

5-2012

Castle Pinckney: Past, Present, Future

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CASTLE PINCKNEY: PAST, PRESENT, FUTURE

A Thesis
Presented to
The Graduate Schools of
Clemson University and the College of Charleston

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Historic Preservation

by
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May 2012

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ABSTRACT

Castle Pinckney is one of a few surviving “castle” style forts. At the time of Castle Pinckney’s construction in 1811 these all masonry, circular, casemated fortifications were a revolutionary experiment in military architecture, inspired by the theories of the foremost military engineers in the world. The southern theater of the War of 1812 never materialized, and Castle Pinckney was not called upon to demonstrate its superior tactical capabilities. As military technology progressed during the nineteenth century, Castle Pinckney became increasingly outdated, but its strategic location in Charleston Harbor caused its continued use as an important military post during the Nullification Crisis, the Civil War, and events in between.

Today Castle Pinckney is a ruin, but it remains a spectacular cultural, historic, and archeological resource. During nearly a century of neglect, the fort and its surroundings have been reclaimed by nature, whose destructive forces have wreaked havoc on the historic masonry structure. The preservation and interpretation of Castle Pinckney faces significant obstacles: the masonry’s instability, the exposed and isolated location of the site, the significant cost of any contemplated work, and many more.

This thesis seeks to dispel the oft-held notion that Castle Pinckney was nothing but an insignificant spectator to the more important events in Charleston Harbor by presenting evidence of the fort’s architectural significance as well as its participation in events of local and national importance. After establishing the site’s unique historic significance, this thesis will survey the existing conditions of the fort’s surviving masonry walls to assess the threats to their stability and provide a substantiated claim for remediation where necessary. Finally, this thesis provides a vision for the future of Castle Pinckney which promotes its potential as a unique cultural heritage tourism site.

ACKNOWLEDGEMENTS

I am incredibly thankful for everyone who made this thesis possible. For my parents and their overwhelming generosity, my gratitude for which cannot be put into words. For Ashley Wilson, whose endless pursuit of interesting opportunities for the students of this program led to my introduction to Castle Pinckney in the first place, and whose infectious enthusiasm for all things preservation kept me excited about my topic. For Mark Schara of the National Park Service, whose guidance was invaluable to me in so many ways; searching the vast archives of Washington, DC, completing the proper documentation of the fort as it exists today, and the refinement of my writing. And for my classmates, whose laughter and support kept me from jumping.

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Introduction

“Castle Pinckney’s longevity has leant it to witness events and themes that an ever diminishing number of structures can claim . . . its integrity translates into a tangible expression of nationally historic themes that has seen little alteration since the actual events occurred.”

- Christopher Ziegler

All buildings are representative of a point in time. They are reflective of the people, values, culture, technology, and craft that surrounded them and were part of their daily existence. From the earliest times, fortifications especially, were designed with the latest methods and technology of waging war in mind; their form and function responded to anticipated modes of attack with continuously evolving sophistication and scale.

In America, the earliest settlers built primitive fortifications – severely limited by their inability to take advantage of the resources surrounding them and an absence of professional military engineers. As competition among colonizing nations became greater, and the technology of war advanced, the need for more formidable fortifications increased. The British colonies of North America were largely responsible for funding and erecting their own defenses. The colonies’ complete dependence on water for the transportation of goods and people meant these defenses were primarily concerned with the protection of important waterways and coastal towns.

These late colonial fortifications relied largely on established European precedent, although a much simplified form. Typically constructed of wood and earth, they served their immediate purpose but generally were allowed to weather away as the potential for conflict became more distant. During the American Revolution, the shortcomings of these forts were apparent.

Almost immediately upon the establishment of the United States Federal government, the need for skilled American engineers and a permanent system of coastal defense became a top priority. The protection of the United States’ long coast required a specialized method of

fortification that was yet to be developed – the problem of defending against ships was much different from that of defending land approaches. Rising to the challenge was a group of young U.S. engineers. Foremost among them was Jonathan Williams, who advocated for a type of fort new to the United States, perfectly adapted for the protection of its important coastal cities. Among these new “castle” style forts was Castle Pinckney in Charleston Harbor, South Carolina.

The first part of this thesis places Castle Pinckney in its essential local and national context and examines in detail the events that led to its construction. The execution of Castle Pinckney was an important step in the progression of technological advancement in coastal fortification. The first two chapters discuss the political, cultural, societal, and technological influences that were essential to this progression.

After its initial construction, Castle Pinckney continued to play an important role in events around Charleston Harbor. Its unique position, barely a cannon shot from the heart of downtown Charleston, made it either particularly advantageous or especially threatening, depending on who was pointing the guns. Chapters three and four discuss the increasing tensions between Charlestonians and the Federal Government, and how Castle Pinckney factored in to each side’s maneuvers around the harbor. These tensions would eventually lead to the American Civil War, a singularly defining time in the history of the United States, and especially Charleston.

By the end of the nineteenth century, the relentless advance of military technology made Castle Pinckney, and other fortifications like it, obsolete for the purposes for which they were built. However, Castle Pinckney and its immediate surroundings continued to serve a variety of non-military purposes. Chapter Five explains how these uses came to be, and how, into the present day, they were not always compatible with the site’s historic use.

Having established Castle Pinckney's history, the second part of this thesis deals with what the fort is today, the challenges of its preservation, and what, after addressing these challenges, it has the potential to be in the future. Chapter six examines the value that the site has today and concisely identifies its most important associations and its unique historic significance.

It is a rare opportunity to examine a site that has remained largely untouched for decades, and that retains such archeological significance. While neglect of the site has left it as a time capsule for our exploration, it has also led to its gradual ruination. It is neither practical nor desirable to completely reverse the process of ruination, but rather to understand, manage, and interpret it. The first step in accomplishing this is to ascertain a better understanding of the current site conditions and the processes of decay. Chapter seven includes a discussion of these processes and a comprehensive survey of conditions found in the fort's masonry walls.

The final chapter takes into account the significance of Castle Pinckney and the condition of its remaining structure to establish a vision for its future interpretation and display. Guided by a mission statement, chapter eight discusses a broad range of issues that affect the development of heritage tourism sites in general and Castle Pinckney in particular. The mission and vision established in chapter eight, and this thesis as a whole, will be used in developing an international competition which will reach across varying disciplines, inviting students and professionals in architecture, preservation, and conservation to submit their own designs for the ideal development of Castle Pinckney and Shutes Folly Island.

The following pages present Castle Pinckney – past, present, and future.

Chapter One - The Tides of War, 1793 – 1801.

“ . . . if we desire to secure peace, it must be known that we are at all times ready for war.”
- George Washington

On December 3rd, 1793, President George Washington delivered his fifth annual message to Congress. With characteristic eloquence, he communicated the most pressing issues facing the young republic. Principally, Europe’s descent into war in 1792 complicated the foreign relations of the United States:

As soon as the war in Europe had embraced those powers with whom the United States have the most extensive relations there was reason to apprehend that our intercourse with them might be interrupted and our disposition for peace drawn into question by the suspicions too often entertained by belligerent nations.¹

In this statement, the President was referring to the violation of the United States’ neutrality rights by European powers, particularly England, a situation in which the country found itself with increasing frequency. In his response to these acts of aggression, Washington reaffirmed the United States’ neutrality and dedicated much of his address to maintaining peace, “one of the most powerful instruments of our rising prosperity”.²

To do so required an entirely new definition of the role of the National Government in defense. Washington discouraged the previously established practice of defense, that the states, in minimal consultation with the Federal Government, provided their own defense and, in some cases, offense. Hoping to avoid open conflict, and wary of the possibility of the actions of a single state drawing the entire country into war, Washington proposed expanding the role of the federal government in national defense.

“There is a rank due to the United States among nations,” Washington stated, “which will be withheld, if not absolutely lost, by the reputation of weakness.” What follows was the crux of this new defense policy, “If we desire to avoid insult, we must be able to repel it; if we desire to secure peace . . . it must be known that we are at all times ready for war.”³

In the face of potential conflict with England, Washington's message resonated in Congress, which on March 20, 1794 approved "An Act to Provide for the Defense of Certain Ports and Harbors in the United States."⁴ The act identified twenty port and harbor towns to be fortified "under the direction of the President of the United States, and at such time or times as he may judge necessary." The growth of American commerce in the early national years meant a growing importance of the towns and cities where the wealth was concentrated and a recognized need to protect them from foreign invasion.

However, this 1794 act provided few details and little structure to facilitate the actual execution of the plan and erection of substantial forts. Several additional factors resulted in the ineffectual and sometimes non-existent execution of this act, which came to be known as the "first system". First, the United States' lack of trained military engineers was immediately apparent. The erection of permanent fortifications had never before been a priority of the United States Government. Even during the Revolutionary War, most fortifications used by the Americans were hastily constructed earthworks or fieldworks or had been built prior to the war by the British army. In the peacetime after the war, these works were rarely garrisoned or maintained. So when the nation found itself in the unenviable position of having an almost entirely undefended coast, the engineers needed to design and erect effective fortifications were difficult to find. In fact, most of the engineers appointed by Secretary of War Henry Knox immediately after the passage of the new defense legislation had French surnames – an indication of the United States' reliance on foreign engineers.⁵

Second, the concept of the Federal Government acquiring land in the states was off-putting to many citizens and politicians of the time. The mood of the early years of the country was still markedly against a strong central government, and the forfeiture of private property to the Federal Government, represented to some, a forfeiture of state autonomy. Many individuals

and state governments were reluctant to cede land to the federally appointed engineers for building the fortifications. Secretary Knox's instructions to the engineers following the act of 1794 required almost total acquiescence to the local and state authorities, making their jobs difficult and resulting in months or years of gridlock and inactivity.

Third, and making the engineers' tasks even more frustrating, was a woefully inadequate appropriation of funds from Congress, which waffled on the issue for two decades, arguing whether or not permanent coastal fortifications were in fact the best means of protecting the country. The total sum for the construction of all fortifications to protect the harbors and ports named in the legislation was \$76,052.53 – an average of just under \$4,000 per city, a prohibitively small amount. The amount reflected Congress' reluctance to make a larger investment in what some of the nation's leaders believed to be an ineffectual method of protecting the Atlantic coast.⁶

These complications, and others, made executing the construction of the first system a difficult process, marked with disagreement, stalemate, and stagnation. In Charleston, South Carolina, this was especially true. Following the passage of the 1794 act, Secretary Knox appointed a French-trained engineer by the name of Paul Hyacinthe Perrault to direct the erection of fortifications at Charleston and Georgetown, South Carolina, as well as Savannah and St. Mary's in Georgia. The letter from Knox to Perrault, dated April 11, 1794, details Perrault's appointed task. He was informed of his temporary employment in the service of the United States Army and was directed to repair to Charleston immediately. Upon arriving he was to report to the Governor, whose approval was required at each step of the process. Charleston was to be protected by seventy two cannon, a number second only to New York City, "which may be divided into three sets of batteries and redoubts" at a cost of \$11,212.32 – significantly more than most other cities, but still a low figure for the task.⁷ Knox was well aware of the inadequacy of

that amount and provided brief instruction on the type of fortifications to be built. These works were to be built of earth and timber, on strategic locations in the harbor as determined by the best judgment of the engineer, with approval from the governor of the state. Nearly identical instructions were distributed to a handful of engineers appointed to various regions of the country.

The fortifications in Charleston were to consist of a battery built of earth and sodded for stability, the low profile of earth ramparts were ideal for absorbing cannon shot. Where stable earth could not be found, Perrault was allowed to specify strong timber facing for the parapets, which would be filled with earth, a formula for success which palmetto logs and sand had made famous at Ft. Moultrie during the Revolutionary War. On top of the ramparts, behind the parapets, the cannon could either be mounted in embrasures, angled openings in the parapet to allow for cannon fire, or *en barbette*, a practice recently popularized by the French for seacoast defense, where the cannon were mounted on high carriages and shot over the parapet rather than through an opening.⁸

Forts that were to be constructed in more isolated locations, removed from the town they protected were instructed to be enclosed forts, or redoubts, with barracks or blockhouses for the garrison. These forts were also to contain a properly built magazine for gunpowder, well ventilated and bombproof. Knox was careful to establish that these instructions were not meant to specify the particular characteristics of each fort, but rather suggestions to regulate expense, referring again to the small appropriation for the task.⁹

Perrault, then, faced formidable challenges in his attempt to erect proper fortifications around the city of Charleston. On May 4, 1794, Perrault sent a letter to Knox stating that he had arrived in Charleston and had set about his work arranging for the fortification of the city. After just a few days on the job, Perrault found difficulty in procuring building supplies for the gun

carriages and immediately became concerned with the small amount of money he had at his disposal, “I cannot help observing to you, that the money allowed is too inconsiderable, and I beg you to give me some directions in order to make something useful.”¹⁰ In a second letter, just over a week later, Perrault’s tone is more stressed, and the working conditions have deteriorated. He stated that the frequent and prolonged absence of Governor Moultrie from Charleston had created many problems, noting that “the loss of time resulting from it is inexpressible.”¹¹

Perrault and his assistants were constantly appealing to Secretary Knox for more money and direction, frequently stating that only a fraction of the intended work had been done, and already the allotted money was nearly gone. In April, Congress had reluctantly appropriated a further \$30,000, totaling \$104,025.52 for the year 1794 toward the construction of fortifications. Charleston, with a total of \$16,212.32 for the year, received more than any other city for the improvement of its defenses. Despite this advantage, by January of 1796 the fortifications as proposed by Perrault were determined to be entirely too expensive, especially considering the increasing reluctance of congress to appropriate more money for fortifications. The rebuilding of Fort Moultrie was suspended and the new fortification planned for Shutes Folly Island – a low-lying island located directly off-shore from Charleston’s wharves – was never attempted.

Around the country, as in Charleston, the execution of the first system fizzled out by 1796, a result of the subsiding possibility of war with France or England. During the next decade, American coastal defense policy was constantly in flux. Because of the absence of an established and consistent strategy, the construction of coastal fortifications was typically a reactionary measure to defend against a new, rising threat, rather than a concerted effort to prepare during peacetime. The resultant fortifications, typically of a quick and inexpensive nature, were hardly permanent or durable. The inconsistency of this policy was highlighted when, only a few years later, the possibility of war with France returned and the first system was revived.

In 1798, Congress dedicated considerable time and expense to the reinvigoration of the coastal defense system and the reorganization of the army. Many believed, including President John Adams, that an invasion from the French was imminent, “to which their extensive seacoast, and their domestic as well as foreign commerce, are alarmingly exposed.”¹² For several years prior, relations with France had been tenuous at best. One year earlier, in 1797, tempers flared in South Carolina and around the nation when the French government refused to receive the United States Minister to France and popular South Carolinian Charles Cotesworth Pinckney.

Pinckney’s prominent position in the Federalist Party made him unpopular in France. Federalist support of Jay’s Treaty, ratified with England in 1795, was viewed as a betrayal of French allegiance and support given the United States during the Revolutionary War. In an attempt to defuse the situation and avoid outright war, President Adams assembled a diplomatic delegation consisting of Pinckney, John Marshall, and Elbridge Gerry. The delegation, upon their arrival in France, were met by a series of confidential agents, whose identities were not revealed, but who identified themselves as trusted friends and agents of French Foreign Minister Talleyrand. The agents related to the American delegation that they themselves had high regard for the United States, but that in order to restore diplomatic relations and be formally received by the French government the United States would have to make certain concessions. These concessions included the payment of a bribe to French agents, the provision of a loan to the French government to fund their war with England, and a revision of certain parts of President John Adams’ speech to Congress which were viewed as inflammatory against France.¹³

The American delegation, angered by the French’s refusal to formally receive them in a manner their position commanded, refused to agree to the terms. News of the demands made by the French agents, referred to in the delegation’s report to congress as Mr. X, Y, and Z, caused outrage throughout the United States, and preparations for war were begun.

Even before what became known as the XYZ affair, residents of Charleston were concerned about the possibility of war with France. Given the general failure of the act of 1794 to provide adequate funding for the defense of the harbor, Charleston was left almost entirely defenseless, excepting minor maintenance and improvements to Fort Johnson on James Island, “to prevent the works there from being rendered useless by the encroachments of the sea.”¹⁴ The French presence in the nearby West Indies, gave residents special cause for concern. The lack of successful coordination between state and federal authorities to erect defensive works led a group of prominent Charlestonians to assemble in St. Michael’s Church late in 1797 to raise funds for the construction of fortifications in the harbor.¹⁵

The most significant result of this citizen action was the construction of a fort on Shutes Folly Island named Fort Pinckney for the popular Charleston diplomat and famous participant in the “XYZ affair”, Charles Cotesworth Pinckney. Fort Pinckney was a small, enclosed, pentagonal work of earth and timber, clearly resembling the type of simple defensive work recommended by Secretary of War Henry Knox just three years prior. The influence of Knox and his appointed engineer, Paul Hyacinthe Perrault, is clearly visible in the design and construction of Fort Pinckney. Perrault had spent over a year in Charleston, producing surveys and proposed drawings for fortification of the harbor , regularly passing them on to Governor Moultrie of South Carolina. It is likely that the concepts developed by Perrault were used in the construction of Fort Pinckney.

Fort Pinckney was located just over a mile from the tip of the Charleston Peninsula, which, at the time, was the site of Fort Mifflin, and would later become known as “The Battery”. (Figure 1.1.) The fort consisted of earth walls faced with timber on the exterior and according to an early drawing of the site contained three buildings, the largest one was likely a barracks to house the garrison, while the other two small buildings could have served a variety of

purposes including a magazine, hot shot furnace, or outhouse. The fort reflected the predominant construction techniques and design theory of the time, particularly the forts resulting from the first system, albeit a very simplified version.



Figure 1.1
Plan showing four sites and their fortifications. Fort Pinckney is left of center at the top of the image
National Archives II, Cartographic and Architectural Records, RG no. 77, Dr. 64, Sheet 19

Even so, Fort Pinckney was an important link in the more complete defense of Charleston Harbor, which by the end of 1799 featured four defensive works, including two at the harbor mouth – Fort Moultrie and Fort Johnson – and two in close proximity to the city – Fort Mifflin and Fort Pinckney. Although none of these forts were of particularly durable or formidable

construction, they projected the image of preparedness, an essential element of the defense policy established by George Washington, and they soothed the worries of Charlestonians.

Shortly after completion of the improvements to the defenses of Charleston Harbor, the prospect of war with France once again subsided, and the protection of the coast once again faded as a congressional priority. Appropriations for the defenses of Charleston harbor dropped from \$11,500.00 in 1799 to \$48.68 in 1801, a literal abandonment of the forts. This drop coincided with the election of Thomas Jefferson to the presidency in 1800. Jefferson and his supporters were generally opposed to increased military spending and the policy of building permanent coastal fortifications in particular.¹⁶ The diminishing possibility of war with a European nation and the rise to power of the Jeffersonians signaled the end of the nation's first attempt at a systematic approach to coastal defense.

Left virtually abandoned, the temporary nature of the forts built during the first system was immediately apparent. A ubiquitous feature of these forts was their earthen walls, which if left unprotected or poorly maintained, were exceedingly susceptible to the elements. Nowhere was this characteristic demonstrated with more painful clarity than in Charleston, where a hurricane in 1804 essentially destroyed all of the harbor's defenses, including Fort Pinckney.¹⁷ The little fort on Shutes Folly Island had a brief existence, but was emblematic of the nation's early, and often unsuccessful, attempts to defend itself from real and perceived threats to its hard-earned sovereignty.

Chapter Two - A More Permanent Defense, 1802 – 1811

“Who are we, that more than others, we can hope to be rich and not tempt the robber – defenseless, and not fall his prey?”

- *Josiah Quincy*

A hurricane that struck the South Carolina coast in 1804 rendered Charleston Harbor almost totally defenseless. Yet funds for the rebuilding and repair of the ruined defenses were not immediately forthcoming from Congress. With the Jeffersonians in control of the White House, the merits of investing large sums of money in permanent coastal fortifications continued to be challenged. From 1802 to 1805 Congress appropriated a total of only \$113,000 for such defenses, indicating that the state of fortifications around the country were similar to those around Charleston.¹⁸

During this relatively quiet period, the most important action taken by the government for the future of fortifications in the United States was the formation of the Corps of Engineers in 1802. The Corps of Artillerists and Engineers had existed as a single unit since their creation by George Washington in 1794. Thus, the separation represented a concerted effort to improve the skills of American engineers. Tensions with France had alerted many American political leaders to the inconvenience of relying mainly on French-trained engineers. The new Corps of Engineers would have their headquarters and conduct technical education at West Point.

The formation of two new branches of the military necessitated the appointment of a new leader for each. The selection of the first officials to lead these branches would be essential to their early success. To lead the Corps of Engineers, President Jefferson suggested Major Jonathan Williams. Williams was well connected among the upper echelon of government, being the grandnephew of Benjamin Franklin, and a member of the American Philosophical Society of which Jefferson was also a member.¹⁹ Williams was educated in Europe, making him the academic equal of the best foreign-trained engineers, but had great American pedigree, making

him the ideal candidate to become the first Inspector of Fortifications and superintendent of the newly established United States Military Academy.

The creation of the Corps of Engineers was a turning point in the design and construction of American coastal defenses and it coincided very closely with the rising threat of war in 1807. In June of that year, the British warship, HMS *Leopard* attacked and boarded the American USS *Chesapeake*. Most reactions in the United States asserted that the event proved England's indifference toward American sovereignty and neutrality, and was just one of many similar confrontations where American seamen were impressed into the British Navy. The *Chesapeake – Leopard* Affair, and other similar events, led to increased tensions in the United States and ultimately contributed to the start of the War of 1812.²⁰

Taken as an affront to the neutrality of the United States and a growing threat to her security at home, Congress authorized spending \$1,000,000 in January of 1808 “as will afford more effectual protection to our ports and harbors, and preserve therein the respect due to the constituted authorities of the nation.”²¹ This sum was in fact significantly smaller than other sums proposed by several congressmen. Appropriations to defend the nation's important harbors became the subject of a heated debate, with some predicting the ruin of American commerce and cities if the amount was inadequate. Even so, the amount approved in 1808 was unprecedented. The funds took physical form through the ideas and theories of Major Jonathan Williams and the newly educated ranks of the Corps of Engineers.

This building campaign, technically begun in 1807, became known as the “second system”, to differentiate it from the “first system” of 1794. As would be expected, the second system bore some similarity to the first. It included a number of open batteries, similar to those built during the first system, and depended heavily on European precedent; however, the second system also began a trend toward more substantial, permanent, masonry forts. In some cases,

these masonry fortifications featured entirely new design features and strategies, ones that reflected the unique needs of the American coast, incorporating and improving European precedent.

These forts were a result of the influence of Jonathan Williams. Williams was an ambitious leader, and he worked constantly to increase the power and influence of the Corps of Engineers. He is perhaps most famous for his work on the fortifications of Governor's Island in New York Harbor; one of which, Castle Williams, is named in his honor. As its name would suggest, Castle Williams was one of a new fort typology being advanced by Williams during the implementation of the second system.

From the seventeenth to the early nineteenth century, the form and function of fortifications depended largely on the work of Sebastien Le Prestre Vauban, a French engineer who revolutionized the art of fortification.²² Vauban's work fortifying the many small cities and towns of France proved remarkably successful, and the influence that resulted from these works was far reaching, spanning centuries and continents. When fully realized, Vauban's work formed a large and complicated, layered system of defense, with each layer serving to slow the enemy, while providing essential support to the other, discontinuous sections of the work. The literal center of these works embodied the most basic form of Vauban's theory – a bastioned work of a regular trace, with a ravelin or tenaille to protect the curtain wall. This recognizable form became a standard used among engineers charged with fortifying early colonial settlements and continued into the early national years of the young United States. Given their sprawling, horizontal arrangements, massive earth works, and emphasis on flanking protection, these forts were particularly well suited to repel land based invasions and absorb artillery fire. The more effective protection of America's expansive seacoast from naval invasion would require a more specialized form.

For this purpose, Jonathan Williams espoused the theory popularized by another French engineer, Marquis de Montalembert.²³ Montalembert's theory was the exact opposite of Vauban's, and well suited for what were frequently constricted seacoast sites, such as island or peninsular locations. He argued for the use of towers, featuring surmounted tiers of cannon. This provided the potential for a large number cannon within a small perimeter, depending on the height of the work. These works, termed "castles" in the United States, were generally circular, and thus provided a great lateral range for the protection of large expanses of water.

The adaptation of Montalembert's ideas to the unique needs of the American seacoast, and the eventual construction of several "castle" style forts served as evidence of the growing influence and skill held by Jonathan Williams and the Corps of Engineers. In Charleston, the construction of the new Castle Pinckney on the site of the ruined Fort Pinckney represented the effective execution of Williams' – and by consequence, Montalembert's – ideas in their purest form.

By 1807, the State of South Carolina had ceded the land on which the several forts around Charleston Harbor were located to the United States government.²⁴ The transfer was a long time coming, having been the intention of the federal government to acquire those same sites since the original passage of the bill for a federal program of national defense in 1794. On December 7, 1807, Secretary of War Henry Dearborn reported to congress on the state of fortifications around Charleston:

The old forts are in a state of ruins; and, as no sites had been ceded and designated by the State for fortifications, until the month of August last, no effectual measures could, with propriety, be adopted, for the defense of the town and harbor, until within the few months past, in which time all necessary measures of preparation have been pursued for commencing and completing the contemplated works, on the most permanent and durable principles.²⁵

As mentioned by Dearborn in his report, it was in August of 1807 that the Legislature of the State of South Carolina granted "the land on which Fort Pinckney is built and three acres around the

same” to the United States and the design and construction of Castle Pinckney was able to begin.²⁶

Jonathan Williams is credited with the design of Castle Pinckney, due to his demonstrated affinity for the *forts circulaires*, and the fact that he designed Castle Williams and Castle Clinton, both in New York Harbor, around the same time. Interestingly, an early drawing labeled, “Plan of a Projected Castle for Charleston Harbor”, shows an entirely different castle style fort than what Castle Pinckney would eventually become – one more similar in form to Castle Williams.²⁷ (Figure 2.1) The drawing is undated and unsigned, and it is unclear whether the proposed fort was intended for the site on Shutes Folly Island or if it was proposed as a second castle style fort for somewhere else in the harbor. However, out of the four sites ceded by South Carolina in 1807, only the point on Shutes Folly Island and the point of the Charleston peninsula would seem suitable locations for this style fort. If both these sites were at one time intended to receive castle fortifications, the configuration of forts around the harbor would have been similar to that constructed in the harbor of New York, with one castle on an island in the harbor, in close proximity to the city’s wharves, and the other on the tip of the peninsula.

It is, however, more likely that the drawing is a rejected plan for Castle Pinckney. Despite the fact that it was never built, it is interesting as an additional example of the castle style fort envisioned by Williams and the Corps of Engineers. Had it been built, the proposed castle would have been considerably more formidable than the later design as built. The projected castle, like Castle Williams, is nearly a complete circle. The perimeter of the exterior wall creates approximately 280 degrees of a circle, where the remaining eighty degrees are occupied by a three story rectangular building that would have housed the sally port on the ground floor, and soldier’s barracks and officers’ quarters on the second and third floors. The circular part of the fort was projected to house two tiers of cannon for a total armament of twenty-one heavy

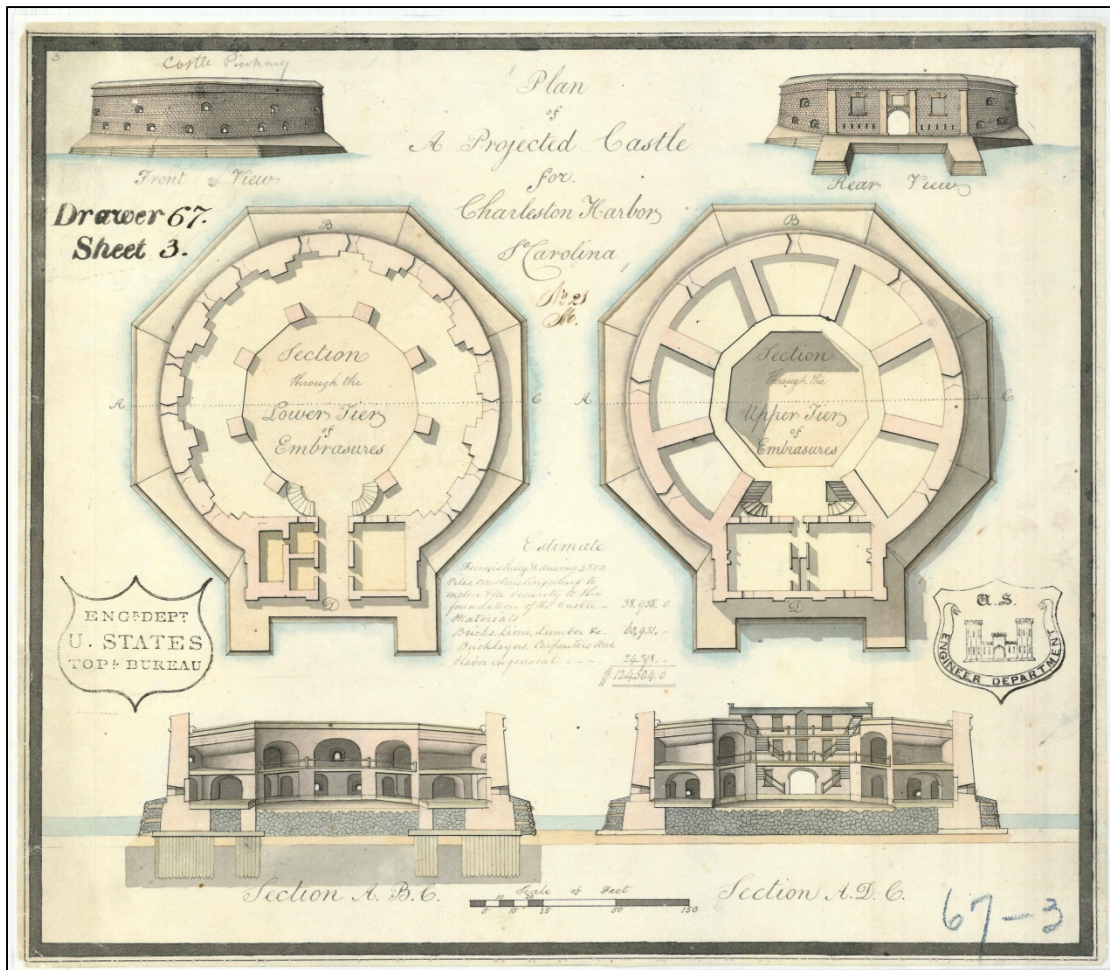


Figure 2.1
Drawing showing an unexecuted design for a castle style fort in Charleston Harbor
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 3

artillery. The lower tier has seven brick vaulted casemates, each having two embrasures and intended to mount two cannons. The upper tier likewise has seven brick vaulted casemates, with each casemate having one embrasure, intended for a single cannon. Other than the basic shape of the projected castle, the unique configuration of casemates and embrasures is where this unrealized plan and Castle Pinckney differ most. Another difference, and making the projected castle significantly more ambitious, is that the upper tier of cannon are enclosed in brick vaulted

casemates, firing through embrasures, as opposed to Castle Pinckney's upper tier of cannon, which were mounted *en barbette*, or on top of the wall, firing over the parapet.

The main reason the design for this projected castle was abandoned was most likely the extravagant cost required to build it. The drawing includes an estimate for construction, totaling \$124,504.00, well over ten percent of the one million dollars appropriated by congress for the defense of the entire country. The estimate sheds light on the requirements and costs of building what, at the time, was a state of the art military installation: \$38,955.00 for "furnishing and driving 4500 piles, constructing wharf to enclose and for security to the foundation of the castle", \$60,951.00 for "bricks, lime, lumber, etc.", and \$24,504.00 for "bricklayers, carpenters work, labor in general . . .".²⁸

Castle Pinckney, although an impressive castle fort, was built on a simpler scale, and at less expense, mostly attributable to the elimination of an entire tier of casemates. Regardless of the differences among these two forts, Williams touted the new circular, casemated design, stating "modern improvements of marine batteries which give double the number of guns on the same horizontal base, and by multiplying the tiers may give six times the number . . . with a bombproof security above, rendering the question of combat, a question of floating wooden walls against impregnable stone walls on shore with equal number of guns in the same space. It is not a very bold assertion to say, that no ship sails the Ocean, that would engage on such terms."²⁹

To execute the construction of Williams' design for Castle Pinckney, Secretary of War Dearborn appointed Major Alexander Macomb. Macomb was a skilled engineer who had spent his entire life surrounded by the rigors of the military. Born in Detroit in 1782, at a time when it was little more than a military outpost, "the chubby boy became a favourite with the soldiers of the garrison."³⁰ He moved to New York with his father as a young boy and attended school at an academy in Newark, New Jersey, where he learned French from the many refugees of the French

Revolution who fled to the United States and were enrolled in the school. At the age of sixteen, Macomb joined a volunteer company of the New York Militia. Shortly after, he applied for service in the regular army and, based on the recommendation of a high ranking official, was appointed Cornet of Light Dragoons, the lowest rank for a commissioned officer.³¹

1798, the year when Macomb joined the army, was a time of flux for America's War Department and all divisions of its armed forces. With the subsidence of the quasi-war with France, the necessity of a large standing army was questioned by many members of congress, mostly Democratic Republicans (later known as the Jeffersonians), who would assume command of the White House in a few years' time.³² While the downsizing and reorganization of most branches of the military had a trickledown effect on nearly all those employed in the service, Macomb was able to find a niche in the newly formed Corps of Engineers.

Finding himself on a recruiting mission in Philadelphia, Macomb was fortunate to meet and befriend Major Jonathan Williams, the widely respected judge, and future head of the Corps of Engineers. With his new recruits, Macomb marched to Pittsburgh to meet General Wilkinson, then general in command of the regular army. Wilkinson was engaged in securing the western frontiers of the United States, including negotiating treaties with Native American Tribes, fortifying, surveying transportation routes and sites for fortification, and raising armies to provide security against the French and Spanish colonies in the south. By his appointment as Wilkinson's aide de camp (personal attendant and advisor), Macomb was able to hone his skills in drawing, surveying, and cartography, while keeping detailed records of the general's endeavors, particularly his negotiations with Native American tribes.

With these records being considered largely complete, Macomb was sent to report to Washington, coincidentally, by way of Charleston, where he spent a few days "in the enjoyment of that elegant hospitality for which it is so justly celebrated".³³ Upon his arrival in Washington,

Macomb found that the size of the standing army had been greatly reduced, including the elimination of the dragoons and his own position along with them. Thanks to the recommendation of his friend Jonathan Williams, by now superintendent of the Military Academy at West Point and head of the Corps of Engineers, Macomb was placed in the Corps as a lieutenant and was directed to West Point to attend classes.

After several years of courses and military exercises, Macomb passed his exams and was promoted to the rank of captain by Secretary of War Henry Dearborn.³⁴ As one of the first generations of graduates from the new military academy, he was first assigned to oversee the repair of the fortifications around Portsmouth, New Hampshire, and the next year was appointed superintendent of public works at Mount Dearborn on the Cataba River in South Carolina.³⁵ Macomb continued this work until 1807 when he was appointed Chief Engineer of the fortifications and other works in the harbors of South Carolina and Georgia. His appointment corresponded with the increased likelihood of war with England following the *Chesapeake – Leopard Affair* mentioned earlier in this chapter. Following the incident, protests rang from across the country, and American popular opinion not only supported, but demanded war.³⁶ In Charleston, the leaders of the city were especially concerned about the impending hostilities, considering the exposed state of their harbor.

Macomb reported to Charleston to begin quick repairs that would enable the harbor's fortifications to provide at least some measure of defense. He began by erecting a temporary battery at Fort Johnson, which calmed the Charlestonians' worries until more complete, permanent plans arrived from Jonathan Williams.³⁷ These plans, which included designs for the new Castle Pinckney, would become Charleston's forts of the second system, and were intended to provide the most state of the art defense for Charleston's burgeoning harbor in the run-up to the War of 1812.

Mostly defenseless when Macomb arrived in 1807, by the time of Secretary Dearborn's 1809 report to congress Charleston Harbor was significantly more secure. Fort Johnson had by then been fully mounted with heavy artillery, Fort Moultrie is reported as being "little inferior in magnitude and importance to any work in the United States" and the new Castle Pinckney is reported as "commenced, and in a rapid state of progress."³⁸ With Forts Johnson and Moultrie largely complete, Macomb devoted most of his energies to the completion of Castle Pinckney.

