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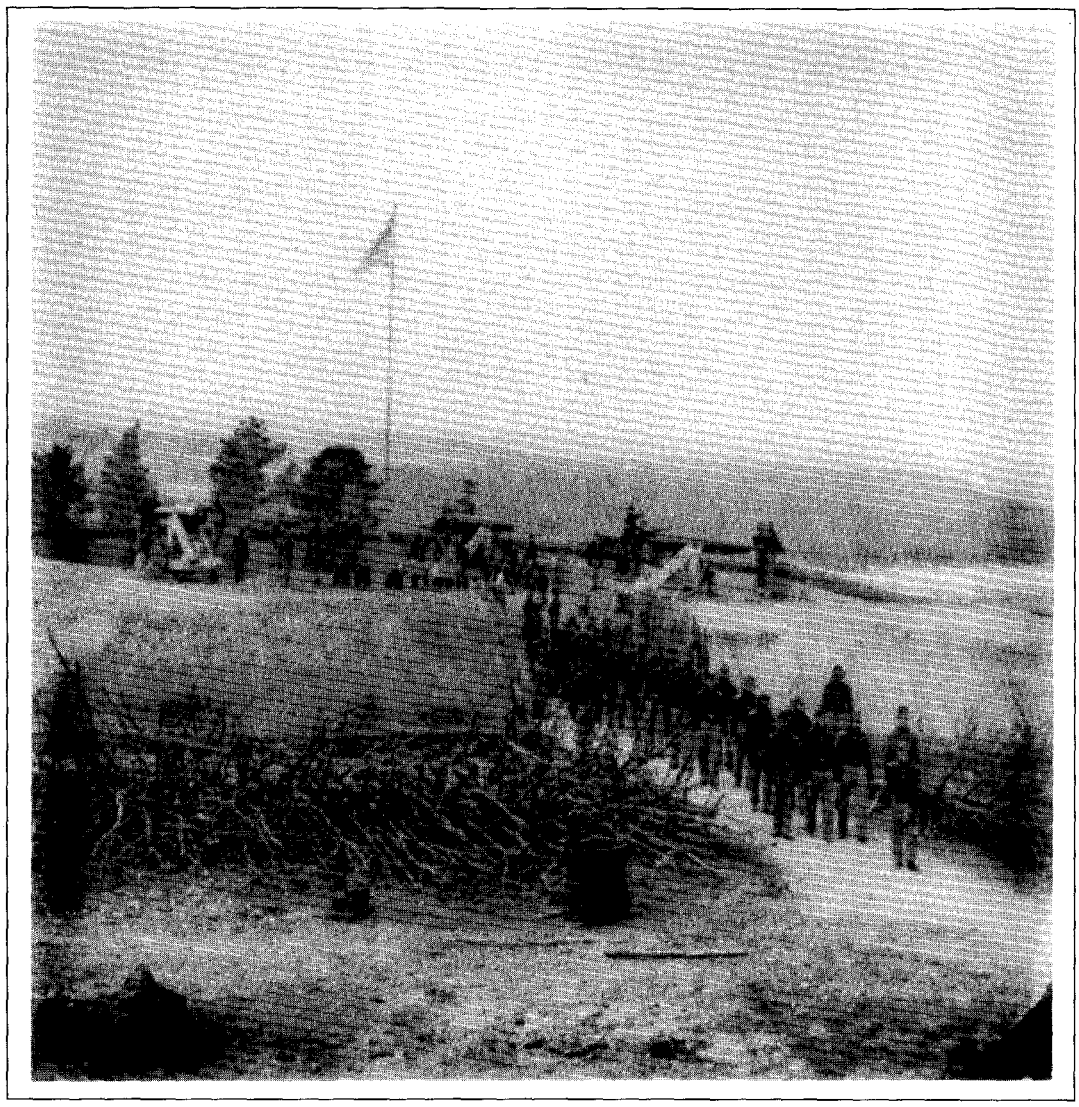

A Historic Resources Study: The Civil War Defenses of Washington

Part I

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A Historic Resources Study: The Civil War Defenses of Washington
Part I

United States Department of Interior
National Park Service
National Capital Region
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Chapter I

An Introduction to the Civil War Defenses of Washington

CHAPTER I: INTRODUCTION TO THE CIVIL WAR DEFENSES OF WASHINGTON

The Historic Resources Study of the Civil War Defenses of Washington was completed for the Capitol Region of the National Park Service to serve a variety of purposes.

1. To provide a narrative overview and analytical history of the parks.
2. To comprehensively document the history of the Civil War Defenses of Washington and its features.
3. To provide a historical framework for future preservation efforts.
4. To assist management in identifying the scope and variety of historic resources in the parks.
5. To provide historical information to improve and enhance interpretation of the parks and historic resources.
6. To assist the National Park Service in developing a Statement for Management/ Management Plan for the related parks by providing a historical basis for future planning.

This Historic Resources Study, has, therefore, accomplished the objectives detailed above through extensive research in libraries, archives and manuscript repositories. The narrative history and accompanying historical analysis provides the most comprehensive study of the Civil War Defenses of Washington ever undertaken. Previously little researched subjects such as non-federal owned sites related to Battle of Fort Stevens, logistics, roads, day to day activities within the forts, relationship of minorities, pre-Civil War background, the "Fort Drive," and the post-Civil War history of the fortifications receive appropriate attention. In addition, all research notes, numerous related illustrations and some documents have been transferred to a CD, which was submitted with the study and provides additional information for future requirements.

This historic resources study addresses many subjects. Previously, subjects such as the post-war history of the Defenses of Washington up to the 1960s; the "Fort Drive," the post-Civil War use of the defenses by the U.S. Military, the role of minorities with the Defenses of Washington, day to day activities within the forts, logistics, roads, and the pre-Civil War Defenses of Washington, were only sparsely researched and documented. Other important subjects such as the history of the fort parks receive the attention they deserve.

Much of the information pertaining to the Defenses of Washington in the post-Civil War period up to the 1960s and the "Fort Drive" was unknown before. Some very interesting documents, for that period, were discovered in the National Archives, such as: T.S. Settle, "Legal Authority for Acquisition of Land and Construction of the Fort to Fort Drive, in the District of Columbia," November 14-15, 1940; T.C. Jeffers, "A Brief History of The Fort Drive - Evolution of Its Concept and Function," March 17, 1947; and T.C. Jeffers, "The Fort Drive, A Chronological His-

tory of the More Important Actions and Events Relating Thereto," February 7, 1947; all from the National Archives and "Justification: The Fort Drive - Washington, D.C., " from Archives of the District of Columbia. In addition, research uncovered the fact that the "Fort Drive" was suggested much earlier than many thought, at least as early as 1872.

The use, or non-use, of the fortifications by the United States military forces is much better known, now. Surprisingly, the former fortifications of the Defenses of Washington experienced little military use in later years, even during other wars. But, of course, a few, such as forts Whipple, Greble, Reno and Foote witnessed a great deal of military use.

A great deal of new information pertaining to the relationship of minorities to the Defenses of Washington was discovered. The role of U.S. Colored Troops in the construction and defense of the fortifications is better understood. In addition, much new information is available on the work of Freedmen and women in the Defenses of Washington. Finally, the association of African-Americans with the former fortifications after the Civil War is now better known.

Much more information relating to day-to-day construction and maintenance activity within the Defenses of Washington during the Civil War was uncovered. Questions such as who actually worked on the construction and maintenance of the fortifications, who supervised the work, and what was the value of the fortifications now have answers. Now, there are documents and information to backup General John G. Bernard's 1871 report on the Defenses of Washington.

One chapter addresses Early's Raid on Washington/Battle of Fort Stevens and the existing, associated, historically significant sites with integrity. Suggestions on how to interpret the event are also provided within the chapter. If only the U. S. Government had acquired Fort Stevens when some individuals and organizations had suggested, we wouldn't have many questions about how to interpret the event.

Other subjects that previously received little attention are the logistics involved in the military defense of Washington, D.C. and the roads used, constructed and maintained by the U.S. Army within and around the Defenses of Washington. These aspects of the defenses still affect the area in some ways today. No doubt, they will also influence the future of the Nation's capital!

Although some research and writing had addressed aspects of the pre-Civil War defenses of Washington, D.C., this is the first time that the whole subject has been addressed in one place. The chapter begins with the early defenses of the Washington Navy Yard and Greenleaf Point and the military reservations set aside within the city. The erection of the fort at Jones Point in Alexandra, its demise, and the construction of Fort Warburton, across the Potomac River, is covered next. The defenses of Washington, both permanent and temporary receive attention. Finally, the planning, erection, maintenance and alterations of Fort Washington, the one river defense of the capital, in the period following the War of 1812, takes the history up to the beginning of the Civil War.

While accomplishing the research for this study, the author visited numerous libraries, manuscript repositories and archives. These institutions are listed below:

Libraries

- Library of Congress, Washington, D.C.
- Library, Archives I, National Archives and Records Administration, Washington, D.C.
- Library, Archives II, National Archives and Records Administration, College Park, MD
- Library, U.S. Army Military History Research Collection, Carlisle Barracks, PA
- U.S. Military Academy Library, West Point, NY
- Washington, D.C. Historical Society Library; Washington, D.C.
- Martin Luther King, Jr. Library, Washington, D.C.
- Library in the Virginia Room, Fairfax Regional Library, Fairfax County, VA;
- Library in the Arlington Room, Arlington County Library System, Arlington County, VA
- Howard University Library [for theses and dissertations], Washington, D.C.
- Library, George Mason University, Fairfax, VA
- Alderman Library, University of Virginia, Charlottesville, VA
- Architecture libraries, University of Virginia, Charlottesville, VA
- Mckeldin Library, University of Maryland, College Park, MD
- Library, Fort Ward City Park, Alexandria, VA

Archives

- Military Records, Archives I, National Archives and Records Administration, Washington, D.C.
- Legislative Records, Archives I, National Archives and Records Administration, Washington, D.C.
- Military Records, Archives II, National Archives and Records Administration, College Park, MD
- Still Pictures Branch, Archives II, National Archives and Records Administration, College Park, MD
- Cartographic Records, Archives II, National Archives and Records Administration, College Park, MD
- Civil Records, Archives II, National Archives and Records Administration, College Park, MD
- Archives, U.S. Military Academy, West Point, NY
- District of Columbia Archives, Washington, D.C.

Manuscript Repositories and Other Reference Collections

- Manuscript Division, Library of Congress, Washington, D.C.
- Maps Division, Library of Congress, Washington, D.C.
- Prints and Photographs Division, Library of Congress, Washington, D.C.
- Periodicals Divisions, Library of Congress, Washington, D.C.
- Manuscript Collections, U.S. Army Military History Research Collections, Carlisle Barracks, PA
- Photographic Collections, U.S. Army Military History Research Collections, Carlisle Barracks, PA
- Special Collections, U.S. Military Academy Library, West Point, NY
- Research and Photographic Collections, Washington, D.C. Historical Society, Washington, D.C.
- Reference Collections and Vertical Files, Washingtoniana Room, Martin Luther King, Jr. Library, Washington, D.C.
- Reference Collections and Vertical Files, Virginia Room, Fairfax Regional Library, Fairfax County Library System, Fairfax, VA
- Reference Collections and Vertical Files, Arlington Room, Arlington County Library System, Arlington County, VA
- Xeroxed Documents Collection, Freedmen and Southern Society Project, University of Maryland, College Park, MD
- Reference Collections, Fort Ward City Park, Alexandria, VA
- Special Collections, Library, George Washington University, Washington, D.C.
- Structure and Site Collections, City Historic Preservation Office, Washington, D.C.
- Collections, Rock Creek Park Nature Center, National Park Service, Washington, D.C.
- Collections, Battleground National Cemetery, National Park Service, Washington, D.C.
- Nomination Files, National Register of Historical Places, National Park Service, Washington, D.C.
- Battlefield Survey Files, Civil War Sites Advisory Commission, National Park Service, Washington, D.C.

In the course of research on the Civil War Defenses of Washington and in writing this historic resources study, the author found and used a variety of materials but, certain items were valuable and deserve recognition. The numerous articles and books written by Benjamin Franklin Cooling

provided valuable assistance. John G. Barnard, the Chief Engineer of the Defenses of Washington for most of the Civil War wrote a report for the U.S. Army Corps of Engineers, published in 1871, that is a required read for anyone interested in the subject. The various National Park Service historic structure studies, interpretive prospectus, cultural landscape inventory, and archaeological research studies were of immeasurable use in this study. Finally, various unpublished masters theses and doctoral dissertations filled in information on subjects and periods otherwise undocumented.

Besides the sources mentioned above, the author discovered many basically new sources, both primary and secondary and published and unpublished, in the various research institutions he visited. This study's bibliography, endnotes and appendices should serve as a treasure trove for those interested in the history of the Defenses of Washington. In addition, a number of newly published sources have appeared while researching and writing this historic resources study.

While researching and writing this study, the author received valuable guidance and assistance from a variety of individuals including Gary Scott, Regional Historian, Capital Region, National Park Service; Steven R. Potter, Regional Archaeologist, Capital Region, National Park Service; Michael Musick and Mike Pilgrim, Archivists, Military Reference, Archives I, National Archives and Records Administration; William C. Beckner, CEHP Inc.; Benjamin Franklin Cooling, military historian and renowned expert on the Civil War Defenses of Washington; and my wife, Gayle G. Grossman, for enduring this project for so many years.

Chapter II

Pre-Civil War Defenses

CHAPTER II: PRE-CIVIL WAR DEFENSES OF WASHINGTON

Historical Defense of Cities

Almost from the beginning of time, man sought advantage in conflict with enemies. Missiles, from stones to spears, were the first weapons. Besides weapons, defense, or the use of fortifications, became a valuable recourse. In 1972, Horst De La Croix, in his *Military Considerations in City Planning: Fortifications*, remarked: "Man's desire and need for protection are as old as his aggressive impulses, and few of his occupations have absorbed as much of his attention, time, effort, and capital as the design and construction of defenses against the transgressions of his human enemies. Since neolithic times he has endeavored to render his settlements safe from aggression by surrounding them with massive defensive structures that have become enduring records of his material progress on the one hand, and impressive monuments to his bellicose inclinations on the other."[1]

A U.S. Army Engineers pamphlet, on the evolution of the art of fortification, elaborated: "As the country became more thickly settled and the tendency to gather into communities became more marked, man began to surround his communities or cities with defensive works for protection against marauding bands and against enemies." As time passed, urban fortifications evolved: "The earliest attempt at strengthening defensive positions probably consisted of the construction of timber stockades or fences, which would give considerable shelter to the defenders and act as obstruction to an assaulting party. However, it must have been soon learned that timber structures might be burned or possibly torn down and recourse was then had to a more permanent form of construction. Walls were built of earth or stone, sometimes surmounted by timber stockades. The earth for raising the walls, of course, had to be dug somewhere, and it was soon found that by taking this earth from immediately in front of the walls, the ditch thus dug would form a serious obstacle to the advance of the enemy. Considerably later, probably, it was found that turning in water so as to transform the ditch into a moat was still more effective."[2]

Still later, cities were protected by defensive systems, including forts, batteries, barriers, obstacles, pillboxes, trenches, etc. Often, the city developed beyond one defensive system, requiring the construction of a new one. One Royal military engineer later remarked, "The promiscuous fortification of towns, which was common in the Middle Ages, and extended to the time of [Sebastian le Prestre de] Vauban, is no longer in vogue. It arose in days before great States became consolidated under a central Government, and when armies were not mobile in the modern sense. A town, once fortified, easily came to be regarded as a place which it was necessary to defend, and this habit of thought has not wholly disappeared."[3]

Historical Defense of Capitals

The proliferation of cities brought an end to the fortification of all communities. The strategic points, usually including the capital city, would now be defended. Baron Henri Jomini, the military theorist most studied by Civil War officers, wrote that "All capitals are strategic points, for the double reason that they are not only centers of communications, but also the seats of power and government."[4] Later, George Sydenham Clarke (Sydenham) offered the following comments on the defense of capitals: "The strategic importance of a capital must depend upon its relation to the political and economic life of a nation, and will, therefore, vary according to circumstances. There will, however, generally be a popular demand for the fortification of a centre of national activity, and if the machinery of governments continues to grow more and more unwieldy, the strategic importance of capitals as decisive objectives will increase. At the same time, the huge area which the modern capital occupies must add greatly to the expense and difficulty of Fortification, while the supply of a population of several millions during an investment or a siege may prove an insoluble problem."[5]

Jomini also theorized that "Invasions of a country whose strength lies mainly in the capital are particularly advantageous. Under the government of a powerful prince, and in ordinary wars, the most important point is the headquarters of the army; but under a weak prince, in a republic, and still more in wars of opinion, the capital is generally the center of national power."[6] In exile at St. Helena, Napoleon stated: "Had Vienna, Berlin and Madrid been fortified, the countries of which they were the capitals would have been preserved from my campaigns of 1806 and 1808, and had Paris been fortified in 1814, my own empire would have been saved from overthrow."[7]

No surprise then, that in the 17th, 18th, and 19th centuries, and into the 20th, the enemy's capital was often considered the number one priority and its fall usually meant the end of the war. Often, an enemy had to lay siege to a city before it would capitulate. In the 1600s, Marshal Vauban, a French military engineer, developed a method of siege, still used today, that would, no doubt, lead to the capture of a city, unless it was relieved by additional enemy forces. However accomplished, the capture of an enemy's city was considered a special prize because it yielded weapons, supplies, food, money and hostages. Most often, though, the greatest prize, was the capture of the enemy's capital, where the national government was located, including military headquarters.[8]

Urban Defense in the New World

The "New World" generally mirrored what was going on in Europe. New York, New York and St. Augustine, Florida, United States; Vera Cruz, Mexico; Quebec and Louisbourg, Canada; Cartegena, Colombia; and Havana, Cuba, among others, were heavily fortified cities in colonial times. Famous lengthy sieges occurred at the last four cities listed above. But even colonial settlements like Jamestown, Virginia and Plymouth, Massachusetts erected forts to protect themselves. Fortification technology, although similar to methods in Europe, was adapted to the needs and resources in the New World. As the colonial period came to an end and countries established themselves, they had their own capitals, and most erected fortifications to protect them.[9]

Defense of U.S. Capitals

From the time that the American Revolution began, in 1775, until the permanent capital was established at Washington, D.C., in 1800, the country had eight capital cities: Philadelphia, PA; Baltimore, MD; Lancaster, PA; York, PA; Princeton, NJ: Annapolis, MD; Trenton, NJ; and New York, NY. None of these cities was the national capital for very long and for that reason did not merit fortifications, except for Philadelphia. Philadelphia was the national capital on and off for many years and was defended by fortifications. The British began construction of Mud Fort, in 1771, on Mud Island in the Delaware River, near the Schuykill River's mouth, just below the city. The Patriots took over the fort which the British then laid siege to from September 27 to November 16, 1777. The Patriots evacuated the fort on November 16 and crossed the river to Fort Mercer, another fortification protecting the city, which later fell to the British. Reduced to rubble by British bombardment, the fortification on Mud Island experienced a rebirth in 1794-95, where the U.S. eventually erected a masonry structure named Fort Mifflin, after Major General Thomas Mifflin. Because Philadelphia was a large and important city, Fort Mifflin remained in military service after the government moved to Washington, D.C. in 1800.[10]

Establishment of A Permanent Capital

The decision to place a new permanent national capital at Washington, D.C. was the result of a compromise between Thomas Jefferson and Alexander Hamilton in July 1790. As a result, the Residence Act of July 16, 1790, that stipulated Congress would move to the new capital in 1800, authorized the President, George Washington, to select the site for the Federal City on the Maryland side of the river between the Eastern Branch and Conococheague Creek, which emptied into the Potomac 75 miles upstream. He also decided where government buildings would be erected and the three commissioners, that he had appointed, would oversee their design and erection. Washington lost little time in announcing his choice for the new city's location. On December 23, 1790, Maryland ceded 10 square miles of land, for the new capital, to Congress. By January 1791, he had hired Pierre L'Enfant, who had written him in 1789 explaining that he had heard that a new capital would be chosen and he hoped to be involved in its creation, to design the city. Washington also chose Andrew Ellicott as the new capital's first surveyor.[11]

In late March 1791, Washington traveled to Georgetown to conduct some of the business involved in establishing the new capital. First, he examined L'Enfant's staggering report outlining a 6,100 acre "grand plan" for the capital and Ellicott's surveys. Washington met with the land owners on March 30 and arranged an agreement whereby they would give up half their land to the government for public use and receive $66.67 per acre for it, except they would receive nothing for any used for streets. L'Enfant met with Washington at Mount Vernon in late June and showed him his drawing of the city and on August 27, he delivered his completed work to the President in Philadelphia. On June 28, Washington visited the new city, met with Ellicott and L'Enfant, decided on sites for the important government buildings, and presented his decisions to the proprietors.[12]

In September, the commissioners, Washington, Jefferson and James Madison met and chose the name for the city and the streets within it and determined to sell lots in auctions to obtain necessary cash. The commissioners favored little public expenditures for the new capital but L'Enfant's plan called for grandiose public spending. Jefferson hired Ellicott to prepare an engraved map of the new capital in November 1791. Soon afterwards, Jefferson, on February 27, 1792, told L'Enfant that his services were no longer needed; he failed to realize that he actually worked for the commissioners, not Washington, and his continued disagreements and refusal to obey them caused his dismissal. Ellicott published the first map of the new city in 1792 and in the fall of the same year had finished his survey and submitted his final plan for the city. Among the plan's provisions was the setting aside of seventeen reservations, or appropriations, for government use; Washington had outlined this idea in a March 31, 1791 letter to Jefferson.[13]

Land for the Military in the New Capital

Naturally, Washington envisioned the use of some of these reservations by the military, including for defenses. In 1791, Washington and L'Enfant chose the site for what is now Fort McNair on Greenleaf Point, or Turkey Buzzard Point, acquired by a deed of trust in 1791 and confirmed in a July 25, 1798 executive order. Apparently, L'Enfant intended for a fortification to be placed there, according to his city plan, setting it aside as military district No. 5, because, as one author wrote, the "peninsula where the Potomac and Anacostia Rivers met was an obvious, natural military site." This site, sported a "one-gun battery mounted behind earth breastworks," possibly as early as 1791 but, for sure, by 1794. By 1803, the "Fort" was first referred to as an arsenal and Congress provided money for the construction of buildings.[14]

This was the only site set apart for the city's defense but there was additional land for other military purposes. George Washington had approved a Washington Navy Yard in March 1792. On October 2, 1799 it opened on the former Reservation No. 14, Exchange Square, for which the Navy paid $4,000. On March 31, 1801, President Thomas Jefferson and Lieutenant Colonel William W. Burrows, Commandant of the Marine Corps, during a ride around the city, picked Square #927, at 8th and Eye, S.E., near the Washington Navy Yard, for the Marine Corps Barracks, that eventually cost $6,247.18.[15]

Coastal Defenses for Washington, D.C. at Alexandria, VA

War began in Europe following the French Revolution and even though the new American nation attempted to remain neutral, it affected the United States in a variety of ways.. President George Washington, more than once, urged Congress to provide protection for coastal ports and harbors to meet any enemy invasion or incursion attempts. On March 20, 1794, Congress voted to erect coastal fortifications at twenty sites. One of these sites, on the Potomac River, would protect Alexandria, Virginia and Georgetown, Maryland and the new capital of Washington, D.C. The Secretary of War, Henry Knox, originally gave instructions to John Jacob Rivardi to erect the fortifications on the Potomac but due to the amount of other work he had to do, John Vermonet, on May 12, 1794, received instructions to take over those duties. By June 17, Vermonet had chosen a site for the fortifications near Alexandria, on the south

side of the Potomac River, remarking: "I have chosen Jones' Point for the seat of a good battery, which will protect the place against the enemy by water..."[16]

From the beginning, Vermonet had problems. Knox informed Vermonet that since Rivardi had originally been assigned this work he, if he wanted to do so, could instruct Vermonet on what to build. John Fitzgerald, a militia colonel and resident of and Collector of Customs at Alexandria who had served on George Washington's staff during the American Revolution, was to procure the equipment and materials and hire laborers for Vermonnet; the materials did not arrive until late in the year and Vermonet felt that, possibly, Fitzgerald had been tardy in making his orders for the materials. While awaiting the materials, Vermonet undertook additional work he thought necessary, "As there is a marsh between this city and Jones' point, I have been obliged to establish a cross-way" or causeway which he reported, on August 3, he had completed. Finally, on September 16, Vermonet could report: "I take the liberty to inform you, that most of the materials are arrived, and are preparing for the battery. The palisade and frieze are also much advanced, the exertion of public has taken place, and I am in hopes to forward the work greatly by the end of October." But, he soon reported that he would need to close down operations for the winter on November 15 and would not resume work until April 15, 1795. Like the other engineers erecting these works, Vermonnet had to consult with the state Governor and submit plans, surveys, soundings, and other materials to him as well as the War Department. Finally, Vermonet was working under money restraints as Knox had informed him that he could not spend more than $3,000. on the fortifications.[17]

Vermonet built a fortification "which presented a circular battery in the front, and two small bastions in the rear, the whole ditched round in the usual way. This fort does not occupy the whole ground, but appeared to the subscriber to be tolerably well designed. The small size of the bastions in the rear, evidently discovered, that only a picket defense by musketry was there contemplated." The fort would mount 12 pieces of artillery en barbette. As war clouds dimmed, interest in these fortifications waned and in 1796, after an unfavorable engineering report, the Army abandoned the fort on Jones Point. The sum total of expenditures on the fort, artillery, and other expenses amounted to $4,936.36.[18]

Fort Warburton, MD

The 1807 Chesapeake affair, which renewed fears of another war with England, influenced Congress to pass a new fortification appropriation bill. The Secretary of War, ordered Lieutenant Colonel Jonathan Williams, Chief Engineer, to Washington to formulate plans for the defense of harbors and ports. Way back in 1794, when Congress passed its first coastal fortification appropriation, George Washington had suggested that a fort be erected at Digges Point, across from Mount Vernon, and again in 1798, he championed the site once again. Williams examined the Digges Point site in 1808 and reported that it commanded the Potomac River but a ridge behind it jeopardized its defenses. Nevertheless, the government purchased the site and on April 11, Williams ordered Captain George Bomford, an Army Engineer, to begin construction of a fort there.[19]

Under Bomford, the work progressed rapidly and on December 1, 1809, he reported that Fort Warburton was finished except for some necessary revetment work on the rampart. One author wrote that the work on the fort was completed so fast that the plans and execution were faulty. The fort, quite similar to Fort Madison constructed at Annapolis, Maryland, was "an enclosed work of masonry, comprehending a semi-elliptical face, with circular flanks enclosed by a perpendicular wall suitable for defense by small arms." The fort's ramparts averaged 14 feet above the bottom of the ditch. To solve the problem of the high ridge behind the fort, Bomford erected, in the rear of the other fortifications, an octagonal, brick, two-story tower, to house one company of men and six artillery pieces. The engineers also constructed a brick magazine and barracks at the site. In late 1809, four 32-pounders, seven 24-pounders, two 50-pounders and two 6-pounder field guns on traveling carriages comprised the fort's armament.[20]

Fort Warburton, or Fort Washington,[21] had some weaknesses. James Hinds has written that "other than unsuitability to the site," the main weakness was "the narrowness of the gun platforms of its main battery" meaning that as the guns recoiled, after firing, they would be at the edge or, possibly, over the edge of the platform. General James Wilkinson described the fort as "a mere water battery" "useless once a vessel had passed" [the fort] with an "octagonal block-house" that "could be knocked down by a twelve-pounder." Completed in 1809, Fort Warburton only stood for five years due to the second war with England, the War of 1812.[22]

Military Invasion of Washington, D.C.

The threat of a second war with England had surfaced often, beginning in 1794. So, when the War of 1812 began, few were surprised and many in the new nation's capital feared the worst, a visit by British military forces. The War of 1812 revealed the weaknesses of Washington, D.C. and its meager defenses. Surprisingly though, from the beginning, little was done to strengthen the defenses and one author, Taylor Peck in *Roundshot to Rockets*, wrote that "Washington was left completely unprotected for the first two years of the war. No fortifications or batteries were erected along either the Potomac or the Eastern Branch. Old Fort Washington was scarcely capable of defending the entire city. Resolutions to place the capital in a defensive state were voted down, largely through the influence of the Secretary of War, General [John] Armstrong. No system of alarms and outposts was established to warn the city of impending danger, and no steps were taken to use the natural advantages of an easily defended eastern boundary."[23]

Although the government did not undertake a centrally directed protection plan for the city, some defensive measures were instituted. In October 1812, Alexandria raised a 60-man company to garrison Fort Warburton which remained there until December when it was ordered elsewhere. After British ships had entered Chesapeake Bay in 1813, the Secretary of the Navy, William Jones, visited Fort Warburton and ordered the erection of a nine-gun water battery there that seamen would man. Also, in 1813, Jones ordered the Washington Navy Yard to prepare some defenses for the city which included mounting carronades on three scows and locating them just off Greenleaf Point where they could rake the channel; placing 7 guns on ship's carriages, in commanding positions, behind breastworks at Greenleaf Point; and

arming a barge with two 12-pound carronades to be kept in readiness for action. In 1814, Fort Warburton received additional guns, mounted in the fort and tower. Disappointed with Secretary of War Armstrong's lack of defensive preparations, President James Madison, in July 1814, along with the cabinet decided to raise militia from the District and surrounding states. The next day Madison created the Military District of Washington and appointed Brigadier General William Winder to command it. Although Winder set up his headquarters in Washington and spent much time in traveling around to see what was needed, by August 18, he had made no changes.[24]

Major General Robert Ross and Admiral George Cockburns' British forces arrived at the mouth of the Potomac on August 15 and began disembarking troops on the 19th, at Benedict, MD, on the Patuxent River. Some thought that the enemy would march to Baltimore or Annapolis or some other town because, they were sure, there was no good reason to capture Washington. But, Washington was the target as Ross's men marched up the Patuxent and the British naval squadron, commanded by Captain James Alexander Gordon, slowly but surely ascended the Potomac River.[25] To check the British land forces, Winder met them at Bladensburg, northeast of Washington, D.C., on August 24. The British defeated the American forces at Bladensburg forcing them to flee, leaving Washington open to the enemy troops.[26]

Resting for awhile at Bladensburg, the British troops then marched into town. Soon, under orders, the British began setting fire to government buildings. At the same time, after sending off as much ordnance and other military supplies as possible, Americans set fire to the Washington Navy Yard and the fort/arsenal at Greenleaf Point. The conflagration in Washington was observed at great distances from the city. A violent thunderstorm broke out and halted some of the fires. On the 25th, the British continued setting fires. At Greenleaf Point, the British, after destroying the artillery there, unleashed an explosion that killed about thirty of their men. In early afternoon, a tornado hit the area putting out much of the fires but causing much other damage. That evening, the British marched out of town unknown to many of the residents due to an 8:00 p.m. curfew.[27]

Gordon's naval squadron saw Washington burning on the evening of August 24, while anchored off Maryland Point, on the Potomac River. On the evening of August 27, just before sunset, the squadron anchored above Mount Vernon, just out of gunshot from Fort Warburton. In preparation for an attack the next morning, Gordon moved the bomb vessels out to cover the frigates and began "throwing shells" at the fort. Soon, the British observed the American force's evacuation followed by an explosion that destroyed most of the fort. Captain Samuel Dyson, who commanded Fort Warburton, had little faith in the fort's prowess and only enough men to man five of the guns. He had received secret orders that if the enemy attacked the fort from the rear, he should blow it up and retreat across the river. Seeing the arrival of the British naval squadron and having received intelligence that enemy troops were in his rear, Dyson gathered his officers and informed them of the intelligence received, told them of his secret orders and asked them what should he do. The decision was to evacuate and blow up the fort. Thus, soon after the bomb vessels began lobbing in shells, Dyson evacuated and the explosion occurred a little later. For his actions, Dyson soon received an order putting him under house arrest awaiting a court-martial; the court-martial found Dyson guilty of "running away and shamefully abandoning the fort" and the Army dismissed him from the service.[28]

Fort Washington, D.C.

In the days after the invasion of Washington, D.C. and the fall of Fort Warburton, the capital feared further incursions and Alexandria, VA, surrendered to Gordon's squadron. To bolster defenses, Washington Mayor James Blake rounded up men to defend Greenleaf Point and James Monroe, acting Secretary of War, attempted to place batteries near the long bridge and at Greenleaf and Windmill points. On September 8, Monroe requested that L'Enfant "proceed to Fort Washington and examine the state of that work, and report the same as early as possible . . ." Monroe then engaged L'Enfant to rebuild the fort and he began "clearing away debris and demolition of the old fort." After completing that work, L'Enfant oversaw the construction of a new water battery and a wharf. After the immediate threat to the capital and Fort Washington had subsided, Monroe questioned L'Enfant on his plans and work and requested that he submit a progress report and explicit plans. L'Enfant was offended and refused to comply. Thus, Monroe suspended work on the fort on July 8, 1815 and fired L'Enfant on September 6.[29]

With L'Enfant's dismissal, Lieutenant Colonel Walker K. Armistead succeeded him and with the assistance of Captain Theodore W. Maurice, who executed the design, oversaw the construction of the new fort which was basically completed on October 2, 1824, for a total cost of $426,000. The new fort was an enclosed "casemated brick and stone fortification with earthen outerworks" located to provide the greatest firepower along the Potomac River. Sporting a partial ditch crossed by a drawbridge at the sallyport; two demi-bastions, on the northwest and southwest corners, to protect the curtain wall; and outworks including a ravelin and mortar battery, Fort Washington "presented a formidable defense of the Potomac approaches to the city of Washington."[30] Author David Salay described the strengths and weaknesses of Fort Washington's location on the river: "At Digges Point the river channel narrows and swings to the east or Maryland shore, forcing boats to approach the fort bow on and pass upriver "stern on"; only directly opposite the fort could a ship bring its guns to bear." "At the same time, approaching ships were vulnerable to the fort's guns." "An enemy ship coming up the Potomac would have been subjected to a heavy fire before reaching the fort, would have come under a devastating fire directly opposite the fort, and still would have been under fire had it succeeded in getting past Digges Point." "Even so," Salay points out, "Fort Washington was vulnerable from the land side. It was particularly susceptible to attack from an enemy landing below Piscataway Creek and moving inland under protection of the ravine east of the fort to the hills in the northeast. From this point enemy cannon could have dominated the fort."[31]

In 1841, Army Engineer Captain Fred A. Smith arrived at Fort Washington to oversee various repairs and improvements. He stabilized the fort's earthen embankments to preclude washouts that were undermining the walls. Improvements included a second story and gun emplacement additions to the gatehouse, modification of the parapet for the mounting of new 32-pounder guns, paving the terreplein, and construction of two hotshot furnaces. Ever fearful of a land attack, Smith raised the east curtain and erected a capionerre on the south wall. Samuel Cooper replaced Smith and finished the changes, completing the work in 1848.[32]

Fort Washington had little armament between 1828 and 1842, comprising only four 6-pounders on iron carriages.. Soon after his arrival, Smith constructed new heavy artillery gun platforms. Thus, 1850 ordnance returns reported thirty 24-pounder guns at the fort. But, when the Army withdrew the fort's garrison in 1853, it had the guns removed from their emplacements. The fort remained inactive and basically unarmed until 1861. Engineer officer, Lieutenant Miles D. McAlester reported the same in his January 9, 1861 inspection report. The Secretary of the Navy's "first order issued during the Civil War for the protection of Washington" was sent, on January 5, 1861, to the Commandant of the Marine Corps, ordering him to send troops to Fort Washington; Marine Corps Captain A.S. Taylor, therefore, led a 40-man detail to the fort. At the beginning of the Civil War, Fort Washington was the single fortification, built to repel waterborne attacks, defending the national capital.[33]

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Chapter III

The Land and the Owners

CHAPTER III: THE LAND AND THE OWNERS

The District of Columbia Before the Civil War

When the Civil War began in April 1861, Washington, the District of Columbia, was quite different than the metropolis today. Originally a ten-mile square district, it lost its southeastern section when Congress returned Alexandria County to Virginia in 1846; Antoinette Lee wrote that this action was a "lack of foresight" because "during the Civil War, a circle of forts located on high ground was constructed to provide protection for the federal city and included major vantage points in Virginia." The actual Washington City, planned by L'Enfant in 1791 and bounded by Florida Avenue, officially Boundary Avenue, to the north; the Eastern Branch on the east; and Georgetown on the West lay in "the flat, basin lands before the first major steep rise to higher ground." Composing the rest of the District of Columbia was the city of Georgetown and Washington County, north of Georgetown's R Street and Washington City's Florida Avenue and east of the Eastern Branch or the Anacostia River.[1]

In 1840, before Congress returned Alexandria to Virginia, the population of the District of Columbia was 43,712 comprising 23,364 in Washington City, 7,312 in Georgetown, 8,241 in Alexandria, and 3,069 in Washington County. Between 1840 and 1850, the District averaged 1600 new residents a year. By 1850, therefore, the Districts population was 51,687 including 40,001 in Washington City, 8,366 in Georgetown, and 3,320 in Washington County; Alexandria had retroceded to Virginia during the decade. The year1860 saw a great increase in population with a total of 75,080 in the District of Columbia: 61,122 in Washington City, 8,733 in Georgetown; and 5,225 in Washington County.[2]

District of Columbia Government

Since its beginning, Washington City changed governments numerous times. Originally there was a mayor appointed by the president, and a city council, elected by the landed citizens. In 1812, the city council began electing the mayor and in 1820, the landed citizens received the right to elect the mayor, to a two-year term. At one time only property owners could vote but adult white manhood suffrage became the law in the 1840s and 1850s. Congress granted the city a charter in 1848, making it easier to govern itself.[3]

Different and separate governments administered Georgetown and Washington County and Alexandria, while it was part of the District. There wasn't any general code of laws; Maryland laws were in effect in some areas and Virginia laws in others. Throughout the District's history, many, including President James Monroe, had championed a territorial form of government for the District. In 1871, the District received a territorial government when Congress provided for a governor, board of public works, and a legislative body, consisting of an eleven member council and a twenty-two member house of delegates. But, this government lasted for only three years.[4]

Improvements in the District of Columbia

In spite of its lack of a central government and changing land areas and governments, the District steadily improved during the years. The central part of the city saw the greatest growth in the second quarter of the century; house and church building flourished. By the 1840s, the city reached out; K Street which had been delineated the northern boundary of the city much earlier had given way and far out P street was under development. Before the city received a charter in 1848, real estate taxes accounted for about nine-tenths of the tax income, limiting improvements. New taxes eased the burden on property owners some but, due to new and greater expenses, until 1860, they paid about 75 cents per $100.[5]

The U.S. Government macadamized Pennsylvania Avenue but it rapidly fell into disrepair and in the years after 1845, it provided cobble stones for the street. In 1845, the city financed the paving of Seventh Street, the main business route and in later years before the Civil War, some streets received cobblestones at municipal expense. The city provided some sidewalks but only through special taxes on the landowners who would benefit.[6]

Until the early 1840s, none of the city had no streetlights but in 1842, Congress financed lights on Pennsylvania Avenue between the White House and the Capitol. The Washington Gas Light Company received a charter in 1848 and slowly began lighting up the city. By the time the Civil War began the city's streets generally were lighted. At first the city only lit the lamps on moonless nights and even then, turned them off at midnight.[7]

Sanitation was sparse but the slow pace of development reduced possible problems allowing for a generally uncontaminated water supply. In spite of swampy marshy areas, few epidemics occurred. Floods and fires, however, often caused problems.[8]

In the 1850s, Congress decided that the "national capital must be made more presentable–for the public convenience, and the self-respect of the republic." The U.S. Government financed the paving of additional streets. It improved the Mall, including the placement of flowers therein and the erection of a building for the Smithsonian Institution. The Botanic Garden beautified the Congress end of the Mall and numerous monuments, including those of George Washington, Thomas Jefferson and Andrew Jackson, appeared around the city. Yearly, new trees were planted.[9]

In 1862, the distinguished Englishman, Anthony Trollope, wrote of the city, "Desirous of praising it to some degree, I can say that the design is grand. The thing done, however, falls so indefinitely short of the design that nothing but disappointment is felt. And I fear that there is no look-out into the future which can justify the hope that the design will be fulfilled." Further, he wrote: "Even in winter, when Congress is sitting, Washington is melancholy; but Washington in summer must surely be the saddest spot on earth."[10] In spite of some visitor's comments, Washington City had come a long way.

Transportation and Communications

Transportation and communications in the capital city area improved considerably before the Civil War. For many years the city looked forward to the completion of the Chesapeake and Ohio Canal and other smaller ones for transportation of people and goods. Then, in 1835, the Baltimore and Ohio Railroad began running four trains each day between Baltimore and Washington, D.C.; fights ensued between the railroads, Congress and the city that precluded the B & O from actually coming into the capital city until 1852. Other railroads, such as the Orange and Alexandria also sought connections with Washington, D.C. The first "public passenger vehicle service," was by stage coach and began in May of 1800. In the Spring of 1830, the omnibus, a four-wheeled passenger vehicle pulled by horses, appeared in the capital city and remained the only public mass transportation until 1862. Samuel F.B. Morse stretched telegraph wires between Baltimore and Washington, D.C. along the B & O tracks and in 1844 demonstrated that the system would work; before the 1840s were over, Washington, D.C. was linked with the country by telegraph.[11]

The First Suburbs of the District of Columbia

Better transportation spurred the District's first suburban growth. In 1845, William Holmead, a farmer whose land was between 13th and 16th Street, N.W., with its center at Columbia Road, subdivided his farm into lots "to those wanting country residences." Transportation assisted the development of other suburban tracts such as Homestead, near North Capitol north of Florida Avenue (1851), and Kendall Green, near 7th and M streets, N.E.(1854). The Union Land Association divided a farm on the south side of the Eastern Branch, in 1854, and called it Anacostia.[12]

The Rural Areas Where Most of the Forts Were Built

Even though Washington City was experiencing a major development, improvement and beautification, Washington County, in the far reaches of the District, was, for the most part, still country and relatively undeveloped. Kathryn Schneider Smith wrote: "This rural part of the District, known as Washington County, was occupied by farms of various sizes and the grand estates of the well-to-do." Likewise, most of the area surrounding the District, in Virginia and Maryland, except for a few developed communities, was also rural. Washington County and the Virginia and Maryland areas surrounding the District, however, became the locations for most of the Civil War Defenses of Washington, D.C.[13]

The Union Army built the first fortifications, that would become a part of the Civil War Defenses of Washington, across the Potomac in Northern Virginia; most of these fortifications were built on the heights. In the District and in Maryland, most of the fortifications, of the Civil War Defenses of Washington, were erected on the heights in the northern part of the city beyond Florida Avenue. There is no question why the Union Army fortified the heights – to provide it with observation points to pinpoint

and track invaders and strongpoints, where they could protect important transportation routes and repel the Confederates without any damage to the city, and to preclude the enemy from using them to shell the city. But, who owned this land before the Civil War and what did they use it for?[14]

The Land and the Owners in Virginia

In Virginia, a variety of individuals owned the land on which the Union Army built fortifications, in the Civil War Defenses of Washington, D.C. Gilbert Vanderwerken owned the land on which the Union built Fort Marcy and much of the nearby batteries, trenches and cleared fields of fire. After many years as a manufacturer of stagecoaches, omnibuses and steam railroad cars and owner of various stage coach and omnibus transportation companies in New York, New Jersey and Mexico, poor health brought him to Washington, D.C., in 1850. Not completely disabled, Vanderwerken organized an omnibus transportation company running from the Navy Yard to Georgetown and from the wharves up Seventh and Fourteenth Street. To pull the omnibuses, he required numerous thoroughbred horses; he purchased over 13,000 acres of land in Arlington and Fairfax counties on which to graze and feed the horses. Vanderwerken cleared some of the land and planted corn, wheat and hay. He also built a house on a knoll and a large barn, naming the estate "Falls Grove."[15]

Columbus Alexander, on whose property the Union erected Fort Tillinghast, was a printer whose real estate was valued at $100,000. He lived in the District of Columbia with his wife Rebecca and six sons, aged 7-18. The property taken over for Fort Tillinghast and accessory buildings comprised about 70 acres which included a two-story frame dwelling, large barn, water well, corn crib, large fowl house, smoke house, two fields of oats, one field of corn, and 200 fruit trees. In addition, the Army later cut down 50 acres of wood.[16]

Fort C.F. Smith, erected on the William Jewell estate in Arlington, displaced the barn and the dwelling which J.G. Barnard referred to as the "red house" in an 1863 report. The Union erected both Battery Garesche and a blockhouse on widow lady Margaret B. Dangerfield's "Hampton" farm, near Alexandria, Virginia. [17]

Owen and Mary Murray owned the land on which Fort Hagerty was erected. Before the war they had a farm of over fifty acres in the area. While constructing Fort Hagerty the Army destroyed the cultivated lands including orchards plus the fencing and the partially brick farmhouse.[18]

Both forts Whipple, later Fort Myer, and Cass were erected on Arlington Plantation, owned by Mary Randolph Lee, wife of Confederate General Robert E. Lee. The government confiscated the plantation for non-payment of taxes. On January 11, 1864, the U.S. Government purchased the plantation at public auction for $26,800.00 and began burying Union soldiers there.[19]

Part of the land on which Fort Williams was built in Virginia was originally owned by the U.S. War Department's Adjutant General, Colonel Samuel Cooper. Cooper went south and became the Confederate Adjutant General. His house, Cameron, stood atop Cooper's Hill; the Union tore down the house to build the fort and renamed the site "Traitor's Hill." The U.S. Government confiscated Cooper's land and sold it, in July 1864, to William Silvey.[20]

The Land and the Owners in the District

The greatest amount of the fortifications in the Civil War Defenses of Washington were within the District of Columbia. The Union Army placed Fort Slemmer on 24 acres of land belonging to Henry Douglass, a florist. Flowers, plants, 1,970 fruit trees, numerous vines and bushes, ornamental trees and four acres of grass and sod were destroyed making it difficult for Douglass to ply his trade.[21]

Fort Reno was built on land belonging to Giles and Miles Dyer; Giles had, at one time, owned five slaves. The Union Army used the Dyer farmhouse, just north of the fort, as a headquarters building for various commands encamped in the area. The fortification occupied about 20 acres of Dyer land and an additional 50 acres of Dyer's land sported barracks, camps, and a parade ground.[22]

In 1861, Selby B. Scaggs, of Ward 4 in the District of Columbia, had a farm comprising approximately 400 acres, worth $52,000., and had four laborers living with him. The Army constructed forts Chaplin and Craven on his land.[23]

Bernard S. Swart, a clerk, owned land in the Northern part of the District of Columbia, some of which is now located in Rock Creek Park. In 1860, he, his wife, Sarah, three children, and two farmhands, Christopher Lambert, 30, and William Hamilton, 19, lived on the farm. After the Civil War began, the Union Army erected Fort DeRussy on Swart's land.[24]

Sixty year old Michael Caton, of Ward 4, valued his real estate at $5,000. in 1860. Living with him were his wife, Sarah, five children between the ages of 18 and 30, and one domestic, aged 16. The Union built Fort DuPont on Caton's land.[25]

Fort Slocum was partially erected on the land of John F. Callan, a clerk. His wife, Sarah A. Callan, and eight children, between the ages of 8 and 24, lived with him. One of his children, James, listed his occupation as "Druggist."[26]

Farmer Philip J. Buckey owned the land on which Fort Bayard was later constructed. Buckey valued his real estate at $5,000. His wife May, four children and two servants lived with him.[27]

William A.T. Maddox, age 47, along with his 28-year old wife Sarah E., owned the land on which the Union Army built Battery Kemble and part of the land on which Fort Gaines was erected. In 1860, he valued his real estate at $20,000. Luckily for him, Maddox had his profession to tide him over; he was a career U.S. Marine Corps officer who in 1860 held the rank of captain and, at the beginning of 1863, was stationed in Philadelphia, Pennsylvania serving as an assistant quartermaster.[28]

Most of the land on which the original Fort Stephens was constructed belonged to Emory Chapel or Emory Methodist Church. Numerous pulications addressing the original Civil War Defenses of Washington, D.C. and the Battle of Fort Stevens include accounts of a free Black woman named Elizabeth or Betsy or Betty Thomas who also owned part of the land on which the Army constructed Fort Stephens. The accounts report that in 1862, the Army tore down Mrs. Thomas's house, described as a "shanty", for a second Fort Stevens magazine. Reportedly, President Abraham Lincoln personally consoled her, saying "It is hard, but you shall reap a great reward." To date, no records have been discovered that actually document Mrs.

Thomas's ownership of the land by 1862. Whether or not she owned the land, Mrs. Thomas apparently lived in the area and has become part of the folklore surrounding Fort Stevens and the battle that occurred there.[29]

Two Families Owned Fort Land in Both the District and Maryland

Lord Baltimore granted land to the Veitch family in 1719 and as late as 1912, descendants were still living on the land. This land, in both the District of Columbia and Maryland, that belonged to John Veitch when the Civil War began, included portions of Scotland Beach and Chillum Castle grounds. During the Civil War, the Union erected forts Lincoln and Thayer and Battery Jameson on the Veitch land.[30]

One family, the Shoemakers, also owned an exceptionally large amount of land on which three of the fortifications in the Civil War Defenses of Washington were erected. In 1810, Samuel Shoemaker bought just over 100 acres of land located in both the District of Columbia and in Maryland. After that first purchase, the family continued to expand its holdings in the area. All or parts of forts Simmons, Mansfield and Battery Bailey were on Shoemaker land.[31]

Besides owning land on which fortifications were located, Issac and Joseph Shoemaker contracted to supply wood for the construction of the fortifications and abatis. Isaiah Shoemaker ran a general store in the area. During the war the family also sold sundry items to the men stationed at Fort Bayard. Some accounts report that family members actually worked on the construction of some of the fortifications in the Defenses of Washington.[32]

In 1860, Jessee Shoemaker's census entry showed that he had nine children living with him. He valued his real estate at $2800. Later, he reported that, when the army took over his land for Fort Mansfield, he lost 23 acres, in all, including seven acres of potatoes, five acres of corn, four acres of clover, a fourth of an acre of asparagus, plus at least 48 apple trees, 51 peach trees, 46 quince trees, 23 cherry trees, and two large persimon trees.[33]

Most of the individuals mentioned above and many others basically lost possession of part or all of their land for the duration of the Civil War and for some, months or years after the conflict ended, preventing them from deriving income from any use of their property. As a result, these people had to find other lodgings and, in some cases, other professions to tide them over during the war because only a few received rent or other compensation before the conflict ended.

