eastern region firms fell from 2013/14 to 2016 but rose sharply in 2017, but not back to 2013 levels.

The number of firms receiving awards fell across the five-year span, ending up 22% below 2013. Table 3.2 reveals that over the 2013-2017 period, 762 firms (defined as establishments with unique DUNS numbers) received at least one financial transaction associated with a prime or named subcontract award from DoD. This total represents the Eastern region's defense contractor population.¹



Sources: NC DIDI estimates, USAspending.gov

- 1. DoD awards are defined using USAspending reported "Base and Exercised Options Values" (both positive and negative) during the time span in question.
- 2. Regions are based on NC Commerce Prosperity Zones.
- 3. Awards included both prime and named sub-contracts.
- 4. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Table 1.2: Eastern Region, Active DoD Establishments, 2013-17

Fiscal Year	Firm Count
2013	406
2014	360
2015	357
2016	335
2017	317
Active Anytime 2013-17	762
Change 2013-17	-21.9%

¹ The potential defense industrial base can be defined as including any establishment registered in SAM to engage in business with the federal government. In this report we use a narrower definition, focusing on those establishments that held at least one active contract or named subcontract with DoD during 2013-2017.

Sources: NC DIDI estimates, USAspending.gov

- 1. Regions are based on NC Commerce Prosperity Zones.
- 2. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Largest Regional Defense Establishments: 2013-17

Table 1.3 below provides a list of the Eastern region's top 25 defense contractors based on cumulative DoD awards over 2013-2017. These 25 firms have cumulative DoD awards of nearly \$1.2b, some 68 percent of all DoD awards to the region. BENSON CONSTRUCTION, INC. is the largest recipient of DoD awards accounting for over 10% of the total. Only two establishments received over \$100m cumulative 2013-17 awards, with an additional five firms receiving between \$50m and \$100m. Some 32% of all DoD cumulative 2013-17 awards (\$546m) was spread among 737 regional DoD establishments. DoD awards to the Eastern region are less concentrated than those to the Charlotte region. Construction related firms have a strong presence among the top 25. We will address the industry composition in more detail below.

Table 1.3: Eastern Region: Top 25 DoD Vendors, Cumulative 2013-17 Awards

DUNS	Vendor Name	Cumulative 2013- 17 DoD Awards	Share of Region
44387736	BENSON CONSTRUCTION, INC.	\$ 173,340,136	10.1%
105874432	COASTAL ENTERPRISES OF JACKSONVILLE, INC.	\$ 101,504,050	5.9%
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932899784	LTM INC.	\$ 83,714,509	4.9%
14165059	JOYCE & ASSOCIATES CONSTRUCTION, INC.	\$ 74,884,886	4.4%
119238652	MILITARY & FEDERAL CONSTRUCTION COMPANY, INC.	\$ 69,754,725	4.1%
24574683	DANIELS & DANIELS CONSTRUCTION COMPANY, INC.	\$ 59,786,100	3.5%
10029481	BLUE ROCK STRUCTURES INC.	\$ 55,558,930	3.2%
175976609	QUADRANT CONSTRUCTION, INC	\$ 47,926,826	2.8%
159942960	ALDERMAN BUILDING COMPANY, INC.	\$ 44,585,704	2.6%
127953599	SOUTHERN MANAGEMENT, INC.	\$ 40,341,139	2.4%
809036101	UP-SIDE MANAGEMENT COMPANY	\$ 40,128,117	2.3%
137136813	G.L.H.C. SERVICES COMPANY	\$ 35,178,105	2.1%
946096849	NORTH STATE MECHANICAL, INCORPORATED	\$ 31,834,066	1.9%
968892559	EAST CAROLINA MECHANICAL LLC	\$ 31,611,169	1.8%
93133031	R & W CONSTRUCTION COMPANY	\$ 31,136,959	1.8%
192992365	TEAM CONSTRUCTION, LLC	\$ 30,068,403	1.8%
807040258	GOVERNMENT SALES, LLC	\$ 29,983,539	1.8%
175972611	MECHWORKS MECHANICAL CONTRACTORS, INC.	\$ 28,524,128	1.7%
614726628	ONSLOW GRADING & PAVING, INC.	\$ 25,145,088	1.5%
961827297	COLUMBUS DESIGN BUILD, LLC	\$ 22,991,781	1.3%
186355020	GROUP III MGT, INC.	\$ 22,758,156	1.3%
9169579	CHAVIS' INC.	\$ 22,615,906	1.3%
13176479	SOUTHERN GLASS & MIRROR OF EASTERN NORTH CAROLINA, INC.	\$ 22,446,332	1.3%
97603583	QUALITY ROOFERS & GUTTERING INC	\$ 20,572,290	1.2%
70961939	CIVIL WORKS CONTRACTING LLC	\$ 18,433,793	1.1%
	Top 25 Total	\$ 1,164,824,837	68.1%
	Total Eastern Region	\$ 1,710,788,466	100.0%

Sources: NC DIDI estimates, USAspending.gov

- 1. DoD awards are defined using USAspending reported "Base and Exercised Options Values" (both positive and negative) during the time span in question.
- 2. Regions are based on NC Commerce Prosperity Zones.
- 3. Awards included both prime and named sub-contracts.