At the time of its construction, Castle Pinckney was an innovation, dreamed up by Jonathan Williams as the perfect structure to defend against naval attack. (Figure 2.2) At high tide, the fort, built on little more than a sand bank in the harbor, rose up out of the water like a ship itself, guarding over the city's profitable wharves. To accomplish this, Castle Pinckney featured two tiers of cannon; the bottom tier enclosed in massive bombproof brick vaults, called casemates. These nine cannon shot through shuttered openings in the exterior wall called embrasures which, on the exterior, were barely above the high tide water line. These casemates also provided structural support for the upper tier of cannon, which sat on the terreplein and shot over a protective parapet which was over five feet tall. A total of nineteen pieces of heavy artillery could be mounted in both tiers, occupying the harbor facing, semi-circular wall, capable of protecting a broad 180 degree lateral range.

The land facing side of the fort took a different form, based on different functional requirements. Here, the wall was formed by two smaller semi-circles which terminated into a flat gorge wall. The flat wall featured a large, arched sally port in the center, flanked by three openings on each side which provided light, air, and openings for defensive small arms fire for the barracks on the other side of the wall. Original drawings show the flat wall featured classical

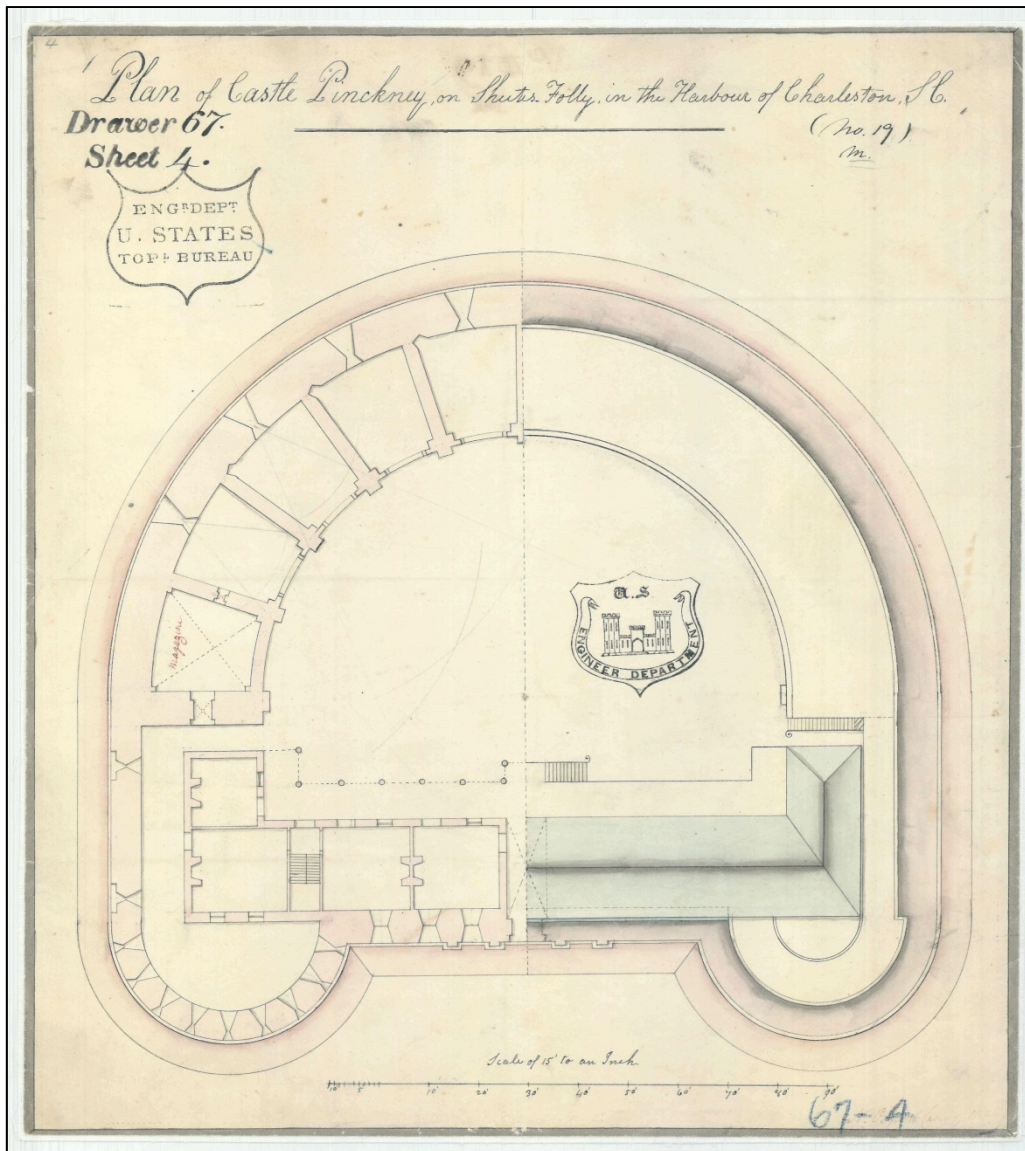


Figure 2.2

Original plan for Castle Pinckney, showing the casemate tier on the left and terreplein on the right
 National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 4

architectural details around the arched entrance and several windows. (Figure 2.3) These details included four Doric pilasters supporting a simple entablature with recessed panels. The two semicircular forms featured openings for small arms fire to defend against land side attack.

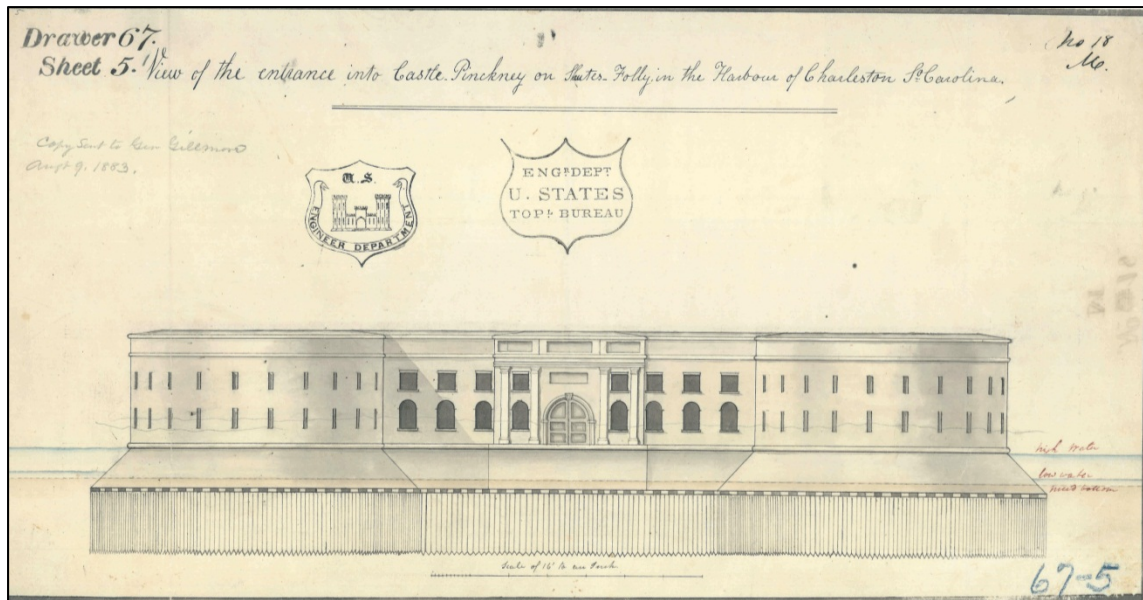


Figure 2.3
Original elevation for Castle Pinckney, showing the gorge wall, and two flanking towers
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 5

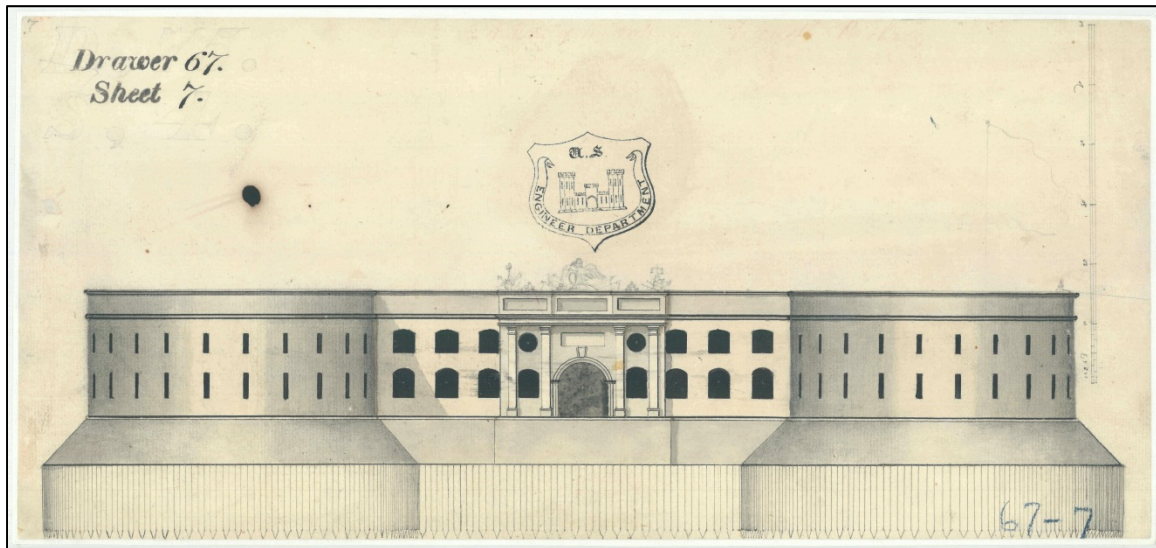


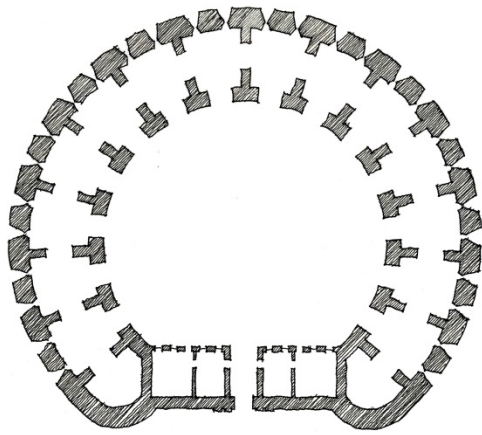
Figure 2.4
Alternative elevation for Castle Pinckney, date and author unknown
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 7

The interior of the land side contained the soldiers' barracks, officers' quarters, and two cisterns, one on the ground floor of each semicircle. The barracks was a two story building of load-bearing masonry walls with eight heated rooms on each story and floored with wood planks.

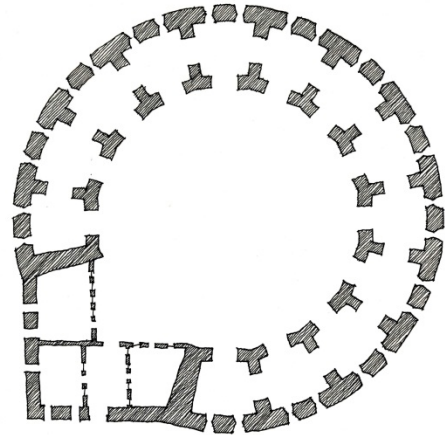
Also, there was a two story porch which ran the length of the building and looked out onto the open parade ground and casemates beyond. The barracks, if necessary in time of conflict, could uncomfortably house two hundred officers and enlisted men.³⁹

This ambitious new fortification was built rapidly, with a sense of urgency heightened by frequent reports of the British amassing forces in Canada for an eventual raid somewhere along the American seacoast. Work continued on the fort through 1809 and in 1810, Secretary of War Eustis reported that Castle Pinckney was, “an enclosed work of masonry for two tier of guns, nearly completed.”⁴⁰ An interesting drawing of Castle Pinckney done in 1810 shows the fort with its full complement of artillery mounted on the top tier, however without the parapet that would have made the fort complete. Yet by December of 1811, Eustis reported to Congress, that not only was Castle Pinckney complete with thirty guns mounted (an obvious misstatement, considering it was designed to hold nineteen), but that “the work is considered the most important in the harbor.”⁴¹

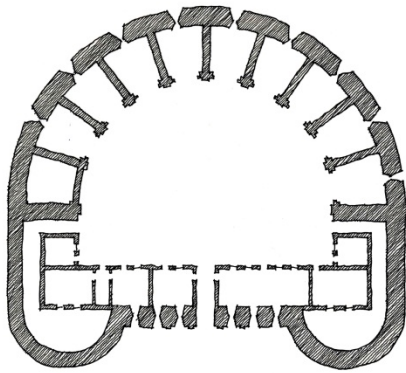
In 1811, Castle Pinckney was one of only a few American fortifications that could be described as truly innovative. Castle Pinckney, Castle Clinton and Castle Williams were some of the first all masonry, casemated fortifications in the United States. In later decades, during the third system, these pioneering design features would become the dominant seacoast fortification type. Castle Pinckney was truly a marvel of military architecture upon its completion, and a harbinger of much larger things to come.



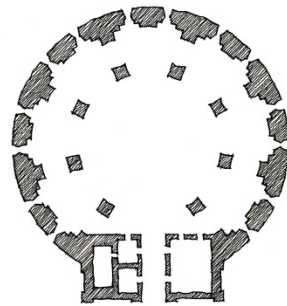
CASTLE CLINTON
NEW YORK HARBOR
1811



CASTLE WILLIAMS
NEW YORK HARBOR
1811



CASTLE PINCKNEY
CHARLESTON HARBOR
1811



PROJECTED CASTLE FOR CHARLESTON HARBOR
UNBUILT

Figure 2.5

Scaled drawing comparing four castle style forts. Clockwise from top left: Castle Clinton, New York Harbor, 1811; Castle Williams, New York Harbor, 1811; Projected Castle for Charleston Harbor, unbuilt; Castle Pinckney, Charleston Harbor, 1811. Drawing by author.

Chapter Three - Antebellum Angst, 1812 – 1860

If it is not, it ought be understood, that the Tariff is only one of the subjects of complaint at the South. The Internal Improvement, or general bribery system, and the interference of our domestic policy – most especially the later – are things which will, if necessary, be met with something more than words.

- *The Winyaw Intelligencer, May 12, 1830*

The War of 1812 saw some significant military engagement between American and British forces. The forts of the lakes region, along the border with British Canada, were tested, Washington was burned, and Baltimore and New Orleans were defended in glorious fashion. But the waters in Charleston Harbor and off the South Carolina coast remained relatively quiet. The now fully repaired and armed defenses of the harbor were never called upon to repel an invading British force, and with the U.S. congress' ratification of the Treaty of Ghent in 1815, hostilities between the two nations came to a close.

Despite its readiness for the War of 1812, Castle Pinckney never participated in any conflict, and, it seems, did not actually receive a garrison until the early 1830's. In the years between its completion and receiving its garrison, Castle Pinckney assumed a fairly ordinary daily existence and appears to have been largely devoid of any sizeable, sustained habitation by anyone. However, some attention was paid to the condition and readiness of the fort, as it was the subject of periodic repairs and surveys. A report to congress in 1818 established the number of guns mounted at Castle Pinckney at thirty, but no regiment or corps is reported as being stationed there.⁴² In that same year, correspondences show that Castle Pinckney was receiving some general maintenance. One letter contains instructions from Washington to “throw loosely around the base of the wall 2 or 300 tons of common stone such as is used for ballast. They may form a part of any wall of a more permanent character that may be constructed hereafter.”⁴³ A second letter from Charleston to Secretary of War Calhoun requests eight hundred dollars “to be applied to the repair of Castle Pinckney in Charleston harbor.”⁴⁴

The lack of any significant activity or new construction at Castle Pinckney was evidence of the absence of war and the downsizing of the United States military. It is interesting that the fort received any appropriations at all and is telling of the changing attitude in Congress toward the importance of establishing and maintaining coastal fortifications even during a time of peace. During this period, the fort is well documented with a number of notes and historic drawings that survive to give insight into the physical challenges of maintaining the building and keeping it in a serviceable condition in the event it was called upon to defend the harbor at a moment's notice. Castle Pinckney remained one of the most important defensive works in the harbor, in close proximity to the city, until the substantial completion of Fort Sumter.

The construction of Fort Sumter was evidence of a change in the system of building fortifications along the coast. Castle Pinckney was one of just a few permanent masonry works built during the second system of defense, but already the technological advance of naval artillery caused forts in close proximity to the cities they protected to become obsolete as a first line of defense. The War of 1812 had proven that forts which were well sited, constructed, and manned could very effectively protect their respective ports and cities. Unfortunately, few forts built during the first or second system satisfied all three of these criteria. The case of Fort McHenry's role in the successful protection of Baltimore provided proponents of a revised and reinvigorated system of defense on the Atlantic coast with a sound argument for their cause.⁴⁵

It was this sentiment which led to the creation of the Board of Engineers in 1818, a panel of three trained engineers, charged with the task of formulating a single, comprehensive plan for the defense of the coast. This plan, officially adopted in 1821, would lead to the construction of the country's most famous and ambitious works, including Fort Monroe in Virginia, Fort Macon in North Carolina, and Fort Jackson in Louisiana. Several of these forts, including Fort Sumter in Charleston, and Fort Pulaski near Savannah displayed the same vertical seacoast defense strategy

pioneered by Castle Pinckney. Both Sumter and Pulaski were situated on small islands (mostly man made in Sumter's case) further removed from the city, and both featured multiple tiers of cannons in brick casemates, a clear continuation of the formula advocated by Jonathan Williams and first embodied by Castle Pinckney.

One objective of this 1821 plan was to locate fortifications as far from urban areas as was practical in order to intercept the enemy before they reached the immediate vicinity of the city forcing them to land troops at a greater distance.⁴⁶ It was for this reason that Castle Clinton, on the tip of Manhattan Island was abandoned in 1822 as new defenses for New York Harbor were moved further out, and that Castle Pinckney eventually became a secondary, interior defense, rather than an exterior, primary defense.⁴⁷

The inevitability of this fate for Castle Pinckney was likely clear to the group of prominent engineers that arrived in Charleston on April 9, 1821 to examine the fortifications along the southern coast.⁴⁸ Among them were two members of the newly created Board of Engineers – Simon Bernard, a French engineer and former aid to the Emperor Napoleon, and Joseph G. Totten, an early graduate of the U.S. Military Academy and long serving Chief of Engineers.⁴⁹ Also among the team was Captain Poussin, an engineer who completed a survey of Castle Pinckney for the board's reference. (Figure 3.1) This 1821 drawing shows Castle Pinckney in its original form, prior to the construction of any outbuildings or the large stone pier that would later be built. Poussin's drawing is nearly identical to the plan as originally proposed by Jonathan Williams. It was this same board of engineers that would design Fort Sumter, making thorough use of the casemated design.

It is clear, however, that neither Castle Pinckney, nor Charleston Harbor were in need of immediate attention from the Board. Their report in 1821 separated the sites of proposed fortifications into a system of three classes. The first class were "required immediately" and were

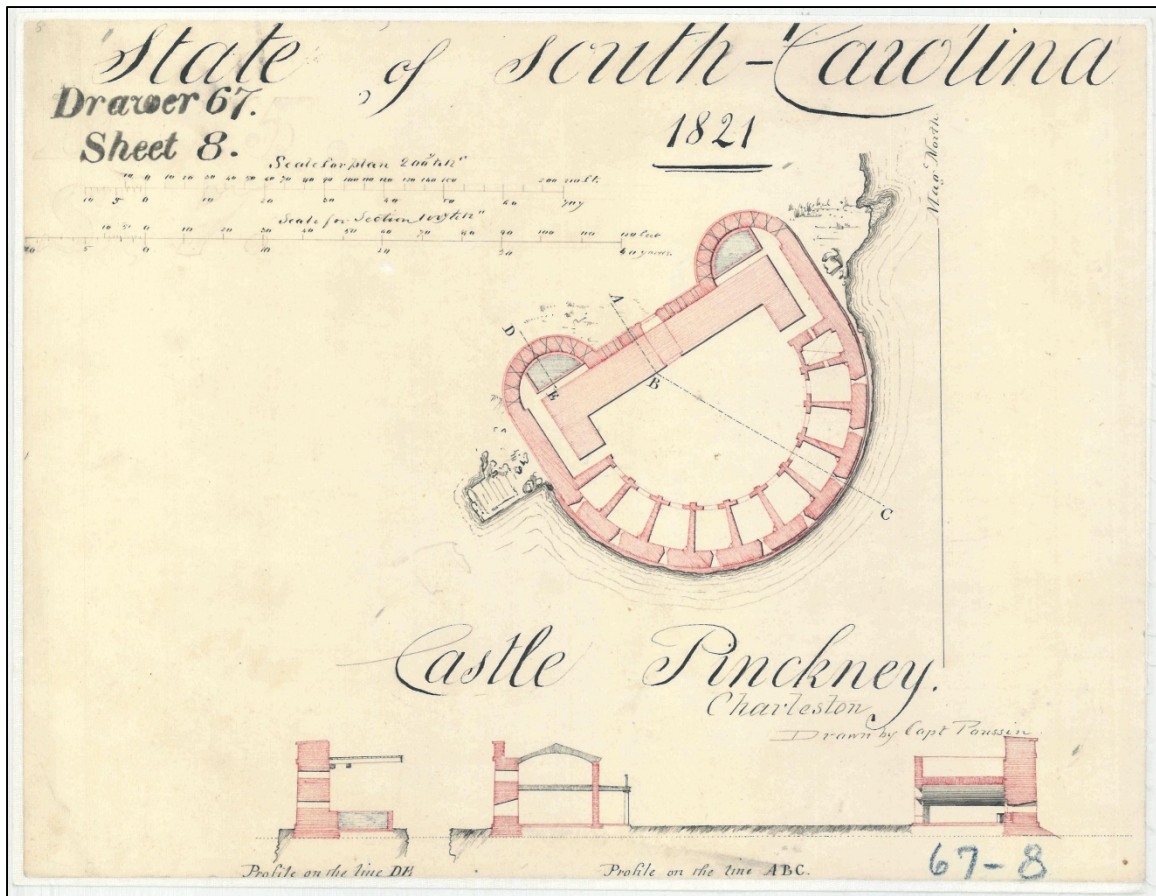


Figure 3.1
 1821 plan and sections of Castle Pinckney, drawn by Capt. Poussin, Corps of Engineers
 National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 8

intended to “prevent an enemy in time of war from forming a permanent establishment, or even a momentary one, on the soil of the Union; those which defend our great naval arsenals; and those which protect our chief commercial cities.”⁵⁰ The new fort for Charleston was placed in the second class, which were to “defend commercial cities of secondary importance, which either from natural or artificial defenses, existing works, etc. are not entirely without protection.”⁵¹ It can be assumed, then, that the reason construction of Fort Sumter was not begun until 1829 (eight years after the commencement of the third system) was both because Charleston’s influence as a primary commercial city had already begun to wane, but also that the harbor was sufficiently

protected, for the time being, by Fort Moultrie on Sullivan's Island, Fort Johnson on James Island, and Castle Pinckney on Shutes Folly Island.

When attention finally turned to the improvement of fortifications in Charleston Harbor in 1829, the social and political conditions in South Carolina were notably different. In 1819, the nation's first economic depression hit and the wealthy planters of South Carolina were particularly affected. Even worse, recovery was made extremely slow in the state by the rise of the Gulf Coast plantations, which were blessed with more fertile land.⁵² In the immediate aftermath of the War of 1812, strong feelings of national pride led to the rise of strong nationalist leaders, promoting a stronger national government. But after the depression, sentiments quickly reversed, with a resurgence of calls for strengthening individual states' rights.

Nowhere was this call louder than in South Carolina, where local economic hardships were blamed on the policies and tariffs of the federal government. John C. Calhoun, Vice President under both John Quincy Adams and Andrew Jackson, became the standard bearer (if somewhat reluctantly) for the nullification movement, which held that if a particular act of the federal government exceeded its own authority, individual states had the right to declare that act unconstitutional and therefore null and void within its own borders.⁵³

On November 24, 1832, the South Carolina Legislature passed an ordinance declaring the tariffs passed by Congress in 1828 and 1832 as null and void in the state. As a part of this act, Governor James Hamilton called on the legislature to raise a volunteer militia of 12,000 men to enforce the act and to protect against federal coercion. These were tense times in the relationship between South Carolina and the federal government, the executive of which was Andrew Jackson, a believer in states' rights, but strongly opposed to the principles of nullification and secession. South Carolina's actions greatly angered Jackson, whose desire to preserve the laws of the United States at all costs was well known. The famous Massachusetts Senator, Daniel

Webster, captured the mood of the time: “I am prepared any day to hear that matters have come to blows in Charleston. I have not the slightest doubt, that both General Jackson and Governor Hamilton fully expect a decision by the sword.”⁵⁴

It was within this tumultuous political atmosphere that work on the third system of defense in Charleston continued. In 1829 Lieutenant Henry Brewerton was dispatched to Charleston to arrange for the construction of Fort Sumter as well as the thorough repair of Fort Moultrie and Castle Pinckney. The repair of Castle Pinckney was to cost about ten thousand dollars.⁵⁵ Brewerton’s drawings of Castle Pinckney, presumably in its repaired state, survive and are the most informative early drawings of the fort, featuring detailed plans, sections, and elevations with measurements. (Figure 3.2, Figure 3.3) By 1831, Brewerton had Castle Pinckney thoroughly repaired and “ready to receive a garrison.” The fort was cited as being “an important position in defense of the harbor.”⁵⁶

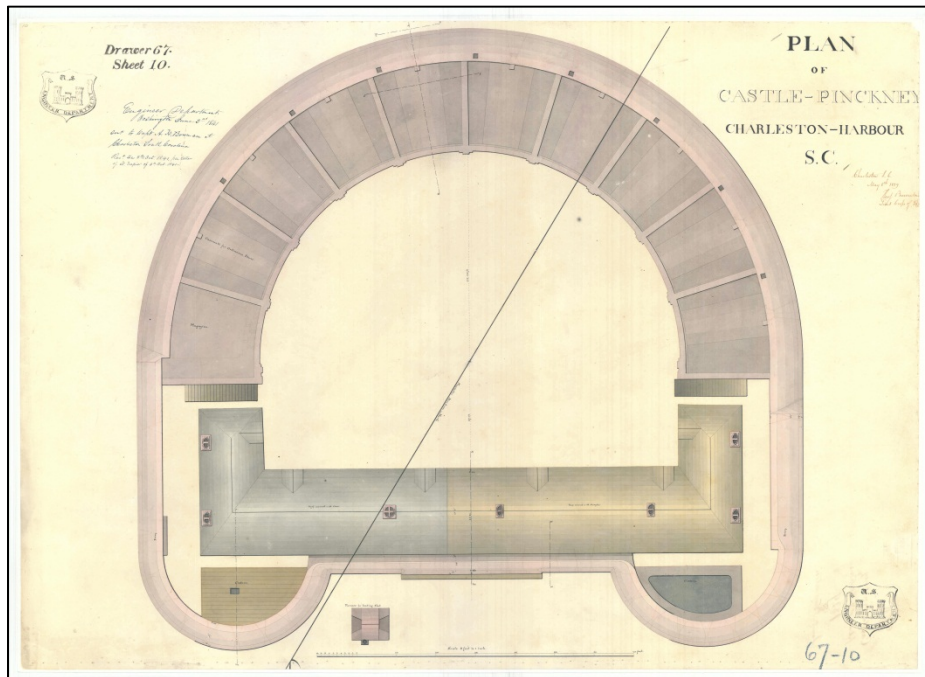


Figure 3.2
1831 plan of Castle Pinckney drawn by Lieut. Brewerton, Corp of Engineers
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 10

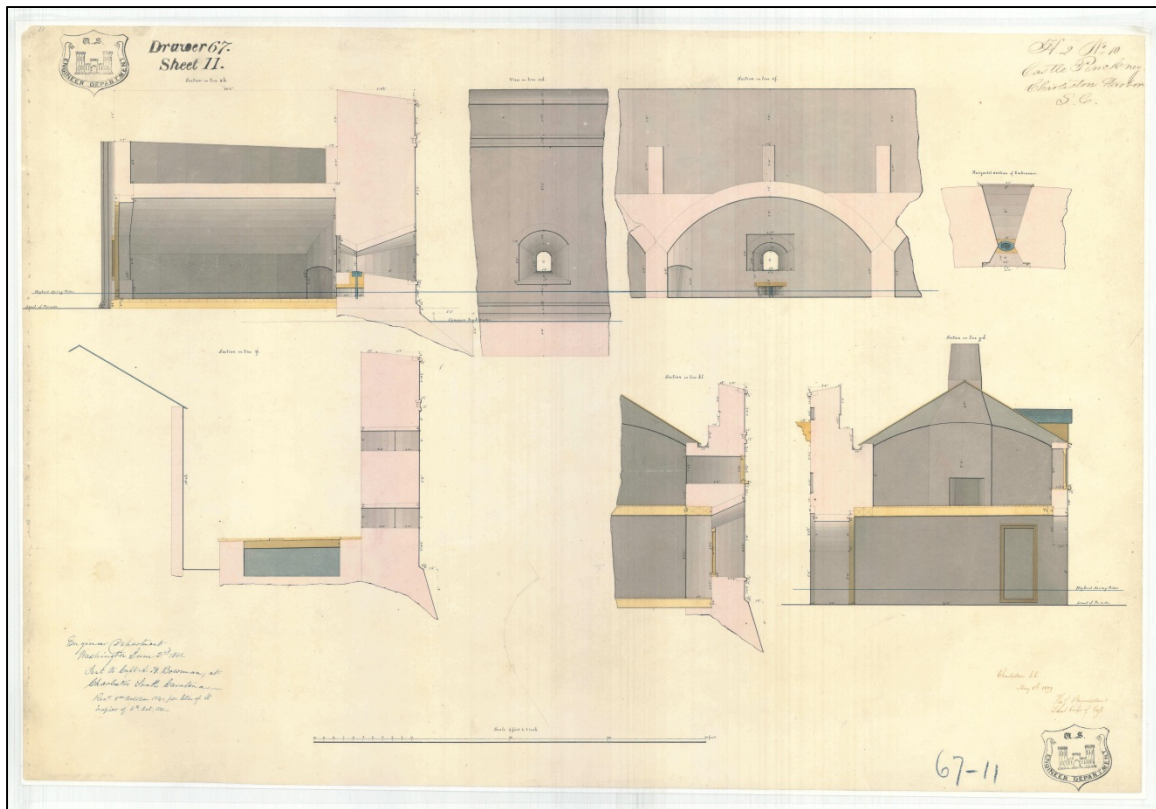


Figure 3.3
 Detail sections of Castle Pinckney, Lieut. Brewerton, Corps of Engineers, 1831
 National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 11

Alexander Macomb, original builder of Castle Pinckney and now Commanding General of the Army must have agreed with this statement. Macomb decided that Castle Pinckney would serve as a stronghold for the federal government in case hostilities broke out in Charleston. In this case, then, the security of Castle Pinckney was threatened more by an amphibious assault launched from the Charleston peninsula, than by a foreign naval power entering through the harbor.⁵⁷ To address this potential threat, 1819 Military Academy graduate, Capt. William A. Eliason, was assigned to oversee the continued repair and improvement of Castle Pinckney. By 1833, a palisade of an irregular trace had been built to enhance protection of the land side of the fort. This palisade was constructed of large timbers driven in to the ground, which, in addition to

forming a protective wall, provided structural support for an elevated platform from which the wall could be defended by cannon or rifle fire. The total armament of the fort as depicted in an 1833 plan, shows eight guns mounted in the original fort, four in casemates, and four *en barbette*, and eighteen additional guns placed on the palisade. (Figure 3.4) It is within this palisade that some of the first documented outbuildings were constructed on the island. Such outbuildings feature prominently in later artistic renderings of the fort and its environs. (Figure 3.5)

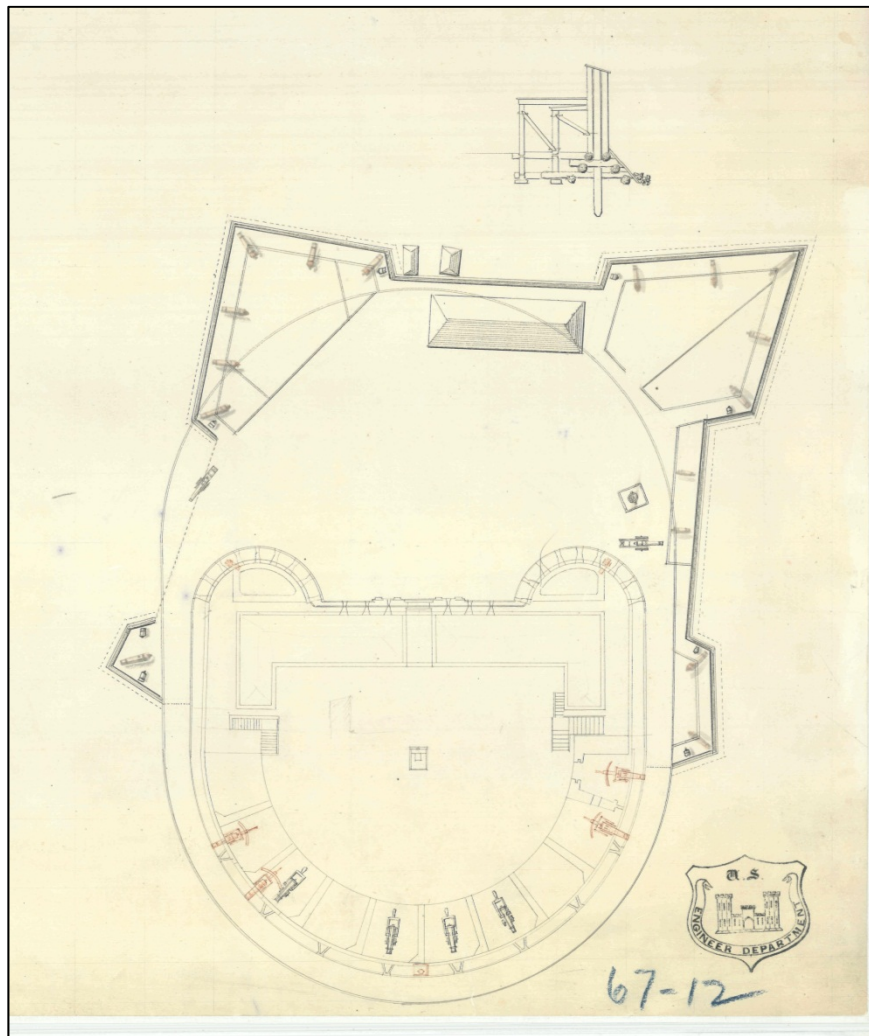


Figure 3.4
1833 plan of Castle Pinckney showing timber palisade addition. Drawn by Capt. William A. Eliason, Corps of Engineers
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 12

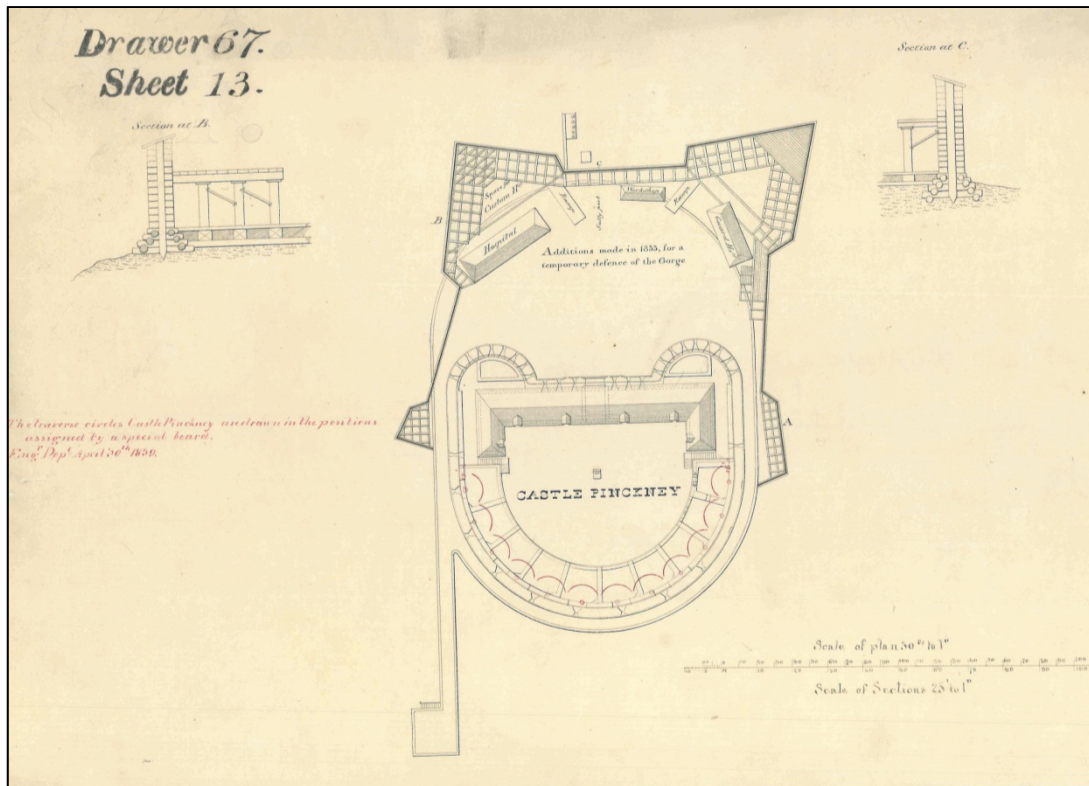


Figure 3.5

Plan of Castle Pinckney showing construction details of timber palisade, including plan and section. Also showing outbuildings. Drawn by Capt. William A. Eliason, Sept. 1833
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 13

As work progressed on the improvements at Castle Pinckney, correspondence between Washington and Charleston showed that Macomb was becoming increasingly wary of a possible confrontation. A letter from Macomb, dated October 29, 1832, issues a stern warning to Brevet Major J. F. Heileman, in command of the troops around Charleston:

You will call personally on the commanders of Castle Pinckney and Fort Moultrie, and instruct them to be vigilant to prevent surprise, in the night or by day, on the part of any set of people whatever who may approach the forts with a view to seize and occupy them.⁵⁸

Macomb went on to inform Heileman that he was responsible for the defense of these forts “to the last extremity . . . against every intrigue and surprise.”⁵⁹ Just a few weeks later, Macomb wrote to confirm that the gun carriages for Castle Pinckney had arrived and also to provide some

additional instruction. Heileman had previously asked Macomb what was to be done in the case that South Carolina demanded control of the citadel, the recently completed structure for the safekeeping of the arms of the State. If this took place, Macomb instructed Heileman to quietly withdraw from the citadel and the city, bringing any valuable United States property with him to either Fort Moultrie or Castle Pinckney.⁶⁰

Late in 1832 and into the next year, President Jackson was primarily concerned with the debate over states' rights, nullification, and secession. On December 10, 1832 the President issued a proclamation that sharply denounced nullification. A few days later, Jackson took further action to remove the custom house from Charleston to Fort Moultrie or Castle Pinckney so that the tariffs recently declared nullified by South Carolina could be enforced free from State interference.⁶¹ The ideological battle continued when South Carolina Governor Hayne issued a counter proclamation, refuting the President's views and affirming an individual state's right to nullify federal laws.

