

Spring 1967

## The Growth of Norfolk Naval Air Station and the Norfolk-Portsmouth Metropolitan Area Economy in the Twentieth Century

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**THE GROWTH OF NORFOLK NAVAL AIR STATION AND  
THE NORFOLK-PORTSMOUTH METROPOLITAN  
AREA ECONOMY IN THE TWENTIETH  
CENTURY**

**Ira R. Hanna**

**A thesis presented to the Department of History of  
Old Dominion College  
in partial fulfillment of the requirements for the  
Degree of Master of Arts in History**

**OLD DOMINION COLLEGE**

**May, 1967**

This thesis was prepared by Ira R. Hanna under the direction of the chairman of the candidate's supervisory committee, and has been approved by all members of that committee. It was submitted to the Dean of the School of Arts and Sciences and to the Graduate Council, and has been approved as partial fulfillment of the requirements for the degree of Master of Arts.

Date

June 1 1967

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Chairman, Graduate Council

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Chairman

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**"Et terra et mare divitiae tuae. Crescas!"**

**From the land and the sea come your riches.  
May you prosper!**

**Motto of the City of Norfolk**

**"Naves Sustinemus"--We serve the Fleet!**

**Motto of Norfolk Naval Air Station**

## PREFACE

The portion of Chesapeake Bay known as Hampton Roads has long been recognized as one of the world's finest natural harbors. It is ice-free the year around and anchorage grounds are spacious. Regularly scheduled sailings link its ports with all the major world trading centers--300 ports in 95 foreign countries.<sup>1</sup> Forming the southern rim of this roadstead, the four contiguous cities of Norfolk, Portsmouth, Chesapeake, and Virginia Beach constitute what is called the Norfolk-Portsmouth Metropolitan area. This area leads the state in population, average personal income, and retail sales. It is also one of Virginia's major industrial centers with more than 330 manufacturing establishments within its boundaries. Norfolk is the hub of this area because it is served by over one hundred shipping lines, eight railroads, four airlines, and numerous trucking companies. While it ranks fourth among the Atlantic ports as a gateway of commerce, Norfolk is first in the nation in export tonnage, well ahead

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<sup>1</sup>Harry M. Thompson (comp. and ed.), The Ports of Greater Hampton Roads Annual, 1966 (Norfolk: Hampton Roads Maritime Association, 1966), pp. 9-21.

of New York City, Baltimore, Philadelphia, and New Orleans.<sup>2</sup> But despite this tremendous commercial activity, the metropolitan area's major source of employment and the largest part of its basic economy are derived from the operations of the area's naval shore establishments.

The Norfolk-Portsmouth area houses the greatest concentration of naval installations in the world. They contribute more than \$445,000,000 in payrolls each year to the urban economy and employ 26 per cent of the total civilian labor force.<sup>3</sup> The fact that the Navy contributes such a large part in maintaining the area's comparatively high economic level stimulates one to question how much the Navy has contributed to its economic development. The following study attempts to answer that question by investigating the twentieth century development of the area's major city--Norfolk--in relation to that of one of its major naval shore establishments, the Norfolk Naval Air Station.

The main reason for selecting N.A.S. Norfolk from among the many major military shore establishments in the Norfolk-

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<sup>2</sup>Ibid., pp. 21-117; Norfolk Chamber of Commerce, Statistical Digest of 1965, pp. 6-15, and 52-57; and Virginia State Corporation Commission, Annual Report for the Year 1960 (Richmond: Superintendent of Public Printing, 1961), pp. 9-46.

<sup>3</sup>Norfolk Chamber of Commerce, Statistical Digest of 1965, pp. 32-33.

Portsmouth metropolitan area is that it contributes almost half of the area's total civil service employment as well as affecting more of the local businesses with its demands for a wide variety of services and supplies.<sup>4</sup> Since the growth of both Norfolk and N.A.S. Norfolk appear to fall naturally into four time segments--1890-1919, 1920-1938, 1939-1950, and 1951-1965--these periods will be used as approximate guidelines in the chapter development of this study.

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<sup>4</sup>Ibid., 60-61.



## CHAPTER I

### NORFOLK'S ECONOMY AT THE BEGINNING OF THE TWENTIETH CENTURY 1890-1919

One of the most serious problems faced by Southern farmers since the earliest times has been to get their products to market. In the latter part of the nineteenth century, because most of their products were agricultural and were sold in bulk quantity to Northern manufacturers or shipped to Europe, the Southerners depended heavily on the transportation systems of their states. They relied on the railroads to get their products to ports of departure and the ports to ship them to their final market. Being the only deep water port in Virginia or North Carolina, Hampton Roads was fortunate to be the focal point of the solution to the transportation problem of those states. During the period 1890-1919, by combining their state-wide and regional railroads into several well coordinated systems, Norfolk and its sister cities became a major rail center and one of America's leading ports.<sup>1</sup>

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<sup>1</sup>John F. Stover, The Railroads of the South, 1865-1900 (Chapel Hill: University of North Carolina Press, 1955), pp. 1-10, 204, 270.

Although Norfolk had been a city of only ten to twenty thousand people before 1870, by 1900 it had doubled its population and by the 1910 census it had 67,452 inhabitants.<sup>2</sup> During the same period although imports rose steadily and in total value multiplied fifty times, the area's economy was based primarily on its export trade. In 1892, the total value of exports increased dramatically to \$19,845,000.<sup>3</sup> The reason was the growth of railroads, thereby enabling a greater variety of goods to be brought to market in a quicker manner.

From 1880 to 1900, the Norfolk and Western Railway extended its lines into the vast coalfields of southwest Virginia, West Virginia, and eventually into Kentucky, Ohio and the Middle West. This expansion made Norfolk one of the greatest coal ports in the world when coal was the energy

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<sup>2</sup>Statistical Digest, mimeographed publication by Norfolk Chamber of Commerce in 1936, n.p.; and Virginia State Planning Board, Population in Flux: A Study of Population Trends in the Hampton Roads Area, 1890-1942. A Report prepared and edited by John Clausen (Richmond: Superintendent of Public Printing, 1943), pp. 26-34, hereafter cited as Clausen, Population Study.

<sup>3</sup>Samuel R. Borum, "Norfolk, Virginia, Port and City," Facts and Figures About Norfolk, Virginia (Norfolk: Green Company, 1890-1893), p. 13.

king. It also opened to Norfolk the possibility of becoming a leading grain port.<sup>4</sup> At the same time, the Seaboard and Roanoke, and the Norfolk and Southern with their north-south routes, superseded all other means of transporting the products of the North Carolina Sounds to market. The great quantities of cotton, lumber, naval stores, corn, peanuts and early vegetables grown in the areas south of Norfolk flowed at an increasing rate into the railway terminals at Berkley. But the largest contribution to Norfolk's industrial development at the turn of the century was the creation of the Norfolk and Portsmouth Belt Line Railroad. It proved of great benefit to the community, not only in facilitating exchange of freight, but in attracting new industries. A plant located on his "clearing house of transportation" had access to seven great railways, as well as to overseas and coastal steamers. By 1927 the Belt Line served 116 different industrial concerns.<sup>5</sup> Later, two more railway systems joined with its tracks.

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<sup>4</sup>Stover, p. 279; Norfolk and Southern Railway, Norfolk's Industrial Advantages (Norfolk: Land and Resource Department of the Norfolk and Southern Railway, 1903), pp. 4-26; The New Norfolk (Norfolk: Merchant's Association, 1927), pp. 15-18; and The Ports of Hampton Roads Annual, 1931, edited by Harry M. Thompson (Norfolk: Hampton Roads Maritime Exchange, 1931), pp. 1-8.

<sup>5</sup>New Norfolk, 1927, p. 18.

The chief products which rolled into Norfolk on the new railroads were truck products, cotton and coal. Also a surprisingly large coastal traffic in peanuts, fruit and vegetables developed from 1890 to 1900. In 1893 the annual shipment of truck from Norfolk amounted to three million packages. At this time the acreage of the truck farms was forty-five thousand, the number of hands 22,500, and the value of the product seven million dollars.<sup>6</sup> But the dividends of these agricultural products was not as large as those of coal and cotton. Although cotton factories increased at a high rate in the South during the 1880's and early 1890's, only one large cotton mill was established in Virginia at that time and none in neighboring North Carolina.<sup>7</sup> Yet, during the same period Norfolk's cotton exports increased from 121,420 to 789,396 tons.<sup>8</sup> Virginia and North Carolina cotton was shipped to northern and European manufacturers through

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<sup>6</sup>Borum, pp. 92-105; Agriculture and Food Production in Norfolk, Virginia (Norfolk: Norfolk Industrial Commission, 1911), pp. 15-62.

<sup>7</sup>C. Vann Woodward, Origins of the New South, 1877-1913 (Baton Rouge: Louisiana State University Press, 1951), pp. 132-136.

<sup>8</sup>Borum, pp. 13-84; Agriculture and Food Production in Norfolk, pp. 15-62.

the port of Norfolk but most of the profits were made by the manufacturers. Therefore, despite the substantial contribution by cotton and other agricultural crops, it was the bulk shipment of coal that made the largest impact on Norfolk's economy from 1890 until World War I.

Although Norfolk lacked major manufacturing industries at the turn of the century, the presence of cheap coal gave the city an advantage over other Atlantic ports and it aided both the coastwise and foreign trade. Steamers going to Baltimore or any southern port below Norfolk still had to come to the Norfolk and Western piers before a long voyage was begun. By 1900 the coal trade had grown so rapidly that it induced a northern capitalist to construct an entirely new railroad from the West Virginia coalfields to Norfolk. In 1905 representatives of the Virginia Railway Corporation, headed by Mr. H. B. Rogers, with the cooperation of Mayor Barton Myers and other Norfolk businessmen, began to build a gravity road-bed from Deepwater, West Virginia, completely encircling the city and ending at a newly constructed coal-loading pier at Sewells Point. The original capital for this venture came from local businessmen but the Virginian quickly reimbursed them. The railway was completed on April 1, 1909 and until the recent construction of the fully

automated Norfolk and Western Coal Piers, the Virginian's 1,040 feet long steel pier with provision for coaling four vessels at a time was the largest pier in the United States. In 1910, the Virginian hauled nearly a million tons, in 1913 four and a half million, and in 1916 six and a half. During the first two decades of the twentieth century, the Norfolk and Western, the Chesapeake and Ohio, which serviced the Newport News area, and the Virginian, made Hampton Roads the greatest coal port in the world.<sup>9</sup>

With the economic success of exporting coal, cotton, and other agricultural products to prove his point, Professor Thomas J. Wertenbaker in his book, Norfolk, Historic Southern Port, described the city in the later nineteenth century as prosperous and progressive. He said:

The period from 1865 to 1890 was marked by profound economic changes. New railway lines were opened, new steamship connections made, manufacturers sprang into life, Northern business came with new ideas, the young men imbibed the spirit of progress. The advent of electric

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<sup>9</sup>Stover, p. 204; Norfolk and Western Railway Co., Corporate History of the Norfolk and Western Railway Company Including That of Its Predecessors (Norfolk: Norfolk and Western Railway Co., 1916), pp. 12-55; Joseph T. Lambie, From Mine to Market: The History of Coal Transportation on the Norfolk and Western Railway (New York: New York University Press, 1954), pp. 68-252; and Andrew S. McCreath, The Mineral Wealth of Virginia (Harrisburg, Pa.: L. S. Hart, 1884), pp. 3-132.

lights, streetcars, waterworks, sewerage systems, clean streets, an efficient police force, better schools; the elimination of marsh lands, the erection of substantial business houses, and the extension of the city limits were but symptoms of the changing times.<sup>10</sup>

By standards relative to Norfolk's earlier economic condition, Wertenbaker's conclusion certainly seemed valid. Norfolk's prosperity in the 1890's appeared to be an excellent example of what the "New South" editors and orators claimed would make the South economically independent--cheap resources, business opportunities, railroad developments and commercial enterprise. But not all interpreters of this evidence of growing prosperity were convinced of its sound basis. C. Vann Woodward in his book, Origins of the New South 1877-1913, maintained that during the period 1880-1901, "of the larger ports of the South only Charleston and Norfolk suffered an appreciable decline."<sup>11</sup> He explained his reasons for this contrasting viewpoint by saying that in spite of the spectacular growth of cities, "the Southern people (including Virginians) remained throughout the rise of the 'New South' overwhelmingly a country people."<sup>12</sup> There was essentially

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<sup>10</sup>Thomas J. Wertenbaker, Norfolk: Historic Southern Port, 2nd ed. Revised by Marvin W. Schlegel (Durham: Duke University Press, 1962, 1931), pp. 269-270.

<sup>11</sup>Woodward, p. 125.

<sup>12</sup>Ibid., p. 139.

no overall industrial development in the South, especially not in the southeastern port cities such as Norfolk.

The physical growth of Norfolk, even as Wertenbaker described it, was due to large investments by combinations of local and non-local businessmen, but the initial investment was always made by the local men. The primary reason was that Northern industrialists were unwilling to take the chance on Southern manufacturing plants because of the lack of sizable nearby markets for their products. Secondly, iron ore shipments lagged behind coal, thus preventing heavy industries in which there was more profit to be gained. Norfolk at the turn of the century possessed only a few small plants and not a single large manufacturing industry. Although the tremendous growth of its transportation systems raised the level of its economy in the 1890's to an all-time high, Norfolk was not an industrial city.<sup>13</sup> Therefore, by more comprehensive standards such as the number of newly established industries which would diversify the economy and provide stability, Norfolk's economic success was false and misleading.

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<sup>13</sup>Norfolk, Virginia: A Great Maritime Port and Railroad Center . . . Portsmouth, Its Sister City (Norfolk: Norfolk Virginian, 1897), pp. 1-42; Frank Eberle (ed.), The Story of Norfolk City of Great Opportunities, The Coming Metropolis of the South; Told in Pictures and Words; Norfolk's Industrial Possibilities and Importance as a Manufacturing Center (Norfolk: Norfolk Board of Trade, 1908), pp. 1-35.