Product Service Code Category Composition

As discussed in Chapter 1, DoD classifies its awards by PSC to describe the products, services, and research and development purchased. PSC codes differ from NAICS Codes in that PSC Codes describe "WHAT" was bought for each contract transaction reported in the Federal Procurement Data System. Table 1.4 provides a summary of the major DoD awards to the Eastern region from 2013-17, by PSC Category. Numerical codes represent products, while alphanumeric codes represent service categories. Only those PSC categories that accounted for 3.0% or more of regional DoD cumulative awards are reported.

Just four PSC categories generate 81% of awards, all in services. Base support and construction related services are Eastern Region's key DoD strengths.

Table 1.4: PSC Category Shares of the Eastern Region's Cumulative 2013-17 DoD Prime Awards (Only PSC Categories with Awards > 1.0% of Regional Total Awards Shown)

PSC Category	PSC Category Name	DoD Award Concentration
R	SUPPORT SVCS (PROF, ADMIN, MGMT)	7.0%
S UTILITIES AND HOUSEKEEPING 10.9%		10.9%
Υ	CONSTRUCT OF STRUCTURES/FACILITIES	9.4%
Z MAINT, REPAIR, ALTER REAL PROPERTY		53.7%
Total Region (%) 81.0%		81.0%
Total Region (\$million)		\$1,367.34

Sources: NC DIDI estimates, USAspending.gov

- 1. DoD awards are defined using USAspending reported "Base and Exercised Options Values" (both positive and negative) during the time span in question.
- 2. Regions are based on NC Commerce Prosperity Zones.
- 3. Awards include only prime contracts.
- 4. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Industry Composition of Eastern Regional Defense Activity

This section addresses the industry composition of defense activity for the Eastern region using several different measures. The detailed data for this analysis is provided in the companion spreadsheet. It is divided into two sections: *Industry Sector Concentration of the Eastern Region Defense Activity* and *Cluster Concentration of the Eastern Region Defense Activity*.

Industry Sector Concentration of Eastern Region Defense Activity

This section will address each industry sector in which the sector share of cumulative 2013-17 DoD awards is at least 5.0%.

• **Construction** is by far the highest concentration of DoD cumulative awards in the Eastern region. The 65% of cumulative awards was widely spread among 142 companies, reporting 11% of employees at location.

The largest recipients were:

Company	Awards	Employees
BENSON CONSTRUCTION, INC.	\$173m	50

JOYCE & ASSOCIATES CONSTRUCTION, INC.	\$75m	31
MILITARY & FEDERAL CONSTRUCTION COMPANY, INC.	\$70m	14
BLUE ROCK STRUCTURES INC.	\$56m	35

The dominant industry groups for awards were:

Subsector	Percentage
NAICS 2362 Nonresidential Building Construction	27%
NAICS 2373 Highway, Street, and Bridge Construction	15%
NAICS 2382 Building Equipment Contractors	11%

• **Professional, Scientific, & Technical Services** has the second largest concentration of DoD cumulative awards at 9.7%, 4.1% of reported employees and 9.4% of DoD establishments.

The dominant industry group for awards were:

Subsector	Percentage
NAICS 5413 Architectural, Engineering, and Related Services	7.0%.
NAICS 5417 Scientific Research and Development Services	1.2%
NAICS 5416 Management, Scientific, and Technical Consulting Services	1.1%

By far the largest recipient of cumulative DoD awards in NAICS 54 were:

Company	Awards	Employees
LTM INC.	\$84m	300
MAUNE, BELANGIA, FAULKENBERRY ARCHITECTS PA.	\$16m	8

In terms of employment, after LTM INC., only PPD DEVELOPMENT, L.P. at 200 employees reported more than 100 employees.

• **Health Care & Social Assistance** received 7.3% of regional DoD awards, and represented 9.0% of reported employees and 4.2% of DoD establishments.

The largest industry group by awards was:

Company	Percentage
NAICS 6243 Vocational Rehabilitation Services	6.6%

The largest share of awards went to COASTAL ENTERPRISES OF JACKSONVILLE, INC., at \$102m in DoD awards with 600 employees (83% of the region's sector award total and 28% of the region's sector total of reported employees).