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Chapter IV

The Civil War Years

CHAPTER IV: THE CIVIL WAR YEARS

War Clouds on the Horizon

As war clouds began to appear, Washington, D.C. was in the midst of the conflict. The city was, for all practical purposes, southern, and many of its citizens had strong southern inclinations. In addition, the Capital was sandwiched between two slave states, both south of the Mason & Dixon Line. Few government troops were in the vicinity and of those that were, some of the officers and men chose to join the new Confederate armed forces and headed south for that purpose. Thus, until more troops arrived, Washington, D.C. was a community under siege.[1]

Brevet Lieutenant General Winfield Scott, commanding general of the army, was not particularly concerned over the capital's safety. Regardless, on January 2, Scott appointed Colonel Charles P. Stone, the Inspector General of the District of Columbia. Stone, who had served under the general during the Mexican War, would be responsible for the defense of the city and he had a plan acceptable to Scott.[2]

Stone speedily undertook his duties, including organizing and drilling the District militia. Scott, who didn't trust the district militia, ordered the Army Regulars to Washington. Regular Army units of all arms—infantry, cavalry and artillery as well as Engineer Sappers and Miners—responded to the call and on February 12, the day before the electoral college met, they were guarding the principal government buildings—White House, Treasury, Capitol, Patent Office and Post Office. The next day they kept an unruly mob, composed of Maryland, District of Columbia and Virginia southern sympathizers, from disrupting the deliberations of the electoral college or creating mischief in general.[3]

The president-elect, Abraham Lincoln, arrived in Washington at 6 a.m. on February 23, and traveled to the Willard Hotel, his temporary residence. Lincoln's trip from Illinois was not uneventful, he was secreted through Baltimore, where the train had to slow down and switch tracks, before continuing on to the capital. Upon his arrival, the government finalized its security plans for the imminent inauguration, on March 4, 1861.[4]

Inaugural day arrived and many were apprehensive. Riflemen were posted along the parade route and in the Capitol. Artillery, cavalry and various other military units took station at a variety of points along the route, but out of the citizens' view, to counter any possible mob violence. Unbeknownst to most of the spectators, local militiamen protected the inaugural platform. The inaugural activities concluded without any problems![5]

Stone's plan for the defense of the city did not include any fortifications except barricades. The plan even excluded Fort Washington, Maryland. The plan, however, did establish "strongpoint" centers at City Hall hill, comprising in its area the General Post Office and the Patent Office, at the Capitol, and Executive Square, which included the White House and the Treasury, State, Navy and

War buildings. The Treasury Building would be the enceinte, the last-ditch position, for a final fight. Thankfully, circumstances never necessitated a retreat to these positions.[6]

The inauguration had come and gone but the fear for the Capital's safety continued due to military reverses nearby and the lack of troops in the city. Fort Sumter, in Charleston Harbor, surrendered on April 14, 1861. The burned-out Harpers Ferry armory fell to the rebels on April 19, and the Confederates occupied the destroyed Gosport Navy Yard on April 21. In addition, riots broke out in Baltimore on April 19, 1861, between pro-Confederate and pro-Union citizens. Among other results, the riots cut-off railroad communication with the North.

President Lincoln, on April 1, 1861, had requested Winfield Scott to inform him daily of the military situation throughout the country and the news was not pleasant. On April 15, Lincoln declared that "an insurrection existed," called for seventy-five thousand troops and convened Congress in a special session to begin on July 4. The call for troops caused bad feeling in some southern-leaning states such as Missouri, Kentucky, Maryland, North Carolina and Virginia. The Virginia State Convention passed "an ordinance of secession" and ordered a May 23 public referendum on it. The Army countered by creating the Department of Washington, encompassing the District of Columbia and the State of Maryland, under the command of Brevet Colonel Charles F. Smith. But, when would more troops arrive to enable control of the department?[7]

Some Pennsylvania militia and regulars from Minnesota arrived in the capital on April 18, to join approximately 600 District of Columbia militia, 200 U.S. Marines and about 600 regulars. The Sixth Massachusetts Infantry Regiment arrived the next day, after experiencing problems and violence in Baltimore. Since some Baltimore citizens destroyed that city's railroad bridges during the riots, land transportation to Washington was stopped. The U.S. Navy offered an alternative route to the capital.[8]

Captain Samuel F. Du Pont, Philadelphia Navy Yard Commandant, initiated a maritime rescue operation. The steamer *Boston* and railroad ferryboat *Maryland* would transport troops from Philadelphia and Perryville, where the Susquehanna River flows into the Chesapeake, to Annapolis, Maryland. From Annapolis, the railroad would transport the men to Washington. On April 21, word reached Washington that the First Rhode Island Infantry Regiment, the Seventh New York Infantry Regiment, and a force of Massachusetts troops under the command of Major General Benjamin Butler, were offshore at Annapolis. These troops would land and rebuild the railroad line to proceed to Washington. The Seventh New York Infantry Regiment arrived in Washington on the 25th and the First Rhode Island Infantry Regiment began arriving on the 26th. Numerous other units from a variety of states soon reached Washington also and the citizenry's siege mentality dissipated.[9]

The Navy also had other duties. President Lincoln proclaimed a naval blockade of the Confederacy on April 19 and the U.S. Navy channeled much of its efforts in that direction. But, the Navy, like the Marines, also took an active part in the defense of the Capital. Lincoln visited the Washington Navy Yard on April 2 to discuss its defense with the commandant, Commander John A. Dahlgren. Afterwards, he

periodically conferred with Dahlgren on the defense of Washington, including guarding river approaches and safe-guarding the Anacostia Bridge. On April 21, Dahlgren obtained and outfitted four steamers at the Washington Navy Yard for the defense of Washington. The USS *Pawnee,* which had been at the Gosport Navy Yard before yard was destroyed and capitulated, arrived in Washington on the 23rd to assist in the capital's defense. The day before, Commander James H. Ward, for whom a fort in the Defenses of Washington would later be named, suggested the organization of a "flying flotilla" for the defense of the entire Chesapeake Bay area, including the Capital. In May, Ward arrived at the Washington Navy Yard with the USS *Thomas Freeborn* and two other vessels in tow to command the "Potomac Flotilla."[10]

Within five days of the Seventh New York Infantry Regiment's arrival in the Union capital, 7,500 volunteers were quartered in the city and by the end of the month, the number had grown to nearly 11,000. Some resided in the Treasury Building, Patent Office, City Hall, Navy Yard and even in the Capitol. As more and more men arrived, troops encamped and drilled wherever unused land was found and supply centers sprang up in a variety of locations. By August, most of the troops that had arrived in Washington were located outside the urban limits of Washington.[11]

In the meantime, important activities were occurring around the District of Columbia. Ben Butler and his forces had stayed in Maryland after their arrival in Annapolis and attempted to insure that state would remain in the Union. On the evening of May 13, Butler arrived in Baltimore with about 1,000 men, including some artillery men with guns. Butler quickly moved his men to occupy Federal Hill, a prominence from which the artillery could shell almost any downtown area, and, as the authors of *Baltimore During the Civil War* wrote, "armed resistance in the city came to an end." Attention turned to Virginia where Confederate flags were visible from highpoints in Washington, rebel troops' campfires blazed at night, and the citizenry would vote on secession soon, on May 23. Given the large number of troops now in Washington, only a few feared these events in Virginia. Colonel J.F.K. Mansfield, the then commander of the Department of Washington, however, argued for the occupation of Northern Virginia to preclude the possibility of rebels mounting artillery on its heights and shelling government buildings in the capital. He also urged the occupation of Alexandria to insure navigation on the Potomac River and the erection of fortifications on the Virginia side to protect the southern terminus of the Chain and Long Bridges and the Aqueduct. His superiors approved these recommendations but implementation was delayed until after the Virginia citizenry's popular referendum on secession.[12]

On May 23, 1861, the public referendum in the State of Virginia held on the Ordinance of Secession was three to one in favor of leaving the Union. Many in Washington had been sure that the vote would go that way but waited to make sure before launching a military force into Northern Virginia. After months of non-activity in the area, military movements began.[13] The May 25, 1861 issue of *The New York Herald* included the following article, "THE INSURRECTION. ADVANCE OF THE FEDERAL TROOPS INTO VIRGINIA, WASHINGTON, May 24, 1861":

" There can be no more complaints of inactivity of the government. The forward march movement into Virginia, indicated in my despatches last night, took place at the precise time this morning that I named, but in much more imposing and powerful numbers.

About ten o'clock last night four companies of picked men moved over the Long Bridge, as an advance guard. They were sent to reconnoitre, and if assailed were ordered to signal, when they would have been reinforced by a corps of regular infantry and a battery.

At twelve o'clock Colonel Ellsworth's regiment of Zouaves embarked in steamers from the Navy Yard for Alexandria, and must have reached there about one o'clock this morning. They landed under the cover of the Pawnee's guns. An attack would have been signalized. No attack was made.

At twelve o'clock the infantry regiment, artillery and cavalry corps began to muster and assume marching order. As fast as the several regiments were ready they proceeded to the Long Bridge, those in Washington being directed to take that route.

The troops quartered at Georgetown, the Sixty-ninth, Fifth, Eighth and Twenty-eighth New York regiments, proceeded across what is known as the chain bridge, above the mouth of the Potomac Aqueduct, under the command of General McDowell. They took possession of the heights in that direction.

The imposing scene was at the Long Bridge, where the main body of the troops crossed. Eight thousand infantry, two regular cavalry companies and two sections of Sherman's artillery battalion, consisting of two batteries, were in line this side of the Long Bridge at two o'clock.

The Twelfth (New York) was the first on the ground. The army crossed the bridge in the following order:

- Twelfth regiment, New York.
- Twenty-fifth regiment, New York.
- First regiment, Michigan.
- First, Second, Third and Fourth, New Jersey, in the order named.
- Two regular cavalry corps, of eighty men each, and Sherman's two batteries.

- Next and last came the New York Seventh, the liveliest party, and with more men than any other regiment. They seemed delighted at the idea that they were to have a show at something that looked like service before returning home.
- Following them was a long train of wagons filled with wheelbarrows, shovels, &c.

Altogether there were at least thirteen thousand troops in the advancing army. This includes the Zouaves who went by steamer, the forces that moved from Georgetown, as well as the main body that proceeded over the Long Bridge.

General Mansfield commanded the movement of the troops until the last corps left the district. The first regiment of the main body that crossed the Long Bridge started at twenty minutes past two, and the last corps left the district at about a quarter to four o'clock.

At four o'clock Major General Sandford and staff left Willard's, and proceeded to Virginia to take command of the advancing forces. He informed me that he should establish his headquarters on Arlington Heights, and should take possession of the Arlington mansion.

Two thousand troops, the New York Zouaves and New York Twelfth, are to occupy Alexandria; the remainder the heights by regiments from the chain bridge to Alexandria.

General Mansfield took the greatest care to instruct the troops just before entering the bridge to take the route step-that is, to avoid marching together, as the solid step together might injure the bridge. . . .

The sun of the 24th of May has risen and exposed to our gratifying gaze the Stars and Stripes floating over Alexandria, where the secession flag has been haunting the sight for weeks past. Truly the past has been a great night's work for the Union. Secession is suddenly doomed, and nothing but an ignominious doom awaits the leading traitors in this great wrong against popular government and free institutions."[14]

For the most part, the occupation of Northern Virginia was peaceful except in Alexandria. There, Colonel Elmer E. Ellsworth, commander of the New York Fire Zouaves (Eleventh New York Volunteer Infantry Regiment) and a friend of President Lincoln, ascended the Marshall House to remove the Confederate flag flying above it. As he descended the steps, with the flag, James Jackson, the proprietor, shot and killed Ellsworth with a shotgun making him one of the first Union martyrs.[15]

The Defenses of Washington

One author wrote, "Accompanying the troops was an ample supply of entrenching tools, and by daylight of the 24th ground had been broken for two forts—Fort Runyon to guard the head of the Long Bridge, and Fort Corcoran to guard the head of the Aqueduct."[16] Engineer troops and officers accompanied the force that night to specifically prepare defenses. Engineer officers such as Barton S. Alexander, Horatio G. Wright, Frederick E. Prime and Daniel P. Woodbury, under Major John G. Barnard's leadership, set about laying out the fortifications and supervising their erection. [Cooling, Symbol, 37] Barnard reported that:

> "As *tetes-de-pont* to the Long Bridge and Aqueduct, Forts Runyon and Corcoran, the sites of which had been previously reconnoitered under my directions, were commenced at daylight on the morning, of the 24th. The same day a reconnaissance was made in the vicinity of Alexandria by Captain Wright, Engineers (now, Major-General U. S. Volunteers), and Fort Ellsworth, to secure our possession of that city, was commenced. A couple of weeks later, I laid out Fort Albany (intended to command the Columbia and the Aqueduct and Alexandria roads, and to give greater security to our *debouche'* by the long Bridge), which was commenced under Captain Blunt, Engineers.
>
> These works were all of considerable magnitude (Fort Runyon having a perimeter of 1,500 yards). They were not entirely completed, though very nearly so, and quite defensible, at the date of the advance of the army under Gen. McDowell (July 16).
>
> I give this brief account of these preliminary works, because they formed the initiation of the system of "Defences of Washington."[17]

Elsewhere, Barnard explained:

> "Previous to this movement the army of Washington, yet weak in numbers and imperfectly organized. under General Mansfield, had crossed the Potomac and occupied the south bank from opposite Georgetown to Alexandria.
>
> The first operations of field engineering were, necessarily, the securing of our debouches to the other shore and establishing of a strong point to strengthen our hold of Alexandria. The works required for these limited

> objects (though being really little towards constructing a defensive line) were nevertheless, considering the small number of troops available, arduous undertakings. Fort Corcoran, with its auxiliary works, Forts Bennett and Haggerty, and the block-houses and infantry parapets around the head of the Aqueduct, Forts Runyon, Jackson, and Albany (covering our debouches from the Long Bridge), and Fort Ellsworth, on Shooter's Hill, Alexandria, were mostly works of large dimensions. During the seven weeks which elapsed between the crossing of the Potomac and the advance of General McDowell's army the engineer officers under my command were so exclusively occupied with these works (all of which were nearly completed at the latter date), to make impracticable the more general reconnaissances and studies necessary for locating a line of defensive works around the city and preparing plans and estimates of the same.
>
> The works just mentioned on the south of the Potomac, necessary for the operations of an army on that shore, were far from constituting a defensive system which would enable an inferior force to hold the long line from Alexandria to Georgetown or even to secure the heights of Arlington."[18]

On May 27, Scott established a new department that comprised all of the State of Virginia east of the Allegheny Mountains and north of the James River, except for Fort Monroe and sixty miles around it. It was named the Department of Northeast Virginia and was commanded by Brig. Gen. Irvin McDowell, who established his headquarters at Arlington House (Custis-Lee Mansion), owned by Robert E. Lee. The troops in this command faced guerilla activity and minor raids and skirmished with rebels in a variety of locations. These events never caused much trouble but they were a nuisance and kept the green Union troops forever on alert.[19]

While the Union concentrated forces behind the new defenses in Northern Virginia, the Confederates amassed troops to protect the railroad center of Manassas Junction. Many at that time thought that one main battle would decide the conflict between North and South. Those in the North clamored for an immediate confrontation before the South could mobilize, train and concentrate troops. In addition, many of the Union troops in the Washington had short terms of service, many for 90 days, so why not use them before they returned home. McDowell moved his troops out toward Manassas on July 16, pursuant to the President's orders. He had organized his army into brigades in five divisions commanded by Colonels Dixon Miles, David Hunter and Samuel P. Heintzelman and Brigadier Generals Theodore Runyon and Daniel Tyler. This Union force clashed with Confederate forces under the command of Brigadier Generals P.G.T. Beauregard and Joseph E. Johnston at Manassas on July 21, 1861.[20]

In the First Battle of Manassas, the Union army, at first, appeared to be winning, forcing the Confederate army to retreat. But, later in the day, the rebels made a stand on Henry House Hill and then counter-attacked, forcing the Union army into retreat that ballooned into a rout. Besides the troops and their supply wagons, many civilian observers trekked to Manassas in their horse and buggies, and picnic lunches, to see what battle entailed. When the fighting turned into a rout, civilians became entangled with the Union army in its flight back to Washington, aiding and abetting the rout.[21]

Fear returned to the capital. Now that the Confederates had won the first major land battle of the war and the Union army was disorganized and in rout, what would happen. Would the rebels capture Washington? Would they destroy the city? Would they arrest and execute loyal Unionists? Thankfully, in the next few days the confederate army realized that it also had become disorganized by the fighting that occurred at Manassas and could not, immediately, undertake an attack on the Union capital. [22]

This fear of Confederate capture was the impetus for designing and constructing a system of fortifications to encircle and defend Washington, D.C. In the wake of defeat, the Union called Major General George B. McClellan, who had won some battles in West Virginia, to Washington and on July 27, only a few days after the defeat at Manassas, gave him command of the troops in the vicinity of Washington, D.C. Nicknamed "Little Mac," McClellan, a West Point graduate, had served in the Regular Army from 1846 until 1857, when he resigned his commission and took a position with the railroads. For most of his army service, from 1846 to 1855, he had been an Army Engineer and, therefore, had an appreciation for fortifications and their use. Thus, in addition to reorganizing the army and formulating new plans to fight the enemy, McClellan ordered the erection of a system of fortifications.[23]

Although there are no written orders or instructions from McClellan describing exactly what he wanted done on the defenses of Washington, he did declare: "When I assumed command of the Army of the Potomac I found Maj. J. G. Barnard, . . . occupying the position of chief engineer of that army. I continued him in the same office, and at once gave the necessary instructions for the completion of the defenses of the capital . . ." And Barnard wrote: "I would add that to the great importance attached to these works by the commanding general [McClellan] . . . to his valuable suggestions and prompt and cordial co-operation, the present state of efficiency of the defenses of Washington is in no small degree due."[24]

When McClellan "assumed command in Washington, on the 27th of July, 1861," he found that:

> "In no quarter were the dispositions for defense such as to offer a vigorous resistance to a respectable body of the enemy, either in the position and numbers of the troops or the number and character of the defensive works. Earthworks, in the nature of *tetes-de-pont,* looked upon the approaches to the Georgetown Aqueduct and Ferry, the Long Bridge, and Alexandria, by the Little River turnpike, and some simple defensive arrangements were made at

the Chain Bridge. With the latter exception not a single defensive work had been commenced on the Maryland side. There was nothing to prevent the enemy shelling the city from heights within easy range, which could be occupied by a hostile column almost without resistance."[25]

So, Barnard reported:

"On the retreat of our army such was our situation. Upon an inferior and demoralized force, in presence of a victorious and superior enemy, was imposed the duty of holding this line and defending the city of Washington against attacks from columns of the enemy who might cross the Potomac (as was then deemed probable) above or below.

Undecided before as to the necessity, or at least the policy, of surrounding Washington by a chain of fortifications, the situation left no longer room to doubt. With our army too demoralized and too weak in numbers to act effectually in the open field against the invading enemy, nothing but the protection of defensive works could give any degree of security. Indeed, it is probable that we owe our exemption from the real disaster which might have flowed from the defeat of Bull Run—the loss to the enemy of the real fruits of his victory—to the works previously built (already mentioned), and an exaggerated idea on his part of their efficiency as a defensive line.

The situation was such as to admit of no elaborate plans nor previously-prepared estimates. Defensive arrangements were improvised and works commenced as speedily as possible where most needed. A belt of woods was felled through the forest in front of Arlington and half-sunk batteries prepared along the ridge in front of Fort Corcoran and at suitable points near Fort Albany, and a battery of two rifled 42-pounders (Battery Cameron)was established on the heights near the distributing reservoir above Georgetown to sweep the approaches to Fort Corcoran.

Simultaneously a chain of lunettes (Forts De Kalb, Woodbury, Cass, Tillinghast, and Craig) was commenced, connecting Fort Corcoran and the Potomac on the right with Fort Albany on the left, and forming a continuous defensive line in advance of the heights of Arlington. The wooded ridge which lies north of and parallel to the lower course of Four Mile Run offered a position from which the city, the Long Bridge, and the plateau in advance

of it could be overlooked and cannonaded. While our external line was so incomplete, it was important to exclude the enemy from its possession. Access to it was made difficult by felling the forest which covered it (about 200 acres), and the large lunette (Fort Scott) was commenced as soon as the site could be fixed (about the middle of August). The subsequent establishment of our defensive line in advance throws this work into the same category with Forts Corcoran, Albany, Runyon, &c., as an interior work, or second line, but it is nevertheless an important work, as, taken in connection with Forts Richardson, Craig, &c., it completes a defensive line for Washington independent of the extension to Alexandria.

The defense of Alexandria and its connection with that of Washington was a subject of anxious study. The exigency demanding immediate measures, the first idea was naturally to make use of Fort Ellsworth as one point of our line, and to connect it with Fort Scott by an intermediate work on Mount Ida. An extended study of the topography for several miles in advance showed that such a line would be almost indefensible. Not only would the works themselves be commanded by surrounding heights, but the troops which should support them would be restricted to a narrow space, in which they would be overlooked and harassed by the enemy's distant fire. The occupation of the heights a mile in advance of Fort Ellsworth, upon which the Episcopal Seminary is situated, seemed absolutely necessary. The topography proved admirably adapted to the formation of such a line, and Forts Worth and Ward were commenced about the 1st of September, and the line continued simultaneously by Forts Blenker and Richardson to connect with Forts Albany and Craig. Somewhat later the work intermediate between Blenker and Richardson—filling up the gap and having an important bearing upon the approaches to Forts Ward and Blenker and the valley of Four Mile Run—was commenced.

The heights south of Hunting Creek, overlooking Alexandria and commanding Fort Ellsworth, had been always a subject of anxiety. The securing to our own possession the Seminary Heights, which commanded them, diminished materially the danger. As soon, however, as a sufficient force could be detached to occupy those heights and protect the construction of the work it was undertaken, and the large work (Fort Lyon) laid out and commenced

about the middle of September.

Previous to the movement of the army defensive measures had been taken at the Chain Bridge, consisting of a barricade (bullet proof, and so arranged as to be thrown down at will) across the bridge, immediately over the first pier from the Virginia side, with a movable staircase to the flats below, by which the defenders could retreat, leaving the bridge open to the fire of a battery of two field guns immediately at its Maryland end, and a battery on the bluff above (Battery Martin Scott) of one 8-inch sea-coast howitzer and two 32-pounders. As even this last battery was commanded by heights on the Virginia side, it was deemed proper, after the return of the army, to erect another battery (Battery Vermont) at a higher point, which should command the Virginia Heights and at the same time sweep the approaches of the enemy along the Maryland shore of the Potomac.

During the months of May and June the country between the Potomac and the Anacostia had been examined mainly with the view of obtaining knowledge of the roads and defensive character of the ground, not in reference to locating field defenses. At the period now in question there was apprehension that the enemy might cross the Potomac and attack on this side. Of course what could be done to meet the emergency could only be done without that deliberate study by which a complete defensive line would best be established. The first directions given to our labors were to secure the roads, not merely as the beaten highways of travel from the country to the city, but also as in general occupying the best ground for an enemy's approach.

Thus the sites of Forts Pennsylvania, Massachusetts, Slocum, Totten, Bunker Hill, Saratoga, and Lincoln were rapidly chosen, and works commenced simultaneously at the first, second, third, and sixth of these points early in August.. The others were taken up as speedily as the clearing of the woods and the means at our disposal would admit, and the gaps in the line afterwards partially filled up by construction of Fort Gaines, Forts De Russy, Slemmer, and Thayer. The works mentioned are at this date essentially completed and armed, though there is still considerable to do in auxiliary arrangements. Our first ideas as to defensive works beyond the Anacostia

contemplated only the fortification of the debouches from the bridges (Navy-Yard Bridge and Benning's Bridge), and the occupation of the heights overlooking the Navy-Yard Bridge. With that object Fort Stanton was commenced early in September. A further examination of the remarkable ridge between the Anacostia and Oxen Run showed clearly that, to protect the navy-yard and arsenal from bombardment, it was necessary to occupy an extent of 6 miles from Berry's place (Fort Greble) to the intersection of the road from Benning's Bridge (Fort Meigs).

Forts Greble and Carroll were commenced in the latter part of September, and Fort Mahan, near Benning's Bridge, about the same time. Forts Greble and Stanton are completed and armed; Forts Mahan and Carroll very nearly so. To fill up intervals or to sweep ravines not seen by the principal works, Forts Meigs, Dupont, Davis, Baker, Good Hope, Battery Ricketts, and Fort Snyder have been commenced, and it is hoped may be so far advanced before the winter sets in as to get them into a defensible condition. The occupation of the Virginia shore at the Chain Bridge was essential to the operations of our army in Virginia. It was only delayed until our force was sufficient to authorize it. General Smith's division crossed the bridge September —, and Forts Ethan Allen and Marcy were immediately commenced and speedily finished.

A few weeks later (September 28) the positions of Upton's and Mun-son's Hills and Taylor's Tavern were occupied and Fort Ramsay commenced on Upton's Hill. The enemy's works on Munson's and the adjacent hill were strengthened and a lunette built near Taylor's Tavern.

Comprised in the foregoing categories there are twenty-three field forts south of the Potomac, fourteen field forts and three batteries between the Potomac and Anacostia, and eleven field forts beyond the Anacostia, making forty-eight field forts in all. These vary in size from Forts Runyon, Lyon, and Marcy, of which the perimeters are 1,500, 937, and 736 yards, down to Forts Bennett, Haggerty, and Saratoga, &c., with perimeters of 146, 128, and 154 yards. The greater portion of them are inclosed works of earth, though many—as Forts Craig, Tillinghast, Scott, &c., south of the Potomac, and Forts Saratoga, Gaines, &c., on the north—are lunettes with stockaded gorges. The armament is mainly made up of 24 and 32 pounders on sea-coast carriages, with a limited proportion of 24-pounder siege guns, rifled Parrott guns, and

guns on field carriages of lighter caliber. The larger of the works are flanked, but the greater number are not, the sites and dimensions not permitting. Magazines are provided for one hundred rounds of ammunition, and many of the works have a considerable extent of bomb-proof shelter, as Forts Lyon, Worth, and Ward, in the bomb- proofs of which probably one-third of the garrison might comfortably sleep and nearly all take temporary shelter. In nearly all the works there are either bomb-proofs like the above, or log barracks, or blockhouses of some kind.

It would be impossible to go into any details about these constructions. I am in hopes ultimately to be able to deposit in the Engineer Office drawings of each work with sufficient detail for most purposes. The accompanying sheets, Nos. 1 and 2, will exhibit the general location and bearings of the works.*(*)* The tabular statement herewith will show the perimeters, number of guns, amount of garrison, &c.*(+)*

It should be observed that most of the works south of the Potomac, having been thrown up almost in the face of the enemy, have very light profiles, the object having been to get cover and a defensive work as speedily as possible. The counterscarps of all the works, with few exceptions, are surrounded by abatis.

It is impossible, at present, to indicate the exact extent of forest cut down. (The drawings herewith represent the forest as it existed before the works were commenced.)*(++)* The woods in advance of Forts Worth, Ward, and Blenker have been felled; all surrounding and between the next work on the right and Fort Richardson; all the wood on the ridge on which is Fort Scott—a square mile probably—in advance of and surrounding Forts Craig, Tillinghast, and Woodbury, besides large areas north of the Potomac, &c. This fallen timber (most of which still lies on the ground.) rendered an enemy's approach to the lines difficult. The sites of Forts Totten, Slocum, Bunker Hill, Meigs, Stanton, and others were entirely wooded, which, in conjunction with the broken character of the ground, has made the selection of sites frequently very embarrassing and the labor of preparing them very great.

The only case in which forts are connected by earthworks is that of Forts Woodbury and De Kalb, between which an infantry parapet is thrown up,

with emplacements for field guns. The construction here was suggested by the fact that this was on one of the most practicable and probable routes of approach for the enemy. Infantry trenches have, however, been constructed around or in advance of other works, either to cover the construction (as at Fort Lyon), or to see ground not seen by the work (as at Forts Totten, Lincoln, Mahan, &c.).

The works I have now described do not constitute a complete defensive system.

We have been obliged to neglect much and even to throw out of consideration important matters. We have been too much hurried to devise a perfect system, and even now are unable to say precisely what and how many additional points should be occupied and what auxiliary arrangements should be made.

It is safe to say that at least two additional works are required to connect Fort Ethan Allen with Fort De Kalb.

The necessity of protecting the Chain Bridge compelled us to throw the left of our northern line several miles in advance of its natural position, as indicated by the topography to the sites of Forts Ripley, Alexander, and Franklin. Between these and Forts Gaines or Pennsylvania one or two intervening works are necessary.

Between Forts Pennsylvania and De Russy at least one additional work is necessary.

Fort Massachusetts is entirely too small for its important position. Auxiliary works are necessary in connection with it.

Small *tetes-de-pont* are required around the heads of Benning's and the Navy-Yard Bridges.

Between Forts Mahan and Meigs one or more intervening works and between Forts Du Pont and Davis another work of some magnitude are required, the ground along this line not being yet sufficiently known. A glance at the map will show it to be almost a continuous forest. It is not deemed necessary to connect the works by a continuous line of parapet, but the intervening woods should be abatised and open ground traversed by a line

of artificial abatis, and infantry parapets, half-sunk batteries, &c., placed so as to protect these obstructions and to see all the irregularities of the ground not now seen from the works. Considerable work is also required in the way of roads, the amount of which I cannot state with any precision. Several miles of roads have actually been made. The works themselves would be very much strengthened by caponieres in the ditches, additional internal block-houses, or defensive barracks, &c.

The aggregate perimeter of all the works is about 15,500 yards, or nearly 9 miles, including the stockaded gorges, which, however, form a small proportion of the whole, requiring, computed according to the rule adopted for the lines of Torres Vedras, 22,674 men (about) for garrisons.

The number of guns, most of which are actually mounted, is about four hundred and eighty, requiring about 7,200 men to furnish three reliefs of gunners. The permanent garrisons need consist of only these gunners, and even in case of attack it will seldom be necessary to keep full garrisons in all the works.

The total garrisons for all the works (one hundred and fifty-two in number) of the lines of Torres Vedras amounted to 34,125 men; and as the total perimeters are nearly proportional to the total garrisons, it appears that the lines about Washington involve a magnitude of work of about two-thirds of that in the three lines of Torres Vedras.

The works themselves, fewer in number, are generally much larger than those of Torres Vedras, and involve, I believe. when the amount of bomb-proof shelter in ours is considered, more labor per yard of perimeter; but the latter lines involved a greater amount of auxiliary work, such as the scraping of mountain slopes, palisading, abatis, roads, &c., than we have had occasion to make.

The lines of Torres Vedras were armed with five hundred and thirty—four pieces of ordnance (12, 9, or 6 pounders, with a few field howitzers); ours with four hundred and eighty pieces, of which the greater number are 32-pounders on barbette carriages, the rest being 24-pounders on the same carriages, 24-pounder siege guns, 10, 20, and 30 pounder rifled guns (Parrott), with a few field pieces and howitzers. As to number of guns,

> therefore, our armament approaches to equality with that of the famous lines mentioned; in weight of metal more than doubles it.
>
> The above applies to our works as now nearly completed, and has no reference to the additional works I have elsewhere mentioned as hereafter necessary. It is impossible to give any other statement of actual cost of the works than the total amount expended thus far. The work has been done partly by troops and partly by hired laborers, the works north of the Potomac being mostly done by the latter. The large amount of carpentry in magazine frames and doors and blindages, barrier gates, stockades, block-houses, defensive barracks, &c., has kept a large gang of carpenters all the time at work, and caused a large expenditure for lumber. The entire amount made available by the Department for these works has been $344,053.46, and this will all have been expended (or more) by the end of the present month. This would give an average of a little over $7,000 for each of the forty-eight works; but of course the real cost of them has been very unequal.
>
> The importance of perfect security to the capital of the United States in the present state of affairs can scarcely be overestimated, and these works give a security which mere numbers cannot give, and at not a tithe the expense of defense by troops alone."

Thus following the defeat at First Manassas, gigantic efforts were directed toward designing and erecting a system of fortifications to protect Washington, D.C., the Union's capital.[26]

After deciding that fortifications are necessary, the first thing to do, hopefully by an Army engineer officer, was to select the right location(s). Dennis Hart Mahan, the Military Engineering professor at the U.S. Military Academy at West Point, New York, wrote:

> "As a field fort must rely entirely on its own strength, it should be constructed with such care that the enemy will be forced to abandon an attempt to storm it, and be obliged to resort to the method of regular approaches used in the attack of permanent works. To effect this, all the ground around the fort, within range of the cannon, should offer no shelter to the enemy from its fire; th ditches should be flanked throughout; and the relief be so great as to preclude any attempt at scaling the work."[27]

After the Army engineer officer selected the location of the fortification, he next needed to "throw up the work," "layout the work" or profile it. Some authors have described how to throw up a work:

> "56. The foregoing chapters contain all that is requisite to determine the plan and relief of field works under all circumstances of variety of ground. To follow a natural order, the next steps will be to describe the manner of laying the work out on the field, which is termed profiling; the distribution of the workmen to excavate the ditch, and form the parapet; and the precautions to be observed in the construction.
>
> 57. Poles (Fig. 18,) having been planted at the angles of the work, and the height of the interior crest-marked on them, a line is traced on the ground, with a pick, showing the direction of the interior crests. At suitable distances, say from twenty to thirty yards apart, cords are stretched between two stout pickets, in a direction perpendicular to the line marked out by the pick; these cords should be exactly horizontal. A stout square picket is driven firmly into the ground, where the cord crosses above the pick-line, and a slip of pine, on which the height of the interior crest is marked, is nailed to the picket. The thickness of the parapet is measured on the cord, and a picket driven into the ground to mark the point. The base of the interior slope and tread of the banquette, are set off in a similar manner; and a slip of deal is nailed to each of the pickets. The height of the interior crest, and the tread of the banquette, are easily ascertained, from the position of the cord, and the interior crest; these points having been marked on their respective slips, the outline of the parapet is shown by connecting them by other slips, which are nailed to the uprights; the banquette slope, and exterior slope, will be determined by a similar process.
>
> 58. From the profile thus formed perpendicular to the interior crests, the oblique profiles at the angles can readily be set up, by a process which will suggest itself without explanation.
>
> 59. Having completed the profiling, the foot of the banquette, and that of the exterior slope, are marked out with the pick, and also the crests of the scarp and counterscarp. All the arrangements preparatory to commencing the excavation are now complete."[28]

"A stick may be cut to measure lines, and stakes will be driven to show the slope and general form of the profile necessary in each particular case. Whatever the form is to be given to a work, it is traced upon the ground by laying off its angles according to the number of their degrees, and its sides are designated by little furrows dug with the mattock or spade along cords stretched in the proper direction. To profile a work is to figure upon the ground its elevation by means of poles and laths nailed together; (Fig. 127.) The officer who directs the work ought to take with him four or five soldiers who carry mattocks, 100 pickets, twenty poles ten or twelve feet long, twenty laths, some camp colors, and a cord 65 feet in length. There ought to be a carpenter, who carries hammer, nails, and a saw.

Field-works necessary or desirable in the operations of an army in the field to strengthen lines of battle, keep open lines of communication, protect bridges from destruction, &c., will generally be constructed under the supervision of engineers. They may have any extent, from a simple redan, or a battery, to a line or several lines of works, some of considerable magnitude, extending over a position of ten or twenty miles."[29]

"*To throw up a work*, a line is first traced on the ground with a pick, showing the direction of the interior crest: poles having been planted at the angles of the work, with the height of the interior crest marked on them, cords are then stretched at distances of about thirty yards apart, horizontally between two pickets, perpendicular to the lines."[30]

"The proper height of parapet for the work having been determined, (by the process of defilading, if necessary,) the next step is to plant pickets on the faces, flanks, and angles as guides to the workmen in giving it the suitable dimensions and form. Thus, to the magistral line of each face and flank, trace on the ground perpendicularly at intervals, and on these measure, horizontally, the bases of the slopes composing the profile to be employed. At the points thus set out fix poles or laths perpendicularly in the ground, and saw off their tops at the height which the parapet is to have at that particular part; nail laths to the tops of these poles from one to the other across the direction of the intended parapet; and thus there will be obtained an outline of the slopes, or a profile of the parapet.

> For the profile at an angle, lay a rope on the ground bisecting that angle, and produce it outwards; drive pickets along this rope at the points where it is intersected by the prolongations of lines joining the bases of the profiles already set up perpendicularly to the adjoining faces, these pickets mark the bases of the profiles at the salient; the laths may then be set up as before.
>
> •When the salient angle is 60%%, the breadth of the base of any slope measured on the capital will be equal to twice the breadth of the same slope taken on a line at right angles to the face."[31]
>
> "The work is commenced by marking on the ground the interior crest, the foot of the interior slope, and the banquette, which is done by a little furrow made with a pick moved along cords stretched in the direction of the lines just mentioned; . . ."[32]

Some soldiers, who observed this construction and often actually worked on the fortifications themselves, penned descriptions:

> "On the 29th we were engaged in building a fort on the site of our old camp. The fort or earthwork was a very large one with a ditch or moat all round it. This was filled with water. The outside of the forts were sodded. In building these works the engineers first built a light frame of wood the size and shape that it wanted, and when it is fixed to suit them with the necessary angles, etc. the men are put to work with pick and shovel and digging from the outside throw the dirt between the frame work until it is filled up, some of the men being on the pile to spread the dirt. When it has been graded over nicely, it is covered over with sods. The ditch soon fills with water from the many rain storms, and after the Cheaveaux de Frisse that we employed were large branches of trees pinned to the ground, with the brush outward. The ends of the branches were then cut off and sharpened, and it would have bothered man or horse to get over it."[33]
>
> "A line was laid out by our Engineers and we were ordered to fortify our position. Axes and shovels were furnished and we were soon hard at work. To most of us this was an unfamiliar effort but before our service ended it was one in which we were to become proficient. . . . There was a lot of fallen timber that we gathered and placed lengthwise, then dug a trench behind, with the dirt thrown over the logs. The trench was over two feet deep, wide

> enough for the line to stand in and with the embankment the total depth was five feet. These works were quite strong and would protect the men against attack, for an ordinary projectile could not go through the embankment."[34]

Engineers

When the Civil War began, two engineer corps existed in the army—the Corps of Engineers and the Corps of Topographical Engineers. Among other duties, the Corps of Engineers planned, designed and oversaw the construction and maintenance of fortifications while the Corps of Topographical Engineers was the Army's surveyors and cartographers, often surveying and mapping fortifications. The two corps combined in 1863 because there weren't enough Army engineers for two to serve on the staff of all the commands within the Union Army. Following the merger, Army Engineers were responsible for surveying and mapping fortifications as well as planning, designing and overseeing their construction and maintenance.[35]

The Army Engineers planned, designed and erected numerous fortifications throughout the country during the Civil War but the Defense of Washington, D.C. was the most ambitious undertaking. Winfield Scott assigned Major John G. Barnard, Corps of Engineers, to the Department of Washington; on April 28, 1861, Colonel J.F.K. Mansfield, the department commander, a former engineer officer, attached Barnard to his headquarters as chief engineer.[36]

When the army moved into Northern Virginia on May 24, 1861, Barnard oversaw the erection of fortifications there. He also accompanied the Army to Manassas in July 1861. McClellan assumed command of the troops around Washington, D.C. at the end of that month. On August 17, all the troops in the vicinity of Washington became part of the Army of the Potomac and, three days later, General Orders No. 1, Army of the Potomac, stipulated that Barnard was attached to the staff as chief engineer. As McClellan formulated his thoughts for fortifications around Washington, D.C., Barnard planned, designed and oversaw their construction. At first, there were many other Army Engineers to assist Barnard including G.W. Snyder, Henry Robert, D.P. Woodbury, Frederick E. Prime, G.W.C. Lee, Miles D. McAllester, C.E. Cross, O.E. Babcock, Horatio G. Wright, Barton S. Alexander, and C.E. Blunt but, before long, all of these officers were off to other assignments except Barton S. Alexander who, except for a few temporary assignments, stayed with the defenses of Washington throughout the war. Army Engineer Lt. James W. Cuyler, for sometime in 1864-65, oversaw the work on outer defenses at Vienna.[37]

Early in the war, the Regular Army Engineer troops assisted in the construction of the Defenses of Washington and in training others to do the same, "Here the men were put immediately to work, superintending the construction of the fortifications of the Capital, being first employed on the rifle battery at Chain Bridge, and afterwards at Fort Pennsylvania (later Fort Reno), and on other works in the vicinity of

Upton, Munson, and Mason hills." Even the volunteer Engineer units participated. Volunteer Army Enginner Wesley Brainerd wrote "We constructed a fort. The work was done by the Companies, relieving each other by day and night as in case of actual hostilities with an enemy in front" and "We occasionally took trips across the river for practice in the art of making Fascines [and] Gabions." Captain Henry E. Wrigley, commander of the Independent Company, Pennsylvania Volunteer Engineers, requested that his unit be detailed for service upon the entrenchments, endorsed by Barnard, and, among other accomplishments, they erected a small battery and infantry parapet to connect Fortt Cass with Fort Tillinghast and supervised a party of 600 men constructing fortifications between forts Richardson and Cass. Unfortunately, both the Regular Army Engineer Battalion and the volunteer engineer units left the Washington, D.C. area for the field.[38]

Civilian Employees

Barnard and Alexander, therefore, hired numerous civilian employees to replace the unavailable military engineers. Barnard wrote:

> "The civil engineers, William C. Gunnell on the north [side of the Potomac River], and Edward Frost (subsequently A. Grant Childs) on the south [side of the Potomac River], had been prior to the war engaged on the Washington Aqueduct. They exhibited great zeal and intelligence, and soon mastered all those branches of military engineering which concerned their duties of construction. They were required to execute plans prepared in the office of the chief engineer, to exercise close supervision over their respective divisions and generally to act as administrative officers in the details of the work."[39]
>
> The subordinate organizations of each of the civil engineers in charge of divisions consisted as follows:
>
> A draughtsman to prepare plans, maps, &c.
>
> An assistant engineer to assist in laying out the work from plans to make the necessary field surveying for maps.
>
> A clerk to consolidate the daily reports of working force; to make out the monthly pay-rolls, keep accounts of purchases, and to prepare vouchers for payment; and to keep account of property drawn on requisition upon the quartermaster's and other departments.

> Two or more superintendents were employed on each division, to whom were apportioned subdivisions of the line. Their duties were to control and direct, through their foreman, the laboring force; to keep the time-books, make daily reports of the occupation of every person employed under them, as well as of the military details; to supervise the camps and depots of material; to make requisition on the engineers in charge (who were the purchasing agents) for materials; and, generally, to aid the civil engineers by giving a closer and more constant oversight to all the operations on each subdivision than they could themselves exercise."[40]

On March 12 and April 29, 1864, Barnard reported on the various types of employees working on the fortifications and their recompense:

> "Your communication of yesterday requesting to be furnished with a list of the pay given to employees on these Defences is received and below I give the desired information:

Chief Engineer–In charge of line	$7.00 per day
Superintendent	$5.00 per day
Clerks	$3. And $4.50 per day
Draftsmen	$3. And $5. per day
Overseers	Nothing shown
Foreman of Laborers–same[as above]	$3.00 per day & 1 Ration
Master Carpenter	$3.50 per day & 1 Ration"

> "In accordance with your request in endorsement on letter of Colonel Brewerton, I herewith annex a statement of the rates paid by me on the works for defences of Washington:

Carpenters	$2.00 to $2.50 per day & 1 Ration
Masons	$2.50 per day & 1 Ration
Blacksmiths	$2.00 to $2.50 per day & 1 Ration
Foreman laborers	$2.50 per day & 1 Ration
Laborers	$1.00 to $1.25 per day & 1 Ration" [41]

Barnard received a variety of applications for the more experienced jobs under his supervision. A.C. Entrikin, of Brooklyn, New York, with a recommendation from Army Engineer officer, Major C. E. Blunt, applied for appointment as superintendent of fortifications, on October 24, 1864; Leander A. Poor asked for a position as engineer on December 10, 1862; and G.W. Watson, who worked for the New York City Surveyor & Engineer Office, wanted a situation as a draughtsmen, on February 3, 1864. The Sanitary Commission inquiree, on January 1, 1865, if employment could be given to certain discharged soldiers as mechanics. Madam Pountalis requested of Barnard civilian employment for an Austrian officer, Mr. Holleys, who was in U.S. service but on account of wounds found field service too hard, on the works.[42]

On November 6, 1861, Barnard wrote an endorsement, exclaiming "We have now in service on field works around Washington as many laborers as can be usefully employed." But, due to the many men who voluntarily joined the service or were drafted, the Army Engineers generally experienced great difficulty in finding good employees and keeping them. Advertisements appeared in various newspapers around Washington, D. C. and in other cities, including New York, such as this one in the *Washington Star*, July 1864:

> Wanted immediately, 200 laborers, 50 choppers, carpenters, etc., to work on Eastern Branch line of fortifications.
>
> Apply to John Collins, superintendent at Camp Haskins, near insane assylum, or at headquarters chief engineer defences of Washington, Pennsylvania avenue and 19th street.
>
> William Gunnell
>
> Engineer Defences North Potomac[43]

Even the Secretary of War realized how difficult it was to find and keep laborers on the fortifications. In 1863, he asked for a report "as to the just and reasonable rate of advanced wages" for laborers on the fortifications. The two Civil Engineers, Gunnell and Childs, recommended to Barnard "we think the following increase would be proper":

> 25 per cent on all rates not exceeding $3.00 per day.
>
> 15 per cent on all rates exceeding $3.00 and not exceeding $5.00 per day.
>
> But in another point of view, if it is considered proper only to give such rates as we are compelled to give in order to command the labor we want, then we would say from $2.00 to $2.50 per day to Carpenters, $1.25 per day to laborers & $1.00 per day to Contrabands with rations to each of the above. All other rates to remain as at present.[44]

A Union draft or conscription threatened to further deplete the ranks of employees. Alexander on October 22, 1862, informed Barnard that "two of the best teamsters" employed on the defenses north of the Potomac River had been drafted by the state in Baltimore County, Maryland and asked for an exemption. In anticipation of a national conscription law, the Engineer bureau, on August 14, 1862, wrote the Secretary of War requesting relief:

> "I have the honor to recommend that the following persons, or classes of persons, employed by the Engineer Department or its officers, be placed among those not subject for the present, to be drafted into the active military service of the United States:
>
> 1st Agent of the Department in charge of works or operations
>
> 2nd Civil Assistants to Officers or Agents
>
> 3rd Clerks
>
> 4th Overseers
>
> 5th Draughtsmen
>
> 6th Receivers of Materials
>
> 7th Foreman of Laborers
>
> 8th Master Mechanics or Workmen
>
> If this proposition is approved, it will still leave the great body of persons employed in our operations, viz, mechanics and laborers. Available for the military service.
>
> Those proposed to be excepted are persons having special acquired skill and generally holding positions of authority. The drafting of any of them might be rather prejudicial than advantageous to the military interests of the Country. Some of them it would be very difficult to replace."[45]

On March 3, 1863, the Union passed its first national conscription act. F.W. Balckford, Commissioner of Enrollment, on December 5, 1863, informed the Commanding Officer at Fort De Kalb that John Nighton, who had been drafted, declined to become a citizen and therefore was exempt from the draft but "In such times, such a man should not be employed by the Government" and recommended his dismissal from the work. Pat Casey, an employee on the fortifications was also exempted from the draft on the "grounds of alienage" in March 1865. In February 1865, W.C. Gunnell, a civil assistant on the defences was

drafted but on March 1, the Adjutant General's Office informed the Engineer Department "I have the honor to inform you that, by direction of the Secretary of War, William C. Gunnell, drafted in this city on the 2d ultimo, will be allowed to absent himself from military service, upon his parole of honor to report for duty whenever called upon." James Burke, a master carpenter on the works south of the Potomac was drafted on February 28, 1865 and Alexander, on March 6, wrote the Secretary of War asking that he be excused from the operation of the draft to continue to serve in his present position for "The long experience of a good man on such a line of forts, as you know, cannot be easily replaced." The Army Engineers did not always succeed as in September 1864, superintendent John Collins was informed that his request to have F.P. Endicott excused from the draft could not be granted.[46]

Labor Relations

Labor relations between the employees and the Army Engineers were not always great. On January 5, 1863, Barnard informed Civil Engineer Edward Frost, who supervised construction and maintenance of Defenses of Washington, South and West of the Potomac, "Your services will be no longer required. Please turn over your work and accounts to Mr. Childs who will be directed to assume charge of them." No reason for this change was found.[47]

On December 28, 1862, Civil Engineer William C. Gunnell, who supervised construction and maintenance of Defenses of Washington North of the Potomac, submitted his resignation but did not state his reasons. Barnard instructed Superintendent John Collins, on December 30, to take over Gunnell's duties. Before Collins could do so, however, Gunnell withdrew his resignation and resumed his duties.[48]

In November 1864, Benjamin S. Bryant, a workman on the defences, required a pass to go into Virginia and bring his wife back. Draughtsman Bolton W. O'Grady disappeared on July 9, 1864, purportedly with a woman of "bad character" and left his wife and two children destitute but, hopefully, the $40.00 owed him could be given to them. On July 2, 1863, Barnard reported that his hired employees were deserting and refused to work so guards were sent him "to compel these people to work, and if necessary prevent their desertion."[49]

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* As Union troops moved south, some slaves escaped their masters and followed the blueclad soldiers, hoping to be set free. On May 24, Union General Benjamin F. Butler refused to return three fugitive slaves who came into his lines because the Confederacy had employed them in constructing fortifications and, therefore, he confiscated them as "contraband of war." Indeed, many slaves in the Confederacy raised food, hauled supplies, and were put to work on fortifications and in mines and munition plants which justified their confiscation as contaband of war. Lincoln's administration quickly approved Butler's actions. The term contraband, applied to fugitive slaves, quickly gained common usage. On July 9, 1861, Congress passed a resolution stipulating that the Union army was not responsible to capture and return fugitive slaves. Congress passed a Confiscation Act on August 6, 1861 providing that the Union Army could confiscate any slave employed directly by the Confederate armed forces. On March 13, 1862, Congress passed an act forbidding Union army officers from returning fugitive slaves to their masters. The Union often employed these contraband and later recruited them into the armed forces. See: Patricia L. Faust, "contrabands," *Historical Times Illustrated Encyclopedia*, 161-62; *Free at Last: A Documentary History of Slavery, Freedom, and the Civil War.* Edited by Ira Berlin , et al. (Edison, NJ: The Blue & Grey Press, 1997), xxviii (May 24), 8-11; Long, *The Civil War*, 77-78 (May 24); James M. McPherson, *Battle Cry of Freedom: The Civil War Era* (New York: Oxford University Press, 1988), 354-56, 496-98.