The possibility of conflict was imminent, and Castle Pinckney came very close to playing an active role in an open conflict for the first time since its construction. However, neither the State of South Carolina nor the President wanted to be responsible for initiating hostilities, and thereby tipping the country into civil war. When the rhetorical battle reached its height, the President recognized that unless he was willing to forcibly take on the nullifiers in South Carolina and their supporters in a number of other southern states, he would have to retreat and scale back the tariffs. What became known as the Nullification Crisis of 1832-1833 was chalked down as a victory for South Carolina and the nullifiers.⁶²

Castle Pinckney's position in the harbor and its role in the crisis made it one of the only coastal forts in the country to see active use in the face of potential conflict during this time. By the end of the conflict in 1833, a number of additions had been made to the facilities on the

island, including a small hospital building, a workshop, and a guardhouse, all placed within the elevated palisade, the platform of which was accessed by ramps from ground level. An army company remained at Castle Pinckney for several more years, until 1836, when it, along with the company at Fort Moultrie and many other military posts across the country, was sent into battle against the Seminole Indians in Florida.⁶³

Two years later, in 1838, Capt. Alexander H. Bowman was assigned to oversee the continuing construction of Fort Sumter as well as the repairs of the other fortifications in Charleston Harbor.⁶⁴ Bowman was a prominent engineer and eventual superintendent of the United States Military Academy at West Point. While in Charleston, he prepared numerous drawings and proposals for the improvement of Castle Pinckney and Shutes Folly Island. The 1840s were transitional for Castle Pinckney, as engineers attempted to define its purpose within the improved system of fortifications for Charleston Harbor. Through the work of Bowman and his engineering assistants the 1840s is one of the most well documented (in terms of the physical configuration and condition of the buildings) periods in Castle Pinckney's long history, their drawings show a number of interesting improvements for the island, however few of these improvements actually came to pass.

Shortly after arriving, Bowman proposed the improvement of the platforms in the smaller circular sections of the fort. Originally constructed of wood, Bowman proposed that they be replaced by brick masonry columns and stone horizontal surfaces. The Captain also submitted a proposal to improve the paving around the base of the harbor facing (scarp) wall. Undoubtedly, Bowman's most interesting and ambitious proposal was for the construction of extraordinarily

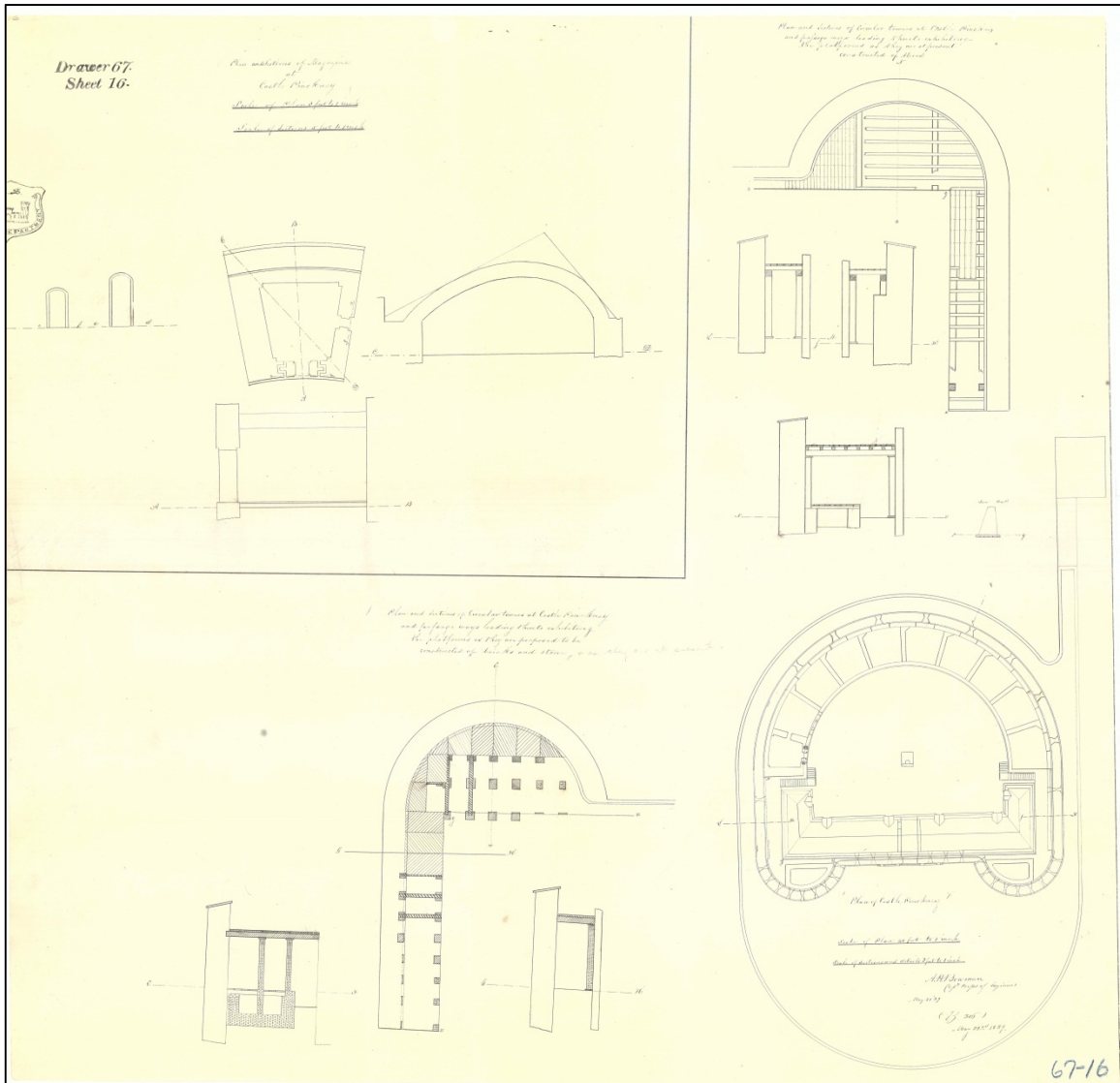


Figure 3.6

1839 drawing by Capt. Alexander Bowman. Upper right depicts existing wooden platforms in small circular tower; bottom center depicts proposed new brick and stone platforms. Detail plan and section of magazine, upper left.

National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 16

long batteries extending from Castle Pinckney and continuing down both shores of the island. As proposed, the batteries would have increased the firepower of the fortification on the island by seventy-two guns. Each of these batteries, as drawn, was a long, wooden platform featuring protective revetments (or timber facing) and a continuous string of gun traverse circles (tracks on

which the gun carriages could swing to give the cannon a large lateral firing range). Such a dramatic increase in firepower is curious considering the increasingly secondary role of Castle Pinckney as the construction of Fort Sumter progressed. This 1846 proposal was likely in response to the beginning of the Mexican-American War in that same year. It is likely that Bowman never actually received approval or funding for this project, but nevertheless his plan shows that Castle Pinckney was being continually maintained and improved throughout the 1840s.

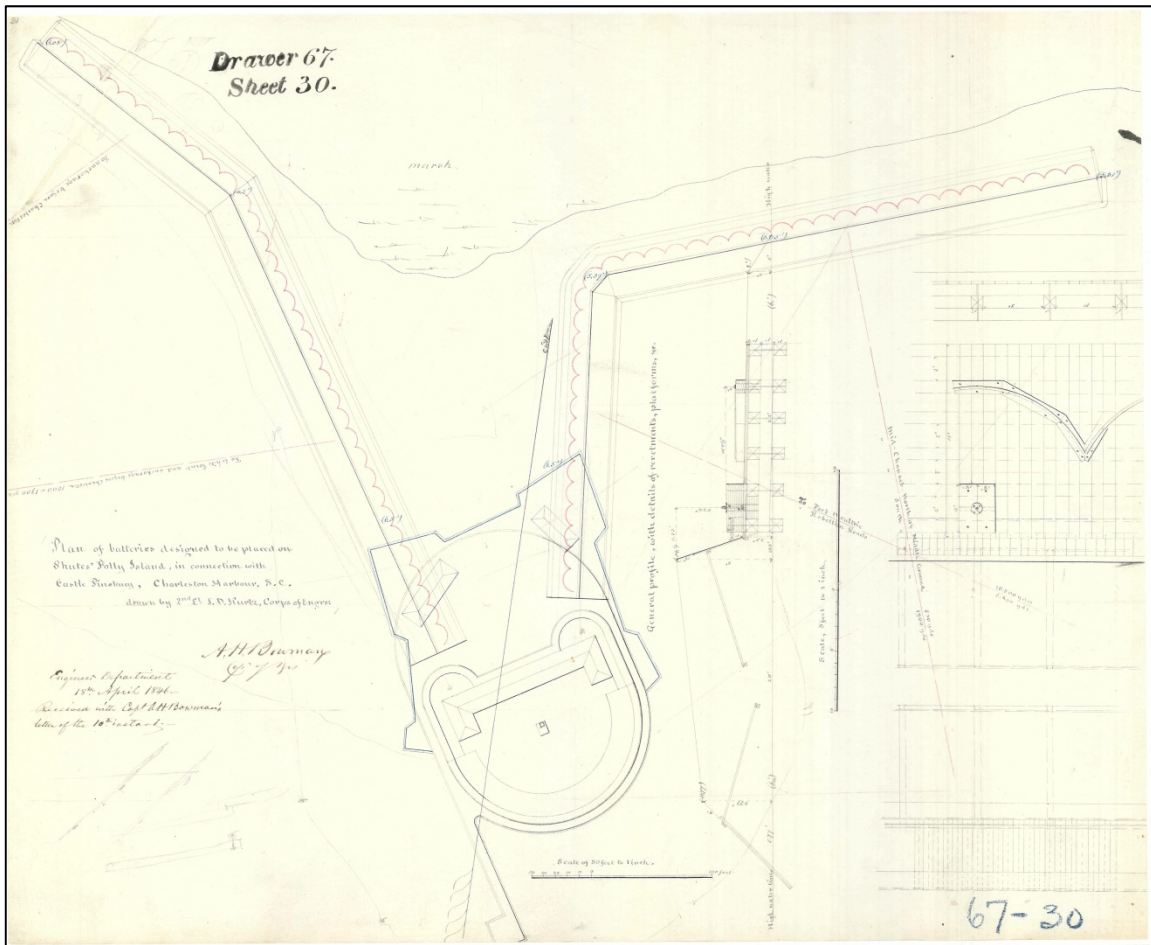


Figure 3.7
 1846 drawing by Lieut. J.D. Kurz, Corps of Engineers depicting proposed addition of long batteries. Detailed plan and section are shown on right of image.
 National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 30

Bowman had several engineers working under his command, among them was Lieutenant James H. Trapier, a native South Carolinian and graduate of the Military Academy. Trapier prepared what are the most detailed and informative drawings of Castle Pinckney that exist today. The young engineer took great care in documenting every existing condition of the fort in 1841, giving us an extremely accurate picture of how the fort existed at that time. Another of Bowman's engineering assistants documented the repairs of the Castle Pinckney Wharf – a substantial structure built of a timber grillage system and filled with rubble for reinforcement and stability. Bowman remained in Charleston overseeing the construction of Fort Sumter and the continued repair and improvement of Castle Pinckney and other harbor fortifications until 1851 when he departed for West Point to instruct classes for a year. He briefly returned to Charleston from 1852 to 1853.⁶⁵

A year after Bowman's departure in 1853, Congress appropriated one thousand five hundred dollars "for a small light on Castle Pinckney, to mark the channels from the bar to the city, and up the Cooper River."⁶⁶ This began an additional use for Castle Pinckney as a navigational aid which would continue beyond its use as a fortification.⁶⁷ The fifth order Fresnel light erected at the site is frequently depicted in artistic renderings of the fort in the years prior to and during the Civil War.

As the 1850s progressed, the political, ideological, and economic differences between South Carolina and abolitionists in the north became increasingly pronounced. In the face of severe financial distress and a growing anti-slavery movement which frequently criticized the honor of the state's most dignified and prominent gentlemen, the state, feeling disenfranchised by the union, moved further toward a doctrine of extreme states' rights.⁶⁸ It was on the eve of the Civil War, late in 1860, that preparations by the United States were made at Castle Pinckney, which would soon enter a new chapter in its history.

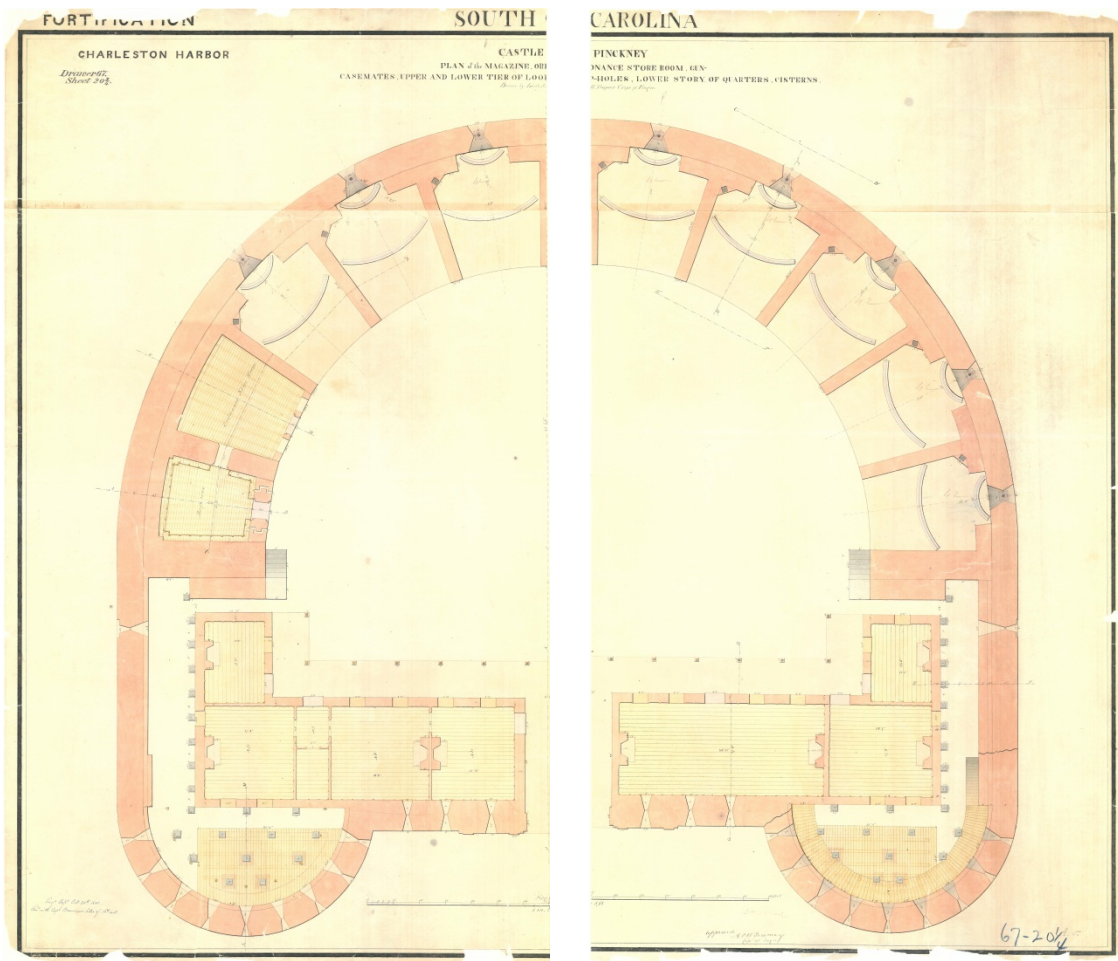


Figure 3.8
1841 plan of the casemate tier at Castle Pinckney. Drawn by Lieut. James Trapier, Corps of Engineers.
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheets 20.25 (1 & 2)

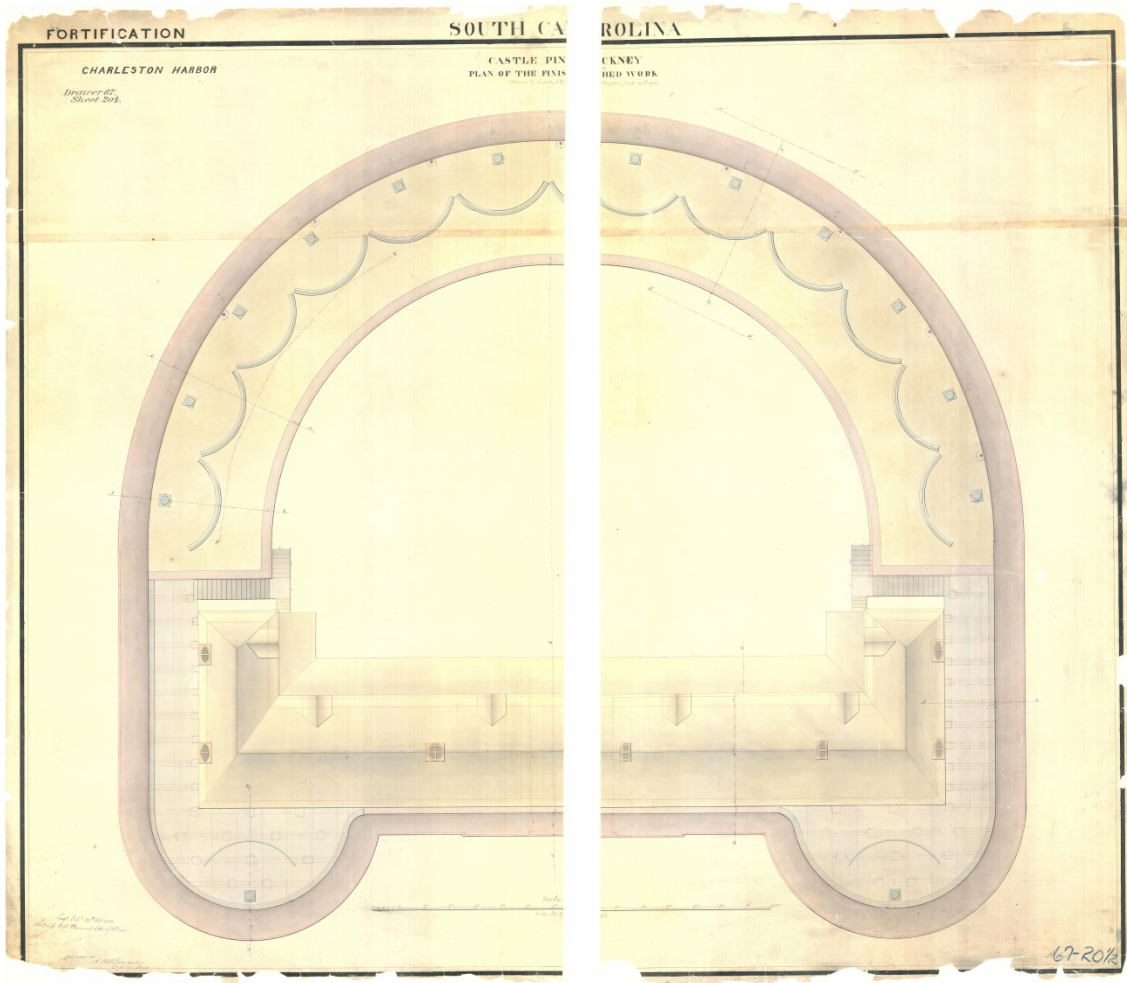


Figure 3.9
1841 plan of the barquette tier at Castle Pinckney. Drawn by Lieut. James Trapier, Corps of Engineers.
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheets 20.5 (1 & 2)

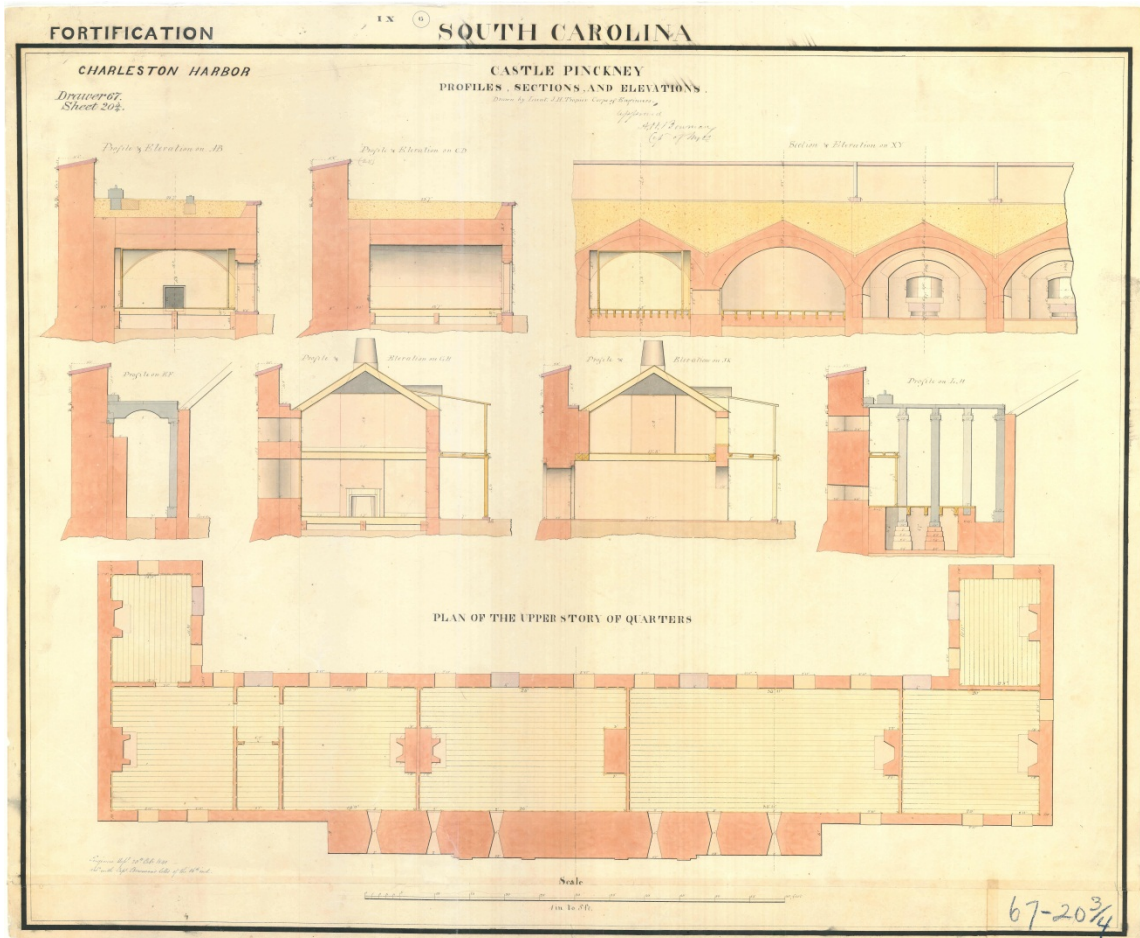


Figure 3.10
 1841 detail plans and sections of Castle Pinckney. Drawn by Lieut. James Trapier, Corps of Engineers.
 National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 20.75

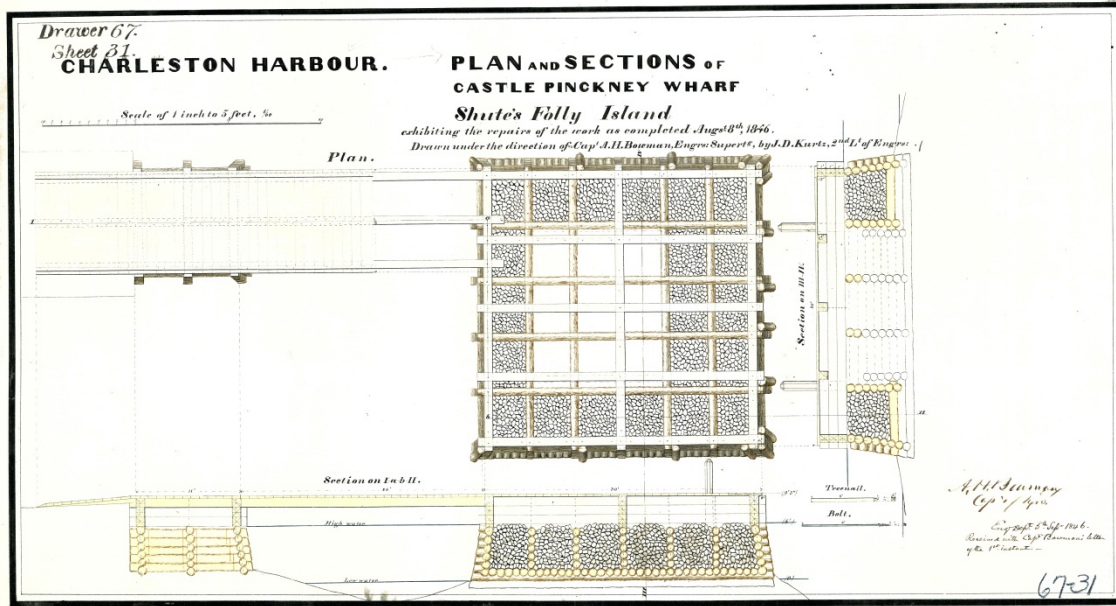


Figure 3.11
Detailed plan and section of Castle Pinckney wharf. Drawn 8 August 1846, by 2nd Lieut. J.D. Kurtz
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 31

Chapter Four - A Secondary Defense, 1860 – 1865

The union now subsisting between South Carolina and other states, under the name of “The United States of America” is hereby dissolved.

- *Excerpt from the Ordinance of Secession*

On December 20, 1860, a convention of delegates from across South Carolina met in Charleston and signed an ordinance declaring the State’s secession from the United States of America. News of the decision was greeted by exuberant celebration in the streets of Charleston and other southern cities. As celebratory cannon salutes were fired, fireworks and bonfires lit, flags flown on every house, and Charleston taverns overflowed, the feelings of Union troops observing from a not-so-safe distance in the harbor, must have been quite different.

With the signing of the Ordinance of Secession, South Carolina became an independent nation, with the exception of three small parcels of strategically important land. Fort Sumter, Fort Moultrie, and Castle Pinckney remained symbols of the Federal presence in the city and maintained, for a short time, control of its all-important harbor. Amidst the celebrations in Charleston, multiple volunteer military companies formed and attention immediately turned toward securing the harbor.

December 20th was the culmination of decades of disagreements and tension between South Carolinians and the Federal government; in the years that immediately preceded the signing of the ordinance, preparations were made by the United States government to maintain its hold on the city and the harbor. These years were crucial for Castle Pinckney as the importance of its position and the worthiness of its thorough repair, armament, and garrisoning were debated.

The fort was considered important enough to be thoroughly repaired under Capt. G.W. Cullum, beginning in 1857 and continuing in 1858 under the direction of Capt. J.G. Foster of the Corps of Engineers. On September 30, 1857, Cullum submitted his annual report detailing the work going on at Castle Pinckney to keep it in a state of readiness:

The wharf at this work, destroyed by the September gale of 1854, has been rebuilt, and its shore abutment capped with heavy granite blocks; a substantial boat house put up; the entire sea wall thoroughly repaired and coped with large flagging stones, extending from the outer edge to the scarp wall of the castle; a new 15 foot shot furnace substituted for the old and insufficient one on the parade; the floors and roofs of the officers' quarters and soldiers' barracks repaired, and their chimney tops rebuilt; and considerable cement and all the asphalt pouring executed. The completion of the contemplated repairs can readily be executed this autumn, without any further appropriation being required.⁶⁹

This substantial amount of work continued for nearly a year; on June 30th, 1858, Capt. Foster reported that the fort had been placed in a "good and efficient condition." He continued:

The repair and additions that have been made comprise the repointing and coating with two coats of cement wash, all the walls and arches; repairing the casemates; readjusting the banquettes and terreplein; repaving the main postern, putting in a new ceiling, and setting a new granite flood sill at the outer gates; the thorough repairing, replastering, and repointing of the buildings for the officers quarters, barracks, and hospital, and the addition of new piazzas to the same.⁷⁰

Foster oversaw the continuing repairs of the fort until the end of 1858, and in 1859 reported that little remained to be done and no additional appropriations were necessary. By all accounts, Castle Pinckney was in a superior state of repair when all the improvements were complete, more than capable of fulfilling its intended purpose for defense of the harbor. Despite this, however, it did not immediately receive a garrison, and the only occupation at the island consisted of Foster and his crew of thirty two laborers, two masons, and two carpenters.⁷¹

The United States continued the improvement of all three Charleston forts under their possession throughout 1860. In November of that year, just a short time before the beginning of the war, work crews under the direction of J.G. Foster and the Corps of Engineers were still hard at work completing Fort Sumter and making various repairs to Fort Moultrie and Castle Pinckney, while the only fort that actually maintained a proper garrison was Fort Moultrie. Meanwhile, Charlestonians and United States Military personnel were increasingly wary of each other's presence and behavior around the city and harbor. The tenuousness of the situation was

demonstrated when Col. John L. Gardner determined that the stores of the U.S. arsenal in the city should be removed to Fort Moultrie for safekeeping. On the evening of November 8th, under the cover of darkness, U.S. officials attempted to ship the stores from the wharves of the city, where the owner of the wharf, suspicious of their motives, refused to allow shipment. A crowd began to gather, and becoming aware of what was being attempted, backed the wharf owner in his refusal. The event served to “indicate the inflammable and impulsive state of the public mind in Charleston and to a great extent characteristic of the feeling manifested throughout the State.”⁷²

Castle Pinckney was the fort nearest the city and events such as this demonstrated to Charlestonians that control of the city’s wharves meant greater control over the routes of communication and transportation throughout the harbor. Control of Castle Pinckney was essential for control of the city’s wharves, which were within easy range of the castle’s guns. Fortunately for South Carolina, the fact that Castle Pinckney was by now viewed as small and antiquated by the US military meant that it had not received a garrison to protect it from Confederate seizure. On November 11th, Assistant Adjutant-General F.J. Porter reported that while the armament of Castle Pinckney was complete, and a company could be accommodated there, he “would not recommend its occupation.”⁷³

Porter’s opinion was in stark contrast to that of Major Robert Anderson, who arrived in Charleston a week and a half later as the new commander of the United States forces there. Anderson’s opinion of the condition and garrison of Castle Pinckney more accurately reflected its perfect strategic location in the harbor. He asserted that it was “perfectly commanding the city of Charleston” and is “essentially important that this castle should be immediately occupied by a garrison, say, of two officers and thirty men.” In his report, Anderson made repeated arguments for the importance Castle Pinckney, with his remarks indicating his belief that the fort played a pivotal role in discouraging confederate attacks on the other two forts:

The safety of our little garrison [Fort Moultrie] would be rendered more certain, and our fort would be more secure from an attack by such a holding of Castle Pinckney than it would be from quadrupling our force. The Charlestonians would not venture to attack this place when they knew that their city was at the mercy of the commander of Castle Pinckney.⁷⁴

Anderson continued to suggest that by the adequate reinforcement of all three forts in the harbor, the United States and South Carolina could avoid outright hostilities altogether, harkening back to George Washington's initial defense policy of preparedness as a deterrent. "Nothing, however, will be better calculated to prevent bloodshed than our being found in such an attitude that it would be madness and folly to attack us."⁷⁵ Despite his best efforts, Castle Pinckney never received the garrison urged for by Anderson. It is hardly a stretch to say that had Castle Pinckney been properly enforced and held by federal troops, with guns trained on the heart of the city, the start of the war could have, at the very least, been postponed for some time.

In response to Anderson's report, on November 28th the Corps of Engineers authorized Capt. J. G. Foster to send a working force of an officer, four mechanics, and thirty laborers to complete the few repairs suggested by Anderson, including repairing one of the cisterns and the wooden banquette above it, making new shutters for the embrasures, and some slight work to the main gate. Interestingly, Anderson recommended repairing the "old palisading", the first mention since the early 1830s of the palisade built during the Nullification Crisis of 1832-1834, which he cited as being "much rotten".⁷⁶ These repairs and others were underway by the beginning of December, and on December 11th Lieutenant R.K. Meade took command of the fort and continued the work.