 Administrative & Support & Waste Management & Remediation received 6.2% of the regions DoD awards.

The largest share of NAICS 56 DoD awards went to the following:

Company	Percentage
NAICS 5611 Office Administrative Services	2.5%.
NAICS 5617 Services to Buildings and Dwellings	1.2%
NAICS 5622 Waste Treatment and Disposal	1.0%

The largest recipients of cumulative DoD NAICS 56 awards were:

Company	Awards
UP-SIDE MANAGEMENT COMPANY	\$40m
SEA COAST DISPOSAL, INC.	\$17m

 Manufacturing was included for discussion even though it did not make the 5.0% cumulative DoD awards cut-off. The sector had the largest concentration of private employees (Public Administration was larger at 26%) and the second largest number of defense firms (65).
 Of the 65 manufacturing establishments only six had cumulative DoD awards over \$1.0m and less than \$8.0m. The largest were:

Company	Awards	Employees
RUSH MASONRY MANAGEMENT, LLC	\$7.2m	6
TAYLCO INC	\$6.5m	30
MAOLA MILK AND ICE CREAM COMPANY, LLC	\$5.7m	113

Only seven firms reported more than 100 employees. The largest were:

Company	Awards	Employees
GE-HITACHI NUCLEAR ENERGY AMERICAS LLC	\$572k	2000
FRANKLIN BAKING COMPANY, LLC	\$150k	350
DYNAPAR CORPORATION	\$1.2m	300

Dominant subsectors for reported employees were:

Company	Percentage
NAICS 325 Chemical Manufacturing	8.4%
NAICS 311 Food Manufacturing	1.9%.

Table 1.5: Eastern Region: Distribution of DoD Activity by Industry Sector (2-Digit NAICS)

(Shares of Region Cumulative 2013-17 DoD Awards, 2017 Reported Employees, and Number of Active DoD Establishments)

NAICS	NAICS Soctor Title	DoD Awards	DoD-Related Employee	DoD Establishment
Sector	NAICS Sector Title	Concentration	Concentration	Concentration
11	Agriculture, Forestry, Fishing & Hunting	0.1%	0.6%	0.8%
21	Mining, Quarrying, & Oil & Gas Extraction	0.0%	0.0%	0.1%
22	Utilities	0.4%	1.3%	0.8%
23	Construction	64.5%	10.7%	21.8%
31-33	Manufacturing	2.9%	18.3%	13.3%
42	Wholesale Trade	3.4%	4.1%	8.9%
44-45	Retail Trade	2.2%	2.4%	6.3%
48-49	Transportation & Warehousing	0.8%	4.7%	3.9%
51	Information	0.2%	0.6%	0.7%
52	Finance & Insurance	0.0%	1.3%	0.3%
53	Real Estate & Rental & Leasing	0.4%	0.5%	2.2%
54	Professional, Scientific, & Technical Services	9.7%	4.1%	9.4%
55	Management of Companies & Enterprises	0.0%	0.0%	0.1%
56	Administrative & Support & Waste Management & Remediation Services	6.2%	3.2%	8.4%
61	Educational Services	0.3%	7.5%	2.2%
62	Health Care & Social Assistance	7.3%	9.0%	4.2%
71	Arts, Entertainment, & Recreation	0.1%	0.2%	3.1%
72	Accommodation & Food Services	0.2%	3.8%	4.6%
81	Other Services (ex. Public Administration)	0.3%	1.7%	6.8%
92	Public Administration	0.9%	25.9%	2.0%
	Unknown			0.0%
	Region Totals (%)	100.0%	100.0%	100.0%
	Region Totals (\$ million)	\$1,711	23,895	762

Sources: NC DIDI estimates, USAspending.gov, Hoovers

- 1. DoD awards are defined using USAspending reported "Base & Exercised Options Values" (both positive & negative) during the time span in question (here cumulative 2013-17 DoD awards).
- 2. Primary NAICS are as reported to Hoovers or, for firms not reporting NAICS in Hoovers, are estimated based on the predominant share of principal NAICS associated with each firm's DoD contracts.
- 3. Regions are based on NC Commerce Prosperity Zones.
- 4. Awards included both prime & named sub-contracts.
- 5. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question (here active anytime during 2013-17).
- 6. Data on employees is "employees at location" reported in Hoovers for 2017, and is for all employees, not just those working on DoD contracts. Not all defense establishments report employees in Hoovers.