In spite of the lack of industry, there was one important change in the city during the 1890's. The power resting in its public administration began to shift from the traditional landowners to the merchants. The responsibility for the city's development now lay in the hands of capable businessmen. From 1890 to 1908, Norfolk merchants tried hard to entice new manufacturing into the area by publishing a series of industrial advertisements. They pointed out the "Industrial Advantages of Norfolk," and proclaimed that the combination of Portsmouth and Norfolk produced "A Great Maritime Port and Railroad Center."<sup>14</sup> These were followed by an illustrated pamphlet published by the Norfolk Board of Trade which claimed Norfolk was "The Coming Metropolis of the South."<sup>15</sup> A very limited success was attained by these assertions of Norfolk's promise as an industrial seaport, and most of its advances were made in the transportation industries. There seemed to be an invisible economic barrier composed of the Northerners' fear that the South could not support an industrial economy. The result was that the real barrier--the lack of large financial investments by the leading Northern capitalists--prevented Norfolk from becoming,

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<sup>14</sup>Ibid.

<sup>15</sup>Ibid.

in the early twentieth century, the urban industrial center it claimed was its destiny.

Some businessmen thought that an economic break-through could be made if the federal government was persuaded to invest heavily in developing its military establishments in the Norfolk-Portsmouth area. Because of the use of Hampton Roads as a port of embarkation during the Spanish-American War, they believed that the Navy might make Norfolk a permanent base of operations. Unfortunately, this did not occur. Even though the U. S. Fleet was a frequent visitor to the area, the Navy did not think of Norfolk as its major Atlantic coast port. During the period 1900-1916, the only Hampton Roads facilities which serviced the Navy's ships were the Norfolk Naval Shipyard in Portsmouth and the Naval Receiving Station. The Receiving Station was composed of two remodelled Civil War ships permanently tied up to the piers at the Shipyard's St. Helena Annex.<sup>16</sup> The United States may have been in the midst of its imperialistic mood, but its naval

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<sup>16</sup>Harold Sprout and Margaret Sprout, Toward a New Order of Sea Power: American Naval Policy and the World Scene, 1918-1922 (Princeton: Princeton University Press, 1943), pp. 3-33; Bradley A. Fiske, "Why Does the Navy Resist Modernization?", U. S. Naval Institute Proceedings, Vol. 31 (January, 1905), 31-45; and Mary Hempstone Oliver, "I Was a House Guest on Farragut's Ship," The (Norfolk) Virginian-Pilot, August 28, 1966, C-4.

leaders were definitely conservative toward expansion or modernization of the Navy's fleet or its shore establishment.<sup>17</sup>

Without the substantial private or governmental investments which the businessmen had hoped for by 1915, it was obvious that the effort to break through the economic barrier of the dearth of industry was stymied. In the next half century, the previous attempts to diversify the urban economy by advertising the area's industrial opportunities were repeated again and again.<sup>18</sup> But the solution to this problem was not to be found in the perseverance of the businessmen and merchants. Few of them, if any at all, realized where the answer lay or how great a part would be played by the military shore establishment. It was even less evident that the economic development of Norfolk would be associated with the growth of Naval Aviation.

War has long been a stimulating factor in the Hampton Roads economy and World War I was no exception. While no amount of advertising in the previous decades had helped to induce the federal government to make capital improvements

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<sup>17</sup>Ibid.

<sup>18</sup>Norfolk Chamber of Commerce, Statistical Digest of 1936, n.p.

to its local military installations, the pressure of the ever-widening European War did. On January 3, 1917, the Germans announced they had commenced unrestricted submarine warfare and all vessels of any kind bound for Allied ports or returning from them would be sunk. With the visits of the German submarines Deutschland and U-53 to Norfolk and other Atlantic ports, during which the latter was able to sink five Allied merchantmen, the military question of American coastal defense sharpened.<sup>19</sup> As diplomatic relations with Germany hourly became worse, the lack of properly prepared bases became more and more significant. Although President Woodrow Wilson did not ask Congress to declare war on Germany until April 6, 1917, he had already provided for the establishment of a new type of naval patrol station. Under the Naval Appropriations Bill of August 29, 1916, \$3,500,000 was set aside for the creation of a Reserve Flying Corps, the purchase of land for naval aviation facilities, and aircraft to be used for training and patrol flights.<sup>20</sup> In February, 1917, the Secretary of Navy referred to the joint Army and Navy Board on Aeronautic Cognizance the problem of selecting sites for

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<sup>19</sup>Archibald D. Turnbull and Clifford L. Lord, History of United States Naval Aviation (New Haven: Yale University Press, 1949), pp. 75-77.

<sup>20</sup>Ibid., p. 81.

these new naval air stations. Within two weeks of the receipt of the Cognizance Board's report, the Navy Department began drawing plans for eleven bases, one of which was Hampton Roads. The plans called for an average expenditure of about \$300,000 on each base but an additional \$1,000,000 was proposed for an experimental air station on the disused grounds of the old Jamestown Exposition at Norfolk.<sup>21</sup>

In April, 1917, 143 acres were purchased and clearing operations were begun. During the same month in accordance with instructions by the Secretary of the Navy concerning the creation of a Naval Reserve Flying Corps, a group of student aviators, mostly from Harvard University began to train at Glenn Curtiss's Newport News airfield. Some of them had already been flying at their own expense at the Newport News field for several years.<sup>22</sup> On May 19th a nucleus of seven student aviators was designated a Naval Air Detachment. In between their flying lessons during the summer months, the

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<sup>21</sup>Ibid., p. 78; Additional funds were appropriated under the Act of June 15, 1917, 65th Cong., 1st Sess., Public #23, H.R. 3971, and later appropriations for enlarging the air base under the Act of July 1, 1918, 65th Cong. 2nd Sess., Public #182, H.R. 10854, as cited in U. S. Navy Yearbook 1920-1921 (Washington, D. C.: Government Printing Office, 1922), pp. 526, 527, 562.

<sup>22</sup>Turnbull and Lord, pp. 91-100.

students prepared the Jamestown site as the Detachment's eventual home base. Although only seven acres had been cleared, the final trip across the bay was made about the 1st of September.<sup>23</sup> From that date until the end of the War in November, 1918, the Norfolk Naval Air Station trained more than 662 officer-pilots, and several thousand mechanics. While they were completing their courses, they spent a sizable part of their pay in local business establishments. These personal expenditures in conjunction with the profits made on Navy contracts by Norfolk construction firms gave a large boost to the city's economy.<sup>24</sup> However, the Naval Air Station was not the only capital investment made by the Navy in Norfolk. On June 28th, 1917, President Wilson set aside \$2,800,000 for the purchase of more land and the erection of

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<sup>23</sup>Ralph D. Paine, The First Yale Unit (Cambridge: Riverside Press, 1925) I, pp. 143-144, 189-191, 208; Captain H. P. Burden, USN, Command History of U. S. Naval Air Station, Norfolk, Virginia, OPNAV Report 5750.4 of 21 August, 1959, p. 1-3; and letter from Lieutenant Commander N. R. White, Jr., USN, Commanding Officer, N.A.S. Hampton Roads, to Director of Naval Aviation, dated June 6, 1919.

<sup>24</sup>paine, I., p. 225; Captain W. N. Sitz, "A History of U. S. Naval Aviation," Technical Note 150, mimeographed by Bureau of Aeronautics, Department of the Navy, 1925, pp. 11-14; and U. S. Navy, Bureau of Aeronautics, World War II Administrative History (unpublished but thermofaxed and bound by Bureau of Aeronautics, 1951-1956), I, pp. 217-226, hereafter cited as Administrative History.

a naval supply depot. At that time a tract of about 474 acres at Sewalls Point was secured which included one hundred acres belonging to the Pine Beach Hotel and the remaining 367 acres of the Exposition property. The initial construction expenditures were \$3,104,281 for a 22,150 feet long bulkhead and \$2,373,000 for dredging ship channels. Filling in behind the bulkheads added over 300 more acres to the area of the Base. Additional appropriations during the summer enabled the Navy to construct two 1400 feet piers 125 feet wide, a submarine basin and an additional landing field on the Air Station. Several hangars, two six-story warehouses, mess halls, living quarters and other facilities were also built in order to support the influx of thousands of enlisted and officer trainees.<sup>25</sup> Although the Navy contributed a great deal to the urban economy, not all of the government's investments were made by it. The advantages of Norfolk's port and railway facilities induced the federal government to establish an Army Terminal there. Late in 1917, work was in progress on a municipal terminal near Sewalls Point, which was to be connected with railways entering Norfolk by an extension of

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<sup>25</sup>Josephus Daniels, The Wilson Era (Chapel Hill: University of North Carolina Press, 1944), pp. 301-302; and U. S. Department of the Navy, Activities of Bureau of Yards and Docks in World War I (Washington, D. C.: Navy Department, 1921), pp. 104-116.

the Belt Line. The government took over this property and immediately erected four concrete warehouses, a rifle factory, and several large piers. When completed it was the largest terminal of its kind in the United States and was estimated to have cost the government over thirty million dollars.<sup>26</sup> By the end of the war, the military shore establishment at Norfolk included two training camps, an enormous supply station and shipping terminal, an air station, and a submarine base. This made Hampton Roads the most extensive military base in the United States.<sup>27</sup> Since that time, the military, particularly the Navy, has contributed a major portion to the Tidewater economy.

In total, the huge government investments during World War I stimulated the development of private industry in Norfolk. Many new plants came to Norfolk at that time and some old concerns doubled their capacity. The American Chain Company, the British-American Tobacco Company, E. I. Dupont de Nemours and Company, the Linde Air Products Corporation, the Virginia Coal and Navigation Company, and the Standard Oil Company were among those which opened new plants in or

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<sup>26</sup>The (Norfolk) Virginian-Pilot, January 10, 1918, p. 2; September 2, 1918, p. 6; January 19, 1919, p. 2.

<sup>27</sup>Activities of Bureau of Yards and Docks in World War I, pp. 258-260.



near the city. In 1916 the Norfolk Shipbuilding and Dry Dock Company in Brambleton employed only forty men, but by June 1918 it employed several hundred.<sup>28</sup> As a result of government and private investments Norfolk's population also began to expand. In 1910 it was 67,452, but by 1920 it had almost doubled [115,777].<sup>29</sup> A further example of the war-time growth of Norfolk's economy was that shipments to the Allies, and to a lesser extent to Germany through neutral countries, caused a sharp increase in the city's shipping trade. The value of exports rose from \$9,500,000 in 1914 to \$36,000,000 in 1916, to over \$100,000,000 in 1919. Imports during the same period multiplied five times their 1914 value.<sup>30</sup> If one were to concentrate on the above figures, it would surely seem that Norfolk's economy was booming, but not all local industries were as thriving as the shipping

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<sup>28</sup>Arthur Davis (ed.), Virginia Communities in War, First Series (Richmond: Virginia War History Commission, 1926), VI, pp. 322, 323; and The (Norfolk) Virginian-Pilot, December 29, 1918, p. 2.

<sup>29</sup>Norfolk Chamber of Commerce, Statistical Digest of 1936, n.p.

<sup>30</sup>U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Statistical Abstracts of the United States, No. 34-36 (Washington, D. C.: Government Printing Office, 1915-1917), pp. 262-296, 301, hereafter cited as Department of Commerce Statistical Abstracts.

lines.

The situation of Norfolk's agricultural interests was quite different and perhaps tragic. With the Food Administration calling for more and more produce, they had a right to look forward to a large expansion of their activities, but instead, they were forced to curtail their production. The opportunities for high paying government construction work at Norfolk drained off so many of their laborers that they could not cultivate all their acres, and with the railways choked with troops and war supplies, it was difficult to market what they did raise. One farmer stated he had only three men to work seven hundred acres, and another, one man for four hundred acres. But the government at the moment was too busy with the immediate problems of the war and did nothing for the Tidewater farmers.<sup>31</sup>

In total perspective, the economy of the Norfolk-Portsmouth Metropolitan area increased significantly from 1890 to 1919, but its development was uneven and the reason for its prosperous conclusion was the explosive growth caused by World War I. The tremendous capital investments by the Navy and the Army provided an economic stimulus that the

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<sup>31</sup>The (Norfolk) Virginian-Pilot, January 29, 1918, p. 3; February 2, 1918, p. 16; February 3, 1918, p. 2; and February 5, 1918, p. 6.

Norfolk businessmen had not been able to produce despite several advertising campaigns. Thus, at the end of the war Norfolk looked forward to an era of expanding prosperity. Yet, in spite of their optimism, local businessmen realized that Norfolk's economic success would now depend on whether the government would continue its stimulating investments or if they would have to find a substitute.

## CHAPTER II

### THE PERIOD OF ADOLESCENCE

1920-1938

The period 1919 through 1938 was one of staggering progress for the Norfolk community. Business and civic leaders during the twenties were joyous with the hope of quick success in industrial expansion, but the Great Depression quelled their early enthusiasm. Only the Navy with its steady expansion of aviation facilities and shipbuilding activities remained a reliable basis for the urban economy. In fact, the Navy's newly created Bureau of Aeronautics, in its efforts to integrate naval aviation into the Fleet, relied on N.A.S. Norfolk more than any other shore establishment to accomplish that task. During the thirties, Norfolk fought successfully to keep its favorable position in the eyes of the Navy, but it was often embarrassed by the poor hospitality that the city offered. It was during this awkward period that the civic leaders first took advantage of the federal government's programs for urban development. For Norfolk and for naval aviation, 1919 through 1938 was a period of adolescence.