On October 28, 1864, Alexander received an anonymous letter "relative to refusing a man work if he did not vote for" George B. McClellan for president. The overseers supervising the erection of the defenses in the Fairfax Court House area had trouble obtaining rations. Alexander, on one occasion, had to appeal to the superior officer (go over the head) of Colonel William Gamble, commander of the troops in that sector comprising the First Separate Brigade. In addition, many commanding officers of forts and batteries, against orders, often refused entrance to employees. For example, in April 1863, "Foreman Franklin Hoyt was refused permission to enter Fort Ward on pass of General Barnard." On August 26, 1864, Assessor P.M. Pearson, U.S. Internal Revunue, requested a list of all officers, subordinates and employees during the year 1863 with the amount paid them to determine income taxes owed.[50]

In spite of the scarcity of employees and the problems associated with them, the engineers used them as they could and when they had money to pay them. Generally, more hired employees were used on the fortifications south of the Potomac River than on those north of the Potomac River. The average number of hired employees in the months for which there are reports follow:

December 1863—700	January 1865—238
March 1864—377	February 1865—243
June 1864—475	March 1865—310
July 1864—435	April 1865—384
September 1864—785	May 1865—353
October 1864—707	June 1865—38
November 1864—786	July 1865—34
December 1864— 520	August 1865—28[51]

Unfortunately, little more is known about the ordinary laborers on the Defenses of Washington. No good collection of letters, or a diary or reminiscence has been found. Some additional information on the contrabands, who worked as laborers, is known and is provided below.

Contraband Workers

Former slaves or "contrabands,"* as some referred to them, flocked to Washington, D.C., the Union capital. In some instances, though, government agencies even impressed the former slaves and forcibly transported them from areas such as the peninsula, between the York and James rivers in Virginia, and North Carolina to the Washington, D.C. area to work. After arriving in the area, many found work as laborers. Due to the lack of other employees and the fact that contrabands worked for less money, numerous former slaves worked on the fortifications.[52]

In August 1862, contrabands, both men and women, received 40 cents plus rations, at the Quartermaster Departments' expense, a day for their work. By November 1863, Civil Engineers Gunnell and Childs recommended to Barnard that $1.00 per day to contrabands with rations was a fair wage. The Engineers also issued a variety of clothing to those contrabands and their families who worked on the fortifications. Some of the contrabands working on the fortifications lived in Freedmen's Village or other Government housing and sometimes even at the forts such as Fort Lyon, VA, or the shanty village at Fort Albany, VA.[53]

The Army didn't always treat the contrabands fairly. The Department informed Brigadier General Silas Casey, on April 6, 1862, that, in answer to his letter, "all negroes coming into the lines of any of the camps or Forts under his command are to be treated as persons and not as chattle." General A.W. Whipple's Division ADC, on August 25, 1862, called attention to the case of the contrabands employed on fortifications in the command declaring that Brigadier General Wadsworth, Military Governor of Washington, sent them over with instructions to pay them at the rate of 40 cents for each working day but many had been at work for more than two months and never received pay leaving them destitute of clothing and other necessaries. On July 11, 1862, the commander of the Miltary Defenses Southwest of the Potomac wrote that a great number of contrabands were employed on the fortifications in this command and, per orders from Whipple, they should be paid all that was due them." The aide-de-camp, Whipple's Division, informed commanders, on July 18, 1862, that regimental quartermasters "will make requisitions for funds sufficient to pay those laborers at the rate of forty cents for each days work" and "rations will be issued at the rate of one for each adult detached for service and where necessity required it food will be furnished for children." To make sure that the contrabands were taken care of, commanders received instructions to keep records of service each day and to make a full report on the subject at the end of each month. These reports resembled the following one, submitted on June 19, 1862:

"I have the honor to report the following as the number of Contraband in your command.

Where Employed	Employees		un Employees	Total	Rations Drawn for
Arlington	Men	8	10	18	
	Women	3	3	6	
	Children		1	1	25
14th Mass V		53		53	53
2nd NY Art.		10		10	10
4th NY Arty	Men	13		13	

	Women	2		2	15
1st Wis Co. Arty	Men	5		5	
	Women	1		1	6
Hospital 4th NY Arty		12		12	12
Hospital Fairfax Sem.	Men	26		26	
	Women	6		6	
	Children		10	10	42
12th Batty Ft. Lyon	Men	41		41	41
11th NY Batty,	Men	14		14	
Ft. Ellsworth	Women	1		1	15
	Total	195	24	219	219[54]

Generally, the Army Engineers were glad to employ contrabands on the defenses. General Whipple, on May 14, 1862, was informed that "On your recommendation the General commanding has directed one Hundred "Contrabands" be detailed for duty as laborers on the Military defences S.W. of the Potomac." On June 1, 1862, Army Engineer William E. Merrill requested that General Wadsworth issue a detail of "contraband" to him for work on the defenses. B.S. Alexander proposed that about "1000 negroes" organized in three gangs under a general superintendent—one 400-man gang to work on the North side between the river and the Eastern Branch, one 400-man gang for the South side of the river, and a 200-man gang for the east side of the Eastern Branch—could put the roads in good order by Christmas. Further, Alexander wrote that by using the contrabands, which in sufficient numbers "will furnish the true solution of the subject, the estimate of costs to do the work may be reduced at least one-half and probably more." Civil Engineer Edward Frost wrote, on May 9, 1862, that 100 to 150 able-bodied contrabands "might meet the urgent need that exists for working parties in the several Forts . . ."[55]

But, not everyone was happy with the contrabands' work and appearance. Civilian Engineer Edward Frost, on November 10, 1862, wrote that "A portion of the Contrabands remaining in my charge" were "entirely unsuitable for the purpose . . ." Many of the local Northern Virginia citizens did not appreciate the contrabands who often camped on their property and sometimes took their belongings and caused destruction. Anne S. Frobel, one of those citizens, was distraught when "a whole gang of Contrabands had taken possession of Sharon," the chapel on her land. The contraband did not leave so she had to have the Army evict them.[56]

One author wrote that "In general, and in order to save the troops as much as possible, most of the labor was performed, not by troops, but by hired negroes working under charge of engineer officers." Actually, hired laborers, including contrabands, were in short supply and at times there wasn't any money to pay them. The greatest amount of the labor on the fortifications was performed by troops stationed in the defenses of Washington and the Department of Washington, including infantry, artillery and cavalry.[57]

Although most of the fortification work was not done by contrabands, they were used when available. The Military Defenses Southwest of the Potomac reported on July 11, 1862 that "there are a large number of Contraband employed as laborers on the forts and roads in this command." On August 1, 1862, Colonel Wagner, Second NewYork Artillery Regiment, learned that a party of contrabands would join him to "be employed in the new work in process of construction near Ft. Blenker." In November 1862, Barnard reported that he had 2 to 300 contrabands at work along the line from Fort DeKalb to Fort Worth. Alexander reported on July 31, 1864, that a gang of contrabands in the employment of the Quartermasters Department was removing the undergrowth of bushes springing up in front of the works. Thus, it was not strange for Alexander to state in his report of operations on the defenses during the month of July 1864, "This labor has been performed, under the direction of this office, partly by employees of the Q.M. Dept. and contrabands from Freedmen's Village, and partly by the garrisons of the different forts."[58]

At times, the Army Engineers experienced problems in the use of contraband labor on the fortifications. In one instance a commander had been informed that he would receive contrabands to work on the forts but later was told that the "General says he considers their service much more needed here at the Hospitals and in the QM Dept. And he can not spare any for the fortifications." Alexander reported:

> "that Colored Laborers at work for Engineer Dept on South Side of Potomac, stationed at Contraband Camp, were by order of Gen Auger taken to the Agricultural Contraband Camp & were informed that all who wished to do so could remain & those who would not would be sent under guard to Washington. They were told that they would not be allowed to work for the Engineer Dept on the Forts or elsewhere, & that they would not be allowed to drive Government teams."[59]

The troops that worked on the fortifications were often glad to see the contraband workers. A member of the 50th New Jersey Volunteer Jnfantry Regiment reported that "Details of men were sent out every morning" to work on the fortifications but "At length a force of two hundred contrabands from North Carolina were sent to take our places in the ditches, and we willingly turned over to them our picks and shovels." Private Alfred Bellard wrote that "The government had sent a lot of contrabands with us to fell trees and cut them into cord wood, which were afterwards sent by rail to the city to furnish fuel for the army during the winter."[60]

Many of the officers felt that the best work was accomplished when a competent supervisor oversaw the contrabands' work. Upon receiving 100 contrabands to work on the fortifications, General Whipple was "authorized to employ suitable persons as "overseers" to take charge of these laborers not exceeding one overseer to thirty laborers." Whipple informed his subordinates that "you will direct a competent officer to take charge of the contrabands detailed as working parties in and about the forts occupied by your command . . ." Civil Engineer Frost suggested to Whipple "assigning to each regimental or other separate command a limited number of negroes, as a working party not less than ten nor more than thirty in each; placing the same number under the general supervision of a commissioned officer & in the immediate care of a sergeant . . ." Concluding, Frost remarked that "Such portions of the work prescribed as command skill & experience will be done by the usual Force employed by the Engineer Department." Regardless, the contraband were important to the construction and maintenance of the defenses of Washington. Without the contrabands' numbers and labor, the defenses would not have been as successful as they were.[61]

Military Workers

Much of the labor for constructing and maintaining the Defenses of Washington was provided by troops. The author of *Alexandria in the Civil War* wrote, "Generally, northerners spent their first days in the Old Dominion adjusting to the rigors of camp life. For most troops, this meant drill and digging earthworks to protect Washington." Margaret Leech, author of the beloved book on Washington during the Civil War expressed the same idea, "The soldiers in the vicinity of Washington had at once begun the arduous labor of building earthworks."[62]

Actually, the soldiers themselves explained it much better. A Seventy-Ninth New York "Highlander" exclaimed that work on the Defenses of Washington "was the hardest kind of manual labor; spades were trumps and every man held a full hand." Private Bellard wrote, "Entrenchments were being dug on all the hills round the city, while more forts were to be put up during the winter. At this time we were building a large fort near Fort Lyons." In his letter from Fort Albany, Virginia, of July 25, 1861, Robert McAllister wrote "The right wing of our Regiment have since been engaged in throwing up breastworks at the Arlington Mills some three miles out from the river at a road and railroad crossing, where we are planting a battery to sweep the road." Company D of the The Forty-Fifth U.S. Colored Troops reported in the Fall of 1864 that "At 7:30 each day the line was formed for fatigue duty and the men (all except the sick and a guard) are marched to Fort McPherson, where they work until 5 p.m." In November 1862, a member of the Fourteenth Vermont Regiment observed that "Fifteen hundred men are detailed from this brigade daily, to work on forts." The author of a history of the Tenth Regiment Massachusetts Volunteer Infantry remarked, "While regimental annals are not over full of dirt-throwing details, it is apparent from casual mention here and there, that all the men were getting their share of work entirely unthought of when they signed their enlistment papers." In the Fifteenth Regiment New Jersey Volunteers, "This drill

was soon interrupted by our being set to work upon the lines of fortification." In 1863, The First Regiment Massachusetts Volunteers "performed a vast amount of labor during the year, having erected fine winter quarters for officers and men; completed and occupied one forty-three gun fort, besides erecting three large bomb-proof barracks, capable of quartering the men."[63]

In December 1862, Charles H. Moulton of the Thirty-Fourth Massachusetts Volunteers provided a longer description of the unit's work on the fortifications:

> "Today the whole regiment is at work on the new forts and rifle pits, busily engaged in throwing up the embankments, so as to hurry up their completion. There is about a month's work on them for the Regt., so people at home need not think that the 34th is out here doing nothing and laying idle. The Regt. Is saving the Government thousands of dollars by doing the work themselves, which otherwise would have to be entrusted to day laborers, who are paid a dollar a day and clothed and fully rationed, and then don't do one-half the work they are expected to accomplish. The Regt. Fell in line this morning at 8 o'clock in their working suit, blouses on etc., and are now actively engaged in shoveling, picking, wheeling, etc."[64]

The Fortieth Regiment New York Volunteers regimental history described what the unit did following First Manassas:

> "But we had other duties than those of drilling. There were daily fatigue parties detailed for the construction of the fortifications which were erected to protect Washington from an invading army. These intrenchments were erected in the form of an arc of a circle reaching from Fort Lyon below Alexandria to Fort Corcoran above Chain Bridge. These forts generally crowned the summits of eminence, in front of which the forests were felled by experienced men from Maine. I remember to have watched from our encampment, the disappearance of these forests, and as giant after giant was seen to fall . . . the forests seemed to melt away and disappear as snow gradually dissolves from the hillside in the springtime."[65]

Some units worked on just one aspect of the fortifications or felt compelled to report about only one specific task. Many spent considerable time cutting down trees for the fortifications and a field of fire. The One Hundred Twenty-Seventh New York Volunteers' regimental history reports that "On September 24th [1862] two hundred men were detailed from the regiment to cut down trees in the front of Fort Ethan Allen to afford greater range for the guns of that fort, and many still remember the feelings of

regret that the circumstances seemed to require the destruction of the pleasant grove." The Thirty-Third New York State Volunteer Regiment exclaimed "Other troops, to the number of ten thousand . . . and eighteen hundred axes were immediately set to work in felling the dense forest of half-grown pines, where Forts Marcy and Ethan Allen now stand." In the Seventeenth Maine "Details were furnished for the manufacture of gabions, and the boys became quite proficient in basket making." While in the Sixteenth Maine, in early September 1862, "Details were made daily to work on a line of breast-works connecting the forts." "The Second Pennsylvania Veteran Heavy Artillery "regiment commenced building a line of rifle pits near Veitch's House on September 11th [1862], and the following day it built a large masked battery in the copse west of Fort Lincoln, in addition to other smaller works along the line of fortifications, which, when completed, comprised a continuous and impregnable chain of earthworks." "On March 3d [1863] the 127th and 144th N.Y. were sent on fatigue duty, which consisted in digging rifle pits near Fort Ward." "Early the next morning [4 September] we [Seventy-Ninth Highlanders: New York Volunteers] began to build brush huts but were soon detailed to work on rifle pits and fortifications for the protection of our new line." The author of the Ninth New York Heavy Artillery remarked that "The forts, all made and armed, must now be decorated, and consequently by the early part of June they are completely sodded."[66]

Various units basically worked on one fortification and their reports of what they built are instructive. In August 1861, Elisha Hunt Rhodes worked on Fort Slocum:

> "The month has been passed in hard work. We have built a large fort and named it Fort Slocum after our first colonel. The city of Washington is now surrounded by a chain of forts and is considered safe from attack. We have shoveled many weary hours but feel that our labor will do some good." . . . "camp life is dull, but I suppose it is part of a soldier's duty, and it will be lively enough before we reach home again. Well it is all for the Union."[67]

George Washington Beidelman, in September 1861, reported construction work at Fort Baker:

> "At that time the section of Fort Baker,—which will be perhaps the strongest and most important in the chain of defences of the national capitol,—was just being commenced and we had to take our turn in the trenches. Thus we have been exchanging the musket for the pick and shovel about every other day since, and will continue to do so, no doubt, until the work is finished, which will be soon. It cost a vast amount of labor—the ditches being 14 feet wide and 10 deep—the embankment 10 feet high and very thick—and the whole enclosing a space area of about 4 acres. When completed it will

> mount 46 guns of large calibre—45 being 24 pounders, and one 64. Some of these are already pointing their "grim visages" in the face of the enemy, ready to give him a warm reception should he have the impudence to advance upon us. The defences on this side of the river will all be completed in a short time, and then we will undoubtedly have " work of another character" to perform."[68]

The Twelfth Regiment Pennsylvania Reserve Corps (41st Regiment of the Line) helped construct Fort Reno:

> "Camp Life at Tennallytown and Camp Pierpont. "Details were made from the command to build Fort Pennsylvania, afterwards called Fort Reno, in honor of General Reno, killed at South Mountain, September 14, 1862, a fort which became well known at the time of Early's attack on Washington in June 1864. The formidable appearance of this large fort, which was situated on a commanding eminence, dominating the country for miles in front, had much to do with Early's failure to assault this fortified position. The Writer (who had the honor to command the defences of Washington north of the Potomac at this time) has no doubt that General Early's command could easily have carried these fortifications had it attacked before the arrival of the sixth corps, on account of the lack of defenders, the Union line being held by a small force of hundred-day-men, veteran reserves and convalescents, which force was posted on the picket line about a mile in front of the fort, there not being sufficient numbers to hold both the forts and the picket line. A small detail to fire the hundred-pounder Parrott rifle, located in an angle of the fort, and some citizens, constituted the only garrison of this formidable looking fortification for nearly two days, whilst Early's veterans maneuvered in front of it."[69]

A history of the Pennsylvania Reserve Corps reported:

> "The Reserves constructed a square redoubt at Tennallytown, mounting twelve guns, which was named Fort Pennsylvania; they also built two lunettes and named them Fort Gaines and Fort Cameron; these works formed part of the fortifications for the defense of Washington."[70]

Slocum's Brigade built Fort Lyon:

> "The spot where the regiment encamped from Sept. 15th to Oct. 7th was

> designated "Camp Lyon," after the hero of Springfield, Mo., and Slocum's brigade built the fort known as "Fort Lyon." A thousand axes soon felled the dense forest of half-grown pines, and in six days heavy siege guns were mounted, to which were added many others as the work progressed. Here the entire camp was surrounded with breast-works, and daily rumors of "the enemy are advancing in large numbers," compelled them to go to their daily work, rifle in hand, and to sleep at night upon their arms, ready to repel an attack at a moment's notice." The long hours of work, the constant vigil, and the low grounds on Hunting creek, produced much sickness, and numerous fatal cases of typhoid fever and long suffering, occurred during the Fall and Winter."[71]

In the history of the Ninth New York Heavy Artillery Regiment is a general account of the construction of the fortifications:

> "As fort-building was so prominent a part of the regiment's work, the following description, sent home by a participant, is not amiss: "The forts are simply earthworks enclosing from one or two acres of land. They are made by digging a ditch or moat, fifteen feet wide by from ten to twelve feet deep, throwing the earth up to to form an embankment inside the ditch. This bank is made hard by pounding it as it is thrown up; through the embrasures, guns are run out; on the outside are abatis which hinder the approach of man or horse; within are magazines and bombproofs, also barracks to be used in case of attack; it requires three reliefs to work the heavy guns; all the forts are connected by rifle-pits; entrance-gates are on the side towards Washington; the heavy stockades surrounding are pierced by loopholes."[72]

Individual Experiences

While constructing the fortifications in the Defenses of Washington some of the men and units had some interesting experiences. Elisha Hunt Rhodes reported that, on October 7, 1861, while erecting Fort Slocum, the digging unearthed "a bed of iron ore." While two hundred men of the One Hundred Twenty Seventh New York Volunteer Infantry Regiment "were detailed from the regiment to cut down trees in the front of Fort Ethan Allen to afford greater range for the guns of that fort," on September 24, 1862, "Private Tallman, of company A, was struck by a falling tree which he had been cutting and severely injured." A soldier in the Thirty Fourth Massachusetts Volunteer Infantry Regiment, on December 28, 1862, observed that "An artist of one of the New York illustrated papers, Frank Leslie's probably, was

here last week, and took a sketch of Camp Lyon, the cluster of new forts and all the scenery round about, which will make a fine picture worth looking at." For the Second Pennsylvania Veteran Heavy Artillery Regiment, "hearing cannonading, and, at times, musketry, in the direction of Harper's Ferry, and later at points nearer, terminating on the 17th of September with the Battle of Antietam" stimulated "The rapid building of these earthworks." The author of the history of the Philadelphia Brigade wrote that:

> "While at work on the trenches, on September 24th [1861], the troops had an opportunity of witnessing one of the uses of balloons in modern warfare. Four miles distant from Fort Ethan Allen, at a station called Falls Church, the Confederates had a considerable body of men. The United States forces at Arlington Heights sent up a captive balloon, and by means of signals directed the battery of Fort Allen how to range its rifled cannon on the camp of the enemy. After a few trials shells were thrown with precision, and the Confederates were discomfited by an unexpected foe."[73]

So much work on the fortifications was necessary that the published histories of the various regiments stationed in the Washington area commonly include statements such as "Fifteen hundred men are detailed from this brigade daily, to work on forts" [Fourteenth Vermont Regiment], "On March 3d the 127th and 144th N.Y. were sent on fatigue duty, which consisted in digging rifle pits near Fort Ward," and "At this time the regiment furnished, once in four days, one hundred and fifty men for picket duty, fifty daily to work on Fort Ellsworth, and twenty-five daily to cut trees and clear the ground for Fort Lyon" [Sixteenth New York Infantry Regiment]. The average number of enlisted men actually employed on the fortifications fluctuated by month as shown below:

December 1863	375 enlisted men
March 1864	1022 enlisted men
June 1864	895 enlisted men
July 1864	580 enlisted men
September 1864	696 enlisted men
November 1864	385 enlisted men
January 1865	108 enlisted men
February 1865	33 enlisted men
March 1865	178 enlisted men
April 1865	280 enlisted men

May 1865	461 enlisted men
June 1865	365 enlisted men

The numbers often varied between those employed north of the Potomac River and those employed south of the Potomac River:

	South	North
March 1864	894	128
June 1864	675	220
Sept. 1864	627	69
Oct. 1864	300	0
Dec. 1864	155	80
Jan. 1865	108	0
Feb. 1865	33	0
April 1865	268	12
May 1865	446	15
June 1865	230	135[74]

Not Enough Workers

Barnard and Alexander pleaded numerous times for more of these men to work on the fortifications. On December 22, 1862, Barnard wrote, "Since I have reassumed charge of the Defenses of Washington, the history of my efforts to complete the Defenses of Washington on the south of the Potomac has been one continual demand for troops to work upon them, which have either not been furnished or furnished only to be taken away, without notice to me, by the time they got into position and acquired some little readiness in their work." On September 17, 1862, Barnard pleaded, "Can you give me a daily detail of 250 men between Forts Richardson & Barnard commencing tomorrow." Alexander, on December 21, 1862, asked for a permanent detail of enlisted men to work on projected fortifications until they are finished." The same day he wrote to Barnard, stating "I think it my duty to inform you that, except at Chain Bridge, we have now no force of enlisted men at work on the fortifications on the other side of the river." Later, in July 1864, Alexander pleaded "Can you not give us a detail of 500 men."[75]

On September 14, 1862, Barnard informed Major General Nathaniel P. Banks, commanding the Defenses of Washington, D.C., that "I need 400 men, at least (a daily detail), around Fort Lyon, and an

equal number for work on lines between Forts Ward and Worth, and between Forts Worth and Lyon." In the Fall of 1862 Barnard submitted a requisition for working parties amounting to 3400 men for work along lines from Fort DeKalb to Fort Worth while Captain Henry L. Abbot forwarded another requisition for 1400 men. In September 1864, Alexander requested 600 "colored troops" from Major General Silas Casey, commanding the Provisional Brigade.[76]

The requests for troops were endless but an even greater problem was having a permanent or, at least, prolonged detail of men. In early November 1862 Barnard urged "we should have details permanently on the other side (besides that for Fort Lyon) of two or three thousand men" to complete the necessary work before the winter season. On December 21, 1862, Alexander requested a permanent detail of enlisted men to work on projected fortifications until they were finished and the next day Barnard concurred by endorsement. Barnard remarked, in mid-July 1863, "At Forts Whipple, Tillinghast, and Craig &c. where we are doing considerable carpentry it is desirable to have the details of Carpenters from the garrison as permanent as possible." Alexander, in May 1864, remarked that "The detail of Carpenters should be made permanent and should be exempt from all other duty."[77]

In requesting details of troops to work on the fortifications, Barnard and Alexander usually requested infantrymen for a variety of reasons including the fact that except when attacked, they did not have any other pressing duties unlike the artillery and cavalry. In June 1863, Alexander wrote that he had applied for men to complete work in the vicinity of Fort Thayer and "meant for you to send infantrymen." Barnard, in August 1863, remarked that he knew there wasn't an infantry force to do the work and he hesitated to request an artillery detail. Of course, artillery and cavalry troops did accomplish some of the fortification work and the Army Engineers were glad to have them assigned to the fortification work such as, on August 29, 1862, when Randolph B. Marcy, Chief of Staff of the Army of the Potomac, informed Barnard that he had ordered 300 men of the Twelfth Pennsylvania Cavalry Regiment to march to Washington and report to him for duty "as you may deem best."[78]

In an attempt to insure that there were troops available to do the fortification work, the Army Engineers attempted to influence their superiors to issue orders assigning the men to this work. In August 1863, Barnard was glad to be informed that four companies of troops had been ordered to the work at Rosiers Bluff (Fort Foote) as garrison and to assist in completing the work. In September 1864, Alexander received a copy of a Department of Washington order to Major General Silas Casey to furnish such fatigue details from colored troops as may be called for by Lt. Col. B.S. Alexander. Brigadier General C. Grover, on September 15, 1862, informed Barnard that "I am ordered to detail daily four hundred men to work under your direction on additional defences between forts Ward & Worth & Lyon." Barnard wrote the commander, Defenses of Washington, on February 19, 1863, remarking "I understand that you have recently ordered the brigades within our lines of defence on the other side of the river, and I suppose that it is your intention that these troops shall assist in completing these lines." Casey's Division, Defenses of Washington, South of the Potomac, reported on Nov. 24, 1862:

"In compliance with Circular of 21st inst. from your Head Quarters I have the honor to report that pursuant to General Orders No. 6 from your Hd Quarters the following details have been made from 1st Brigade, a detail of one hundred men per day for four days has been at work on roads from this camp to Alexandria, this work has been interrupted by the weather and is not yet finished. From 2nd Brigade a detail of fifty men per day for six days has been at work on roads from this camp to (South of Hunting Creek) to Alexandria and have put the road in good order. From 3rd Brigade, no regular detail could be sparred as every regt. In it but one were under orders to instruct and very heavy details were required for work on line of defences. The road from this camp to Fort Runyon is in pretty good order."[79]

The contents of two orders detailing troops to work on the fortifications follow:

Special Orders No. 6, Headquarters, Department of Washington, September 2, 1862

"At the request of Engineer Frost employed by Genl Barnard to supervise construction and maintenance of Defences of Washington South and West of the Potomac, Commanders of Infantry regiments of this command encamped between Four Mile Run and Hunting Creek will furnish details of men for Engineer work anywhere in the vicinity of their camps.

They are directed to make the details as large as practicable within the requirements of the Engineers.

By cmmd of MG McC

Signed JG Barnard (BG)
Temporarily in command of Defenses of Washington[80]

HEADQUARTERS DE RUSSY'S DIVISION,
Arlington, Va., May 24, 1864.

Brig. Gen. J. G. BARNARD:

GENERAL: I have the honor to inform you that I have complied with your request of the 16th instant, in regard to working parties on the fortifications in these defenses. Also, in compliance with your request of the 19th instant, I issued the following order, No. 76, from these headquarters:

> Col. A. Piper, commanding Second Brigade, De Russy's division, will detail a guard sufficient to take charge of, say, 300 prisoners, detailed for work on the fortifications and roads within the limits of his brigade. This guard will be instructed by General Barnard at what hour the prisoners will be taken from the Camp of Distribution, and at what hour relieved.
>
> Very respectfully, your obedient servant,
>
> G.A.DE RUSSY,
>
> *Brigadier-General of Volunteers.*[81]

Indeed, many troops did report for fatigue duty on the fortifications. Brigadier General C. Grover wrote "am ready to furnish them 400 men daily, when, where and to whom shall they report." Col. M. Cogswell, commanding the Artillery Brigade, near Fort Corcoran, reported on January 23, 1863, that "In compliance with your instructions, I have the honor to report, that five officers, and four hundred men, this day reported to the Engineer officer, near the Red House." Col. Cogswell, on February 4, 1863, exclaimed:

> "I have the honor to report that the detail for work on Fort McDowell is as follows:
>
> From 14th Mass HA:
>
> 3. Lieutenants
>
> 5. Sergeants
>
> 12. Corporals
>
> 179. Privates
>
> From 2d NY Arty
>
> 3. Lieutenants
>
> 3. Sergeants
>
> 8. Corporals
>
> 138. Privates"
>
> [Cogswell to Potter, Feb 3, 1863, another letter filed with the one above]

"I have the honor to report the detail for men of this command at work on the fort styled Fort McDowell, furnished on the 2nd and 3rd insts.

The detail for yesterday was as follows:

From 2d NY Arty

180. Privates

8. Corporals

3. Sergeants

3. Lieutenants

From 14th Mass.

182. Privates

12. Corporals

5. Sergeants

3. Lieutenants

Feby 3rd From 14th Mass

178. Privates

12. Corporals

5. Sergeants

3. Lieutenants

No detail was made from the 2nd New York Artillery to day on account of the regiment being paid off."[82]

The commanders did not always comply with requests for troops to work on the fortifications. In May 1863, the commander of the Defenses South of the Potomac negatively replied to a request for troops to work on the fortifications. He stated that he could not furnish a detail from the Fourteenth Massachusetts Volunteer Infantry Regiment to work on bombproof at Fort DeKalb, because the unit was required to guard Long Bridge.

On September 3, 1863, the commander of the Third Brigade, at Fort Baker, requested that Lt. Col. Haskin, in charge of the Defenses North of the Potomac, inform Barnard "the impossibility of complying

with the Requisition for a detail of 300 men to work at Fort Mahan" because "The total enlisted men present at Fort Mahan is 234 of which 35 are reported sick." The Department of Washington replied to a request from Alexander for a fatigue party remarking that "garrisons are too small as they now are, it will be impracticable to furnish it." G.A. DeRussy, informed Alexander on November 19, 1864 that he was "unable to furnish the detail of 15 carpenters as requested."[83]

Even when troops did report as requested or ordered problems arose. Barnard informed Major General Heintzelmann on November 25, 1862 that two regiments, thought to be available, had been removed the week before, without notice. They had been from General Casey's command and were stationed near Fort Ward and the Columbia Turnpike for work upon the defenses. On September 27, 1862, Alexander reported that the superintendent of the new works, now being constructed between forts Pennsylvania and Alexandria, complained that the "soldiers engaged do not do their duty," and he "has never seen such indifference on part of officers or laziness on part of soldiers." On January 22, 1863, Col. M. Cogswell wrote "I have the honor to report that the detail for work at the Red House was not furnished on the 20th . . ." Civil Engineer Gunnell informed Alexander on October 28, 1862 that "the 17th Conn regiment is of no use for working on the forts . . ."[84]

Superintendent Douglass, in October 1862, reported to Alexander that on the past Monday only 400 men were at work on the rifle-pits and batteries at Chain Bridge and that "yesterday there were only 190 men at work on them." Engineer-in-Charge Childs informed Barnard on June 18, 1863 that at Fort Ethan Allen there was a detail of 30 men the day before with no officer in charge and but 13 men were working while the others sat in the ditch. Gunnell, in December 1862, reported that the One Hundred Thirteenth New York Volunteer Infantry Regiment was supposed to be working on the rifle-pits west of Fort Kearny, but of the 150 men that reported only 50 did any work." In June 1864, Lieutenant Fulkerson, in charge of the working party from Fort Worth, refused to work his men after 4 o'clock because he could not control them. He finally succeeded in coaxing his men to work until 5 o'clock, but did not make them return the tools to the tool box as instructed.[85]

There were further problems including an accident in November 1864 at Fort Runyon where one corporal was killed and several privates wounded, possibly due to the carelessness of the civil engineer in charge, A.J. Robbins.

Edward Frost, Civil Engineer, reported on November 19, 1862 "In answer to your inquiry today I have to state that yesterday morning there were two regiments detailed for fatigue duty by Genl Casey—the 107 Ohio and 143 Penna. Vols., but during the day they were withdrawn."

Superintendent Bennett informed Engineer in Charge A.G. Childs, on April 20, 1863:

> "I have one soldier sixty two years old just convalescent as a guard for this camp. Please make application for a guard consisting of one commissioned

> officer and at least twenty five men. Or else allow me to direct this old man to return to his Regiment. The first night he reported for duty he staid in the camp alone and was nearly frightened to death by the rats. Since that time five carpenters stayed here and protected him. He may possibly be of some service to General Tyler but he is not of the slightest use here—only in our way."[86]

Of course, the troops had their own complaints. According to the *Army Regulations*, Paragraph 902, [both the 1861 and 1863 editions], troops were to receive extra duty pay when, among other things, they worked on fortifications. Although the men were working for Army Engineers, the Quartermaster actually disbursed the extra duty pay. Thus, for a variety of reasons, the Army was in arrears for paying the troops their extra duty pay. Captain A. Alberti, Fifth Michigan Volunteer Infantry Regiment, reported that two privates of Company K were employed as carpenters at Fort Lyon for 29 days in October and November 1861 but they had not received their extra duty pay as of October 1, 1862. In March 1863, Colonel Wells asked Lt. Col. Alexander for information as to how his men were to be paid their extra duty pay for work at Fort Lyon.[87]

Due to the demands upon them for fatigue parties to work on the fortifications, the various units suffered. In the Sixteenth New York State Volunteer Infantry Regiment, "The long hours of work, the constant vigil, and the low grounds on Hunting creek, produced much sickness, and numerous fatal cases of typhoid fever and long suffering, occurred during the Fall and Winter." On October 7, 1862, a brigade commander reported "Owing to the drain upon our numbers for fatigue duty on Fort Richardson, I do not propose having Brigade drills except on Sunday mornings until the strength of the regts is increased. The two regiments that do not furnish a fatigue party have Battalion drill at 3 pm daily Sats. And Sundays excepted."[88]

United States Colored Troop Workers

Black troops, designated United States Colored Troops, U.S.C.T., served in the Defenses of Washington.[89] The USCTs, however, did not generally garrison the fortifications in the Defenses of Washington but served in the Provisional Brigade, commanded by Silas M. Casey, encamped at Camp Casey. These troops did, at times, work as laborers, like many other Union units, on the Washington defenses.[90]

On September 15, 1864, the department commander directed that Casey furnish fatigue details as asked for by Alexander. Alexander, on September 18, 1864, specifically requested a detail of 600 men from Casey, with all their officers, to report to Engineer Camp Barnard. Superintendent Clark reported that 1700 colored troops were at Camp Casey , 800 of them unassigned and, therefore, should be able to do fatigue duty. In a June 23, 1863 letter to the chief of staff of the department, in regard to troops that

could perform fatigue duty at Fort Thayer, Alexander wrote it "has occurred to me that the regiment of negroes now encamped in Anastolia Island might with perfect propriety be directed to perform it and the more particularly as they understand it well, many of the men in this regiment having left this very work to enlist in the service."[91]

Casey appeared reluctant to furnish troops for fatigue duty on the fortifications at times. On September 19, 1864, he remarked, "the regular garrison of Camp Casey, Va., consists of 343 men and they are constantly required for duty there. The others who may be at the Camp, are recruits in process of preparation for sending to the front. I have not enough officers to distribute the recruits."[92]

On September 14, 1864, the Department of Washington informed Alexander that 800 USCTs could be furnished him if necessary. The next day, then, the Department of Washington issued an order requiring Casey to furnish fatigue details from the USCTs as Alexander might request. Some USCTs, such as the Forty-Fifth U.S.C.T. did furnish fatigue details for fortification work at that time.[93]

Convalescents, Conscripts, Stragglers, Deserters and Prisoners as Workers

In addition to the men serving in the various U.S. Army units stationed in the defenses of Washington, other military personnel were available. Convalescents, conscripts, stragglers, deserters and prisoners were also encamped in the area and, in some instances, the Army Engineers used them in the construction of the fortifications in the defenses of Washington. Most of these men lived in camps near Alexandria. Cooling wrote:

> "The second Camp Convalescent was located south of Fort Richardson in the valley . . . The camp replaced the infamous "Camp Misery" which was located on the slopes of Shuters Hill northeast of Fort Ellsworth near Alexandria. The camp was moved to this site and constructed in 1862."[94]

Robert McAllister described the first camp thusly:

> "We moved to this place yesterday. It is right at Fort Ellsworth, overlooking Alexandria. It is a beautiful place at the outskirts of the town, and with a fine view. The cause of our coming here is that near here they have a large camp of about 15,000 troops—convalescents, recruits, paroled men, and stragglers. Some of them require guarding, which we are ordered to do. It will take about 100 men for guard duty. This detail is small compared to the detail we had that was so large we could not drill. Now we can have battalion drill. Otherwise, I would rather not have come here."[95]

Charle H. Moulton of the Thirty-fourth Massachusetts Volunteer Infantry Regiment also described the first camp:

> 'The Convalescent and Straggler Camp which is located about half a mile out of Alexandria, when first established some three months since, occupied only a small space and has been constantly enlarging until now it covers an area of over 200 acres, for the accommodation of the convalescent when discharged from the Government hospitals, and as a rendezvous for stragglers until they can be returned to their regiments. Since the establishment of the camp, over 60,000 soldiers have been encamped there, who would otherwise have been straggling all over the country. On Friday last over 600 were dispatched to their regiments, and on Monday 400 more arrived to take the vacant places. The reason for gathering together of such an immense body of men is chiefly occasioned by the wholesale skedaddling from the army on the advance, which is increasing every day by the desertion of drafted soldiers. The sooner these men are pushed forward into an action so much the better, for they are incurring a heavy expense every-day, largely adding to the public expenditures."[96]

The author of the history of the Eleventh Regiment, Rhode Island Volunteers, described the second camp:

> "The present camp is in a filthy condition, and a shame to those who have charge of it. The camp was originally located about two miles nearer Alexandria, in the region of what was called the Distributing Camp. When we took possession of Camp Metcalf they were located in the Green Valley. What was filthy before we went there, by the middle of February had become clean, and a very different affair from what it was when the government established it. It was under entirely different regulation. It grew rapidly from a small number to a moderate sized army, and what had been confusion soon became order and system."
>
> "The government sent to this camp all stragglers, all detailed privates, all the men fit for duty at Camp Convalescent, and thence they were sent in large squads to their respective regiments. There were from five to eight thousand men then in the camp. The post was under the command of Capt. Upham. Contiguous to this camp was a camp of recruits, also under the commandant of that post.

> Still nearer Alexandria, and distinct from the Distribution Camp, was the camp of paroled 'prisoners, containing not more than five or six hundred men; and we learned that somewhere between Camp Metcalf and Fairfax Seminary, was a convalescent horse camp, where horses that had been under medical treatment and were on the road to sound health, were treated to further rest and a fat pasture."[97]

Unfortunately, when the men from the Convalescent Camp worked on the fortifications, they rarely did good work. Superintendent Clark reported on October 19, 1863, that "Mr Hawkins reports that details of 212 men from the Convalescent Camp done the work of about 20 laborers. The officers informed him that their instructions were to bring the men out, not to make them work." Clark reported, on October 20, 1863, that the detail of 225 men from the Convalescent Camp wouldn't work and that the officers could not compel them to do so. On October 22, 1863, Alexander informed the Chief of Staff of the Department "You will perceive that Mr. Clark still says that the men from the Convalescent camp do not work properly."[98]

Alexander wrote Colonel E.S. Kellogg, the commander of the Convalescent Camp, in October 1863, asking him to take charge of the men to insure that they work. Kellogg declared he didn't "consider the source of the request (Alexander)of importance" and suggested that an order be issued by the Department. Exasperated, Alexander exclaimed "Some officer ought to see that these men do their duty, and there is no one who can so easily do it as Col. Kellogg." "If there is no authority to make these men work, they had better remain in their camp."[99]

Not only did the men from the Convalescent Camp not work, but they caused other problems. Alexander remarked that the convalescents great cry was Whisky and suggested that maybe they should receive 2 jiggers per day. Clark reported that they refused to work one day complaining of the quality of their rations. Barnard reported to the commander of the department that:

> "On inspecting Fort Ellsworth yesterday I observed that the abattis has been much impaired by the chopping off of branches & indeed in some places had been carried off entirely. Capt. Langworthy, the Commanding Officer informs me that it was done by *convalescents* before he took command . . ."[100]

Actually, the convalescents' work improved considerably if a sufficient and competent guard, with good officers, accompanied them. Clark reported on November 6, 1863 that a small detail from the Convalescent Camp reported for work that day because the guard left about 3 a.m. "when there was a general stampede out of Camp." Alexander felt that "a competent officer should be placed in command with a guard strong enough to enforce his orders, and that he is *instructed* that it is his *special duty* to see that the men are kept at work." One soldier reminisced:

> "Guard duty at Convalescent Camp began at once on Thursday, the 15th, and the men were on duty every other day, either at that camp, the new barracks, not then finished, or our own camp. The service was a heavy one, and the men began to see that there was work to be done more wearing than going to the front."[101]

Another type of worker on the Defenses of Washington was the conscript and substitute. As conscription began in 1863, conscripts and substitutes were sent off from hundreds of locations to ultimately join regiments. Centers for conscripts, to prepare them for their future duties and decide upon their ultimate assignments, sprang up in numerous locations including in the vicinity of the nation's capital. The Army authorities around Washington, D.C. sent these conscripts and substitutes to Camp Taylor in Northern Virginia.[102]

The Army Engineers employed conscripts and substitutes on various fortifications including Fort McPherson and Fort Lincoln. The Department of Washington ordered that the commander of the Rendezvous of Distribution "place in camp in or near the ravine between Forts Woodbury and Whipple tomorrow, July 18th all conscripts and substitutes now in your camp to answer requisitions from the Engineer department for working parties." The Commander was to provide a sufficiently strong guard "to control the occupants and prevent their escape." In September 1864, the Department informed Alexander that Camp Taylor was broken up and the conscripts and substitutes sent to their respective commands.[103]

Military prisoners were still another source of labor on the Defenses of Washington. The Army kept these prisoners, of various types, at Camp Distribution in Alexandria. These men had committed various crimes from desertion and murder to sleeping on duty or drunk and disorderly. A General Court-martial found Commissary Sergeant John Jarvis, Sixth Regiment, Veteran Reserve Corps, guilty of "Conduct prejudicial to good order and military discipline" and sentenced him "to be reduced to the ranks, to be confined at hard labor on public fortifications for the period of 6 months, and to forfeit his monthly pay for the period of 4 months" and was ordered to be "sent under guard to Arlington House, Va and be delivered to BG DeRussy, Commanding Division, to labor on the fortifications of Washington."[104]

Superintendent Clark reported in mid-October 1863 that 175 prisoners in the charge of a lieutenant and 25 men were at work at Four Mile Run but "From their operations today I do not anticipate a rapid prosecution of the work." Civil Engineer A. Grant Childs informed Barnard, on August 1, 1863, that a number of prisoners were at work at Fort Ethan Allen "and that work is now progressing well." On November 5, 1863, Superintendent Clark reported that 44 deserters at Four Mile Run had "not done as well as usual. In November 1863, Superintendent Clark reported that a detail of 104 deserters, in the charge of Lt. Loomis of the Fourth Pennsylvania Reserves, had worked well.[105]

To obtain good work from the prisoners it was necessary to have a sufficient guard under the command of competent officers. This was much more true for the prisoners than for the convalescents, conscripts and substitutes,. Brigadier General G. A. De Russy reported on May 19, 1864 that it was "impossible" to furnish a guard for deserters because only one regiment was left in line between Fort Richardson and Battery Rodgers. But, on May 24, 1864, De Russy informed Barnard that he had issued Order No. 76 to "detail a guard sufficient to take charge of, say, 300 prisoners," to work on the fortifications. Testifying to the foregoing statements about guards, Private Bellard, in late 1862, wrote in his memoirs "We had now plenty of duty to perform in picket, campground, guarding parolled prisoners and in the trenches."[106]

For better control, one officer reported on September 5, 1863, that all the prisoners in the Defenses South of the Potomac were concentrated in one camp. In July 1864, under the threat of a Confederate attack, the Department ordered De Russy to collect "all the general prisoners in your command" and place "in camp or confined in such work as will be convenient access from the ground between Forts Woodbury and Whipple on which it is proposed to build a battery." Childs observed in early August 1863 that the *Evening Star* reported about "500 prisoners deserters &c have been sent to Genl De Russy to work on Fortifications." I would respectively suggest that this whole force be set at work to construct the covered way across the valley of four mile run."[107]

In 1864, Alexander received a December 21 Circular from the Engineer Department asking how many military convicts he could employ in the Defenses of Washington. On December 28, Alexander replied that he had no guards except those necessary to preserve order and guard against fire and, therefore, "I am convinced therefore that the defences of this city will not furnish suitable places upon which to work military convicts." Alexander continued:

> "If I had a military organization as I ought to have on such a system of intrenchments say two or three regiments of Engineer troops, I would find no difficulty in working all the military convicts in the country unless the number should amount to several thousand, which I suppose can hardly be the case."[108]

Confederate Workers

In a few instances, Confederate deserters worked on the Defenses of Washington. In March 1864, Provost Marshal T. Ingraham suggested that three Confederate deserters, who had taken the oath of allegiance and desired employment on government works, could work on the defenses of Washington. On March 24, Ingraham forwarded six "rebel deserters" who desired employment on government works.