Cluster Concentration of Eastern Region Defense Activity

This section will address each industry cluster in which the cluster share of cumulative 2013-17 DoD awards, reported employees or establishments is at least 5.0% (see Table 3.6). A cluster is a regional concentration of related industry. The clusters have been defined by the U.S. Cluster Mapping Project. The 4 clusters below are Traded Clusters and are the engines of regional economies. They serve markets in other regions or nations.

• **Business Services Cluster**: This is the largest cluster based on cumulative DoD awards (8.7%). It consists of 41 establishments, reporting some 780 employees.

The top firms by DoD awards are:

Company	Awards	Employees
LTM INC.	\$84m	300
MAUNE, BELANGIA, FAULKENBERRY ARCHITECTS PA	\$16m	8
ASHLEY-MARIE GROUP, INC.	\$10m	98

• **Distribution and Electronic Commerce Cluster**: With only 3.5% of the region's DoD awards and 3.3% of reported employees, it represents 7.5% of DoD establishments. It consists of 56 active DoD establishments, most with only modest DoD awards.

Two establishments received the largest cumulative DoD awards:

Company	Awards	Employees
GOVERNMENT SALES, LLC	\$30m	6
AIR WILMINGTON, INC.	\$13m	35

Only seven establishments received more than \$1.0m in cumulative DoD awards. No establishments in this cluster report more than 100 employees, and only two report an employee total between 50 and 100.

• Education and Knowledge Creation Cluster: This cluster made the cut based on reported employees at educational institutions, with modest DoD awards. Out of 12 establishments, four are educational institutions. These four report employees at location of 1,756, some 86% of the region's cluster total, but receive only 5.0% of the cluster's DoD awards.

Two establishments received 90% of cumulative DoD awards:

Company	Awards	Employees
PPD DEVELOPMENT, L.P.	\$8.6m	200
THE WALKER GROUP ARCHITECTURE INCORPORATED	\$6.4m	8

• **Upstream Chemical Products Cluster:** This cluster made the cut-off due to the employee count of only one establishment, the only establishment in this cluster.

Company	Awards	Employees
GE-HITACHI NUCLEAR ENERGY AMERICAS LLC	572k	2,000

The next clusters are local clusters. Local clusters are the foundation of local economies and sell goods and services primarily for a local market.

Local Commercial Services Cluster: The 51 DoD Firms (8.0% of total DoD establishments) in this
cluster primarily provide base support activity. They represent a small share of both DoD awards
and reported employees. The largest recipient of awards was UP-SIDE MANAGEMENT
COMPANY, with \$40m in awards and only one reported employee. Three additional firms
received awards over \$1.0m.

• Local Education and Training Cluster: The seven establishments in this cluster are all private entities and provide an array of training services, receiving some \$116m in awards and employing 813 employees. Further investigation may identify regional assets that might be leveraged for non-DoD economic development as part of a diversification strategy.

The largest awards and largest employer in the cluster was:

Company	Awards	Employees
COASTAL ENTERPRISES OF JACKSONVILLE, INC.	\$102m	600

- Local Health Services Cluster: This eighteen-establishment cluster makes the list only because the ONSLOW COUNTY HOSPITAL AUTHORITY with only \$21k in DoD awards, reports 1,200 employees. Indeed, the largest establishment by awards, COASTAL CHILDREN'S SERVICES, PLLC, with only 33 reported employees received \$4.7m some 40% of the cluster total. Some 12 of the 18 establishments appear to be individual physician or dental practices.
- Local Real Estate, Construction, and Development Cluster: This cluster is by far the largest regional recipient of DoD awards. 161 establishments are in this regional cluster, with 3,000 employees and \$973m in DoD awards. These firms support the extensive on-base new, upgrade and facility repair activity in North Carolina (not just the Eastern Region).

Reported employee counts in this cluster are highly deceptive, since most firms use an extensive array of subcontractors and vendors on each project. Though defined as a local cluster, we note that in the DoD contracting world, some construction companies support out-of-region, indeed, out-of-state projects. Analysis of specific DoD award portfolios for individual firms would be required to sort out the flows.

This is a very active defense cluster and potentially the regions greatest defense-related asset.