Nine days later, on December 20th, South Carolina formally seceded from the United States of America. State troops quickly moved to secure the fort which posed the most immediate threat to the safety of the city itself: Castle Pinckney. Taking advantage of the unguarded state of the island, "a steamer landed an armed force at Castle Pinckney, and effecting

an entrance by scaling the walls with ladders, took forcible possession of the work. Lieutenant Meade was suffered to withdraw to this fort [Sumter].”⁷⁷ This act constituted the first seizure of United States property by the seceded State of South Carolina. Later that evening South Carolina forces occupied Fort Moultrie in a similar manner, “while in town the Palmetto flag was hoisted on the custom house and saluted.”⁷⁸

Castle Pinckney was in excellent condition at the time of its seizure. “The armament of the fort was all mounted, except two or three guns on the barbette tier, and one 42 inch in the casemate tier. The carriages were in good order. The magazine was well furnished with implements, and also contained some powder.”⁷⁹ The armament included fourteen 24-pounders, four 42-pounders, four 8-inch seacoast howitzers, one 10-inch and one 8-inch mortar, and four light artillery pieces for flank defense – certainly a valuable prize for South Carolina troops.⁸⁰

Following the apparent refusal of federal troops to withdraw from Fort Sumter, South Carolina immediately began preparing for an assault on the fort, and to repel any effort of the federal government to supply the garrison of the fort with any reinforcement. To this end, Brigadier General P. G. T. Beauregard was busy improving the batteries on Sullivan’s, Morris, and James Islands. His report to General L.P. Walker, Secretary of War for the Confederate States on March 6, 1861 identified eight new batteries, completed or under construction, on Morris Island alone. These batteries required guns, several of which were taken from Castle Pinckney. While under the control of the United States in the months leading up to the war, Castle Pinckney sat as a first line work in close proximity to the enemy – the secessionists of Charleston. But with its capture by South Carolina, the focus of potential hostilities shifted further out toward the mouth of the harbor – Fort Sumter and the coastal islands. As such, Castle Pinckney was viewed as an insignificant work in the defense of Charleston Harbor in the early years of the war. Because of this, many of its guns were removed and placed in new batteries

around the perimeter defense works for the city. In March this included the transfer of two of Castle Pinckney's seacoast howitzers, and all of its 24-pounders to Morris Island.



Figure 4.1

Early map showing the Confederate defenses of Charleston Harbor, published 1861. *Part of Charleston Harbor Embracing Forts Sumter, Johnson, and Castle Pinckney*. Map. Philadelphia: P.S. Duval & Son, 1861. Library of Congress, *Map Collections*

On April 12, 1861, these new batteries on Morris Island, along with Fort Johnson and Fort Moultrie opened fire on Fort Sumter, thus beginning the Civil War. An estimated total of thirty guns continuously fired on Fort Sumter throughout the day, while Major Anderson and the federal troops at the fort returned fire with a total of forty-eight guns. Based on this estimation,

over half of the guns used to fire on Fort Sumter were taken from Castle Pinckney. The taking of Castle Pinckney was an essential first step in securing South Carolina's defensive positioning and eventually expelling Federal troops from Charleston Harbor.

It was later reported that during the Union's return fire on the confederate batteries, "Only one or two shots were fired at Fort Johnson and none at Castle Pinckney or the city."⁸¹ Castle Pinckney, then, was not fired from or on during the bombardment of Fort Sumter, and passed through the earliest stage of the war unscathed and untested. It would be several more years before the defense capabilities of Castle Pinckney were once again prepared for action – although in a rather different form – as part of the second line, as the Union bombardment began to break through the first line of Confederate defenses.

In the meantime, the castle was put to a slightly less combative use. On September 12, 1861 the Charleston Zouave Cadets, a volunteer company, was assigned to guard a group of Federal prisoners captured during the First Battle of Bull Run, or First Manassas. The Charleston Zouaves were organized in early 1860 as a social and military club, with an armory, gymnasium, and reading room. Upon the secession of South Carolina, the company volunteered their services to Governor Francis Pickens and were assigned to several posts around Charleston, including the construction of batteries on Morris Island, guard duty at the batteries on Cummings Point, where they witnessed the attack on the *Star of the West* as it attempted to resupply the federal troops at Fort Sumter, as well as guard duty on Sullivan's Island, where the company witnessed the bombardment of Fort Sumter in April. After several months of drilling and parading to fill the time in Charleston, the Zouaves were called upon to escort the captured New York Zouves to Castle Pinckney by way of the Charleston jail.

The New York Zouaves were similarly a volunteer company, but "made up largely of New York City's rough element".⁸² The union prisoners were kept in the casemates of Castle

Pinckney, which, to facilitate their conversion to cells, were bricked up with the exception of a door and window in each. Although the Charleston company was at first apprehensive of the “rough” character of the prisoners, the relationship between captor and captured proved to be amicable. “The prisoners in general, proved more tractable than was expected under the circumstances and gave no trouble, though the members of the company were ordered to strict vigilance and were never allowed outside their quarters without their sidearms.”⁸³ For the one month that the union prisoners remained at Castle Pinckney, the two sides seem to have gotten along relatively well, although the Charleston Zouaves were careful not to get too comfortable. At the end of October the prisoners were removed from the castle and sent to Virginia as part of a prisoner exchange.

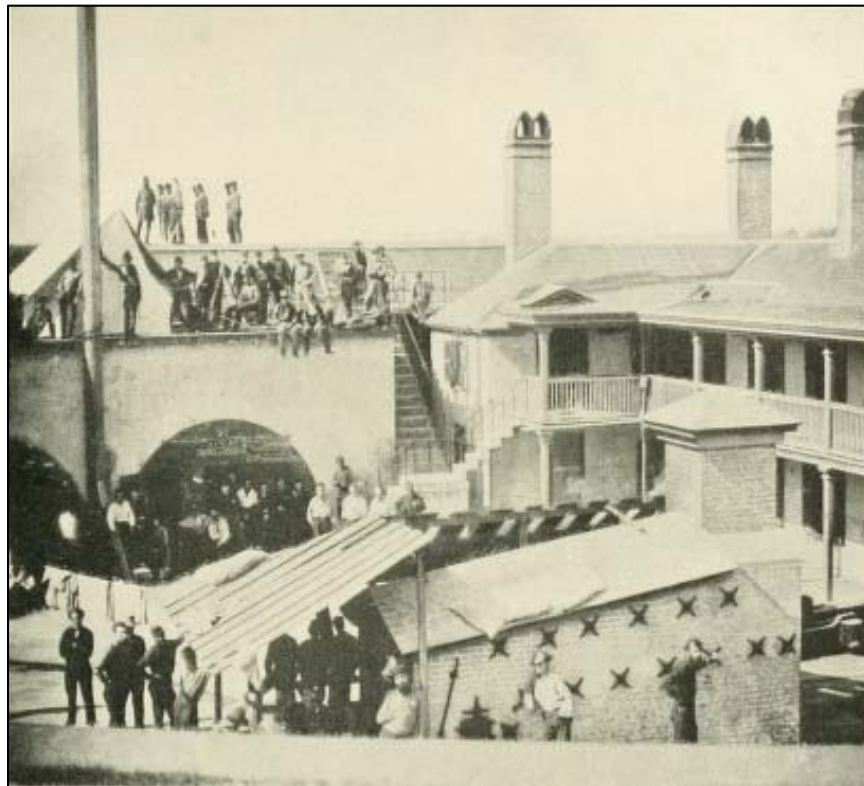


Figure 4.2
Civil War photograph showing Charleston Zouaves above, watching over Union prisoners below. Also shown are barracks in the background and hot shot

The Charleston Zouaves remained as the garrison of Castle Pinckney until the end of January, 1862. In those few months, distractions from the monotony of daily garrison life were rare. With little actual military conflict around Charleston Harbor, which was being effectively blockaded by the United States navy, any event that was out of the ordinary was welcome. These events included the cheering of confederate blockade runners and the occasional visitor for inspection. Perhaps one of the most renowned individuals to ever visit Castle Pinckney was General Robert E. Lee, who had recently been appointed Commander of the Department of South Carolina, Georgia and Florida, and was busy organizing the coastal defenses there. The excitement of this visit, however, was quickly subdued when the Fire of 1861 broke out in Charleston, which caused “considerable gloom and anxiety among the men as all had homes there at the source of the flames yet none could get there, though in the near vicinity and in full view of the conflagration.”⁸⁴

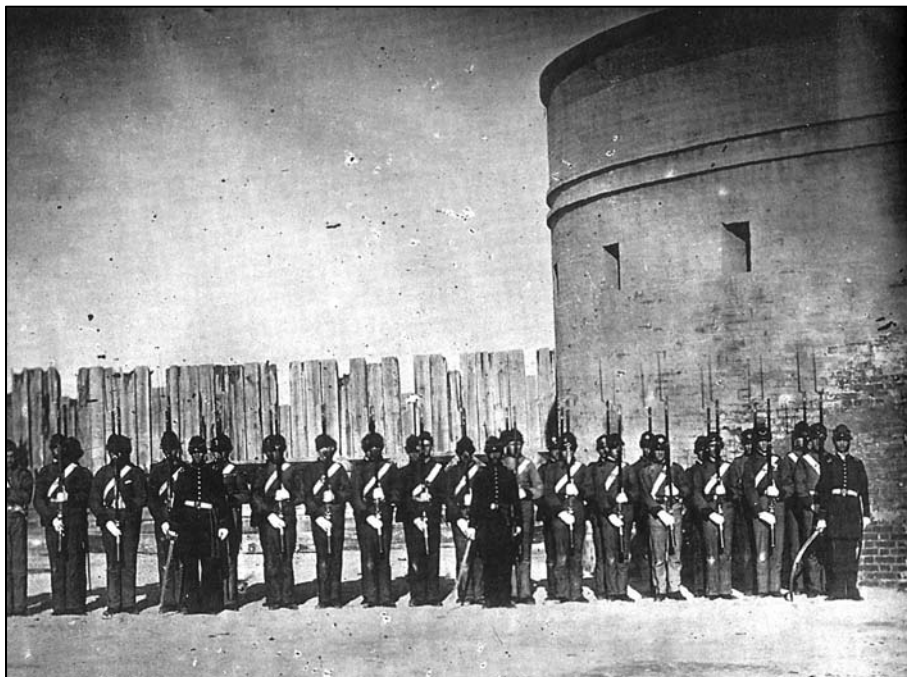


Figure 4.3

Civil War photograph showing soldiers at attention outside the fort. Note the fort's exterior before removal of the parapet, and old timber palisade.

Photograph. Library of Congress: *Selected Civil War Photographs, 1861 - 1865*

Shortly after the prisoners had been removed from the fort, Captain Charles A. Leanlan of the Corps of Engineers was assigned to Castle Pinckney to oversee the reversal of the work done to convert the fort to a prison. An additional company of infantry was assigned to assist the Zouaves in their work of opening the casemates, mounting guns, and general preparation for participating in the defense of the harbor. Thus for a short time between serving as a prison and an earth work, Castle Pinckney assumed its original purpose. The Zouaves continued their garrison duties with Capt. C.E. Chichester in command until March, 1862, when they were replaced by the first South Carolina Regiment of Artillery, under Major Ormsby Blanding.⁸⁵

For the remainder of the year 1862, the defenses of Charleston were being fine-tuned and adjusted for the long anticipated Federal attack on the strategic port. For the most part, this effort focused on the improvement of the outer line of defenses, including those on Morris and James Islands. The Union plan to advance from the south on both of these islands and establish batteries from which they could launch artillery assaults on Fort Sumter as well as the city, meant that Castle Pinckney was well outside the range of relevant defense works. This was frankly stated by General Beauregard after his inspection of the various batteries and harbor defenses in September of 1862, "I did not visit Castle Pinckney, the armament of which is nine 24-pounders and one 24-pounder rifled, as I am acquainted already with this work, and considered it nearly worthless, capable of exerting but little influence on the defenses of Charleston."⁸⁶

Union forces continued their assault on the defenses of Charleston for the remainder of 1862 with varying degrees of success, taking heavy casualties during the loss at the Battle of Secessionville and subsequently retreating from James Island, which Beauregard believed critical to the successful defense of the city. However, by the middle of 1863, U.S. General Gillmore and his troops had gained a foothold on Morris Island and began repeated assaults on the Confederate Battery Wagner, with the ultimate aim of positioning for the assault on Fort Sumter. The second

Davis was correct in his observation. A report prepared by Major Suters of the Corps of Engineers in December of 1863 shows that the Confederates were contemplating the modifications of Castle Pinckney fairly early during the bombardment of Fort Sumter. Drawings accompanying the report give a detailed plan for the conversion of Castle Pinckney into a massive earthwork, barbette battery. The brick masonry walls, which had been proven disastrously susceptible to Union artillery, were buried, and atop the earth embankment were placed three, ten inch columbiads and one seven inch brooks rifle. The guns were mounted in circular placements, between protective merlons. Under the large amount of earth brought into the interior was a system of tunnels which led to various casemates, used as magazines, storage and bombproof shelters. Also, a part of the barracks was demolished to make room for a large covered shelter constructed in the north half circular tower. The reinvented battery was intended to intercept any ship that managed to slip past the crumbling defenses at the mouth of the harbor.

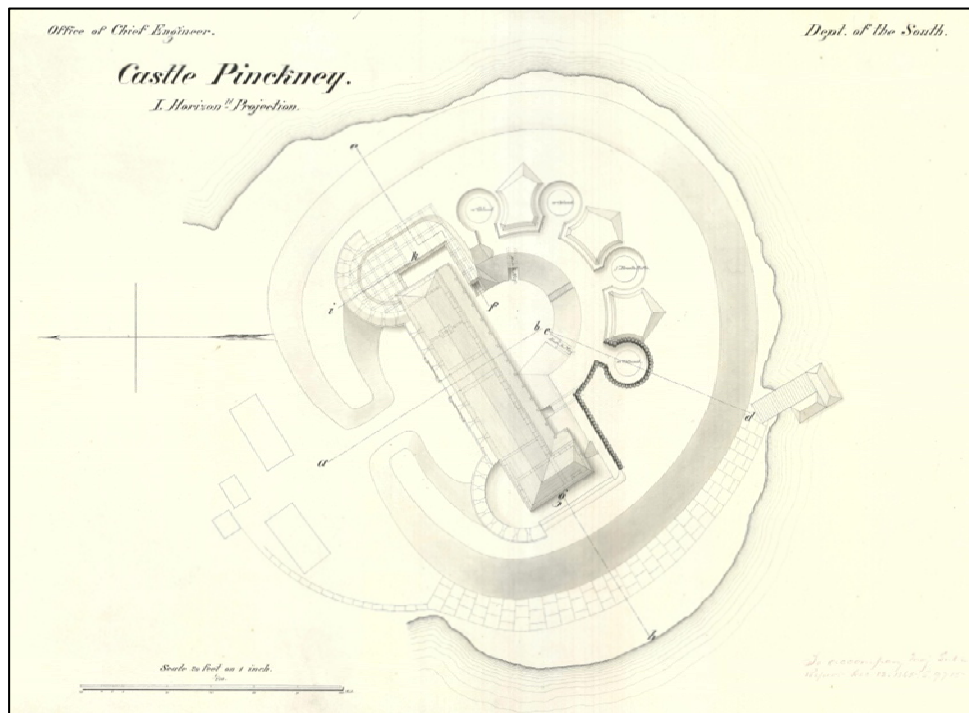


Figure 4.5

Drawing of proposed changes to Castle Pinckney, drawn late 1863
National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 42.25

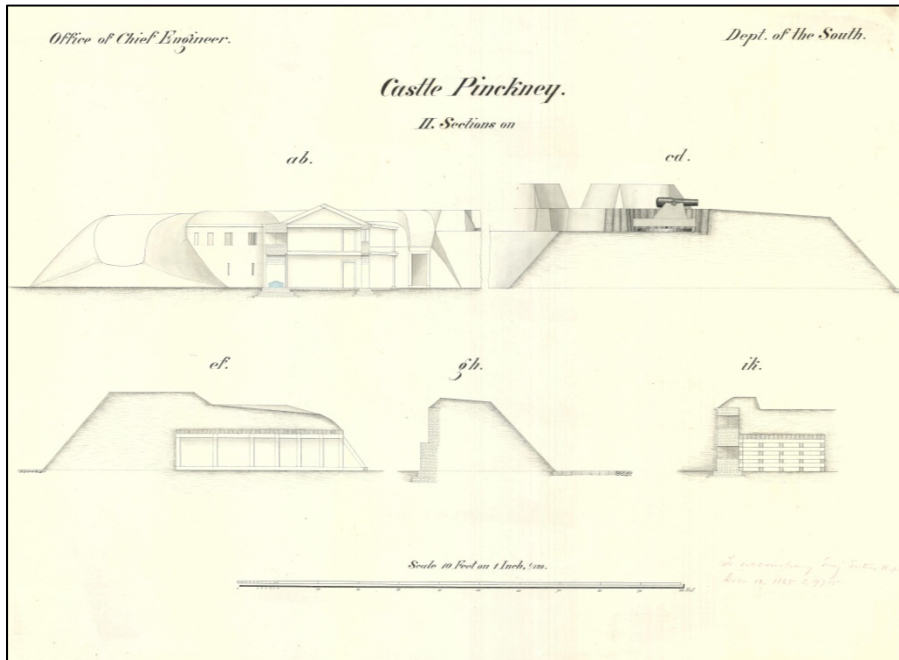


Figure 4.6
 Detailed sections of proposed changes to Castle Pinckney, drawn late 1863.
 National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 42.5

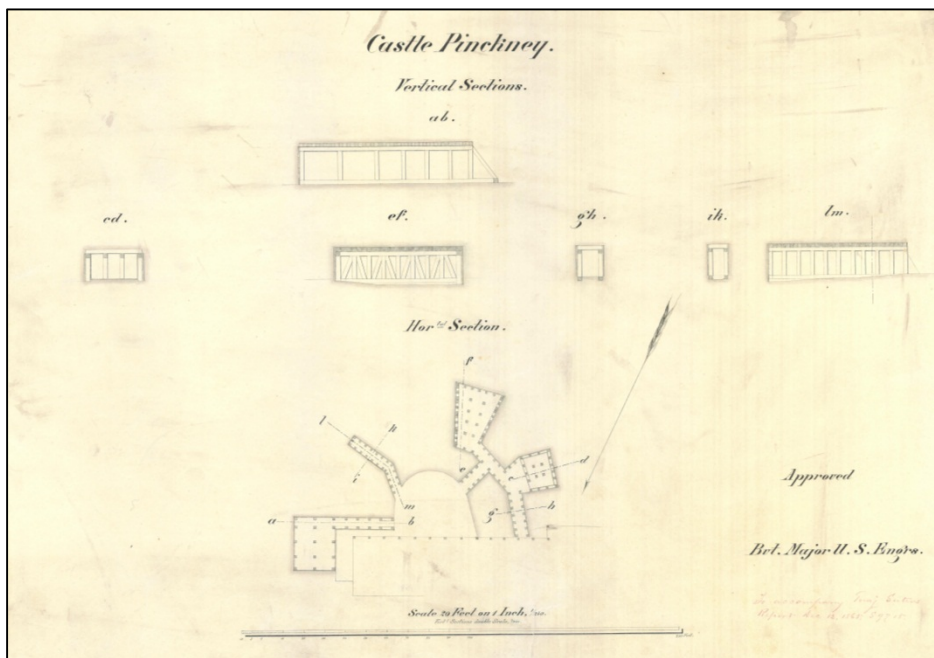


Figure 4.7
 Detailed plans and sections of proposed changes to Castle Pinckney, drawn late 1863
 National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 42.75

Work on the improvement of Castle Pinckney progressed rapidly through the month of January, 1865. On January 13th, Assistant Adjutant-General W.L.M. Burger stated that, “At Castle Pinckney heavy working parties have been constantly employed since my last report, probably sodding.”⁸⁷ A week later, Burger delivered a follow up report, “Only on Castle Pinckney strong fatigue parties (say over 100 men) are still at work day and night between low and half tides.”⁸⁸

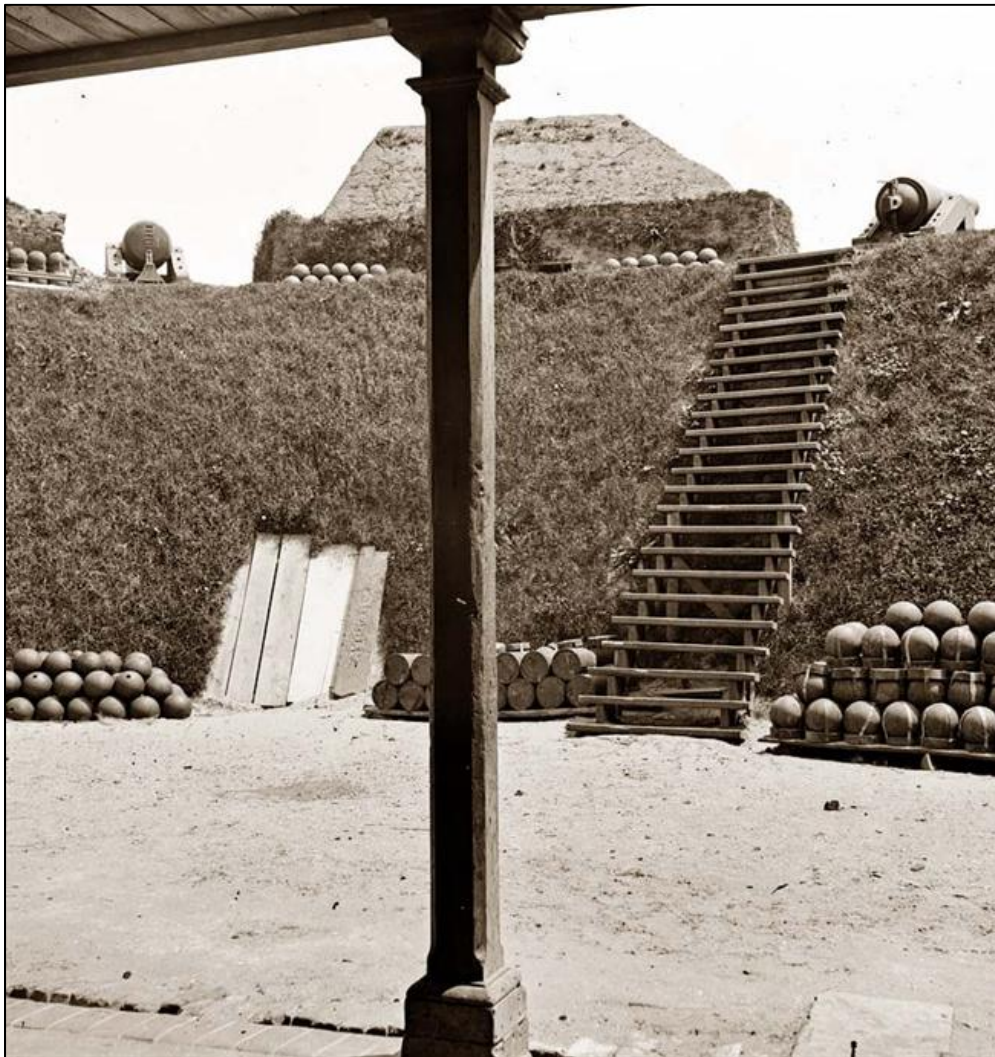


Figure 4.8

Photograph taken from barracks portico facing south, showing Castle Pinckney’s conversion to an earth work, note guns on either side of the large merlon.

Photograph. Library of Congress: *Selected Civil War Photographs, 1861 - 1865*

The work on Castle Pinckney was barely completed when, on the night of February 17, 1865, Charleston and all Confederate troops there were evacuated, including those stationed at the various forts around the harbor. General Sherman's unrelenting march through the interior of the State put the Charleston forces in checkmate, forcing them to withdraw to North Carolina so that they might live to fight another day. As they abandoned them, "new flags were left flying over Fort Sumter, Fort Moultrie, and Castle Pinckney, which the troops hoped would lead the federal forces to think that they were still occupied."⁸⁹ The flag remained flying over the abandoned fort for eight days, until Colonel Bennett, commanding the U.S. forces in Charleston, was assured of the withdrawal of all Confederate troops. On February 24th, Bennett "pushed for the city, stopping at Fort Ripley and Castle Pinckney, from which works rebel flags were hauled down and the American flag substituted."⁹⁰

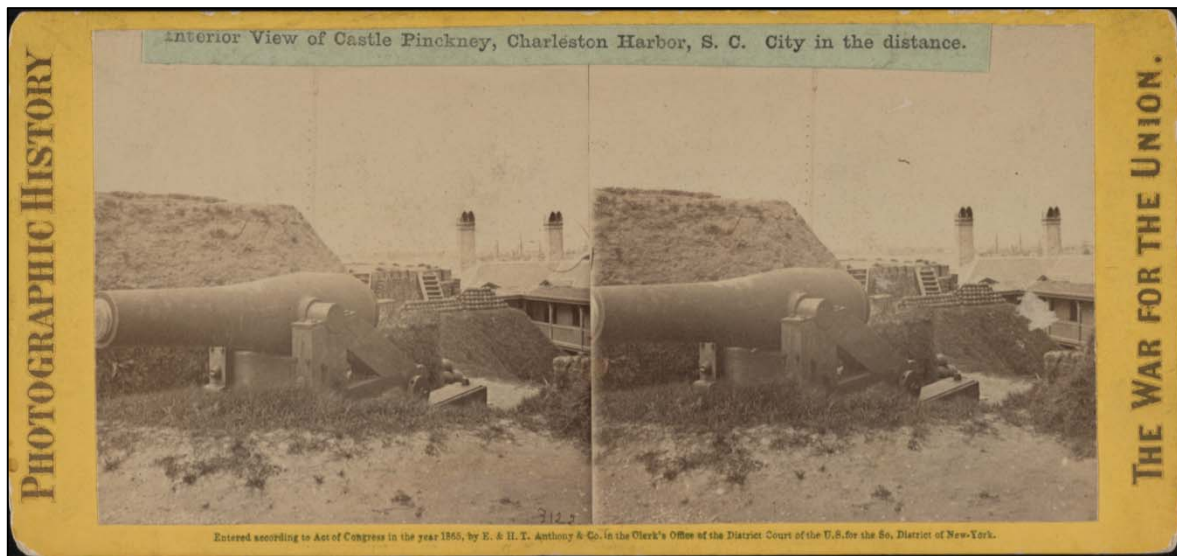


Figure 4.9
Stereoscopic card of Castle Pinckney shortly after the Civil War
Stereograph. Library of Congress: *Selected Civil War Photographs, 1861 - 1865*

The abandonment of Castle Pinckney on February 17th was the last day the fort was used as a defensive military installation. The end of the war and the relentless advance of military technology quickly made the now fifty-four year old fort unsuitable for the purpose for which it was built. For the next several decades, the site served a variety of utilitarian purposes and, simultaneously, the layers of its most historically significant periods were worn away or buried.

Chapter Five - An Interesting Ruin, 1866 – 2012

The fort is in a dilapidated condition; the walls have settled and cracked; there are no slopes, except accidental ones; the gun carriages have rotted away and only parts of the guns are exposed by the rubbish in which they are buried.

- *Lieutenant Thomas N. Bailey,
United States Engineer Office at Charleston*

After the official end of hostilities at the close of the Civil War, Castle Pinckney passed back under the control of the Corps of Engineers of the United States Army. It was at this time, when its importance as a defensive installation had lapsed, that a pattern began which would continue to the present day. The fort and surrounding site were the subject of frequent governmental agency transfers and changes of use that took advantage not of its strategic defensive location, but of its isolated island nature.

For a brief period, Castle Pinckney was once again used as a prison. For the year August, 1867 to August, 1868, the fort held anywhere from fifty to one hundred military prisoners accused of various crimes including murder, neglect of duty, desertion, assault and battery, riotous conduct, sleeping on post, drunkenness on duty, arson, and horse stealing.⁹¹ It is unclear if the casemates within the castle were once again bricked up to be used as cells, or if the prisoners were allowed access to the whole parade ground, but by August, 1868 the supply of former confederate ruffians had dwindled to the point where Castle Pinckney was no longer needed to hold them.

In 1870, it seemed that the fort might once again play a role in the defense of Charleston, when Major Q.A. Gillmore of the Corps of Engineers recommended that it “be temporarily maintained with such repairs as are absolutely essential, and that guns of medium size be mounted upon wood platforms in the several emplacements already prepared for them.”⁹² To accomplish these minor improvements, Gillmore recommended an appropriation of seven thousand dollars. The money never came, however, and none of the proposed work was done at

the fort. For the next six years, the site served as an ordnance storehouse for the War Department and continued to feature a navigational aid light. An ordnance sergeant and a lighthouse keeper were stationed at the island to manage these activities.

By 1876, the War Department had little use for the site, and began to express its desire to hand the fort over to the Treasury Department for use as a Light House Board depot. On November 15, 1876, Secretary of War J.D. Cameron ordered the removal of any remaining ordnance at the site and dismissed the ordnance sergeant, “As there will remain but four obsolete guns, only valuable as scrap iron, and as the work is not at present needed as one of the defenses of the harbor it can be turned over temporarily to the care and custody of the Treasury Department, if you so desire, and the light keeper placed in charge.”⁹³

Although this date marks a turning point in Castle Pinckney’s history as the date when the fort was finally relieved of any defensive capabilities whatsoever, the War Department continued to make it clear that the site was only being handed over for temporary use by the Light House Board, and should an emergency situation necessitate its use as a defensive installment, the War Department maintained the authority to use it as such. In response to a request by the Secretary of the Treasury, on April, 1878, Secretary of War George McCrary officially gave the Light House Board permission to use the island:

I have the honor to inform that your request is approved, and that authority is granted to use Castle Pinckney, and to construct wharves and temporary buildings in the vicinity in such positions as may be approved by the officer of engineers in charge of the work, it being agreed that the premises shall be vacated when required by this department.⁹⁴

The Light House board immediately went to work turning the island into a functional and well maintained depot. However, it appears that the fort itself did not figure in the plans of the board, and the interior casemates, barracks, guns, and gun carriages were allowed to deteriorate. By 1884, Lieutenant Thomas N. Bailey, of the United States Engineers office in Charleston reported that the Light House Board had constructed several buildings near the fort, of “trim

appearance”, but that the fort itself was in a dilapidated condition.⁹⁵ The buildings were located on the western land side of the fort and included the keeper’s dwelling and a large storehouse, as well as the wharf and light, rebuilt by the Light House Board in 1880.

In the 1890s modernized defenses – part of the new system spearheaded by Secretary of War William Endicott – were installed at Fort Sumter and on Sullivan’s Island. The completion and preparation of these defenses became a priority during the Spanish American War in 1898, but any semblance of modernization bypassed Castle Pinckney, which continued to be used by the Light House Board.

1901 was a year of major change for the character and appearance of Castle Pinckney when the Light House Board decided to upgrade the site and move its functions to the interior of the fort. With the barracks termed a “dangerous wreck” and the rest of the fort interior being slowly filled with rubbish, the Light House Board decided to demolish what was left of the barracks, fill the fort with dirt, pour a concrete cap on the fill, and construct a new, rather impressive, keepers dwelling, along with a new store house, oil house, and a short railway connecting the wharf to the service buildings. A 1901 plat shows the board’s plans; the entire southern and western sides of the fort were to be filled above the level of the barbette tier, so as to completely bury the casemates. On the northeast side of the interior, where the barracks once stood, the earth fill sloped down to the original level of the ground, so that the sally port still served as a functional entrance to the fort’s interior. Located on the northwest side of the fort’s interior, on top of the earth fill, was the new keeper’s dwelling, an impressive two-and-a-half story Italianate house, with a two story, wrap around piazza. Soon after, the old structures outside of the fort’s walls were demolished. The new and improved light house depot continued to be used until 1917.

By 1917, the navigational aid lights at Castle Pinckney were fully automated and no longer required a keeper. The Light House Board then abandoned the island to allow the War Department to reclaim it for use by the Corps of Engineers in Charleston. The large house on the island proved impractical and expensive to maintain. It was demolished and replaced with a much simpler one-and-a-half story building for housing a watchman. For the next several decades, the island and fort were used as a storage and supply depot for the Corps of Engineers in Charleston.

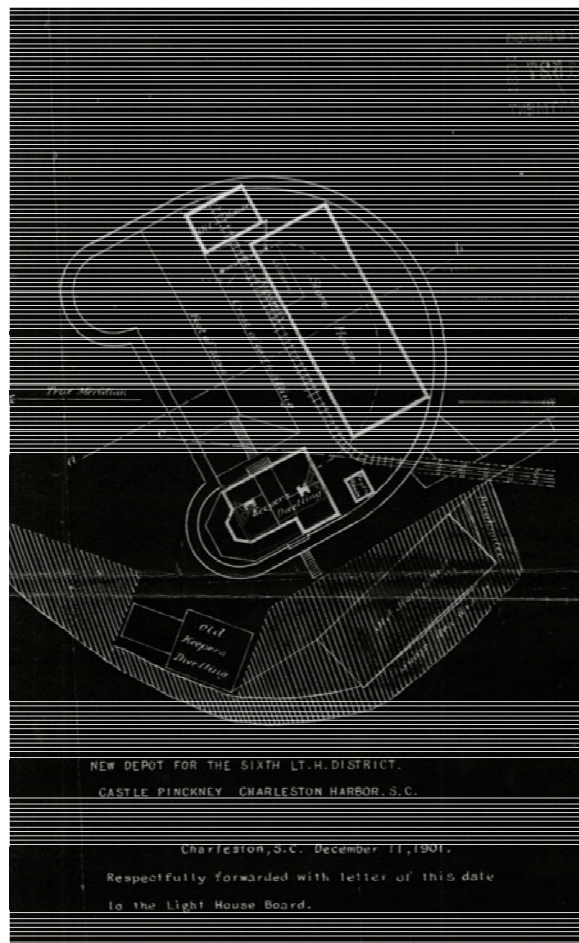


Figure 5.1
1901 plat showing proposed upgrades to fort interior for new light house depot. Note
"old keepers dwelling" and "old storehouse" outside fort.
National Archives I, Records of the Lighthouse Service, 1790 – 1939. Record Group

Despite being considered insignificant for most of its life and in its most forlorn state since the time it was built, Castle Pinckney was suddenly declared a national historic monument by executive order of President Calvin Coolidge on October 15, 1924. The impetus for this order is not well documented, but with the historic preservation movement gaining momentum across the country, and especially in Charleston, it is likely that a group of particularly interested Charlestonians appealed to their congressmen for national recognition of the historic sites around the harbor.

Despite its national monument status, the fort continued to serve as a repair depot by the Charleston district engineers for river and harbor works. In 1929, a report by the War Department on Castle Pinckney as a military reservation or post listed the improvements on the site:

- 1 – Keeper’s dwelling, wood 35’ x 37’, with four square rooms, passage, kitchen, bath, two attic rooms, and an 8’ piazza all around.
- 1 – Brick storehouse 39’ x 100’, with galvanized, corrugated iron roof on steel trusses. (Used as a machine shop and storehouse.)
- 1 – Wooden building 19’ x 20’, with a 6’ piazza on front. (Used as an office.)
- 1 – Wooden building 18’ x 31’, on low ground, west of the fort with a 6’ piazza front and back. (Used as quarters for negro watchman). This building was destroyed by fire March 9, 1929.
- 1 – Wooden buildings 32’ x 66’ on wharf approach. (Used as a store house and carpenter shop.)
- 1 – Pile wharf with an approach 300 feet long and 150’ wide at head. About 600 tons rip rap has been placed in the last four or five years around the old fort as a method of protection from wave action.⁹⁶

On June 10, 1933, an executive order of President Franklin Roosevelt began the reorganization and expansion of the National Park Service. Among other things, the order initiated the transfer of all the War Department’s parks, monuments (of which Castle Pinckney was one), and national cemeteries to the NPS. Soon after the transfer, the Park Service began to evaluate their options for the development of Castle Pinckney as a historic site. The department’s original interests lied in removing the engineers’ functions, restoring the site, and opening it to

the public. This proved to be an ambitious goal, and the funds or organization for implementing such a plan were not readily available.

In 1934, the Moultrie – Thomson Victory Memorial Association, a group dedicated to erecting a monument to Moultrie’s victory over the British on Sullivan’s Island at the outset of the Revolutionary War, expressed interest to the National Park Service to use Castle Pinckney as a site for the proposed monument. While the NPS expressed their willingness to allow the development of the monument, planning seems to have fizzled out, and nothing came of the project.

As various ideas for the development of Castle Pinckney surfaced and faded, the informal agreement between the NPS and War Department that allowed Castle Pinckney to be used as a depot for the engineers continued. During the 1930s, as the NPS contemplated the best sites around Charleston Harbor to acquire and develop into national parks, the historical commission of the City of Charleston and several prominent residents began to express interest in the history of Castle Pinckney. In 1935, Jermain Slocum, Chairman of the Charleston Historical Commission, recruited Rogers W. Young, a historian at Fort Pulaski National Monument, to conduct archival research on Castle Pinckney and write an official history for publication in the *South Carolina Historical and Genealogical Magazine*. The resultant history was the first thorough, scholarly examination of Castle Pinckney’s history, and determined how the site would be understood for years to come.⁹⁷

After the publication of Young’s history in 1938, the NPS determined that Castle Pinckney lacked national historic significance, “To set aside Castle Pinckney, spend the large sums necessary to renovate it, and present it to visitors as a nationally important site places the National Park Service in a position where it cannot well refuse approval to the designation of similarly unimportant fortifications.”⁹⁸ The author of this letter was Ronald F. Lee, then acting

assistant director of the NPS, would become a vocal critic of Castle Pinckney, leading legislation that lead to its abolishment as a National Historic Monument in 1956.