The work and reliability of the Confederate deserters was not always good as demonstrated by James Dunn, an employ on the defenses, who, on a Saturday, procured a pass from the Provost Marshal near Fort Albany to visit the city to purchase clothing but did not return.[109]

Still other military personnel were available, at times, to work on the defenses of Washington. The last chapter discussed the U.S. Marines that garrisoned Fort Washington. On August 28, 1861, the Secretary of the Navy, Gideon Wells, ordered Commander Dahlgren to send 300 seamen to garrison Fort Ellsworth in Alexandria. Dahlgren dispatched 400 seamen aboard the steamboat *Philadelphia* to Alexandria that day. These sailors served at Fort Ellsworth until November 1861, at least, and worked on the fortifications. One author remarked that a complete frigate's crew was at Fort Ellsworth "and they have been spending the past two months in putting the fort in complete order, just as sailors do, sodding, and whitewashing everything and planting evergreens, until the inside of the works is the very picture of neatness . . ." On September 3, 1861, the Secretary of the Navy ordered Colonel John Harris, commanding the U.S. Marine Corps, to "Detail a guard of thirty marines in command of an officer to report to Commander Wainwright as part of the garrison of Fort Ellsworth under his command" and like the seamen, they also worked on the defenses.[110]

Supplies

The acquisition of supplies and equipment became more difficult as the Civil War progressed due to the great numbers required and the financial restraints imposed to prevent fraud. Various branches of the Army—Engineers, Quartermaster, Commissary of Subsistence, Ordnance, Signal Corps, Infantry, Artillery, Cavalry—acquired and procured supplies and equipment used on and in the defenses of Washington, D.C. Some supplies and equipment could only be used by one branch while in some instances one branch procured items that would be mostly used by another. Chief Engineer Joseph G. Totten, Corps of Engineers, informed the Secretary of War on August 5, 1861, that "no contracts have been made by this Department since the 4th of March last and that no military supplies have been purchased since that date except Intrench tools, wheel barrows, sand bags, shovels, spades, picks, &c, &c required for the hasty construction of Intrenchments for the defences of Washington" and the necessary "purchases were made in the market here at reasonable prices, wherever found for sale, or they could be manufactured by citizens of known loyalty to the Union without practicality or other regard to persons" but the bulk was "being supplied by the wholesale hardware establishments of E.M. Lithicum & Co. of Georgetown, and Campbell and Son of Washington, and, to the extent of their ability, by the retail houses of Sibley & Guy, L.L. Savage & Co., and others of Washington."[111]

To do all the construction and maintenance on the Civil War Defenses of Washington, a variety of tools, building materials and miscellaneous other items were necessary. Although the army cut down acres and acres of timber, additional lumber was required. Thus, a Moses A. Commins submitted a bill for 1096 hardwood trees 14 inches in diameter at $2.50 each for a total of $2,740. On September 18, 1862,

J.T. Lenman reported that he had lumber on hand as required. William McLean, on September 16, 1862, wrote that he could furnish lumber as required. In June 1863, Lt. Col. Alexander reported back to the Secretary of War that timber cut from Mr. S.R. Colby's land near forts Stevens and Slocum "was done to open a view for our guns" and that some of it was used in construction of forts and that the owners should be paid, but there was no authority.to do so. Special Orders No. 18, August 27, 1863, attempted to alleviate this problem by ordering that no timber would be cut "for the express purpose of construction without first referring the circumstances to the general commanding." Further, wherever timber is required for construction "an arrangement must be made with the owner thereof" or the property must belong to a "known Secessionist" and "authority must have been obtained from the general commanding to enter upon such property." On August 31, 1864, Samuel Strong offered to sell timber to the Engineer Department and upon request, he wrote that he would sell it for "50 cents per lineal foot."[112]

The Engineers didn't need to purchase stone because they quarried it at Cloud's Mill dam on the right of the Leesburg turnpike about two miles in front of Fort Ward and at Fort Totten to be used on the fortifications and in some of the buildings used. Edward Sowers reported on September 16, 1862, that he couldn't furnish the roofing presently required. Johns & Crosley, though, submitted requested information relative to supplying "gutta percha cement roofing" on November 24, 1862. The commander of the 1st Maine Heavy Artillery, on May 9, 1864, received instructions to get nails from the regimental quartermaster "to put up the Stables at Fort Simmons."[113]

Barnard requested that the Engineers pay Richard Cruickshank, Esq., 50 cents each for 685 gabions used at forts Ethan Allen, Marcy, and others. Tens of thousands of sand bags were procured. Captain E.L. Hartz, in October 1862, submitted invoices and receipts for 24 grindstones. In May 1861, one regiment "hired on its own account, out of private means, some wagons to procure its supplies." In July 1862, the engineers in the defenses spent $13.35 for stationery while for August and September, the cost was $43.70.[114]

A major expense was tools for constructing and maintaining the defenses of Washington. E.M. Lithicum, in October 1862, informed Barnard that he did not have as many sledges as required but he would order more from Baltimore. Barnard requested the following tools on May 7, 1861: "1000 shovels, 500 Picks, 300 Axes, 200 ax handles, etc." On July 13, 1864, at the time of Jubal Early's raid, Barnard exclaimed that entrenching tools were unobtainable in Washington, D.C. and recommended that 5000 shovels, 2000 picks, 5000 axes and 6000 handles be ordered from one of the northern cities. Through most of the war, the New York U.S. Engineer Agency, an engineer depot, in New York City had been supplying a great amount of tools. In addition, the Quartermaster Department furnished entrenching tools and for specific purposes, even the Ordnance Department had some. Despite these supply sources there were never enough entrenching tools.[115]

The engineers working on the defenses of Washington purchased much of the supplies and equipment that they used. Barnard reported on December 30, 1862, that $550,000. had already been expended on the defenses mainly for employment of a large number of civil assistants, superintendents, overseers, troops and laborers and the purchase of lumber and other materials required. The engineers, therefore had to keep ledgers of their purchases such as the following:

Certified Bills Sent to Mr. Eveleth, October 1862	
Pay rolls for September	7704.91
Mr. McLean for Lumber in August	161.81
Mr. McLean for Lumber in September	526.12
E.M. Linthicum for Hardware Aug	118.97
E.M. Linthicum for Hardware Sept	581.69
Philip & Solomon for stationery in July	13.35
Philip & Solomon for stationery Aug & Sept	43.70
W.H. Godey for Lime Aug	25.00
E. Lycett for Mounting Maps Sept	36.00
R.L. Jenkins for Blacksmithing in Apl & Sep	25.17
Joyce & Sherman for Horse shoeing	6.40
Joseph Libbey for Lumber in Sept	774.52
D.B. Colclazer for Blacksmithing in Aug	10.00
W.D. Brooke for Straw	5.00
November Pay Rolls for October	9987.16
McLean for lumber in October	753.16
Philip & Solomon for stationery in October	74.77
Linthicum & Co. Hardware in October	733.26
J.L. Lemian for Lumber in October	115.98[116]

Tools

To accomplish the work necessary to construct and maintain the defenses of Washington, a variety of tools were necessary. Author David V. Miller wrote that the defenses of Washington "were constructed by manual labor (some 3,000 men in 1862) using pick, shovel and heavy carpenter tools." On May 7, 1861, Barnard wrote that he desired "the following entrenching tools":1000 shovels, 500 Picks, 300 Axes, 200 ax handles, etc. On the same day, Barnard asked for shovels, picks, axes, axe handles, hand saws, cross cut saws, augurs and wheel barrows. Other tools frequently requested were spades, broad axes, sledge hammers, hatchets, drawing knives, crow bars, tape lines, and transits.[117]

The soldiers who worked on the Defenses of Washington, frequently mentioned the tools in their letters, memoirs, books and in regimental histories. In 1862, the First Maine Heavy Artillery Regiment quickly erected Fort Sumner with "the diligent use of axes in front, with the teams hauling timber, with pick and shovel, crosscut saw, broadax, and other tools which the Government furnished." Alfred Bellard wrote that " . . . the men are put to work with pick and shovel . . ." The Twenty-Seventh New York Infantry Regiment "put aside . . . drilling, and exchanged . . . guns for the pick and shovel." George Washington Beidelman, in September 1861, exclaimed "we have been exchanging the musket for the pick and shovel about every other day since, and will continue to do so, no doubt, until the work is finished, which will be soon." The Fifteenth New Jersey Volunteer Regiment was happy when " . . . a force of two hundred contrabands from North Carolina were sent to take our places in the ditches, and we willingly turned over to them our picks and shovels." The Sixteenth Maine Volunteer Infantry Regiment, in September 1862, worked daily ". . . on a line of breast-works connecting the forts" and the regimental historian felt that "Many of them, reared on farms, had a natural propensity for digging holes and shoveling dirt, which had been fully satisfied by details to dig "sinks" and tent drains" but they " . . . were glad of a chance to exhibit their artistic qualities on something less degrading than a camp sink."[118]

One author wrote that when the Army crossed the Potomac into Northern Virginia on May 24, 1861, "an ample supply of intrenching tools" accompanied them. But Barnard reported that there was a "want of tools" and he "found the Sixty-ninth N. Y. S. M. halted in position, waiting for the arrival of the entrenching tools in order to commence the works of defense which had been projected by the U.S. Engineers." At the time of Jubal Early's raid on Washington, Barnard remarked that intrenching tools were unobtainable in Washington, D.C.[119]

Manuals

The West Point graduates and some of those who attended other military schools had taken military engineering, had some fortification drawing and possibly, had some practical experience in erecting them. A variety of Regular Army officers and men, and some volunteers, who had served in earlier wars,

oversaw or actually constructed field fortifications. Others observed them in other countries as at least 150 U.S. Army officers had visited Europe between 1815 and 1861, some even witnessed fighting there.[120]

But, many of those officers and most of the enlisted men, who served in the Civil War had no experience with fortifications whatsoever. But, a variety of manuals and other technical literature were available. For an extensive list of mostly foreign language fortification manuals and other technical literature see pages 374-77 in Henry W. Halleck's *Elements of Military Science*, 1859 edition. Numerous pertinent British texts were extant and some officers used them. In 1861, when the war started, available fortification manuals published in the United States were: Louis von Buckholtz, *On Infantry, Camp Duty, Field Fortification, and Coast Defence* (Washington, DC: Selmar Siebert, 1860); Dennis Hart Mahan, *A Complete Treatise on Field Fortification, with the General Outlines of the Principles Regulating the Arrangement, the Attack, and the Defense of Permanent Works* (New York: Wiley & Long, 1836) and subsequent editions with the title *A Treatise on Field Fortification, Containing Instructions on the Method of Laying Out, Constructing, Defending, and Attacking Intrenchments, With the General Outlines Also of the Arrangement, the Attack, and Defence of Permanent Fortifications* in 184, 1856, and 1861; and Chapter II entitled "Field Fortification." in Henry D. Grafton's *A Treatise on the Camp and March with Which Is Connected the Construction of Field Works and Military Bridges. With an Appendix of Artillery Ranges, &c. for Use of Volunteers and Militia in the United States* (Boston: W.P. Fetridge and Co., 1854), pages 23-38; Chapter III. entitled "Fortifications." and Chapter XIV. entitled "Field Engineering" in Henry W. Halleck's *Elements of Military Art and Science; or, Course of Instruction in Strategy, Fortification, Tactics of Battles, &c., Embracing the Duties of Staff, Infantry, Cavalry, Artillery, and Engineers, adapted to the use of Volunteers and Militia* (New York: D. Appleton & Co., 1846 & 1859), pages 61-87, 342-77; "Field Works" and shorter sections under other headings in Henry L. Scott, *Military Dictionary: Comprising Technical Definitions; Information on Raising and Keeping Troops; Actual Service Including Makeshifts and Improved Material; and Law, Government, Regulation, and Administration Relating to Land Forces* (New York: D. Van Nostrand, 1861), pages 283- 99; and Chapter IX, entitled "Field Fortifications." in Egbert L. Viele. *Hand-book for Active Service; Containing Practical Instructions in Campaign Duties, for the Use of Volunteers* (New York: D. Van Nostrand, 1861), pages 92-148.[121]

As the war progressed, new works were available. Mahan's *Field Fortification* appeared in new editons. In James C. Duane's *Manual for Engineer Troops* (New York: D. Van Nostrand, 1862) there was Part II, "Rules for Conducting a Siege," pages 51-144; Part III, "School of the Sap," pages 147-204; Part IV, "Military Mining," pages 207-37; and Part V, "Construction of Batteries," pages 241-65. William P. Craighill's *The Army Officer's Pocket Companion* (New York: D. Van Nostrand, 1863) included Article 98— "Field Works," pages 219-40. Even the Confederates, with poor supplies of paper, etc., published field fortification manuals such as Egbert L. Viele, *Hand-Book of Field Fortifications and Artillery; Also Manual for Light and Heavy Artillery with Illustrations* (Richmond, VA: J.W. Randolph, 1861). In addition, as had occurred before the war, technical articles on fortification appeared in periodicals such as "Fortification—Land Defences—Profiles," *Army and Navy Journal*, 1 (November 14, 1863), page 182; James R. Willett's "A Method of Determining a Plane of Defilement." *United States Service Magazine* 1 (June 1864), pages 618-21; and "The De-

fence of Field Works," in *Army and Navy Journal*, 2 (September 3, 1864), pages 20-21. Immediately after the war, still more technical literature appeared on field fortifications: Francis J. Lippitt, *A Treatise on Intrenchments* (New York: D. Van Nostrand, Publisher, 1866); F.P.J. Piron, "The Systems of Fortification Discussed and Compared," *United States Service Magazine*, 5 (January 1866), pages 34-40 (February 1866), pages 108-14; (March 1866), pages 225-34; (April 1866), pages 328-32; and "Field Intrenchments," *Army and Navy Journal*, 6, (November 7, 1868), pages 184-85.[122]

Generally, the U.S. Army considered Mahan's *Field Fortification* as the official manual but officers consulted other publications at times. Major General Henry W. Halleck, an Army Engineer for many years who became commander-in-chief of Union forces in July 1862, wrote that Professor Mahan's *Treatise on Field Fortification* "is undoubtedly the very best work that has been written on field fortification, and every officer going into the field should supply himself with a copy," in both the 1846 and 1859 editions of his *Elements of Military Science*.[123]

Acquisition of Land

Margaret Leech, author of *Reveille in Washington 1860-1865*, in discussing the days following the Union's move across the Potomac River into Northern Virginia on May 24, 1861, wrote:

> "The soldiers in the vicinity of Washington had at once begun the arduous labor of building earthworks. On both sides of the river, the farmers were ruined. Not only were their orchards and vegetable gardens trampled and their fields filled with tents, but the very face of their land was changed, as its soil was shifted into high mounds, and deep ditches."[124]

On December 10, 1861, Barnard wrote Joseph G. Totten, Chief of Engineers, and, among other subjects, exclaimed:

> "I should have mentioned, in connection with my statement of the amount actually expended, that the Treasury Department has advanced over $20,000 on account of the defenses of Washington, which should be refunded. I feel it my duty in this place to urge that Congress should take immediate measures to assess the land and other damages arising from these works and from the occupation of troops. In most cases the owners are ill able to bear temporarily the losses to which they have been subjected."[125]

Later, in his published 1871 report on the Defenses of Washington, Barnard elaborated on this terrible treatment of the land owners:

> "OCCUPATION OF LANDS—The sites of the several works being determined upon, possession was at once taken, with little or no reference to the rights of the owners or the occupants of the lands—the stern law of "military necessity" and the magnitude of the public interests involved in the security of the nation's capital being paramount to every other consideration. In one case a church, and in several instances dwellings and other buildings were demolished, that the sites might be occupied by forts. Long lines of rifle-trenches and military roads were located and constructed where the principles of defense or the convenience of communication required them, without regard to the cultivated fields or orchards through which they might pass. In addition to the ground immediately occupied by the defensive works, the lands in front for a distance of two miles were cleared of standing timber. At this work alone there were employed in the autumn of 1862 details of troops numbering from 2,000 to 3,000 men for a period of several weeks. The timber so cut down was used, so far as it was found to be suitable, in the construction of the forts, or for abattis.
>
> The injuries thus inflicted upon the citizens living along the lines, in the destruction and use of private property, were in the aggregate very considerable, and there were probably individual cases of *extreme* hardship; but, however much these evils might be deplored, they could not be avoided. No compensation for such damages or occupation of lands was made or promised, nor was it even practicable to make an estimate of their pecuniary amount. In some instances a statement of the number of acres denuded of timber, and a general description of its kind and quality, and in others of the number and kind of trees cutdown, was given to the owners, upon request being made therefor, as a supposed basis for future indemnity by the Government; but no general system of estimating, damages was attempted."[126]

Brigadier General Irvin McDowell, commanding the Department of Northeastern Virginia, on May 29, 1861, wrote the Adjutant General's Office in Washington, D.C. reporting that, "The troops are occupying houses in some cases, and fields, and cutting wood for fuel. Shall not rent and compensation be paid? If so, funds are needed for that purpose . . ." That same day, McDowell wrote another message, also to the Adjutant General's Office, and begged that his message be sent on to the "General-in-Chief" stating that there were "rumors of outrages committed by volunteers in Alexandria" and testimonials of

"several cases of trespass, depredations, and attempts at burglary" in Northern Virginia. Confederate Brigadier General P.G.T. Beauregard, commanding the Department of Virginia, on June 5, 1861, cited these Union depredations in an attempt to incite the "good People of the Counties of Loudoun, Fairfax, and Prince William to rally to the standard of your State and country, and by every means in your power compatible with honorable warfare to drive back and expel the invaders from your land."[127]

Even before Beauregard issued his plea, McDowell had already attempted to alleviate the situation by issuing General Orders, No. 4, on June 27, 1861. The order required that "Statements of the amount, kind, and value of all private property taken and used for Government purposes, and of the damage done in any way to private property by reason of the occupation of this section of the country by the U.S. troops, will, as soon as practicable, be made out and transmitted to department headquarters by the commanders of brigades and officers in charge of the several fortifications." Further, these "statements will, as far as possible, give the value of the property taken or of the damage sustained, and the name or names of the owners thereof. Citizens who have sustained any lessor damage as above will make their claims upon the commanding officers of the troops by whom it was done, or in cases where these troops have moved away, upon the commander nearest them." Additionally, the statements were to exhibit:

1st	The quantity of land taken possession of for the several field-works, and the kind and value of the crop growing thereon, if any.
2d.	The quantity of land used for the several encampments and the kind and value of the growing crop thereon, if any.
3d.	The number, size and character of the buildings appropriated to public purposes.
4th.	The quantity and value of trees cut down.
5th.	The kind and extent of fencing, &c., destroyed.[128]

On July 18, McDowell issued General Orders, No. 18, reiterating his orders for the "preservation of the property of the inhabitants of the district occupied by the troops under his command." His troops had committed additional depredations and he felt the "deepest mortification." The order provided that commanders of regiments select an officer as provost-marshal along with ten men as a police force to preserve property. The least punishment for infractions would be incarceration in the Alexandria jail."[129]

But, even by October 1, 1861, depredations continued. Major General George B. McClellan, commanding the Army of the Potomac, issued General Orders, No. 19, on that date, remarking that the "attention of the General Commanding has recently been directed to depredations of an atrocious character that have been committed upon the persons and property of citizens in Virginia by the troops under his command." Further the order provided that "all persons connected with this army who are

detected in depredating upon the property of citizens shall be arrested and brought to trial" and he "will admit of no remission of the death penalty which the military law attaches to offenses of this nature." In subsequent years more land was confiscated as the Army Engineers erected new fortifications and cleared land for fields of fire and although additional incidents of depredation occurred in Northern Virginia, there were far fewer incidents.[130]

Plans and Details of the Fortifications

Reed Hansen, who researched and wrote a history masters degree thesis on Fort Marcy states that the planners of the Defenses of Washington:

> "meticulously based their work on D.H. Mahan's *A Treatise on Field Fortification*, Barnard's principal reference book and the classic syllabus of its day. Mahan, a West Point professor, explicitly outlined those defensive procedures, specifically the embrasure and barbette, which Barnard put to good use in his fortifications."[131]

Barnard, in his 1871 report, mentions Mahan's manual a number of times. In one place he stated in a section entitled "PROFILES": "The works were originally profiled in accordance with the general section given in Mahan's Field Fortifications." In the same section he offered, "In some instances the scarps of the older works were revetted, either with plank, after the plan given in Mahan's Field Fortifications, or with vertical posts, as hereafter to be described." Later on in a section entitled "MAGAZINES, BOMB-PROOFS" Barnard wrote, that the interior structures of the fortifications, magazines, bomb-proofs, etc. "were in accordance (with some variation in details) with the plans given in Mahan's Field Fortification."[132]

It is likely, that inexperienced young Regular Army Engineer officers and those green volunteer Army Engineers most often used Mahan's book. For most of the older Regular Army Engineers, their education at West Point, duty assignments, which during their career meant some experience in planning, erecting and maintaining fortifications, readings and official and unofficial trips provided them with a much fuller technical background upon which to plan and erect the defenses of Washington. Barnard, as well as the two Civil War chiefs of engineers, Joseph G. Totten and Richard Delafield, and other Army Engineers had visited Europe where they visited fortifications and some had the chance to observe their construction and use in warfare.[133]

In the development of the system of fortifications erected around Washington, D.C. that included the forts, batteries, blockhouses, trenches and rifle-pits, Barnard looked to historical examples, especially the Lines of Torres Vedras. Napoleonic scholar and expert David G. Chandler wrote that the Duke of Wellington had instructed his Army Engineers to construct a line of fortifications north of Lisbon.

Colonel Richard Fletcher, Royal Engineers, and 17 other engineer officers, beginning in October 1809, oversaw the construction of a line of forts from the sea on the west to the Tagus estuary on the east including 108 redoubts, to which 42 were later added, in three lines mounting 447 guns, at a total cost of £100,000. Manned by about 25,000 men, the fortifications halted Napoleon's troops under the command of Marshal Andre Massena from October 10, 1810 to March 5, 1811, when the French troops withdrew. Barnard, on December 30, 1862, in a letter to Secretary of War Edwin M. Stanton, stated "There has been but one other system of field works that I know of that is analogous to this in extent and character—the famous lines of Torres Vedras." In January 1863, he wrote:

> "The theory of these defences is that upon which the works of Torres Vedras were based; the only one admitted at the present day for defending extensive lines. It is to occupy the commanding points within cannon range of each other by field-forts, the fire of which shall sweep all the approaches. These forts furnish the secure emplacement of artillery. They also afford cover to bodies of infantry. The works may be connected by lines of light parapets, or the ground (where practicable) may be obstructed that the enemy's troops cannot penetrate the interval without being exposed, for considerable time, to the effects of artillery or musketry fire of the forts."[134]

In a report on the defenses of Washington, dated December 10, 1861, and another of January 26, 1863, addressed to Joseph G. Totten, Chief of Engineers, Barnard provided a number of comparisons to the Lines of Torres Vedras:

> The aggregate perimeter of all the works is about 15,500 yards, or nearly 9 miles, including the stockaded gorges, which, however, form a small proportion of the whole, requiring, computed according to the rule adopted for the lines of Torres Vedras, 22,674 men (about) for garrisons.
>
> The number of guns, most of which are actually mounted, is about four hundred and eighty, requiring about 7,200 men to furnish three reliefs of gunners. The permanent garrisons need consist of only these gunners, and even in case of attack it will seldom be necessary to keep full garrisons in all the works.
>
> The total garrisons for all the works (one hundred and fifty-two in number) of the lines of Torres Vedras amounted to 34,125 men; and as the total perimeters are nearly proportional to the total garrisons, it appears that the lines about Washington involve a magnitude of work of about two-thirds of that in the three lines of Torres Vedras.

> The works themselves, fewer in number, are generally much larger than those of Torres Vedras, and involve, I believe. when the amount of bomb-proof shelter in ours is considered, more labor per yard of perimeter; but the latter lines involved a greater amount of auxiliary work, such as the scraping of mountain slopes, palisading, abatis, roads, &c., than we have had occasion to make.
>
> The lines of Torres Vedras were armed with five hundred and thirty—four pieces of ordnance (12, 9, or 6 pounders, with a few field howitzers); ours with four hundred and eighty pieces, of which the greater number are 32-pounders on barbette carriages, the rest being 24-pounders on the same carriages, 24-pounder siege guns, 10, 20, and 30 pounder rifled guns (Parrott), with a few field pieces and howitzers. As to number of guns, therefore, our armament approaches to equality with that of the famous lines mentioned; in weight of metal more than doubles it.[135]

Twice, on December 11, 1861 and December 30, 1862, Barnard, in reports to General George B. McClellan and Secretary of War Edwin M. Stanton, attempted to demonstrate the monetary value of the work on the defenses of Washington by comparing it to the relative costs of the Lines of Torres Vedras:

> I mentioned in that letter that our defensive system thus far consisted of about forty-eight works, mounting over 300 guns, some of which are of very large size; and I may add that the actual defensive perimeter occupied is about thirty-five miles, exceeding the length of the famous (and hitherto the most extensive fortified by extemporized field-works) lines of Torres Vedras by several miles. The amount which has been expended will not, therefore, considering the pressure under which the works have been built, appear extravagantly large.
>
> These [lines of Tores Vedras] frustrated the design of Napoleon of driving the English from the Peninsula. They consisted of a greater number of works, but the works were smaller, and much less expensive in workmanship; yet on these lines, in a country where labor commanded but one tenth of what is paid in this country, $1,000,000 was expended from first to last.[136]

McClellan, in the Fall of 1861, asked Barnard and Brigadier General William F. Barry, Chief of Artillery, to determine the number of men necessary "for garrisons and reserves 'for the various works in and about Washington to satisfy the conditions of a good defense'." In a supplemental report, of October 24,

1861, to McClellan through his Assistant Adjutant General General Alpheus S. Williams, Barnard and Barry explained that the example of the Lines of Torres Vedras had helped them calculate the number of men necessary to man the defenses of Washington:

> It seems proper to exhibit more clearly the grounds on which our estimate is founded. We have adopted the rule, which experience Showed to be satisfactory for the lines of Torres Vedras, in computing the garrison of the various works, viz: Two men per running yard of front covering line and one man per running yard of rear line, deducting spaces occupied by guns. Computed in this manner, the total of the full garrisons of all the works would amount to 19,789 men, of which 6,581 should be gunners, in order to furnish three reliefs to each gun.[137]

Barnard further compared the defenses of Washington to the Lines of Torres Vedras in his 1871 report. The defenses of Washington were "originally thrown up under *pressure*; hence, they were sometimes laid out without prepared plans, and not infrequently paced off on the ground. Under such circumstances coordination of plan, or even symmetry and perfection of design, was not to be expected." He felt that this unsystematic origin constituted an important distinction between the defenses of Washington and "other works of like extent to which they would be referred in comparison," such as the Lines of Torres Vedras that were carefully surveyed, located, planned and essentially finished, before Wellington's army took its position behind them. Both the defenses of Washington and the Lines of Torres Vedras "belong to the class of 'field works' and are illustrative of what can be done mainly by the use of earth and timber furnished by the locality . . ." Further, Barnard remarked that the British built practically all of the Lines of Torres Vedras in a year, from October 1809 to October 1810, while the Union spent about four years erecting the Washington defenses. The Lines of Torres Vedras were erected for a specific purpose—"to meet a foreseen contingency"—but the Washington lines were to protect a city against a possibility of incursion, siege or attack by unknown numbers of the enemy. Finally, Barnard argued that the "defenses of Washington exceeded even the length of the lines of Torres Vedras" "due to the large area over which the city, with its public buildings, arsenals, navy yard, &c., is spread, to the incidental necessity of covering Alexandria and holding the Chain Bridge, and of protecting the reservoir of the Washington Aqueduct, and to the vastly increased ranges of modern artillery."[138]

In spite of Barnard's heavy reliance on the Lines of Torres Vedras, he did consider the fortifications at other locations such as the Caucasus and Silestria and especially "Sebastopol" erected during the Crimean War. He remarked that the field fortifications at Sebastopol were "feeble earth-works." Although Sebastopol field fortifications did "prevent an immediate seizure of the place by the allied armies" they could only be protractedly held against a formal siege by the "most extraordinary exertions, combined with a lavish expenditure of the materials of war and an appalling sacrifice of lives of the brave

defenders . . ." Later, Barnard wrote, "Sebastopol, a vast intrenched camp defended by field fortifications of heavy profile, derived its principal strength from an armament such as is found only in a great maritime arsenal, and from a numerous army which always maintained its communications open with the interior of Russia." Sebastopol was not "secure against escalade" due to the lack of scarp walls in the defenses. But, the allies were still unable to overrun the Sebastopol defenses for a variety of reasons including their own shortcomings.[139]

Many plans, drawings, and photographs of the fortifications in the defenses of Washington gleaned from Barnard's 1871 report, the National Archives and other repositories and a variety of other sources appear elsewhere in this study.

Endnotes

[1] Cooling, Benjamin Franklin, III, *Symbol, Sword, and Shield: Defending Washington During the Civil War* Second Edition Revised (Shippensburg, PA: White Mane Publishing Company, 1991), 1-17; Margaret Leech, *Reveille in Washington* (New York: Harper & Brothers Publishers, 1941), 14-32; James H. Whyte, "Divided Loyalties in Washington during the Civil War," *Records of the Columbia Historical Society, Washington, D.C.* (hereafter referred to as *RCHS*), 1960-62, 103- 122; Elden E. Billings, "Military Activities in Washington in 1861," *RCHS*, 1960-62, 123-24.

[2] Leech, *Reveille in Washington*, 12-13, 28-29; Cooling, *Symbol, Sword*, 2, 9-10; Billings, "Military Activities," 124-27.

[3] Leech, *Reveille in Washington*, 29-32, 11-14; Cooling, *Symbol, Sword*, 10-12; Billings, "Military Activities," 124-27.

[4] *Lincoln Day by Day: A Chronology, 1809-1865. Volume III: 1861-1865.* Washington, DC: The Government Printing Office, 1960., III, 20-22; Leech, *Reveille in Washington*, 33-34.

[5] Cooling, *Symbol, Sword*, 1-17; *Lincoln Day By Day*, III, 24-26; Leech, *Reveille in Washington*, 34-46; Billings, "Military Activities," 126.

[6] Billings, "Military Activities," 126-27; Thomas M. Woodruff, "Early War Days in the Nation's Capital," Minnesota Commandery, The Military Order of the Loyal Legion of the United States, *Glimpses of the Nation's Struggle*, Third Series, New York, NY: D.D. Merrill Company, 1992, 90-92; Leech, *Reveille in Washington*, 65.

[7] Billings, "Military Activities," 128, 129-31; Woodruff, "Early War Days, 89-98; Cooling, *Symbol, Sword*, 18-36; James I. Robertson, "Norfolk, Va., fall of," In *Historical Times Illustrated Encyclopedia of the Civil War* Edited by Patricia L. Faust (New York: Harper & Row, Publishers, 1986), 535; Leech, *Reveille in Washington*, 46-86; E.B. Long with Barbara Long, *The Civil War Day by Day: An Almanac 1861-1865* (Garden City, NY: Doubleday & Company, Inc., 1971), 47- 77; Scott Sumpter Sheads and Daniel Carroll Toomey, *Baltimore during the Civil War* (Lithicum, MD: Toomey Press, 1997, 12-27.

[8] Long, *The Civil War*, 61-64; Cooling , *Symbol, Sword*, 22-26; Billings, "Military Activities," 128, 130; U. S., Naval History Division, *Civil War Naval Chronology, 1861-1865* (Washington, DC: The Government Printing Office, 1971), I-9—I-11, VI-15; Sheads & Toomey, *Baltimore*, 12- 27; Woodruff, "Early War Days, 92; Leech, *Reveille in Washington*, 58-59.

[9] Cooling, *Symbol, Sword*, 25-26, 28-31; Eric Mills, *Chesapeake Bay in the Civil War* (Centreville, MD: Tidewater Publishers, 1999), 24-26, 28-31; *Civil War Naval Chronology*, I-11, VI-15; Long, *The Civil War*, 63-66; Billings, Military Activities, 130-31; Woodruff, "Early War Days," 93-95; Leech, *Reveille in Washington*, 63-64, 66-67.

[10] Billings, "Military Activities," 131; *Civil War Naval Chronology*, I-10—I-15, VI-12—VI-13, VI-15, VI-19; Long, *The Civil War*, 64, ; Cooling, *Symbol, Sword*, 28-31; Mills, *Chesapeake Bay*, 39-41.

[11] Billings, "Military Activity," 130-31; Woodruff, "Early War Days," 93-98; Cooling, *Symbol, Sword*, 31-33; Leech, *Reveille in Washington*, 66-79; Wilhelmus Bogart Bryan, *A History of the National Capital From Its Foundation Through the Period of the Adoption of the Organic Act* (New York, NY: The Macmillan Company, 1916), Volume II, 478-79.

[12] Leech, *Reveille in Washington*, 79-80; Cooling, *Symbol, Sword*, 32-36, 41; Sheads & Toomey, *Baltimore*, 30-32.

[13] Long, *The Civil War*, 77; Leech, *Reveille in Washington*, 80.

[14] Taken from *The Civil War: A Newspaper Perspective. The Charleston Mercury; The New York Herald; The Richmond Enquirer.* A CD-ROM produced by Accessible Archives.

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[74] Williams, *Life in Camp*, 35; McGrath, *The History of the127th*, 34; Newton Martin Curtis, *From Bull Run to Chancellorsville: The Story of the Sixteenth New York Infantry together with Personal Reminiscences* (New York: G.P. Putnam's Sons, 1906), 61; RG77, Entry 18, Letters Received, 1826-66, B169', Barnard to Totten, January 19, 1864; B314', Barnard to Totten, April 6, 1864; A2004, Alexander to Delafield, July 5, 1864; A2028, B.S. Alexander to Delafield, August 8, 1864; A2044, Alexander to Delafield, October 7, 1864; A2057, Alexander to Delafield, November 1, 1864; A2074, B.S. Alexander to Delafield; December 3, 1864; A2094, B.S. Alexander to Delafield, January 3, 1865; A2120, B.S. Alexander to Delafield, February 6, 1865; A2145, B.S. Alexander to Delafield, March 3, 1865; A2166, B.S. Alexander to Delafield, April 6, 1865; A2176, B.S. Alexander to Delafield, May 4, 1865; RG77, A2191, Alexander to Delafield, June 5, 1865; A2232, B.S. Alexander to Delafield, July 10, 1865.

[75] *ORAs*, I, Volume 21, Endorsement on Communication from Alexander to Barnard, December 22, 1862, page 871; *ORAs*, I, Volume 21,

Alexander to Barnard, Dec 21, 1862, page 871; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869 Box 1, 1862, B21, Barnard to Captain R.B. Irwin, A.A.G, September 17, 1862; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 558, Endorsements on Letters Referred, September 1862-December 1865, pages 57-58, endorsement on letter, December 21, 1862; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page 21, B.S. Alexander to C.C. Augur, July 16, 1864.

[76] *ORAs*, I, Volume 19, Part II, 291; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869 Box 1, B133 1862, Barnard to Col. C. McKeever, A.A.G., November 3, 1862.

[77] RG393, Preliminary Inventory 172, Part 2, DeRussy's Division, 22nd Army Corps, Entry 6731, Letters Received, 1863-65, B.S. Alexander, Chief Engineer, Defenses of Washington, to Brigadier General De Russy, Commanding De Russy's Division, May 25, 1864; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, B133 1862, Barnard to Col. C. McKeever, A.A.G., November 3, 1862; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 1, page 268, Barnard to Brigadier General G.A. DeRussy, July 18, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 558, Endorsements on Letters Referred, September 1862-December 1865, pages 57-58, endorsement on letter, Dec. 21, 1862; RG393, Preliminary Inventory 172, Part 2, DeRussy's Division, 22nd Army Corps, Entry 6725, Letters Sent, January 1863-August 1865, Volume 189 DW, pages 285-86, Thomas Thompson, Captain & A.A.G., DeRussy's Division, to Commanding Officer, 2d Brigade, DeRussy's Division, June 4, 1864.

[78] RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5383, Letters Received (Unentered), 1863-67, Alexander to Lt. Col. J.H. Taylor, A.A.G., June 23, 1863; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, B375 1863, Barnard to Lt.Col. J.H. Taylor, Chief of Staff & ADC, August 31, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page. 58-60, to Major General Silas Casey, Commanding Provisional Brigade, September 18, 1864; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 4, 1864, A266, B.S. Alexander to Major General Silas Casey, Commanding Provisional Brigade, September 18, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2, organized like a Regular Register of Letters Received, page 581, W23, Department of Washington, September 15,1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 558, Endorsements on Letters Referred, September 1862-December 1865, page 96, endorsement on letter of Colonel Alexander to Major General Casey dated September 18, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, C25, C.D. Clark, Suptintendent, September 15, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 560, Telegrams Received by General J.G. Barnard, November 1862-October 1863, Military Telegraph, from R.B. Marcy, Chief of Staff, Army of the Potomac, to Barnard, August 29, 1862.

[79] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, P 24, Potter, August 11, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 560, Telegrams Received by General J.G. Barnard, November 1862-October 1863, Military Telegraph, Brigadier General C. Grover, Commanding Grover's Division, to Barnard, September 15, 1862; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, 1863, B57, Barnard, to Major General Heintzelman, Commanding, Defenses of Washington, February 19, 1863; RG393, Preliminary Inventory 172, Part 2, Defenses of Washington, South of the Potomac, Army of the Potomac, Entry 6744, Letters Received and Sent, March-December 1862, Headquarters, Casey,s Division, to Maj. L. Hunt, ADC, Defences South of the Potomac, November 24, 1862.

[80] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 559, Special Orders, Headquarters Defenses of Washington, August 1862-July 1865, Special Orders No. 6, Headquarters, Department of Washington, September 2, 1862.

[81] *ORAs*, I, Volume 37, Part I, 351.

[82] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 560, Telegrams Received by General J.G. Barnard, November 1862-October 1863, Military Telegraph, Brigadier General C. Grover, Commandig Grover's Division, to Barnard, September 15, 1862; *ORAs*, I, Volume 37, Part I, 531; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army

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[83] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 509, T5, T.R. Tannatt, Colonel, Commanding Defenses South of the Potomac, Arlingtom, May 22, 1863; RG393, Preliminary Inventory 172, Part 2, 3d Brigade, Defenses North of the Potomac, 22nd Army Corps, Entry 6708, Letters Sent, January 1863-June 1865, Volume 184/408 DW, A. Brown, Colonel, 10th New York Artillery, Commanding Brigade, 3rd Brigade, Fort Baker, D.C., to Lt.Col. Haskin, ADC, Charge of Defenses North of the Potomac, September 6, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page 339, Department to Lt.Col. B.S. Alexander, Chief Engineer, Defenses of Washington, August 19, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, page 88, D17, G.A. DeRussy, November 19, 1864; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 4, 1864, A266, B.S. Alexander to Major General Silas Casey, Commanding Provisional Brigade, September 18, 1864 with reply by MajorGeneral S. Casey.

[84] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 1, page 129, Barnard to Heintzelmann, November 25, 1862; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2, organized like a Regular Register of Letters Received, page 1, No. 4, B.S. Alexander, September 27, 1862; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, 1863, C32, Colonel M. Cogswell, Commanding Arillerty Brigade, near Fort Corcoran, to Captain Carroll H. Potter, A.A.G., Defenses of Washington, January 22, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 1, pages 117-18, B.S. Alexander to Lt.Col. J.A. Haskin, ADC, October 28, 1862.

[85] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 4, A12, Alexander, October 22, 1862; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 1, page 129, Barnard to Major General Heintzelman, November 25, 1862; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 1, No. 4, B.S. Alexander, September 27, 1862; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, 1863, C32, Col M. Cogswell, Commanding Artillery Brigade, near Fort Corcoran, to Captain Carroll H. Potter, A.A.G., Defenses of Washington, January 22, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, page 58, C20, Childs, Engineer in Charge, June 18, 1863; RG393, Preliminary Inventory 172, Part 2, 3d Division, 3d Army Corps, Entry 6770, Letters Received, September-October 1862, W.C. Gunnell, per James A. Brown, Clerk, Headdquarters, Engineer Department, Defenses Of Washington, to Col. Haskin, Dec. 16, 1862; RG393, Preliminary Inventory 172, Part 2, DeRussy's Division, 22nd Army Corps, Entry 6725, Letters Sent, January 1863-August 1865, Volume 189 DW, pages 285-86, Thomas Thompson, Captain & A.A.G., DeRussy's Division, to Commanding Officer, 2d Brigade, DeRussy's Division, June 4, 1864.

[86] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 584, W27, Department of Washington, November 30, 1864; RG393, Preliminary Inventory 172, Part 2, Defenses of Washington, South of the Potomac, Army of the Potomac, Entry 6744, Letters Received and Sent, March-December 1862, Edward Frost, Engineer, Engineer Office, Roach's House, Defenses of Washington, South of the Potomac, to Major L. Hunt, A.A.G., &c., November 19, 1862; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, 1863, C143, Ensign Bennett, Superintendent &c., Camp on Traitors Hill, Va, to Engineer in Charge A.G. Childs, April 20, 1863.

[87] RG77, Entry 18, Entry 18, Letters Received, 1826-66, A1820 (1862), A. Alberti, Captain 5th Michigan Infantry Regiment, near Fort Ramsay, to Geneneral Totten, October 1, 1862; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, E4, Eveleth, March 5, 1863; RG77, Entry 18, Letters Received, 1826-66, C5082, Received February 12, 1862, C.B. Comstock, Lt. of Engineers/Chief Engineer, Headquarters, Army of the Potomac, to General J.G. Totten, February 10, 1862; United States, War Department, *Revised Regulations for the Army of the United States,*

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[88] Thompson, *Historical Sketch of the Sixteenth Regiment*, 10; RG393, Preliminary Inventory 172, Part 2, Whipple's Division, Defenses of Washington, Army of the Potomac, Entry 6770, Letters Received, September-October 1862, S.S. Carroll, Commanding Brigade, to Captain H.R. Dalton, A.A.G., October 7, 1862.

[89] Larry Gara, "black soldiers," In *Historical Times Illustrated Encyclopedia*, 63.

[90] A few photographs taken during the Civil War depict USCTs at some of the forts in Washington [see collection of photos accompanying this report] but their stay at the forts was only temporary; *ORAs*, I, Volume 37, Part 1, 570, 700; *The Black Military Experience*. (*Freedom: A Documentary History of Emancipation 1861 - 1867 Selected from the Holdings of the National Archives of the United States*; Series II) Ira Berlin, Editor (New York: Cambridge University Press, 1982), 374-75; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 558, Endorsements on Letters Referred, September 1862-December 1865, page 96, endorsement on letter of Colonel Alexander to Major General Casey dated September 18, 1864; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862- March 1869, Box 4, 1864, A266, B.S. Alexander to Major General Silas Casey, Commanding Provisional Brigade, September 18, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page 516, Department to Major General Silas Casey, Commanding Provisional Brigade, September 15, 1864; US, War Department, *Supplement*, Part II-Record of Events, Volume 78, Serial No. 90, 45 USCT, April 1864-June 1865, 36; US, War Department, *Supplement*, Part II-Record of Events, Volume 77, Serial No. 89.28th USCT, Feb 1864-June 1865, Regiment, 626-27.

[91] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page 516, Department to Major General Silas Casey, Commanding Provisional Brigade, September 15, 1864; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 4, 1864, A266, B.S. Alexander to Major General Silas Casey, Commanding Provisional Brigade, September 18, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, C25, C.D. Clark, Superintendent, September 15, 1864; RG393, Preliminary Inventory 172, Part 1,Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5383, Letters Received (Unentered), 1863-67, Alexander to Lt. Col. J.H. Taylor, A.A.G., June 23, 1863.

[92] RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 4, 1864, A266, B.S. Alexander to Major General Silas Casey, Commanding Provisional Brigade, September 18, 1864, see specifically Casey's endorsement of September 19; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 558, Endorsements on Letters Referred, September 1862-December 1865, page. 96, September 20, 1864, Casey endorsement on letter of Colonel Alexander to Major General Casey dated September 18, 1864.

[93] RG393, Preliminary Inventory 172, Part. 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5375, Letters Sent, July 1864-March 1869, Volume 1, 20DW, page 511, Department to Alexander, Sept 14, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 583,W23, Department of Washington, September 15,1864; U.S., War Department, *Supplement*, Part II-Record of Events, Volume 78, Serial No. 90, 45 USCT, April 1864-June 1865, 36.

[94] Benjamin Franklin Cooling, III and Walton H. Owen, II, *Mr. Lincoln's Forts: A Guide to the Civil War Defenses of Washington* (Shippensburg, PA: White Mane Publishing Company, 1988), 81.

[95] McAllister, *The Civil War Letters*, 213 (Camp Ellsworth, Oct 1, 1862.

[96] Moulton, *Fort Lyon*, 65 (Camp Lyon, Dec 9, 1862).

[97] R.W. Rock (pseudo.), *History of the Eleventh Regiment, Rhode Island Volunteers, in the War of the Rebellion* (Providence, RI: Providence Press Company, Printers, 1881), 99, 106.

[98] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 59-60, C28, Clark, Superintendent, Headquarters, Engineer Camp, Defenses South of the Potomac, October 19, 1863; page 60, C29, C.D. Clark, Superintendent, to A.G. Childs, October 20, 1863; RG393,

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[99] RG393, Preliminary Inventory 172, Part 1, Defenses & Department of Washington, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, 1863, supplement, Box 2, A31, Alexander to Colonel J.H. Taylor, Chief of Staff, October 22, 1863.

[100] RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, 1863, supplement, Box 2, A31, B.S. Alexander to Colonel J.H. Taylor, Chief of Staff, October 22, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, C31, Clark to Childs, October 22, 1863; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, 1863, B10, J.G. Barnard to Major General S. Heintzelman, Commanding Defenses of Washington, July 9, 1863.

[101] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, C35, Clark to Childs, November 6, 1863; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, 1863, supplement, Box 2, A31, Alexander to Colonel J.H. Taylor, Chief of Staff, October 22, 1863; Rock (pseudo.), *History of the Eleventh Regiment*, 88.

[102] Patricia L. Faust, "Conscription," In *Historical Times Illustrated Encyclopedia*, 160; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page 55, to Lt.Col. J.H. Taylor, September 6, 1864; Volume 2, Page 130, Department to Lt.Col. S. McKelvy, Commanding Rendezouvs of Distribution, July 17, 1864; RG393, Preliminary Inventory 172, Part. 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5375, Letters Sent, July 1864-March 1869, Volume 1, Volume 20DW, page 511, Department to Alexander, Sept 14, 1864.

[103] RG393, Preliminary Inventory 172, Part. 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5375, Letters Sent, July 1864-March 1869, Volume 1, 20DW, page 129, Department to Commanding Officer, Fort Lincoln, July 17, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, pages 58-59, to Taylor, September 15, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 66, C23, A.G. Childs, August 5, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page 36, to DeRussy, August 6, 1864; RG393, Preliminary Inventory 172, Part. 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5375, Letters Sent, July 1864-March 1869, Volume 1, 20DW, page 130, Department to Lt.Col. S.. McKelvy, Commanding Rendezouvs of Distribution, July 17, 1864; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 553, Letters Sent by the Chief of Engineers, 1862-66, Volume 2, page 130, Department to Lt.Col. S. McKelvy, Commanding Rendezouvs of Distribution, July 17, 1864; RG393, Preliminary Inventory 172, Part. 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5375, Letters Sent, July 1864-March 1869, Volume 1, Volume 20DW, page 511, Department to Alexander, September 14, 1864.

[104] RG393, Preliminary Inventory 172, Part 4, Fort Whipple, Va., 1864-67, Entry 1362, Orders Received from the 1st Brigade, DeRussy's Division at Fort Corcoran, September 1864-June 1865, Volume 398/1032DW, pages 541-42, Military District of Washington, General Orders No. 30, Sept 5, 1864.

[105] RG393, Preliminary Inventory 172, Part 1, Defenses & Department of Washington, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, 1863, supplement, Box 2, A30, B.S. Alexander to Augur, Commanding Department, October 18, 1863; RG393, Preliminary Inventory 172, Part 2, Defenses of Washington, South of the Potomac, 22nd Army Corps, Entry 6731, Letters Received, 1863-65, A. Grant Childs, Civil Engineer, to Barnard, August 1, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, page 61, C34, Clark to Childs, November 5, 1863; page 60, C32, Clark to Childs, Nov 4, 1863.

[106] RG393, Preliminary Inventory 172, Part 2, DeRussy's Division, 22nd Army Corps, Entry 6731, Letters Received, 1863-65, Barnard to De Russy, Commanding Division, May 16, 1864; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5382, Letters Received, September 1862-March 1869, Box 1, B375 1863, Barnard to Lt.Col. J.H. Taylor, Chief of Staff & ADC, August 31, 1863; RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, page 85, D2, Brigadier General DeRussy, May

19, 1864; *ORAs*, I, Volume 37, Part 1, 531, De Russy to Barnard, May 24, 1864; Bellard, *Gone for a Soldier*, 161.

[107] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, page 413, P25, Potter, September 5, 1863; RG393, Preliminary Inventory 172, Part 1, Department and Defenses of Washington and 22nd Army Corps, 1862-69, Entry 5375, Letters Sent, July 1864-March 1869, Volume 1, 20DW, page 130, Department to De Russy, Commdg Div, Arlington House, July 17, 1864; RG393, Preliminary Inventory 172, Part 2, Defenses of Washington, South of the Potomac, 22nd Army Corps, Entry 6731, Letters Received, 1863-65, A. Grant Childs, Civil Engineer, to Barnard, Aug. 1, 1863.

[108] RG77, Records of Detached Engineer Officers, Defenses of Washington, 1861-66, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a Regular Register of Letters Received, page 111, E24, Engineer Department, December 24, 1864; RG393, Preliminary Inventory 172, Part 2, DeRussy's Division, 22nd Army Corps, Entry 6731, Letters Received, 1863-65, B.S. Alexander, Chief Engineer, Defenses of Washington, to Brigadier General De Russy, Commanding De Russy's Division, May 25, 1864.

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Chapter V

The Fortification System

CHAPTER V: THE FORTIFICATION SYSTEM

Washington, D.C. could not be easily defended because it, and the surrounding area had, "no strong natural defensive features." During the Civil War, the Union constructed a fortification system to protect its capital. This fortification system protecting Washington, D.C. made it the best-defended city in the world at the time of the Civil War. [1]

Barnard described this system:

> " . . . from a few isolated works covering bridges or commanding a few especially important points, was developed a connected *system* of fortification by which every prominent point, at intervals of 800 to 1,000 yards, was occupied by an inclosed field-fort, every important approach or depression of ground, unseen from the forts, swept by a battery for field-guns, and the whole connected by rifle-trenches which were in fact lines of infantry parapet, furnishing emplacement for two ranks of men and affording covered communication along the line, while roads were opened wherever necessary, so that troops and artillery could be moved rapidly from one point of the immense periphery to another, or under cover, from point to point along the line." [2]

Barnard continued, "At the termination of the war in April, 1865, the "defenses of 'Washington" consisted of 68 inclosed forts and batteries, having an aggregate perimeter of 22,800 yards, (13 miles,) and emplacements for 1,120 guns, 807 of which, and 98 mortars were actually mounted; of 93 unarmed batteries for field-guns, having 401 emplacements; and of 35,711 yards (20 miles) of rifle-trenches, and 3 block-houses." One author surmised: "Clearly, Barnard's foresighted move of transforming individual forts into an integrated system—including 60 forts, 93 batteries, 837 guns and 25,000 men by the end of 1863 contributed to the system's seeming impenetrability." Another author declared: "Washington, thus fortified, was the finest existing example of the system of defenses based upon a series of detached forts connected by a continuous trench line." Thus, "All commanding points on which an enemy would be likely to concentrate his artillery to overpower that of one or more forts were subjected not only to the fires, direct and cross, of many points along the line, but also to that of heavy rifled guns from distant points unattainable by the enemy's field guns."[3]

The number of forts, guns or other aspects of the fortifications were not necessarily important; the combination of the forts, batteries, blockhouses, trenches and guns and their interaction made the entire fortification system effective. A review of this fortification system and its components is necessary to understand why it was effective.