The largest players by awards are:

Company	Awards	Employees	
BENSON CONSTRUCTION, INC.	\$173m	50	
JOYCE & ASSOCIATES CONSTRUCTION, INC.	\$75m	31	
BLUE ROCK STRUCTURES INC.	\$56m	35	

Table 1.6: Eastern Region: Distribution of DoD Activity by High Concentration Industry Cluster

(Shares greater than 5% of Region Cumulative 2013-17 DoD Awards, 2017 Reported Employees, and Number of Active DoD Establishments)

Clusters w/ at least 5% of Region Total	Cumulative 2013-17 DoD Awards	Reported 2017 Employment, DoD Establishments	DoD Establishments	
Traded Clusters				
Business Services	8.7%	3.3%	6.4%	
Distribution and Electronic Commerce	3.5%	3.3%	7.5%	
Education and Knowledge Creation	1.3%	8.3%	2.5%	
Upstream Chemical Products	0.0%	8.4%	0.3%	
Local Clusters				
Local Commercial Services	3.3%	2.3%	8.0%	
Local Education and Training	6.8%	3.4%	1.0%	
Local Health Services	0.8%	5.6%	3.1%	
Local Real Estate, Construction, and Development	62.9%	12.6%	24.4%	
Summary				
#N/A	1.1%	26.5%	2.8%	
Traded Clusters > 5%	13.5%	23.2%	16.7%	
Local Clusters > 5%	73.8%	23.8%	36.6%	
Total > 5%	87.3%	47.0%	53.3%	
Region Totals (\$ million)	\$1,711	23,895	762	

Sources: NC DIDI estimates, USAspending.gov, Hoovers, U.S. Cluster Mapping Project

- 1. DoD awards are defined using USAspending reported "Base & Exercised Options Values" (both positive & negative) during the time span in question (here cumulative 2013-17 DoD awards).
- Clusters are composite of 6-digit Primary NAICS codes based on a variety of interdependencies, as defined by the U.S. Cluster Mapping Project. Primary NAICS are as reported to Hoovers or, for firms not reporting NAICS in Hoovers, are estimated based on the predominant share of principal NAICS associated with each firm's DoD contracts.
- 3. Regions are based on NC Commerce Prosperity Zones.
- 4. Awards included both prime & named sub-contracts.
- 5. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question (here active anytime during 2013-17).
- 6. Data on employees is "employees at location" reported in Hoovers for 2017, and is for all employees, not just those working on DoD contracts. Not all defense establishments report employees in Hoovers.

Regional Comparisons

Each region of the state has a unique defense industry profile. Appropriate IES and economic development strategies and programs may therefore require quite distinct actions in each region.

DoD Award Trends: 2013-17

Table 1.7 summarizes DoD awards to North Carolina and its regions for fiscal years 2013 through 2017. These totals include both prime and sub-contract awards. Statewide awards fell from 2013 through 2015 but recovered quickly reaching a total nearly 21% above 2013 in 2017.

The regional patterns are markedly different. The **Eastern Region** was a bit more erratic, reaching a low in 2016, then recovering some in 2017 to a level nearly 6% below 2013 in 2017.

Table 1.7: North Carolina: DoD Awards by IES Region, 2013-17 (\$ millions)

Region	2013 DoD Awards	2014 DoD Awards	2015 DoD Awards	2016 DoD Awards	2017 DoD Awards	Cumulativ e 2013-17 Awards	Regiona I Shares, 2013-17 Awards	Percent Change 2013-17	Absolute Change
Charlotte	\$500.60	\$336.50	\$429.90	\$267.60	\$1,030.1 0	\$2,564.70	21.00%	105.80 %	\$529.50
Eastern	\$396.20	\$412.20	\$292.20	\$236.20	\$374.10	\$1,710.80	14.00%	-5.60%	(\$22.10)
Northeas t	\$252.80	\$152.90	\$113.00	\$77.30	\$114.20	\$710.20	5.80%	-54.80%	(\$138.60)
Piedmont Triad	\$171.20	\$197.60	\$268.20	\$318.80	\$303.10	\$1,258.90	10.30%	77.00%	\$131.90
Research Triangle	\$1,014.2 0	\$919.60	\$806.30	\$850.40	\$923.30	\$4,513.90	37.00%	-9.00%	(\$90.90)
Western	\$62.10	\$55.50	\$101.80	\$1,070.6 0	\$144.00	\$1,434.00	11.80%	131.70 %	\$81.80
Annual Totals	\$2,397.1 0	\$2,074.2 0	\$2,011.3 0	\$2,820.9 0	\$2,888.8 0	\$12,192.40	100.00%	20.50%	\$491.70

Sources: NC DIDI estimates, USAspending.gov

- 1. DoD awards are defined using USAspending reported "Base and Exercised Options Values" (both positive and negative) during the time span in question.
- 2. Regions are based on NC Commerce Prosperity Zones.
- 3. Awards included both prime and named sub-contracts.
- 4. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Table 1.8 summarizes the number of active DoD establishments in North Carolina and its regions for fiscal years 2013 through 2017. These totals include both prime and sub-contractors (some firms are both and are not double counted). The resulting patterns show significant differences among the regions as well as with DoD award totals.