After World War I Virginia's prosperity increased as its agriculture was diversified, manufacturing became more important in its economy, and the tourist business became a major enterprise. Though Norfolk was a part of that prosperity, its success was because shipping, its major industry, continued to grow and not because the city shared in the diversification of the state's economic base. Immediately after the Armistice, Norfolk attempted to capitalize on the federal government's wartime investments in the area. It sent a committee, headed by Mayor Albert L. Roper, to Washington where they made a request of the War Department to sell or lease the Army Terminal Piers. Because of peacetime cutbacks the piers were no longer needed, but the Army did not want to give up the facility permanently. After many weeks of discussion, the government consented to lease the city one of the piers together with the adjacent sheds. This venture proved an immediate success. Not only did it attract more general shipping trade, but in 1921 it added \$62,296 to the city's revenue.<sup>1</sup> However, it soon became evident that if Norfolk was to compete with New York and other northern ports, she must add to coal, tobacco and cotton, some other principal

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<sup>1</sup>Norfolk City Council, City of Norfolk, Virginia (Norfolk: Keyser-Doherty, 1924), pp. 17, 18.

article of trade. To the municipal government, grain seemed to be a good solution, and with the cooperation of several Chicago grain concerns, a large elevator and terminal worth five million dollars was constructed between the Army Terminal and the Naval Base.<sup>2</sup>

Although Norfolk had many problems during the early twenties, not all of them were commercial. Because of the enlarged population, the city government found that the municipal facilities would have to be expanded to meet the increased demands upon them. In order to make it possible for an expert to be hired to coordinate the required work, the city government was changed to a council-manager form. The new city manager, Charles E. Ashburner, used his authority to guide the reorganization of the public works of the entire city. New roads were constructed, a modern market for local agricultural products and a new Armory were built, public education was advanced and broadened, new branch libraries were built, a juvenile and domestic relations court instituted, recreational facilities enlarged, the fire department made more efficient, and the city limits were extended northward to include the Naval Base and all adjacent federal properties.<sup>3</sup>

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<sup>2</sup>Ibid., p. 21.

<sup>3</sup>Ibid., pp. 65-67.

When Mr. Ashburner left Norfolk in 1923, he had already transformed it into a modern city. Next to Ashburner the most important city official of the 1920's was Mayor I. Walke Truxtun. He was a native of Norfolk and known for his tenacious public spirit. When he took over as city manager in 1926, he proceeded to capitalize on what Ashburner had started. First, he balanced the city's budget, then he reorganized the police and fire departments, but the most significant advance during this tenure was the establishment of a junior high school system. It was recognized at that time as one of the most complete and efficient in the country.<sup>4</sup>

Despite her progress in public works during the early twenties, the major indication of Norfolk's economic growth was the increase in her commercial shipping trade. At the conclusion of the First World War, many had predicted that Norfolk would lose the gains it had made in foreign trade, but this did not occur. As the number of industries increased in the South, so did its demand for raw materials not available from its own sources. Fish came from Africa, chemicals and mahogany from South America, and many other items from

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<sup>4</sup>Leonard D. White, The City Manager (Chicago: University of Chicago Press, 1927), pp. 100, 101; and The (Norfolk) Virginian-Pilot, January 15, 1928, I, p. 24 and IV, p. 1.

Europe. Norfolk got more than its share of this commerce and imports gained steadily. Their total value rose from \$8,500,000 in 1920 to \$32,817,774 in 1928. The value of exports also increased; from \$134,826,244 in 1918 to \$325,000,000 in 1921.<sup>5</sup> Actually, Norfolk's shipping was affected more by Europe's economy than by that of the United States. When a depression hit Europe in 1922, Norfolk's foreign trade dropped by fifty per cent, but it was still ten times as large as in 1914. For the rest of the decade, exports hovered around \$180,000,000, which still made it the most active port in exports on the Atlantic Coast.<sup>6</sup> Therefore, when the New York Stock Market crashed in 1929, causing many American businesses to falter, Norfolk was not among those cities that received the worst shock.

Another major reason for the comparative lightness of the impact of the Great Depression on Norfolk's economy was her wartime marriage to the Navy. Norfolk had courted the Navy for seventy years, and because of her ice-free port she took more and more of the fleet away from the traditional

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<sup>5</sup>Report of Hampton Roads Maritime Association (Norfolk: Hampton Roads Maritime Association, 1928), pp. 46-116; and Report, 1921, pp. 28-92.

<sup>6</sup>Ibid.



naval ports of Boston and Philadelphia. When World War I caused a quick but solid marriage to the Hampton Roads area, Norfolk unquestionably took advantage of it. Naval operations brought her an annual income of \$20,000,000, and even after the war, bluejackets swarmed in the stores, restaurants and theaters.<sup>7</sup> By 1930 the Naval Shipyard employed an average of four thousand men and the Naval Base, including the Naval Air Station, two thousand. The added attraction to the war-time marriage was that while other industries were forced to curtail their activities during the depression, those of the Navy were increased. From 1929-1932, after a week's work on the great battleships Idaho and Mississippi which were being modernized at a cost of \$12,000,000 each, many a skilled worker pocketed his wages with thankfulness. In addition, at the Naval Base the erection of new barracks, a concrete pier, and a half-million dollar general airfield provided jobs for hundreds more. The combined payroll of all naval activities, excluding the shipboard payrolls, was approximately one million dollars a month.<sup>8</sup>

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<sup>7</sup>The (Norfolk) Virginian-Pilot, January 1, 1931, p. 4, and January 1, 1933, p. 6.

<sup>8</sup>Ibid.

One of the most important reasons that the Navy remained so interested in developing its Norfolk facilities was its interest in naval aviation. Tests completed by units of the Norfolk Naval Air Station in 1919 convinced the Navy's General Board that "to put the United States in its proper place as a naval power, fleet aviation must be developed to the fullest extent."<sup>9</sup> To implement this policy, a Fleet Supply Department was formed in 1921 and industrial work connected with servicing the fleet's aircraft was expanded at N.A.S. Norfolk. The station reached the limits of its property at this time, and it became necessary to fill in the marsh, southeast of the landing field. When this was completed, several hangars and buildings to accommodate industrial shops were erected. Meanwhile, the station's Assembly and Repair Department was divided into four sections--assembly, structural, engine, and machinery--each hoping for a separate building in which to operate.<sup>10</sup> Unfortunately, at this moment the policy of the Navy changed. After the Washington Disarmament Conference of 1921, the attitude of

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<sup>9</sup>U. S. Navy Department, Report of the General Board, June 23, 1919 (Washington, D. C.: Government Printing Office, 1919), p. 462.

<sup>10</sup>Norfolk Naval Air Station, Records of the Departments of Public Works, Supply, Operations, and Overhaul and Repair, n.p.

the government was that all military appropriations should be cut to a minimum. It took several years and five investigations by Congress and the Navy to change this situation.<sup>11</sup>

The most effective of those inquiries was that of the Morrow Board which was created by the President to study the whole problem of aircraft in national defense. It was headed by the distinguished Dwight W. Morrow, whose knowledge and influence finally moved Congress to action. On November 30, 1925, this Board recommended a five-year construction program for which Congress soon afterwards appropriated the funds. The program was begun the next year and one of its major accomplishments was that it brought to the newly created post of Assistant Secretary of the Navy for Air, David S. Ingalls.<sup>12</sup> Ingalls was one of the young reservists who had taken his flight training at Hampton Roads, and he immediately began to channel a good portion of the Navy's aviation appropriations to Norfolk. In 1929 and 1930, construction of a new administration building and facilities for the

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<sup>11</sup>Archibald D. Turnbull and Clifford L. Lord, History of United States Naval Aviation (New Haven: Yale University Press, 1949), p. 163; and Harold and Margaret Sprout, Toward a New Order of Sea Power: American Naval Policy and the World Scene, 1918-1922 (Princeton: Princeton University Press, 1943), pp. 282-296.

<sup>12</sup>Turnbull and Lord, pp. 228-269.

Assembly and Repair Department contributed millions to Norfolk's economy when it was needed most. Alterations were also made to existing buildings, and the Supply Department acquired several large storehouses. In 1930, the first group of civilian mechanics, who replaced the enlisted men needed for duty aboard the new aircraft carriers, were transferred from the Naval Shipyard in Portsmouth. There were fifty of them, a small group in comparison to the 6500 civilian employees and the 1500 officers and men assigned to N.A.S. Norfolk, now the largest and most important naval air station on the Atlantic coast.<sup>13</sup>

Norfolk's economy during the years of the Great Depression was considerably less affected than other urban centers of the state, yet the year 1932 was probably the most difficult for the city. Not only was there a decrease in local private business but early in the year the production schedule at the air station was slackened. Prior to that time, 12 to 16 engines had been overhauled each month, but because of cuts in its appropriations, the Navy's Bureau of

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<sup>13</sup>Captain H. P. Burden, USN, Command History of U. S. Naval Air Station, Norfolk, Virginia, OPNAV Report 5750.4 of 21 August, 1959, pp. 2-4; and Barney Baugh, JOL, USN, "Record of Conquest: Navy Pioneers in the Air Ocean," All Hands, No. 469 (March, 1956), p. 40.

Aeronautics contemplated total suspension of that type of work at Norfolk. This meant the ultimate cessation of the station's industrial operations, upon which many of the local businesses depended. For this reason a committee composed of civilian employees of the station, members of the Chamber of Commerce, and the Mayor of Norfolk went to Washington to exert pressure on navy officials not to close down those operations. The committee proved that the air station at Norfolk was capable of an overhaul production schedule that would exceed that of Pensacola or its aircraft factory at Philadelphia. They brought this to the attention of the Secretary of the Navy, Claude A. Swanson, a former U. S. Senator from Virginia, and the result was that N.A.S. Norfolk has operated on a full-scale production since that time. Furthermore, it became one of the foremost aircraft assembly and repair facilities in the country.<sup>14</sup>

Unfortunately, at the same time that the Bureau of Aeronautics considered closing the industrial shops at the Naval Air Station, the majority of the ships composing the

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<sup>14</sup>Richard L. Morton, "Virginia," Encyclopedia Britanica, 23, (1966), 183; Interviews with employees of the Assembly and Repair, and Supply Departments as listed in bibliography, November, 1944; and The (Norfolk) Ledger-Star, October 5, 1966, p. 1, and The (Norfolk) Virginian-Pilot, October 6, 1966, p. 59.

Atlantic Fleet left Norfolk to take part in combined exercises in the Pacific Ocean. This was a severe blow to local retail businesses, which in large measure depended on its twenty thousand officers and men for patronage. To fill this gap, Norfolk was fortunate to be the recipient of many millions of federal funds administered through the National Recovery Acts and those construction programs designed to make the U. S. Navy "Second to None."<sup>15</sup> On March 27, 1934, Congress passed the Vinson-Trammell Bill, authorizing the building of a strong naval air arm while at the same time conforming to the provisions of the new London Disarmament Treaty of 1930. The funds necessary to execute such a program came from two sources--the Emergency Appropriations Act of June 9, 1934, and those provided by President Franklin D. Roosevelt's liberal allocations from the huge sums available under the Public Works Administration. These latter funds were provided not only because of Roosevelt's extensive knowledge of the importance of sea-power which he had obtained while he was Assistant Secretary of the Navy under President Woodrow Wilson, but because of his warm personal regard for Captain Ernest J. King, former commanding officer of N.A.S.

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<sup>15</sup>George T. Davis, A Navy Second to None: The Development of Modern American Naval Policy (New York: Harcourt, Brace and Co., 1940), pp. 404, 405.

Norfolk and now Chief of the Bureau of Aeronautics. Therefore, in addition to the millions appropriated by Congress for the purpose of building planes and carriers, from 1934 to 1938 approximately \$36,000,000 was received by the local shore establishments to build supporting facilities. The results were floodlighting for the extended runways, larger hangars, better living quarters, and more adequately equipped industrial shops. By 1938, civilian employment at the Air Station reached 1,000 and the base had doubled in size.<sup>16</sup>

While Norfolk's naval installations in the thirties benefited greatly from federal appropriations, the city itself also was a beneficiary. The local economy received millions through the programs of the Public Works Administration and the Works Progress Administration. Thousands of people were employed by these agencies and their local counterparts in the construction of many of the public service buildings, recreational facilities, bridges and highways which are still

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<sup>16</sup>Turnbull and Lord, pp. 229-237, 259, 261, 264-269, 284-295; Russell F. Birchowsky, Is the Navy Ready? (New York: Vanguard Press, 1935), pp. 257-290; and G. H. Fuller, Expansion of the United States Navy, 1931-1939 (Washington, D. C.: U. S. Navy Department, 1939), pp. 366-392; Ernest J. King and Walter Muir Whitehill, Fleet Admiral King: A Naval Record (New York: W. W. Norton and Company, 1952), pp. 212-214; and Norfolk Naval Air Station, Records of the Departments of Public Works, Supply, Operations and Overhaul and Repair, n.p.

in use today. Some of the more prominent of these structures are the Campostella Bridge; the Granby Street, Colley Avenue, Twenty-Sixth Street, and Hampton Boulevard bridges over the Lafayette River; Lafayette Park; several large sewer projects at Ocean View, Willoughby and Brambleton; Ocean View School; an 18,000 seat stadium at Norfolk Division of William and Mary--V.P.I. with adjacent playground areas behind Larchmont School; and finally, a new \$2,000,000 Federal Building housing enlarged Post Office facilities, court rooms, and offices for federal agencies. Always alert to the expanding need for public educational facilities, Norfolk taxpayers combined with federal funds to build a new \$500,000 high school [Granby] and to make \$141,000 worth of improvements to Booker T. Washington High School.<sup>17</sup> The result of these projects was that unemployment was cut in half and local retail businesses began again to make profits. The general economy recovered from the depression at such a rapid rate that by 1936 Norfolk merchants were again soliciting private industries for the New Norfolk.<sup>18</sup> In that year the

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<sup>17</sup>Thomas J. Wertenbaker, Norfolk: Historic Southern Port (2nd ed., revised and edited by Marvin W. Schlegel, Durham: Duke University Press, 1962, 1931), pp. 323-343.