Figure 5.2

Photograph taken by A.E. Demaray, Acting Director of the National Park Service, during his visit to the site in February, 1938.

National Archives II, Records of the National Parks Service. Record Group 79

Between 1938 and 1956, the NPS, led by Lee, maneuvered to abolish Castle Pinckney National Monument, an essential step in enabling the agency to dispose of the site. During these years, the Charleston district engineers continued to use the site as a supply depot for their harbor operations. It is interesting that, in 1952, a popular article appeared in newspapers across the country detailing the Department of the Interior's difficulties in disposing of Castle Pinckney. In response, the department received several dozen letters from private individuals across the country expressing interest in purchasing the property. However, without having first removed

monument status and transferring the property to the General Services Administration (GSA) for disposal, the NPS was unable to sell or otherwise dispense with the property.

By February, 1957, Castle Pinckney had been transferred to the GSA, real property disposal division. Chief of the division, A.R. Smith, reported, “This property has been screened with Federal Agencies with negative results and has been determined to be surplus to the needs and requirements of the Government.”⁹⁹ The GSA listed Castle Pinckney’s three-and-a-half acres at \$320,000, remarking that it was suitable for seasonal residential purposes as well as private club or boating purposes.

Interest in the property from the private sector had apparently waned by this time, and in 1958 the GSA reached a deal with the South Carolina State Ports Authority (SCSPA) to acquire Castle Pinckney for \$12,000.¹⁰⁰ At the outset, the SCSPA had the intention of restoring the fort and opening it to the public as an historic site, but as the National Parks Service discovered over two decades earlier the logistics of the site were too challenging, and the cost too high. By this time, all government uses for the site ceased, and the island was substantially abandoned.

In December of 1967 a fire broke out at Castle Pinckney and destroyed most of the structures associated with the light station and engineer depot.¹⁰¹ The next year, the Charleston Sons of Confederate Veterans purchased the site with plans to develop it. By 1978, the SCV had made significant progress in the planning process with the completion of two reports. First, *Castle Pinckney: An Archeological Assessment with Recommendations* was completed by the Institute of Archeology and Anthropology at the University of South Carolina. While light on history, the report identified several different archeological zones based on time periods of distinct occupations at the island. Second, Wilbur Smith and Associates, a South Carolina preservation planning firm, completed an economic feasibility and development alternatives

report for the restoration of Castle Pinckney. However, like the earlier attempts, the SCV's initiative died due to lack of funds.

Eventually, in 1984, the SCV was obligated to return the site to the SCSPA, which left the site to be slowly reclaimed by nature until the SCV once again demonstrated an interest in erecting a monument at the site. In June of 2011, the SCSPA agreed to transfer Castle Pinckney back to the SCV for ten confederate dollars. Currently, the SCV are considering modest methods to improve the appearance of the fort, ensure its structural stability, and erect a Confederate memorial.



Figure 5.3
Castle Pinckney at high tide, 10 December 2011
Photograph by author

Chapter Six - Statement of Significance

We attach value to historic sites for a variety of reasons. Often we admire the unique character of a historic building, one associated with a certain stylistic era, with identifiable decorative and architectural elements. Sometimes the site reminds us of a particularly influential individual – a politician, an army general, an architect, a writer. Or perhaps the site reminds us of an individual who was decidedly not influential, in which case it is evidence of the daily life of the average slave, soldier, farmer, or inmate. Maybe at one time the structure was a technological marvel, inspiring others to achieve greater feats. In any case, these increasingly rare sites serve as primary evidence of a time when buildings, intentionally or not, were the greatest expression of culture and technology. Reflecting on these sites offers the opportunity to understand them and learn from them, and in the process understand something more about ourselves and our world today.

But what do Shutes Folly Island and its two hundred year old occupant, Castle Pinckney, have to teach us? Whatever we find this lesson to be, it is one of two places in the world that survive to teach it. In the harbor of New York City and in Charleston Harbor in South Carolina are the last two testaments to a unique and underappreciated time in the history of the United States. However, Castle Pinckney's value is not merely in its rarity. From an isolated position in Charleston Harbor, Castle Pinckney has witnessed two centuries of change, and remains standing, as a forgotten time capsule, containing physical evidence from nearly every stage of that time continuum.

The late 18th century in America was a time of experimentation and change, when both the average citizen and the various levels of government were attempting to determine what principles the future of the country would be built on. Much time and effort was devoted to establishing an effective way to protect these principles – especially important during a time

when the legitimacy of the new country was constantly challenged by ambitious and imperialistic European powers.

This effort materialized in the evolution of military architecture and the design of our nation's early defenses. Changes in this architecture were necessitated by changes in the style, setting, and technology of waging war, but always dealt with the same basic considerations and limitations: the natural terrain of the site, the economic circumstances of the place, available building materials, and anticipated modes of attack.¹⁰² During the colonial years, forts were typically an adaptation of the same basic form (the traditional European square, four bastioned fort) influenced by the previously listed factors. This form, particularly well-suited for land based warfare, remained the dominant style throughout the colonial years and into the revolutionary years.

After the revolution, it was recognized that, having expelled the enemy from our own soil, any attack would not come over land, but would have to first penetrate America's extensive seacoast. Therefore, a policy of national defense necessarily developed to effectively secure the country's fragile centers of commerce – its important seaside towns and their harbors and ports. In some of these places, few changes were made to the familiar bastioned fort, in other places a concerted effort was made to adapt to shoreline sites and naval attack. Fort Moultrie on Sullivan's Island is one example that represents the transition between a pure bastioned fort and a specialized seacoast fort. Its land side is a traditionally bastioned shape with embrasures, while its harbor side is polygonal, with cannons mounted *en barbette*.

Castle Pinckney is the ultimate, if early, realization of the new focus on seacoast defense. Totally unlike its predecessors, Castle Pinckney has an overtly vertical emphasis in an attempt to mount large amounts of artillery on a restricted site and on a much smaller exterior perimeter. A portion, then, of Castle Pinckney's significance is that it represents the United States' tradition of

technical innovation decades before it would be known around the world for such. At the same time, it is associated with particularly remarkable individuals who were critical to the development of that innovation, one which would set the course for the future of coastal fortifications.

Castle Pinckney is one of the few remaining testaments to the skill and ambition of Jonathan Williams. Williams was the most influential individual of the time period in the field of fortifications and defense. In addition to his design for Castle Pinckney, Williams was entrusted to be the first superintendent of the military academy at West Point, the first chief of the United States Corps of Engineers, and was personally responsible for the defense of the most important harbor in the country – New York City. From 1807 to 1811, Williams assigned General Alexander Macomb to execute the construction of the castle fort in Charleston, an important assignment, considering Williams’ strong belief in the superiority of the new castle style fort.

Williams did well with his assignment, as the execution of the forts around Charleston Harbor turned out to be just the beginning of an exceptional record of military accomplishment for Macomb. After his duty in Charleston, Macomb went on to defeat a superior British force at the Battle of Plattsburg in September of 1814, for which he earned a congressional gold medal, and was eventually promoted to commanding general of the entire United States Army from 1828 until his death in June of 1841, the longest serving commanding general up to that time.¹⁰³

Castle Pinckney’s direct association with these two exceptionally important individuals gives it a unique connection to the earliest development of the country’s military establishment. The fort as it stands is the product of the collaboration of these two great minds, and is the only remaining testament to their collective influence. In the time immediately following its completion, Castle Pinckney was a shining example of a new and innovative military technology

developed by a rising young generation of officers and engineers. It survives as a tangible connection to this important time in our country's history.

It is fortunate for Charleston that Castle Pinckney was not called upon to fulfill its purpose during the War of 1812 or for many years after. And although the fort receded into a secondary rank of importance, it is only due to the precedent which it established – one of the first all masonry, casemated works – that forts of superior defensive capabilities, such as Fort Sumter, were able to be constructed. Fort Sumter, and other coastal forts of the third system, relied on the same basic principles first promoted by Jonathan Williams.

Even after its initial construction, Castle Pinckney's significance and educational value are only reinforced by the events that continued to take place within its walls and around the harbor. The site tells the story of the political and social changes that took place around the country during the years between the War of 1812 and the Civil War. These changes were thrown into particularly sharp relief in Charleston, where differences in economic priorities with the northern states led to the Nullification Crisis in 1832 and eventually the Civil War.

Castle Pinckney played a unique role in the development of these events. By 1832, the corps of engineers had completed thorough repairs on the fort, which stood in threatening proximity to the city. Tensions came near a breaking point, when South Carolina declared the Tariffs of 1828 and 1832 unconstitutional and therefore nullified. Both the state and the federal government made moves to protect their respective actions with force if necessary, and Castle Pinckney became a bastion of the federal government's presence in Charleston.

It was perhaps this association that caused Castle Pinckney to become the first prize of the seceded state of South Carolina on December 27, 1860. Despite the warnings of Major Robert Anderson, who believed Fort Sumter and Castle Pinckney were the keys to controlling the harbor, the troops of what would soon become the Confederate States of America were able to

easily seize the island. Castle Pinckney's use during the civil war responded to the perceived level of threat to the security of the harbor. When the military leaders of Charleston believed the outer line of defenses to be in peril, Castle Pinckney was prepared as a secondary defense; when no such threat existed, the fort was used for less defensive purposes, such as a prison. In either case, Castle Pinckney is in a unique position to tell part of the Civil War story in Charleston Harbor, which when considered with other sites around the harbor, makes the story that much more complete.

The years after the Civil War at Shutes Folly Island are generally considered less significant. This is only partially justified. We have a tendency to focus on the oldest possible date of association for historic properties. This is part of an effort to become further and further removed from the modern world which we are trying to temporarily escape when we explore historic sites. This effort frequently ignores later accumulations of history, which while seemingly appropriate at the time, is antithetical to the complete understanding of the site and all its layers of history. In Castle Pinckney's case, there are few above ground structural remains of later periods of occupation; the structures used by the light house board and harbor engineers have been demolished or burned. The sole survivors from this period are the concrete pads on which these buildings once stood and the metal railing that runs along the top of the wall. The situation begs the question – “what should we preserve, and why?” – a question that will be more thoroughly addressed in the last chapter of this thesis.

Ultimately, the value of Castle Pinckney is shared with historic sites in general, in that it provides an opportunity to experience history in a way that makes it more real, interesting, and accessible. More specifically, Castle Pinckney, as an isolated ruin on an island in historic Charleston Harbor, tells an authentic early American story that few sites can replicate. A story about the country's early efforts at national defense, about a rising military establishment, about

the escalating debate over states' rights, and about a country divided. The site and the ruin can be thought of as an unread or partially read story, the more respectfully and effectively they are treated, the more information there will be to read. Carefully conserved, Castle Pinckney will remain for future readers to reinterpret in the light of more knowledge and understanding.

Chapter Seven - Conditions Survey

The Nature of Castle Pinckney as a Masonry Ruin

Today Castle Pinckney is classified as a ruin, which gives it a unique character and a unique set of preservation and interpretation challenges. The main attraction of a ruin is its romantically unkempt state; a place abandoned by humans, where “nature takes its revenge and, through the assaults of vegetation, reconquers what man has built”¹⁰⁴. Nature, then, is a constant force of destruction and decay for buildings. It is in this state, somewhere in between architecture and nature, that a ruin lies.¹⁰⁵ The challenge, then, in preserving and interpreting these sites, is how to balance the desirability of maintaining the isolated and neglected atmosphere of a ruin, while ensuring the survival of the structure, and enhancing its clarity.

But why is it important for a ruin to be preserved and maintained as a ruin? Why is it not a better choice to thoroughly repair and restore the building with the goal of providing a clearer understanding of its original function? Aside from more practical considerations (like extravagant cost, among others), Castle Pinckney, as a ruin, provides a greater understanding of the passage of time, a quality which aids in its interpretation as an authentic remnant of history – the fragmentary remains of an earlier culture, which no longer exists. The pleasure of a ruin, then, is to provide a window for visitors to visualize how things had once been, and be able to appreciate or learn about an earlier time.

This is not to say that a restored building cannot achieve a similar effect in terms of educational value or that Castle Pinckney should receive no restoration work at all. But the absence of any substantial modern intervention gives historic sites an undeniable truth, the missing bits of which, through accurate and subtle interpretation, can be filled in by imaginative reconstruction (certainly a more mentally stimulating exercise than literal reconstruction). By establishing the value of Castle Pinckney as a ruin, the goal becomes to preserve it as such, with

the simultaneous objective to provide a fuller understanding of the original structure and its development over a set period of time.

The Purpose and Scope of this Survey

This goal has two distinct parts: preservation and interpretation, one technical, the other, philosophical; each as important as the other. Since its abandonment nearly eighty years ago, Castle Pinckney has been subject to constant weathering and decay. To understand the effects these various mechanisms have had on the structure into the present day, it is necessary to conduct a survey of current conditions, the observations and conclusions of which will provide a better understanding of deteriorative conditions and scope for future work. This work may be required immediately to prevent catastrophic failure or may be less urgent, as part of a long term stabilization and interpretation plan.

The survey will depend entirely on up close, visual inspection and analysis, and is necessarily limited to surface evidence (more invasive methods, although required, are not within the scope of this thesis). It will identify all of the mechanisms of decay at the site and investigate the failures caused by one or a number of these mechanisms. Ultimately, the goal of the survey is to make a substantiated claim for intervention where necessary.¹⁰⁶

Summary of Defects - Structures

Like all historic buildings, Castle Pinckney has evolved over time based on its users' needs and tastes. However, Castle Pinckney and forts in general are unique in their relative immutability. Their purposes are so specialized and structural systems so massive, that frequent and major change to their basic configurations or materials are impractical and expensive. For

this reason, the vast majority of what remains at the site can be positively dated to its original construction between 1807 and 1811.

Most of Castle Pinckney was built to be durable in the face of constant exposure. The massive outer walls are composed entirely of handmade brick, a strong and durable material. Other original features included a soldiers' barracks which was built of thinner brick masonry walls, joined with the massive walls of the land side. The barracks building featured eight rooms per floor with a fireplace in each room. A two story piazza, built with wood columns and spanning members ran the length of the parade facing side of the barracks. Post-Civil War photos show the barracks still intact, and it is likely that the building was not completely destroyed (although it was probably seriously deteriorated) until the fort was filled by the Lighthouse Board when they took control of the island in 1880.

The disappearance of the wood components of the barracks leaves the brick masonry as the single building system of concern for the current survey of Castle Pinckney. Besides the original handmade bricks and lime mortar (of which little remains on the exposed wall faces) the two centuries of Castle Pinckney's existence have resulted in an accumulation of alterations to the exterior brickwork. With poor documentation of modern repairs, it is difficult to date the various brick patches and mortar repointing campaigns that are visible. It is clear that some of the brick patches were made with early, handmade bricks of inferior quality compared to those of the surrounding original bricks, as they display advanced erosion and in some cases, complete failure. The majority of original bricks, although marred by sloppy repointing, soiling, brick patches, and other superficial disfigurements are in remarkably good condition.

It is also relevant to point out that in some of the earliest available drawings and photographs, both the exterior and interior walls of the fort appear to be covered with either a stucco or lime wash. This treatment has since been worn away, but traces of surface applications

can still be found and should be examined to figure out what exactly they are composed of. In most historic photos, the pattern of the brick courses is still visible. This would suggest a coating of something thinner than stucco, which is thick and typically has a uniformly even surface. Evidence suggests that the exterior may well have been covered with a lime wash. This could become an important element in any preservation plan.

The properties of early 19th century handmade bricks are well known. Compared to modern, machine pressed bricks, they are softer and more porous. These properties make them more susceptible to a number of general preservation problems. They are subject to deterioration caused by water, dampness, and chemical action; settlement, failure of lintels or arches, inadequate structural design, corrosion or failure of metal inserts, leaching or loss of mortar joints and poor manufacture, poor workmanship, neglect, and penetration of the fabric by roots of vegetation. A number of these problematic conditions are on display at Castle Pinckney.

Currently, the exterior masonry walls of Castle Pinckney display a wide variety of conditions. The effects of the earth fill inside the fort are not totally understood. It is possible that the weight of the earth is causing accelerated settling, as well as outward forces on the brick masonry walls; however, it is also possible that the earth is providing stability for the walls. A more detailed structural analysis by a qualified engineer will be required to understand the effects of this fill. It is clear that this earth is providing fertile ground for excessive growth of vegetation. The root systems of these trees and shrubs have found their way into the masonry, particularly the old, loose mortar joints. Removal of these plants should be carefully studied, so as not to compromise the stability of the masonry. Also poorly understood is the extent and effects of settling at the fort. It is clear that the massive brick structure is extremely heavy and that the sandy, marshy soil of the island is fairly unstable. These facts would suggest that the fort has experienced significant settling over 200 years. Historic drawings and photographs indicate that

the bottom row of embrasures was designed to be approximately two feet above high water. The bottoms of these embrasures are now submerged at high tide; this is partially due to a rising sea level, but mostly indicates settling in excess of a foot-and-a-half to two feet. Settling of this magnitude has led to a chain reaction of stresses throughout the fort's masonry walls.

The most common deteriorative conditions of the exterior masonry walls are significant mortar loss, large cracking, what appears to be patch failure or impact damage, soiling from nesting pelicans, and invasive plant growth. The composition, quality, and condition of mortar at Castle Pinckney is widely varied, and like many other conditions at the site, requires much more study to be fully understood. It is clear, however, that much of the old, soft mortar has been completely washed out, and has led to partial collapse of the outer wythe of brick. There are some places along the exterior wall, where this missing mortar should be repointed as the first order of business, as an essential part of initial stabilization. However, along much of the wall, the brick is so thoroughly covered with pelican guano or moss and other micro flora, that repointing would be difficult and impractical.

This survey will include all visible, standing masonry ruins. Currently, the exposed sections of masonry include the exterior of the wall dating from the fort's original construction in 1807 – 1811. The top of the wall – also exposed – is the most altered and displays rapid and ongoing decay. Nearly all of the original parapet, including the capping stone, has been removed, exposing the core of the wall to weathering. Previous attempts to remedy this problem include concrete capping and patching with modern brick. In most places, these repairs are failing, leading to exposure of soft bricks and mortar, and allowing for the proliferation of invasive plant growth. Some sections of the interior original masonry walls are also exposed, but are generally more sheltered than top or exterior sections. The condition of bricks and mortar of the masonry

walls and the forces of their decay will be the primary subject of investigation, as they are the only extant, exposed building features.

Summary of Defects – Site

Castle Pinckney's location on the southern end of a low lying island in Charleston Harbor adds to the unique set of considerations for its long term preservation. Shutes Folly Island, at the meeting of river and coastal environments is subject to constant change over a wide range of timespans; the sea level and island shape change over years, the tides rise and fall daily, and storms can cause sudden, dramatic alteration. Fortunately, the harbor is naturally more protected than outer island, seacoast locations, yet any large body of water presents a powerful, aggressive, and salt-rich environment.¹⁰⁷ It abrades, erodes, deposits, undermines, and destabilizes waterfront structures.

There is little that feasibly can or should be done to combat many of the challenges that Castle Pinckney's environment presents. Shutes Folly is a sandspit island, formed by deposits from the Cooper and Wando Rivers. Its form is dynamic and shifts in position, elevation, and size due to erosion and deposition of sand. Over two hundred years, the exact site on which Castle Pinckney is built has remained fairly consistent in elevation and shoreline while elsewhere large portions of the island have been built up or eroded away.

Much of the exterior of the fort features several feet of debris and sediment build up at the base of the wall, so that only the upper portions of the embrasures are visible above the surface. Some of this is natural deposition of sediment and vegetation, and some is due to manmade break waters and pier foundations. The rate and severity of coastal erosion is influenced by the nature of the shoreline; the areas of the wall facing stable, dry land and having a protective buildup of earth at their base experience little decay caused by their proximity to the

water. However, these areas are affected by the changing characteristics of the island and its soils which results in settling and cracking.

The exterior of the southeastern section of the fort is located in the inter-tidal zone, the area between mean low tide and mean high tide. At low tide, the base of the wall is entirely above the water level, but at high tide, the base of the wall is partially submerged. The fact that the wall is partially submerged is not a problem in itself, and was actually an original design intention, but without regular maintenance, the bricks and mortar are very susceptible to water erosion caused by wave action. Additionally, the combination of rising sea levels and settling of the fort have led to the high water mark reaching a point on the wall at least one foot higher than originally intended. There is currently much concern about rising sea levels around the world, and given the tendency of civilization to develop near water, many coastal heritage sites are at risk; the Low Country of South Carolina is a prime example. The impact of sea level rise on Castle Pinckney in particular is difficult to predict, but would likely lead to accelerated soil erosion and increased wave action. Design for potential interpretation and public access should take rising sea levels into careful consideration.

The vast majority of the soil at Shutes Folly Island is classified as tidal soft by the United States Geologic Survey, and as such is deemed unsuitable for virtually every use or for siting any structure.¹⁰⁸ The land on which Castle Pinckney is built is a small area of slightly elevated and slightly more substantial soil, however, the walls of Castle Pinckney are still at particular risk for continued settling, enhanced by the dynamic nature of the island. Further engineering studies will be required to fully understand the nature of the soils at Castle Pinckney and their weaknesses in relation to the stability of the structure.

One particularly important issue that warrants further study is the potential effects upon removal of the earth fill from the interior of the fort – a primary goal for interpretation of the site.

The fort has been gradually filled in over the years, with major filling efforts during the Civil War and during its conversion to a Light House Board depot. Much of the earth has been in the fort for over one hundred and fifty years and has likely had an influence on the underlying soils and brick masonry. The removal of the earth will not only require extensive archeological planning, but could have unintended structural effects on the masonry; such as soil rebound in reaction to removal of so much weight. Likewise, other, more modern elements within the fort, such as drainage infrastructure, underground storage tanks, and concrete pads add additional weight and will need to be removed as part of a long term development plan. The removal of the earth fill and other elements would lead to the exposure of building elements which have not been exposed in over one hundred and fifty years.

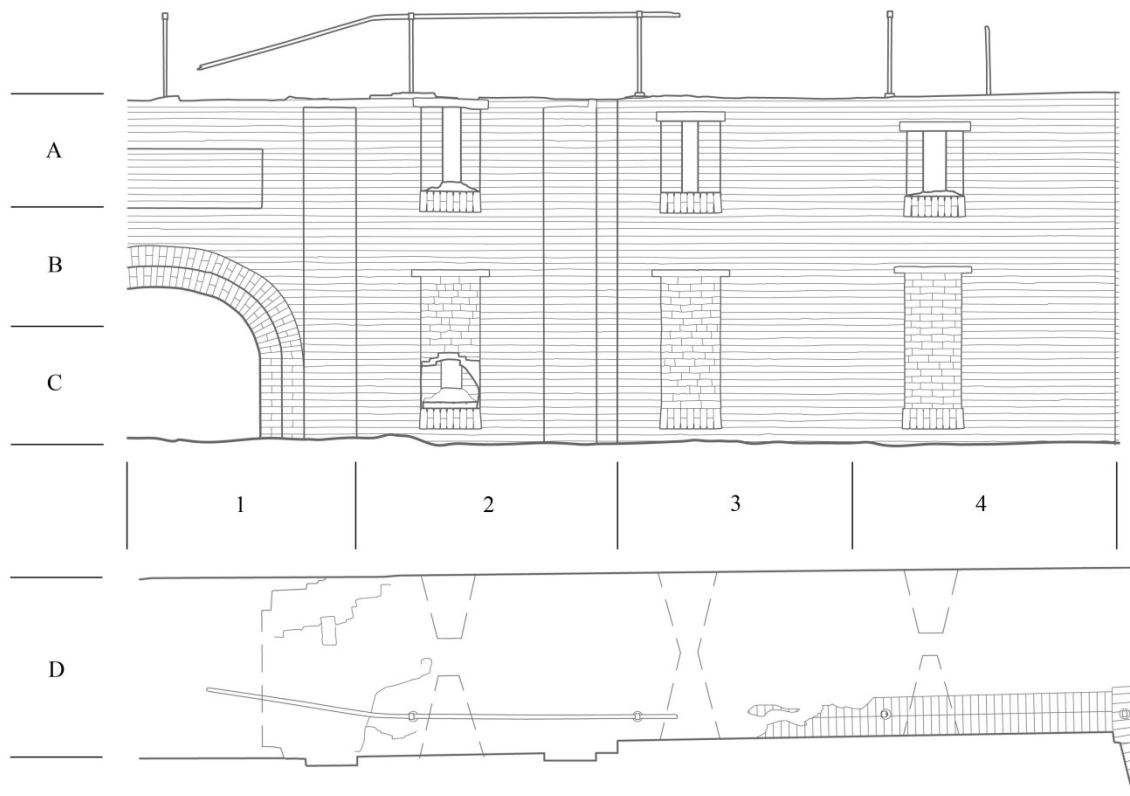
Methodology

The primary objective of this survey is to identify symptoms of decay in the brick masonry. These symptoms include, among other things, missing mortar, failing brick patches, impact damage, biological growth, cracking, missing bricks, and invasive plant growth. The survey is based on detailed inspection from ground level and the top of the wall. The fort has been divided in fourteen sections; each section is further divided into a grid to more easily locate identified defects on the reference drawings. The labels A, B, and C refer to each section's elevation drawing, while section D refers to a plan view of the top of the wall in that section.

Each defect is listed individually in the section's accompanying "schedule of defects". Each schedule includes six categories: "Item No." gives each defect a number, in ascending order, "Grid Ref." gives the reference location of the defect on the accompanying elevation or plan drawing, "Defect Description" provides a brief description of the identified defect, "Size" uses either an area of square feet or a linear length to give a better understanding of the size of the

defect, “Comments” provides additional information as to the cause and state of the defect, and in some cases, potential remediation. “Repair Priority” refers to the severity of the defect and its priority in potential future work. A repair priority of “1” can indicate two conditions: either the defect indicates serious or imminent structural failure, or removal of the defect is required for further investigation of the masonry. A repair priority of “2” indicates that the defect is causing ongoing deterioration of important architectural or structural elements. In this case, deterioration is likely not threatening to the fort’s immediate structural stability, but should be addressed to prevent further deterioration. A repair priority of “3” indicates that the defect is causing minor or superficial damage to the wall surface; it is not immediately important for the wall’s stability or preservation.

Section 01



Section 01: North façade

Architectural Description

Section 01 is the west side of the north facing gorge wall and with the east side of the gorge wall, contains the most architectural detail of any location on the fort's exterior. Constructed entirely of brick masonry, the section features a brick archway to the interior, called the sally port. The sally port is flanked by two engaged columns, which, before the removal of the parapet, had simple Doric capitals. It is likely that the molded brick bases of the columns are still intact under the ground. Originally, this section had six openings, three of which have since been bricked up. Four of the openings have their original brownstone headers. Two headers have been partially replaced with cast stone. The height from the ground to the top of the wall in this location is approximately 12' 8", and the width of the wall is approximately 6' 6".

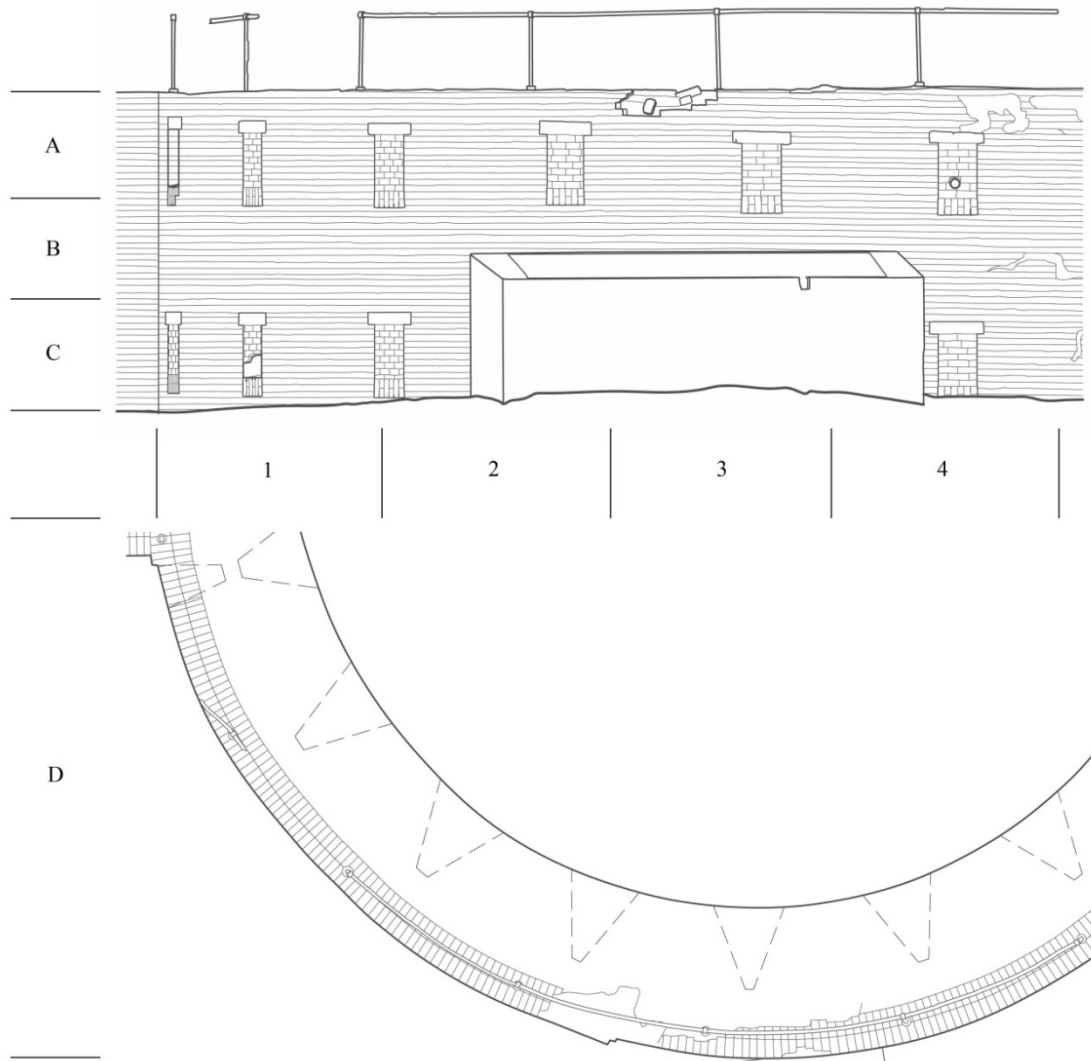
Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
1	1 / A-C to 4 / A-C	Extensive growths of moss and other microflora conceal the condition of the masonry and mortar joints.	400 sf	Cleaning of organic growth is necessary for further assessment of masonry conditions and enabling further work	1
2	1 / A-B	Decay of mortar joints (Figure 7.1: Detail above arch showing)	12 sf	After cleaning, joints should be repointed with appropriate historic mortar mix	2
3	2 / A	Exposed brownstone header	2 sf	Continued exposure will lead to irreparable deterioration. Header should be preserved as part of a plan to consolidate the top of the wall	2
4	2 / D	Large tree growth		The root system of the tree has penetrated the wall interior and caused cracking in the upper portions of the wall.	2
5	2 / A	Open and fractured mortar joints with minor brick displacement	15 linear ft.	Penetrating roots have caused mortar loss and brick displacement	2



Figure 7.1: Detail above arch showing mortar joint decay and organic growth

Section 02



Section 02: North Façade

Architectural Description

Section 02 is located on the north façade of the fort, and is part of the western half-circular tower. This section of the wall existed to provide land side defense, featuring two tiers of small openings for musket fire. The wall is built entirely of brick, except for the brownstone headers over the openings. The openings have been sealed with bricks.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
6	1 / A-C to 3 / A-C	Extensive growths of moss and other microflora conceal the condition of the masonry and mortar joints (Figure 7.2)	215 sf	Cleaning of organic growth is necessary for further assessment of masonry conditions and enabling further work	1
7	3 / A, 3 / D	Large tree growth	10 sf	The root system and weight of the tree are causing significant brick and mortar loss at the top of the wall	3
8	2 / A-B to 4 / A-B	Major horizontal and diagonal wall fracturing (Figure 7.3)		Significant settling has led to major diagonal fractures in the masonry. Attempts to level the top of the wall by the addition of modern bricks have resulted in horizontal cracking where historic and modern bricks meet.	1
9	3 / A	Spalling brownstone header	2 sf	Significant spalling due to surrounding use of hard Portland cement mortar mix	2
10	1 / A	Loss of mortar joints			3

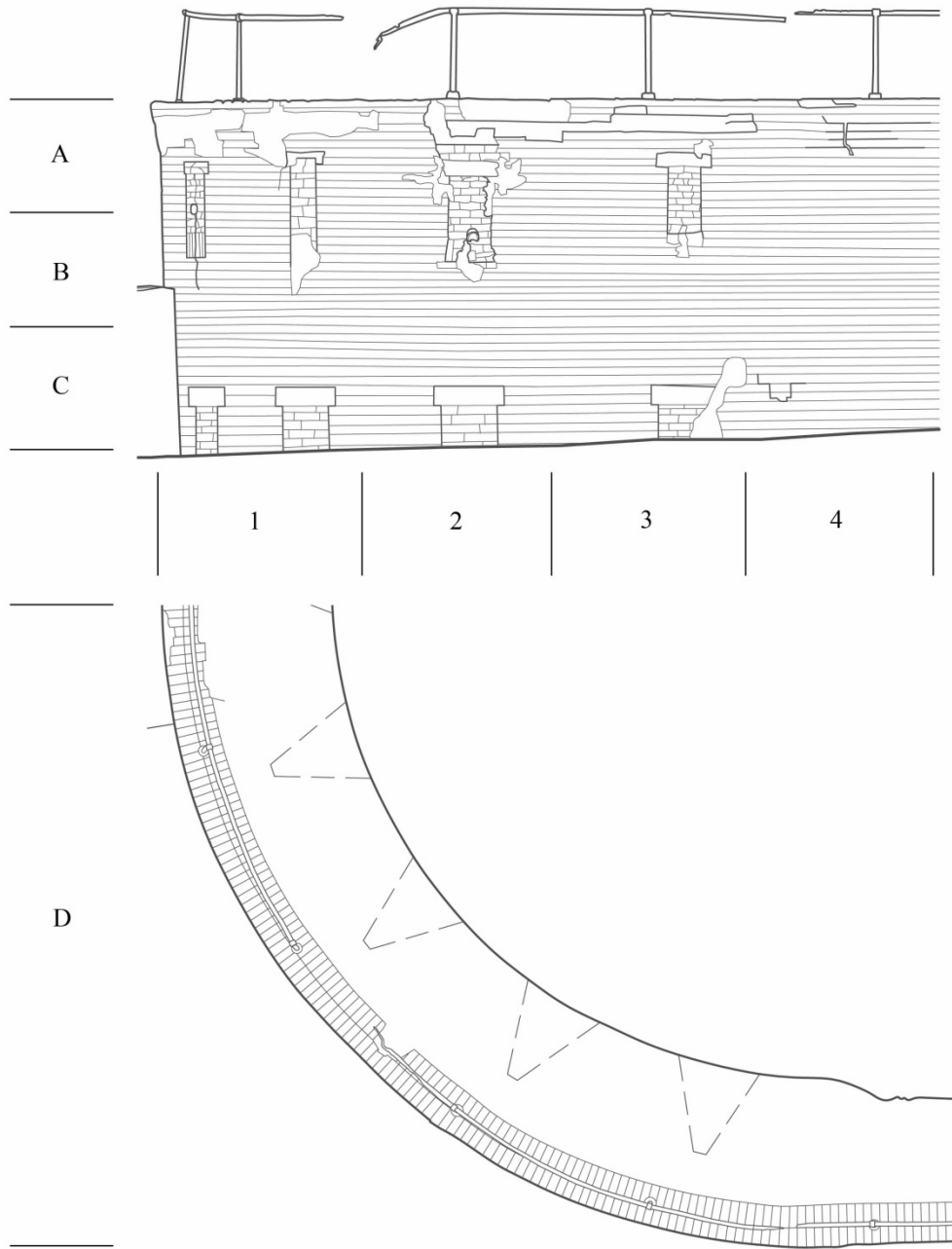


Figure 7.2
The highest proliferation of moss and microflora, at the base of the wall