The Forts

Barnard declared that the general profiles, or sections, of the works were derived from those in Dennis Hart Mahan's *A Treatise on Field Fortifications*. Generally, the Army Engineers planned the forts for approximately a 500-man garrison and for about 16 guns. John M. Wilson, an Army Engineer who worked in the defenses, wrote that "In the construction of these works the heights of the interior crest of the parapet was from 7 to 9 feet above the parade; the thickness of the parapet ranged from 12 to 18 feet; the ditches were usually 6 feet deep, and a few feet beyond the counterscarp a glacis was constructed upon which an abattis was placed; revetments of plank, vertical posts, fascines or sod were used, the cheeks of embrasures being revetted with gabions." "In spite of differences in their size and trace (outline of horizontal configuration), the designs for each fort and large battery fit a common description: revetments, or interior retaining walls, of either vertical tree posts or sod if trees were not available . . .; an earthen parapet usually made between twelve and eighteen feet thick; a surrounding ditch, beyond which an earthen glacis sloped outward and down; and an abattis, a barricade of felled trees oriented with branches facing out, toward the attacker" and "Each work also included platforms for field and siege guns." An Army Engineer publication on "The Art of Fortification," described the forts this way:

> "The profile of these forts consisted of an earthen parapet from 12 to 18 feet thick (the thickness depending upon exposure). The interior slope was revetted while the exterior slope was allowed to take the natural slope of the earth. At the foot of the exterior slope proper, there was a narrow berm, outside of which there was a ditch at least 6 feet in depth. Outside of the ditch the ground was graded so as to form a glacis with a narrow covered way fitted occasionally as an infantry parapet. On the glacis or at its foot there was usually built an abatis. When first constructed, the interior slope was revetted with planks, but these proved to have so little durability, they were later replaced by a revetment consisting of vertical posts, capped by horizontal logs which were well tied back into the parapet.
>
> Within the forts, bombproof magazines and bombproof quarters were plentifully supplied and the earth covers of these were frequently fitted as infantry parapets."[4]

The Batteries

The Army Engineers also constructed numerous batteries between the forts. George B. McClellan wrote: " The intermediate points [between the forts] were occupied by lunettes, redoubts, batteries, etc., and in a few cases these were united by infantry parapets. The entire circumference of the city was thus protected. " The Commission that studied the fortifications in late 1862, after examining and reporting on each fortification, recommended the construction of "numerous batteries . . . in the intervals between the forts." By constructing these batteries, the intervening space between the forts was also covered by artillery fire. Not all the batteries received guns; various authors report that over ninety batteries were not armed.[5]

In his post-war report, Barnard described the batteries:

> "BATTERIES.– The same section of parapet was given to batteries, whether open or closed, as to the forts. Many of them were provided with magazines, and all of them with traverses when necessary. The arrangement of embrasures and platforms, and their manner of construction, was precisely the same as described for the forts, and the revetment generally of vertical posts was of an equally substantial and durable character. In the construction of open batteries generally, no ditch was excavated, but the material for the parapet was obtained by excavating in the rear to such an extent and depth as to give a convenient area of tereplein, with a cover of 7 _ to 8 feet. The most perfect and complete batteries of this form (open works) were Batteries Parrott and Kemble, armed with 100-pounder Parrott rifles and one 15-inch gun; but the purpose of these were peculiar, and differed very much from that of the batteries for field or siege guns, armed or unarmed, of which so many were arranged along the lines of defense."[6]

The Blockhouses

During the Civil War, the U.S. Army erected numerous wooden blockhouses to protect railroad lines, bridges, roads, and important defiles. Likewise, the Army erected blockhouses in the defenses of Washington, D.C. The Army designated three of these blockhouses by numbers: Blockhouse No. 1 and Blockhouse No. 2 were located near Hunting Creek Valley, one at the north side of the valley at the Little River Turnpike and one on Telegraph Road near the bridge over Hunting Creek, and Blockhouse No. 3 on the Leesburg Turnpike near Fort Ward.[7]

In his post-war report, Barnard described these blockhouses:

> "The ground plan of these structures had the form of a Greek cross. The walls were built of large logs from 16 to 18 inches in diameter, hewed on two sides and placed vertically in close contact. They were made 10 _ feet in height in the clear from the floor. The roof was made of logs extending over the walls one foot on all sides. On these logs was thrown an earth-covering four feet thick at the crown and sloping down to a depth of six inches at the ends of the logs. This was thoroughly rammed, and in it were bedded purlines, upon which was constructed a shingle roofing. Loop-holes for musketry fire were cut through the walls at a height of 8 feet above the floor, their splay being on the *inside.* A banquette of plank, 3 _ feet above the floor and 6 feet in width, was carried AROUND the interior; this served also as a substitute for bunks. The floors were of 2 1/2-inch plank. Embrasures for a 12-pounder howitzer were arranged on every face of the block-houses, in each of which buildings there were two such guns. The throats of the embrasures were closed, when not in use, by heavy timber doors, barred on the inside, and the banquette was made in movable sections behind each embrasure. Around the outside was dug a deep V ditch, the earth being, thrown up on a slope of forty-five degrees, as high as the soles of the loop-holes. The cheeks of the embrasures were of hewn timber, and a roof of the same was thrown across to sustain the earth slope just mentioned. Each block-house was provided with a small magazine below the floors. These structures, though not entirely *bomb-proof,* were so buried in earth as to be pretty secure against any artillery accompanying cavalry raids. Their garrisons consisted of sixty men each. These buildings were erected by the Quartermaster's Department, under the direction of the engineer of the Defenses at the time, (Col. B. S. Alexander.)"[8]

There were, however, additional blockhouses within the Defenses of Washington. One author reported that "a breastwork, and two bomb proof block houses of large logs two stories high were erected and pierced on all sides for musketry" guarded the "high stone bridge" on which the Potomac Canal crossed the Potomac River. B.S. Alexander submitted a memorandum "List of forts and batteries arranged in classes in the order of their relative importance" to Major-General C.C. Augur, in which the third-class works included "three block-houses on Aqueduct Bridge." In his monthly report of engineer operations in the Defenses of Washington for April 1865, Alexander declared that work was still pro-

gressing on the Aqueduct road and bridge area blockhouses. At least one additional blockhouse was planned for the Navy Yard Bridge and whether finished or not, the Army Engineers were working on it in April 1865.[9]

Also, starting in November 1864, "an advanced line of picket posts was established during the past month; the principal posts being at Prospect Hill, on the Georgetown and Leesburg turnpike; at 'Vienna' on the Loudon & Hampshire RR; at Fairfax CH on the Little River Turnpike and at Fairfax Station on the Orange & Alexandria RR." The work on these fortifications "laid out at these four points to enable the positions to be held by the infantry garrison" continued until April 1865 and consisted of "block houses, stockades, infantry parapets with epaulement for a few field guns and abattis." At least thirty some blockhouses were erected in this advanced defensive line. A few blockhouses were erected along the route of the Orange & Alexandria Railroad too.[10]

The Trenches

Barnard wrote: "In addition to the forts proper, there were between the forts [and batteries], and forming as it were the curtains, some 20 miles [approximately 35,711 yards] of rifle trenches . . ."The whole line was connected by rifle-trenches which were in fact lines of infantry parapet, furnishing emplacement for two ranks of men and affording covered communication along the line . . ." One author wrote "Washington, thus fortified, was the finest existing example of the system of defenses based upon a series of detached forts connected by a continuous trench line."[11]

Barnard described the trenches in detail:

> "TRENCHES AND COVERED WAYS.—The three sections on page 74 represent different kinds of trenches used in connecting the works and forming the line of defense, or for furnishing a covered fire upon ground in contiguity to, but unseen from, the forts. The connecting lines, destitute of interior revetments, had, in place, thereof, earth slopes of about 45 degrees. The earth was thrown up from an inside excavation, which was carried to sufficient depth (usually 3 feet) to afford, in conjunction with the embankment, a cover of 71/2 feet. The banquette was made on the natural surface of the ground. To facilitate access from the trench an intermediate step, 2 feet in width, broke the continuity of the earth slope. The bottom of the trench was graded to throw the drainage to the rear, and outlets for it were provided at suitable localities. For the uses of infantry alone a width of 5 feet was given to the bottom of the trench, from which resulted a thickness, between crests, of parapet of 4 feet. Wherever it was considered desirable to provide for the passage of guns these dimensions were increased to 8 feet for both trench and parapet. Sometimes such trenches

> were adapted to the service of guns, in which cases platforms of well-compacted earth were made, and on each side of the embrasure the parapet was revetted, either with wall-sodding or posts. The embrasures were revetted either with gabions or with sods. The full width of trench was cut to the rear of the platforms, with easy ramps for crossing them and for running the guns into position. When the second form of trench was used to connect a fort with a contiguous battery the interior slope was usually revetted with posts, instead of being of earth at its natural slope."[12]

The Water Defenses and Obstructions

Both Fort Foote and Battery Rodgers anchored the defenses on the Potomac Rivers' southern approach and were often referred to as water or river or shore batteries. No enemy forces attempted to ascend the river for an attack on Washington so it is difficult to assess the value of these fortifications. At the end of the war, the Army had numerous proposals for the post-war use of the fort and battery. The Army did not retain Battery Rodgers but it did keep Fort Foote, which in association with Fort Washington was to repel invasions and raids up the river. The Army Engineers remodeled and enlarged Fort Foote during its use but stopped using it as a water defense in 1878.[13]

Additionally, the Army Engineers constructed obstructions that could be moored in the Potomac River, near Fort Foote, and "render the shore batteries [Fort Foote and Battery Rodgers] more efficient for the protection of Washington against maritime attack." In July 1864, Congress appropriated $300,000.00 for the fabrication of the obstructions and B.S. Alexander designed them, " . . a series of floats holding up a 400-foot-long chain with 23 anchors . . ." that some referred to as the "Alexandria Chain," but they were unused during the war. After the war, the Army held on to the obstructions and, in 1868, offered them to the Secretary of the Navy who, it turned out, considered them worthless. The obstructions remained stored in a shed near Fort Foote, deteriorating, at least into the early 1870s.[14]

The Guns

The U.S. military built some Civil War fortifications as infantry strong-points, which did not require any artillery. Some of these fortifications were erected in the Defenses of Washington. Most Civil War fortifications, however, required artillery. The artillery could reach attacking enemy forces at a distance, long before they approached the fortification's moat [or ditch] or ascended the parapet. In addition, and especially in the Defenses of Washington, the fortifications were mutually supporting, meaning that when one fort was attacked, the guns from three, four or five others could fire on the enemy forces, often enfilading them, and driving them away as happened in July 1864 when Jubal Early and his forces approached Fort Stevens.

During the four years of war, armament in the Defenses of Washington increased and changed as the work on the fortifications progressed and more useful ordnance became available. In September of 1862, Nathaniel P. Banks, then commanding the Defenses of Washington, reported that there were 120 guns within the defenses of which forty were heavy guns, meaning that the rest were presumably field guns. B.S. Alexander, in October 1864, reported 377 guns and 36 mortars in the defenses. On May 6, 1865, the Chief of Engineers, Richard Delafield, reported that the Defenses of Washington were armed with "905 guns of various calibers" which Barnard substantiated, in his 1871 report, by writing that at the termination of the war, in April 1865, there were "emplacements for 1,120 guns, 807 of which and 98 mortars were actually mounted."[15]

The types of artillery within the fortifications in the Defenses of Washington also changed during the war. Barnard mentioned that in August and September 1862, following the Battle of Second Manassas, when Washington was in peril:

> "The demand for field-guns for our armies had stripped our arsenals of them and compelled the substitution in these forts of large numbers of 24 and 32-pounders on barbette carriages. Such guns made a very improper armament. Not only were they too heavy and unmanageable, but so exposed that at close quarters they would be nearly unserviceable. To replace most of these as rapidly as possible by light field guns on field or siege carriages placed in embrasure was deemed imperative, in doing which another expedient to enhance the efficiency of the artillery fire suggested itself."[16]

In October 1863, Barnard complained: "The works which constitute the defenses of Washington have been separately (and sometimes hastily) armed with such ordnance as might be available at the moment." Changes of ordnance in the defenses occurred at times for various reasons such as in September 1862, when orders required the emplacement of coehorn mortars in a number of the forts. At other times, field guns such as the "Napoleon," the Model 1857 Light 12-pounder, was substituted for the unwieldy and improper 24- and 32 -pounders already emplaced. Such actions usually required labor-intensive changes in platforms and or embrasures and, therefore, did not occur too often.[17]

In late 1863, the War Department created a board of officers " . . . to examine and report upon the armaments of the works constituting the defenses of Washington," " . . . report upon the points to be presented to them in a letter of instructions, and will make any other recommendations which in their judgment may seem proper." In January 1864, W.F. Barry, Inspector of Artillery, submitted the board's report to the commander, Defenses of Washington, for execution. Basically, after the Defenses of Washington accomplished the board's changes. Few changes occurred later except under special circum-

stances. One such change occurred at Fort Ward which had recently undergone "extensive alterations" that were " . . . so extensive as to amount practically to a reconstruction of the work and a corresponding change is necessary in its armament" that included the removal of six 24-pounders and five 32-pounders to be replaced by six 6- or 12-pounders, four 12-pounder howitzers, four 24-pounder howitzers, and six 4-inch guns.[18]

The Defenses of Washington required semi-monthly submission of reports of the armament of the forts. Also, miscellaneous other reports listed the guns in the various forts and batteries in the Defenses of Washington. Thus, it is fairly simple to determine the types and number of guns and their disposition throughout the war.[19]

Logistics

Henry L. Scott, in his 1861 *Military Dictionary* defined logistics as " . . . that branch of the military art embracing all details for moving and supplying armies" and went on to say that it includes "the operations of the ordnance, quartermaster's, subsistence, medical and pay departments," and "also embraces the preparation and regulation of magazines, for opening a campaign and all orders of march and other orders from the general-in-chief relative to moving and supplying armies." In its 1962 *Dictionary of United States Military Terms for Joint Usage*, the Joint Chiefs of Staff defined logistics as "The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, these aspects of military operations which deal with; (a) design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of materiel; (b) movement, evacuation and hospitalization of personnel; (c) acquisition or construction, maintenance, operation, and disposition of facilities; and (d) acquisition or furnishing of services." More simply stated, the American Heritage Dictionary defines logistics as "The procurement, distribution, maintenance, and replacement of materiel and personnel."[20]

Logistics, therefore, encompasses a great amount of an army's operations. This was particularly true for the Civil War Defenses of Washington. Practically every operation or event that occurred within the Defenses of Washington involved logistics. In fact, to function as the total defense of the Nation's capital, the Civil War Defenses of Washington were wholly dependent on logistics.

Within the Defenses of Washington, construction, quartering, messing, supply, troop and materiel movements and similar activities involved logistics. Throughout this study logistics have been integrated into all of the descriptions of the Civil War Defenses of Washington. From the movement by ship of Navy personnel across the Potomac to help defend Alexandria early in the war, to the use of the garrison to help erect fortifications and various buildings, mount ordnance, clear roads and construct new ones, to clearing vegetation from ramparts, to the supply of horses, wagons, etc., to move food, equipment and materiel, all illustrate the importance of logistics.[21]

Administration

The administration of logistics within the Defenses of Washington occurred at various levels. Because Washington, D.C. was the capital of the nation, the various bureaus of the Army and Navy were located in the area. At the beginning of the war, the Army's supply and service functions included the Adjutant-General, Quartermaster, Engineer, Topographical Engineer, Ordnance, Subsistence, Medical, Pay, Provost Marshal, Inspector General and Signal departments and bureaus. The Quartermaster, Ordnance, Subsistence and Medical departments accomplished most of the Army's procurement and distribution of supplies, but in certain instances, the other departments or bureaus had to perform these duties.[22]

Below the bureaus and departments, officers in the various commands, such as armies, corps, divisions and brigades, including the Defenses of Washington, served on the commander's staff in positions such as Chief Quartermaster and Chief Engineer to oversee the operation of those bureau's functions within the command. Thus, within the Defenses of Washington, the Chief Quartermaster was responsible for all quartermaster functions and operations and the Chief Engineer, who was John G. Barnard for most of the war, oversaw the engineer functions and operations. These men, for all practical purposes, had two bosses who were the commanding officer of the command in which they served and the chief of the bureau whose functions and operations they oversaw. These officers usually furnished periodic reports of operations to both their commanding officer and their chief of bureau.[23]

Often, in lesser commands of the Defenses of Washington, such as "Defenses North of the Potomac," the "Artillery Defenses of Alexandria," and fort and regimental headquarters, there were officers and men who oversaw bureau activities. That often left someone at the fort or regimental level, such as the ordnance sergeant, responsible for bureau activities at those sites. So, at most levels of command, military personnel or civilians had the responsibility for insuring the accomplishment of the bureaus' activities. During the Civil War, this was especially true because the bureaus had few service personnel, especially non-commissioned officers and enlisted men, to do the work.[24]

The Washington Area Depots and the Arsenal

For the most part, supplies, equipment and materiel was stockpiled in depots, or in the case of the Ordnance Department, in one its twenty-eight arsenals and armories, and from there transported to the troops in the field. By the end of the Civil War, the Quartermaster depot system that began during the Seminole War, included three types of depots—general, advance and temporary. The general depots were the large repositories in major cities. The advance depots were with the armies in the field. Temporary depots were for particular operations.[25]

Washington, because it was the capital of the country and the location of the various War Department bureaus headquarters, had the largest collection of supplies, equipment and materiel. One author described it:

> "Hardly had war begun when camps, warehouses, depots, immense stacks of ammunition, food, equipment and long rows of cannon, caissons, wagons and ambulances began sprouting up all over town in vacant lots and open spaces. Centers of activity included the Navy Yard, the Army Arsenal (now Fort McNair), and the Potomac wharves at Sixth and Seventh Streets SW. By 1863 another hub of activity had grown along the Maryland Avenue railroad yards. These busy centers lined the southern rim of the city fronting on the Anacostia and Potomac Rivers."[26]

Near Washington's western limits, Foggy Bottom witnessed a large accumulation of supplies, equipment and materiel and storehouses, including a remount depot of roughly 30,000 horses and mules on grounds presently occupied by Watergate, the Kennedy Center for the Performing Arts, the Truman Building (the State Department headquarters) and George Washington University. Also, not far from the Capitol Building, around the Baltimore and Ohio railroad depot and repair yards, a large assortment of supply buildings and yards grew up along Tiber Creek. The Washington Monument grounds housed a large Army cattle-slaughtering yard. Around the city smaller but similar operations abounded.[27]

The United States or Washington Arsenal was located at what is today Fort McNair. The "Volunteer Engineer Depot" or the "Washington Engineer Depot" was located about one half mile north of the Washington Navy Yard roughly at the foot of 14th and/or 15th streets on the Anacostia River. The present Renwick Gallery of Art housed the Army's Depot of Clothing and Equipage during the war. The Cavalry Depot was at Giesboro within the District of Columbia. These depots, the arsenal, the large Quartermaster and Subsistence depots in the city, and the branch Quartermaster depot in Alexandria served the country, the nearby armies and the Army activities in and near the city. The Defenses of Washington obtained most of its supplies, equipment and materiel from these sources. In addition, the Defenses of Washington stockpiled supplies, equipment and materiel at its four camps and other locations.[28]

Given the large area encompassed by the Defenses of Washington, perhaps the greatest logistical problem within the defenses was the movement of supplies, equipment and materiel. In a few certain circumstances, supplies, equipment and materiel could move by train, canal or river. But, as B.S. Alexander wrote in 1862, " . . . supplies must come from the city and they must go in wagons . . ." Thus, good roads were necessary.[29]

The Roads

In his 1871 report on the defenses of Washington, Barnard wrote:

> "MILITARY ROADS.—The line of defensive works was readily reached by the several county roads radiating from the cities of Washington, Georgetown, and Alexandria; but there existed, at first, no *adequate* means of communication along any portion of the line, and none at all along *some* portions of it. The necessity for such communicating roads became apparent as soon as the general line of works was established. The conditions governing their location and construction were, that they should not be seen from any ground that an enemy might be able to occupy in front, that they should be as direct as practicable consistently with easy grades, and that they should have sufficient width for the movement over them of field batteries or army trains."[30]

Later in the same report, Barnard stated: "The aggregate length of military roads constructed was about 32 miles. Providing, as they did, the means of rapidly moving troops or guns, unobserved by the enemy to reenforce any part of the line that might be attacked, their importance as adding to the strength of the defensive system can scarcely be over-estimated."[31]

Further on in his 1871 report, Barnard exclaimed " . . . military roads were located and constructed where the principles of defense or the convenience of communications required them . . ." He also wrote, " . . . roads were opened wherever necessary, so that troops and artillery could be moved rapidly from one point of the immense periphery to another, or under cover, from point to point along the line." In 1862, the construction of roads was necessary so that ". . . succor can be readily thrown to any point menaced." Therefore, " . . . for moving troops to and from these defenses and between them, . . . roads were built, passing in rear of and interconnecting all the forts and crossing all the various pre-existing county roads radiating from Washington and Alexandria."[32]

The military roads and their locations, throughout the defenses, are readily visible on the maps appearing in Barnard's 1871 report. Construction and maintenance of the roads continued throughout the war. The first actual military road built, in the autumn of 1861, connected the "isolated works" at Chain Bridge with Fort DeKalb (Strong), at the right of the Arlington lines of fortifications, which was about three miles long. By the end of the war the military roads connected "the system into a complete whole."[33]

Barnard wrote that in September 1862, the men built a road from Fort Sumner, near the Potomac, to Fort Stevens, east of Rock Creek, about 5 miles long, and later extended it to Fort Lincoln, near the Eastern Branch, which was "A very excellent road thoroughly drained by side ditches and with substantial

bridles and culverts, . . . to which was given a width of 45 feet and a full, rounded surface." One military observer remarked that the military roads were "well-paved" and a good example of "the defensive use of communications." If the military roads were not initially constructed well, crews repaired and improved them in a variety of ways including widening the roadway and corduroying them. Although the military roads were well-built, a contemporary author, in his *The Washington Sketch Book*, suggested an improvement by "a little expenditure in trees and shrubbery" that "would make them, in time, part of a beautiful and picturesque drive—the boulevards of Washington" and added "God speed that day!"[34]

In addition to the military roads, supplies, equipment and materiel moved on pre-war city, county, state and Federal roads. One author commented that the military roads crossed "all the various pre-existing county roads radiating from Washington and Alexandria." In October 1862, B.S. Alexander wrote that ". . . my attention has been involuntarily directed to the great necessity of improving the roads leading from the city to these defensive positions" and he realized that "the improvement of these roads does not properly belong to the Engineers," "Nor does it belong to the Quartermaster, Commissary, or any other department exclusively but all would benefit" and therefore, he sent estimates to J.G. Barnard of the cost to do the work. In April 1861, the Headquarters, Chief Engineer of the Defenses of Washington, received a letter from the Interior Department complaining of the injury done the Washington Aqueduct by travel of heavy government wagons over it. John Tidball, commanding the Third Brigade, De Russy's Division, headquartered at Fort Ethan Allen, informed the Department of Washington that "The road along the canal between Georgetown and Chain Bridge is now in a very bad condition, and when winter sets in will be almost if not entirely impassible" but it "is important because over it not only the supplies for the defence of Chain Bridge have to be carried, but also supplies for some of the posts on the north side of the river, and the wear and tear of animals and wagons will be very great if it is left unrepaired." Thus, any road in the area was likely to be used in addition to the military roads built during the war.[35]

For good reason, the Army did not always take good care of the roads. Anne S. Frobel, an Alexandria, Virginia citizen, remarked in early June 1863 that "More barricading fixed up in the roads again to day . . ." and "These great immense piles of brush and things are fixed up here and there and every where and the roads, completely stopped . . ." In March of 1864, commanders in the Defenses of Washington were instructed that "All wood roads leading to the exterior not required for travel, to be obstructed so as to confine travel through the lines to the main roads." Other road security was possible such as, in April 1864, when the men constructed " . . . stockades on roads leading to Aqueduct, Chain and Long Bridges . . . "[36]

The Bridges

Almost as important as the roads for movement of supplies, equipment and materiel were the bridges. The only three bridges across the Potomac were Long Bridge, Aqueduct Bridge and Chain Bridge until 1864 when a railroad bridge was added, next to Long Bridge. The Navy Yard Bridge and Benning's Bridge crossed the Anacostia River, or as some called it the Eastern Branch. Fortifications and a guard unit protected all of these bridges. In addition, bridges on various roads crossed lesser streams and creeks. All the bridges required maintenance and in most instances, improvements. Without the bridges, the roads would not have been of much use.[37]

Endnotes

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[2] Barnard, A Report, 33

[3] Barnard, A Report, 86; Kelly, Fortification, 35; Joseph Mills Hanson, Bull Run Remembers . . . The History, Traditions and Landmarks of the Manassas (Bull Run) Campaigns Before Washington 1861-1862 (Manassas, VA: National Capitol Publishers, 1961), 29; Chapter Three, "Defenses of Washington," In Engineer Operations in Past Wars, Part One (Fort Humphrey, VA: The Engineer School, 1926), 31.

[4] Barnard, A Report, 63; Gustave J. Fiebeger, A Text-Book on Field Fortification, Third Edition (New York: John Wiley & Sons, 1913), 73; John M. Wilson, "The Defenses of Washington, 1861-1865," #38 in The Military Order of the Loyal Legion of the United States, The Washington, DC Commandery, War Papers (Washington, DC: The Military Order of the Loyal Legion of the United States, 1901), 16; Kelly, Fortification, 27; U.S., Engineer School, Pamphlet on the Evolution of the Art of Fortification, Engineer School Occasional Paper No. 58, Prepared Under the Direction of William M. Black (Washington, DC: The Government Printing Office, 1919), 89; for Barnard's lengthy description of the forts, see the Appendices.

[5] George B. McClellan, McClellan's Own Story – The War for the Union, the Soldiers Who Fought It, the Civilians Who Directed It And His Relations to It and to Them (New York: Charles L. Webster & Company, 1887), 72; Chapter Three, 30; Pamphlet, 89; Barnard, A Report, 33, 86; Hanson, Bull Run Remembers, 29.

[6] Barnard, A Report, 72-73

[7] Barnard, A Report, 76; David V. Miller, The Defense of Washington During the Civil War. (Buffalo, New York: Mr. Copy, 1976), 7; Fiebeger, A Text-Book, 73; Kelly, Fortification, 29.

[8] Barnard, A Report, 76-77

[9] History of the Fifth Massachusetts Battery (Boston, MA: Luther E. Cowles, Publisher, 1902), 67; Alfred Bellard, Gone for a Soldier: The Civil War Memoirs of Private Alfred Bellard, Edited by David Donald (Boston, MA, 1975), 274; ORA , I, 46, Part 3 (serial 97), Memorandum of C.C. Augur, May 10, 1865, 1130; RG77, E-18, A2074, December 3, 1864, B.S. Alexander to Richard Delafield, Chief of Engineers; RG77, E-18, A2120, B.S. Alexander to Richard Delafield, Chief of Engineers, February 6, 1865; RG77, E-18, A2145, B.S. Alexander to Richard Delafield, Chief of Engineers, March 3, 1865; RG77, E-18, A2166, B.S. Alexander to Richard Delafield, Chief of Engineers, April 6, 1865; RG77, E-18, A2176, B.S. Alexander to Richard Delafield, Chief of Engineers, May 4, 1865; RG 77, E556, Registers of Letters Received, 1861-65, Volume 2, organized like a regular Register of Letters Received—A, B, C, and so on, page 588, W21, Department of Washington, April 8, 1865.

[10] RG77, E-18, A2074, December 3, 1864, B.S. Alexander to Chief of Engineers; RG77, E-18, A2120, B.S. Alexander to Richard Delafield, Chief of Engineers, February 6, 1865; RG77, E-18, A2145, B.S. Alexander to Richard Delafield, Chief of Engineers, March 3, 1865; RG77, E-18, A2166, B.S. Alexander to Richard Delafield, Chief of Engineers, April 6, 1865; RG77, E-18, A2176, B.S. Alexander to Richard Delafield, Chief of Engineers, May 4, 1865.

[11] Pamphlet, 89; Barnard, A Report; 33, 86; Hanson, Bull Run Remembers, 29

[12] Barnard, A Report, 73-74

[13] Barnard, A Report, 58-62; "Defenses of Washington," in DeB. Randolph Keim, Keim's Illustrated Hand-Book. Washington and Its Environs: A Descriptive and Historical Hand-Book to the Capital of the United States of America, Fourth Edition—Corrected to July, 1874 (Washington, DC: For the Compiler, 1874), 230; Cooling, Mr. Lincoln's Forts, 225-32; T. Michael Miller, "Jones Point: Haven of History," The Historical Society of Fairfax County, Virginia Yearbook, 21 (1986-1988), 15-73; Ames W. Williams, "The Location of Battery Rodgers," Echoes of History, 5, April 1975, 33-34; ORA, I, 39, Part 2 (serial 49), J.G. Barnard to Edwin M. Stanton, Secretary of War, October 13, 1863, 310-11; for a great amount of information pertaining to Fort Foote and Battery Rodgers see: Leonard E. Brown, National Capital Parks: Fort Stanton, Fort Foote, Battery Ricketts (Washington, DC: Office of History and Historic Architecture, Eastern Service Center, National Park Service, 1970) and William J. Dickman, Battery Rodgers at Alexandria, Virginia (Manhattan, KS: MA/AH Publishing, 1980).

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Chapter VI

Maintenance of the Defenses

CHAPTER VI: MAINTENANCE OF THE DEFENSES

New fortification construction continued until the end of the war and even afterward but it tapered off considerably in 1863. But, in addition to and following the new fortification construction in the Defenses of Washington, much other related work was necessary. Even before the fortifications were completed, alterations, maintenance and repair work was necessary, some almost every day.[1]

Barnard, in January 1862, exclaimed, "I deem it my imperative duty, after many representations to headquarters and to the chief of artillery on the subject of garrisoning the fortifications and preserving them from dilapidation, to call the attention of the Commanding General again to the subject, and to say that unless more effective measures are taken, these works, with their armament, must fall into ruin." Edward Frost, civilian Army engineer employee, reported, in May 1862, " . . . in compliance with your instructions of yesterday, I proceeded on that day to Fort Lyons & made arrangements by which the work of construction & especially of repairs will be recommenced on Monday morning." By October 1862, Barnard felt compelled to state, "The preservation of these works is another important consideration." In December 1862, Frost wrote: "In accordance with instructions given by General Barnard, various changes have been made, and some are still to be made, in the interior features of the several Forts and much incidental work is accomplished from time to time in the way of *maintenance*." On January 16, 1864, Barnard declared, "The $300,000 ask for of Congress will I think, complete everything in hand and leave a fund available for the ever recurring repairs which such a system demands." Less than a month later, care and preservation of the fortifications became an official duty of the Army as Article 17, in the regulations for the care of field-works and the government of their garrisons, issued as General Orders No. 42, War Department, February 2, 1864, stipulated that "Commanding officers will pay special attention to the police and preservation of the works."[2]

In his post-war report on the Civil War Defenses of Washington, Barnard reported; "The operations of 1864 . . . were confined mainly to the repairing, strengthening, and perfecting of existing works." In a March 1864 inspection report of the defenses, Assistant Adjutant General James A. Hardie, later the U.S. Army Inspector-General, remarked: "Every spring repairs will be necessary at every fort." Another observer reported that with some exceptions, ". . . the time was devoted to keeping in good repair those [works] already constructed." Thus, to keep the fortifications combat ready, constant maintenance and repair was necessary.[3]

The works in the Civil War Defenses of Washington required constant maintenance and repair for a variety of reasons. Aging took its toll. The longer the works stood, the more they required maintenance and repair due to deterioration. In July 1864, Alexander observed that, "The defense of the [Long] bridge is very imperfect, owing to the dilapidation and decay of Fort

Jackson." Later the same year, he exclaimed, "They [the forts] have all been provided with abatis, but some of it is over three years old, and so rotten and broken as to be almost useless as a means of defense, and so dry as to be easily set on fire." The next year, in 1865, Alexander reported, "An examination of Forts Haggerty & Bennett shows them to be in a very dilapidated condition, requiring extensive repairs if the forts are to be maintained."[4]

Natural elements were the cause of a great deal of the maintenance and repairs. In April 1864, Army Chief of Staff, Major General Henry W. Halleck reported to Lieutenant General U. S. Grant, commanding General of the Army, that, ". . . some of the works are not completed and the recent heavy rains have so injured some of them as to require extensive repairs . . ." Hardie wrote that, "In all older works the frost and rain have done more or less injury . . ." Barnard, in October 1862, observed, "The winter acts severely upon these earthen scarps and exterior slopes." The 59th New York Volunteer Infantry Regiment reported, in March 1862, ". . the washing away of the sodding from the Magazine of Fort Franklin."[5]

Water was the most destructive of the elements. Water leaked into most of the structures erected at the fortifications and correspondence quite often contained phrases such as, "One of the magazines in Lyons needs repair . . . it is leaky and too damp for the preservation of powder," and, ". . . found one in such a state from leakage that it was wholly unfit for the storage of powder." In April 1864, a surgeon reported on the leaky and unhealthy condition of the bomb-proof barrack at Fort Marcy. Alexander, in a report of engineer operations for the year ending September 30, 1864, warned that new magazines were necessary to replace those "built of white pine boards and frame, in the quickest manner" in which the boards "now rotting out" were causing leaks "which render the magazines unfit for the safe keeping of ammunition." In his December 1864 report of the condition of quarters at Fort Whipple, the post commander observed that the roofs on barracks 2 and 3, all the cook houses and two of the officers quarters "leaked badly."[6]

Fire was always a fear. In January 1864, the commander at Fort Ethan Allen issued General Orders No. 1, with the following provision: "I. A barrel of water will be placed at each end of each barracks as a precaution against fire; buckets or camp kettles will be placed near the barrels ready for use." General Orders No. 42, War Department, February 2, 1864, regulations for the care of field-works and the government of their garrisons prepared by Brigadier-General William F. Barry, U.S. Army Inspector of Artillery, stipulated in article 22 that "The practice of building fires on the open parades, for cooking and other purposes, is prohibited, as it endangers the magazines." Alexander informed Halleck, in July 1864 that "To guard against fire, barrels of water and buckets are placed on the [Long] bridge at intervals of thirty or forty yards." Regardless, fires occurred, and Major F.H. White, commander of Fort Marcy, reported that defective flues and the bad condition of poor Sibley stoves caused a fire at the fort in the "bomb proof" on January 28, 1865.[7]

With gunpowder, ammunition, guns and other ordnance stored in various places in and around the Defenses of Washington, the chance of fire setting off an explosion was quite real. In 1864, "regulations for the care of field-works and the government of their garrisons," in the last part of the eleventh provision warned, "No fire or smoking will be allowed in the vicinity [of a magazine] when the doors or ventilators are open. Too many precautions cannot possibly be taken to avoid the chances of an explosion." On November 5, 1862, the 100-pounder Parrott gun at Fort Alexander fired four times, but the third and fourth shots burst in the tube and the gun tipped over, chassis and all, after the fourth. Perhaps the best known Civil War explosion occurred near General Grant's headquarters, at City Point, Virginia, at noon on August 9, 1864, when a barge carrying ordnance stores exploded, killing 70 men and wounding 130 and destroying 600 feet of warehouses and tearing up 180 feet of wharf.[8]

The worst explosion in the Defenses of Washington occurred on June 9, 1863, when the north magazine at Fort Lyon, in Virginia, blew up. A 26-man detail, under the command of a lieutenant, was using wooden spoons to remove caked powder, caused by moisture in the magazine, from inside shells. The lieutenant, unsatisfied with the slowness of the work, provided priming wire to some of the men to remove the caked powder. Friction from the wire scraping in one of the shells ignited the powder and set off the explosion of approximately 28,000 pounds of powder, about 18,000 pounds in barrels and roughly 10,000 pounds in various types of ammunition. The explosion killed twenty-one men, including two officers, and injured ten men [one account reported twenty men killed and fourteen men injured]. The blast tossed one gun on the rampart "into battery and tipped forward, with its muzzle resting on the parapet." The dirt and logs of the magazine were thrown in all directions. The men found shells as far away as 2,500 yards. Tents and wooden buildings near the magazine were completely destroyed, but most of the garrison, in the bombproof about 75 feet away, was unharmed. The explosion damaged only a small fraction of the fort. The next day, President Abraham Lincoln and his entourage, including Secretary of War Edwin Stanton and General Samuel P. Heintzelmann, visited the fort to see first-hand the results of the blast.[9]

Human error, such as in the case of the Fort Lyon north magazine explosion, indifference, carelessness and laziness were also causes for maintenance and repair. The 1864 "regulations for the care of field-works and the government of their garrisons," stipulated, in Article 17:

> "Commanding officers will pay special attention to the police and preservation of the works. All filth will be promptly removed and the drainage particularly attended to. No one should be allowed to walk on the parapets, or move or sit upon the gabions, barrels, or sandbags that may be placed upon them. When injuries occur to the earthworks they should be repaired as quickly as possible by the garrison of the work. If of a serious nature, they should be at once reported to the engineer officer in charge of

> the work. All injuries to the magazines or platforms of the guns will be promptly reported as soon as observed: The abatis, being a most important portion of the work, must be always well looked to and kept in perfect order."[10]

Further, in Article 20, was the following:

> "The garrison can greatly improve the work by sodding the slopes of the parapet, and those of the ramps and banquettes, or by sowing grass seed on the superior slope, first covering it with surface soil. The grass-covered or sodded portions of the parapets, traverses, magazines, &c., should be occasionally watered in dry weather and the grass be kept closely cut. Early in the spring and late in the autumn they should be covered with manure."[11]

In some instances, troops were quite efficient in carrying out such provisions as when, in January 1862, Barnard reported that both commanding officers and subordinates of the Fourteenth Massachusetts Volunteer Infantry Regiment (became First Massachusetts Volunteer Heavy Artillery Regiment), and Fourth Connecticut Volunteer Infantry Regiment (became First Connecticut Volunteer Heavy Artillery Regiment), "feel pride in preserving their works in perfect order." But, he went on: "Such is not always the case, as the use and importance of the works are not appreciated, and where it is not, we may expect to see the timber work and abatis converted into tent floors and fire-wood." In 1863, Barnard exclaimed that he couldn't " . . . be responsible for the condition of the works if commanding officers assume to alter or destroy what has been done." He also reported that the "Commanding officers of Forts Cass & Woodbury have therefore, without authority, and in direct violation of their duties to preserve the defensive qualities of their works, wantonly impaired the same. . . ." In 1863, Barnard remarked: "On inspecting Fort Ellsworth yesterday I observed that the abattis has been much impaired by the chopping off of branches & indeed in some places had been carried off entirely." Alexander, in June 1863, wrote, "I think it my duty to inform you that the garrison at Fort Cass have removed the abattis from the gorge of that work. I understand that it has been cut up for firewood." The Department commander detailed various infractions at forts Mahan, Meigs and Dupont, in April 1862, including a negligent and careless guard, a leaky magazine, guns without tampions, and muzzles elevated and elevating screws badly rusted.[12]

B.S. Alexander warned, in October 1864:

> "Improbable as it may appear at the present time, it is the part of prudence to remember that history repeats itself, and that we should guard against such a contingency in the future. To do this effectually, we must keep the defenses in order. These being built of perishable materials, like a railroad, require constant repairs; old magazines require to be repaired or rebuilt; new bomb-proofs are required in many of the works; decayed revetments must be renewed; worn-out gun platforms require renewal; decayed abatis

> must be replaced by new; the scarps require constant attention—they must all be sodded, or revetted with masonry before the works can assume a permanent character; all interior earthen slopes of traverses, magazines, bomb-proofs, camps, &c., should be sodded; besides, some additional redoubts and batteries should be built in order to render these already constructed more secure. For these objects, "To keep in repair and render more permanent the defenses of Washington," an appropriation of $500,000 for the fiscal year ending July 1,1866, will be required."[13]

Thus, maintenance and repair work encompassed a wide variety of duties and activities to preserve the various materials integral to viable fortifications. Each month, Barnard, and then Alexander, submitted reports to the Chief of Engineers outlining the engineer work accomplished during the period. These reports and other correspondence detail the maintenance and repair work that varied from removing the old counterscarp gallery and erecting a new one at Fort Lincoln; to repairing the lunette at Fort Strong; reinforcing parapets and magazines at Forts Strong, Bennett, Woodbury, Tillinghast and Craig; removing the old magazine and building a new stone one at Fort Worth; repairing revetments, platforms, embrasures, etc. at Battery Wagner; rebuilding chimneys at Fort Ethan Allen; repairing parapets, traverses, etc. at forts Craig and Tillinghast; renewing abatis on the gorge line at Fort Cass; repairing slopes of the bastions at Fort Carroll; cutting nineteen embrasures in the revetment at Fort McPherson; trimming and sodding the bombproofs and traverses at Fort Craig, Tillinghast and Battery Garesche; repairing the interior revetment at Fort Albany; sodding the bombproof at Fort Ellsworth; making gabions at Camp Barnard; trimming the exterior slopes at Fort at Kennedys' Hill; trimming the counterscarp and glacis at Fort Morton; altering the parapet at Fort Chaplin for flank defense guns; putting a new roof on the bombproof and covering the same with earth at Fort Marcy; repairing the magazine at Fort Tillinghast; cutting loopholes in the counterscarp galleries at Fort Foote; dismounting the barbette guns and preparing new platforms for the siege guns at Fort Thayer; repairing and sodding the magazine at Fort Cass; anchoring the scarp revetments at Fort Barnard; sodding the crest, embrasures and interior slopes at Fort at Kennedys' Hill; completing platforms and traverse circles for two guns at Battery Rodgers; repairing the interior revetment of the parapet at Fort Reynolds; throwing up rifle pits for the flanking battery at Battery Slough; putting the road between Fort Lyon and the Little River Turnpike in thorough repair; building gun platforms for additional siege and field guns, etc. at Battery Cameron; removing one 32-pounder and one 8-inch howitzer in Fort Runyon from the water side and placing it in position in the fort to command the causeway near Arlington Spring, Arlington House, the Columbia Turnpike and the magazines of forts Albany and Scott; trimming and sodding the slopes and ramps, grading and trimming the terreplein, and reinforcing the parapet at Fort Ward; hauling two 200-pounder and six 30-pounder Parrott guns from the wharf to Fort Foote; and cutting and clearing a large amount of bushes and undergrowth from the front of the works, on both sides of the river.[14]

Experiments

In the midst of everything else going on in the Civil War Defenses of Washington, experiments also occurred. On May 2 1863, Colonel Henry L. Abbot, Corps of Engineers, furnished General Joseph G. Totten, Chief of Engineers, diagrams illustrating the four experiments conducted by the First Connecticut Volunteer Heavy Artillery Regiment, on May 16, to determine the penetration of elongated projectiles into an earthen parapet near Battery Garesche. On August 10, 1863, experiments tested the penetration of shot from a 30-pounder Parrot Gun at Battery Cameron. Eleven days later similar experiments at Battery Cameron occurred with a 4-inch gun.[15]

Mapping

In the course of construction of the fortifications and later alterations, maintenance and repair, the Army Engineers realized that a record of their work was necessary. They, therefore, created numerous maps and plans that, today, are a fairly good record of the fortifications and the work accomplished. Army civilian engineer employee Edward Frost aptly described the endeavor, in December 1862, in the following message to Alexander:

> "It becomes a matter of some importance to decide what shall be done in respect to mapping the lines; and preparing some record for reference hereafter of the works as they now stand, as well as for convenience in making thereon notes of future changes or additions."[16]

Magazines

Perhaps, the item that required the most maintenance and repair was the magazine. The magazines' greatest problem was that it leaked and was, therefore, frequently damp, making it impossible to fulfill its main function of storing ammunition and gunpowder. In May 1862, one officer, after inspecting the magazines at Fort Lyon, informed Captain Frederick E. Prime, the Chief Engineer on the Defenses of Washington, that he "found one in such a state from leakage that it was wholly unfit for the storage of powder, which had to be removed to the other which leaked very badly. I do not consider that in their present state they answer the end to which they were designed." No one was surprised when in May 1864, Brigadier General A.P. Howe, Inspector of Artillery, in his report of an inspection of the works in the Defenses of Washington, made frequent derogatory comments regarding the magazines such as for Fort Bennett—"Magazine., one; leaks in places"; Fort Ward—"Magazines, three; two serviceable, one unserviceable; new ones being built"; Fort Sumner—"Magazines, two; only one of which is dry and in good condition."; Battery Vermont—"Magazines, one; not dry; wants repairs"; Fort Meigs—"Magazines, three; two not dry, one dry and in good condition"; and Fort Foote—"Magazines, three, only one of which is completed; completed one in good condition."[17]

The magazines required a variety of maintenance and repair in addition to solving leakage problems. This work included "putting earth covering on magazines"; "trimming and sodding magazines;" "repairing . . . sodding of magazines;" "putting stockade in front of magazine," "framing magazines," "framing roof logs for magazines"; "roofing completed;" "timber revetment of . . . magazine completed;" "shelving magazines;" "inside sheeting of one magazine on;" "making wire gauge doors for magazines," "3 wire gauge doors hung in magazines and screen put on ventilators." Of course, the explosion of Fort Lyon's north magazine, on June 9, 1863, necessitated the construction of a new one. In October 1864, Alexander informed the Chief of Engineers, Richard Delafield, of general problems with many of the magazines:

> "The new magazines stated above as needed are to replace those first constructed, which were built of white pine boards and frame, in the quickest manner, when the earlier forts were being hastily thrown up. The boards of these buildings are now rotting out, causing leaks, which render the magazines unfit for the safe keeping of ammunition. They should be rebuilt in a more permanent manner of logs and oak boards."[18]

Bombproofs

Like the magazines, the bombproofs were damp, leaked, and sometimes flooded. But, water was even a greater problem in bombproofs because, in some cases, the engineers made them into living quarters. Water was not, however, the only repair and maintenance problem in bombproofs. Thus, the bombproofs, like the magazines, required constant repair and maintenance. [19]

In January 1864, Barnard informed the Chief of Engineers, Joseph G. Totten, that within the Defenses of Washington, the " . . . magazines and bomb-proofs are now in a very bad condition." In July 1864, Barnard, in reporting that the new bombproof at Fort Ethan Allen was not yet completed, observed that the "frame is up" and the "water proof roof is on" but it still required an earth covering, laying the floors, and putting up the siding. In October 1864, Alexander wrote: "Most of them [the works] are provided with good bomb-proofs . . ." but ". . . new bomb-proofs are required in many of the works . . ."[20]

On June 20, 1862, Edward Frost told the overseer of the Defenses of Washington, South of the Potomac River, that the bombproof at Fort Ward required repair "to prevent the roof from falling in." Repair and maintenance work included: putting earth covering on bomb-proofs at Forts Ward and Corcoran; "trimming and sodding bomb-proof" at Fort Ethan Allen; "hauling and hewing timber for bomb-proof" at Fort Morton; putting a new roof on the bombproof and covering it with earth at Fort Marcy; cutting loopholes on bombproofs at Fort Stanton; erecting a stairway to breast height on the bombproof at Fort Ellsworth; and rebuilding the bombproofs at Battery Jameson.[21]

In April 1863, the First Massachusetts Volunteer Heavy Artillery Regiment's quartermaster requested lime to whitewash works in the Defenses of Washington. His request was originally denied but, soon afterward, the Chief Engineer of the defenses sent a written communication stating that whitewashing was a necessity. On April 10, Colonel T.R. Tannatt referred the request to Barnard observing that " . . without the lime it is impossible to properly care for and preserve the wood work pertaining to forts, and keep the same in proper condition." Ten days later, Barnard replied that whitewashing was conducive to cleanliness and health in the bombproofs and made them lighter, thereby making all parts of the work clearly distinguishable even in dark.[22]

Since many of the bombproofs served as quarters, the chance of fire within them was great. On December 2, 1863, Barnard informed Augur that the stovepipes in use in the bombproofs were dangerous due to sparks from them. Later that month, civil engineer A. Grant Childs forwarded a sketch showing improvements in the arrangement of stovepipes to act as a spark arrester in bombproofs, suggesting that the Quartermaster Department adopt his idea, if not too late. Following the fire in a bombproof at Fort Marcy, in January 1865, already mentioned, the General commanding the Department of Washington directed his Chief Ouartermaster, Colonel M.I. Ludington, that due to the great danger of "fire in those bomb proofs" occupied as quarters where the use of vitrified earthen pipes as the lower end of the flues, with straight pipes, " . . double elbows be introduced in every case in which bomb proofs are used as quarters and heated by stoves."[23]

Abatis

In General Orders No. 42, "regulations for the care of field-works and the government of their garrisons," prepared by Brigadier General Barry, U.S. Army Inspector of Artillery and issued by the War Department in February 1864, article 17 stipulated: "The abatis, being a most important portion of the work, must be always well looked to and kept in perfect order." In January 1863, Barnard declared: ". . . I need scarcely tell you that an abattis is one of the most essential things to the security of a field work." But, as Barnard reported in January 1862, "as the use and importance of the works are not appreciated" . . . "we may expect to see the timber work and abatis converted into tent floors and fire-wood."[24]

Early in the war, timber abounded in the Washington, D.C. area so it was common to read directives such as "You are hereby authorized to cut such poles and abattis in rear of Fort Blenker as may be needed for your work in that vicinity." Later, though, much of the timber had been cleared but abatis was still required as Alexander demonstrated in October 1864, writing "These works are, generally speaking, in good condition, so far as their interior arrangements are concerned, the principal defect being the want of good strong abatis around some of the forts." But, scarcity of wood was only one of the problems pertaining to abatis.[25]

In January 1863, Barnard observed "On inspecting Fort Ellsworth yesterday I observed that the abattis has been much impaired by the chopping off of branches & indeed in some places had been carried off entirely." In May 1863, Colonel A. Piper, commanding the Third Brigade, De-

fenses North of the Potomac, requested that General Barnard be notified that the abatis in front of Fort Baker was 20 yards in front of the glacis, with the public highway breaking its continuous line, thereby allowing the enemy to reach the ditch at two points without passing through it; he suggested that the abatis might be placed immediately in front of the ditch. In June 1863, at Fort Cass, the garrison had "removed the abatis from the gorge" of the work and cut it up for firewood. Colonel Alexander, in October 1864, observed "They [the works] have all been provided with abatis, but some of it is over three years old, and so rotten and broken as to be almost useless as a means of defense, and so dry as to be easily set on fire" and, therefore, the ". . . decayed abatis must be replaced by new . . ." Barnard observed, "The replacing of abattis around our works is getting to be a matter of difficulty & expense . . ." early in 1863.[26]

Thus, the Chief Engineer of the Defenses of Washington monthly reports to the Chief of Engineers included many references to abatis. In the report of operations for June 1864, work included "laying new abatis" at Fort Ethan Allen and relaying the same at Fort Woodbury. In the report of operations for September 1864, work entailed "laying abatis" at forts Tillinghast, Totten and Slocum. In October 1864, the engineers oversaw "renewing abatis on the gorge line at Fort Strong and renewing abatis at Fort Woodbury." At Fort Morton, workers were "excavating for and laying abatis" in November 1864. In October 1864, Alexander submitted a report of operations for the year ending September 1864, showing "abatis repaired" at Fort Marcy; "abatis renewed" at forts Tillinghast, Craig, Carroll, Totten, Slocum and Stevens; and observed that the ". . . abatis requires to be renewed along the whole line from Fort Albany to Fort Lyon, inclusive, with the exception of Forts Berry, Garesche, Ward, and Williams." Abatis work continued until the defenses were no longer required.[27]

Roads

The Washington, D.C. area endured the constant movement of men, animals, supplies, armament and ammunition within the Defenses of Washington for military purposes on many city streets, and county roads in the District, Maryland and Northern Virginia. In addition to the numerous roads in existence in the Washington, D.C. area when the Civil War began, the Army Engineers oversaw the construction of thirty-two to thirty-three miles of roads during the war, between 1861 and 1865, for use within the Defenses of Washington. Both military and civilian streets and roads required continual maintenance and repair.[28]

In November 1862, Barnard forwarded a letter from Colonel Alexander to the Department pertaining to the upkeep of the roads. Alexander observed:

> "The necessity of having roads and the importance of having good roads being admitted, we ought not, with the experience of last winter before us, to allow ourselves to be caught in the same condition again. It is an easy matter to say that the roads were horrible; that they were nearly impassable; that the expense of supplying the troops

> was enormously increased in consequence; that the number of wagons engaged in this business was double what it would have been with good roads; that the wagons were broken down and worn out; that mules and horses were disabled in great numbers; and that the troops were sometimes without provisions & the animals without forage. But all this would not convey any adequate conception of the terrible condition of these roads."[29]

Soon after, on December 2, 1862, Alexander wrote: ". . . I beg to suggest the following plan of keeping it [the road] in repair during the winter so that it may at all times answer the purpose for which it was constructed." As he considered the new road connecting with the line of defenses from Fort Alexander to Fort Massachusetts, he suggested that the road be divided into sections and the garrisons of the nearest fort would keep the road repaired. Elaborating, he stipulated that the garrison of Fort Alexander, using 20 to 25 men every day, could accomplish repairs in section 1, from Fort Alexander to the head of the reservoir. Repair would "consist in filling up the ruts, leveling sunken places, attending to the drainage, &c." Each fort would have a cart, furnished by the Quartermaster Department, with the post's name imprinted on it, along with horse and harness to be used only for repairing the fort and adjacent roads. In conclusion, Alexander suggested that the same plan could be used throughout the whole line of defence.[30]

In response to Alexander's suggestions, the Headquarters, Second Brigade, Defenses of Washington, North of the Potomac, at Fort Pennsylvania, issued Special Orders No. 73 on December 14, 1862:

> "The Military road from Fort Alexander to Fort DeRussy is divided into sections for the purpose of keeping it in repair during the winter so that it may at all times answer the purpose for which it was constructed.
>
> Section I. From Fort Alexander to the head of the Reservoir to be kept in repair by the garrison of Fort Alexander.
>
> Section II. From the head of the Reservoir to Tennallytown to be kept in repair by the garrison of Fort Mansfield.
>
> Section III. From Tennallytown to Broad Branch to be kept in repair by the garrisons of Fort Pennsylvania and Kearney.
>
> Section IV. From Broad Branch to Rock Creek to be kept in repair by the garrison of Fort DeRussy.
>
> The work of repairs will consist in filling up the ruts, leveling sunken places, tending to the drainage, &c From twenty to thirty five men daily might be advantageously employed on each section.
>
> Regimental Quartermasters will make requisitions for carts, horses, harness, one for

each Post, the name of the Fort will be painted on the cart and orders issued that these carts are to be used exclusively for repairs of the Forts or the adjacent roads.