<sup>18</sup>The New Norfolk alternately published as Know Norfolk and The Norfolk Story was edited by Thomas A. Hanes of the Norfolk Chamber of Commerce from 1920-1966.



Norfolk Advertising Board published a series of historical studies entitled Through the Years in Norfolk, which combined the celebration of the city's two hundredth anniversary with an appeal for new investments. Two of its monographs were F. E. Turin's "The Making of a Great Port" and M. E. Bennett's "Commercial and Industrial Norfolk."<sup>19</sup>

Although private industry was still apparently not impressed with the opportunities which Hampton Roads offered, Norfolk's city council did act to expand the area's main industry--transportation. In 1932 on the eastern edge of Ironmunger's farm near Granby Street, the first minicipal air-field was established, and in 1936 a trans-atlantic air service was proposed. Most of the air service at this time consisted of mail flights to the major east coast cities, but its operations steadily increased. Because of the encroachment of expanding operations at the adjacent Naval Air Station, in 1938 the city decided to construct a new air facility. With the help of funds from the Public Works Administration, Norfolk built a modern airport on the former grounds of Truxton Manor Golf Course at Little Creek. It soon proved to be an excellent community investment with great potential

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<sup>19</sup>As cited in the bibliography.

for future economic growth.<sup>20</sup>

Throughout the period 1920-1938, Norfolk's businessmen and civic leaders searched for new methods to stimulate the area's industrial economy, but few of their efforts were as fruitful as the municipal airport. Progress in the early twenties was confined to the establishment of several light manufacturing plants in conjunction with the bulk shipping trade. Industrial development was slow and was halted completely by the Great Depression. From 1930 to 1935, the urban economy struggled for stability, and Norfolk's population during that five-year period increased only a few thousand, but the city's recovery from the depression was indicated by the fact that employment doubled. The government's public works projects initiated this increase but ultimately the largest contributor was the military. It was estimated that the combined military payroll in 1938 was one million dollars per month, almost as much as the total industrial payroll for the entire Norfolk community in 1933.<sup>21</sup>

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<sup>20</sup>"Oldest Airport Building in Norfolk," The (Norfolk) Virginian-Pilot, July 13, 1961. The building still exists and plans are to turn it into an air museum.

<sup>21</sup>Norfolk Chamber of Commerce, Statistical Digest of 1936, n.p.; and Statistical Digest of 1938, pp. 6, 8, 9; and F. E. Turin, M. E. Bennett, and W. H. T. Squires, Through the Years in Norfolk (Norfolk: Norfolk Advertising Board, 1936), pp. 105-124.

Although the Norfolk businessman had not found the economic stimulus he had searched for in private industry, he did discover that there was a basis for future economic development already in the community--the military shore establishment. Furthermore, just prior to the beginning of the military build-up in preparation for World War II, Norfolk's shipping industry regained its leadership in the east and boasted of over nine million dollars in custom receipts.<sup>22</sup> For the urban area this recovery by its major industry marked the crossing of the final bridge toward a stable economic development. During the previous two decades the Norfolk-Portsmouth Metropolitan Area had passed through the adolescence of a sporadic economic growth, but now it faced an even greater problem--that of properly directing the vigorous wartime economy of the 1940's.

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<sup>22</sup>Norfolk Chamber of Commerce, Statistical Digest of 1932, p. 9.

## CHAPTER III

### WARTIME EXPANSION

1939-1950

As America and her allies strengthened their defenses during 1939 and 1940, Hampton Roads became a focal point of their efforts. Ships heavily laden with war materiel plied between Norfolk and European ports with increasing regularity. As a result, the Hepburn Board in preparing its part of the National Emergency Program recommended that flight operations at Norfolk Naval Air Station include a more complex system of patrolling the sea lanes and that the station's overhaul and repair facilities be expanded to support it.<sup>1</sup> The major problems involved in the accomplishment of these recommendations were the need for more land, aircraft hangars and trained mechanics, a separate supply department, new training programs, and housing for the trainees.<sup>2</sup> The first to be solved was the need for more land and more operational

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<sup>1</sup>U. S. Congress, House, Report on Need of Additional Naval Bases to Defend the Coasts of the United States, Its Territories and Possessions, December 23, 1938, 76th Cong., 1st Sess., Document No. 65, March 9, 1939, pp. 622-840.

<sup>2</sup>Archives of Norfolk Naval Air Station, Department of Public Works, Map of the base dated September 9, 1939, and accompanying data, n.p.

facilities.

An expansion plan was originally undertaken in the summer of 1938. The station Maintenance Department began the construction work, but it was completed by WPA and PWA programs. In the next two years bulkheads for extending the airfield, an enlisted barracks, extensions to the overhaul shops, and a new seaplane ramp were erected. All together, these projects contributed \$2,350,000 to the Norfolk economy in 1939, and other minor WPA projects added \$24,600 in 1940, and \$45,000 in 1941.<sup>3</sup> Although these additional facilities did relieve the pressure of immediate operational requirements, the station barely kept up with the increasing demands for carrier-qualified pilots and mechanics. From 1938-1941, N.A.S. Norfolk provided the air crews and repair material for the Wasp, Ranger, Yorktown, and Hornet. In addition, it trained the squadrons of the British carriers Illustrious and Formidable, and supplied many of the aviation units for American and British battleships and cruisers.<sup>4</sup> In 1940

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<sup>3</sup> Archives, N.A.S. Norfolk, Public Works Department, See Appendix I.

<sup>4</sup> Captain H. P. Burden, USN, Command History of U. S. Naval Air Station, Norfolk, Virginia, OPNAV. Report 5750.4 of 27 August, 1959, pp. 2-4; Interviews with station personnel as listed in bibliography, dated November, 1944; and see Appendix II.

Norfolk was directed to provide facilities and personnel that would eventually classify it as a Class "A" air base and place it on a production basis that would function to meet the total needs of the Fleet.<sup>5</sup> To meet these new demands more industrial buildings as well as more land were required. The most important steps taken to solve these problems were the acquisition of 1441 acres adjacent to the station, and the awarding of a complex construction project to a local firm. The following table gives a résumé of the total land acquired and the amount paid for it:

<u>Date</u>		<u>Acreage</u>	<u>Cost</u>
11 July, 1940	First Acquisition	1034	\$443,309
25 Sept., 1940		7	551
21 July, 1941	Second Acquisition	227	85,693
5 Nov., 1941	Third Acquisition	85	104,437
25 March, 1942	Fourth Acquisition	30	32,366
9 April, 1942	Fifth Acquisition	<u>55</u>	<u>299,460</u>
Total		1441 Acres	\$965,816

By December, 1942, the air station was composed of 2,165 acres, 800 of which were reclaimed from Little Bay and Mason Creek.<sup>6</sup>

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<sup>5</sup>See Appendix III.

<sup>6</sup>Archives, Fifth Naval District, Public Works Office. 8.3 acres acquired from the City of Norfolk at the cost of \$1.00 not considered.

On June 29, 1940, the largest construction contract [NBY 4158] that has ever been undertaken at Norfolk was awarded to Virginia Engineering Corporation of Newport News, Virginia. The original plans provided for 278 buildings, ninety percent of which were to be permanent structures. During 1941 and 1942, operational requirements became so extensive that alterations and revisions enlarged this project to five times its original scope. The major part of the construction work included two chapels, several storehouses, three Bachelor Officer Quarters, ten apartment houses for officers, three enlisted men's barracks, a radio-radar building, three aircraft hangars, three seaplane hangars with four adjacent ramps, seven large industrial overhaul and repair hangars, an engine test building, a dispensary, and the extension of all runways, which sometimes necessitated the relocation of roadways. The final cost of the project, including additional work accomplished by Naval Construction Battalions, was \$74,976,691.<sup>7</sup>

During 1942 and 1943 there were numerous aspects of aircraft operations that influenced the air station's development. Squadrons of patrol planes offered air coverage for

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<sup>7</sup>Archives, Fifth Naval District, Public Works Office, Report of the Officer in Charge of Construction for Contract NBY-4158, 1939-1943, n.p., hereafter cited as Archives, NBY-4158.

the shipping lanes off the coastal waters; anti-submarine patrols were flown regularly; and inshore patrol squadrons of the Eastern Sea Frontier were based at Norfolk. There was also a greater concentration on the training and development of operational techniques for carrier aircraft. Eleven outlying fields were used for the practice of precision landings, for dive-bombing target areas, and for anti-aircraft training.<sup>8</sup>

The new year, 1943, was ushered in with a momentous administrative reorganization of naval aviation operational units. On 1 January, the combined strength of the Commander, Carriers Atlantic; the Commander, Carrier Replacement Squadron; and the Commander, Fleet Air Wings Atlantic were combined under the new title, Commander, Naval Air Force, Atlantic Fleet, and N.A.S. Norfolk was named as the headquarters for the new ComAirLant. The Fleet Air Detachment attached to the station became a subordinate administrative command for all the fleet air detachments operating in the Norfolk area, including the outlying fields. Fleet Air Wing Five maintained a training schedule for all patrol squadrons and it included a program for the allied naval forces of Russia and France. Anti-submarine patrols carried a heavy load this year, and

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<sup>8</sup>Burden, pp. 5, 6.



squadrons worked closely with the Air Information Center located at Breezy Point. Squadron VS-37 flew inshore patrols for the Eastern Sea Frontier and also offered air coverage for military convoys and merchant shipping, and carried on special search missions.<sup>9</sup>

Amidst the routine activity of the day, on 17 September, 1943, a violent explosion occurred which rocked the entire station. It created such force and concussion that the windows and walls of many buildings were damaged to the extent that they were considered hazardous and were eventually razed. The center of the explosion, which was caused by the detonation of 24 depth charges, included a group of enlisted men's barracks opposite the dispensary, three hangars, and a public works office building. The total number of casualties amounted to 426, including 29 deaths. The shock of the explosion found people scaling fences that had been considered man-proof and impossible to climb; some people escaped the explosion area with little recollection of the means they had used to arrive a safe distance from the area. Other persons found themselves some time later with shoes in hand, waiting for street cars with no memory of the event.<sup>10</sup>

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<sup>9</sup>Archives, Operations Department, N.A.S. Norfolk, n.p.

<sup>10</sup>The (Norfolk) Virginian-Pilot, September 17, 1943, p. 1.

Following the investigation, the Bureau of Aeronautics gave approval for the erection of six new brick veneer barracks, a two-story brick Public Works Building, and a modern hangar for the Assembly and Repair Department to replace the destroyed buildings. The new buildings were completed the following year at a total cost of over fifteen million dollars. The year which had opened with the genesis of a new organization for the functioning of the Air Force had culminated in tragedy. However, advancement had been achieved in the coordination of the activities of the Fleet Air organization and, consequently, in the massing of air station facilities and operations for the service of fleet aviation units. While the marks of the destruction of lives could not be erased, the remains of old buildings were replaced by new facilities and equipment which accelerated the aircraft production program. Thus the foundation of a modern and well-equipped naval shore facility was laid in the year 1943.<sup>11</sup>

By late 1943, N.A.S. Norfolk was recognized as one of the chief naval air centers in the United States, with facilities to support an extensive plane overhaul program and provisions for the operation and maintenance of seven patrol

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<sup>11</sup>Archives, Public Works Department, Norfolk Naval Air Station, n.p.

squadrons, one inshore patrol squadron, one utility squadron, and four carrier groups. Experimental units based at Norfolk also made notable contributions to the war effort, and both fleet and station training schools had increased the number of their graduates by twenty times their former rates. The training units involved were: Aircraft Armament Unit, Aviation Experimental Division, Fighter-Director School, Advanced Carrier Training Unit, Carrier Qualifications Training Unit, Transitional Training Squadrons Atlantic, the Aviation Machinist's Mate Class "A" School, the Instrument Landing School, the Celestial Navigation Trainer Unit, and the Link Trainer. As the operational requirements of the station increased during World War II, most of the training units were transferred to other air facilities along the east coast or middle west. Nevertheless, N.A.S. Norfolk retained its position as the east coast's number one Naval Air Station, supporting all Fleet air operations.<sup>12</sup>

Throughout 1944, extension of the airfields to accommodate the increased activity of patrol squadrons and the parking of transient planes being ferried to the Pacific theatre continued. A perimeter taxiway at East Field was completed by July at a cost of \$33,128, and in August, a

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<sup>12</sup>Ibid., and Archives, Operations Department, N.A.S. Norfolk, n.p.

\$70,000 project for the standardization of airfield lighting also was finished. The patrol plane program of the Assembly and Repair Department required more attention than any other during this year, and its problems were not satisfied until the completion in early 1945 of a new overhaul hangar, the largest of its kind in the world, at a cost of \$1,470,000.<sup>13</sup>

One of the most important developments at N.A.S. Norfolk during 1943-1944 was the initiation of the Navy Management Program for Naval Air Shore Establishments. This program established a training schedule for officers and civilian supervisors in the various departments of the station in methods of obtaining maximum utilization of available personnel, or in other words--good management. Supplemental to this were the trainee indoctrination program, which furnished basic technical and administrative information, and the apprentice program, which gave instructions in advanced aircraft assembly and repair. One of the chief problems of the Assembly and Repair Department had been the proper supervision and coordination of work. The enlistment of capable men had never reached the level of war demands, but the Navy

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<sup>13</sup>Archives, Fifth Naval District, Public Works Office, n.p.

Management Program appeared to solve this problem.<sup>14</sup>

Previous to the Management Program, the Air Station with the help of the Norfolk City Council had set up a Labor Board in January, 1942. The Board's duty was to obtain the necessary civilian workers needed by the Air Station and to take care of civilian personnel problems. The Board operated until August, 1943, during which time it obtained several hundred automobile mechanics, which it thought could easily shift from reciprocating auto engine repairs to aircraft engines. It also hired over one hundred women to operate lathes in the metal shop and to be sewers in the fabric shop. The Board solved the immediate need for personnel, but as the Management Program superseded its functions, it quietly disbanded.<sup>15</sup>

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<sup>14</sup>U. S. Navy, Bureau of Aeronautics, World War II Administrative History (unpublished but thermofaxed and bound by Bureau of Aeronautics, 1951-1956), II, pp. 206-226; Correspondence between Chief of Naval Operations and Chief of Bureau of Aeronautics, BuAer Memoranda, 1932-1944, folder 6, Action followed CNO-BuAER letter AER-AS-1-RLF, A (19) 8, Serial 190595 of 17 December, 1943; and U. S. Navy Department, Survey of Administration, Bureau of Aeronautics, 16 August 1941 (Washington, D. C.: Navy Department, 1942), pp. 15-282.