Figure 7.3
Major horizontal and diagonal fracturing and spalling brownstone header

Section 03



Section 03: West Façade

Architectural Description

Continuing from Section 02, Section 03 is part of the west half-circular tower. The brick masonry wall is largely devoid of architectural features, excluding the two tears of original openings, since closed with bricks. The openings, like others at the fort, feature brick sills and brownstone headers. Like Section 02, Section 03 still displays traces of a historic surface treatment, likely a lime wash. Metal piping has been inserted in two of the openings to serve as drainage for the interior fill. The wall in this section is approximately 12'4" tall and 6' wide at the top.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
11	1 / A-C	Leaning and fractured wall		As in Section 02, significant settling has led to significant leaning and fracturing of the wall	1
12	2 / A	Spalling brownstone header (Figure 7.4)	2 sf	Extensive application of Portland cement mortar has led to the almost complete loss, through spalling, of the brownstone header in this location	2
13	2 / A to 3 / A	Brick masonry loss	10 sf	Portland cement causing differential movement and brick loss	2
14	1 / A-B to 4 / A-B	Wall fracturing and decay of mortar joints		Portland cement patching on much of the brickwork and in many of the mortar joints is causing the surrounding masonry and mortar to crack and fall out of the wall	2
15	4 / A	Minor fracturing and decay of mortar joints	18 linear ft	Large plants have taken root in the mortar joints of the wall surface. Growth of root systems have caused fracturing and mortar loss in the surrounding masonry.	3

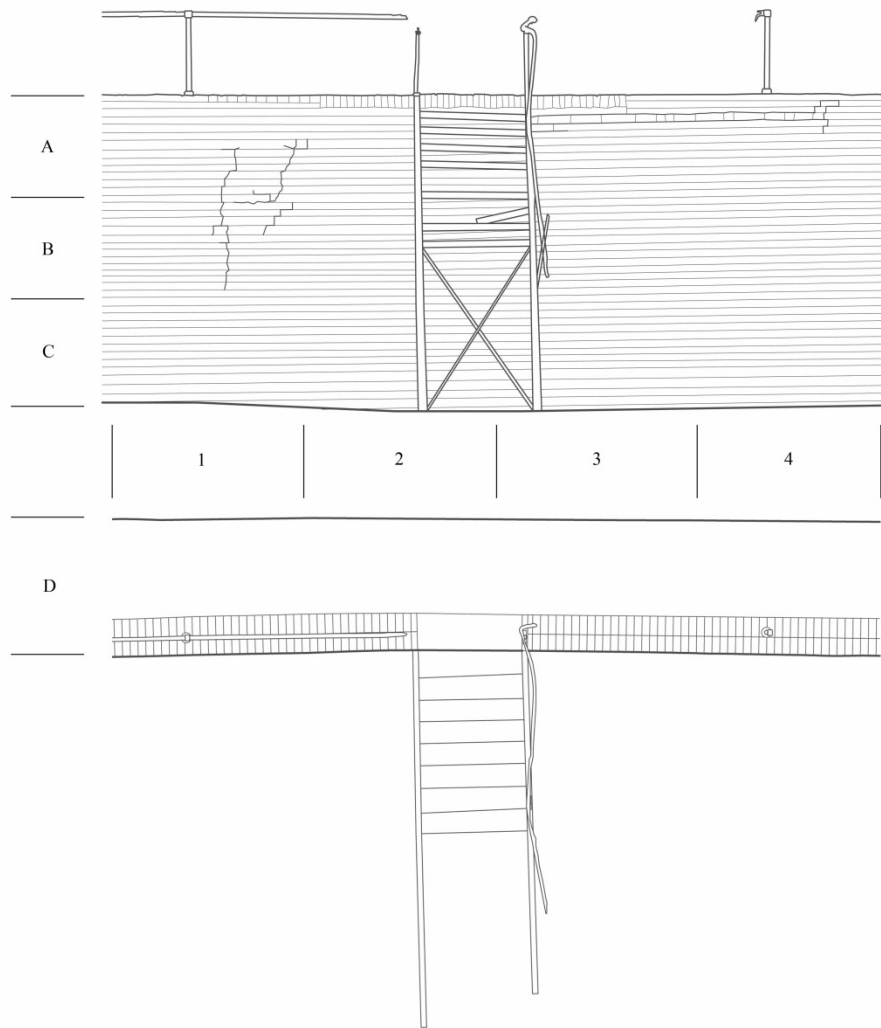


Figure 7.4
Damage caused by Portland cement; spalling
brownstone header and fracturing brick



Figure 7.5
Further damage caused by Portland cement;
brick and mortar loss

Section 04



Section 04: West Façade

Architectural Description

Section 04 is a flat, uniformly brick, section of the wall. It contains one original opening which has since been bricked up. This opening is larger than those found in the previous sections 03 and 04 and features a brick arch rather than brownstone lintel, but was likewise intended for small arms fire. Later additions include several courses of modern brick at the top of the wall and a metal staircase that provided access to the living quarters on top of the interior earth fill. The top of the wall is covered by poured concrete paving.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
16	1 / A-B, 3 / B-C	Masonry fracturing (Figure 7.7)	10 linear ft	Accelerated settling and wall movement in adjacent sections of the wall is causing stress fractures.	3
17	3 / A to 4 / A	Minor fracturing and decay of mortar joints (Figure 7.7)	25 linear ft	Incompatibility between the modern addition of several courses of brick at the top of the wall and historic bricks have caused fracturing and mortar loss	3

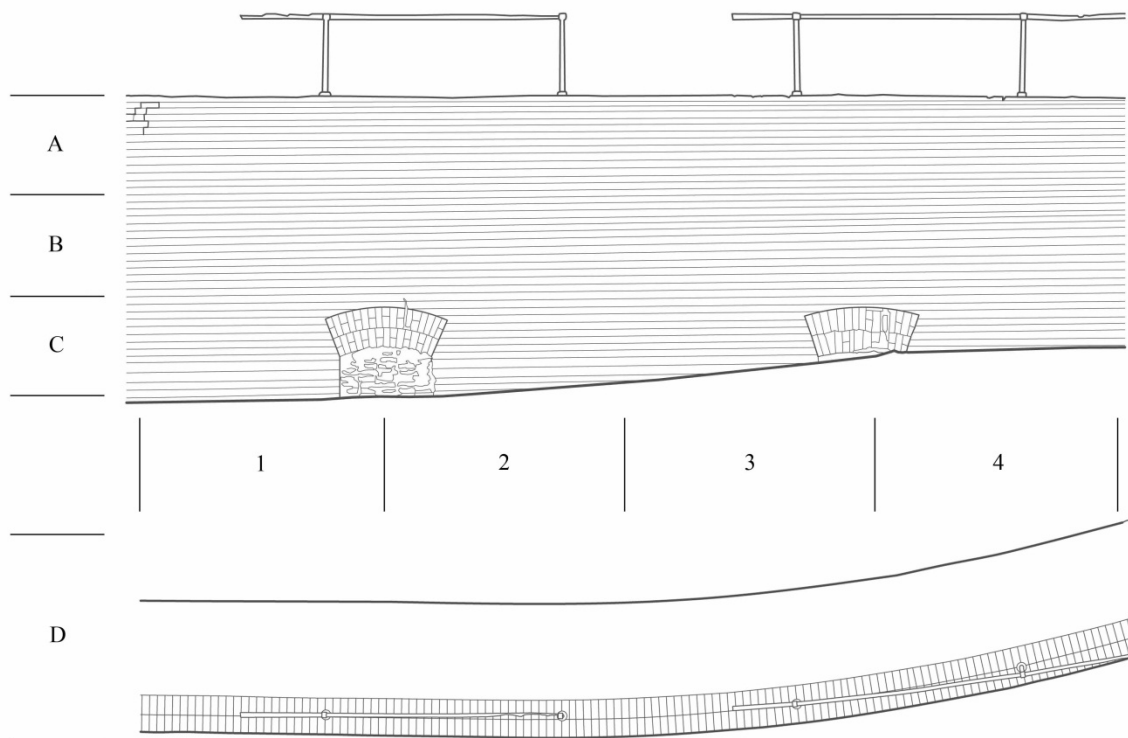


Figure 7.7
Showing both stress fracturing and fracturing due
To incompatible masonry



Figure 7.6
Bricked up opening

Section 05



Section 05: West Façade

Architectural Description

Section 05 marks a change in the form and function of the wall. Here the wall begins its large semicircular trace, where, on the interior, the bombproof casemates were located. The casemates in turn supported gun emplacements on the terreplein. On the wall's exterior, this is expressed by the embrasures, openings through which the cannon shot. In section 05, these bricked up openings are largely buried by accumulations of several feet of soil. The brick arches of these openings are still visible. Towards the southern part of section 05, the ground level rises significantly. The top of the wall has been altered with the addition of several courses of modern brick and poured concrete paving.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
18	1 / A	Minor fracturing and mortar joint decay		Large plant growth on top of the wall has caused minor fracturing and mortar loss	3
19	3 / C to 4 / C	Stress fractures above opening	6 linear ft	Settling and the weight of the above wall have caused stress fractures in the brick arch and above	2
20	2 / A-C to 4 / A-C	Pelican soiling (Figure 7.8)	225 sf	Use of the structure as a pelican nesting ground as led to an abundance of guano, a deteriorative substance which conceals masonry conditions beneath	1
21	1 / D to 4 / D	Large tree growth (Figure 7.9)		Tree root systems have penetrated the masonry joints	2

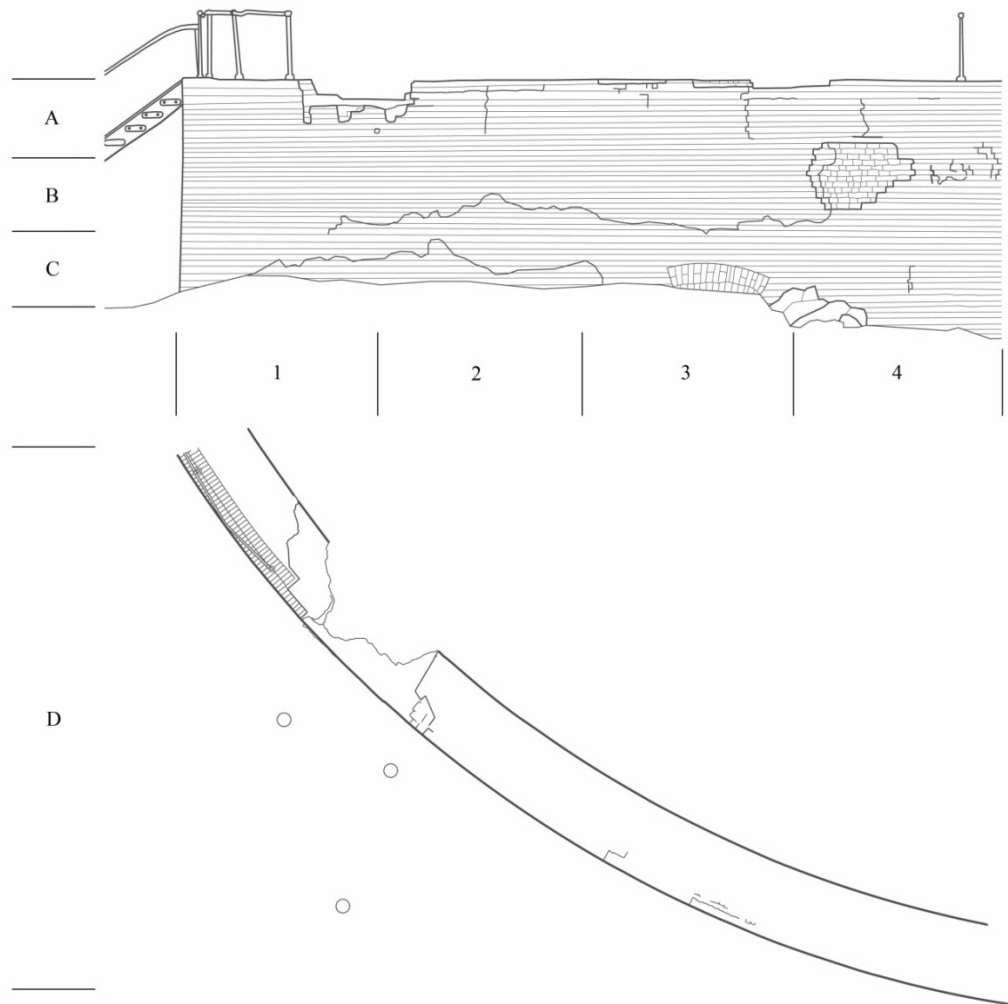


Figure 7.8
Showing heavy guano accumulation



Figure 7.9
Large tree growth on top of wall

Section 06



Section 06: Southwest Façade

Architectural Description

Section 06 continues along the large semi-circular trace begun in section 05, and similarly features two embrasures for the lower tier of cannon. One of these embrasures is entirely covered by soil; the arch of the other is partially exposed. The large amount of soil in this section was intentionally placed to support the pier constructed during the light house depot's occupation of the island. A large section of the original wall was removed to connect the pier to the fort's interior.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
22	1 / B-C to 4 / B-C	Major fracture	45 linear ft	Significant settling and outward pressure from the interior earth fill appears to be the cause of massive fracturing which could likely lead to catastrophic failure	1
23	1 / A to 2 / A, 1 / D to 2 / D	Major fracturing and masonry displacement	48 sf	Modern alterations have damaged the top and face of the wall, leaving the wall interior exposed and leading to accelerated fracturing and decay	2
24	4 / A-B	Missing brick	15 sf	Cause of missing brick patch is unknown. Evidence suggests impact damage, has left the wall interior exposed	2
25	1 / A-C to 4 / A-C	Pelican soiling		Nearly the entirety of section 07 is covered with a heavy accumulation of pelican guano	1
26	1 / A to 4 / A, 1 / D to 4 / D	Minor fracturing, masonry displacement, mortar joint decay		Small to large plants have taken root in much of the top of the wall causing fracturing and decay	2

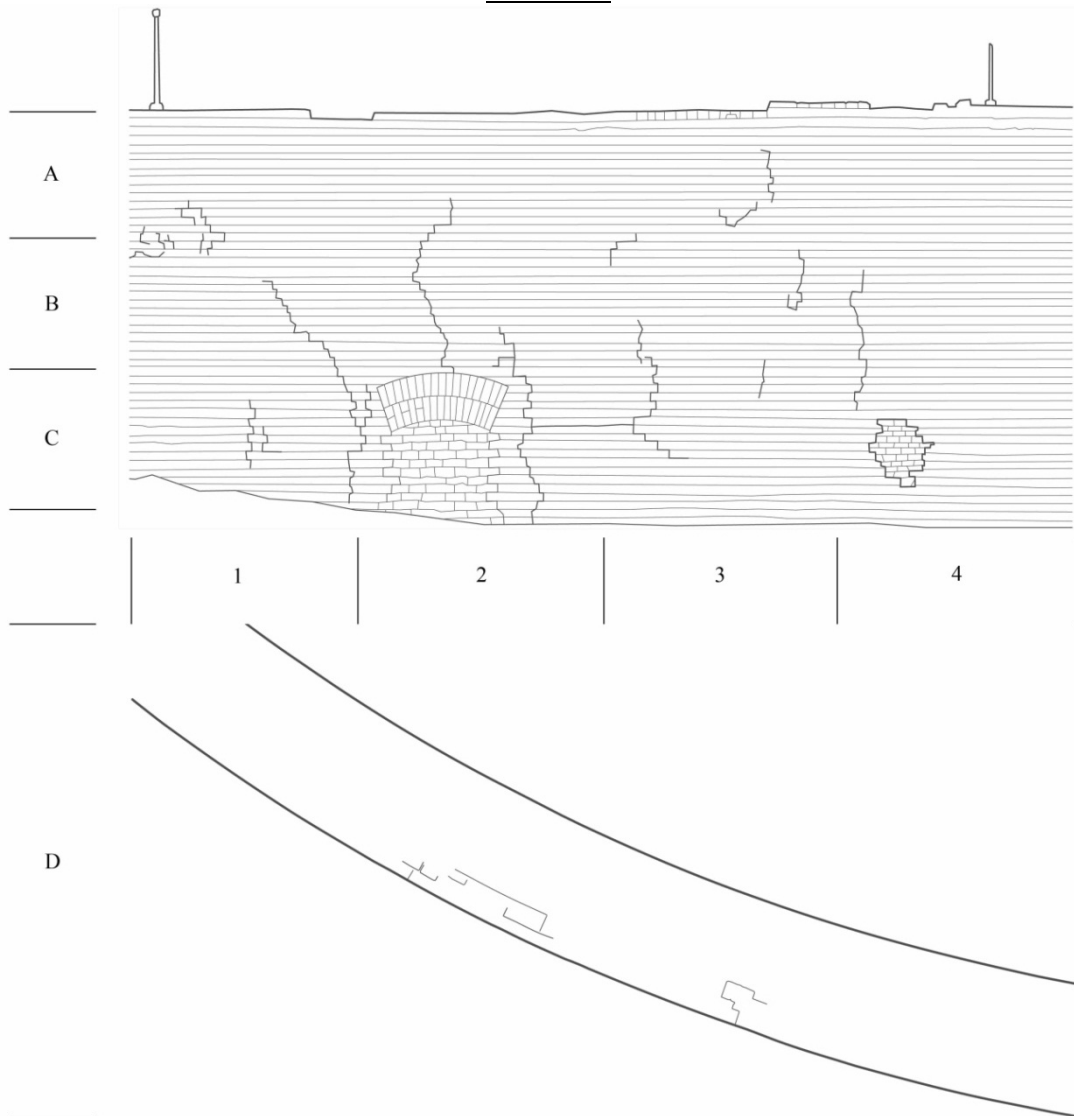


Figure 7.10
Showing major horizontal fracture



Figure 7.11
Showing missing brick patch. Damage caused by vegetation at top of wall is visible

Section 07



Section 07: South Façade

Architectural Description

Section 07 continues the large semicircular trace. It is entirely brick masonry and features one embrasure, the bottom of which is partially buried. Section 07 is located in the intertidal zone, so that at high tide, the water level reaches several inches up the base of the wall.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
27	1 / C to 4 / C	Eroded masonry	36 sf	Water and wave action causing significant masonry and mortar joint erosion. Some bricks are of inferior quality and are particularly susceptible	1
28	1 / B-C to 2 / B-C	Diagonal fracturing (Figure 7.12)	12 linear ft	Settling has led to diagonal stress fractures	1
29	2 / A-C to 4 / A-C	Masonry fracturing and mortar joint decay		The combination of settling and water erosion at the base of the wall has led to stresses and fracturing throughout this section of the wall	2
30	1 / A to 4 / A, 1 / D to 4 / D	Invasive plant growth (Figure 7.13)		Plants taking root in the top of the wall has led to masonry fracture, mortar joint decay, and masonry displacement along the top of the wall	2
31	4 / C	Missing brick patch	4 sf	Cause of brick loss is unclear. Has left wall interior exposed and susceptible to erosion	3
32	1 / A-C to 4 / A-C	Pelican soiling		Majority of section is covered with a heavy accumulation of pelican guano	1

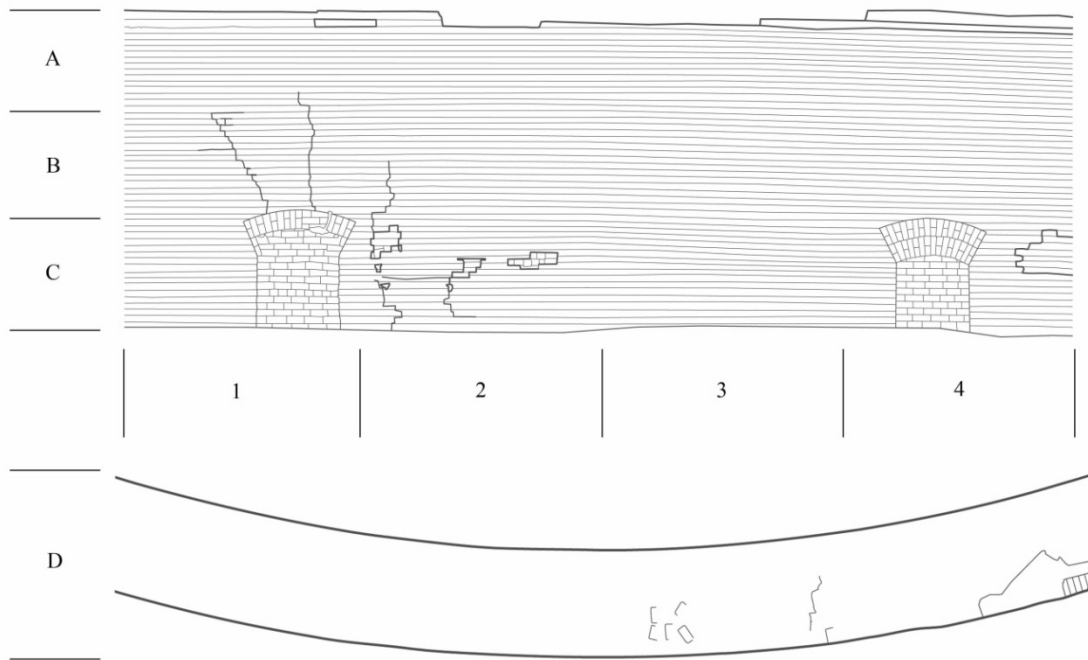


Figure 7.12
Showing diagonal fractures



Figure 7.13
Invasive plant growth

Section 08



Section 08: South Façade

Architectural Description

Section 08 continues the large semicircular trace, and is in the intertidal zone. The all masonry wall in this section is approximately 13' tall and 5'4" wide at the top of the wall. It features two bricked up embrasures, which each have brick arches. The west brick arch has been partially removed and altered. At the top of the wall, the east side of section 08 retains one of the original brick string courses which circumscribed the entire fort exterior.

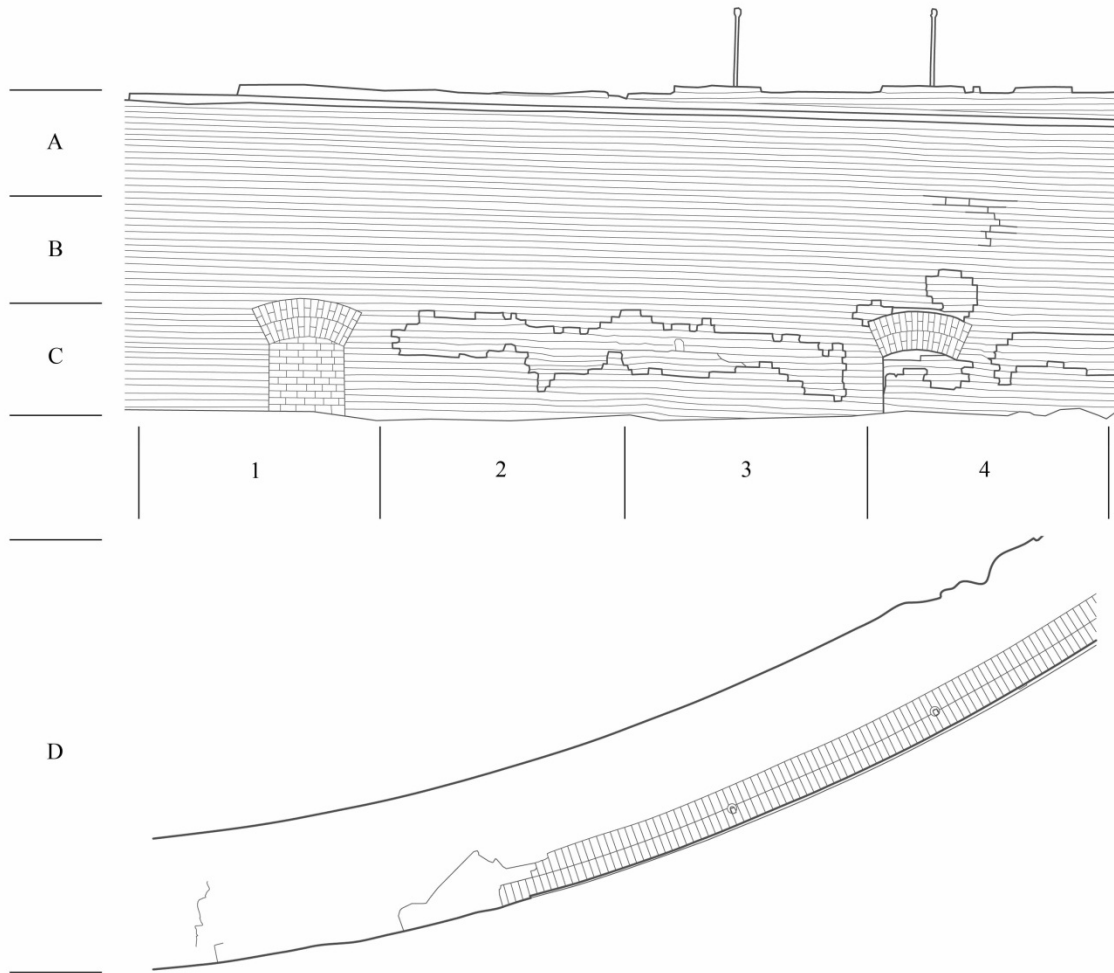
Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
33	1 / B	Diagonal fracturing	9 linear ft	Weakness and partial failure of the brick arch is causing stress fractures in the masonry above	2
34	2 / C to 3 / C	Major masonry erosion / instability (Figure 7.14)	48 sf	An area of under fired bricks at the base of the wall is significantly eroded due to water and wave action. Adjacent areas are experiencing masonry displacement and instability	1
35	3 / B-C to 4 / B-C	Mortar joint decay		Soft mortar at the base of the wall is being washed out due to water erosion	2
36	1 / A-B to 4 / A-B	Pelican soiling		Majority of section is covered with a heavy accumulation of pelican guano, concealing masonry conditions beneath	1
37	1 / A to 4 / A, 1 / D to 4 / D	Fracturing and masonry displacement		Fracturing at the top of the wall due to erosion and invasive plant growth	2



Figure 7.14
Showing diagonal fracturing above embrasure arch and adjacent under fired brick erosion

Section 09



Section 09: Southeast Façade

Architectural Description

Section 09 continues the large semi-circular trace and is in the intertidal zone. The entire section is brick masonry and features two bricked up embrasures with brick arches. The east embrasure is partially open because of erosion of the later brick patch. A brick string course runs the length of section 09 at the top of the wall.

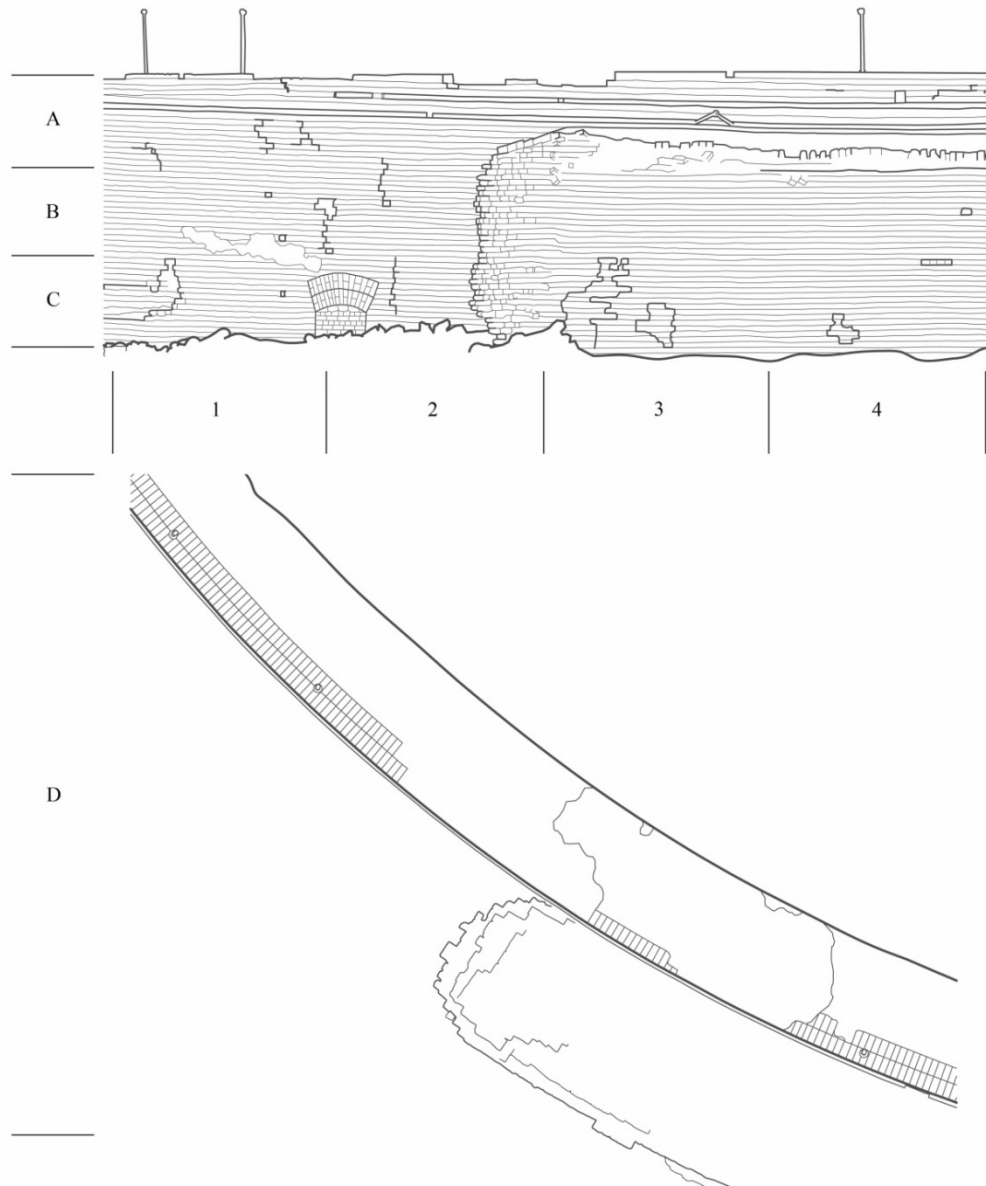
Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
38	1 / C to 4 / C	Severe masonry erosion and displacement (Figure 7.15)	120 sf	The combination of wave action and under fired bricks have led to major erosion and brick loss causing instability in adjacent areas of the wall	1
39	1 / B to 4 / B	Major diagonal fracturing (Figure 7.15)		Masonry failure at the base of the wall is causing stress fracturing in the area above	1
40	4 / B-C	Missing bricks (Figure 7.15)		Masonry displacement on the surface of the wall, caused by erosion, fracturing, settlement, and mortar joint decay have led to exposure of wall interior	2
41	1 / A-C to 4 / A-C	Pelican soiling		Much of section is covered with a heavy accumulation of pelican guano, concealing masonry conditions beneath	1
42	1 / A to 4 / A, 1 / D to 4 / D	Fracturing and masonry displacement		Fracturing at the top of the wall due to erosion and invasive plant growth	2



Figure 7.15
Showing erosion caused by water at base of the wall, and resultant brick loss and stress fracturing

Section 10



Section 10: East Façade

Architectural Description

Section 10 continues the large semi-circular trace and is in the intertidal zone. The area likewise features two embrasures with brick arch openings. One of the embrasures is concealed by a large brick masonry addition, which creates a second wall. Evidence suggests the bricks of the original parapet were used in constructing this wall, the purpose of which was to protect the

magazine which was located in the casemates on the interior. This section also features an additional brick string course, completing the set of two string courses that originally circumscribed the fort. The wall in this section is approximately 12'6", the width at the top of the wall is approximately 5'2". The height of the outer brick wall is approximately 10', the width of the outer brick wall is approximately 6'4".

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
43	1 / A-B to 2 / A-B	Major diagonal fracturing (Figure 7.16)	16 linear ft	Part of the wall in this section has been relaid with a Portland cement mortar, causing the surrounding masonry to fracture	2
44	1 / A-B to 2 / A-B	Portland cement repair	20 sf	A modern Portland cement repair is causing damage to the surrounding masonry due to incompatibility and differential movement	2
45	2 / A-C to 4 / A-C, 2 / D to 4 / D	Unstable masonry (Figure 7.17)		The large additional exterior masonry wall was never intended to be exposed and is susceptible to rapid erosion and decay	2
46	1 / A to 4 / A, 1 / D to 4 / D	Fracturing and masonry displacement		Fracturing at the top of the wall due to erosion and invasive plant growth	2

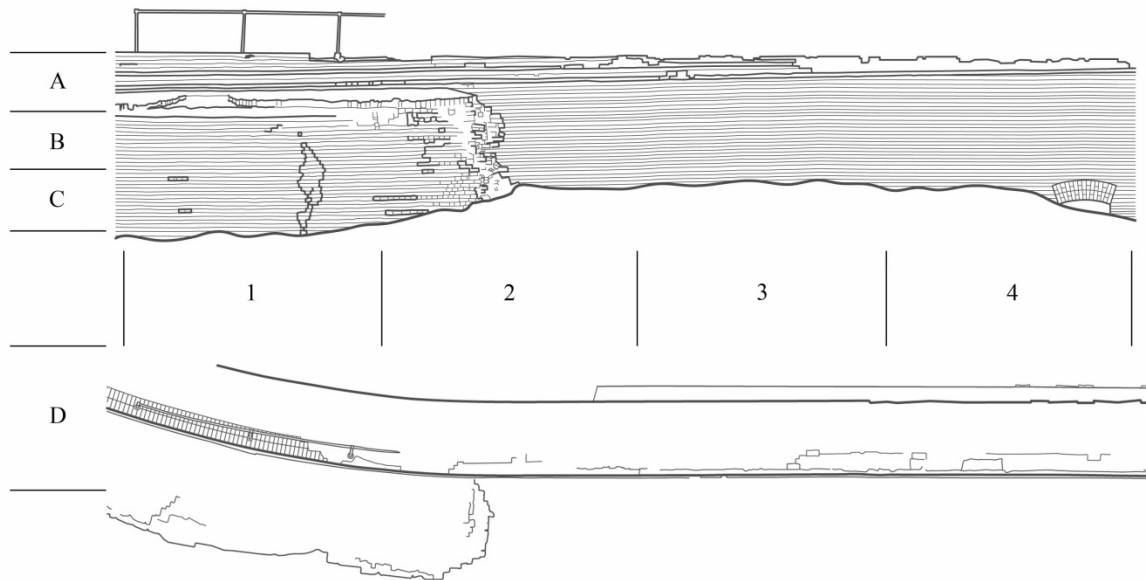


Figure 7.16
Showing Portland cement patch and adjacent
diagonal fracturing



Figure 7.17
Showing unstable outer masonry wall

Section 11



Section 11: East Façade

Architectural Description

Section 11 is the eastern terminus of the large semicircular trace, where the wall becomes straight, once again, for a short distance between the large semicircle and the smaller semicircular towers on either side of the sally port. The additional, outer masonry wall continues from section 10 into section 11. Much of the base of the wall is concealed by a large accumulation of soil, vegetation, and loose bricks. The south part of section 11 features the double string course at the top of the wall. The bottom string course continues for the length of section 11; the top string course has been removed or lost at the north side of the section.