Regimental Quartermasters will be held responsible that these orders are obeyed and that the roads are kept in repair."[31]

In many instances, Barnard and Alexander insisted that it was ". . . indispensable to begin work immediately before winter rains are upon us . . ." The December 1862 report of the Commission, "to examine and report upon the plan of the present forts, and sufficiency of the present system of defenses for the city," echoed these beliefs; in one place, the Commission report declared: "On the south side of the Potomac there are roads enough, or nearly so; but they require much work, such as widening, raising, constructing of culverts, &c., to make them practicable for winter." Elsewhere the report included the following remark: "Much work, however, is required on the main stems leading from the city, to make them practicable in the winter." Near its end, the Commission report offered the following: "It has been estimated that the work on roads about Washington requires ten regiments for twenty days, and efforts have been made to obtain this or an equivalent of labor in some other shape." In October 1864, Alexander emphasized the need for road repair when discussing the defenses north of the Potomac River: "The present length of the military road, with its branches, is about eighteen miles. It is in a passable condition, but needs repairs in some places."[32]

In a few instances, the Army Engineers were more interested in obstructing roads than repairing them. Annie S. Frobel, a Confederate sympathizing Northern Virginia civilian observed, in June 1863, "More barricading fixed up in the roads again to day . . . These great immense piles of brush and things are fixed up here and there and every where and the roads, completely stopped, but still there are ways left to go round the barricades." Barnard, in his report of monthly operations, for January 1864, to the Chief of Engineers, reported that the force south of the Potomac was employed in building stockades on the roads leading to Aqueduct, Chain and Long Bridges. In March 1864, Army Chief of Staff Henry W. Halleck directed the obstruction of all wood roads leading to the exterior and not required for military transport to confine travel through the lines to the main roads.[33]

Quartermaster Department

The Army engineer officers, men and employees were not the only ones that performed maintenance and repair work in the Civil War Defenses of Washington. In fact, the Quartermaster Department undertook a large part of that work. The Quartermaster Department accomplished much of the road maintenance and repair. In late 1862, Alexander observed: "I am aware that the improvement of these roads does not properly belong to the Engineers. Nor does it belong to the QM, Commissary, or any other Department Exclusively but all would benefit . . ." About the

same time, John P. Slough, Military Governor of Alexandria, who "upon a personal examination" found that ". . . two roads leading out of Alexandria required attention" requested that Captain C.B. Ferguson, the depot quartermaster, have them repaired. The Quartermaster Department also furnished wagons, carts, horses and harness to be used in repairing the roads.[34]

The Quartermaster Department was also responsible for most of the buildings erected and removed within the Civil War Defenses of Washington. In January 1864, Lieutenant Colonel Elias M. Greene, the Department Quartermaster, received instructions that the quarters and mess house at Battery Cameron required pitch and the quarters and mess halls at batteries Parrott and Kemble required other materials for completion. In October 1864, Lieutenant Colonel Horace G. Thomas, at Fort Bunker Hill, applied for permission to move the large two story building now occupied as Headquarters at Fort Slocum and the building adjoining to this post to be re-erected as Brigade Headquarters; Captain Arthur S. Nesmith, Assistant Quartermaster, Hardin's Division, recommended the action with changes and Hardin approved. In 1864, upon request, Quartermaster Daniel H. Rucker ordered Captain Elisha E. Camp, Assistant Quartermaster, to send a carpenter to make the repairs asked for that included repairing the sentry boxes, erecting a shelter for the horse of the detailed Mounted Oderly on duty and to make repairs on quarters of officers and men at the south end of Long Bridge. In August 1864, Alexander requested of the Department Acting Quartermaster, Captain Elisha E. Camp:

> "Will you please send & have the roof of the building occupied by these Head Quarters repaired. It is in a very leaky Condition. So much so that unless repaired in heavy rains it will be impossible to occupy it."[35]

The Quartermaster Department undertook much additional maintenance and repair work including cutting bush in front of fortifications. In July 1864, during the threat of a Confederate invasion of the Washington, D.C. area, quartermaster teamsters were put to work cutting the underbrush and new growth in front of the fortifications. In addition, the Quartermaster Department furnished implements, such as scythes, to help in the clearing.[36]

Another important Quartermaster Department duty was to dig, maintain and repair wells in the defenses. In October 1864, Alexander reported that the Quartermaster's had been so slow in cleaning, deepening and curbing wells in the forts South of the Potomac that he was considering doing the labor at Fort Ward "if the Chief Qr Master will supply us with the materials." The Fort Morton commander, in March 1865, reported: " . . . the well within this Fort was left by the Quartermasters Dept. In an unfinished Condition and consequently the Brick work in the interior of the Well is giving away." He then requested that it be repaired "without delay."[37]

In order to accomplish the maintenance and repair work within the Civil War Defenses of Washington, constant requests to the Quartermaster Department for tools and supplies were necessary, as discussed elsewhere. But, the Quartermaster Department received some interest-

ing additional requests such as one in November 1864 for "2 to 3 hundred loads of manure from the Eastern Branch stables to put on the sod on forts across Eastern Branch." The Quartermaster Department also furnished any transportation required, including the wagons, horses, harness and forage.[38]

Moving and Destroying Buildings

From the beginning of the Civil War Defenses of Washington, in May 1861, the Army had to deal with numerous houses and other structures that impeded fortification construction and restricted the field of fire. In many instances the Army destroyed the structures, but in some cases, they moved them to other locations. Similarly, after the construction of structures in the defenses, such as barracks, quarters, mess houses, etc., the Army, in some instances, decided that it no longer needed them or wanted them relocated. Depending on the structure, various departments such as Army Engineers, Quartermasters Department, Signal Corpsmen and Ordnace Corpsmen, were responsible for their destruction or relocation.[39]

Imminent danger motivated some of this work. In August 1864, civil engineer William C. Gunnell requested the issuance of orders for the removal of company quarters from Forts Carroll and Greble so that the ammunition could be safely placed in magazines. General Hardin, commanding a division in the Defenses of Washington, requested, in September 1864, the removal of the Signal Station at Fort Lincoln to Fort Bunker Hill where it would be of much better use.[40]

In a "Memoranda compiled for the Guidance and Information of Officers Serving in the Defenses of Washington," drafted by Lieutenant Colonel Barton S. Alexander, but never issued, article 3 stipulated that "When any part of the line of the defense is threatened with an attack all houses, trees, bushes, and in general everything that could be used as a cover by the enemy's sharpshooters, should be removed for a distance of at least 600 yards from the line." Thus, some remaining structures were to be removed or destroyed upon the approach of an enemy. "In case of any demonstration of the enemy making a dash along the road from Bladensburg toward Benning's Bridge," . . . the "dwelling-house and barn close to the work [Fort Mahan] is highly injurious to the defense, particularly with a small garrison." A memorandum for Colonel Haskins in June 1863 on the situation at Fort Mahan recorded that, "A few days' notice ought to be given, and the buildings removed." In July 1864, at the time of Jubal Early's raid on the defenses, the house, barns, etc. near the counterscarp at Fort Mahan were removed.[41]

The necessity for the relocation or destruction of structures was a neverending problem. In July 1863, Barnard informed his superiors that "The strength of Fort Stevens and of the line between it & Ft. Slocum is most seriously impaired by the existence of a dwelling house & orchard on the right, and of a dwelling and outbuildings immediately in front " and urged that the Army "sweep away these obstructions at a few hours notice, and the occupants of the dwellings

should be aware that in case of an advance of the enemy towards Washington, the buildings must be destroyed." Barnard, in May 1864, informed the Department commander that a collection of huts, probably erected by General Silas Casey's men, and now occupied by contraband, located immediately in front of the line of rifle pits crossing the Columbia Turnpike, "should not have been permitted in the first place," and must be removed henceforth as this "is one of the most probable approaches for an army and there are important batteries for field guns which would be entirely masked by the buildings."[42]

Quarters

Quarters for both officers and men required constant attention. At Battery Cameron, the quarters required pitch in January 1864. The commander at Fort Whipple, in December 1864, reported that the roofs on barracks Nos. 2 & 3 and on two of the officers quarters leaked badly, the flooring required repair and many of the bunks within were "unservicable by the subtraction of various parts . . ." The commander of the guard at the south end of Long Bridge applied for carpenters to make repairs on the quarters of both officers and men in October 1864.[43]

Not all officers and men serving in the Defenses of Washington had satisfactory quarters. Many bombproofs in the defenses served as quarters. Others lived in camps of huts or tents nearby. But these living quarters had their limitations as at Fort Worth, where the men lived in Sibley tents, about which one officer reported that they were " . . . worn and no longer habitable . . " In some instances, the Army moved barracks from one fort to another but elsewhere, such as at Forts Carroll & Greble, the Army requested necessary orders be issued for the removal of company quarters. By late 1864, the War Department had decided to stop erecting barracks in the works around Washington.[44]

Living quarters even caused combat deficiencies. On June 29, 1863, Barnard, in reporting on the Eastern Branch defenses, remarked "I look upon the quarters as a great source of weakness . . . they are on the very point most favorable for an assault, and the matter is becoming worse every day by the addition of new buildings" and recommended that the troops move out of them into a nearby camp or ". . . the works themselves." A July 2, 1863 report on the condition of Fort Totten and the defenses on the right observed that many of the troops are outside of the forts "in very comfortable quarters," with the exception of forts Snyder and Carroll, that "could bring misfortune to them coming to be shelled by the enemy."[45]

Underbrush, Bushes and Vegetation

In the *1861 Army Regulations, with an Appendix containing the Changes and Laws Affecting Army Regulations and Articles of War to June 25, 1863*, published in 1863, under "Care of Fortifications," Article IX, Number 42 stipulated that:

> "All grassed surfaces, excepting the glacis, will be carefully and frequently mowed (except in dry weather), and the oftener the better, while growing rapidly—the grass never being allowed to be more than a few inches high. In order to cut the grass even and close, upon small slopes a light one-handed scythe should be used; and in mowing the steep slopes, the mower should stand on a light ladder resting against the slope, not upon the grass. Crops of hay may be cut on the glacis; or, if fenced, it may be used as pasture; otherwise it should be treated as other slopes of the fortification. On all the slopes, spots of dead grass will be cut out and replaced by fresh sods. All weeds will be eradicated. A very little labor, applied steadily and judiciously, will maintain the grassed surfaces, even of the largest of our forts, in good condition."

In addition, Number 43, on the same page prohibited "The burning of grass upon any portion of a fortification is strictly forbidden." War Department General Orders No. 42, February 2, 1864, in Article 20, stipulated that: "The grass-covered or sodded portions of the parapets, traverses, magazines, &c., should be occasionally watered in dry weather and the grass be kept closely cut."[46]

So, in April 1862, an inspection report showed that a hill, near Fort Mahan, commanded the inside of the fort and "was covered with trees and thick underbrush." Barnard, in September 1862, sent a memorandum to Frost, ordering that the heavy second growth should be cut immediately and to use bank scythes to do it. Later, in June 1863, in a memorandum to Colonel Haskins, Barnard suggested, "Commanding officers should be instructed to clear the bushes which have grown since the first cutting of the timber." And in June 1864, Barnard reported that he had "directed that one scythe with a stone be furnished to each fort on your line" so that "One man ought to cut all the grass on the slopes of any of our forts, even the largest, in three or four days and the scythes can then be used in cutting the grass and weeds from the slopes of the batteries and rifle pits between the forts."[47]

Actually, though, not much was said about the growth until the time of Early's Raid on Washington in July 1864. On July 5, 1864, the Department informed Colonel Haskins, commanding a division, that the Chief Engineer, Defenses of Washington, had reported " . . that brush is growing on the approaches to the works constituting your line in such quantities as to militate against the proper use of the means of defence given to them" and that he should begin removing it. On July 18, the Chief Engineer, Defenses of Washington, directed that the trees and bushes 'be cleared out of the ravines and from vicinity" of forts Dupont and Davis. On July 19, the major general commanding the Department, directed that " . . . "all men who can be spared from the garrisons of the works constituting the front, east, and south of the Eastern Branch, be employed in clearing the approaches of brush, &c., commencing on the crests, &c., where the enemy, in developing himself, would naturally establish sharpshooters and his skirmishers." The commanding general of the Department wrote Brigadier General G.A. De Russy, commanding a division, on July 28, asking him to inform these headquarters what " . . . progress has been made in clearing the

approaches to the works on your line of brush, he desires also to know approximately the height of this brush." On the same day, M.D.Hardin, commanding a Division, ordered Colonel William H. Hayward, commanding the Second Brigade, to assign all the available force that could be spared "to cut brush" in his command area. Again on the same day, Hardin informed the Department:

> "In reply to your communication of the 27th instant, I have the honor to report, from my observation of the line yesterday, that the brush in front of Forts Sumner, Mansfield, and Reno has been nearly cleared, although more work should be done on that front. On Rock Creek and in front of Fort DeRussy, and from Fort Slocum east to Fort Lincoln the brush is not cleared. A great amount of work remains to be done on that line. On account of the limited number of troops in this command it has been impossible to complete the work, although all my available force has been engaged on it. I most respectfully request 300 workmen, or as many as can be furnished, be sent at once to clear the brush now remaining, as above stated. The brush is from five to eight feet in height."[48]

At the end of July and into August, this activity continued. On July 31, Alexander reported that he had received a communication from Army Chief of Staff General Henry W. Halleck, to General U.S. Grant, in reference to the undergrowth of bushes springing up in front of our defensive works, and he reported to the Engineer Department that the Department of Washington issued an order on the subject, "but still the bushes do not come down as rapidly as they ought" . . . and remarked 'that scarcely any cutting has yet been done on the line over the Eastern Branch." On August 8, the Department commander directed an examination, on August 9, of the " . . . approaches to the works north of the Potomac. . . and report to these Head quarters the progress . . . made in clearing the brush away; also the probable time . . . to clear the approaches to a distance of one thousand yards from the parapet of the works." On the same day, he ordered General De Russy "to send out inspectors to examine progress of clearing brush on approaches from Corcoran to Willard," and they should specify the time to clear the whole front to a distance of 100 yards from the parapet, and their report should be received by August 9.[49]

For sometime afterwards, Alexander's reports of engineer operations, addressed the clearing of underbrush, bushes and other vegetation in the defenses. Alexander reported that in July 1864, "there has been a large amount of bushes and undergrowth cut and cleared from the front of the works, on both sides of the river." In his October 1864 report of engineer operations for the year ending September 30, 1864, Alexander wrote: "Great quantities of bushes have been cut in front of the works, and some woods and orchards felled in the neighborhoods of Forts Stevens, Slocum, and Mahan." In January 1865, Alexander's force worked at cutting wood and brush in Eastern Branch swamps. Nearly the whole force, employed upon the North side of the Potomac River, in February 1865, completed work in clearing the brush from the Eastern Branch swamps.[50]

Sodding

War Department General Orders No. 45, February 16, 1863, Regulations for the care of the Field works, and the Government of their Garrisons, pointed out the importance of sodding in Article 18:

> "The garrison can greatly improve the work by sodding the superior (upper) slope of the parapet, and also the exterior or outer slope, or by sowing grass seed on the superior slope, first covering it with surface soil. The grass-covered or sodded portions of the parapets, traverses, magazines, &c., should be occasionally watered in dry weather, and the grass kept closely cut."[51]

But, maintenance and repair of sodding was continual and demanding. Barnard, in October 1863, informed the Secretary of War that the work outlined by the Commission was "either finished or brought to a state of efficiency; still a system of works of this character demands constant watchfulness and expenditure to keep it up, and there are yet some works that require overhauling, and all of them ought to have their scarps either revetted or sloped and sodded." In October 1864, Alexander reported that "Revetment of scarps will be required either by sodding the whole exterior slopes at all the forts on the line not already revetted on an angle of 45 degrees by a scarp wall of brick or stone, or by a scarp revetment of plank." Alexander also stated that because the works are "being built of perishable materials" they would "require constant repairs" pointing out that they "must all be sodded, or revetted with masonry before the works can assume a permanent character" and "all interior earthen slopes of traverses, magazines, bomb-proofs, camps, &c., should be sodded."[52]

On April 14, 1865, the Department informed Alexander that people were cutting sod in Virginia, on the property of a loyal man, Mr. Millard, for repair of Fort Foote. In November 1864, Captain George P. Thyng, commanding Fort Foote, received orders to furnish an officer and detachment of men for "daily duty in sodding." Engineer in Chief, Defenses South of the Potomac, A. Grant Childs, requested a detail of men from the various garrisons to commence, among other things, sodding, and more specifically to repair the sodded slopes on the forts to the right of Columbia Pike. Still later, in late May 1865, Alexander requested an increase in the detail for sodding at Fort Whipple to 100 men.[53]

Thus, the monthly reports of engineer operations in the Defenses of Washington, included much sodding work. In June 1864, men repaired the parapet and sodding at Fort Lincoln. In April 1865, laborers repaired the sodding of traverses and magazines at Fort Morton and repaired and sodded the magazine at Fort Cass. During the year ending September 30, 1864, Alexander reported that his work force had repaired the old revetment, parapets, and sodding at forts Lincoln, Thayer, Saratoga, Bunker Hill, and Slemmer; repaired the parapets and sodding at forts DeRussy and Kearny; and repaired and sodded the parapets at forts Reno, Bayard, Simmons, and Mansfield. At most of the works, a great deal of new protective sodding was completed.[54]

Ordnance and Artillery

In addition to the fortifications and the many structures and facilities around them, the guns, armament and associated materiel required maintenance, repair and alteration. Barnard, on October 6, 1862, reported that the defenses mounted "four hundred and forty-three guns." In December 1862, Barnard stated: "The total armament in the different works, at the date of this report, is six hundred and forty-three guns and seventy-five mortars " In October 1864, Lieutenant Colonel B.S. Alexander wrote, "The present armament is 762 guns and 74 mortars." The numbers of guns, ammunition and associated materiel were, therefore, immense.[55]

The guns in the Defenses of Washington ranged from 6-pounder field guns to 200-pounder Parrots. The armament included 24- and 32-pounder seacoast guns, 10- to 100-pounder Parrotts, 42-pounder James Rifle, 30-pounder rifles, 24-pounder flank defense howitzers, 24-pounder siege guns, and 24-pounder Coehorn mortars. Smaller guns included the 12-pounder Whitworth breech-loading rifles, 12-pounder James rifle, 12-pounder heavy guns, 12-pounder mountain howitzers, 12-pounder field howitzers, 12-pounder light Napoleon field guns, 10-inch Siege Mortars; 8-inch siege howitzers, 8-inch seacoast howitzers, 6-pounder James guns, and the 4-inch rifles. Some forts had a wide range of guns meaning they required a variety of carriages or platforms and ammunition but one Artillery commander felt that three calibers of guns along with mortars, possibly making a total of five, was favored.[56]

Due to new requirements and mistakes, guns were transferred from one fortification to another. A Northern Virginia civilian, on November 27, 1862, observed: "Six heavy pieces of ordnance were taken up there [forts on the opposite hills] today." In September 1862, Colonel William B. Greene, Fourteenth Massachusetts Volunteer Infantry Regiment, received an order from the Department directing him to remove a 30 pounder Parrott gun from Fort Craig to Fort DeKalb, to replace the same by one of the 24 pounders that had been left on the outside of Fort Corcoran and to put the other 24 pounder either into Fort De Kalb or Fort Woodbury. At the same time, Barnard instructed Mr. Frost, the civilian engineer, to transfer the "32 pdr looking to the right & near" "to the place of the 24 pdr on the other side" at Fort Barnard. On July 1, 1863, Colonel H.L. Abbott, First Connecticut Volunteer Heavy Artillery Regiment, reported that he had transferred the ". . . four 4-inch ordnance guns of our siege train remaining in park at Fort Ward to Ft Scott, as they will be of some service there, and are of no use in their former location." In January 1864, General W.F. Barry, Inspector of Artillery, transmitted to the Department of Washington the changes to be made in the armament of the fortifications promulgated by the Board of Officers, over which he presided, and approved by the War Department in December 1863, asking that General DeRussy and Lieutenant Colonel Haskins be directed to instruct the commanding officers of posts to pay special attention to the interchange ordered to be made and to make sure that for each gun, howitzer or mortar sent away or received, the proper carriages,

implements, equipments and ammunition accompany it. Colonel Alexander, in January 1865, when "Referring again to the armament of the Block Houses," stated that "their embrasures were not made for heavy guns" and, therefore, the "boat howitzers" . . . 'now in place ought to be changed" to "12 pdr Napoleon's "or if they are unavailable, "any other field guns will answer the purpose." In the Spring, 1865, Colonel Alexander asked permission " . . . to remove the guns and ammunition from forts Haggerty and Bennett and by constructing platforms, and embrasures, to convert them into Batteries of field guns, to be armed when the emergency may require it." Much artillery materiel was transferred along with the guns, like in June 1864, when Colonel Haskins, commanding Haskins' division, directed that the necessary orders be issued "for transfer of the following surplus ordnance stores" from Battery Vermont to Fort Sumner: two 8-inch howitzers breechsights; 2 sponge buckets wood; 3-fuze mallets; 1-fuze plug reamer; 2-fuze setters (bronze); 45-fuze plugs (wood); 3 gunners quadrants (wood); 2 budge barrels.[57]

With the transfer of guns from one fortification to another, pertinent changes in the works were often necessary. In September 1862, Barnard informed Frost that at Fort Ward, the new seacoast platform was to be converted into a siege platform so arranged as to fire well to the left. Barnard, in October 1862, reported that "When these works were commenced, neither field nor siege guns could be obtained in any adequate numbers; hence the only resource was to arm them with sea-coast 24's and 32's from the arsenal" but " it is probable that many of these guns should be dismounted, and it is certain that a great many emplacements should be prepared for field & siege guns" meaning "that 200 platforms should be made, embrasures cut &c. for field & siege guns, which (earthwork included) is alone a very considerable work." In May 1863, Barnard told Gunnell that "At Fort Slocum the 2 24-pdr barbette guns on left face of old work must come down and siege platforms & embrasure be substituted" because "This face is the only one which will bring a cross fire to bear upon the heights immediately North of Fort Stevens."[58]

Such alterations and repairs continued throughout the war. In August 1863, Barnard instructed Childs that the "Embrasure to be made on flank of Fort Corcoran where the two 8" guns have been removed." General W.F. Barry, Inspector of Artillery, wrote Brigadier General De Russy, commanding the Defenses of Washington, South of Potomac, in late January 1864, suggesting that he inform Barnard what materials were required for the alteration of platforms and embrasures due to the change of armament recommended by the board of officers. Colonel Alexander Piper, commander of the Tenth New York Artillery Regiment, in March 1864, pleaded that Barnard's attention should be directed to the subject of new platforms and embrasures for his line because the ordnance already delivered is "useless otherwise." In July 1864, Gen. C.C. Augur, commanding the Department of Washington, informed General Henry W. Halleck, the Chief of Staff of the Army, that " . . . any material changes in the armament [in the Defenses of Washington] would require changes in the platforms or embrasures, involving considerable work, and be likely to produce confusion in the ammunition, besides introducing to the garrisons pieces with whose ranges they would be unacquainted."[59]

In July 1864, the Department asked Barnard to " . . send a competent officer to Fort Sumner to superintend the remounting of a hundred pounder Parrott Gun dismounted by firing yesterday" during Early's Raid on Washington. In August 1864, Major J.G. Benton, commanding the Washington Arsenal, proposed to send two working parties, in a few days, to repair 100 and 200 gun pounder platforms and the carriages of some of the flank defense howitzers in the forts around this city, and asked that commanders of the forts afford assistance in labor. Brigadier General M.D. Hardin, commanding a division, requested in September 1864, that Colonel Alexander send a man from his department to superintend the relaying of one siege platform at Fort Totten and one 10-inch Siege Mortar bed at Fort Sumner.[60]

The engineer workforce actually accomplished a great amount of this work. In July 1864, it repaired the revetment, platforms, embrasures etc. at Battery Wagner. It laid platforms at Fort Ethan Allen, cut 19 embrasures in the revetment and hewed 11 platform sleepers of which five were laid at Fort McPherson; took up the traverse circles at Fort Albany; removed platforms at Fort Worth, and mounted a 24-pounder at Fort Chaplin, in October 1864. In November 1864, it laid platforms at forts Ethan Allen, McPherson and Albany. In April 1865, it dismounted the barbette guns at Fort Thayer and prepared new platforms for siege guns. Work continued even in the Summer of 1865 as the workforce laid gun platforms and made embrasures at forts Worth and Ellsworth and raised the parapet of the right front bastion at the latter in June. In July, it laid platforms at forts Ethan Allen, C.F. Smith, Lyon and Ellsworth, removed platforms at Fort Strong and cut embrasures at Fort C.F. Smith. In August 1865, the workforce laid two gun platforms at Fort Reno and laid other gun platforms at retained forts south of the Potomac River, in August 1865.[61]

In October 1862, General W.F. Barry, Chief of Artillery, Defenses of Washington, recommended that a special order be issued directing the numbering of the guns in all the field-works constituting the Defenses of Washington: "The guns in each work to be numbered in a regular series from right to left as you enter the gateway. (And *not* from left to right as in the case in many instances now) and the numbers to be legibly painted either upon the breach of the gun in *white* paint or upon the interior slope of the parapet (if practicable) in *black* paint." So, in November 1863, Colonel Schrimer, commanding the 2nd Brigade and the Fifteenth New York Artillery Regiment, reported I have the honor to forward according to your request the outline sketch, of the Forts, under my command" pointing out that "The embrasures, are numbered from right to left and the Pieces at each Platform, now in position, are specified in Black Ink." The mounting of some of the guns was difficult and required special procedures so, in the spring of 1864, Alexander forwarded to the Chief of Engineers, Richard Delafield, photographs "showing the manner of mounting 15" guns by means of purchase falls" and a tracing showing the method used for mounting 200-pounder rifled guns at Battery Rodgers using the same principle for mounting the 15"

gun by making the parts somewhat larger. Similarly, a circular issued by the First Brigade, De Russy's Division, on April 3, 1865, directed that "Commanding officers of Posts will at once repair the Targets belonging to their respective Forts and put them in condition for target practice."

Garrisons

During the war, the garrison of the Defenses of Washington changed in size, extent and composition. Likewise, the garrisons of the individual forts also changed in numbers and composition. Many troops served in the defenses of Washington for a while and then received orders to serve elsewhere. Thus, the Defenses of Washington seemed to experience frequent, if not continual, change.

"Major General George B. McClellan, on October 18, 1861, directed Brigadier General J.G. Barnard, Engineer of the Defenses, and Brigadier General William F. Barry, Chief of Artillery, Army of the Potomac, to "determine the minimum strength of garrisons—artillery and infantry—required for the various works in and about Washington to satisfy the conditions of a good defense." Barnard and Barry sent a summary estimate to McClellan on the 22nd, and two days later they submitted their finalized report calling for a total of 33,795 including 11,045 total for the garrisons, based on "the rule, which experience showed to be satisfactory for the lines of Torres Vedras," of "Two men per running yard front covering line and one man per running yard of rear line, deducting spaces occupied by guns, and 22,750 reserves. Barnard submitted additional thoughts on the required garrisons of the Defenses of Washington on December 1, 1861; December 10, 1861; and January 13, 1862.[62]

In February 1862, the Army of the Potomac return showed 5,106 officers and men present in the field works and artillery about Washington, D.C. along with 160 officers and men present at Fort Washington but the total number in the Washington, D.C. area was 177,556. On March 8, 1862, President Lincoln's General War Order, No. 3., stipulated: ". . . no change of the base of operations of the Army of the Potomac shall be made without leaving in and about Washington such a force as in the opinion of the General-in-Chief and the commanders of all the army corps shall leave said city entirely secure." Brigadier General James Wadsworth, commander of the Military District of Washington, reported, on April 2, 1862, that the forces left in his command, when McClellan took the Army of the Potomac to the Peninsula, for the "defenses of Washington" was 15,335 infantry, 4,294 artillery and 848 cavalry totaling 19, 022 after subtracting those sick and in arrest and confinement but ". . . nearly all the force is new and imperfectly disciplined . . ." During the Peninsula Campaign in Virginia, correspondence between McClellan and the War Department and the President frequently concerned the Defenses of Washington and the number of men left behind to defend them; similar correspondence occurred between the Army of the Potomac commander and the War Department and the President during the Antietam and Gettysburg campaigns.[63]

The U.S. Army return, of June 30, 1862, showed 4,358 officers and men present for duty in the Defenses of Washington although the Army of Virginia, under the command of Major General John Pope, totaling 77,087, was in the vicinity. On August 31, 1862, the Defenses of Washington included 25,771 present. Major General N.P. Banks, commander of the Defenses of Washington, informed the Commander in Chief of the Army, Major General Henry W. Halleck, on September 11, 1862, that the Defenses of Washington comprised 15,515 officers and men "in garrison" with a total of 73,300 "Troops for the defense of Washington." The December 31, 1862, return of Major General Samuel P. Heintzelman, commanding the Military District of Washington, showed a total of 66,603 officers and men present for duty but a much smaller number of them were actually in and near the fortifications.[64]

As is evident from some of the numbers given above, tens of thousands of troops that were technically counted as part of the Defenses of Washington, did not serve in the fortifications but, theoretically, could do so if necessary. On January 26, 1863, Heintzelman wrote Halleck, stating "There does not appear to be much connection between the Army of the Potomac and the troops for the defenses of Washington," and asking ". . . cannot the defenses be made into a separate department with such limits as may be convenient." Thus, on March 31, 1863, Brigadier General J.G. Barnard submitted a tabular statement of, among other things, the garrisons "of the forts constituting the Defenses of Washington" as 10,305 artillery and 16,420 infantry for a total of "full garrisons for all the forts" as 26,725 men. He also included a statement addressing the required garrison for the defenses. The following extract from the "report of the commission ordered last autumn by the Secretary of War to report on the Defenses of Washington may be interesting:"

> "The total infantry garrison required for their defense, computed at 2 men per yard of front perimeter, and 1 man per yard of rear perimeter of works, is about 25,000. The total number of artillerymen (to furnish three relief's for each gun) required is about 9,000. It is seldom necessary to keep these infantry supports attached to the works. The artillerymen, whose training requires much time, having learned the disposition of the armament, and computed the distances of the ground over which attacks may be looked for, and the ranges and service of their guns, should not be changed; they should remain permanently in the forts."[65]

In his 1871 report, Barnard wrote "When Early marched on Washington in 1864 the defenses had been stripped of the disciplined and instructed artillery regiments (numbering about 18,000) which had constituted their garrison, and their places supplied by newly raised 100-day regiments, (Ohio National Guard,) insufficient in numbers and quite uninstructed. In a March 8, 1864 inspection report, ordered by the Secretary of War, Assistant Adjutant General James A. Hardie reported "Theoretically, the garrisons are not strong enough, in as much as they do not afford three relief's of gunners and there are no reserves" and the numbers were 11,011 men for the garrisons south of the Potomac, comprising one division under Brigadier General Gustavus A. DeRussy with four

brigades under colonels John C. Tidball, Thomas Tannatt, Henry L. Abbot and L. Schirmer; and 7,852 men, for the garrisons north of the Potomac, forming one division under Lieutenant Colonel Joseph A. Haskins, Aide de Camp, with three brigades under colonels Louis O. Morris, Augustus. A. Gibson and Alexander Piper, (Eastern Branch,) for a total of 18,863 men. On April 17, 1864, Henry W. Halleck, Army Chief of Staff, informed Lieutenant General U.S. Grant, Commander-in-chief of the U.S. Army, that the Defenses of Washington were garrisoned ". . . by 10 regiments and one battalion of heavy Artillery; effective force of about 14,000 or deducting regiment ordered for Burnside, about 13,000." Major General Samuel P. Heintzelman, Commander of the Department of Washington, on May 17, 1863, aptly spelled out the problems of stating numbers in the Defenses of Washington writing that "From the last morning report of the troops in the Defenses of Washington, dated May 10, 1863, the aggregate present amounts to 52,629" but, after deducting "those on special or other duty, sick, and in arrest or confinement, there are only 32,982," and of that number there are "the guards on the railroad from here to Baltimore, 1,530," the "Corps of Observation on this side of the Potomac, guarding the river as far as the Monocacy, 1,177," "[Major] General J. [H] Stahel's cavalry division, 3,739," and "the force under Brigadier General John J. Abercrombie, including the First Brigade of Pennsylvania Reserves, of 8,581," leaving under 18,000 men to actually man the defenses and perform related duty. That number generally remained the same until Early's Raid on Washington when the numbers swelled.[66]

Some of the troops that arrived in Washington to meet Early's Raid remained for a while but the numbers soon returned to those of pre-July. In December 1864, the Department of Washington return revealed a total of 29,741 officers and men present for duty with 13,165 staff and infantry, 4,215 cavalry, 14,207 artillery, and 76 men in a Signal Corps detachment. The February 1865 return for the Department of Washington showed a total present for duty of 28,347 comprising 12,365 artillery, 11,473 staff and infantry, 4,363 Cavalry, and 146 men in a Signal Corps detachment. But, with the war winding down and many troops falling back from the front, the April 1865 Department of Washington return showed a total of 68, 118 men present for duty.[67]

The numbers of troops stationed at the various forts, batteries and other fortifications in the Defenses of Washington also varied for a variety of reasons. Colonel Thomas D. Doubleday, commanding the Defenses of Washington, North of the Potomac, sent Lieutenant Colonel Peter Fritz, Jr., commanding the Ninety-Ninth Pennsylvania Volunteer Infantry, on April 16, 1862, directions for the care of works and armament under his charge instructing him that "Not less than twelve men should be stationed at any Fort and fifteen will be required for Fort Carroll and its redoubt." Army of the Potomac Assistant Adjutant-General, Brigadier General A. Seth Williams, notified Barnard on August 30, 1862, that General McClellan had learned " . . the forts on the east side of the Eastern Branch are garrisoned by but a single company each" but he " . . thinks they should be immediately occupied by garrisons commensurate with their armament and importance, and wishes you at once to call upon General Silas Casey for the troops necessary for that purpose." General Amiel W. Whipple, commanding a brigade in the Defenses of Washington, in May 1862, was so

disturbed by the lack of troops in the forts that he requested authority from General James Wadsworth, department commander, " . . to recruit to the Maximum strength the regiments within this command."[68]

The size of a fortification also helped determine the number of troops assigned. In late August 1862, Major General George B. McClellan, Army of the Potomac commander, informed Barnard that one of his staff officers had reported that forts Thayer, Saratoga, Bunker Hill, Slemmer and Totten were garrisoned by "one small company" of the One Hundred and Twelfth Pennsylvania Volunteer infantry but they were all under marching orders that morning but he thought that instead of abandoning these works, " . . . they should be occupied with much larger garrisons . . ." On September 14, 1862, Barnard wrote Major General Nathaniel P. Banks, then commanding the Defenses of Washington, reporting that Fort Lyon was " . . . a very large work . . ." now garrisoned by three companies of the Third New York Artillery Battalion, numbering between 300 and 400 men, " . . requires a garrison of 1,400 men for defense, at a minimum estimate."[69]

But, ultimately, the exigencies of the war determined the number of troops assigned to each fort, battery, blockhouse or trench. In the late Summer of 1862, Barnard philosophically wrote: "My duties as the engineer do not permit me to keep myself informed as to the dispositions and changes of dispositions of troops, and I can only state the necessity [of the number of troops to garrison the defenses], without being able to say exactly how to meet it." Civil War correspondent Noah Brooks, in early July 1863, wrote from Washington: "These forts are now garrisoned by detachments of regiments . . . and it can thus be seen that the garrison in each must be quite small." In addition to the lack of sufficient troops, the quality, at times, left much to be desired as General Halleck reported, in April 1864, that of the effective force in the Defenses of Washington, "Very a few of the men have ever been under fire and one-third of them were raw recruits."[70]

Other Military Personnel

On February 2, 1864, War Department General Orders No. 42, regulations for the care of field-works and the government of their garrisons, stipulated in Article number 19: "No person not officially connected with the garrisons of the field-works will be allowed to enter them . . ." Certain exceptions were provided for in that those who were visiting the defenses on duty, or had passes "signed by competent authority" could enter. Besides actual garrisons of the fortifications and the troops officially assigned to the Defenses of Washington, that, at times, included Navy and Marine Corps personnel, other officers and men had duties that brought them into the fortifications also.[71]

Fortification construction, maintenance and repair required Engineer, Quartermaster, Ordnance and Signal Corps officers and men to visit the defenses. New recruits, before assignment to a unit; recovering convalescents; and imprisoned men and officers often worked in the defenses.

Special ceremonies, military reviews, demonstrations and exhibitions brought officers and men into the defenses. Military courts- marital, inspections, investigations and the like, were additional reasons for visits by officers and men.[72]

Civilians

Like non-garrison military personnel, civilians were generally excluded from the defenses but some, for various reasons, did enter them. Perhaps the most often seen civilian was the sutler, officially appointed for each post and regiment, according to *Army Regulations*. Located in the vicinity of the units' camps, the sutler legally sold food, clothing, tobacco, newspapers, razors, books, stationary, etc. and was generally the only source for such items unless the officers and men received a "pass" allowing them to leave the area. Article 29 of the 'Articles of War" provided that "No sutler shall be permitted to sell any kind of liquors or victuals, or to keep their houses or shops open for the entertainment of soldiers, after nine at night, or before the beating of reveille, or upon Sundays, during divine service or sermon, on the penalty of being dismissed from all future sutling." Some sutlers, who usually made good money, were also unscrupulous and, therefore, the Second Brigade, Defenses North of the Potomac, Defenses of Washington, in Special Orders No. 46, stipulated that "Sutlers will hereafter have a copy of the 29th Article of War posted in a conspicuous place in their stores." Liquor, purchased from the sutler, led to many ugly incidents and grave problems and was the cause of various incarcerations. But, ultimately, the sutler was an important, if not the only, source of a variety of necessities and extras.[73]

Many civilians, black and white, male and female, officially worked in the fortifications; some of these civilians were laborers, others were cooks or laundresses, and still others performed additional necessary functions. At times, these civilians even slept in the defenses or near them and ate their meals in the immediate area. Although their status was tenuous, these civilians were absolutely necessary for the preservation of the defenses and the health and spirit of the men. Additionally, civilians employed by the Engineer, Quartermaster, Ordnance, Signal Corps, and Commissary departments, at times, visited the fortifications while on duty. [74]

Wives, girlfriends and prostitutes visited the defenses, whether legal or not, at times. On June 2, 1863, the Second Brigade, Defenses North of the Potomac, ordered: "The wifes (sic) of Soldiers not performing the duties of laundresses beyond the allowances by regulations are hereby ordered to leave all Posts garrisoned or to be garrisoned in this command." A similar issuance, from the Second Pennsylvania Volunteer Heavy Artillery Regiment, First Brigade, Defenses North of the Potomac, stipulated: "Soldiers wives not now on duty as Laundresses will leave the garrisons" but "Those acting as cooks for officers alone [are] excepted." Girlfriends and prostitutes even served as laundresses or cooks or in some other capacity but their standing was even more tenuous that the wives.[75]

Newspaper reporters, photographers and illustrators were often observed in the area of the fortifications. Some had obtained official passes, but many others just took their chances in order to obtain a great illustration or story. Charles Moulton reported that on December 28, 1862: "An artist of one of the New York illustrated papers, Frank Leslie's probably, was here last week" sketching Camp Lyon, the new forts in the area and the scenery roundabout. A little over three months later, the officer of the day at Fort Albany observed D. Grover sketching the fort and the surrounding hills, ravines, etc. The sketch showed the guns, abatis, and contour of grounds in detail and when the "artist" was approached, he "secreted" his work. The artist was informed that if he wanted to get the sketch back, he would have to report to General Heintzelman, commander of the defenses. Most likely, the "artist" was a spy and never reported to Heintzelman.[76]

Almost anyone might show up in the Defenses of Washington. Charles Moulton noted that on April 5, 1863, a "genealogist" was visiting the different Massachusetts units in the Defenses of Washington practicing his trade. He was taking the name of each soldier, birth date, enlistment date, hometown, age, and names, including maiden surnames where appropriate, of the father, mother, grandmothers, grandfathers and earlier decedents if known. The genealogist had been at work for over a year, but had only gathered information from about 19 regiments so far due to the time involved. He hoped " . . . to form a record which will afford a great medium and render certain assistance to the soldier or his parents in procuring pensions, bounty, gratuities, etc., which might never be gotten otherwise." Moulton had furnished all the information he could but asked his parents for additional data.[77]

Endnotes

[1] John G. Barnard, *A Report on the Defenses of Washington, to the Chief of Engineers, U. S. Army, Corps of Engineers, Corps of Engineers Professional Paper No. 20* (Washington, DC: The Government Printing Office, 1871), 32-33, 82-85.

[2] ORA, I, Volume 5, pages 698-99, Barnard to Gen S. Williams, Assistant Adjutant General, Army of the Potomac, January 13, 1862, page 698; Barnard, A Report, 32-33; Library of Congress, Manuscript Division, U.S., Army—Engineers, Letterbook, 1862-64, Page 160, Frost to Colonel Cogswell, Commanding Brigade, December 29, 1862; RG77, Entry 18, B169[1], Barnard to Totten, January 19, 1864 (Within—letter from Barnard to SW, January 16, 1864); RG77, Entry 18, B9332, Barnard to Kurtz, in Charge of Engineer Bureau, October 15, 1862, with this personal report—Barnard, Extract, October 6, 1862—enclosed with B9332 (B9332, Barnard to Kurtz, in Charge of Engineer Bureau, October 15, 1862; ORA, Serial 125, General Orders No. 42, War Department, Adjutant General's Office, February 2, 1864, 64.

[3] Barnard, *A Report on the Defenses of Washington*, 125, 133; Ora[Elmer] Hunt, "Defending the National Capital," In Francis T. Miller. *The Photographic History of the Civil War*, 10 Volumes (New York: The Review of Reviews Co., 1911), Volume 5, 102.

[4] *ORA*, Serial 71, Volume 37, Part 2, Alexander to Halleck, July 6, 1864, made examination of Chain Bridge and Aqueduct Bridge, page 85; *ORA*, I, Serial 91, 286, Alexander to Delafield, October 4, 1864; RG393, Part 1, E5382, Box 4, A116, 1865, B.S. Alexander to Lieutenant Colonel J.H. Taylor, Chief of Staff, April 6, 1865.

[5] *ORA*, I, 33, page 888, Halleck to Grant, April 17,1864; Barnard, *A Report*, 125; RG 77, Entry 18, B9932, with this personal report—Barnard, Extract, October 6, 1862—enclosed with B9332(B9332, Barnard to Kurtz, in Charge of Engineer Bureau, October 15, 1862) after some remarks—; RG77, E556, Volume 1, No. 40, Colonel, 59th New York Volunteer, March 17, 1862.

[6] RG 77, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 162, G5, A.A. Gibson, April 18, 1864; RG393, Part 2, E6731—Lieutenant Colonel J.H. Taylor, Chief of Staff & Assistant Adjutant General, to DeRussy, commanding Division, July 9, 1864; RG77, Entry 554, page 33, May 6, 1862, Brightly to Captain F.E. Prime, Engineer of Fortifications; *ORA*, Serial 91, page 287, Alexander to Delafield, October 4, 1864; RG393, Part 4, E1358, Volume 398/1027 DW, page 7-8, Captain Robert J. Nevin, commanding post, Fort Whipple, to Lieutenant Lyman SW Cushing, Acting Assistant Adjutant General 1st Brig, DeRussy's Division, December 22, 1864.

[7] RG393, Part 4, Fort Ethan Allen, E443, Volume 207/475 DW, Orders Issued & Received, 1863-64, No page, General Orders 1, Fort Ethan Allen, January 4, 1864; *ORA*, Serial 125, General Orders No. 42, War Department, Adjt. General's Office, February 2, 1864, page 63-64; RG 77, E556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 585, W7, Department of Washington, February 3, 1865; ORA, Serial 71, Volume 37, Part 2, Alexander to Halleck, July 6, 1864, pages 84.

[8] ORA, Serial 125, General Orders No. 42, War Department, Adjutant General's Office, February 2, 1864, page 63-64; *ORA*, Serial 125, page 62, No. 11, February 1864; RG 77, Entry 553, Letters Sent, Volume 1, page 124-25, Barnard to Robert B. Parrot, November 6; Anne S. Frobel, *The Civil War Diary of Anne S. Frobel of Wilton Hill in Virginia* (McLean, VA: EPM Publications, Inc., 1992), 194; Miller, *The Photographic History*,"Forts and Artillery,", page 187.