<sup>15</sup>World War II Administrative History, II, pp. 214-216.

From 1938 to 1943 the civilian employment at the Air Station rose from less than 1,000 to almost 6,000. This rapid increase of personnel caused many transportation problems and a great deal of congestion in the surrounding residential areas. The situation culminated in the erection of a low-cost temporary defense housing project in the Broad Creek district. It served the city's needs for twenty years after which it was demolished and the cleared area used as an industrial park.<sup>16</sup>

During the peak wartime years, the civilian employees of the Naval Air Station, excluding the Supply Annex, numbered over 8,000, and their payrolls contributed over \$40,000,000 a year to the Norfolk economy. When the war ended in 1946, these figures were cut in half, yet the total contribution of the Air Station was over thirty times that which it had been in 1938.<sup>17</sup>

Throughout the years leading up to the Korean Intervention, the Air Station continued to operate at normal capacity while executing the experimental plans for the preservation of aircraft, the development of jet aircraft, and the subsequent reorganization of the assembly and repair

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<sup>16</sup>Norfolk Chamber of Commerce, Statistical Digest of 1938, p. 9 and 1950, p. 10.

<sup>17</sup>Archives, N.A.S. Norfolk, Public Information Office, n.p.

facilities. In 1950, the station was again called on to increase its operations rapidly. Even though the new emergency was in the Pacific area, Norfolk was still the major supporting shore establishment for all Fleet Aviation Units. The status of the Naval Air Station as a Class "A" aircraft overhaul and repair station and primary supply depot remained unchanged during the Korean War. The station easily expanded its departments back to World War II overhaul standards while supporting the thirty-three commands and squadrons headquartered there.<sup>18</sup> War again brought prosperous times to Norfolk.

The effect of the tremendous expansion of military installations in the Norfolk area during World War II and to somewhat a lesser degree in the Korean War was probably the single most important factor in the maturing of the city as an industrial seaport. The urban economy was stimulated by the problems caused by the expanded population, both military and civilian. Although the United States census reported an increase of only 15,000 during the period 1930-1940, in the next two years, the population exploded. It increased from 144,332 to 225,000 and by 1946 it was over

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<sup>18</sup>Burden, pp. 8-14.

In addition to the economic benefits of the war, Norfolk received two important stimuli. The first was that Norfolk citizens, awakened by the tremendous influx of servicemen, accepted their responsibility for the well-being and recreation of those men. Eventually their efforts formed a lasting bond between Naval personnel and the civilian public. The second was the remarkable transformation of the spirit of the city's people--their willingness to cooperate with government establishments as well as their own City Council to make the progress which had been achieved through war expansion into a stable economic and social platform for future growth. The major example of this was the creation of the City Planning Commission in 1946. The municipal election earlier that year brought a progressive slate of businessmen headed by Pretlow Darden into control, and they immediately launched a program under which the city's facilities were expanded and undeveloped land utilized. The Planning Commission was an important contributor to the accomplishment of those objectives.<sup>22</sup>

In conjunction with the Commission's plan for Norfolk's physical development, the problem of ridding the city of its

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<sup>22</sup>Robert R. MacMillan, "City Manager Government in Norfolk, Virginia--Its Development and Current Status" (Unpublished Masters thesis, William and Mary College, 1948), pp. 60-76.



slums was given to the newly reorganized Housing Authority. It was renamed the Norfolk Redevelopment and Housing Authority and Lawrence M. Cox was appointed Executive Director. As far back as 1937, a Citizen's Committee on Crime had pointed out the high social cost of slums and recommended a program to eliminate them. Wartime emergencies, however, forced the Housing Authority to concentrate on defense housing, and it was not until the war was over that it was able to return to its original goal. The City Council showed its support of the new program in December, 1948, by appropriating \$25,000 for planning a program of slum clearance. Thus, when the Federal Housing Act of 1949 went into effect, Norfolk was the first city in the country to complete its application for a grant under its urban redevelopment program. In March, 1950, Norfolk signed a contract for federal assistance to provide three thousand new homes, and six months later it received the necessary grant for acquiring property and demolishing dilapidated buildings.<sup>23</sup>

Besides the growing awareness of its social responsibility toward the general public, Norfolk's business

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<sup>23</sup>New Norfolk (edited by Thomas A. Hanes and published monthly by Norfolk Chamber of Commerce), December, 1948, pp. 6, 7, 16, 17; October, 1949, pp. 10, 11; and April, 1950, pp. 6-10.

community also was devoting a great deal of energy to broadening its economic base in order to provide greater stability. The most obvious source of new income for the city was through a project which would increase civilian use of its splendid natural port facilities. For this purpose the Norfolk Port Authority was established in 1948. Although Hampton Roads consistently led all North Atlantic ports in export tonnage, most of this tonnage was in coal and other bulk-loaded products, which brought relatively little revenue to the port. The new authority devoted itself especially to building up general cargo and bringing new industries into Norfolk that would equalize its economy between the shipping industry and general manufacturing.<sup>24</sup> The following is an excerpt from a release by the Norfolk Industrial Commission published October 11, 1946:

The industrial structure of the Norfolk area was broadened sharply during the past year. H. M. Thompson, commissioner of the Norfolk Industrial Commission, reported yesterday a gain of 16 major plants, representing a total investment of \$5,000,000 or more and employment opportunities for some 5,000 men and women. Not only that, but 100 existing plants emerged from wartime shackles by expending more than \$3,000,000 for improvements and extensions and are holding in abeyance, because

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<sup>24</sup>New Norfolk, January, 1949, pp. 2-6.

of commercial building restrictions, many other projects which would add millions of dollars to their industrial investments. In any event, private industry in the area is fast returning to normal operations after four years of war which saddled it with the dual problem of labor and material shortages. Based on a recent survey, 40,000 persons are receiving better than \$40,000,000 from private industry which, in the past year, had a production income ranging in excess of \$150,000,000 and used materials valued at \$66,000,000. Notable among new industries shaping up is the projected Berkley plant of the United States Gypsum Company which will spend more than \$600,000 in construction and an additional \$1,000,000 for machinery and other installations.<sup>25</sup>

In comparison, to show the amount which the military shore establishment was contributing, the Director of Civilian Personnel of the Fifth Naval District reported that for the same period the total number of civilians employed at such activities was 29,549, of which 7,420 were at N.A.S. Norfolk, and their total payroll was \$76,800,000.<sup>26</sup>

Just four years after the above reports, another comparison was made concerning the relative contributions of private industry and the military to the general area economy.

Since the close of the war, in excess of \$10,000,000 had been invested in the area of new plants, for the relocation of existing plants to larger quarters to permit greater production, and for the re-establishment of plants which had been discontinued during the war. In this same period approximately \$24,000,000 was expended on expansion and improvement of existing plants. A

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<sup>25</sup>Norfolk Chamber of Commerce, Statistical Digest of 1947, p. 8.

<sup>26</sup>Ibid., p. 9.

survey conducted by the Norfolk Industrial Commission showed that 295 industries were located in the Norfolk industrial area. These plants provided employment for approximately 25,000 persons, annual payrolls exceeded 64 million dollars; and the value of locally manufactured products exceeded 300 million dollars.<sup>27</sup>

The contribution of the military to the expanded economy was shown by an increase in its civilian payroll for the year to \$87,600,00 although the total employed had dropped by almost 1,000 since 1946. Even though the total decreased, N. A. S. Norfolk increased the number it employed by over 1,000. Therefore, while other bases economized, it remained a stable force in Norfolk's expanding economy. In addition to the civilian payroll, the Norfolk Industrial Commission at this time began to include military payrolls in its report of the city's economy. They totaled \$46,800,000 for the 24,402 shore based military personnel.<sup>28</sup>

Thus, because of the tremendous expansion of the military shore establishment during World War II, Norfolk became aware of its great economic potential as an industrial center. A break-through was caused by the federal government's

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<sup>27</sup>Norfolk Chamber of Commerce, Statistical Digest of 1951, p. 8.

<sup>28</sup>Ibid., p. 9.

large capital investments, which included those of the Public Works Administration as well as the military. Particularly notable were the large civilian housing projects and the tremendous expansion of the Naval Air Station. N.A.S. Norfolk grew from 236 acres to 2165 acres and sixty large buildings were constructed costing over sixty million dollars.<sup>29</sup> The major result of this was that the federal government's effect on the community was not forgotten by its citizens. When there was no let-down in the economy after World War II, as there had been after World War I, the businessmen were surprised but they were also determined to take advantage of the opportunity presented to them. With further aid from the federal government through its Housing and Redevelopment Program, they committed themselves to make Norfolk a great industrial-seaport. In the years 1946-1950, with the formation of urban authorities to take care of the social and economic problems of the thousands who had come to Norfolk during the war to seek better paying government jobs, Norfolk gained a mature understanding of the deficiencies in its economic base and began to attack the problem.<sup>30</sup> One

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<sup>29</sup>Burden, p. 6.

<sup>30</sup>Norfolk Chamber of Commerce, Statistical Digest of 1948, p. 3, 4, 21.

mistake it did not make was to disallow the part that the Navy had played in that development. In fact, relations with the Naval installations, especially the Air Station, and the naval personnel who manned those bases, both collectively and individually, were better than they had ever been before. It remained for the new decade to prove the city's ability to capitalize on its new found maturity.

## CHAPTER IV

### A PERIOD OF TRANSITION

1951-1965

During World War II, N.A.S. Norfolk became the largest complex of air bases on the Atlantic Coast. It was the operational headquarters for Fleet Air Atlantic, the chief supply center for aircraft parts, and the Navy's major aircraft overhaul and repair station. Yet, no sooner had shore establishments such as Norfolk proved their usefulness as major supporting arms of the Fleet than a new age with new scientific achievements in aircraft power made everything but the pilot obsolete. Although the propeller-driven AD Skyraider with its radially-cooled combustion engine was the primary carrier attack plane, the F9F series of jet aircraft--Panther, Cougar and Tiger--became the mainstay of fighter squadrons during the Korean conflict. By 1951 the rapid development of jet aircraft demanded a new concept of the facilities required to support naval air operations.<sup>1</sup>

All major Naval Aviation bases during World War II had been constructed near seaports where both seaplanes and

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<sup>1</sup>Captain H. P. Burden, USN, Command History of U. S. Naval Air Station, Norfolk, Virginia, OPNAV Report 5750.4 of 27 August, 1959, p. 16.

landplanes could be operated. The industrial complex surrounding these bases often imposed definite limits on airfields within the city limits. It was possible only to extend one runway per station to a length suitable for landing jet aircraft without dislodging permanent installations. Therefore, in 1951 an orderly shore station development program was devised to fit modern jet operations. It was known as the Master Jet Complex and consisted of a master jet airfield capable of basing four carrier groups, a seaport-industrial airfield as operational headquarters, and several auxiliary fields for defense and training requirements. The Hampton Roads Complex designated N.A.S. Norfolk as the seaport-industrial airfield, N.A.S. Oceana as the master jet field, and N.A.A.S. Chincoteague, N.A.A.S. Edenton, A.L.F. Fentress and N.A.F. Weeksville as auxiliaries. In conformity with the Master Plan, a construction program similar to the World War II project NBY 4158 was begun in 1952. Modernization, augmentation, or replacement of existing overhaul and repair facilities of Norfolk totalled over \$36,000,000 in the first year. From 1954 until 1959, an average of \$45,000,000 was paid to local construction firms each year.<sup>2</sup>

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<sup>2</sup>Ibid., pp. 17-19; and Archives, Fifth Naval District Public Works Office, n.p.



At this time the Navy's shore establishments in Hampton Roads, now employing over 35,000 civilians, contributed an average of \$156,000,000 per year to the general economy. In comparison, for the same period the total of all other employment in the Norfolk-Portsmouth metropolitan area averaged approximately 140,000 and the wages of these workers contributed an average of 560 million per year to the general economy. In other words, during the fifties every third worker was employed by the Navy, and almost a third of the total wages paid to employees in the Norfolk-Portsmouth area was disbursed by the naval shore establishments. Furthermore, this did not include the annual payrolls of the shore based military personnel [\$70,000,000], fleet based personnel [\$100,000,000], or the amount annually paid by the Navy to local businesses for goods and services [\$480,000,000].<sup>3</sup>

In his economic review for 1960, the research director of the Norfolk newspapers, Mr. William Diederich, determined that the city's federal and military establishments accounted for forty per cent of the metropolitan area's income. He said, "Despite the transfer of a number of units from the area in connection with the Navy's dispersal program, 1959

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<sup>3</sup>Norfolk Chamber of Commerce, Statistical Digest of 1962, pp. 40, 41.

Navy payrolls reached an all-time high of \$402,235,409."<sup>4</sup>

Also, as an example of the stimulus that the Navy's technological developments gave to the industrial community of Norfolk, Mr. Diederich reported that in the same year Tabet Manufacturing Company, makers of electronic devices who established their firm during World War II to supply the Navy's demands for such products, constructed a new \$400,000 plant. This same company is today in the process of expanding those facilities.<sup>5</sup>

In 1965, Norfolk took notice of the military's contribution to the community's economy by admitting in its

Statistical Digest that:

The Norfolk-Portsmouth Metropolitan area, containing the greatest concentration of naval power in the world, is strongly dependent on an armed forces economy. Since most economic barometers are based on an all civilian economy, the area often suffers when compared to less prosperous metropolitan areas. The data for such yardsticks as unemployment, income, retail sales, etc. do not reflect this unique situation. Therefore, a section of this Statistical Digest will be set aside to measure the hidden value of the military in the economy.<sup>6</sup>

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<sup>4</sup>Norfolk Chamber of Commerce, Statistical Digest of 1960, p. 6.