The state and all regions have lost active DoD establishments over the 2013-17 span. At the state level, 2017 is some 13% below 2013. The **Eastern Region** saw the largest decline in active DoD establishments, dropping every year for a 22% and losing 89 establishments from 2013 to 2017.

Table 1.8: North Carolina: Active DoD Establishments by IES Region, 2013-17

Region	Active 2013 DoD Estab	Active 2014 DoD Estab	Active 2015 DoD Estab	Active 2016 DoD Estab	Active 2017 DoD Estab	Active DoD Estab 2013-17	Shares, 2013-17 Estab	Percent Change 2013-2017	Absolute Change
Charlotte	334	349	354	323	317	727	20.60%	-5.10%	-17
Eastern	406	360	357	335	317	762	21.60%	-21.90%	-89
Northeast	80	80	78	73	72	160	4.50%	-10.00%	-8
Piedmont Triad	227	196	198	183	185	421	11.90%	-18.50%	-42
Research Triangle	615	591	602	586	559	1,292	36.70%	-9.10%	-56
Western	88	90	84	79	75	162	4.60%	-14.80%	-13
Grand Total	1,750	1,666	1,673	1,579	1,525	3,524	100.00%	-12.90%	-225

Sources: NC DIDI estimates, USAspending.gov

- 1. DoD awards are defined using USAspending reported "Base and Exercised Options Values" (both positive and negative) during the time span in question.
- 2. Regions are based on NC Commerce Prosperity Zones.
- 3. Awards included both prime and named sub-contracts.
- 4. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Regional Industry Sector Comparisons

Table 1.9 below presents the regional concentrations of cumulative 2013-17 awards to active DoD establishments at the 2-digit NAICS industry sector level. Regional and Sector totals are provided to show scale. Manufacturing, Construction and Professional, Scientific and Technical Services clearly dominate the state totals. However, this pattern is not consistent across the regions. Construction dominates the **Eastern Region**, at nearly 65% of cumulative DoD awards. Professional, Scientific and Technical Services comes in second, with manufacturing way down the list. Three other sectors have larger shares than manufacturing.

Table 1.9: North Carolina: Regional Concentration of DoD Awards by Industry Sector (Share (%) of Region Cumulative 2013-17 DoD Awards and US\$ Millions)

NAICS Sector	NAICS Sector Title	Charlotte	Eastern	Northeast	Piedmont Triad	Research Triangle	Western	Sector Totals (%)	Sector Totals (\$ mil)
11	Agriculture, Forestry, Fishing & Hunting	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	\$2
21	Mining, Quarrying, & Oil & Gas Extraction	0.10%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	\$5
22	Utilities	9.20%	0.40%	0.00%	0.00%	6.00%	0.00%	4.20%	\$511
23	Construction	9.60%	64.50%	18.10%	4.70%	26.60%	4.20%	23.00%	\$2,800
31-33	Manufacturing	46.90%	2.90%	9.80%	59.00%	7.90%	84.30%	29.80%	\$3,628

42	Wholesale Trade	9.00%	3.40%	6.90%	3.90%	3.50%	2.40%	4.80%	\$580
44-45	Retail Trade	0.40%	2.20%	0.00%	0.30%	7.40%	0.10%	3.20%	\$385
48-49	Transportation & Warehousing	0.80%	0.80%	0.30%	0.90%	0.50%	0.00%	0.60%	\$70
51	Information	0.30%	0.20%	13.90%	4.40%	4.70%	0.00%	3.10%	\$374
52	Finance & Insurance	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	\$1
53	Real Estate & Rental & Leasing	0.00%	0.40%	0.20%	0.10%	0.20%	0.00%	0.20%	\$19
54	Prof, Scientific, & Tech Services	17.10%	9.70%	4.60%	4.20%	18.80%	5.50%	13.20%	\$1,615
55	Mgmt of Companies & Enterprises	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	\$0
56	Admin & Support & Waste Mgmt & Remediation Services	4.80%	6.20%	2.30%	0.00%	9.00%	0.50%	5.40%	\$655
61	Educational Services	0.00%	0.30%	33.60%	2.80%	10.00%	0.00%	6.00%	\$731
62	Health Care & Social Assistance	0.80%	7.30%	9.90%	19.30%	1.40%	0.10%	4.30%	\$524
71	Arts, Entertainment, & Recreation	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	\$3
72	Accommodation & Food Services	0.10%	0.20%	0.00%	0.10%	3.40%	0.00%	1.30%	\$158
81	Other Services (ex. Public Admin)	0.90%	0.30%	0.40%	0.40%	0.30%	3.00%	0.80%	\$94
92	Public Administration	0.10%	0.90%	0.00%	0.00%	0.40%	0.00%	0.30%	\$38
	Region Totals (%)	100.00%	######	######	100.00%	100.00%	######	100.00%	\$12,192
	Region Totals (\$mil)	\$2,565	\$1,711	\$710	\$1,259	\$4,514	\$1,434	\$12,192	