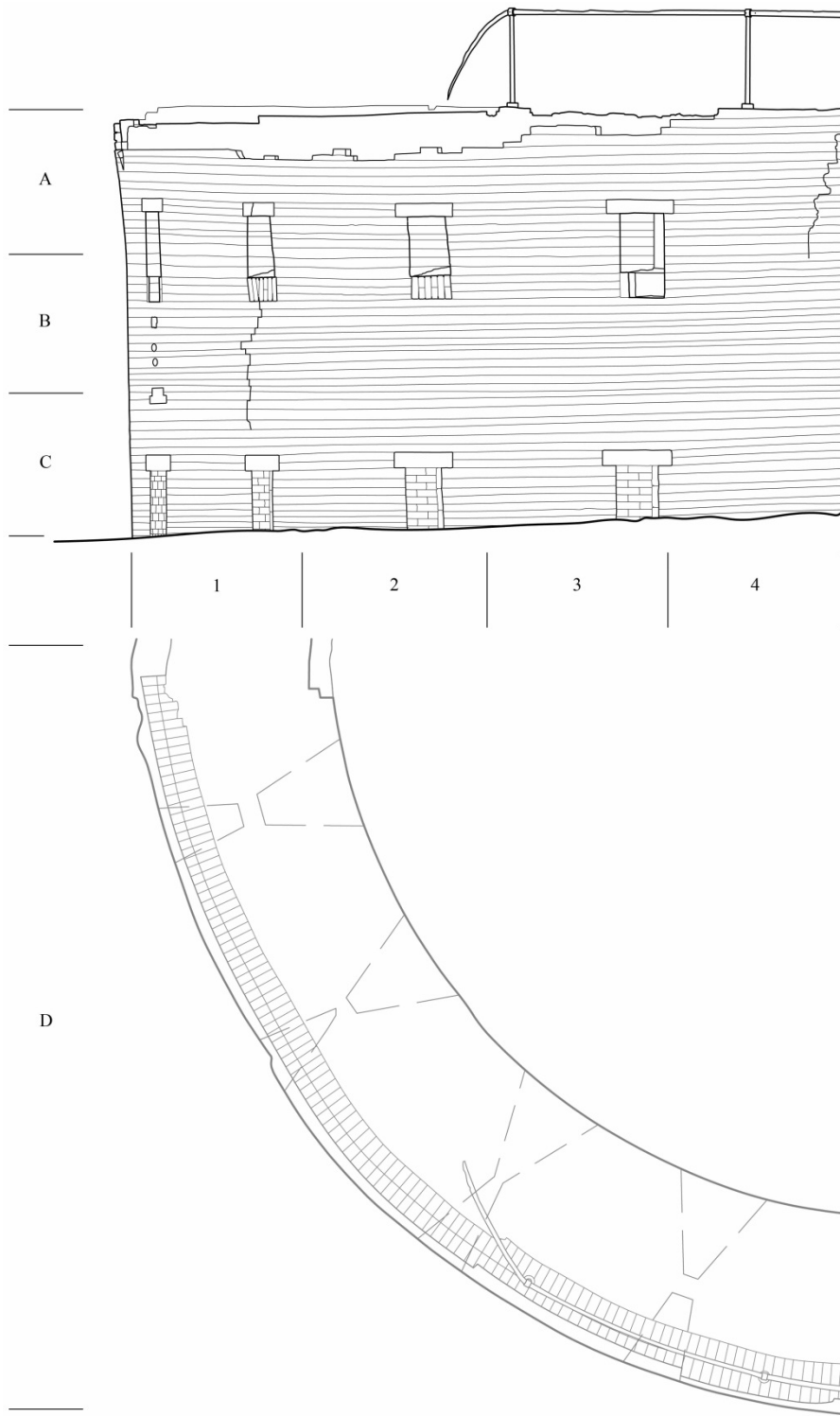
Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
47	1 / A to 4 / A, 1 / D to 4 / D	Extensive vegetation growth; masonry fracturing and mortar joint decay (Figure 16)		Extensive growth of the large trees and their numerous root systems have caused significant and ongoing masonry fracturing, displacement, as well as mortar joint decay and loss along the top of the wall	2
48	1 / A-C to 2 / A-C	Unstable masonry		Additional, outer masonry wall is susceptible to accelerated mortar joint decay and subsequent masonry failure	2
49	2 / A-C to 4 / A-C	Mortar joint decay		Settling and invasive plant growth has led to mortar joint decay and loss in much of the wall	3



Figure 7.18
Showing extensive large tree growth and resultant deterioration of masonry at the top of the wall

Section 12



Section 12: Northeast Façade

Architectural Description

Section twelve is located in the northeast section of the fort, and marks a return to the land side function of the building. It is part of one of the two smaller semi-circular towers that were intended for land-side defense. As such, it features two tiers of narrow, splayed openings, marked with dashed lines on the plan. The lower tier of these openings has since been bricked up; the upper tier features some of the few openings that remain open as originally intended. The top tier of openings retain their original brownstone headers; the bottom tier of openings have been altered, including granite replacement headers. The bottom of the lower tier of windows is partially buried due to settling and accumulated soil.

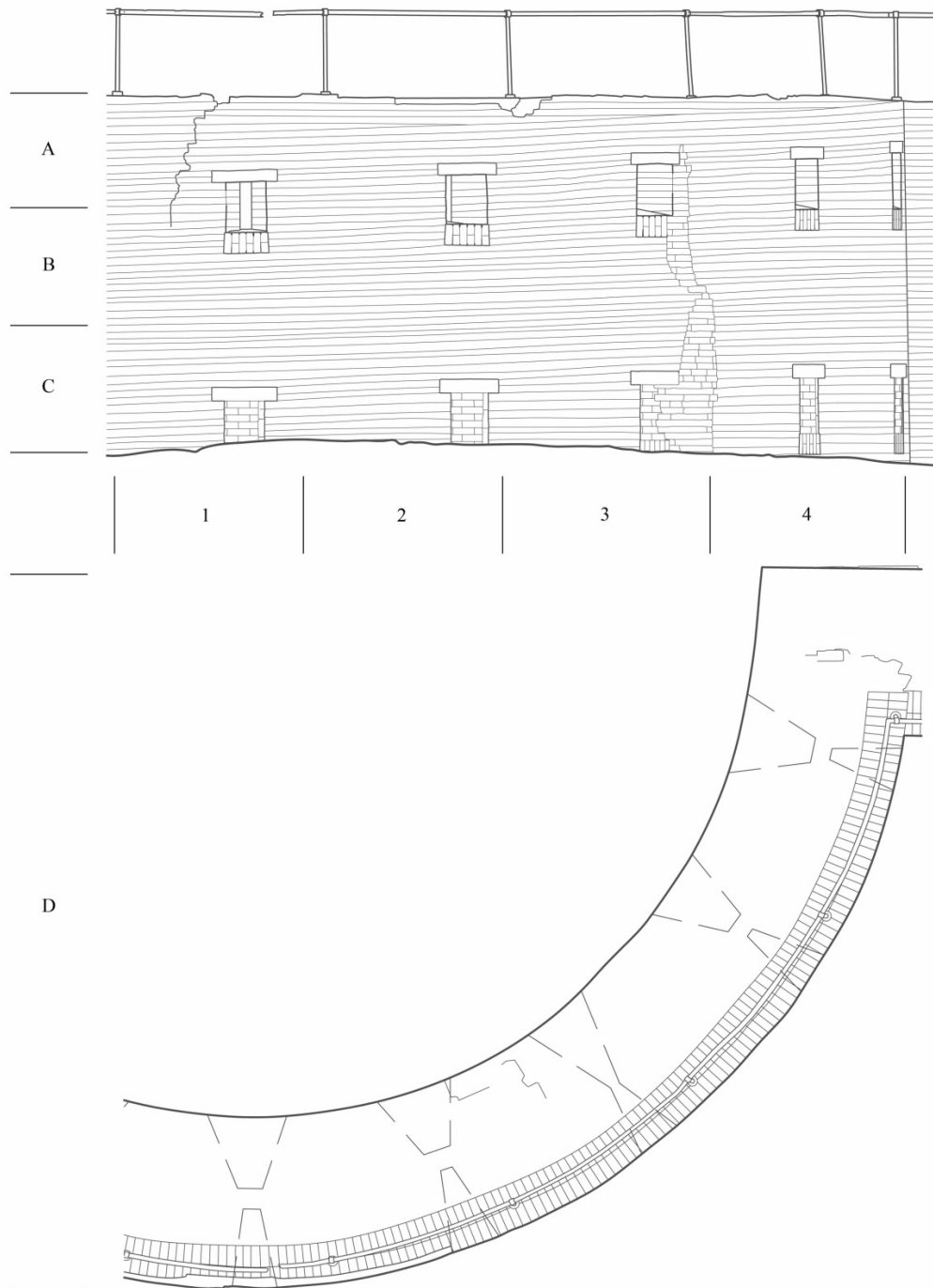
Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
50	1 / A, 1 / D	Large tree growth; masonry fracture and displacement	16 sf	The weight and root system of a large tree is causing major masonry failure at the top of the wall	2
51	1 / A-C	Major vertical fracturing	8 linear ft	The destructive combination of vegetation, settling, and stresses from the interior earth fill is causing major fracturing	1
52	1 / A	Cracked brownstone header	.8 linear ft	Stress from wall movement has caused the header to crack	3
53	3 / A-B	Major vertical fracture in opening (Figure 17)	2 linear ft.	Settling has led to leaning and bowing of the wall. Internal stresses are evidenced by the large fracture on the interior face of the opening, as the outer wythes of the masonry are pulling away from the inner wythes.	1
54	1 / B	Masonry displacement	3 sf	Modern Portland cement repairs are causing fracturing and masonry displacement	3
55	1 / B-C to 3 / B-C	Growths of moss and other microflora conceal the condition of the masonry and mortar joints.		Cleaning of organic growth is necessary for further assessment of masonry conditions and enabling further work	3



Figure 7.19
Showing large stress fracture in opening

Section 13



Section 13: North Façade

Architectural Description

Section 13 is located on the north façade, and continues the east, small semicircular tower from section 12. It features a total of ten narrow openings in two tiers, five in each tier. The top tier of openings remain in their original, open condition with brownstone headers. The bottom tier of openings have been closed with bricks. Some of this bottom tier is partially buried, two of the bricked up openings and their sills are entirely visible above the ground. The wall is approximately 12'9" tall in this location, and approximately 5'10" wide at the top of the wall.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
56	1 / A	Minor diagonal fracture	5 linear ft	Settlement is causing diagonal stress fracture, crack should be monitored to determine rate of active settlement	1
57	1 / A-B to 2 / A-B	Minor vertical and horizontal fractures		Settlement has led to the leaning of the wall and outward stresses at the top of the wall, leading to multiple stress fractures (Figure 7.20)	2
58	1 / A to 4 / A, 1 / D to 4 / D	Large plant growth		The root systems of large plants have penetrated the top and upper face of the wall causing fractures and masonry displacement (Figure 7.21)	2
59	3 / A-C	Vertical fracture paralleling modern brick patch	10 linear ft	A patch of modern brick laid in Portland cement is causing fracturing in the adjacent masonry (Figure 7.22)	2
60	1 / C to 4 / C	Growths of moss and other microflora			3



Figure 7.20
Showing wall leaning and fracturing due to settlement

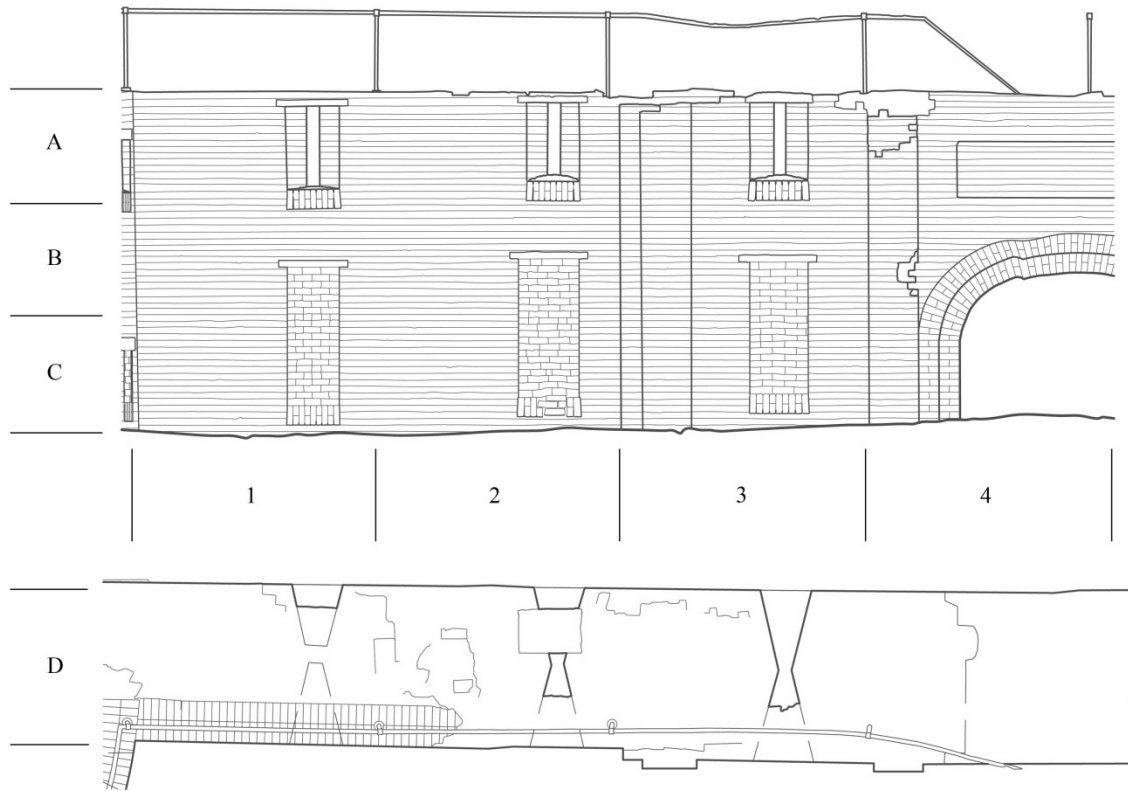


Figure 7.21
Showing large plant growth and resultant fracturing



Figure 7.22
Showing fracture paralleling modern brick patch

Section 14



Section 14: North Façade

Architectural Description

Section 14 is the east side of the north facing gorge wall, and along with the west side of the wall, features the highest level of architectural detailing of anywhere on the wall. Two engaged columns flank the center arched entry way. A recessed panel is centrally located above the arched entry. The section features six openings originally intended to provide light and air for the barracks as well as allow defensive fire of small firearms. The openings are in two tiers, three in each. The bottom tier has been bricked up, while the upper tier remains open. All openings feature brownstone headers and brick sills.

Schedule of Defects

<u>Item No.</u>	<u>Grid Ref.</u>	<u>Defect Description</u>	<u>Size</u>	<u>Comments</u>	<u>Repair Priority</u>
61	1 / B-C to 4 / B-C	Extensive growths of moss and other microflora conceal the condition of the masonry and mortar joints. (Figure 7.24)	400 sf	Cleaning of organic growth is necessary for further assessment of masonry conditions and enabling further work	1
62	2 / A, 3 / A	Exposed brownstone headers (Figure 7.23)	2 sf (2)	Deterioration / removal of upper brick courses has left headers exposed. Header should be covered as part of a plan to consolidate the top of the wall	2
63	3 / A, 4 / A	Open and fractured mortar joints with minor brick displacement		Penetrating roots have caused mortar loss and brick displacement. Open joints are susceptible to accelerated erosion	2



Figure 7.23
Showing exposed brownstone header and brick displacement



Figure 7.24
Showing moss growth

Recommendations

For immediate action: A total of ten major, structural defects have been identified in the fourteen sections as having a repair priority of “1”. These defects are uniformly large cracks due to settlement, stresses from leaning walls or structural pressure from the earth fill. In some cases, significant worsening of the defect could lead to catastrophic wall failure. These cracks should be monitored as engineering studies of settlement and wall movement at the site progress.

Other defects with a repair priority of “1” indicate either pelican soiling or organic growth on the walls. The walls should be cleaned as the first stage of a more detailed preservation plan to reveal masonry conditions beneath.

For completion within two years: Numerous defects with a repair priority of “2” require remediation in the near future to prevent further deterioration. The objective of these repairs is not to achieve a restored state, but rather to create a secure barrier to further deterioration, which in some cases may necessitate restoration work.

In nearly every section of the wall, large tree growth is leading to masonry fracture and brick displacement. The roots of these plants are likely thoroughly entwined in the mortar joints. All invasive vegetation at the site should be cut down and killed, and their roots left in place to wither and rot, until the mortar joints can be raked out and repointed. In areas of major fracture and displacement it will likely be required to re-lay whole sections of masonry using intact original bricks and an appropriate historic mortar mix.

Large areas of the top of the wall are experiencing rapid erosion and decay, usually due to invasive plant growth. The top of the wall should be consolidated as a plan to prevent further deterioration and also to prevent a return of invasive plant growth. Consolidation should include re-laying of entire sections of masonry with original brick and a historic mortar mix, ensuring that

the top courses are capable of shedding water and presenting a surface largely impermeable to plant growth.

In many areas, significant mortar joint decay and loss are threatening to the stability of the surrounding masonry. Areas of particularly dramatic loss should be repointed with an appropriate historic mortar mix. In some areas, this mortar loss is accompanied by brick loss leading to the exposure of soft bricks and mortar in the wall's interior, resulting in their ongoing erosion and decay. Areas of brick loss that are particularly susceptible to water intrusion and erosion should be bricked up with original bricks and an appropriate historic mortar mix.

In numerous areas of the wall, previous repairs with unsympathetic materials, such as modern bricks and Portland cement mortars, are causing fracturing and brick loss. Measures should be taken to remediate these conditions. In extreme cases this should include the removal of Portland cement and replacement with original bricks and a historic mortar mix.

Settlement and wall movement have led to minor stress fracturing throughout the masonry, in most cases these fractures are not threatening to the stability of the wall. Potentially problematic cracks should be monitored to determine the extent of ongoing movement.

For completion within five years: Defects with a repair priority of "3" are not immediately threatening to the fort's stability, and will likely not become so in the near future. Minor mortar loss, small cracks, and small areas of masonry loss do not require immediate attention, but should be repaired as part of a larger, long term preservation plan.

Chapter Eight - Vision

Mission

The isolated and neglected nature of Castle Pinckney gives the site a sense of timelessness and intrigue; however, the educational and cultural value of the place can only be appreciated if the site is properly interpreted and made publically accessible. Establishing public visitation as a goal for the site immediately triggers a myriad considerations and concerns for the preservation of the site, which, to name a few include its legibility to visitors, issues of public access and facilities, sustainability, and operation and maintenance costs. Each one of these issues is accompanied by a set of pros and cons, where perhaps the building and the site are made more accessible and more legible, but where its long term preservation and sustainability may be jeopardized. The goal of any such project is to find the most appropriate middle ground, where visitors can reach the site, are enabled to enjoy and learn from its setting and history, and simultaneously plan for the long term viability of the site, maintaining it for generations to come.

The guiding principles for interpretation of the site, then, are threefold, to achieve:

1. *A sensitive and thoughtful display of the Castle Pinckney ruins*
2. *An informative and authentic retelling of its entire history*
3. *A respectful, sustainable, and well-designed system for public access and visitation.*

To achieve this mission, it is necessary to separate the immediate and feasible goals from the long term, ideal vision. The mission and long term vision guide decisions made for the immediate, feasible program of work.

Castle Pinckney is a complex site, containing potentially unstable ruins which require complicated and expensive repairs and maintenance. Surrounding and filling these ruins is soil containing large amounts of archeological evidence, the excavation of which may further destabilize the very ruins such evidence would serve to illuminate. At the most basic, the site

alone presents significant challenges to public access – its surrounding shallow waters, fragile shoreline, currents and changing tides, and busy container ship traffic. All these problems provide a powerful dose of reality to the expectation that Castle Pinckney might be beautifully preserved and opened to the public in the very near future. However, as with most historic sites, the work in progress is compelling in itself, serving as a laboratory for preservationists and archeologists which is also open to the public as a heritage site. Castle Pinckney has the potential to be a model of sustainable tourism involving local professionals and broader community participation, serving as a catalyst for multidisciplinary collaboration. In pursuit of achieving the ideal site conditions as established by the mission, there are several key concepts to carefully consider.

Tourism

In a city like Charleston, where history and tourism are inextricably linked to the well-being of the place, sustainable tourism is of particular weight. At Castle Pinckney, as with any historic site, it is important to realize that visitors can affect a site both positively and negatively, and the scale and severity of impacts will vary according to the type and number of visitors. Ideally, access to Castle Pinckney will be somewhat limited, resulting in a moderate amount of interested visitors. Lacking the size, infrastructure, and facilities of more popular sites like Fort Sumter, it would be impractical and undesirable for large amounts of people to visit Castle Pinckney. Limiting access will also serve to attract desirable visitors, those interested to learn and experience the history of the place and explore its archeological and architectural fabric, those who value a site's 'sense of place' and are eager to experience it.¹⁰⁹ Such limited access makes tourism sustainable by introducing less foot traffic to the site and requiring fewer improvements to the site to make it more hospitable for larger numbers of tourists.

Site Management

Planning for sustainable tourism also requires planning for site management and visitor comfort, another long term goal of the interpretation of Castle Pinckney. Regardless of the number, visitors to a historic site need to be managed. This management can range from being extremely minimal – an unstaffed site, where visitors are self-guided by pamphlets or signage – to extensive – a well-staffed site, where visitors are greeted by displays and paid tour guides. The appropriate level of management is unique to every site and its individual conditions and requirements. Castle Pinckney's very exposed position, and unsuitable location for the construction of any substantial shelter or interpretive center (at least in the near term), requires minimalism in almost all respects, including management. A minimal management strategy at Castle Pinckney corresponds well with the site's interpretation as a ruin, where a lack of human activity and intervention are desirable.

Access

It is within the framework of sustainable tourism and site management that public access should be addressed. What is best mode of transportation for visitors to reach the site? Where do they arrive and how do they approach the fort? Varying strategies for access should be analyzed, but in keeping with the minimalist long term goals of site interpretation and management, access should likewise be simple and nonintrusive to the sites natural setting. Facilities for arrival at the site should be located thoughtfully and respectfully of the site's original orientation, and allowing for an authentic experience upon arrival. Currently the granite base of the historic pier on the southern tip of the island, where the site was traditionally accessed, is in a ruined condition. The possibility of adapting the pier to serve as the site of a new dock offers the intriguing opportunity for visitors to approach the fort in the traditional way, as well as provide a poignant contrast

between the ruined pier and new pier. A new pier should ideally be designed to accommodate small motorized boats. Non-motorized boats should also be provided for, but the waters surrounding the historic pier are frequently too rough to comfortably provide for the loading and unloading of small boats such as kayaks. Boats providing access to the site should be in accordance with the determined number and type of visitors allowed at the site. In keeping with a limited access plan, these boats should be limited to small motorized boats and kayaks, intentionally appealing to more adventurous and motivated visitors.

Facilities

As a ruin, modern facilities (such as a visitors' center and/or restrooms) should be kept off the site to the greatest extent practicable. Not only does this seek to keep construction and maintenance costs down, but more importantly it is necessary to maintain the attractiveness of Castle Pinckney's remote environment. If required, facilities should be located in areas of least fragility and archaeological disturbance kept to an absolute minimum. The facilities should age well and weather comfortably in their settings, strategically contributing to, rather than detracting from the attractiveness of the place. New buildings should be soundly constructed of sustainable materials, and be capable of alteration, extension, or removal to cater to future needs. Facilities should also consider the instability of the island's soils which may require lighter construction materials and a more temporary character. Despite the desirability of keeping modern interventions to a minimum, the site will also require economic sustainability. To better attract and accommodate visitors in the long term, basic services may need to be provided, such as shelter, restrooms, and a small interpretive center. These services should incorporate the latest technologies in low impact, environmental design.

Interpretation and Display

Carefully considered, all of the previously listed objectives will result in a respectful system for public access and visitation, as required by the long term mission. But they will revolve around the interpretation and display of the ruins themselves. What is the ideal treatment of the ruins? What, if anything, should be restored? What preserved? What parts of the site's history should be emphasized and what parts left out? Due to its inherent nature as a ruin, that of incompleteness, Castle Pinckney and its setting can be confusing to understand. The development of these sites can be difficult to determine with any certainty, as they need to change and adapt to ongoing discoveries in preservation and archaeology. Castle Pinckney will need to be understood through two ways, each an important part of the site's ideal interpretation: the display of the existing fabric, and documentary records.

Castle Pinckney should be displayed largely in an 'as found' condition, with two major exceptions being removal of the interior earth fill through careful archeology, and preservation work required for the ruins' stability. The goal is to reveal as much original fabric as possible to provide an understanding of the original function of the structure as an early 19th century fortification. This should include several key elements. First, the interior casemates, an exceptional architectural resource, should be carefully revealed. Second, embrasures in the casemates should be selectively opened, depending on their proximity to the water, to provide the visual connection between the fort's interior and its original lines of fire. Third, archaeological remains of the original barracks building, hot shot furnace, and platforms in the small circular towers should be exposed and displayed. Remains of these features are likely fragmentary, and their preservation should be carefully studied before deciding on their long term exposure. Exposure of original building features is the primary goal of the excavation, however, later additions which have gained historic significance of their own are also to be preserved in an 'as

found' condition. These additions, located primarily on the fort's north exterior land side, are essential for the understanding of Castle Pinckney's importance in the years after its original construction. Ultimately, the ideal display of the Castle Pinckney ruins requires the exposure of any historic fabric that enables a more complete understanding of the site's evolution, and the subsequent preservation of that fabric in an 'as found' condition. The result will be an authentic display of the architectural evolution of the site.

Achieving a clear understanding of Castle Pinckney's architectural evolution is only half the challenge of interpretation at the site. Documentary evidence sheds light on the societal, technological, cultural, and political changes which precipitated that evolution. Structural remains provide only a part of the power of place, the other part of which is provided by those remains' personal associations. At historic sites, such information can take many forms; as interpretive signage, guide books, pamphlets, audio tours, and guided tours to name a few traditional methods. Whatever the method, the interpretation of this material can enormously enhance visitor experience, but only if well thought out in terms of design, size, scope, number, and location, and if they are well maintained. The ideal interpretation of Castle Pinckney as a ruin should be a largely unguided experience. It is not realistic or desirable to erect and maintain numerous interpretive markers on a small, isolated, and exposed site. If detailed information is desired by visitors, the bulk of interpretation should take place prior to embarking for the site, ideally by a tour guide familiar with the fort's history, with strategically located signage at the site to reinforce key periods of historic importance and functional change. Similar programs of interpretation can be found at isolated ruin sites across the United States.

Determining what information is most important and interesting to communicate to visitors is an essential step in its successful interpretation. The challenge is amplified the older a property gets, as more layers of history accumulate. The history written in this thesis constitutes

a detailed retelling of the history of the Castle Pinckney site, but contains more information and more detail than is important or interesting for more casual students of history. Key time periods to interpret include the fort's original construction during the years 1808 – 1811, the nullification crisis from 1829 – 1833, and the Civil War years from 1860 to 1865. Each one of these key time periods needs to be put in a context that relates happenings at the site to the local and national themes that they were a part of, as well as how and why these themes lead to events at Castle Pinckney during each time period. Primary resources should be used to the greatest extent possible during tours, in literature, and on signs to give the history authenticity – an original record, rather than its modern representation in print, gives correspondingly greater understanding and excitement.¹¹⁰

Near Term Priorities

With limited resources, the realization of Castle Pinckney as a completely excavated and interpreted site is a daunting task. Realistically, the site will be cleaned up, preserved, excavated, and interpreted over a long period of time as resources become available to the site's owners. However, the mission statement and the ideal preservation philosophy laid out above, should guide the decisions made at each stage of the process. It is useful here, to discuss feasible work which would be required to achieve a basic level of site improvement, in pursuit of the established mission.

This initial work should seek to remediate the most pressing deteriorative conditions as identified by the conditions survey, and work towards making the site safe for visitors, as well as enhancing its visitor appeal. This first phase of work should include:

- Professional engineering studies to assess the stability of the masonry walls and the structural influences of the earth fill

- Monitoring of major cracks
- Elimination and remediation of current deteriorative conditions including invasive plant growth
- Stabilization of failing masonry, especially on the top of the wall
- Removal of hazardous conditions, particularly all rusting metal elements. This should include the location and prominent marking of dangerous underground cisterns until they can be removed
- General cleaning of brick masonry

These recommendations are focused primarily on achieving a basic understanding of the behavior of the masonry, immediate stabilization of the masonry, and basic improvements in visitor appeal. As such, they would prevent the structure from deteriorating further in the near term, and allow small visitor expeditions to begin, while more detailed engineering, preservation and archeological planning proceeds.

Castle Pinckney requires both preservation and visitation. Preservation and tourism are often at odds, but must be reconciled. Without tourism, the need for sites like Castle Pinckney and the people who care for them is diminished, and their importance will be lost on all but architectural historians and archeologists.¹¹¹ The proper achievement of both will require much further planning; innovative, collaborative, and sustainable strategies must be developed for the site's long term management. Successfully achieved, Castle Pinckney's unique history and sense of place will be available for others to experience and enjoy.

Conclusion

It is a rare opportunity to have a historic structure of such integrity as Castle Pinckney. The fact that it has been untouched by archeologists and preservationists up to this point allows us to fully appreciate the extraordinary cultural resource that survives in the middle of Charleston Harbor. Underneath accumulations of moss, pelican guano, oyster shells, and dirt, are the encapsulated remnants of a time long gone. These remnants can do much to teach lessons in history, architecture, societal and cultural development, and conflict.

Ruined building fabric are the remains of our ancestors' past endeavors. In Castle Pinckney's case these remains are evidence of endeavors which charted the course for the future of American coastal fortifications and stood watch over the burgeoning Charleston Harbor during the country's infancy. They tell the story of a country that became increasingly divided as differences in political, cultural, and economic beliefs became more pronounced. Castle Pinckney stood witness, from a distance of less than a mile, as war dragged on and finally, as one of the greatest bombardments in military history up to that point rained down on the city of Charleston.

Within these broader themes of national importance are a multitude of smaller stories, interwoven with the fabric of the building; the officers and engineers that built it and would go on to great fame, the soldiers that slept in the barracks and operated the cannons, the prisoners locked in the casemates, the slaves laboring in the yard. Each has left an indelible mark on the Castle Pinckney site, clues to the lives once lived and to events that took place in and around it.

Few sites ever existed that were like Castle Pinckney, fewer still remain today, and none have the wealth and integrity of structure and artifacts that are concealed in Castle Pinckney's interior. With a clear vision, through careful and thoughtful planning, the building and site can be opened for the public to experience and learn from.

This thesis has been an attempt to shed some light on the stories and history that make Castle Pinckney a unique place in the country, and the means by which it can be profoundly displayed to future visitors. Long devalued for its lack of direct participation in any major war or battle, Castle Pinckney is anything but insignificant. Among the oldest casemated masonry forts in the nation, Castle Pinckney stands at a crossroads on its two hundredth anniversary. Left to nature, the historic masonry walls of the fort will continue to weather and collapse. If cared for, Castle Pinckney can remain standing, as a monument to the passage of time and to the people who made it the important place that it is.

APPENDICES

Appendix A

Clemson University / College of Charleston MSHP Program Documentation Effort

The origins of this thesis lie in the Castle Pinckney documentation effort by the National Park Service and the Clemson University / College of Charleston joint program in historic preservation begun in February 2011. Over the course of several weeks, students in the program (class of 2012) worked to clear brush and vegetation around the top of the fort and around the base of the wall. After clearing, the structure was documented using a combination of laser scanning technology employed by the National Park Service and annotated field notes completed by the students.

Armed with these resources, three students of the program, including the author of this thesis, worked to complete documentary drawings to Historic American Building Survey quality. Working throughout the summer of 2011 at the National Park Service Headquarters in Washington, DC, the drawings were completed for submittal to the Library of Congress archives.

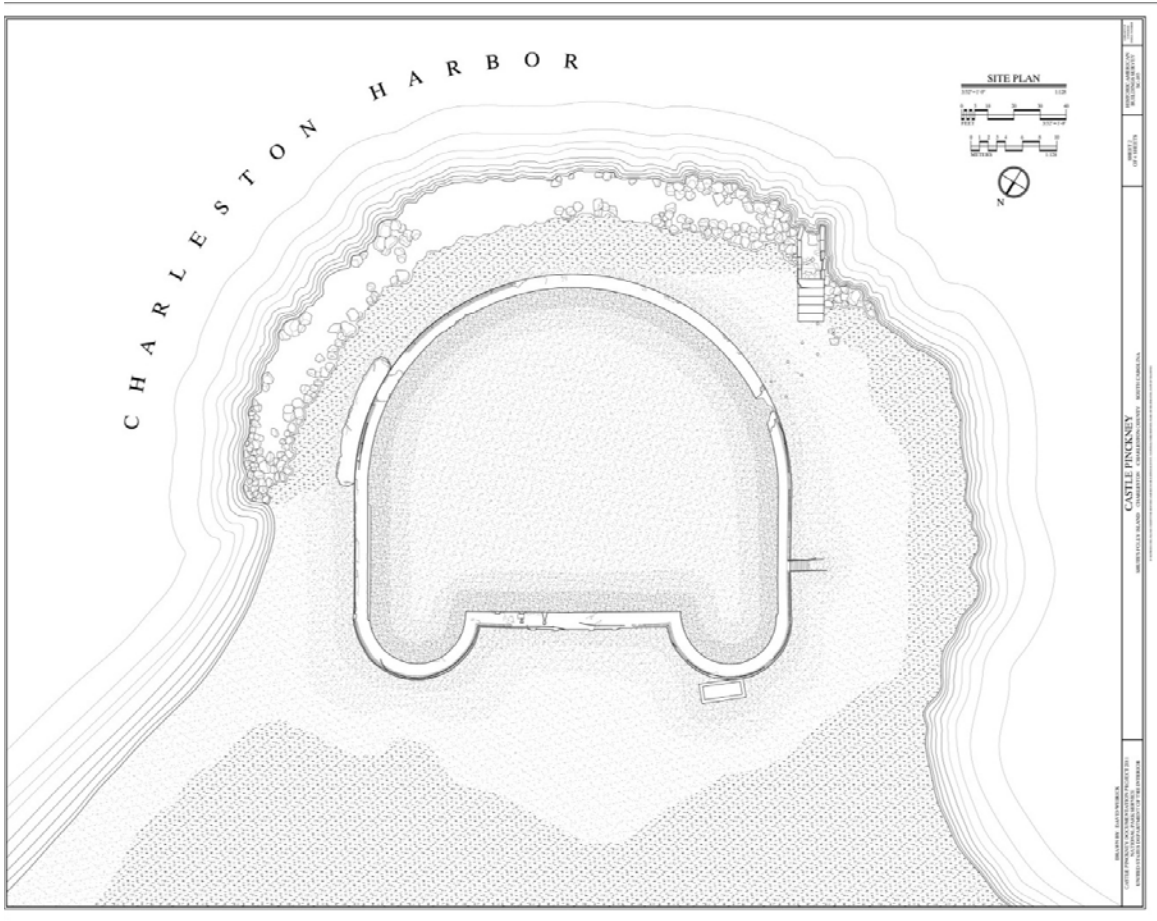


Figure A.0.1
Castle Pinckney site plan. Drawn by author.