<sup>5</sup>Ibid., pp. 6, 7.

<sup>6</sup>Norfolk Chamber of Commerce, Statistical Digest of 1965, p. 50.

One of these hidden factors in Norfolk's economy is the buying power of the armed forces personnel. As calculated by the Public Information Office of the Fifth Naval District, the median income of the 66,282 Navy personnel located in Norfolk in 1960 was \$4,638, thus representing a buying power of over \$307,415,916.<sup>7</sup> This figure does not include subsistence or quarters allowance, amounting to an average of \$1,776 per year more for approximately seventy per cent of the personnel, which would add another \$82,401,072, giving a total of \$489,816,988.<sup>8</sup> Even if it were true that one-quarter of this staggering amount of money was spent in local markets and retail stores, it is clear that many Norfolk businesses would be severely hurt if the Navy should significantly decrease its shore establishments in the area.

Another hidden factor in the local economy is the retired military personnel. On August 24, 1966, speaking

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<sup>7</sup>The Norfolk Chamber of Commerce has estimated that \$6,924 annual civilian income equals \$4,638 median armed forces income, and this is 49.3 per cent greater buying power than regular income tables indicate. But, it should be remembered that even this cash difference does not take into account the hidden benefits such as medical care, reduced commissary and post exchange prices, etc., that leave more available for discretionary spending and increase the buying power.

<sup>8</sup>Norfolk Chamber of Commerce, Statistical Digest of 1965, p. 6.

at a meeting of the Suburban Kiwanis Club, Rear Admiral Reynold D. Hogle, Commandant of the Fifth Naval District revealed that 52,000 retired naval officers and enlisted men and their 50,000 dependents are now making their homes in the Metropolitan Norfolk area. He continued by saying:

These, plus 90,000 active duty personnel and 31,000 civilian employees, have resulted in a total figure that makes one out of every three persons living in Tidewater connected in some way with the Navy. To me this emphasizes that the destinies of the Navy and Tidewater are inseparably linked. Any move for the betterment of the community as a whole must take into consideration the Naval Shore Establishment.<sup>9</sup>

As an illustration of what the naval shore establishment means to the four-city area, in 1965 it poured over two billion dollars into the Hampton Roads economy through its purchases from local businesses.<sup>10</sup> In addition, the Navy's monthly civilian payroll approximated seventeen million dollars and the military payroll ran close to nine million. The Naval Supply Center alone disbursed \$23,421,000 for merchandise and supplies purchased in the area.<sup>11</sup> Recently, as a result of the war in Southeast Asia, 500 new employees, mostly aircraft mechanics and apprentices, were added at the Naval Air

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<sup>9</sup>Jack Kestner, "What Navy Brings, Tidewater Keeps," The (Norfolk) Ledger-Star, 24 August 1966, p. 26.

<sup>10</sup>Norfolk Chamber of Commerce, Statistical Digest of 1966, p. 6.

<sup>11</sup>Ibid., pp. 60, 61.

Station. This increase re-emphasizes the fact that the Overhaul and Repair Department of Norfolk N.A.S., now totaling approximately 5,500 civilian employees, is the largest single employer in the city and contributes over \$36 million in annual payrolls to the local economy.<sup>12</sup> There is no doubt that the key to Norfolk's prosperity is still in the hands of the military.

For proof of the degree of influence that the military shore establishment has on the economy of the Norfolk-Portsmouth metropolitan area, one merely has to look at the division in the area's basic labor force. The combination of federal government and military personnel comprise thirty-nine per cent of the total labor force, and with the criteria used by the Virginia Employment Commission it comprises seventy-nine per cent of the basic employment. But to depend on these figures alone to indicate the modern trend in the area's basic economy would be a mistake. Although the Navy continues to be a major contributor to the basic economy, from 1955 to 1965 the total number of civil service employees and military personnel assigned to shore establishments decreased by 4,000. During the same period, the work

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<sup>12</sup>Jack Kestner, "Air Facility to Add 500," The (Norfolk) Ledger-Star, 5 October 1966, p. 1.

force of the area's private industries gained 22,100 new workers.<sup>13</sup> From these figures it appears that local industries are beginning to make up for the drop in military expenditures during peacetime.

The following list indicates the industrial expansion of the Norfolk-Portsmouth Metropolitan area in the past few years.

1. 1963--Completion of Norfolk and Western Railway's highly automated coal loading Pier 6 at Lambert's Point.<sup>14</sup>
2. January 21, 1964--Dedication of the Virginia State Ports Authority's \$15 million Merchandise Pier P and supporting facilities at Lambert's Point. This marked the culmination of the Authority's acquisition and lease-back program involving the former Norfolk and Western Railway properties.<sup>15</sup>
3. April 15, 1964--Dedication of the \$200 million Chesapeake Bay Bridge-Tunnel, replacing the ferry system between Virginia's isolated Eastern Shore and Chesapeake

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<sup>13</sup>Norfolk Chamber of Commerce, Statistical Digest of 1965, pp. 50, 51.

<sup>14</sup>Frank Sullivan, "Economic Review of 1964 and Outlook for the Future," Norfolk Chamber of Commerce, Statistical Digest of 1965, p. 6.

<sup>15</sup>The (Norfolk) Ledger-Star, January 24, 1964, p. 8.

Beach in the new city of Virginia Beach.<sup>16</sup>

4. October 16, 1964--Consummation by the Norfolk and Western of the greatest railway expansion program in modern history--the unification of the Norfolk and Western with the Wabash, Nickel Plate, Sandusky Line, Pittsburgh and West Virginia, and a few lesser lines. Norfolk became the major outlet to the sea for an 8,400-mile rail system whose main lines covered the industrial midwest. The western terminus of the Norfolk and Western was extended to Omaha, Nebraska, 1,300 miles from Norfolk.<sup>17</sup>

5. December 28, 1964--Announcement of another major expansion of the Norfolk Ford Assembly Plant, adding 130,000 square feet of floor space to storage facilities and boosting total plant space to nearly one million square feet. The announcement followed closely the completion of an earlier \$10-million project which involved the addition of almost 200,000 square feet.<sup>18</sup>

6. 1965--Opening of General Electric Company's new plant in Portsmouth which plans to employ over 2,000 workers

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<sup>16</sup>The (Norfolk) Ledger-Star, April 15, 1964, p. 1.

<sup>17</sup>The (Norfolk) Virginian-Pilot, October 16, 1964, p. 1.

<sup>18</sup>The (Norfolk) Virginian-Pilot, December 28, 1964, p. 1.

by 1970.<sup>19</sup>

7. 1961-1965--Projects extending the runways and facilities at the Municipal Airport totalling over three million dollars were completed. The addition of the 1000 feet to the major runway enabled the airport to accommodate medium range jet aircraft.<sup>20</sup>

8. 1951-1965--Norfolk Redevelopment and Housing Authority Projects which created land for the expansion of industrial, educational, and low rent housing facilities.<sup>21</sup>

The completion of these projects provides three reasons why the Norfolk-Portsmouth area now is fulfilling its potential as an industrial seaport. First, the Virginia State Port Authority's acquisition and lease-back program of the Norfolk and Western's old facilities was very timely. Without Pier P, the record 800,000 tons of general cargo handled at Norfolk in 1964 would not have been possible. This operation was most helpful to the urban economy because the average handling cost amounted to \$13.00 a ton; all of which was funneled into

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<sup>19</sup>Norfolk Chamber of Commerce, Statistical Digest of 1966, p. 6.

<sup>20</sup>Arthur P. Henderson, "Airport Growing," New Norfolk, IV, No. 4 (April, 1966), 20-21.

<sup>21</sup>See Appendix IV.



local stevedoring firms. Similarly, the record 25,947,668 tons of coal dumped at the new Norfolk and Western piers helped swell the coffers of the diversity of businesses in the Norfolk area at the rate of \$2.25 a ton. Their combined success added \$68,782,253 to the area economy.<sup>22</sup>

The second part of Norfolk's "plan for progress" was the expansion of its transportation systems. Since the majority of the city's economy was based on trading goods not manufacturing them, Norfolk had to add to its shipping and railroad capabilities better facilities for other modes of traffic--trucking and flying. As former Mayor W. Fred Duckworth, now the Chairman of the Tidewater Virginia Development Council, pointed out in a recent interview, "The Norfolk-Virginia Beach area is bounded by water for over 180° of its circumference, and in order to be able to compete in the transportation market as well as for the tourist trade, it must build bridges over, under, and above the water."<sup>23</sup> The building of a network of bridges and tunnels linking Norfolk with the Eastern Shore via the 17.6 mile Chesapeake Bay Bridge and Tunnel, with the Peninsula via the

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<sup>22</sup>Sullivan, "Economic Review of 1964," Statistical Digest of 1965, p. 6.

<sup>23</sup>Duckworth Interview on June 28, 1966.

Hampton Roads Bridge and Tunnel, and with Portsmouth to the south via the two Elizabeth River Bridge and Tunnel systems, was a major step in the solution to the trucking problem. In 1964 the 1,129,017 vehicles handled by the bridge-tunnel brought in revenues approximating \$7,400,000. This represented an increase of 54% in vehicles and 48% in revenues over the old ferry system. In addition, the complex of interstate highways, circumferential freeways, and limited access roads leading into the city, which are now under construction, will immeasurably aid the trucking industry as well as making it easier for the ordinary suburban citizen of Greater Norfolk to get to and from its business centers.<sup>24</sup>

In 1950, the Norfolk Ports Authority accepted the responsibility of directing the progress of the new Municipal Airport. During the next fifteen years it became the leading air terminal in the State. Although only 202,323 passengers passed through its gates in 1950, by 1965 this figure had risen to 640,954. Airport manager, Preston Mangum, attributes this surge in commercial traffic to the military standby fares

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<sup>24</sup>Norfolk Chamber of Commerce, Statistical Digest of 1966, insert, n.p.; and Sullivan, "Economic Review of 1964," Statistical Digest of 1965, p. 6.

instituted by the airlines a few years ago.<sup>25</sup> Norfolk is serviced by three major airlines--United, Piedmont, and National--and a fourth, Allegheny Airlines, began operations on August 1, 1966. In addition to the rise in passenger service, air freight increased from 8,600,000 pounds in 1963 to 18,500,000 in 1965. For these reasons, the air transportation systems in Norfolk, which add over two million each year to the economy in payrolls, contribute a great deal to the growth and diversification of the city's commerce.<sup>26</sup>

The third major reason for the recent economic growth was that "unification," a term frequently used to describe the consolidation in 1964 of the N & W with the Wabash, Nickel Plate, Sandusky Line, Pittsburgh and West Virginia, and lesser lines, stimulated local railroad industry as nothing before or since World War II. Norfolk was the principal beneficiary of rising railway revenues already in evidence a year after the consolidation. Trainloads of grain, originating in the western segments of the railroad became as normal as the time freights now running

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<sup>25</sup>Arthur P. Henderson, "Norfolk Airport Enjoys Status as Leader in Area Industry," The (Norfolk) Ledger-Star, 16 July 1966, p. 36.

<sup>26</sup>Ibid.; and Statistical Digest of 1966, p. 55.

between Norfolk and the midwest. Furthermore, the N & W spent \$20 million in new classification yards to shorten the time of delivery to its seaport terminal in Norfolk. Even though this unification and expansion of the N & W did help to diversify the type of products shipped through the Hampton Roads ports, the railway's importance to the basic economy of the area is often overlooked. In 1964, for example, the Norfolk Terminal Division employed 1,700 and had a payroll in excess of \$10 million.<sup>27</sup> Only the Navy and a few other organizations can match those figures.

One of the few that can match those figures is the Ford Motor Company, and it is not waiting for any other industry to catch up with it. Since the completion of its 1964 expansion, it has already proposed to add another shift of almost 800 workers or to make further plant expansions. The choice is dependent on the city making land available for the expansion. The General Electric Company, which just established itself in the Portsmouth area, also is thinking of expansion and is similarly stymied.<sup>28</sup> Former Mayor Duckworth explained this by stating that:

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<sup>27</sup>Norfolk Chamber of Commerce, Statistical Digest of 1965, p. 6.

<sup>28</sup>Ibid.

The problem of industrial expansion or of establishing new businesses in the Norfolk area is the acquisition of enough land to which public utilities are supplied.<sup>29</sup>

In the 1950's and 1960's, Norfolk faced this problem squarely with its Redevelopment and Housing projects which are summarized in Appendix IV. With these projects, Norfolk not only solved one of its toughest economic problems but also a major social problem--low rent housing for poor Whites and Negroes crowded in the downtown slum areas. For industry, the removal of temporary World War II apartments at Broad Creek Village, which threatened to degenerate into new slums, provided a 468 acre tract which now is known as Norfolk Industrial Park. For the many low-income Norfolk families, the new brick apartments that rose from the spot where slums formerly stood provided their first real homes. In this connection the Authority has relocated more than 5,000 families, demolished 2,193 structures, and has purchased land in the amount of \$17,968,022 for its projects. From a statistical viewpoint, the urban renewal program undertaken by the Norfolk Redevelopment and Housing Authority has thus far brought to the execution phase slum clearance and re-development projects covering approximately 840 acres. Of this total the authority already has completed 465 acres

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<sup>29</sup>Duckworth Interview of June 28, 1966.

lying adjacent to the commercial center of the city.<sup>30</sup> In the words of Ed Grimsley, an old sailor turned news reporter, on a nostalgic return in 1965 to where he had spent many of his World War II liberties, "The sounds of your project's wrecking cranes, bulldozers, and trucks, played the dirge of a bawdy boulevard [East Main Street], and sounded the call for the march toward a progressive New Norfolk."<sup>31</sup>

The Norfolk Redevelopment and Housing Authority took ten years to plan the modernization of the city and fifteen years to accomplish it, but the result triggered no less than half a billion dollars of improvements in and outside project areas. A recent example of this is that following the announcement that the new Cultural and Convention Center would be constructed directly opposite its seven million dollar motor hotel, the Golden Triangle let it be known that they plan an expansion which will double its present room

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<sup>30</sup>Ibid., Frank Sullivan, "Norfolk's Urban Renewal Program, Nation's First, Saved Business Area From Economic Strangulation," The Municipal South (June, 1964), 6-9; and John I. Brooks, "The Record Speaks Best for Renewal in Norfolk," The (Norfolk) Virginian-Pilot, 2 August, 1965, p. 16.