Sources: NC DIDI estimates, USAspending.gov, Hoovers

- 1. DoD awards are defined using USAspending reported "Base and Exercised Options Values" (both positive and negative) during the time span in question.
- 2. Primary NAICS are as reported to Hoovers or, for firms not reporting NAICS in Hoovers, are estimated based on the predominant share of principal NAICS associated with each firm's DoD contracts.
- 3. Regions are based on NC Commerce Prosperity Zones.
- 4. Awards included both prime and named sub-contracts.
- 5. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Table 1.10: Regional Concentration of DoD Awards by NAICS Sector

NAICS Sector	NAICS Sector Title	Charlotte	Eastern	Northeast	Piedmont Triad	Research Triangle	Western	Sector Totals	Sector Total (\$ million)
11	Agri, Forestry, Fishing & Hunting	0.40%	113.70%	8.90%	-29.70%	6.40%	0.20%	100.00%	\$2

21	Mining, Quarrying, & Oil & Gas Extraction	30.30%	5.70%	0.00%	0.00%	64.00%	0.00%	100.00%	\$5
22	Utilities	46.00%	1.40%	0.00%	0.00%	52.60%	0.00%	100.00%	\$511
23	Construction	8.80%	39.40%	4.60%	2.10%	43.00%	2.20%	100.00%	\$2,800
31-33	Manufacturing	33.20%	1.40%	1.90%	20.50%	9.80%	33.30%	100.00%	\$3,628
42	Wholesale Trade	39.70%	10.10%	8.40%	8.50%	27.40%	5.90%	100.00%	\$580
44-45	Retail Trade	2.50%	9.80%	0.10%	1.00%	86.30%	0.40%	100.00%	\$385
48-49	Transportation & Warehousing	31.20%	20.10%	3.00%	16.30%	29.40%	0.00%	100.00%	\$70
51	Information	2.00%	0.90%	26.40%	14.70%	56.10%	0.00%	100.00%	\$374
52	Finance & Insurance	0.80%	3.60%	0.00%	0.00%	63.40%	32.20%	100.00%	\$1
53	Real Estate & Rental & Leasing	5.40%	36.20%	7.20%	6.20%	44.80%	0.10%	100.00%	\$19
54	Prof, Scientific, & Tech Services	27.20%	10.20%	2.00%	3.20%	52.50%	4.80%	100.00%	\$1,615
55	Mgmt of Companies & Enterprises	0.00%	8.30%	0.00%	91.70%	0.00%	0.00%	100.00%	\$0
56	Admin & Support & Waste Mgmt & Remediation Services	18.70%	16.10%	2.50%	-0.10%	61.80%	1.00%	100.00%	\$655
61	Educational Services	0.10%	0.70%	32.60%	4.90%	61.60%	0.00%	100.00%	\$731
62	Health Care & Social Assistance	3.80%	23.70%	13.40%	46.40%	12.50%	0.20%	100.00%	\$524
71	Arts, Entertainment, & Recreation	8.70%	66.80%	1.80%	12.30%	10.10%	0.30%	100.00%	\$3
72	Accommodation & Food Services	0.80%	2.50%	0.00%	0.50%	96.10%	0.10%	100.00%	\$158
81	Other Services (except Public Admin)	23.30%	6.10%	2.70%	5.90%	16.30%	45.60%	100.00%	\$94
92	Public Administration	6.60%	43.10%	0.00%	0.20%	50.10%	0.00%	100.00%	\$38
	Region Totals (%)	21.00%	14.00%	5.80%	10.30%	37.00%	11.80%	100.00%	\$12,192
	Region Totals (\$ million)	\$2,565	\$1,711	\$710	\$1,259	\$4,514	\$1,434	\$12,192	

Sources: SDG estimates, USAspending.gov, Hoovers

- 1. DoD awards are defined using USAspending reported "Base and Exercised Options Values" (both positive and negative) during the time span in question.
- 2. Primary NAICS are as reported to Hoovers or, for firms not reporting NAICS in Hoovers, are estimated based on the predominant share of principal NAICS associated with each firm's DoD contracts.
- 3. Regions are based on NC Commerce Prosperity Zones.
- 4. Awards included both prime and named sub-contracts.
- 5. An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Definitions

Industry-related terminology is often used in very confusing ways. The following definitions are provided to help the report be as clear as possible.