[9] Benjamin Franklin Cooling, III and Walton H. Owen, II, *Mr. Lincoln's Forts: A Guide to the Civil War Defenses of Washington* (Shippensburg, PA: White Mane Publishing Company, 1988), 62, 64; E.B. Long with Barbara Long, *The Civil War Day by Day: An Almanac 1861-1865* (Garden City, New York: Doubleday & Company, Inc., 1971), 364; *Lincoln Day by Day: A Chronology, 1809-1865. Volume III: 1861-1865* (Washington, DC: The Government Printing Office, 1960), 189; Frobel, *The Civil War Diary*, 195-98; *ORA*, I, Serial 87, page 992, Major Thomas Lincoln Casey, Corps of Engineers, U.S. Army to the Chief of Engineers, Richard Delafield December 29, 1864; *ORA*, I, Serial 89, Volume 92, Part 3, Richard Delafield to Charles A. Dana, November 18, 1864, 641-42; Record Group77, Entry 18, Letters Received, B9806, Barnard to Chief of Engineers, June 25, 1863, encloses copy of Lieutenant D.F. Schenck, 50th New York Volunteer Engineers, Report of June 18, 1863, concerning magazine explosion at Fort Lyon; Record Group 393, Part 1, Entry 5412, Major J.C. Willard, Aide-de-Camp to Colonel J.H. Taylor, Assistant Adjutant General, June 10, 1863; Record Group 393, Part 2, Entry 6725, Letters Sent, 1863-65, Volume 189 DW, page 114, June 10, 1863.

[10] *ORA*, Serial 125, General Orders No. 42, February 2, 1864, regulations for the care of field-works and the government of their garrisons, prepared by Brigadier General Barry, U.S. Army Inspector of Artillery, page 64.

[11] *ORA*, Serial 125, General Orders No. 42, February 2, 1864, regulations for the care of field-works and the government of their garrisons, prepared by Brigadier General Barry, U.S. Army Inspector of Artillery, page 64.

[12] *ORA*, I, 5, pages 698-99, Barnard to General S. Williams, Assistant Adjutant General, Army of the Potomac, January 13, 1862, page 698; RG77, E558, to S.P. Heintzelman, Endorsement of Gen Barnard on letter of Colonel B.S. Alexander dated Washington June 25th 1863 (Letters Received 250), page 65; RG393, Part 1, E5382, Box 1, 1863, B10, J.G. Barnard to Major General S. Heintzelman, commanding Defenses of Washington, July 9, 1863; RG 77, Entry 553, Letters Sent, Volume 1, page 250, Alexander to Barnard, June 25, 1863; RG393, P.I. 172, Part 2, Entry 3714, Letters Sent, 1862, 63-65, Volume 21/240 5AC, Page 37-38, Headquarters, Military Defenses North of Potomac, Assistant Adjutant General to Major U. Doubleday, Ordnance Officer, April 15, 1862.

[13] *ORA*, Series , Volume , Serial 91, pages 280-88, Alexander to Delafield, October 4, 1864, pages 287-88.

[14] RG77, Entry 18, A2191, Alexander to Delafield, June 5, 1865; RG77, Entry 18, A2004, Alexander to Delafield, July 5, 1864; RG77, Entry 18, A2232, Alexander to Delafield, July 10, 1865; RG77, Entry 18, A2028, B.S. Alexander to Delafield, report of operations on these defenses during the month of July 1864, August 8, 1864; RG77, Entry 18, A2074, B.S. Alexander to Chief of Engineers, December 3, 1864; RG77, Entry 18, A2057, Alexander to Delafield, November 1, 1864; RG77, Entry 18, A2094, B.S. Alexander to Delafield, report of operations on these defenses during the month of December 1864, January 3, 1865; RG77, Entry 18, A2145, BS Alexander to Delafield, report of operations on these defenses during the month of February 1865, March 3, 1865; RG77, Entry 18, A2166, BS Alexander to Delafield, report of operations on these defenses during the month of March 1865, April 6, 1865; RG77, Entry 18, A2094, B.S. Alexander to Delafield, report of operations on these defenses during the month of December 1864, January 3, 1865; RG77, Entry 18, A2028, B.S. Alexander to Delafield, report of operations on these defenses during the month of July 1864, August 8, 1864; RG77, Entry 18, A2120, B.S. Alexander to Delafield, report of operations on these defenses during the month of January 1865, February 6, 1865; RG77, Entry 18, A2176, B.S. Alexander to Delafield, report of operations on these defenses during the month of April 1865, May 4, 1865; RG 393. P.I. 172, Part 2, Entry 6744, Fort Lyon, November 21, 1862, Colonel George Wells, commanding Fort Lyon, to Colonel Hunt, Acting Assistant Adjutant General, Headquarters, Defenses South of the Potomac; RG77, Entry 18, B196', Barnard to Totten, February 4, 1864; RG77, Entry 560, Military Telegraph, Major Andrew Washburne, Acting Ordnance Officer, Arlington, to Barnard, September 9, 1862; RG77, Entry 18, A2004, Alexander to Delafield, July 5, 1864.

[15] RG77, Entry 18, A1862 1863, Colonel H.L. Abbot, Captain, Engineers, near Fort Richardson, to Totten, May 26, 1863; RG 77, Entry 18, B9913, Barnard to Totten, August 20, 1863; RG 77, Entry 18, B9933, Barnard to Totten, August 29, 1863.

[16] The Library of Congress, U.S., Army—Engineers, Letterbook, 1862-64, Page 146, Edward Frost to Colonel B.S. Alexander, December 22, 1862.

[17] RG77, Entry 554, page 33, May 6, 1862, Brightly to Captain F.E. Prime, Engineer of Fortifications about Washington; *ORA*, Serial 68, Volume 36, Part 2, A.P. Howe to Halleck, May 17, 1864, report of inspection of the works in the defenses, pages 886, 890-91, 894, 896.

[18] RG77, Entry 18, A2094, B.S. Alexander to Delafield, report of operations on these defenses during the month of December 1864, January 3, 1865; RG77, Entry 18, A2166, B.S. Alexander to Delafield, report of operations on these defenses during the month of March 1865, April 6, 1865; RG77, Entry 18, A2176, B.S. Alexander to Delafield, report of operations on these defenses during the month of April 1865, May 4, 1865; RG77, Entry 18, A2191, Alexander to Delafield, June 5, 1865; RG77, Entry 18, A2074, December 3, 1864, B.S. Alexander to Chief of Engineers; RG77, Entry 18, A2057, Alexander to Delafield, November 1, 1864; RG77, Entry 18, A2120, BS Alexander to Delafield, report of operations on these defenses during the month of January 1865, February 6, 1865; RG77, E553, Volume 1, page 240, Alexander to Lieutenant D.F. Schenck, Fort Lyon, June 11, 1863; RG77, E553, Volume 1, page 241, Alexander to Lieutenant D.F. Schenck, Fort Lyon, Jun 13, 1863; ORA, Serial 91, page 281, Alexander to Delafield, October 4, 1864, report of operations for year ending September 30, 1864, page 287.

[19] Library of Congress, Manuscript Division, U.S., Army—Engineers, Letterbook, 1862-64, page 25-27, Edward Frost to _____, overseer, Defenses of Washington South of the Potomac, Engineer Office, June 20, 1862; RG77, Entry 18, B169', Barnard to Totten, January 19, 1864; RG393, Part 2, E6731, Lieutenant Colonel J.H. Taylor, Chief of Staff Assistant Adjutant General, Department of Washington, to Colonel M.I. Ludington, Chief Quartermaster, Department of Washington, February 8, 1865; RG77, E558, page 83—Endorsement on requisition of Lieutenant Heevey, Quartermaster of 1st Mass Heavy Artillery, for lime for purpose of whitewashing forts, Office of Chief Quartermaster, April 9, 1864; RG77, Entry 18, A2260, Alexander to Delafield, August 2, 1865; RG77, E553, Volume 2—, Page 23, Barnard to ColonelJH Taylor, July 20, 1864; RG77, Entry 18, B196', Barnard to Totten, February 4, 1864; RG77, Entry 18, B314', Barnard to Totten, April 6, 1864; RG 77, E-553, Letters Sent, Volume 1, page 337, Barnard to Augur, December 2, 1863; RG 77, E556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 62, C39, Childs, December 17, 63; RG77, E556, Volume 1, No. 31, Lieutenant M.D. McAlester, February 14, 1862; RG 77, E556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 68, C7 [1865], Childs, February 7, 1865; RG 77, E556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 585, W7, Department of Washington, February 3, 1865; RG77, Entry 18, A2044, Alexander to Delafield, October 7, 1864; RG77, Entry 18, A2074, December 3, 1864, B.S. Alexander to Chief of Engineers; RG77, Entry 18, A2057, Alexander to Delafield, November 1, 1864; RG77, Entry 18, A2094, BS Alexander to Delafield, report of

operations on these defenses during the month of December 1864, January 3, 1865; RG77, Entry 18, A2145, BS Alexander to Delafield, report of operations on these defenses during the month of February 1865, March 3, 1865; RG77, Entry 18, A2166, B.S. Alexander to Delafield, report of operations on these defenses during the month of March 1865, April 6, 1865; ORA, Serial 91, Alexander to Delafield, October 4, 1864, report of operations for year ending September 30, 1864—Page 282, 285.

[20] RG77, Entry 18, B169', Barnard to Totten, January 19, 1864—sends copy of report the Secretary War of 11th October 1863, also a copy of a letter of the House of Representatives explanatory thereof, My letter to the same authority of the 14th, asking an application of $100,000 until an appropriation be made, from any funds available for "field works" has I believe communicated to you." I also send a monthly report, in conformity to paragraph 64, Engineer Regulations, for December 1863; RG77, E553, Volume 2—, Page 23, Barnard to Lieutenant Colonel J.H. Taylor, July 20, 1864; ORA, Serial 91, page 280, October 4, 1864, Alexander to Delafield, submit the following report of operations on the defenses of Washington during the year ending September 30, 1864: pages 283, 287.

[21] Library of Congress, Manuscript Division, U.S., Army—Engineers, Letterbook, 1862-64, page 25, Edward Frost to _____ , overseer, Defenses of Washington South of the Potomac, Engineer Office, June 20, 1862; RG77, Entry 18, B314', Barnard to Totten, April 6, 1864; RG77, Entry 18, A2044, Alexander to Delafield, October 7, 1864; RG77, Entry 18, A2074, December 3, 1864, B.S. Alexander to Chief of Engineers; RG77, Entry 18, A2057, Alexander to Delafield, November 1, 1864; RG77, Entry 18, A2094, B.S. Alexander to Delafield, report of operations on these defenses during the month of December 1864, January 3, 1865; RG77, Entry 18, A2145, BS Alexander to Delafield, report of operations on these defenses during the month of February 1865, March 3, 1865; RG77, Entry 18, A2166, B.S. Alexander to Delafield, report of operations on these defenses during the month of March 1865, April 6, 1865; ORA, Serial 91, Alexander to Delafield, October 4, 1864, report of operations for year ending September 30, 1864, page 285.

[22] RG77, Entry 558, Endorsements on requisition of Lieutenant Heevey, Quartermaster of 1st Mass Heavy Artillery, for lime for purpose of whitewashing forts, Office of Chief Quartermaster, April 9-10, and 18, 1864, page 83.

[23] RG 77, Entry 553, Letters Sent, Volume 1, page 337, Barnard to C.C. Augur, December 2, 1863; RG 77, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 62, C39, Childs, December 17, 1863; RG 77, E556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 68, C7 [1865], Childs, February 7, 1865; RG 77, E556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 585, W7, Department of Washington, February 3, 1865; RG393, Part 2, E6731, Lieutenant Colonel J.H. Taylor, Chief of Staff, Assistant Adjutant General, Department of Washington, to Colonel M.I. Ludington, Chief Quartermaster, Department of Washington, February 8, 1865.

[24] *ORA*, Series 3, Volume 4, Serial 125, General Orders No. 45, War Department, Adjutant General's Office, February 2, 1864, Article 17, page 64; RG393, P.I. 172, Part 1, Entry 5382, Box 1, 1863, B10, J.G. Barnard to Major General S Heintzelman, commanding Defenses of Washington, Januaryy 9, 1863; RG77, Enter 553, Volume 1, page 156-57, Barnard to Heintzelman, January [between 6 and 10], 1863; *ORA*, I, Volume 5, pages 698-99, Barnard to S. Williams, Army of the Potomac Assistant Adjutant General, January 13, 1862.

[25] RG393, P.I. 172, Part 1, Defenses & Department of Washington, Entry 5382, Letters Received, 1863, supplement, Box 2, A8, B.S. Alexander to A.G. Childs, Engineer in charge, South Of Potomac, September 4, 1863; Alexander to Delafield, October 4, 1864, *ORA*, Serial 91, pages 280-288, report of operations for year ending September 30, 1864, page 287.

[26] RG393, P.I. 172, Part 1, Entry 5382, Box 1, 1863, B10, J.G. Barnard to Major General S.P. Heintzelman, commanding Defenses of Washington, January 9, 1863; RG77, Entry 553, Volume 1, page 156-57, Barnard to Heintzelman, January [between 6 and 10], 1863; RG393, Part 2, E6708, Letters Sent, 1863-65, Volume 184/408 DW, no page no., ColonelA. Piper, commanding Third Brig, Defenses North Of the Potomac, to Lieutenant Colonel J.H. Haskins, Aide-de-Camp in charge of Defenses North of Potomac, May 29, 1863; RG 77, Entry 553, Letters Sent, Volume 1, page 250—Alexander to Barnard, June 25, 1863; *ORA*, Serial 91, October 4, 1864, Alexander to Delafield, report of operations on the defenses of Washington During year ending September 20, 1864, page 286-87.

[27] RG77, Entry 18, A2004, Alexander to Delafield, July 5, 1864; RG77, Entry 18, A2044, Alexander to Delafield, October 7, 1864; RG77, Entry 18, A2057, Alexander to Delafield, November 1, 1864; RG77, Entry 18, A2074, December 3, 1864, B.S. Alexander to Chief of Engineers; Alexander to Delafield, October 4, 1864, *ORA*, Serial, ar91, page 280-288, report of operations for year ending September 30, 1864, pages 281-85. RG77, Entry 18, A2120, B.S. Alexander to Delafield, report of operations on these defences during the month of January 1865, February 6, 1865; RG77, Entry 18, A2166, B.S. Alexander to Delafield, report of operations on these defences during the month of March 1865, April 6, 1865.

[28] Barnard, *A Report on the Defenses of Washington*, 87; ORA, Volume , Serial 91, October 4, 1864, Alexander to Delafield, 280; RG 77, Entry 558, page 86, Endorsement on letter of Honorable J.P. Hoher, Secretary of Interior, in reference to an injury done the Washington Aqueduct by travel of heavy Government wagons over it, referred to these Headquarters for report, Headquarters, Chief Engineer of Defenses Washington, April 26, 1861; RG77, Entry 558, page 56—October 25, 1862, To Major General N.P. Banks. Endorsement on memorandum of Lieutenant Colonel B.S. Alexander in relation to the repairs of the road in the District defining the nature of repairs required, dated at Washington October 24, 1862; RG77, Entry 553, Volume 1, page 123, Barnard to Colonel C.

McKeever, Assistant Adjutant General, November 3, 1862; RG393, Part 1, Entry 5382, Box 1, B132 1862, Barnard to Colonel C. McKeever, Assistant Adjutant General, November 3, 1862 [this and letter below also in RG77, E553, pages 121-23]; RG 77, E556, Registers of Letters Received, 1861-65, Volume 1, No. 14, Alexander, November 3, 1862; RG393, PP.I. 172, art III, Military District Of Washington, 1862-64, Entry 646, Letters, 1862-64, T50—1863 & W443--1863, J.J. Taylor, Chief of Staff, Department of Washington, 22d Army Corps, to Brigadier General J.H. Martindale, Military Governor, DC, November 28, 1863.

[29] RG393, Part 1, Entry 5382, Box 1, B132 1862, Barnard to Colonel C. McKeever, Assistant Adjutant General, November 3, 1862[this and letter below also in RG77, Entry 553, pages 121-23.

[30] RG77, E553, Volume 1, page 136, Alexander to Lieutenant Colonel Haskins, in charge defences North Of the Potomac, December 2,1862; RG 393, Part 2, E6610, B.S. Alexander to Lieutenant Colonel Haskins, Aide-de-Camp, in charge of Defenses North of the Potomac, December 2, 1862 [also in RG77, Entry 553, page 136].

[31] RG393, P.I. 172, Part 4, Fort Ethan Allen, Entry 443, Volume 207/475 DW, Orders Issued & Received, 1863-64, Page 101-02, Special Orders No. 73, Headquarters, Second Brigade, Defenses of Washington, North of the Potomac, Fort Pennsylvania, December 14, 1862, pages 101-02.

[32] *ORA*, I, Volume 21, Serial 31, 904; Barnard, *A Report*, 17-32; RG77, Entry 553, Volume 1, pages 121-23, Barnard to Colonel C. McKeever, Assistant Adjutant General, November 3, 1862; RG393, Part 1, Entry 5382, Box 1, B132 1862, Barnard to Colonel C. McKeever, Assistant Adjutant General, November 3, 1862; RG393, P.I. 172, Part 2, Entry 6725, Letters Sent, 1863-65, Volume 189 DW, Page 170-71, South of the Potomac, August 29, 1863 (Arlington) to Lieutenant Colonel Solon H. Lathrop, Assistant Inspector General; RG393, Part III, Military District Of Washington, 1862-64, Entry 646, Letters, 1862-64, T50—1863 & W443—1863, J.H. Taylor, Chief of Staff, Department of Washington, 22nd Army Corps, to Brigadier General J.H. Martindale, Military Governor, DC, November 28, 1863; RG393, Part 1, Entry 5382, 1863, Box No. 2, A48 1863, supplement, B.S. Alexander to Lieutenant Colonel J.H. Taylor, Chief Of Staff, December 17, 1863; RG393, P.I. 172, Part 2, Entry 6708, Letters Sent, 1863-65, Volume 184/408 DW, no page no., Headquarters, Third Brigade, Fort Baker, December 3, 1863 to Lieutenant Colonel Haskins, Aide-de-Camp, Charge of Haskins Division; *ORA*, Serial 31, December 24, 1862 Commission report, page 915; *ORA*, Serial 91, page 280,, October 4, 1864, Alexander to Delafield, page 286.

[33] Frobel, *The Civil War Diary*, 195 (Friday 5 June 1863); RG77, Entry 18, B196', Barnard to Totten, February 4, 1864; RG 77, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received, A, B, C, and so on, 201, H4, Halleck, March 13,1864.

[34] RG393, P.I. 172, Part 1, Entry 5382, Box 1, B132 1862, Barnard to Colonel C. McKeever, Assistant Adjutant General, November 3, 1862 [this and letter below also in RG77, Entry 553, pages 121-23]]; RG 393. P.I. 172, Part 2, Entry 6744, John P. Slough, Military Governor of Alexandria, November 22, 1862, To Colonel Hunt, Acting Assistant Adjutant General, Headquarters, Defences South of the Potomac; RG 393, P.I. 172, Part 2, Entry 6610, B.S. Alexander to Lieutenant Colonel Haskins, Aide-de-Camp, in charge of Defences North of the Potomac, December 2, 1862 [also in RG77, Entry 553, page 136; RG393, Part 4, Fort Ethan Allen, Entry 443, Volume 207/475 DW, Orders Issued & Received, 1863-64, Page 101-02, Special Orders No. 73, Headquarters, Second Brigade, Defenses of Washington, North of the Potomac, Fort Pennsylvania, December 14, 1862, pages 101-02.

[35] RG393, Part 2, Entry 6606, Letters Sent, 1864-65, vol. 162/333 DW, page 3, #7, Headquarters, Haskins Division, January 7, 1864, to Colonel Greene, Chief Quartermaster Department; Library of Congress, Manuscript Division, U.S., Army—Engineers, Letterbook, 1862-64, page 25, Edward Frost to _____ , overseer, Defenses of Washington South of the Potomac,Engineer Office, June 20, 1862; RG92, Washington, DC, 1861-1917, Entry 2353, Letters Received, 1861-65, 1871-72, J19, Box 3, Letters Received, 1864——R.M. Jones, 1st Lieutenant, 24th Veteran Reserve Corps, Commanding Guard, Sourh End Long Bridge, Va, to A.V. Gish, Captain & Acting Assistant Adjutant General, October 27th 1864; RG92, Washington, DC, 1861-1917, Entry 2353, Letters Received, 1861-65, 1871-72, B731, Box 3, Letters Received, 1864——Colonel B.S. Alexander, Lieutenant Colonel Aide-de-Camp, Headquarters, Chief Engineer of Defences, Washington, August 18, 1864, to Captain Elisha E. Camp, Assistant Quartermaster; RG393, Part 2, Entry 6610, Captain Nesmith, Assistant Quartermaster, Hardins' Division, to Brigadier General M.D. Hardin, Commanding Division, October 10, 1864—submits report in obedience to your instructions, application of Lieutenant Colonel Thomas, dated Fort Bunker Hill, October 1864; RG393, Part 2, E6731, Lieutenant Colonel J.H. Taylor, Chief of Staff ,Assistant Adjutant General, Department of Washington, to Colonel M.I. Ludington, Chief Quartermaster, Department of Washington, February 8, 1865; RG92, Washington, DC, 1861-1917, Entry 2353, Letters Received, 1861-65, 1871-72, B731, Box 3, Letters Received, 1864——Colonel B.S. Alexander, Lieutenant Colonel Aide-de-Camp, Headquarters, Chief Engineer of Defences of Washington, August 18, 1864, to Captain Camp, Assistant Quartermaster; RG77, Entry558, page 83— Endorsement on requisition of Lieutenant Heevey, Quartermaster of 1st Mass Heavy Artillery, for lime for purpose of whitewashing forts, Office of Chief Quartermaster, April 9, 1864; RG393, pt. 2, Entry 6725, Letters Sent, 1863-65, Volume 189 DW, Page 33, same command, March 4, 1863, Aide-de-Camp to ColonelGeorge D. Welles.

[36] RG393, Part 1, Entry 5375, Letters Sent, Volume 1—20DW, page 268, Department of Washington, to Major General M.C. Meigs, Quartermaster General, August 8, 1864; RG393, Part 2, Entry 6725, Letters Sent, 1863-65, Volume 189 DW, page 321, August 10, 1864 to Colonel Thomas Wilhelm (messages to at least one other to do the same).

[37] RG77, Entry 553, Volume 2, page 84, to Taylor, October 13, 64; RG393, Part II, Entry 6731, H.P. Norris, 1st Lieutenant, 1st US Artillery, commanding Fort Morton, to Captain Thomas Thompson, Acting Assistant Adjutant General, De Russy's Division, near Fort Corcoran, March 13, 1865; RG77, Entry 553, Volume 2, page 84, to Taylor, October 13, 1864.

[38] RG 77, Entry 556, Registers of Letters Received, 1861-65, No. 79, Major D.C. Houston, August 17, 1862; RG 77, Entry 556, Registers of Letters Received, 1861-65, No. 91, Captain E.L. Hartz, Assistant [or, in a few cases, Acting] Quartermaster, September 11, 1862; RG77, Entry 553, Volume 2, page 95, to Brigadier General Daniel H. Rucker, Chief Quartermaster, November 14, 1864; RG393, Part 2, Entry 6731, Major J.G. Benton, Ordnance, commanding Washington Arsenal, to General DeRussy, November 1, 1864; RG393, Part 1, Entry 5382, Box 4, 18634, B86, W.F. Barry, Inspector of Artillery, to Lieutenant Colonel J.H. Taylor, Chief of Staff, Department of Washington, January 9, 1864; RG393, Part 2, Entry 6731, Major J.G. Benton, Ordnance, commanding Washington Arsenal, to General DeRussy, November 1, 1864; RG393, Part 2, Entry 6725, Letters Sent, 63-65, Volume 189 DW, page 447, Thomas Thompson, Captain & Assistant Adjutant General, De Russy's Division, to Colonel W.S. King, commanding Third Brigade, April 15, 1865; *ORA*, 2, pages 653-54 McDowell to Townsend, Assistant Adjutant General, May 29, 1861; *ORA*, Volume 37, Part 1 [S# 70], Special Orders No.123, Headquarters Department Of Washington, Twenty-Second Army Corps, May 18, 1864, page 483; *ORA*, Volume 37, Part 1 [S# 70], R. Chandler, Assistant Adjutant General, Hardin's Division, to Captain Conant, Company B, Maine Coast Guard, May 18, 1864, page 484; *ORA*, Volume 37, Part 1,[S# 70], Special Orders No. 34, Headquarters Haskins' Division, Twenty Second Army Corps, Department of Washington, May 6, 1864, page 393.

[39] RG393, Part 2, E6606, Letters Sent, 1864-65, Volume 162/333 DW, page 172, #409, Hardin, commanding Hardins Division, to Lieutenant Colonel Taylor, Chief of Staff & Assistant Adjutant General, September 23, 1864; RG 77, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 162, G7, Gunnell, August 13, 1864; RG393, Part 2, Entry 6610, Captain Nesmith, Assistant [or, in a few cases, Acting] Quartermaster, Hardins Division, to Brigadier General M.D. Hardin, Commanding Division, October 10, 1864—submits report in obedience to your instructions, application of Lieutenant Colonel Thomas, dated Fort Bunker Hill, October 1864; RG393, Part 1, Entry 5382, Box 4, 1863, B204, Barnard, to Lieutenant Colonel J.A. Haskins, in charge of Defenses, July 1, 1863; RG 77, Entry 553, Letters Sent, Volume 1, page 397-98, Barnard to Augur, May 5, 1864; RG77, Entry 575, Page 18, Menorandum—Fort Mahan, July 18, 1864; *ORA*, I, Volume 33, pages 887-8—Halleck to Grant, April 17, 1864—page 888; *ORA*, Volume 27, Part 3, Serial 45, June 29, 1863, Memorandum for Colonel Haskins, page 405.

[40] RG 77, Entry 556, Registers of Letters Received, 1861-65, Volume 2 organized like a regular Register of Letters Received—A, B, C, and so on, page 162, G7, Gunnell, August 13, 1864; RG393, Part 2, Entry 6606, Letters Sent, 1864-65, Volume 162/333 DW, page 172, #409, Hardin, commanding Hardins Division, to Lieutenant Colonel Taylor, Chief of Staff & Assistant Adjutant General, September 23, 1864.

[41] Barnard, *A Report on the Defenses of Washington*, Appendix C, 137; *ORA*, I, Volume 27, Part 3, Serial 45, June 29, 1863, Memorandum for Colonel Haskins, page 405; RG77, Entry 575, page 18, Memorandum—Fort Mahan, July 18, 1864.

[42] RG393, Part 1, Entry 5382, Box 4, 1863, B204, Barnard, to Lieutenant Colonel J.A. Haskins, in charge of Defenses, July 1, 1863; RG 77, Entry 553, Letters Sent, Volume 1, page 397-98, Barnard to Augur, May 5, 1864.

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[65] *ORA*, I, Volume 25, Part 2, Serial 40, 3-4; *ORA*, I, Volume 25, Part 2, Serial 40, 177-78.

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Chapter VII

Jubal Early's Raid/
The Battle of Fort Stevens

CHAPTER VII: JUBAL EARLY'S RAID ON WASHINGTON, D.C./ BATTLE OF FORT STEVENS

Before the Battle

During its existence, the Civil War Defenses of Washington were under almost constant rumor of threat and suffered various Confederate raids, especially on its southern and western sides. In the aftermath of the First Battle of Manassas, the routed Union troops streamed back into Washington as a disorganized mob and, theoretically, that should have made it easy for enemy forces to follow up and seize the capital. Thankfully, the Confederate forces were also disorganized, tired and in need of food, supplies, and ammunition, which made it impossible for them to follow up on their victory. Following the Confederate victories at the Second Battle of Manassas and the Battle of Chantilly, the defeated Union troops returned to the capital dejected but not in rout; again the Confederates did not followup by attacking Washington. Similarly, during the Antietam and Gettysburg campaigns, fears that the Confederate forces might some how elude their Union pursuers and turn south to Washington kept the capital in a heightened state of insecurity. At other times, rumors of intended attacks on Washington sent chills through the hearts of many of the Washington, D.C. area inhabitants, except for the numerous Confederate sympathizers.[1]

Although an all out attack and/or siege of Washington was unlikely, most of the time, the threat of enemy raids was a constant threat and rumors of intended excursions circulated almost daily. The greatest threats of intended raids concerned the most frequent raiders, Colonel John Singleton Mosby's Confederate guerillas, the Forty-third Virginia Cavalry Battalion. Mosby and his men did carry out raids on the defenses and related troops at times and the threat of such raids was realistic. But, Mosby and his men did not perpetrate all raids on the Defenses of Washington; Major, later Lieutenant Colonel, Elijah V. White's Thirty-fifth Virginia Cavalry Battalion was one of the other raiding units.[2]

The greatest enemy threat to the Defenses of Washington occurred in July 1864, when Confederate Lieutenant General Jubal A. Early led his "Army of the Valley" to within six miles of downtown Washington in view of the new Capitol dome. In mid-June, Early left Robert E. Lee's Army of Northern Virginia at Cold Harbor. He marched to the Shenandoah Valley where his army provided the deciding numbers in defeating Union Major General David Hunter at Lynchburg. Early then headed down the valley and across the Potomac River into Maryland, defeated another Union army under Major General Lew Wallace at Monocacy, and then marched his men to the outskirts of the Union capital. Could Early and his men accomplish the unthinkable and capture Washington, D.C., a feat that no other Confederate army, even one commanded by the consummate commander, Robert E. Lee, had accomplished?

The Campaign

According to Lieutenant General Jubal A. Early, General Robert E. Lee gave him orders, on June 12, 1864: " . . . to move the [Second] corps, with two of the battalions of artillery attached to it, to the Shenandoah Valley; to strike [Major General David] Hunter's force in the rear and if possible, destroy it; then to move down the valley, cross the Potomac near Leesburg, in Loudon County, or at or above Harpers Ferry, as I might find more practicable, and threaten Washington city." In addition, Early was to "communicate" with General John C. Breckenridge who would "cooperate" with him against Hunter and in the expedition north. At the time he received these directions, his corps was located near Gaines Mill, in the rear of [Lieutenant General Ambrose P.] Hill's line at Cold Harbor. Early the next morning, Early started his corps, that he stated numbered about eight thousand men, towards Charlottesville, Virginia.[3]

Early and his men arrived in Charlottesville on June 16. There, they took the train for Lynchburg, arriving in mid-day on the next day and entered the Confederate earthworks just as the Union troops came in to view. With the arrival of Major General Stephen D. Ramseur's division, the Confederates halted the Union attack and both sides spent the rest of the day deciding on their future moves. Inactivity continued the next morning except for some light skirmishing. Around noon, the Confederates undertook an attack and fighting continued for about two hours when Early ended the assault and appeared to be getting ready for a decisive attack the next morning. Hunter, even though his force outnumbered the Confederates, decided not to wait for the onslaught and ordered a retreat that evening. Fearing a Confederate pursuit might block the important Valley Turnpike, he took his force west into West Virginia, arriving at Parkersburg, on the Ohio River, on July 4.[4]

The Confederates pursued Hunter's force and in a few skirmishes, captured some men and artillery and destroyed supplies and ordnance. When the Yankees entered the mountains, Early broke off the pursuit and, on the 22nd, halted to replenish his men, allowing the artillery and wagons to catch up. On June 18, Early had received a telegram from Lee, stating: "Grant is in front of Petersburg" so "Strike as quick as you can, and, if circumstances authorize, carry out the original plan, or, move upon Petersburg without delay." Thus, after replenishment, Early headed his force, now comprising his Second Corps plus men commanded by Breckenridge and Ramseur, down the Shenandoah Valley, crossing the James River on the 23rd and reaching Buchanan that night, and proceeding on to Staunton, on the 26th, where he halted again to reorganize.[5]

At Staunton, after reorganization, Early determined that he had about two thousand mounted troops commanded by Major General Robert Ransom and comprising four brigades under Brigadier General John McCausland, Colonel W.L. Mudwall Jackson, Brigadier General Bradley T. Johnson and Brigadier General John D. Imboden. The infantry comprised approximately ten thousand troops. Major General John C. Breckenridge commanded a corps composed of his own division, under Major General Arnold Elzey, and Major General John B. Gordon's division of the Second

Corps. The other two Second Corps divisions were under Major General Robert Emmmet Rhodes and Major General Stephen D. Ramseur. Brigadier General Armistead L. Long commanded the nine artillery batteries divided into two battalions. Early also attempted to unencumber his army by leaving unneeded supplies and personal items there. With all this accomplished, early in the morning on June 28th, Early set his command into motion, passing Harrisonburg on the 29th and New Market on the 30th, continuing to Winchester on July 2. At Winchester, a communication from Lee directed Early to remain in the area until "everything was in readiness" to cross the Potomac and, in the meantime disrupt and destroy the Chesapeake and Ohio Canal and the Baltimore and Ohio Railroad.[6]

On July 3, Union Major General Franz Sigel, after some skirmishing, fled Martinsburg, abandoning some supplies—he had shipped out most of them in the railroad cars—and the Confederates enthusiastically appropriated what they found. Other destruction of the railroad and canal was also accomplished. But, at Martinsburg, on the 3rd, some of Gordon's men became drunk and plundered the city. The same thing occurred the next day at Harpers Ferry, as some of Gordon and Ramseur's men pillaged the city in a disorganized mob. Union troops had evacuated the city, crossed the Potomac River, burned the railroad and pontoon bridges there and moved into the fortifications on Maryland Heights. Early began crossing the Potomac at Shepherdstown the next day intending to attack the Union forces on Maryland Heights. The Confederates eventually realized that capturing the Union force would cost many men and much time in the attempt, which was not a forgone success. Thus, Early, on July 7, moved on, leaving the Union forces on Maryland Heights. He would march around them, through South Mountain on his way to Washington.[7]

On July 5, Lieutenant General Grant, commanding general of the Army, in spite of various correspondence from Union commanders in the Shenandoah that mentioned Early commanded the force in their front, dated as early as June 22, finally realized that Early, with the Second Corps, was absent from his front. Also, about this time, the day that Early's men began crossing the Potomac, Washington, D.C. and its citizens really began to worry about their security. Would Early head towards Baltimore, Washington or somewhere else?[8]

On July 6, Captain Robert E. Lee, met up with Early, near Sharpsburg, with a message from his father. In addition to his other missions, Early was to cooperate in an operation intended to liberate Confederate prisoners of war so that they could join Confederate forces before Petersburg. Early would detach General Bradley T. Johnson, with his cavalry brigade formerly commanded by General William E. "Grumbles" Jones, on a raid between Washington and Baltimore toward the Union Prison at Point Lookout, Maryland, where he and a force under naval raider Colonel-Commander John Taylor Wood would secure the release of the fifteen to twenty thousand prisoners of war there. Early sent Johnson off on the mission but, due to the inability of Wood to join up, the prisoners of war were not liberated.[9]

Although Early had hoped to find some Confederate sympathy as he entered Maryland, he did not court it. His men undertook extensive foraging, which, in some cases, turned into sacking, pillaging and plundering in various towns including Sharpsburg, Hagerstown, Williamsport and Shepherdstown. The Confederates extracted ransoms from some towns such as $20,000 from Hagerstown, $1,500 at Middletown, and $200,000 later at Frederick. In addition, supplies and food were taken from many Maryland homes and farms.[10]

Early, on July 7, sent the cavalry ahead toward Frederick and, since the expected shipment of shoes had finally arrived, he distributed them to his men that night. Leaving early in the morning on July 8, advancing toward South Mountain, Rhodes men moved through Crampton's Gap to Jefferson; Breckenridge led his men through Fox's Gap; and Ramseur pushed his men, with the supply wagons, through Boonsboro Gap. After passing South Mountain, the force moved on toward Monocacy Junction. Ramseur's division moved through Frederick, skirmishing with Union troops as they advaned. The Union force under Major General Lew Wallace, the commander of the Middle Department and author of *Ben Hur*, began the evacuation of Frederick, after dark. The Confederates entered Frederick, the next morning, and extracted a ransom of $200,000.[11]

When, Wallace and his men, numbering between five and six thousand, including Brigadier General James B. Ricketts' Division of the Sixth Corps that Grant had dispatched on July 5, left Frederick, they moved southeast of the city and took a position on the Monocacy River where they could dispute enemy crossings. Early reported that his line covered " . . . the Washington road, while the Baltimore pike is two miles and a half on my right." The position blocked passage on both the roads leading to Washington and to Baltimore. Skirmishing began at around 6:30 a.m. and eventually lead to general fighting, about 9:00 a.m., as the Confederates, roughly ten thousand men, advanced. After fierce resistance for a prolonged period of time, turning back three Confederate attacks, Ricketts' division was defeated after Gordon's division outflanked it. Wallace decided to retire before he lost all his troops, allowing the Confederates to cross the railroad bridge, and fighting ceased by 5:00 p.m. Some Confederates pursued the Yankees but soon broke off. The Confederates had lost around 700-800 men killed, wounded and missing while the Yankees lost about 1300-1400. Early's men had clearly won a decided victory, but had lost a day in their movement to Washington that was quite telling.[12]

Following the Battle of Monocacy, Early ordered the wagons, supplies, foraged livestock and captives to cross the Monocacy that evening so they would be ready to move with the army early the next morning. U.S. Army Chief of Staff Henry W. Halleck received a message from Wallace, at 11:40 p.m., informing him of the defeat at Monocacy; Wallace had begun a retreat toward Baltimore. In light of Early's movements after the battle, it became fairly evident that he was headed for Washington, not Baltimore. Realizing the precariousness of the situation in the Washington, D.C. area, on the 9th, General Grant ordered the two remaining Sixth Corps divisions to Washington by boat. On the 10th, he informed the President that one division of the Nineteenth Corps, about 6,000 men, was on its way by boat, from Fort Monroe. Some thought was given to

having U.S. Grant, himself, travel to Washington and personally command the defenses of the capital but he finally decided that " . . . it would have a bad effect for me to leave here." At daylight, Early's army began to move in the direction of the Union capital.[13]

General McCausland's cavalrymen led the way for Early's army as they traveled the road toward Washington. Dust and heat wearied them. Periodic skirmishing haggard them. Union Major William H. Fry gathered approximately 500 cavalrymen, from Giesboro Depot, and set out to discover Early's whereabouts. He soon fell in with Captain A. Levi Well, with some companies of the Eighth Illinois Cavalry Regiment, and together they rode north from Rockville toward Gerrardsville; these troops engaged the enemy in what historian Benjamin Franklin Cooling referred to as " . . . the opening shots of the battle for Washington." Fry and Well dogged the Confederates for the rest of the day, all the way to Rockville. By evening, the Confederate troops were strung out from Gaithersburg to Rockville. The main Confederate bivouac was at Gaithersburg.[14]

According to Early, his army moved out at daylight on July 11. McCausland, with his cavalry traveled the Georgetown Pike. The infantry, with John Imboden's cavalry, under Colonel Smith, in the lead, "turned to the left at Rockville, so as to reach the 7th street pike which runs by Silver Springs into Washington." Jackson's cavalry covered the infantry's left flank. Like the day before, it was hot and dry, no rain for weeks, which, with all the men, horses, artillery and wagons moving at once, stirred up a lot of dust. The Confederates were moving as fast as they could in an effort to reach and capture the fortifications in the Defenses of Washington before re-enforcements arrived to man them.[15]

As the Confederates approached, the Union troops, what there was of them, were in dire straits. First, the command structure was fragmented. Major General Christopher C. Augur commanded the Department of Washington, Twenty-second Army Corps, and should have had overall command. Colonel Moses N. Wisewell was Military Governor of Washington and, therefore, he had some command functions. Major General Alexander McD. McCook reported that on July 11, at 12.30 a.m, a telegraphic order was received directing that: Major General Quincy A. Gillmore, with a portion of the Nineteenth Corps, would command the line from Fort Lincoln to Fort Totten; Brigadier General M. C. Meigs, Quartermaster-General, would command the line from Fort Totten to Fort De Russy; Brigadier General Martin D. Hardin, would command from Fort De Russy to Fort Sumner, inclusive; Major General Horatio G. Wright, commanding the Sixth Corps troops in the defenses would be held in reserve; and Major General Alexander McD. McCook would command the entire line. Furthermore, the Chief of Engineers, Brigadier General Richard Delafield, reported that at the time of Early's raid, he had ordered all the Army Engineer officers constructing seacoast batteries, north and east of this city, to the defenses of Baltimore and Washington, including seven officers and General Barnard had also returned for the emergency. Thus, command confusion was rife.[16]

The number of troops and their quality were major problems. In his post-war report on the Defenses of Washington, Barnard wrote that in July 1864, " . . . all the artillery regiments which had constituted the garrisons of the works and who were experienced in the use of the artillery, had been withdrawn and their places mainly filled by a few regiments of 'one-hundred-days men,' just mustered into service." Continuing, Barnard remarked that the fortifications were manned by: "Bodies of hastily-organized men, such as teamsters, quartermasters' men, citizen volunteers, &c., sent out to the lines . . ." Veteran Reserve Corpsmen, composed of partially disabled men who could perform some duties, were on alert and manned some of the fortifications. This allowed the fully-able to fight. Convalescents were also in the defenses. The July 10th Department of Washington tri-monthly report showed an aggregate present combined strength of 23,326 officers and men North of the Potomac along with 484 heavy artillery pieces and 29 field artillery pieces; 16,114 officers and men, 460 heavy artillery pieces and 6 field artillery pieces were south of the Potomac and would be of no use in the fight against Early's army. Of the 23,236 officers and men only 17,277 were readily available to fight Early's army. Those not available included 196 general headquarters personnel, 2,841 military personnel in the District of Saint Mary's, Maryland, 156 at Fort Washington, Maryland, and 2,766 general hospital guards. Historian Frank Vandiver believes that "After all detachments and other deductions were made, Augur might be able to put 9,500 men in the thirty-seven miles of entrenchments" including those south of the Potomac. Historian Frank Cooling wrote: "All that authorities could hope for was a sufficient show of force to bluff the enemy until Grant's veterans could arrive from Petersburg to save the city."[17]

As Early's men continued their advance, they ran into some Union troops. Colonel Charles R. Lowell with three squadrons of the Second Massachusetts Cavalry Regiment may have initiated the first fighting of the day when they skirmished with McCausland's force while also gathering intelligence. Major William H. Fry was also involved in skirmishing that morning. As McCausland continued his movement on the Georgetown Pike, he was headed for Fort Reno at Tennallytown and along with a battery of artillery, he drove back the Union picket-line guarding the fronts of forts Bayard, Simmons, and Mansfield. At that time, the guns in those forts and Fort Reno opened on McCausland, his men and the accompanying artillery battery. McCausland, in response to the artillery fire moved left, giving his attention to forts Kearny and De Russy and the intervening ground, between 9 and 11 a.m. By noon, General Hardin, commanding in the area, asked General Augur for more ammunition for Lowell and Fry and forage for their horses. Skirmishing continued on that front.[18]

The other Confederates marched from Rockville on Rockville Pike along the New Cut Road (now Viers Mill Road) to the crossroads in Leesborough (now Wheaton). Then, they turned right on to the Washington and Brookeville Turnpike that became the Seventh Street Road in the District. As they marched, they heard the heavy artillery firing from the forts and heard of the intelligence from McCausland about the well-built fortifications in the Defenses of Washington. As they approached the District, the Capitol dome came into view as well as the enemy fortifica-

tions. Colonel Smith drove a small body of cavalry back into the works, dismounted his men and deployed as skirmishers. Early rode ahead of the infantry and arrived in sight of Fort Stevens after noon, observing that the fortifications were not adequately manned. Attempting to act quickly, Early wrote that he deployed his infantry and started them towards Fort Stevens just as Union re-enforcements were arriving and being deployed within the fortifications. When skirmishers in front of the fort responded, and the heavy artillery from the fort began to fire, Early stopped his movements and reconnoitered.[19]

Around noon, cheering began at the Sixth Street docks where Union reinforcements had finally arrived. Even the president came to the dock to greet them. Major General Horatio Wright led one of his divisions of the Sixth Corps off the transports onto the dock to rousing cheers. After a false start in the wrong direction, these troops headed up Seventh Street toward Fort Stevens. Soon afterwards, the Nineteenth Corps contingent arrived and headed up Seventh Street also. When General Wright and his men approached the defenses, he received an order from General Halleck to hold his men in reserve and the Nineteenth Corps contingent was to move to Fort Saratoga, not under enemy attack. Wright fumed and finally received permission to advance to Fort Stevens. When he arrived at the fort, the Confederates were pressing the skirmishers and approaching the fort. When the First Brigade, Second Division, Sixth Corps under Brigadier General Frank Wheaton moved out to reestablish the skirmish line, other Sixth Corps units ventured into the skirmishing. A variety of people such as Secretary of State, William H. Seward, and Secretary of the Navy, Gideon Welles, had come to Fort Stevens to observe the fighting, including the President, with Mrs. Lincoln, who peered over the parapet, putting himself in danger and earning a special honor as the only president to come under enemy fire while in office. Early's whole force never showed but skirmishing continued until the Confederates fell back after dark ending the fighting.[20]

After dark, Early met with generals Breckenridge, Rhodes, Gordon and Ramseur and, according to the Confederate commander, he decided to attack the fortifications at daylight on the 12th. Later, though, he received intelligence from General Johnson that two corps from General Grant's army had arrived and more could be on the way. Thus, at daylight the next morning, Early reconnoitered again, "found the parapet lined with troops" and "decided to give up all hopes of capturing Washington." Thus, it remained relatively quiet in front of Fort Stevens throughout most of the day except for skirmishing and Union artillery fire upon any "collection of the enemy which could be seen within reach of their guns." Again, President Lincoln visited Fort Stevens and ascended the parapet to see what was happening. Under enemy fire, someone, there are various suggestions as to whom it was, entreated the president to get down before he was killed. At around 6:00 p.m., General Wright ordered General Wheaton to lead his division out and clear out the Confederate skirmishers, about twelve hundred yards in front of Fort Stevens to the right of the Seventh Street, who were systematically wounding or killing anyone who exposed themselves within the fort; the enemy strongly resisted the attack and heartily returned fire for some-

time before retreating long after dark.[21]

West of Fort Stevens, Colonel Lowell, commanding the cavalry in front of Fort Reno, concocted a bold move and received permission from General Hardin to carry it out. He moved up the River Road, in the morning, while it was still dark, reached the wooded country, and attacked McCausland's cavalry on its right. Then, Lieutenant Colonel Crowinshield, with two squadrons of the Second Massachusetts Cavalry Regiment, attacked the enemy's front, compelling them to drop back a mile in confusion. Other attacks on isolated Confederate units occurred elsewhere in front of the defenses.[22]

During the night of July 12 to 13, Early's Army of the Valley withdrew, headed back to the Shenandoah Valley, crossing the Potomac at White's Ford, near Leesburg on July 14; some Union forces had pursued Early whose men fought a rearguard action at Poolesville, Maryland. After Early crossed the Potomac, General Wright advised his superiors against pursuit but President Lincoln did not agree. One source gives the total Union and Confederate casualties as 874; another source gives casualties as 573 Union and 500 Confederate. The only real threat of the Civil War to the Union capital was over. Soon, the strength of the Defenses of Washington would return to depleted numbers but as the Union forces continued to win victory after victory, the defense of Washington, D.C. seemed unnecessary.[23]

Historically Significant Sites Related to Early's Raid in the District of Columbia and Montgomery County, Maryland[24]

The area in which the Battle of Fort Stevens occurred was mostly open farm area at the time of the battle. Many of the homes, farms and other buildings in the area were damaged or destroyed to provide a field of fire for artillery, to prevent enemy sharpshooters from using them as a blind, or by accidental fire during fighting. The area remained as open farm area for some time after the battle but, especially in the Twentieth Century, practically all of it was developed for housing. Thus, little remains of the original battlefield with any integrity. Many of the roads, including Georgia Avenue (formerly Seventh Street Road and Brookeville Turnpike), Rockville Pike (Route 355), Viers Mill Road (Route 586), and Georgetown Pike (Route 197), still maintain their original names and much of their Civil War period trace. Postmaster Montgomery Blair rebuilt his home "Falkland," burned to the ground during Early's raid, but it finally succumbed, in 1958, and the Blair Shopping Center was built on the site. Francis P. Blair's Home, "Silver Spring," which Early saved from destruction and used as a headquarters while in the area, was razed in 1958. The nearby town of Leesborough renamed itself Wheaton in honor of Union General Frank Wheaton who protected it from Confederate pillaging and destruction. The Civil War Sites Advisory Commission offered the following in reference to the Battle of Fort Stevens battlefield area, after listing the few historically significant sites with integrity: "Other than these specific areas, all structures and open ground associated with the battle have been completely obliterated by resi-

dential and commercial development in Washington, DC and Silver Spring, MD within the last 50-75 years." Further, in discussing the long-term threats to the Battle of Fort Stevens battlefield area, the Civil War Sites Advisory Commission reported: "Other than the forts administered by the National Park Service, Battleground National Cemetery, Grace Episcopal Church, and Walter Reed Army Medical Center, the historical integrity of the land involved in the Battle of Fort Stevens has been completely eliminated by residential and commercial development."