<sup>31</sup>Edward Grimsley, "Dirge for a Bawdy Boulevard: Farewell East Main Street," The Commonwealth (January, 1966), p. 12.

capacity.<sup>32</sup> Also the I. T. Williams Corporation, one of the world's largest suppliers of logs for wood-veneer products, has announced that it soon will begin operations in the Norfolk area. This addition to the plants already operating in the area will make Norfolk one of the largest producers of veneer plywood products in the United States.<sup>33</sup>

Located in the southern most part of Virginia's Urban Corridor, the Norfolk-Portsmouth Metropolitan area with 58 new plants or plant expansions totalling over 40 million dollars stood second only to Richmond in total capital expenditures in the early 1960's.<sup>34</sup> The pace of development in the Urban Corridor has caused its share of the state's economic activity to grow substantially larger. It now has 67% of the wholesale trade volume, 59% of retail trade volume,

<sup>32</sup>Norfolk Chamber of Commerce, Statistical Digest of 1966, p. 77.

<sup>33</sup>In his interview, W. Fred Duckworth said that Penrod-Jurden Co., are the other producers. Williams was the first company contacted by the Tidewater Development Council eleven years ago and only now has it decided to locate in Norfolk. General Electric Corp. was the second to be contacted over nine years ago, and in 1965 opened a plant in Portsmouth and now plans expanding operations to an employment of over 2000.

<sup>34</sup>The Urban Corridor extends from Alexandria in the North, through Fredericksburg and Richmond, down the Peninsula to Newport News and Hampton, and across the Chesapeake Bay to Norfolk, Portsmouth, Chesapeake, and Virginia Beach. "A New Profile of Virginia's Urban Corridor," Research Bulletin No. 134 (Richmond: Richmond Chamber of Commerce, 1964), pp. 1, 2.

and 67% of the service trade volume in Virginia. Although it has only 17% of the land area of Virginia, it now has more than 55% of the population and of this number, 32% is urban.<sup>35</sup> Although Richmond still leads the State in industrial activity, there is no doubt that in the 60's, the Norfolk-Portsmouth metropolitan area has begun to challenge its leadership in growth statistics. Already Norfolk is the largest in population with 332,030. Its sister city, Portsmouth, is fifth with 117,283, and Virginia Beach recently jumped into third place with 131,860, displacing Newport News.<sup>36</sup> In 1965, Norfolk emerged the undisputed financial center of eastern Virginia. Total assets of area banks and savings and loan associations were in excess of \$1 billion, and when Virginia National Bank of Norfolk completes its merger plans, it will be the largest banking system in Virginia.<sup>37</sup>

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<sup>35</sup>Ibid.; "Industrial Development in Virginia's Urban Corridor," Research Bulletin No. 126 (Richmond: Richmond Chamber of Commerce, 1964), pp. 1, 2; and "Richmond Area Facts in Figures," two-page fact sheet printed by Richmond Chamber of Commerce, 1966.

<sup>36</sup>Ernest McCrary, "Beach Population 3rd," The (Norfolk) Virginian-Pilot, 17 October 1966, p. 21.

<sup>37</sup>Norfolk Chamber of Commerce, Statistical Digest of 1966, p. 6; and The (Norfolk) Ledger-Star, 16 July 1966, p. 42.



In comparison with other South Atlantic ports with a similar number of naval installations, Norfolk is the one which has profited the most from government investments. For example, Jacksonville, Florida, whose naval air facilities are comparable to Norfolk's Master Jet Complex, has an annual military payroll of \$218 million and a civil service payroll of \$62 million. This is far below Norfolk's annual total of \$445 million.<sup>38</sup> The naval shore establishment of Charleston, South Carolina contributes to the city's economy an annual amount--including payrolls, goods and services, purchases, and construction contracts--of about \$200 million.<sup>39</sup> This is less than one-half of the Norfolk Naval Shore Establishment's expenditures. Although Atlanta, Georgia, is not a port city, it is the geographical center of the transportation industry in the Southeast and Norfolk is in competition with her. Atlanta is the leader in the South in air traffic, motor freight, and general rail cargo, but

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<sup>38</sup>Norfolk Chamber of Commerce, Statistical Digest of 1966, p. 11; "Data: Jacksonville, Florida," a two-page fact sheet printed by The Committee of 100, Jacksonville Area Chamber of Commerce, 1966, n.p.; and Metropolitan Jacksonville Statistical Digest (Research Department, Jacksonville Area Chamber of Commerce, August, 1965), n.p.

<sup>39</sup>"Economic Fact Sheets No. 1 and No. 4," part of a mimeographed report by the Market Research Department of the Charleston Trident Chamber of Commerce, Charleston, South Carolina, June, 1966, n.p.

Norfolk, because of her favored geographical position in the central Atlantic coast, is catching up with her quickly in air cargo and passenger traffic. Norfolk's crowning glory among her transportation industries is her shipping traffic, with which Atlanta will never be able to compete. At the base of the difference between Atlanta's economic prosperity and that of Norfolk's is the fact that Atlanta is surrounded by land which allows manufacturing industries to take advantage of its superior geographical position, while Norfolk is surrounded for the most part by water and must depend on shipping, including the Navy's use of the Roadstead, for the basis of its economy. Proof of this claim is that the bulk of Atlanta's traffic is manufactured goods while that of Norfolk is raw materials, especially coal, grain, logs, and truck produce in bulk quantities.<sup>40</sup>

In a recent issue reporting on the new economic success story coming out of the South, U. S. News World Report pointed out that the Norfolk and Newport News areas now are tending

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<sup>40</sup>"Atlanta: Transportation," one of a series of monographs prepared by the Research Department of the Atlanta Chamber of Commerce, Atlanta, Georgia, Spring, 1966, pp. 3, 4, 11, 13, 22, 23, 25; "Atlanta: Facts and Figures," another of the above series, pp. 3, 10; and Norfolk Chamber of Commerce, Statistical Digest of 1966, pp. 52-56.

to rival New York as centers of the shipping industry.<sup>41</sup> It claimed that the South, once the nation's number one economic problem, now is outpacing the rest of the United States. During the 1960's, the South has been the only region of the country whose population has grown at a faster rate than in the decade of the 1950's. Furthermore, the eleven southern states are far ahead of the remaining 39 states in percentage growth in jobs, personal income, retail sales, farm cash receipts, factory output, and bank assets. An official of the Federal Reserve Bank of Atlanta put it this way:

The "New South" is old hat. I prefer to call it the "maturing" South. As you diversify and upgrade industry and agriculture and expand service industries, you create a more mature economy--one that is more stable and less vulnerable to severe fluctuations.<sup>42</sup>

This "maturing" South is losing much of its dependence on northern capital and executive skills. Today, the states and their major cities are becoming powers in their own right. The South is urbanizing faster than the nation as a whole. In 1940, it was two-thirds rural, now that majority has

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<sup>41</sup>"The South on the Rise--Success Story," U. S. News and World Report, LXI, No. 8 (August 22, 1966), p. 54.

<sup>42</sup>Ibid.

reversed in favor of the cities. It is in the cities that long-held traditions are losing some of their grip. In particular, there is less resistance to accepting federal funds for education, hospitals, research, and urban renewal. Among those U. S. News and World Report identified as that type of urban community was Norfolk, Virginia.<sup>43</sup> In the past fifteen years, with the help of the federal government, particularly the Navy, Norfolk and her sister cities have become the major metropolitan area in Virginia.

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<sup>43</sup>Ibid., pp. 54-58.

## CHAPTER V

### CONCLUSION

The direct involvement of the military, especially the Navy, in the economic life of the Norfolk-Portsmouth area began around the turn of the century. During the short period of the Spanish-American War much of the equipment, food supplies, and many of the troops embarked on their road south from the port of Hampton Roads. This caused an increase in total exports for a short while, but by 1901 the economy had dropped back to normal. The same thing occurred in the 1920's after World War I, but by then the Navy had firmly established Norfolk as its major supporting facility along the Atlantic seaboard. Even though the Washington Disarmament Treaty [1921] and the London Treaty [1930] demanded a reduction in total defense expenditures, the Navy continued to expand its shore bases at Norfolk. Under these agreements, limits were placed on the number of capital ships [battleships and cruisers] the U. S. Navy could have in service but nothing prevented it from developing its submarine force or its new and potentially powerful air arm.

At Norfolk Naval Air Station in the 1920's, aviation experimentation, testing, and training of pilots to man the

planes of the new aircraft carriers increased rapidly. During this period the Navy became so confident of the importance of N.A.S. Norfolk to the future defense of the nation that in years 1928-1930 it built thirty new permanent brick buildings to replace the temporary ones which had been used since the commissioning of the base in 1918. It also hired the first civil service workers to replace officers and enlisted men needed to man the ships and planes at sea more than the facilities ashore. At this time the gradual development of military shore establishments did not seem to aid in the diversification of the area's industry; however, it did begin to give stability to the basic economy and a promise of future growth.

Although the establishment of several installations during World War I caused old businesses to expand and many new ones to move into the Norfolk area, the major economic growth was still within the bulk transportation, chemical fertilizer, and shipbuilding industries. After the war, when the demands of the military sharply declined, so did what little desire private industry had of investing in the area. The only company that was established during the early 1920's that continued to expand afterwards was the Ford Motor Corporation, but its success was not because of any

stimulus from local economic conditions. The company's major reason for success was the nationwide interest in the automobile. In the late 1920's, as the military shore installations began to depend more on the civilian community to satisfy their employment needs, the area economy began to develop a basic stability outside of local private industry. By 1930 the urban economy of the Hampton Roads area had become so dependent on the direct and indirect influence of the operations of military facilities that the effects of the severe fluctuations of private business in the early 1930's were buffered considerably. The most important occurrence in the Norfolk-Portsmouth business community during the 1930's was the realization of the magnitude of the part which the naval shore establishments played in the economic stability of the area. This was re-emphasized in 1932 when the Navy decided to cut down the aircraft overhaul and repair service at the Norfolk Naval Air Station. A committee of area businessmen, urban administrators, and civilian employees of the air station was sent to Washington to persuade the Secretary of the Navy not to close the industrial facilities of the station because of the adverse effects which it would have on the area's basic economy. The Navy did not close the air station shops, and until the

late thirties the naval shore establishment remained a stabilizing factor in the urban economy. But, it was not a stimulus to a diversified industrial economy.

As the federal government became more involved in the recovery of the national economy after the depression and during World War II, so did its demands on local business. However, only the transportation, construction and wholesale supply companies reaped the full benefit of this tremendous growth. For example, Norfolk Naval Air Station expanded from 236 acres in 1940 to 2165 acres in 1944, and sixty large buildings were constructed costing over sixty million dollars, while the growth rate of local manufacturing remained at relatively low level. No major manufacturing plants were established in the city during the war. Norfolk was merely the shipping port for the products of the rest of the country.

In the 1930's and early 1940's, the most significant benefit to the general economy was the gain in civil service employment at the military shore installations and the military's demands for local goods and services. During that period the naval facility which made the largest demand was the Norfolk Naval Air Station. It supplied the Pacific as well as the Atlantic Fleets with its planes, repair parts and advanced trained pilots. The number of civilian employees



at N.A.S. Norfolk rose from less than 100 in 1930 to over 1000 in 1940 to over 8000 in the peak wartime years. The payrolls of these workers contributed over \$50,000,000 a year to the city's economy. In addition, many small businesses were begun in the Norfolk-Portsmouth area because of the requirement for special aircraft devices. The rapid changes in aircraft design toward the end of the war extended these demands even beyond the wartime years into the jet age. This was the economic stimulus that Norfolk needed. There was no significant drop in the economy as there had been after previous wars and thousands of skilled workers employed by the military shore establishment and related local manufacturing companies remained at their jobs. The Korean War caused the military to expand their facilities even more. Norfolk's population doubled in less than fifteen years and this created a stimulus in itself to local business.

A challenge to join the progress of urban development in the twentieth century was given to the business and civic leaders of Norfolk. They responded by forming commissions to seek ways of solving the social and economic problems of the city--to provide the people with modern public facilities, adequate housing, schools, recreational areas and to attract new industries to provide the jobs and the goods and services

demanding by a growing community. In 1949 Norfolk's progressively-minded city council took the opportunity to begin urban redevelopment in order to provide the land and public services that were being demanded by the expansion of local businesses. Also they were encouraged to "think big" by the prospects of northern industries being interested in placing new plants in the Norfolk area. The majority of this enterprise was completed in the 1950's and early 1960's. At the very beginning of this redevelopment program, the Norfolk Ports Authority in conjunction with the Chamber of Commerce, the Industrial Commission, and other local merchant's associations, began an advertisement campaign aimed at attracting a wider variety of industrial investment. This resulted in northern industries beginning to look with favor on the idea of establishing local manufacturing plants. In 1954 former Mayor W. Fred Duckworth organized the Tidewater Virginia Development Council, a combined enterprise of private industry and local municipal and county governments. Its purpose was not only to coordinate the efforts to interest new industries in the Tidewater area but to aid the new investors in solving the problems of locating their businesses. Finally, after four previous tries in the twentieth century, the industrial advertisement campaigns of Norfolk's businessmen paid off. But the reason for this success cannot be

attributed solely to the perseverance of the local business and civic leaders. Its basis lay in the economic stability produced by the gradual development of the naval shore establishment in the twenties and thirties. Yet, even this was not the complete answer. The major reason was the combined effect of the huge number of capital improvements made to naval installations, the large amount of supplies demanded by the military in general, and the tremendous increase in civil service employment during and after World War II. The effect of these demands on local businesses provided the economic stimulus which truly made the Norfolk-Portsmouth Metropolitan Area one of the most prosperous in the "maturing" South.