Establishment: An establishment is a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one or more establishments. We define an establishment in the data as a location having a unique DUNS number. Dun & Bradstreet (D&B) provides a DUNS Number, a unique nine-digit identification, for each physical location of a business. All defense establishments are required to have a DUNS number.

Defense Establishment: An active DoD establishment is defined as one with at least one financial transaction (positive or negative) during the time span in question.

Defense Related Employment: Data on employees is based on numbers of "employees at location" reported by defense establishments in Hoovers for 2017, and is for all employees, not just those working on DoD contracts. Not all defense establishments report employees in Hoovers.

Defense (or DoD) Awards: DoD awards are the "Base and Exercised Options Values" (both positive and negative) reported in USAspending during the time span in question.

NAICS: The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy, based upon a mutually agreed upon system among the statistical agencies of Canada, Mexico and the USA.

- NAICS divides the economy into 20 Sectors (2-digit). Industries within these sectors are grouped according to production criterion
- The 20 Sectors are further divided into Subsectors (3-digit), Industry Groups (4-digit), NAICS Industry (5-digit), and National Industry (6-digit)

Primary NAICS: The NAICS associated with a company that reflects their primary line of business. This is the NAICS that is use by the U.S. Government is collecting and compiling all official industry data. Many companies have secondary NAICS.

Principal NAICS: This is a NAICS assigned (sometimes) by a DoD project/program office to specific awards. A principal NAICS may or may not be the same as the contractor's primary NAICS.

Product Service Code (PSC): DoD also classifies its awards by PSC to describe the products, services, and research and development purchased by the federal government. PSC codes differ from NAICS Codes in that PSC Codes describe "WHAT" was bought for each contract transaction reported in the Federal Procurement Data System (FPDS), whereas NAICS Codes tend to describe "HOW" purchased products and services will be used.

Cluster or Sub-Cluster: A regional concentration of related industries that arise out of the various types of linkages or externalities that span across industries in a particular location. This analysis uses the

definitions generated by the U.S. Cluster Mapping Project, which are mutually exclusive aggregations of 6-digit primary NAICS codes.

Local Cluster or Sub-Cluster: A local cluster or sub-cluster is composed of local industries, which are present in most (if not all) geographic areas, and primarily sell locally. Local industries are grouped based on similarities in activities reflected in aggregated U.S. industry categories.

Traded Clusters or Sub-Clusters: A traded cluster or sub-cluster is composed of traded industries, which are concentrated in a subset of geographic areas and sell to other regions and nations. Sets of traded industries are organized into traded clusters and sub-clusters based on an overall measure of relatedness between individual industries across a range of linkages, including input-output measures, use of labor occupations, and co-location patterns of employment and establishments.

The distinction between Traded and Local Clusters is an important one. Traded Clusters export goods and services outside of a state or region and, therefore, bring new capital and wealth into the state or region. They are also described as basic employers, and because they increase wealth and disposable income, they are generally the primary focus of economic development officials.

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John Loyack, Vice President, Global Business Services North Carolina Economic Development Partnership

Tenette Prevatte, Academic Dean Computer & Information Technology Programs
Fayetteville Technical Community College

Marty Ray Zapata, Vice President Strategy & Planning Zapata Engineering

CONTACT US:

IES applies tailored business solutions that enable companies to improve their operations and their bottom line. Let IES craft a solution that fits your specific needs. Feel free to contact: Michael Mullins, Director of the North Carolina Defense Industry Diversification Initiative Director, North Carolina Defense Industry Diversification Initiative Military Segment Manager Industry Expansion Solutions North Carolina State University mrmulli2@ncsu.edu

The NC DIDI will be making presentations statewide and sharing information about the initiative. Are you interested in receiving information about upcoming events, scheduling a speaker for your next lunch and learn, or allowing us to set up a booth at your next conference? Feel Free to Contact:

Nimasheena Burns
Director of Communications and Project Management
NC Department of Military and Veterans Affairs
Nimasheena.burns@milvets.nc.gov

Perhaps your company might be interested in taking part in the Universal Production Growth Resiliency and Diversification Extension Program? Feel free to contact:

Rex Raiford, Regional Manager and Pilot Project Manager

Industry Expansion Solutions

North Carolina State University

Rex raiford@ncsu.edu

Laura Rogers
Client Relations Manager
NC State University - Industry Expansion Solutions
Ldrodger@ncsu.edu

Jason Yearwood
Communications and Program Specialist
North Carolina Department of Military and Veterans Affairs
Jason.Yearwood@milvets.nc.gov

Lacey McEwen
DoD Grant Coordinator
NC State University
Industry Expansion Solutions
Lacey mcewen@ncsu.edu

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