The sites that do include some integrity are listed below along with some historical and descriptive information:

Anderson Cottage

The U.S. Soldiers' Home (now the U.S. Soldiers' and Airmens' Home) was established in 1851, through the efforts of Major Robert Anderson and Lieutenant General Winfield Scott. The Soldier's Home partially incorporated George Riggs' farm including his original home, named Anderson Cottage, in honor of Robert Anderson. President Abraham Lincoln and his wife, Mary Todd Lincoln, used Anderson cottage as their Summer home, where they were staying until 10:00 p.m. on the night of July 10 before Jubal Early's Army of the Valley invaded the area. They returned to the Anderson Cottage on July 14. Also, located on the U.S. Soldiers' Home grounds, the Army used the tower above the Scott Building for a signal tower during Early's Raid.

Battleground National Cemetery

In July 1864, Quartermaster General Montgomery C. Meigs took possession of a small parcel of the battlefield ground over which some of the fiercest fighting of the Battle of Fort Stevens had occurred to bury forty of the Union dead. The U.S. Government acquired title to this Battleground National Cemetery, encompassing 1.033 acres, on February 22, 1867, under the provision of an Act of Congress that provided for National Cemeteries. War Department General Orders No. 39, date April 7, 1882, designated Battleground National Cemetery as a Fourth Class Cemetery. Monuments to Union Army units that had served in the Battle of Fort Stevens were placed in Battleground National Cemetery as follows: Ninety-eighth Pennsylvania Volunteer Infantry Regiment in 1891, One Hundred Twenty-second New York Volunteer Infantry Regiment in 1903, Company K, One Hundred fiftieth Ohio National Guard Regiment in 1907, and the Twenty-fifth New York Volunteer Cavalry Regiment in 1914. In March 1936, the cemetery interred the remains of Major E.R. Campbell, who had served in the Battle of Fort Stevens and died at the age of 92, bringing the total of soldier graves to 41. Today, Rock Creek Park, National Park Service, administers the Battlefield National Cemetery.

Fortifications in the Defenses of Washington involved in the Battle of Fort Stevens

Fort Stevens

Fort Stevens was originally constructed as Fort Massachusetts in 1861. Later the Army enlarged the fort and renamed it Fort Stevens. Today, several pieces of artillery are placed within the partially reconstructed fortification, administered by the National Park Service. Emory Chapel now stands where the fort's eastern magazine had been. On November 7, 1911, William Van Zandt Cox and Lewis Cass White supervised the placement of a three-ton boulder (five and one-half feet high by three feet in diameter taken from the battlefield near the site of the then new Walter Reed Army Hospital on the old Carberry property) atop the fort's parapet to mark the spot where President Lincoln stood under fire; four 32-pounder cannon balls, fired from the fort and found on the battlefield, surround the base of the marker. The Sixth Corps Association, on July 12, 1920, dedicated a bronze bas-relief, sculpted by Otto Schwizer, depicting President Lincoln, Surgeon Crawford and General Wright under fire on the parapet, that was affixed to the boulder.

Since around 1900, individuals and organizations had tried in vain to have the U.S. Government acquire the site. But, it was not until 1925-33, that the Government got the remaining parts of the fort and some of the surrounding ground. The Daughters of Union Veterans of the Civil War and the Grand Army of the Republic, in September 1936, placed a bas-relief of the fort on the site. In the late 1930s, the Civilian Conservation Corps restored the parapet on which President Lincoln stood and the western magazine, under National Park Service landscape architect Robert P. McKean's supervision; the Civilian Conservation Corps substituted concrete for the original wood magazine interior, gun platforms and revetments although they aptly duplicated the detail and style of the Civil War engineers. Fort Stevens has served as a gathering point for Civil War veterans and a location for reenactments and memorializations.

Fort De Russy

Located within a wooded section of Rock Creek Park are the remains of the earthworks and some of the rifle trenches along with a plaque on a large boulder.

Battery to left of Rock Creek

Located near Fort De Russy, the earthworks of the Battery to the left of Rock Creek are visible.

Battery Kingsbury

Scant remains of Battery Kingsbury are visible.

Battery Sill

Scant remains of Battery Sill are visible.

Fort Totten

Located in a large open area near a Metro Station of the same name, allowing for erosion and vandalism, well-preserved earthworks and an outer trench are visible.

Battery Totten

Located near Fort Totten, the battery's earthworks are visible but because they are located in an open area, they are liable to erosion and vandalism.

Fort Slocum

Fort Slocum Park includes some visible rifle pits and remains of a field gun battery.

Fort Reno

Fort Reno Park is basically a large open field, with possibly some archaeological remains underneath, but is devoid of any fortification remains above ground.

Fort Bayard

Fort Bayard is a small park with very few remains of the fort.

Fort Bunker Hill

Fort Bunker Hill is located in heavy woods, but it includes a few remains of the earthworks.

Grace Episcopal Church Confederate Gravesite

At the time of the Battle of Fort Stevens, Grace Episcopal Church stood along Brookeville Pike and many of the Confederates marched past it. The Grace Episcopal Church that now stands in the area was constructed after a former structure burned in 1896. A new trolley line on Georgia Avenue forced the movement of the Confederate mass gravesite to its present location. The gravesite includes 17 unknown Confederate dead from the Battle of Fort Stevens. At the gravesite is a shaft, made of granite, marked simply "Confederate," that memorializes the Confederates who lost their lives in the Battle of Fort Stevens.

Rockville, Maryland Fairgrounds

General John McCausland's cavalry brigade camped overnight, July 10-11, on the fairgrounds at Rockville, Maryland.

Walter Reed Army Medical Center

The Walter Reed Army Medical Center originally began when the reservation of 43.27 acres was announced in War Department General Orders No. 83, W.D., dated May 2, 1906, as a result of deeds obtained from George W. Madert and his wife, in 1905. Administered by the U.S. Army, Walter Reed Army Medical Center is located on land where the Confederates positioned their lines during the Battle of Fort Stevens. Some of the open ground within the reservation is similar to the appearance of the terrain in 1864 on which the Battle of Fort Steven was fought. Also, the sharpshooter who fired at President Lincoln, after he ascended Fort Steven's parapet, was on land now incorporated into Walter Reed Army Medical Center; today a plaque, accompanied by two 100-pounder spherical shots fired from Fort Totten or Fort De Russy, marks the spot of a Tulip tree that stood near where the Confederate sharpshooter had been. Readily apparent now, the problem with this site is that during a national emergency, it may be closed to the public.

Woodside Park

In Woodside Park, in Silver Spring, at the corner of Georgia Avenue and Spring Street, a historical marker pertaining to the Battle of Fort Steven, was unveiled on July 13, 1992.

Interpretation

These sites, then, are those that could be visited when interpreting Early's Raid on Washington/Battle of Fort Stevens. Fort Stevens should, definitely, be the premier site but because only part of it was saved and the state of preservation and interpretive facilities at the site leave something to be desired, it does not provide excellent circumstances for interpretation. Also, the National Park Service does not have a historian or interpretive ranger assigned to Fort Stevens daily, an important condition for a premier interpretive site, and, most likely, can not afford to do so. None of the other sites mentioned above has the value or notoriety of Fort Stevens and, therefore, could not serve as the major interpretive site.

But, there are alternatives to having a major specific site to accomplish the interpretation. First, the National Park Service could produce a brochure providing the historical background of Early's Raid on Washington/Battle of Fort Stevens along with a driving guide to each of the important sites. Second, the National Park Service could produce a historical handbook on Early's Raid on Washington/Battle of Fort Stevens as they have done for other sites. Finally, if possible, the National Park Service could produce an audio tape and/or compact disc providing historical information on the event along with driving directions and instructions. Hopefully, the accomplishment of these measures would provide an excellent level of interpretation along with the least amount of cash outlay over a long period of time.

Endnotes

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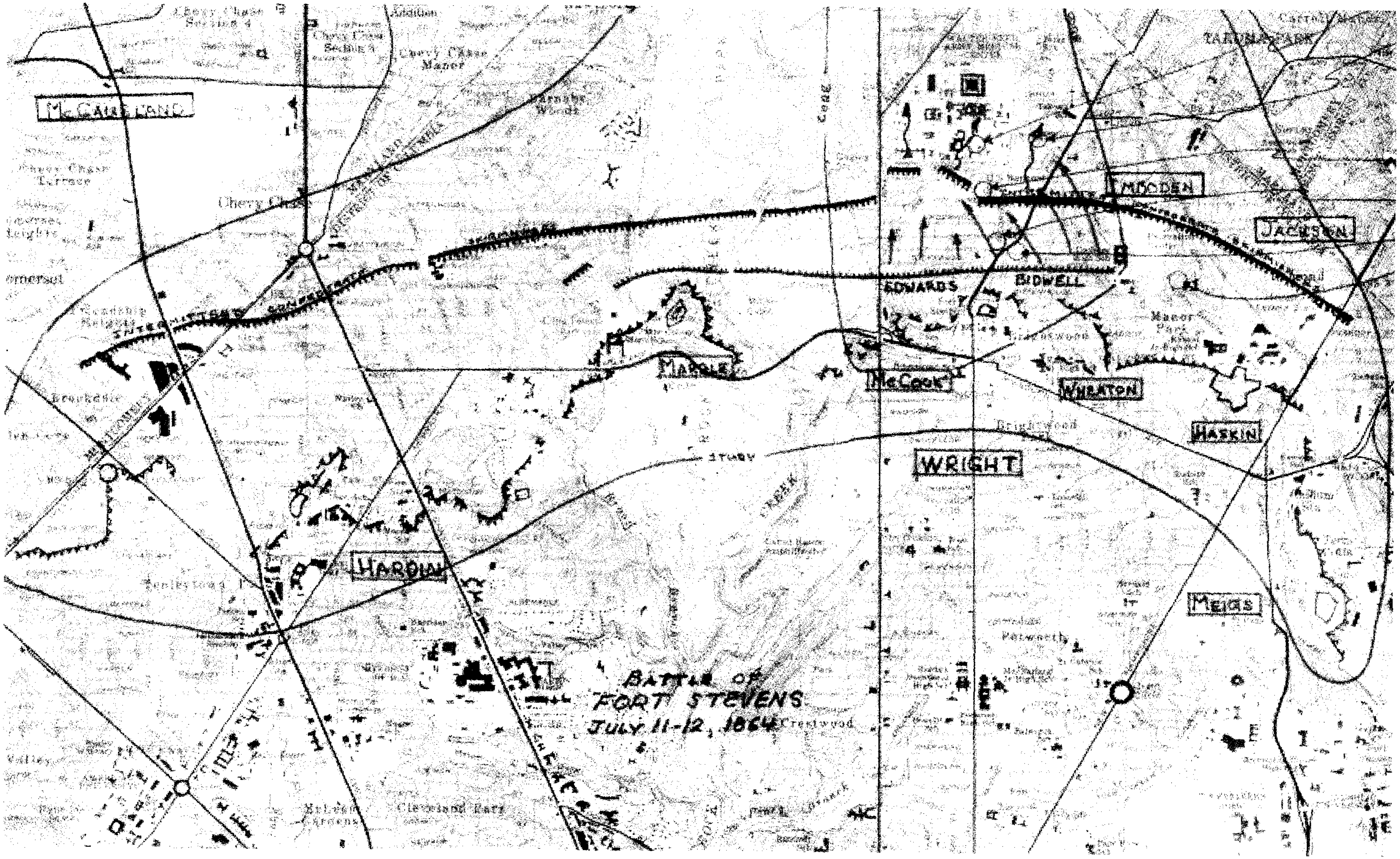
Note About The Maps

For some of the important Civil War battlefields, extensive information is available including maps that show where the various units were at certain times during the battle and the homes, farms and other features that existed at the time of the fighting. Unfortunately, the Battle of Fort Stevens has not received a lot of attention but there are a few useful items available.

Soon after the battle, General Barnard reported [ORA, I, 37, Part 2 (serial 71), 414-16], on July 22, that in compliance with instructions from Major General C.C. Augur, commander of the Department of Washington, he "caused the ground occupied by the rebel troops to be surveyed and the location of camps noted" and inclosed a sketch showing all this. He also inclosed a report from Lieutenant J.H. Oberteuffer, Jr. and Mr. E. Hergesheimer, U.S. Coast Survey, who also made the sketch, in which they gave some detail about the movements and locations of the enemy during the battle. But, the sketch is unavailable [I looked for the sketch and Michael Musick, the Civil War specialist at the National Archives, did also but neither of us was able to find it]. Hopefully, this sketch will show up somewhere soon!

In 1991, Congress created the Civil War Sites Advisory Commission to determine which Civil War battles were the most historically significant, which ones were under historic preservation threat, both short and long term; and devise new methods for saving them other than spending millions and millions of dollars for them. Between 1991 and 1993, the Commission conducted surveys of the historically significant battlefields, including Fort Stevens, and completed written reports and maps showing where the actual battlefield is, where the troops were and marked the important features for each. The Battle of Fort Stevens map, researched and drawn by David Murphy, of the Capital Region, National Park Service, appears to be the best extant one, by far, showing the location of the troops and features on the battlefields. A copy of this map is included, in two parts, within this report.

In 1863, April to September, Private A.A. Hodasevich, Second Artillery, Pennsylvania Volunteer Battalion, drew, in the field with a plane table, "a map of distances to principal points in " for each fort in the brigade [First Brigade, Defenses North of the Potomac]. The map includes 5 large sheets of paper that show the environs of forts DeRussy, Stevens, Slocum. Totten, Slemmer, Bunker Hill, Saratoga, Thayer, Lincoln, and batteries Sill and Jameson, showing fortifications, roads, houses, names of residents, fences, vegetation, drainage and relief by contour lines. This multi-paged map, among the holdings of the Geography and Map Division, Library of Congress [G3851.S5 1863 .H61 Vault, 189 L. Sheet 1], therefore, shows the features, including house, farms, etc., on the Fort Stevens battlefield, as they were just one year before the battle.



McCAUSLAND
IMBODEN
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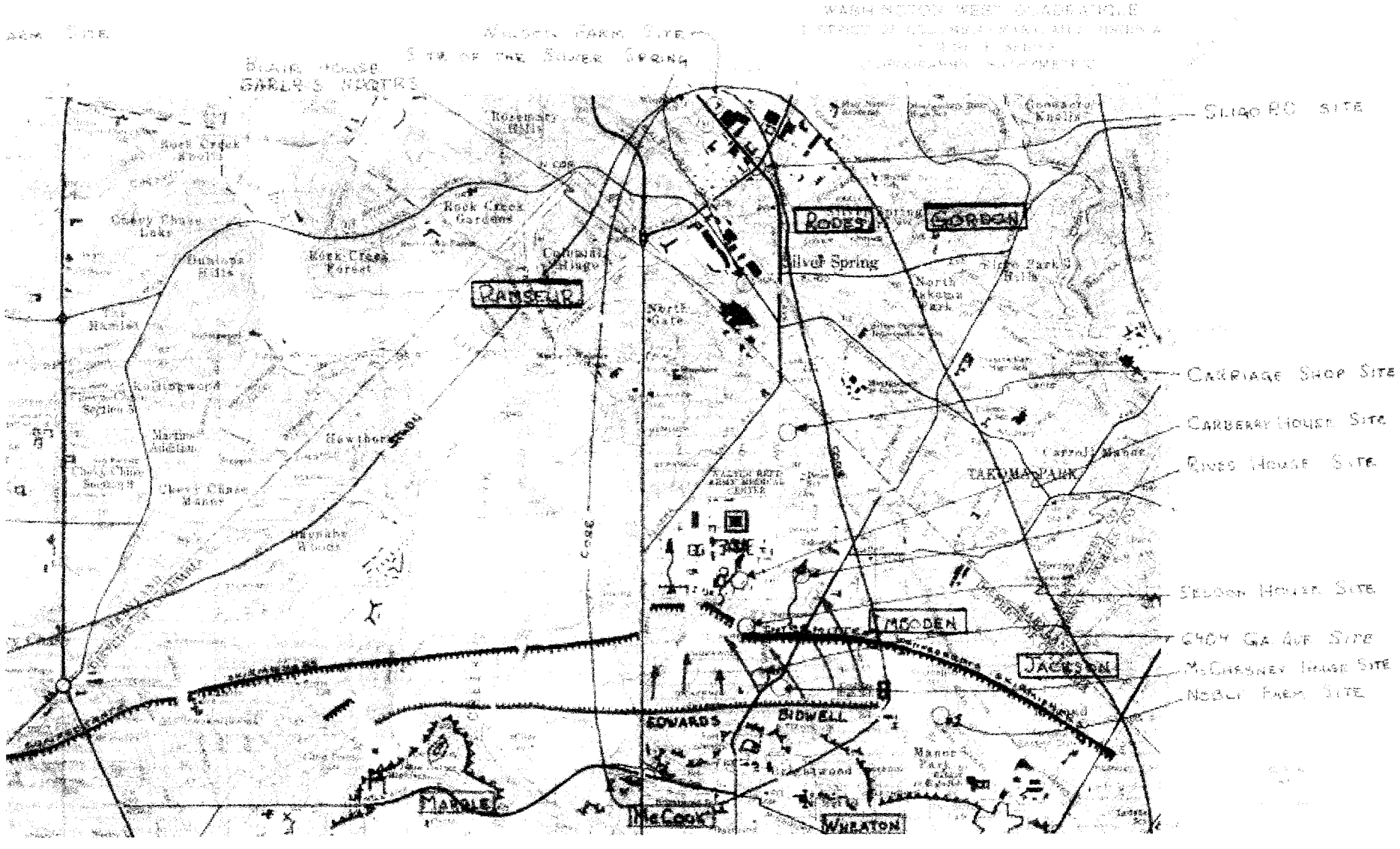
BATTLE OF
FORT STEVENS
JULY 11-12, 1864


Site of the Silver Spring
Blair House
Sligo Rd. Site
Carriage Shop Site
Carberry House Site
Rives House Site
Sligo Park
Rock Creek Forest
Rock Creek Gardens
Rosemary Hills
Chevy Chase Lake
Dunlaps Hills
Hawthorne
Takoma Park
Silver Spring
North Takoma Park
Carroll Manor
Rodes
Gordon
Ramseur
Meeden
Jackson
Edwards
Bidwell
Marvel
McCook
Wheaton
Rock Creek

Photographs and Illustrations

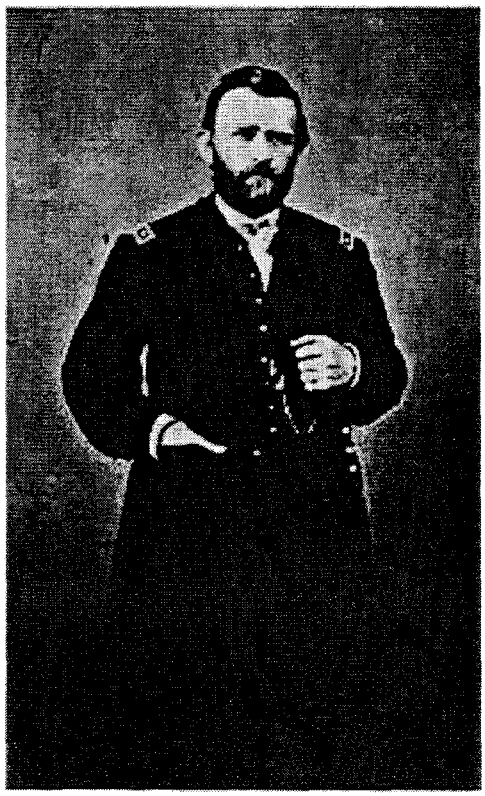
People

C. C. Augur

J. G. Barnard

W. F. Barry

Edward Richard Sprigg Canby



Ulysses S. Grant

Samuel P. Heintzelman

George B. McClellan

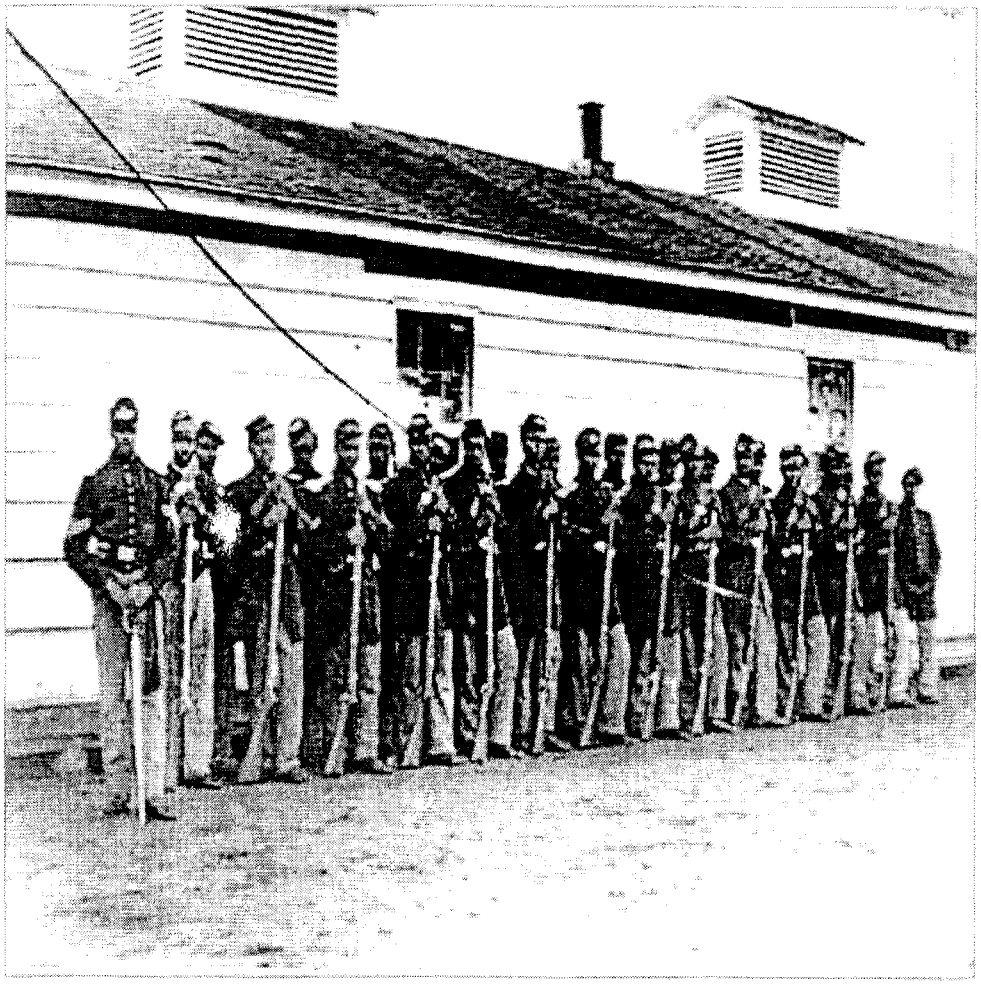
Irvin McDowell

Winfield Scott

Edwin M. Stanton, Secretary of War

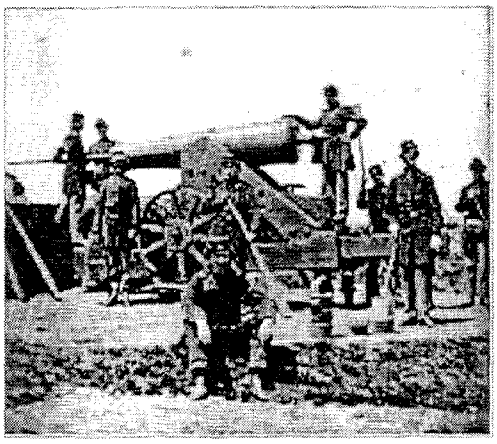
Philip Regis Denis de Kere
dern De Trobiand

James Samuel Wadsworth



United States Colored Troops at Fort Lincoln

Forts



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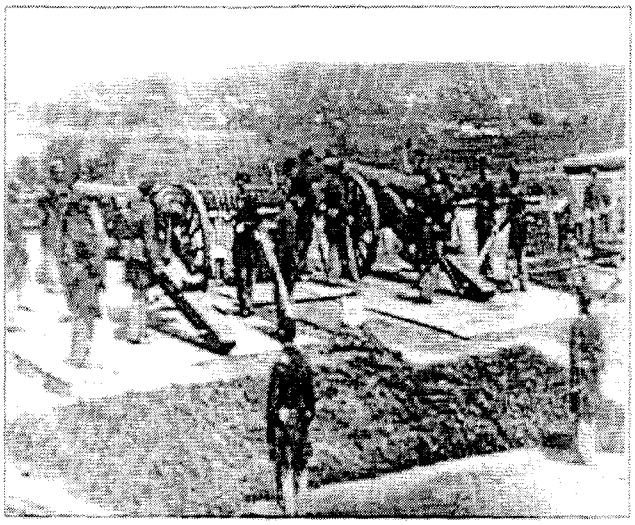
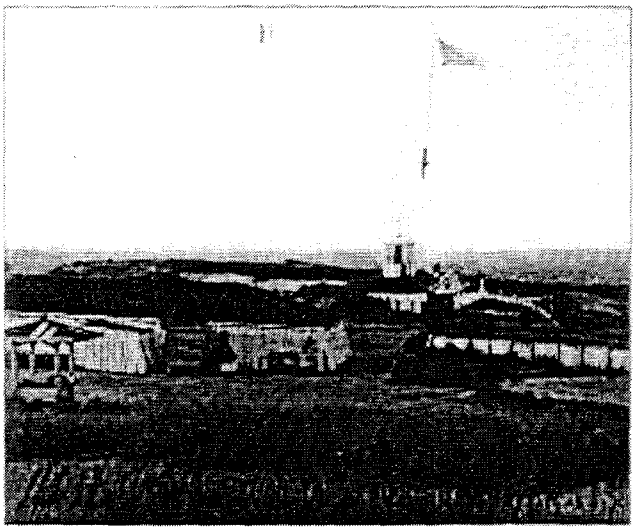


Fort Lincoln



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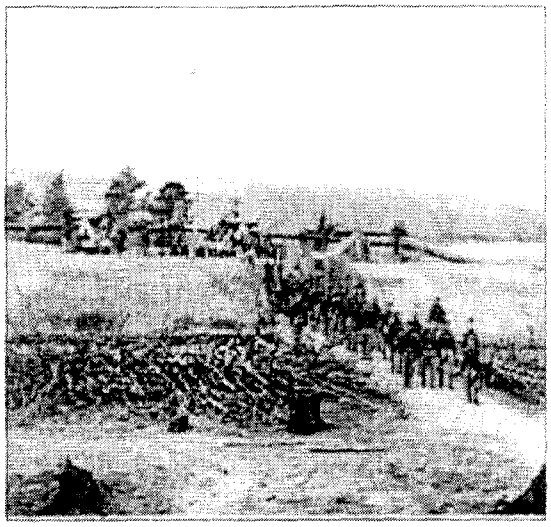
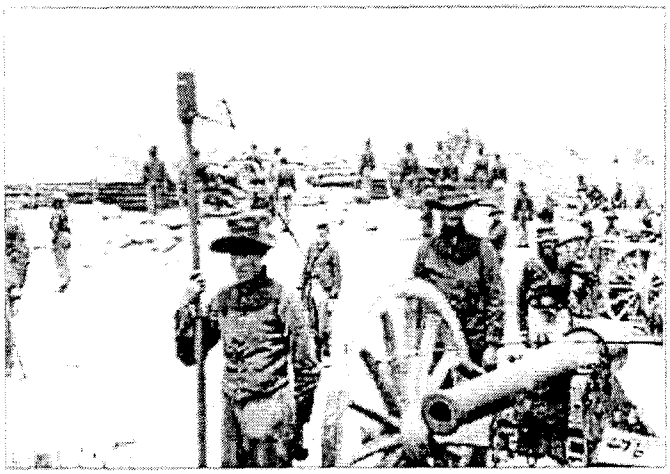
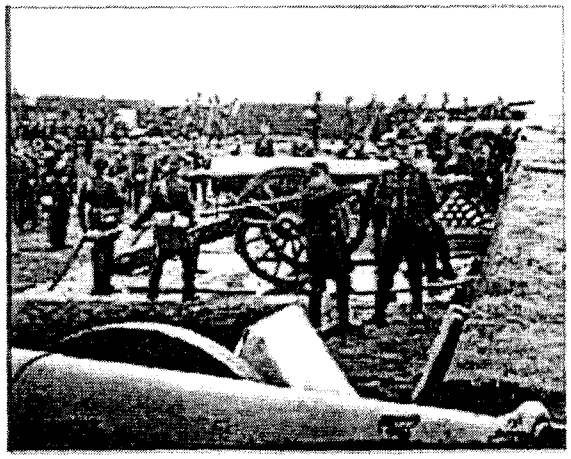


Fort Massachusetts



Fort Richardson



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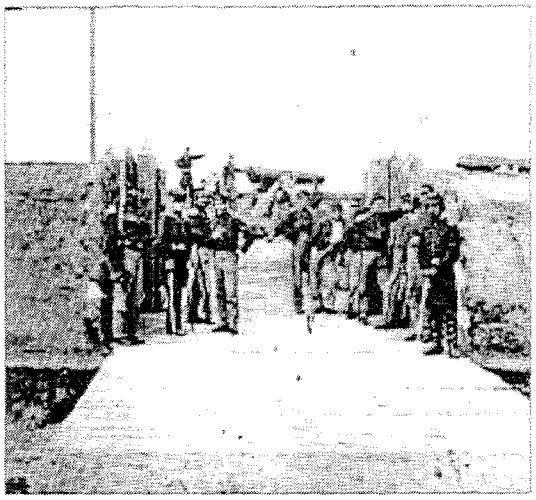
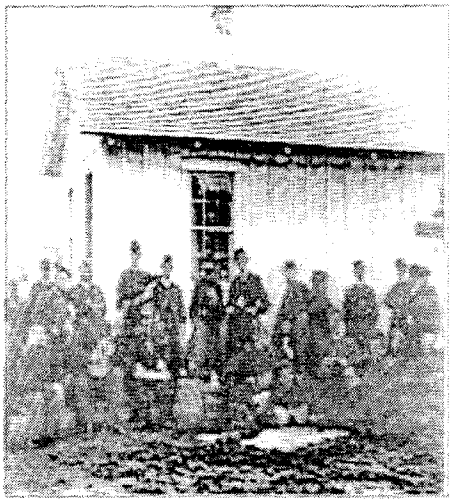


Fort Slemmer



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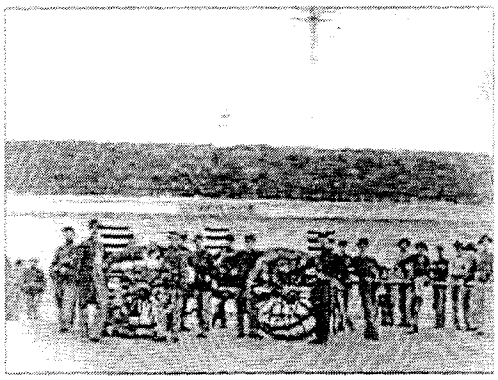
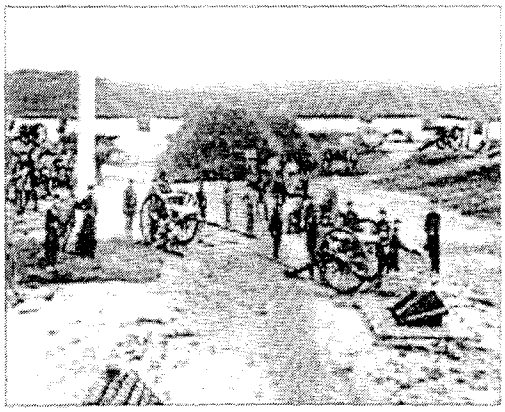


Fort Smith

Fort Smith



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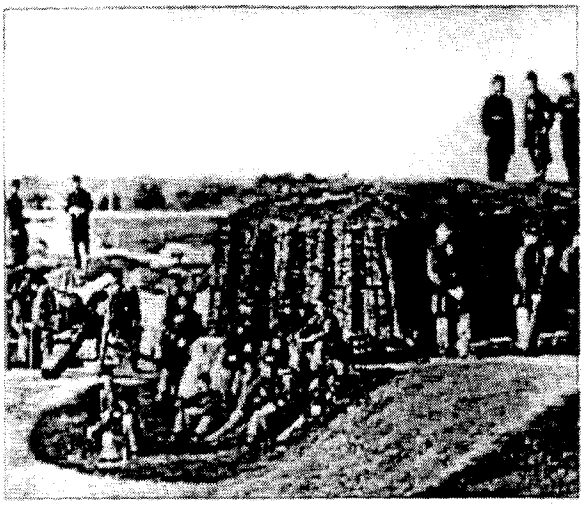

Fort Stevens

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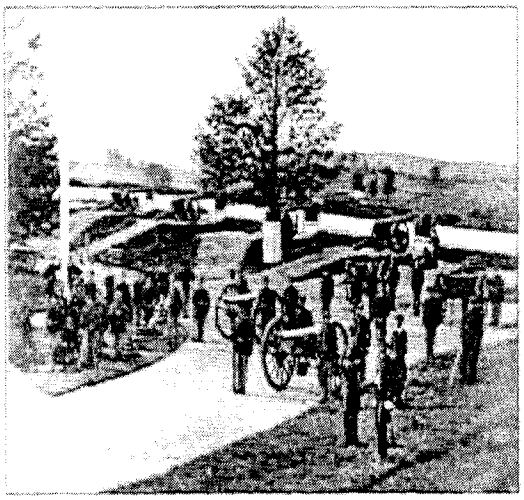
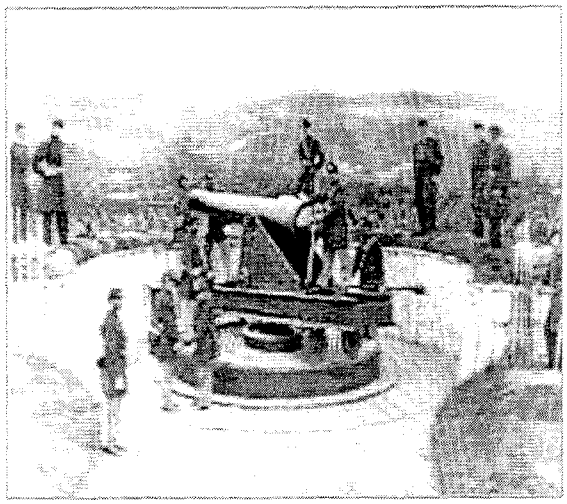
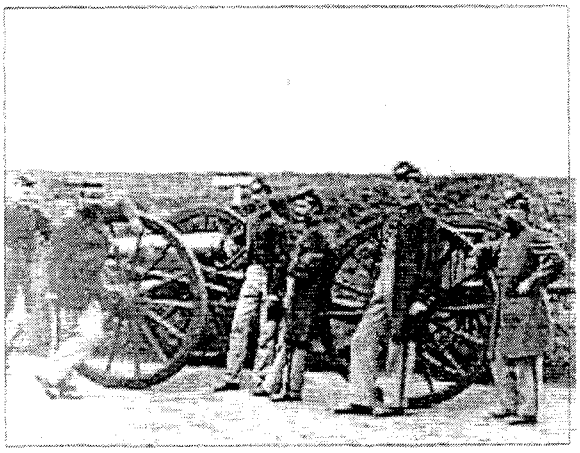


Fort Stevens

Fort Totten



Fort Totten



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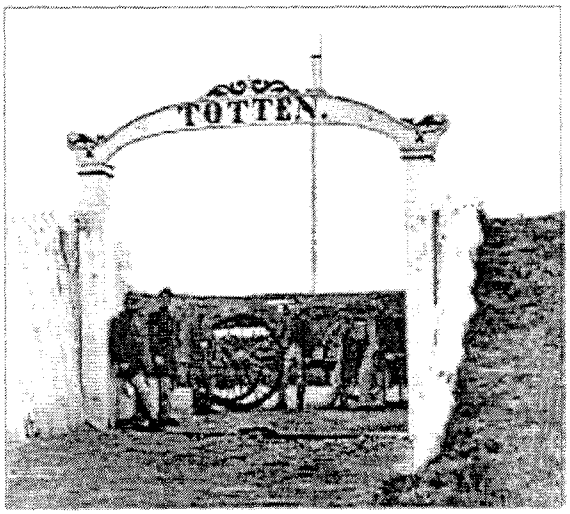

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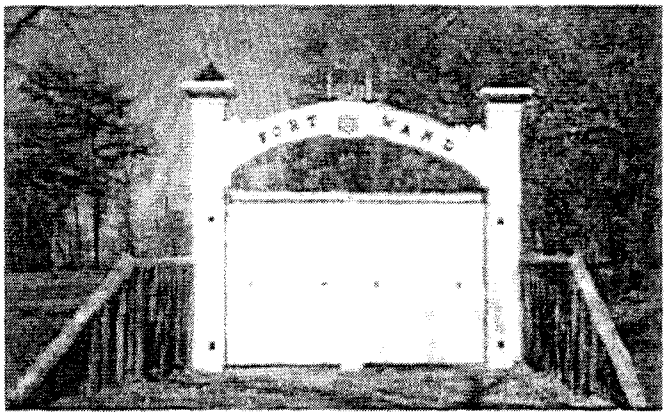
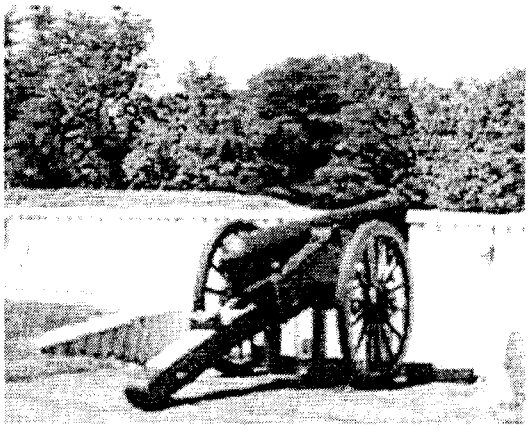
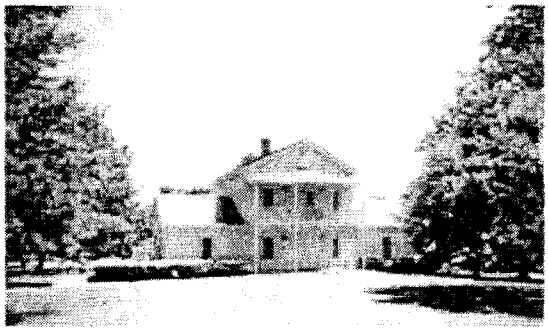


Fort Ward



Fort Ward

Fort Ward



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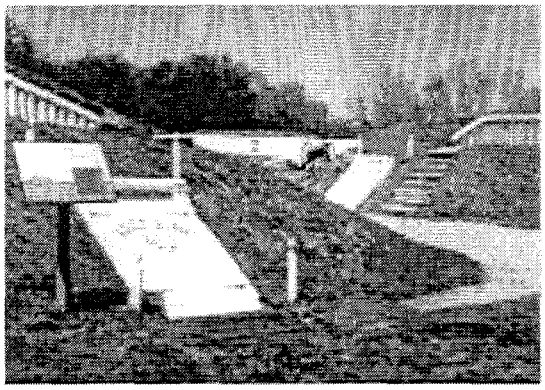

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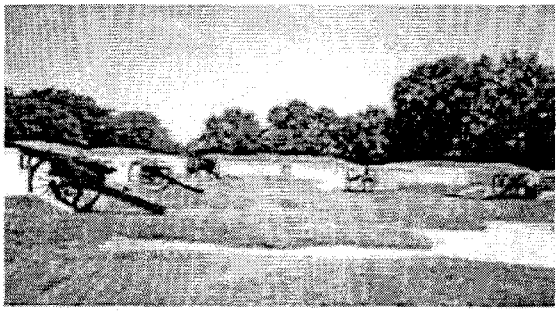

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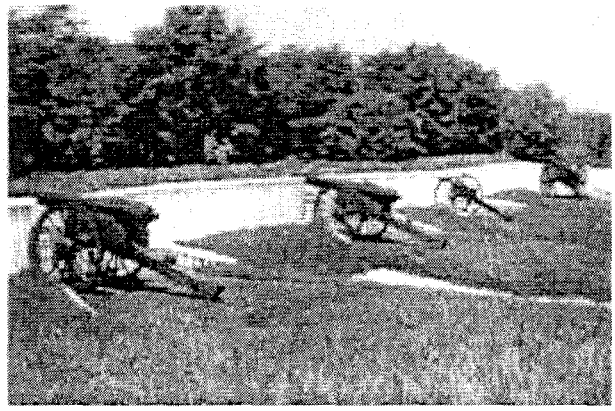

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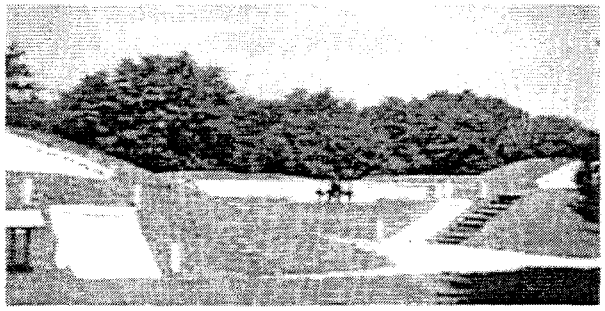
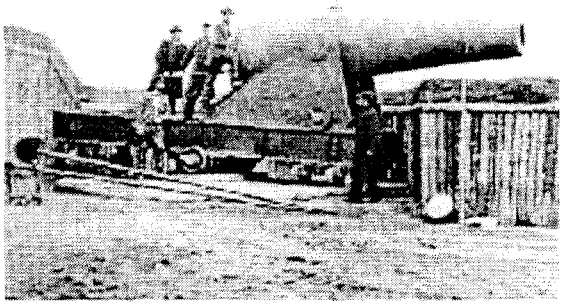


Fort Ward

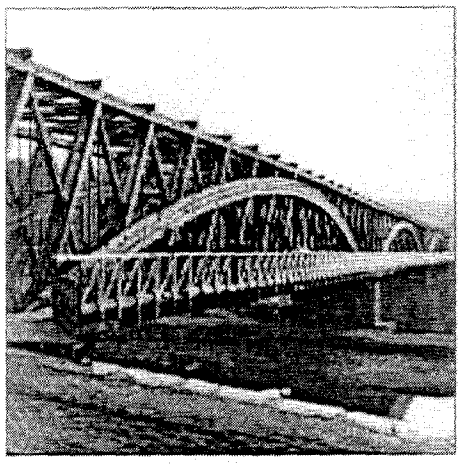
Fort Whipple

Battery Rodgers



Battery Rodgers

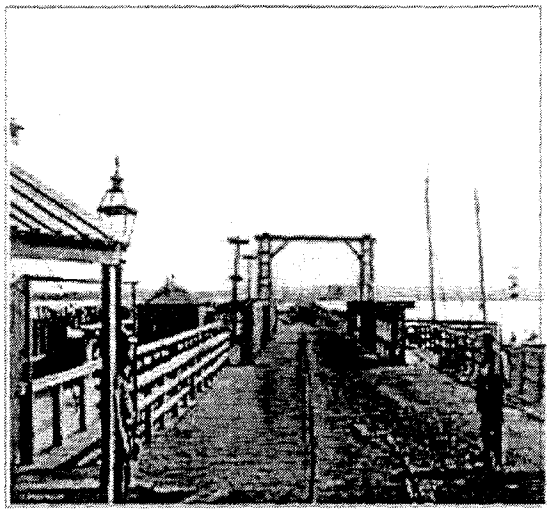
Infrastructure



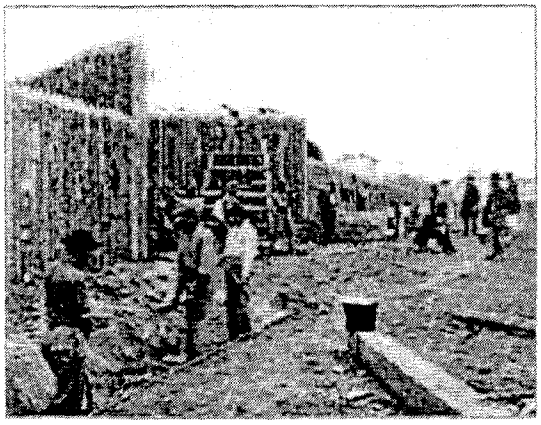
Chain Bridge

Blockhouse at Chain Bridge

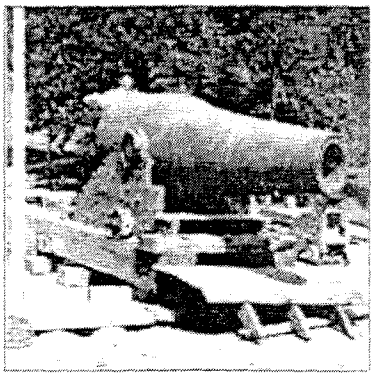
Blockhouse in Washington, D.C. area



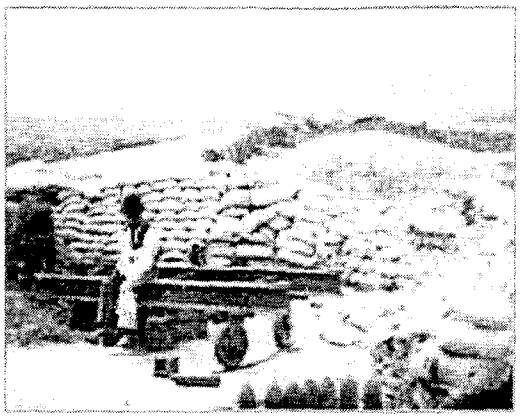
Long Bridge



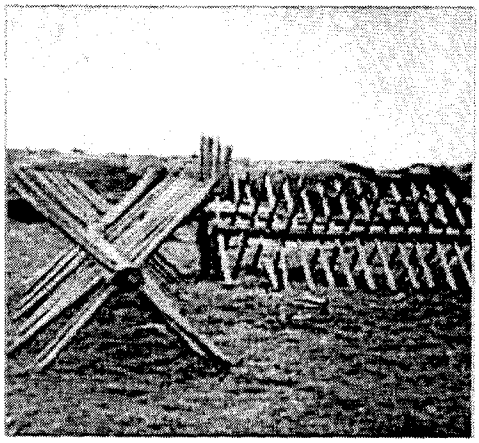
Stockade in Alexandria



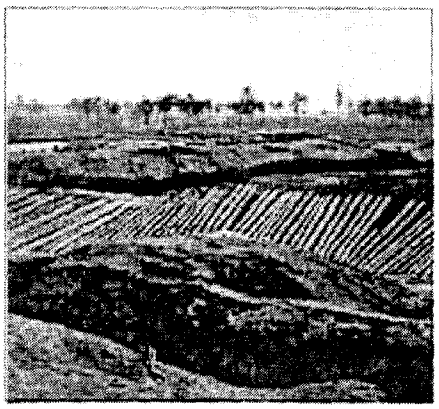
15-Inch Gun



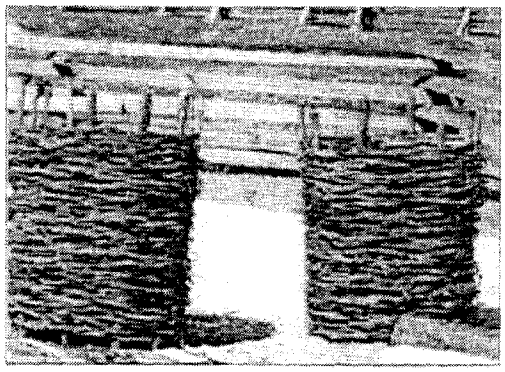
Sandbags



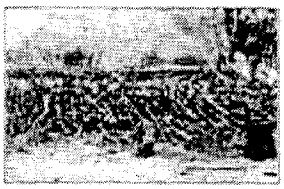
Chevaux-de-Frise



Fraise



Gabions



Abati

Illustrations

United States Volunteers Erecting Earth Works on Arlington Heights

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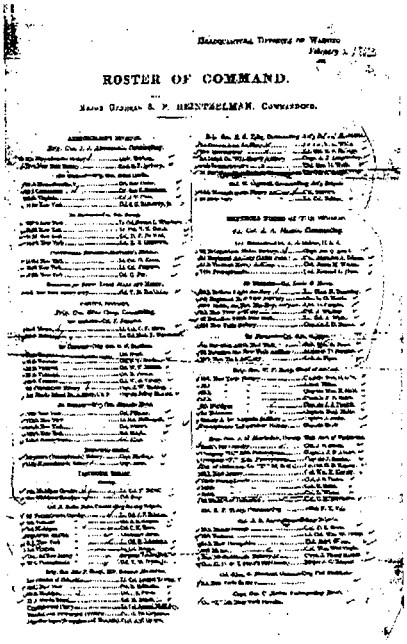
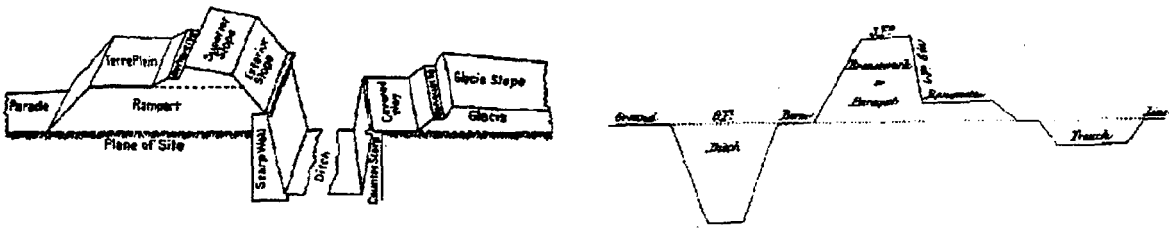
Digging Fortifications

Fascines



ROSTER OF COMMAND.

Command Roster



Profiles of Fortifications

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