In the past two decades, Norfolk has become a major rail center for agricultural products and the largest shipper of coal in the world. In more recent times, air cargo and passenger traffic has begun to take its place alongside shipping and rail industries as a major contributor to the area's economy.<sup>1</sup> These transportation industries are now challenging the Navy as the supplier of the greatest portion

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<sup>1</sup>Arthur P. Henderson, "Norfolk Airport Enjoys Status As Leader in Area Industry," The (Norfolk) Ledger-Star, 16 July 1966, p. 36.

of the basic economy, but it is a slow process to overcome such a big lead. Recent diversification of local manufacturing and supply companies has helped to close the gap. It also has given a boost to the businessman's claim that the area's transportation systems are the key to its future prosperity.<sup>2</sup>

In reviewing the economic growth of the Norfolk area in the twentieth century, Mr. George L. Wadsworth, Jr., Executive Director of the Builders and Contractors Exchange, recently said:

Business usually fed on itself; growth did not come from new industry moving into the area. The biggest pressure to develop the Norfolk area came from the Navy's demands on local contracting businesses.<sup>3</sup>

In concurrence, former Mayor W. Fred Duckworth said,

Capital has always been our biggest problem; no gamblers except the federal government . . . but now companies we contacted over ten years ago are beginning to take notice of the opportunities here.<sup>4</sup>

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<sup>2</sup>"Exports, Imports Increase in Newport News and Norfolk," The (Norfolk) Virginian-Pilot, 29 September 1966, p. 68; and "Va. Chemicals Ships to 2000 Customers in 80 Countries," The (Norfolk) Virginian-Pilot, 25 September 1966, p. E-13.

<sup>3</sup>Wadsworth interview of June 30, 1966.

<sup>4</sup>Duckworth interview of June 28, 1966.

The future development of the Norfolk-Portsmouth Metropolitan Area will depend largely on the vigor and perserverance of its business and civic leaders, but it never would have been possible without the enormous capital investments made by the federal government. The Federal Housing Act of 1949 and subsequent Congressional appropriations for urban renewal contributed greatly to the remodelling of downtown Norfolk which made room for industrial expansion. But, as the history of the Norfolk Naval Air Station has disclosed, it was the Navy's efforts to develop a major shore establishment in the area that contributed the most to the creation of Greater Norfolk. In the twentieth century there can be no doubt that the Navy held the dominant position in the development of the area economy.

## APPENDIX I

### PWA AND WPA PROJECTS, 1933-1941

June 18, 1938

Authorized by the Chief of Bureau of Yards and Docks  
Naval Public Works - Combined WPA-PWA Emergency Relief  
Construction Program

Approved by the President June 16, 1938 under PWA  
Appropriation Act of 1938:

Bulkhead and fill lagoon	\$ 80,000
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December 15, 1939

1. Construction of barracks - enlisted personnel	750,000
2. Construction of west extension to Building V-28-- (Engine Overhaul)	550,000
3. Construction of a seaplane ramp	<u>250,000</u>

Total PWA and WPA expenditures in 1938 and 1939	\$2,350,000
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#### 1940 WPA Projects

Improvements, minor alterations, rehabilitation of present facilities	\$24,600
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#### 1941 WPA Projects

\$45,000 allotted--divided between station and  
Bureau of Aeronautics projects.

## APPENDIX II

### FROM THE RECORDS OF THE TRAINING DEPARTMENT, N.A.S. NORFOLK

Personnel on board - 12 July 1939

<u>Unit</u>	<u>Number on Board</u>
Air Station	340
Ranger Squadrons	387
Ranger Utility Squadron	13
Wasp Squadrons	303
Four Patrol Squadrons	356
U.S.S. St. Louis Aviation Unit	16
U.S.S. Omaha Aviation Unit	9
U.S.S. Tuscaloosa Aviation Unit	18
U.S.S. Quincy Aviation Unit	23
U.S.S. Vincennes Aviation Unit	<u>20</u>
TOTAL	1485

VP-53 (Temporarily at Annapolis) 121

161 Single Officers Attached to Above Units

Fleet Units Based at this Station 19 December 1940:

Commander Patrol Wing 5  
Four Patrol Squadrons  
U.S.S. Ranger Air Group  
U.S.S. Wasp Air Group  
Commander Aircraft Patrol Force (Temporarily at Washington)  
Aviation Units from:  
U.S.S. Arkansas  
U.S.S. New York  
U.S.S. Vincennes  
U.S.S. Wichita

Note: Each Squadron was about 200 or more officers and men, thus the above represented over 2000 officers and men.

**Fleet Units on Board April 1, 1941:**

ComPatWingsLant  
 Ranger Utility Unit  
 Utility Patrol Wing  
 USS Omaha  
 USS Texas  
 USS New York  
 USS Arkansas  
 Ranger and Wasp Air Groups

**Total: Over 2600 officers and men**

**Fleet Units on Board August 13, 1941:**

PatWingsLant Fleet  
 Utility Patrol Wing-5  
 Operational Training Squadron  
 Advanced Carrier Training Group  
 USS Cincinnati Unit  
 Hornet Utility Unit  
 Yorktown Air Group  
 Ranger Air Group  
 Wasp Air Group

**Total: Over 3400 officers and men.**

**Fleet Units on board March 20, 1942:**

Various Squadrons of patrol, attack and support planes

**Total: Over 3800 officers and men.**

**Fleet Units on board November 27, 1942:**

Various Squadrons of patrol, attack, and support planes  
 FairWingLant Utility  
 British Air Groups

**Total: Over 5000 officers and men.**



APPENDIX III

PUBLIC - NUMBER 43 - 78TH CONGRESS

CHAPTER 87 - 1ST SESSION

H.R. 4278

AN ACT

To authorize the Secretary of the Navy to proceed with the construction of certain public works, and for other purposes.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA, IN CONGRESS ASSEMBLED, That the Secretary of the Navy is hereby authorized to establish, develop, or increase naval aviation facilities, with which shall be included the authority to purchase, accept by gift, or otherwise acquire land to construct buildings and accessories with approximate costs as indicated: - - - - -  
Norfolk, Virginia, \$500,000 for acquiring the land described and authorized by the Act of June 14, 1934 (48 Statute 957), as amended by section 5 of this Act; Sec. 5. The Act of June 14, 1934 (48 Statute 957) after the enacting clause is hereby amended to read as follows:

"That the Secretary of the Navy be, and be hereby is, authorized to acquire by purchase or condemnation, additional

lands adjacent to the Hampton Roads Naval Operating Base, Norfolk, Virginia, such lands lying north of the Virginian Railway and west of Granby Street. The sum of \$500,000, authorized by Section 1 of the bill H.R. 4278, as enacted, for the acquisition of land at or in the vicinity of Norfolk, Virginia, shall be available for the purposes of this Act."

Approved, April 25, 1939 and implemented by the Naval Appropriations Act for fiscal year 1940, approved May 23, 1939.

## **APPENDIX IV**

### **FACTS ON NORFOLK REDEVELOPMENT AND HOUSING AUTHORITY**

#### **PROJECTS, 1951-1965,**

**Furnished by the Authority from their files.**

##### **Project No. 1**

**Size: 123.2 acres; Begun December, 1951**

**Net Cost: \$5,699,702**

**City's Share: \$1,899,901**

**Federal Government: \$3,799,801**

**Private Re-use: 38.1 acres, Public Re-use: 85.1 acres**

**Status: All parcels acquired; all structures vacated and demolished, new construction completed 1964.**

**Key Provisions: New sites for light industry and commerce, development of first .15 of which has brought more than a five-to-one increase over the before-redevelopment tax assessment; gone are the slums that formerly cluttered downtown's doorstep. Replacing them are a public housing project with 752 low-rent apartments (Young Park), a fire station, an elementary school, and a number of new commercial structures including the 13-story, 361-room, \$6 million dollar Golden Triangle Hotel.**

##### **Project No. 2 (Atlantic City)**

Size: 141.0 acres; Begun July 1957

Net Cost: \$7,145,591

City's Share: \$2,302,397

Federal Government: \$4,843,194

Private re-use: 36.6 acres, Public re-use: 98.9 acres

Status: All parcels acquired; 97% of all structures demolished.

Key Features: The project provided a large part of the land for a 6-lane highway linking the city's east and west sides. Its outstanding achievement has been the creation of the 35-acre Medical Center, which at present consists of a \$2.5-million office building for physicians and dentists, a 492-bed hospital, a 100-bed children's hospital, and a Public Health Center. Under construction is a 218-bed addition to the existing hospital, and soon to be started as a Rehabilitation Center. A study is being made to determine the best uses for this area, and hopes are high for a \$100-million Medical complex that will ultimately include a 4-year medical college. Recently completed in the Atlantic City Project is Hague Towers, with 20 stories and 262 apartments. A second building of comparable size will round out this dual-phase apartment complex of 500 units.

Project No. 3 (Downtown Civil and Commercial Redevelopment)

Size: 132 acres covering half of the central business district

Net Cost: \$25,442,029

City's Share: \$8,122,449

Federal Government: \$17,319,580

Re-use Provisions: Streets, 34.80 acres; public parking, 48.91 acres; private parking 2.62 acres; pedestrian ways, 13.30 acres; Civic Center, 17.46 acres; commercial, 17.59 acres; not being acquired, 4.54 acres.

Status: 60% complete

Key Provisions: Bars and burlesque have given way to Main Plaza East, a pedestrian mall, and Plaza One office building. The newly completed Civic Center and the 23-story Virginia National Bank, now under construction, exemplify the dividends steadily accruing from redevelopment. The Kirm Library, built on a downtown site provided by redevelopment, serves about 1,500 citizens every day. Historic structures in the area are being preserved. The old courthouse, built in 1847 as a city hall, is now the MacArthur Memorial. In its first year of existence the Memorial drew over 450,000 visitors. At the east end of Freemason Street, the Willoughby-Baylor house (c. 1794) is undergoing restoration and a new Sports Colosseum has been designed for the area south of the Golden Triangle Motel.

Additional projects include the Ghent Conservation Area,

which involves the conservation of a fine old residential neighborhood threatened by blighting influences; Rosemont, 306 acres of dilapidated hovels without water, drainage, or sewers, which is being developed as a totally-planned community of privately owned homes; and, the Old Dominion College Project, the objective of which is to eliminate the blighted structures surrounding the college campus and make land available for campus expansion and additional academic facilities.

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George L. Wadsworth, Jr., Executive Manager of the Builders and Contractors Exchange, June 30, 1966.

Donald W. Shriver, Executive Manager of the Norfolk Chamber of Commerce, June 22, 1966.

Ralph B. Hanna, Sr., Retired Assistant Superintendent and Chief of Records of U. S. Post Office Motor Vehicular Service, Norfolk, Virginia, and former Chief Petty Officer, Yeoman, at Norfolk Naval Air Station from July, 1918 to May, 1919.

L. W. Cross, Executive Secretary, Navy YMCA, Norfolk, Virginia, June 30, 1966.

W. Farley Powers, Sr., Teacher of Wesleymen's Bible Class from 1936 until 1961, and former Secretary of Smith-Douglas Company, May 10, 1966.

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C. W. Howe, Public Works, November, 1944.

L. A. Daniels, Chief Clerk, Assembly and Repair, November, 1944.

C. E. Kirkwood, Supply, November, 1944.

F. A. Heckman, Engineer, BuAer Maintenance and formerly a draftsman for N.A.S. Assembly and Repair, November, 1944.

Clifford Ragan, Quarterman, Assembly and Repair,  
November, 1944.

Miss Corrine Day, Radio and Radar, Assembly and Repair,  
November, 1944.

Wilbur Henderson, Fabric and Upholstery Shop, Assembly  
and Repair, November, 1944.

Letters to the author:

Eugene E. Wilson, dated October 30, 1956.

J. C. Hunsaker, dated November 21, 1956.

Louis J. Gulliver, dated November 11, 1956.

Patrick N. L. Bellinger, Vice Admiral, USN (Ret.), dated  
November 19, 1956.

All of the above answer specific questions about  
the early era of naval aviation, and Bellinger's  
letter describes Norfolk Naval Air Station's part in  
its development.

## BIOGRAPHICAL DATA

Ira Richard Hanna was born in Norfolk, Virginia, on September 16, 1935. Receiving his early education in the public schools of Norfolk, he entered the United States Naval Academy, Annapolis, Maryland, in the summer of 1953. He majored in Naval Science and received a B.S. degree from the Naval Academy in June, 1957.

Following graduation and upon receiving his commission as an Ensign, United States Navy, Mr. Hanna served aboard the Destroyer Charles P. Cecil (DDR-835), whose homeport was Norfolk, and the Heavy Cruiser Des Moines (CA-134), Flagship of the Sixth Fleet operating in the Mediterranean Sea, which had as its homeport Villefranche, France. He attained the rank of full Lieutenant in the regular naval service. Although he resigned his regular commission in 1961 in order to enter private business, Mr. Hanna presently holds the rank of Lieutenant Commander in the Naval Reserve.

After four years' business experience, having held positions as Project Engineer for General Electric Corporation's Electronic Air Defense System Project L-112, and Vice President of Hanna Garden Center Incorporated, Mr. Hanna entered Old



Dominion College in September, 1965, to pursue studies leading to a Master of Arts degree in American History. While completing these studies, he is teaching at Norfolk Academy, the oldest independently established boys educational institution in that city.