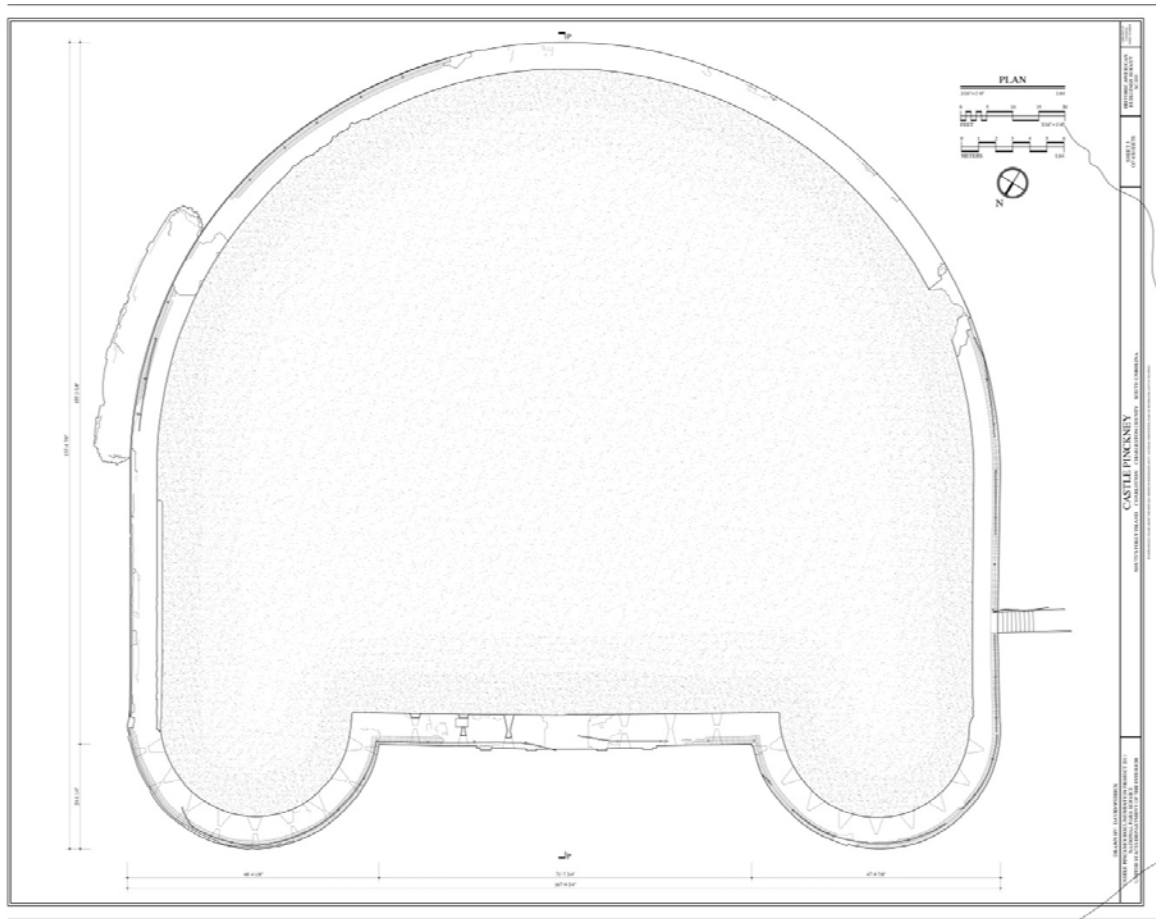


Figure A.0.2
Castle Pinckney plan. Drawn by author.

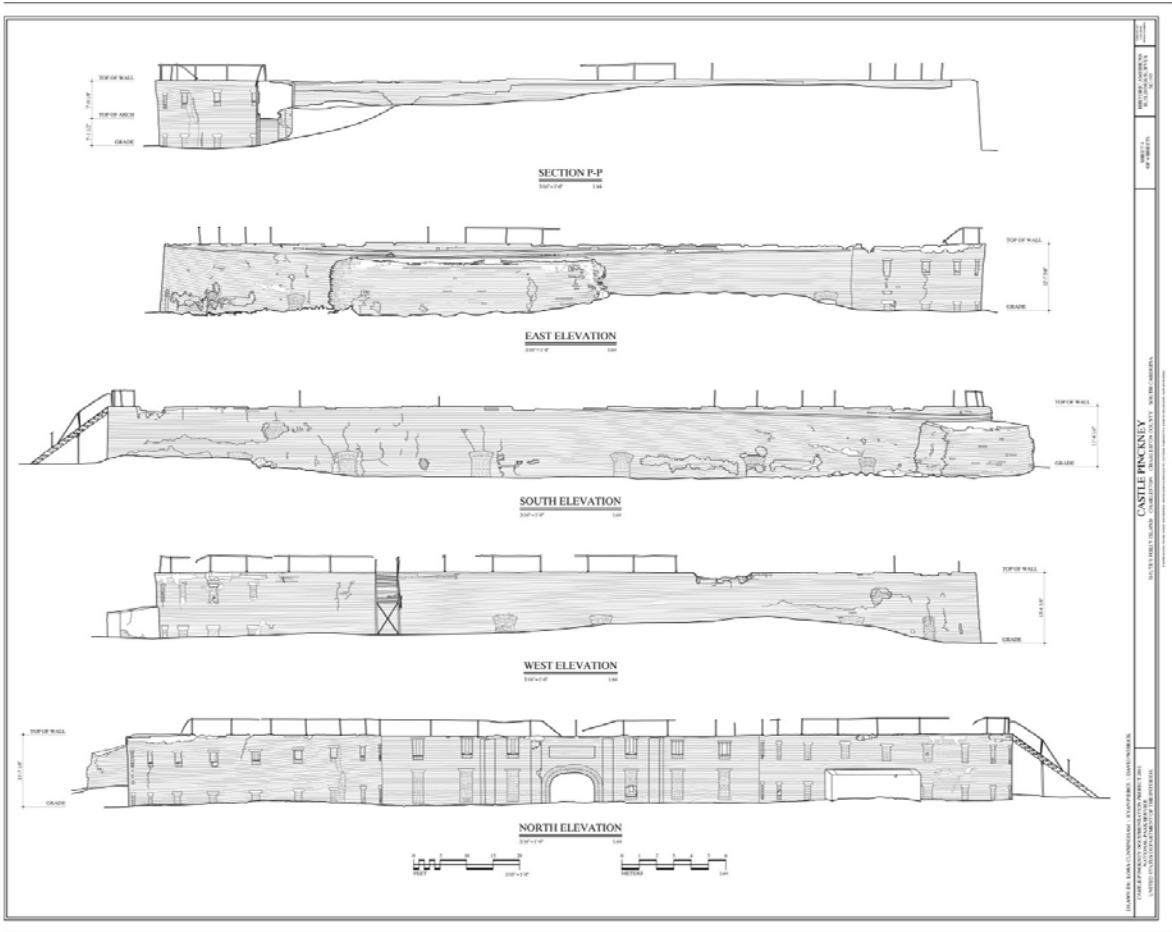


Figure A.0.3
 Castle Pinckney elevations. Drawn by author, Lora Cunningham, and Ryan Pierce.

Appendix B

Castle Pinckney Image Collection

Much of the research required for this thesis focused on locating images, pictures, plans, sketches, and other graphic representations of Castle Pinckney. These images are essential to understanding the physical evolution of Castle Pinckney. These images also give critical insight to the artist's, photographer's, or engineer's perception of the fort as it existed at that point in time. More images were located and studied than are included in the body of the text; they are all included here.

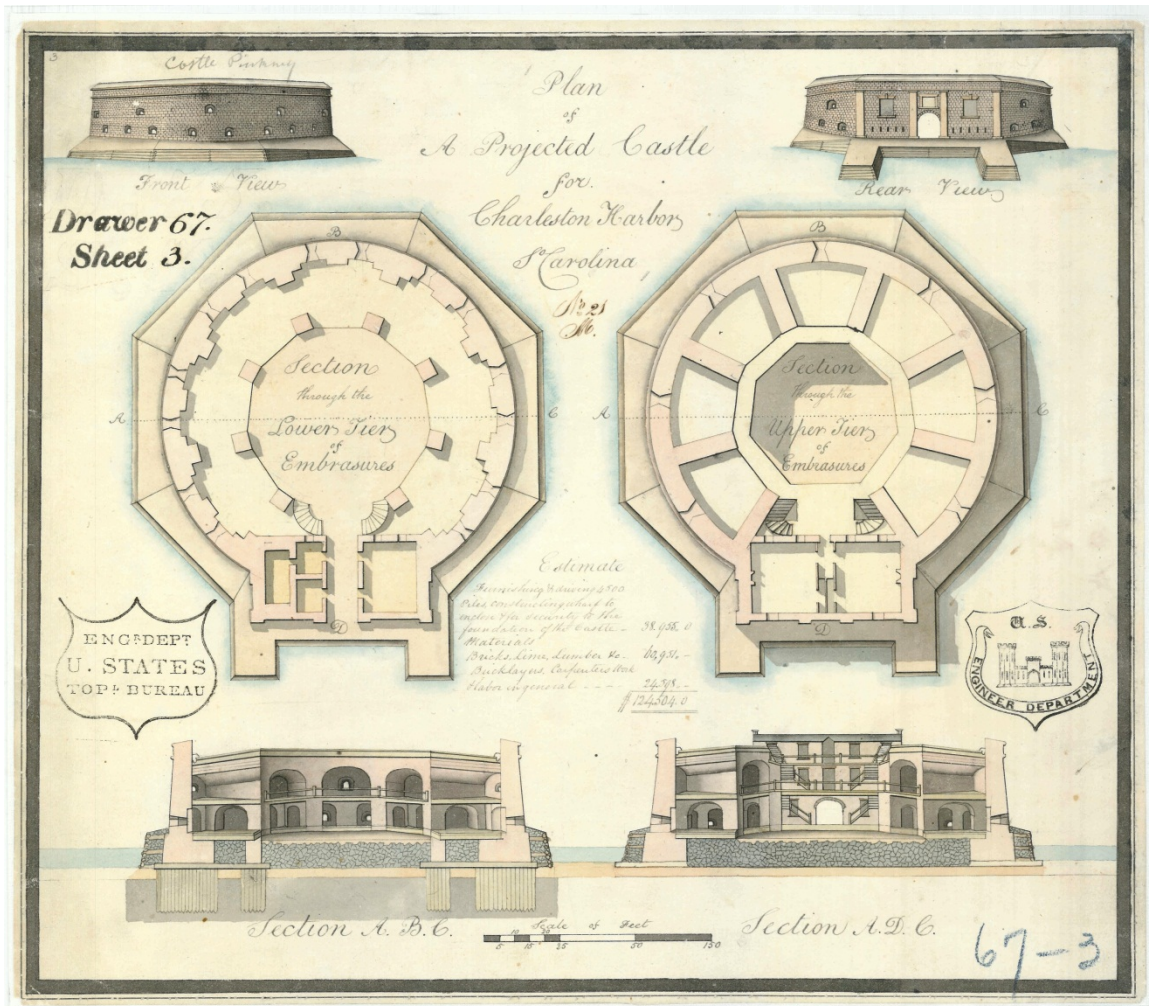


Figure B.1
 "Plan of Projected Castle for Charleston Harbor." Drawing by unknown, date unknown. Drawing shows an early design for a new castle style fort in Charleston Harbor. It is likely a precursor to the final design for Castle Pinckney. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 3

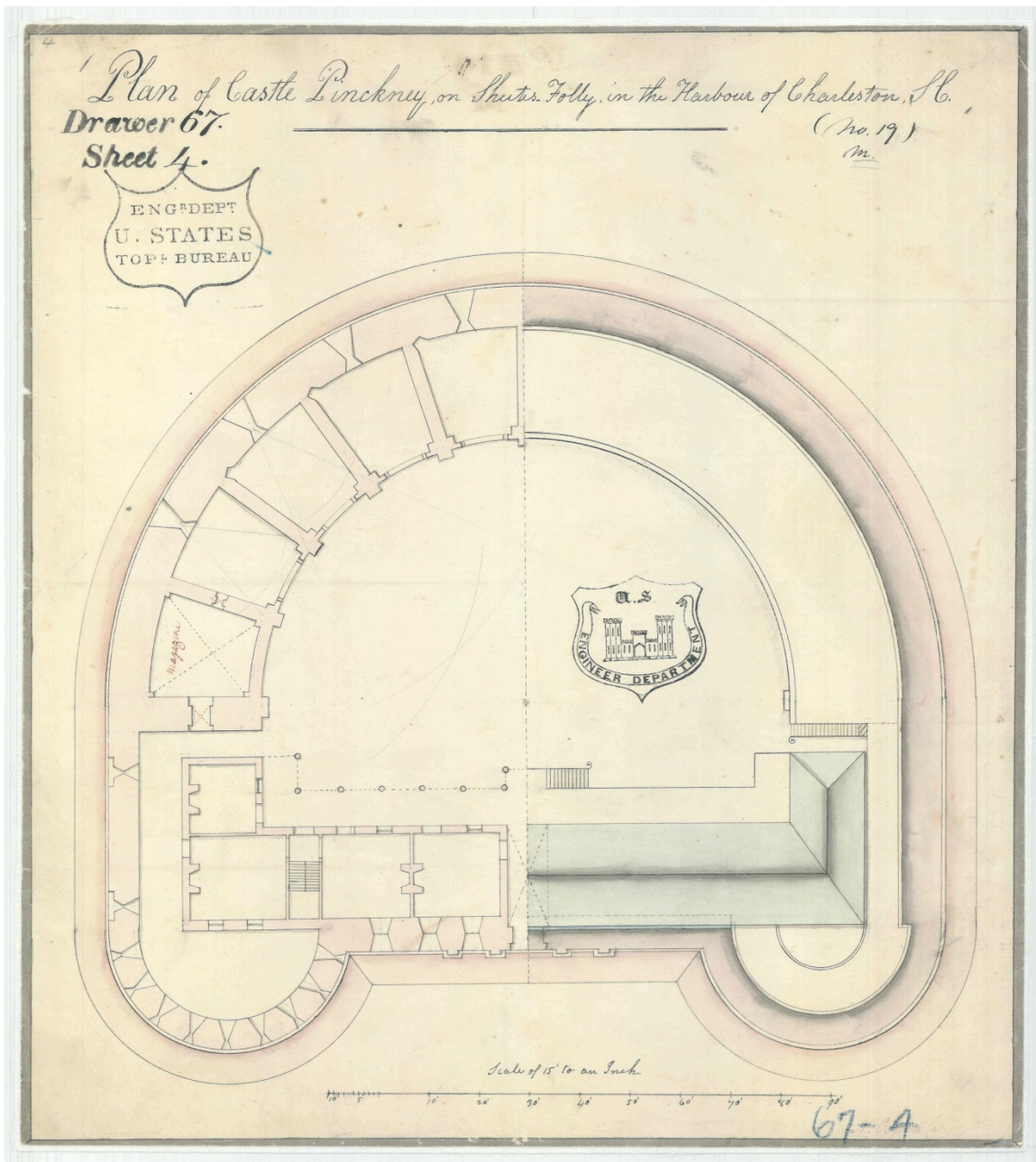


Figure B.2

“Plan of Castle Pinckney on Shutes Folly in the Harbour of Charleston, SC.” Drawing attributed to Jonathan Williams, date unknown. An early drawing of Castle Pinckney, likely the same drawing provided to Alexander Macomb to direct the construction of the fort. The fort as constructed was largely the same as this drawing, with a few minor differences. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 4

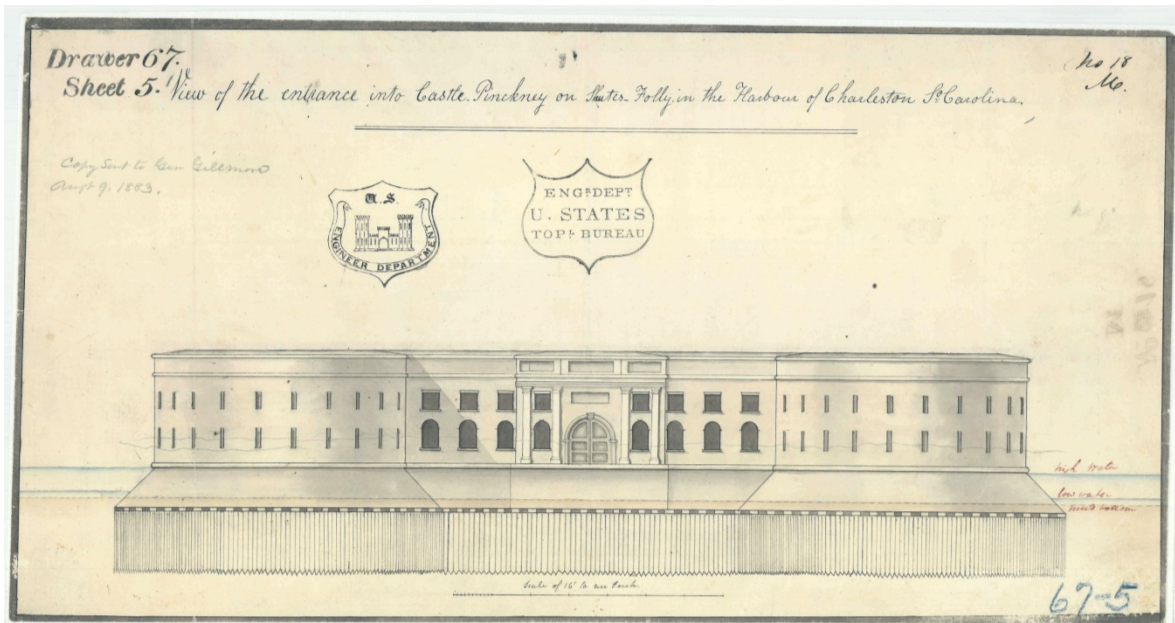


Figure B.3

“View of the entrance into Castle Pinckney on Shutes Folly in the Harbour of Charleston So. Carolina.” Drawing attributed to Jonathan Williams, date unknown. An early drawing of the north elevation of Castle Pinckney which would have originally accompanied the plan (Figure B.2). This drawing differs from both the original plan and the fort as built, containing eight segmental arch openings, rather than six jack arch openings. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 5

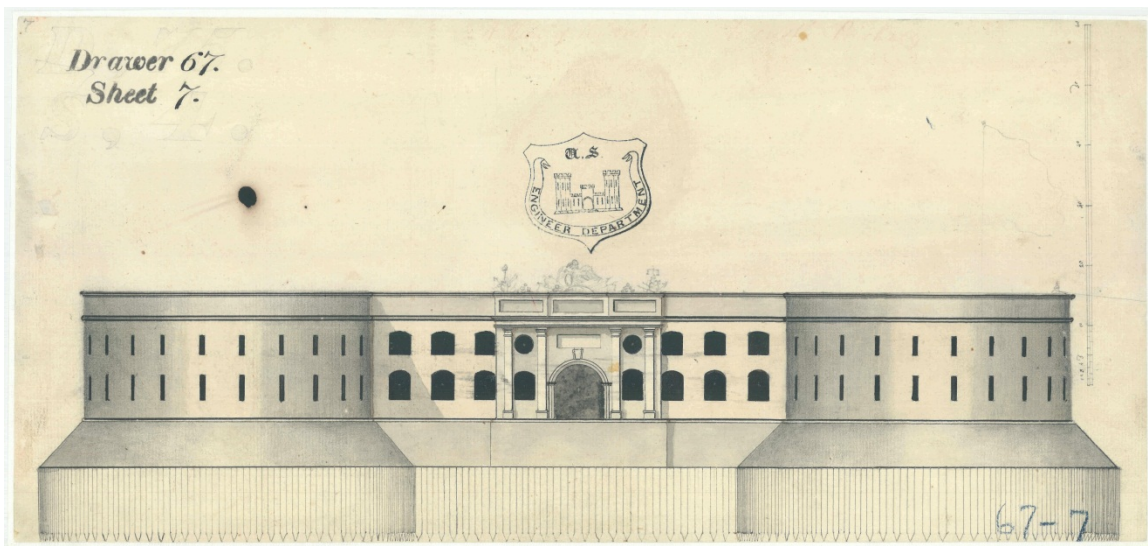


Figure B.0.4

Castle Pinckney Elevation. Drawing by unknown, date unknown. An early drawing of the Castle Pinckney north elevation. The drawing differs from the fort as constructed in a number of details, mostly around the sally port of the north façade. The fort was built with simplified openings – narrower, with jack arches rather than segmental arches. This drawing was likely a study for the final elevation (Figure B.3). National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 7

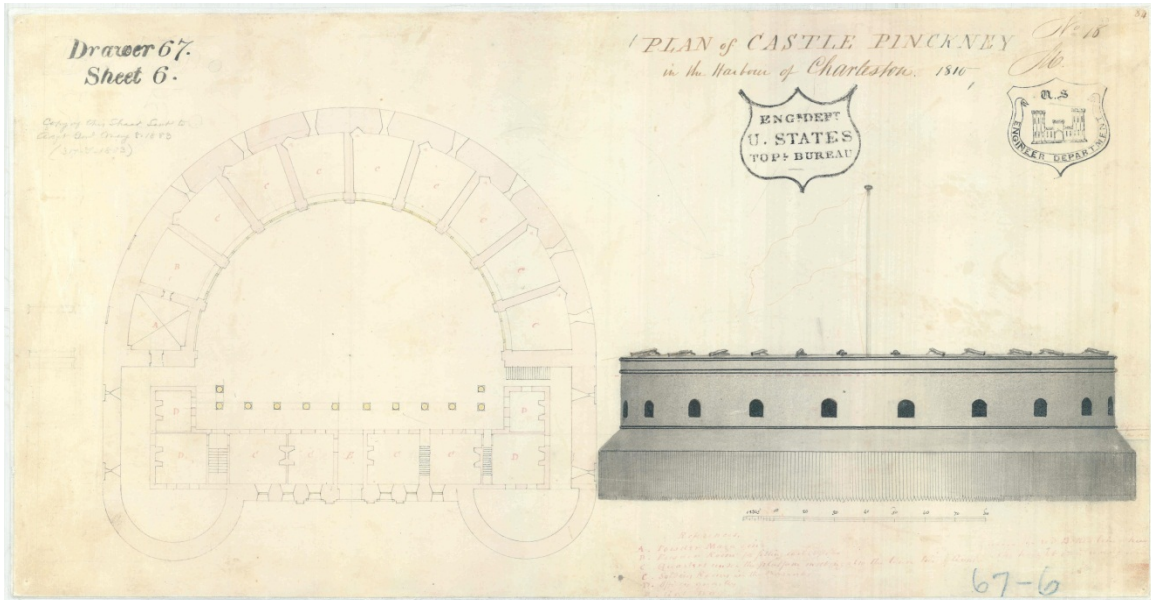


Figure B.0.5

“Plan of Castle Pinckney in the Harbour of Charleston” Drawing by unknown, 1810. Likely the first drawing of Castle Pinckney as an existing structure, possibly drawn by Alexander Macomb during construction. The elevation shows that the parapet wall is not yet completed in 1810, as it would have concealed the cannon mounted *en barbette* behind it. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 6

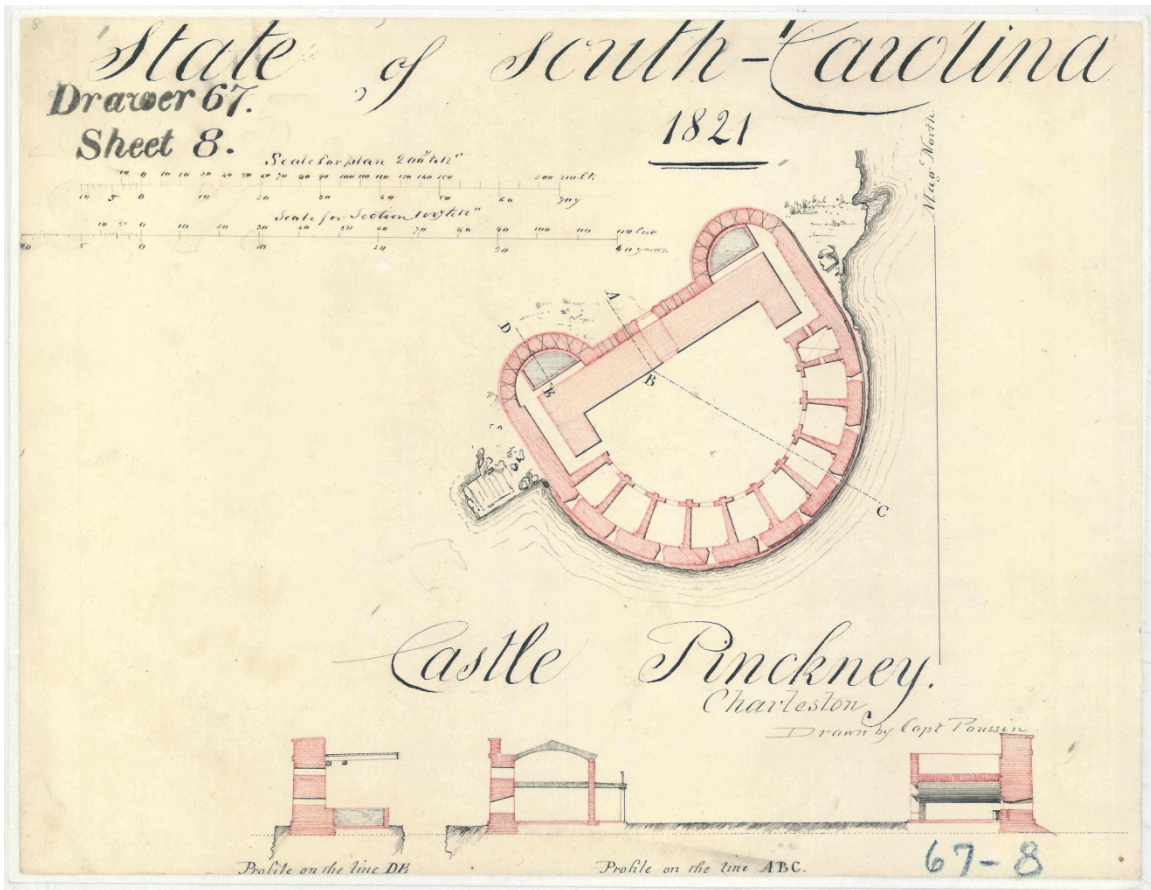


Figure B.0.6

“Castle Pinckney, Charleston.” Drawn by Capt. Poussin, 1821. The first known drawing of Castle Pinckney after its full completion. The drawing shows that in 1821, the fort existed mostly the same as when completed ten years earlier. It is the first drawing to show sections and surrounding site conditions. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 8

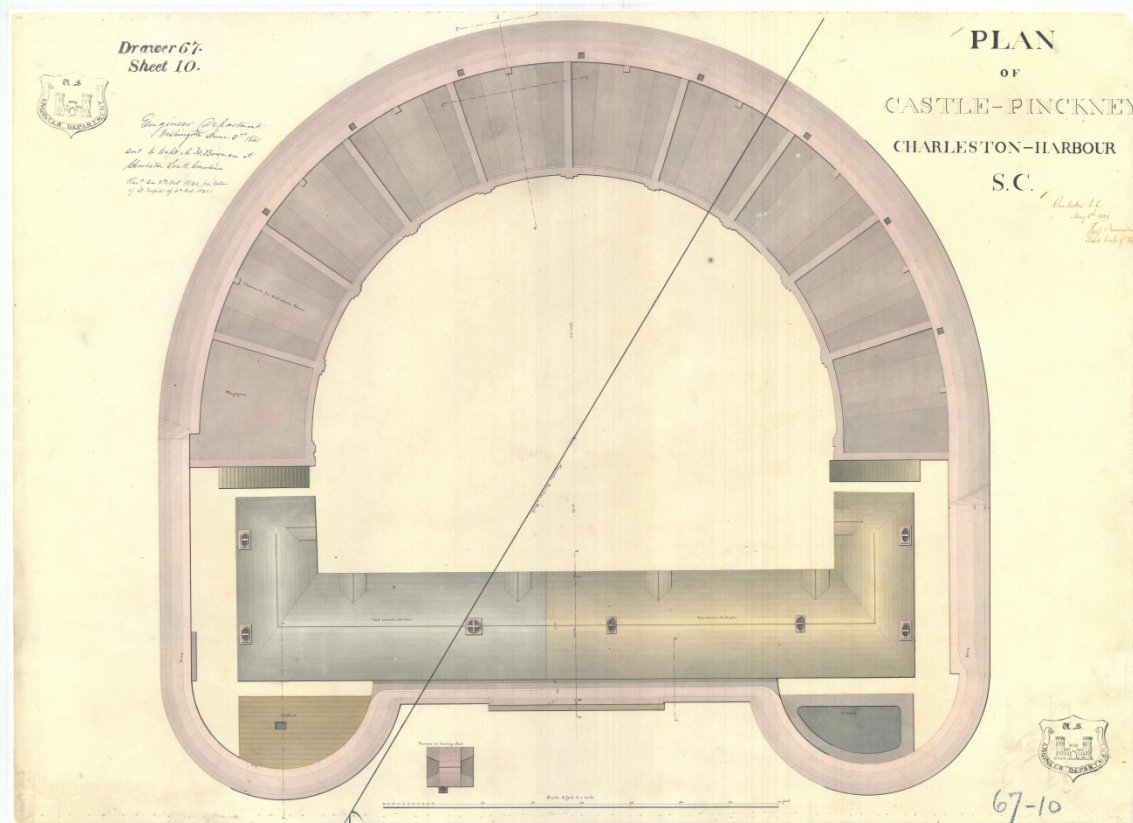


Figure B.0.7

“Plan of Castle Pinckney, Charleston Harbour S.C.” Drawn by Lieutenant Henry Brewerton, 1831. Plan drawn as an aerial view, showing the barbette tier and the roof plan of the officers’ quarters and barracks. The drawing reflects the repairs and changes made to Castle Pinckney as part of the execution of the third system of fortifications in Charleston Harbor during the 1830s. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 10

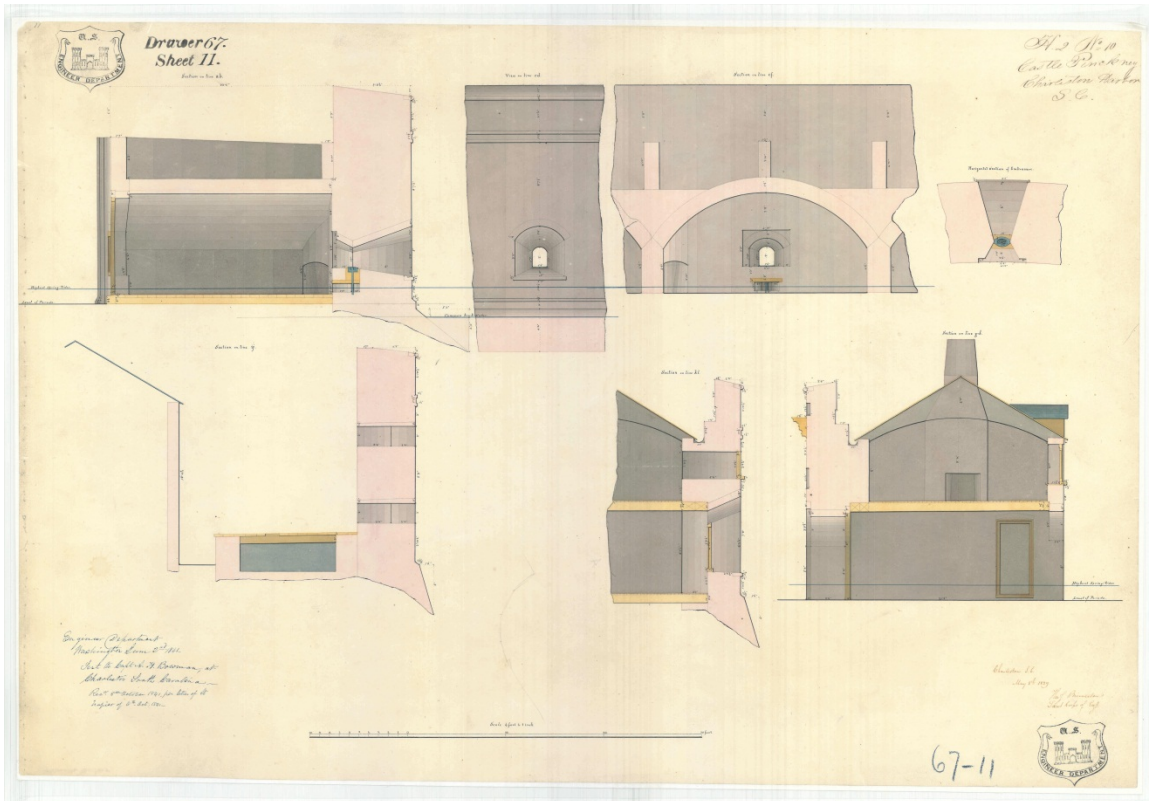


Figure B.8

Detail section drawings of Castle Pinckney. Drawn by Lieut. Henry Brewerton, 1831. Set of detail sections accompanying Brewerton's plan of 1831 (Figure B.7). Documenting the state of the repaired and modified Castle Pinckney. They are the most detailed drawings of the fort up to that time, showing multiple sections with dimensions of the casemates, barracks, platforms, and embrasures. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 11

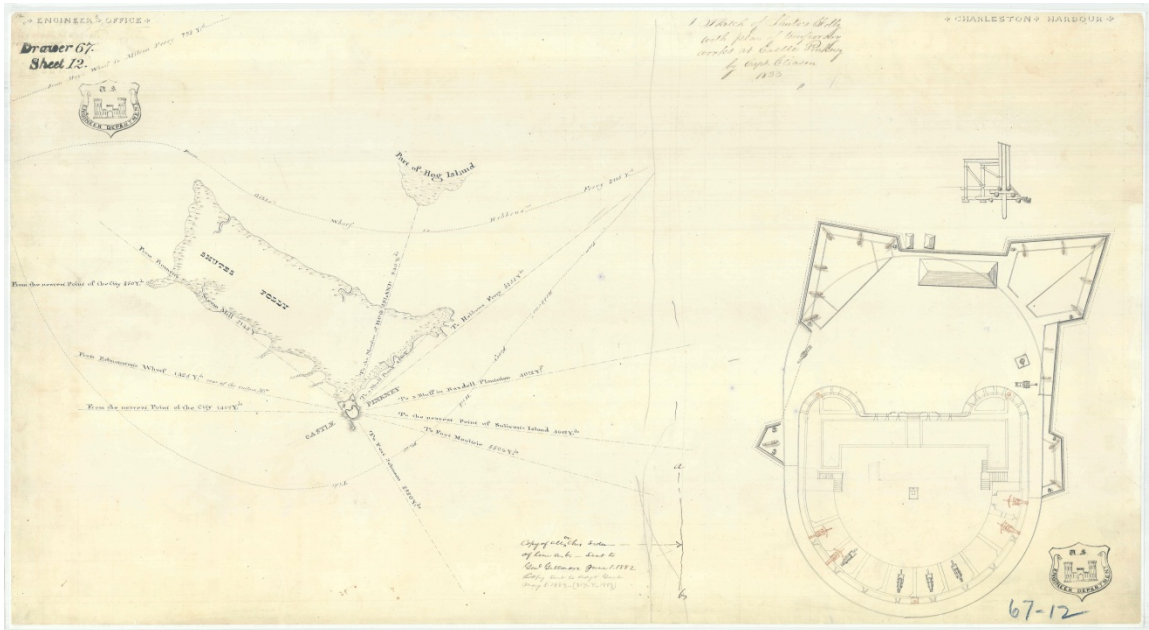


Figure B.9

“Sketch of Shutes Folly with plan of temporary works at Castle Pinckney.” Drawn by Captain Eliason, 1833. The earliest known drawing to show Castle Pinckney as well as the entire island. The plan shows the timber palisade that was constructed on the north side of Castle Pinckney during the Nullification Crisis of 1832 – 1834. It is useful for its depiction of the fort’s armament as well as the location of early outbuildings. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 12

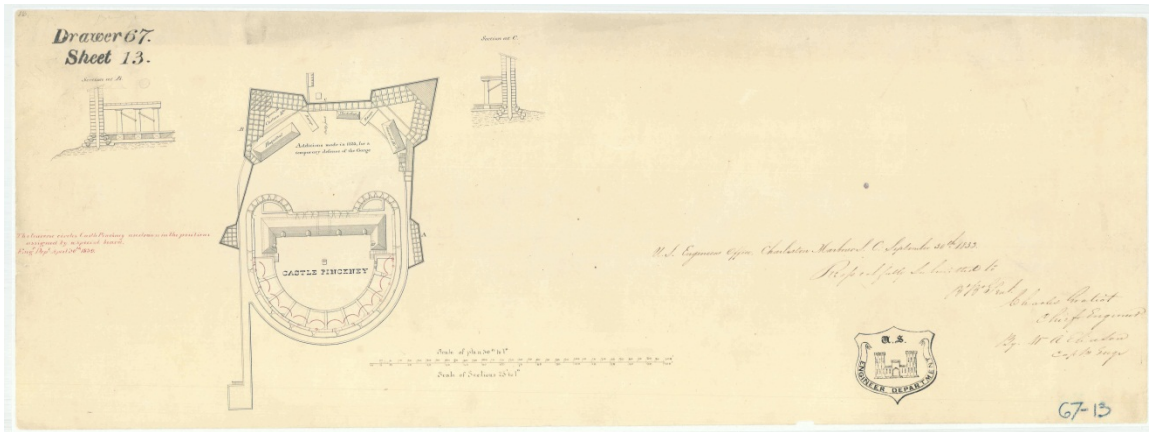


Figure B.10

Plan of Castle Pinckney. Drawn by Captain Eliason, 1833. Another drawing showing the timber palisade constructed for the temporary defense of the gorge during the Nullification Crisis. The drawing shows construction and framing details for the platform and scarp walls and several outbuildings within the palisade. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 67, Sheet 13

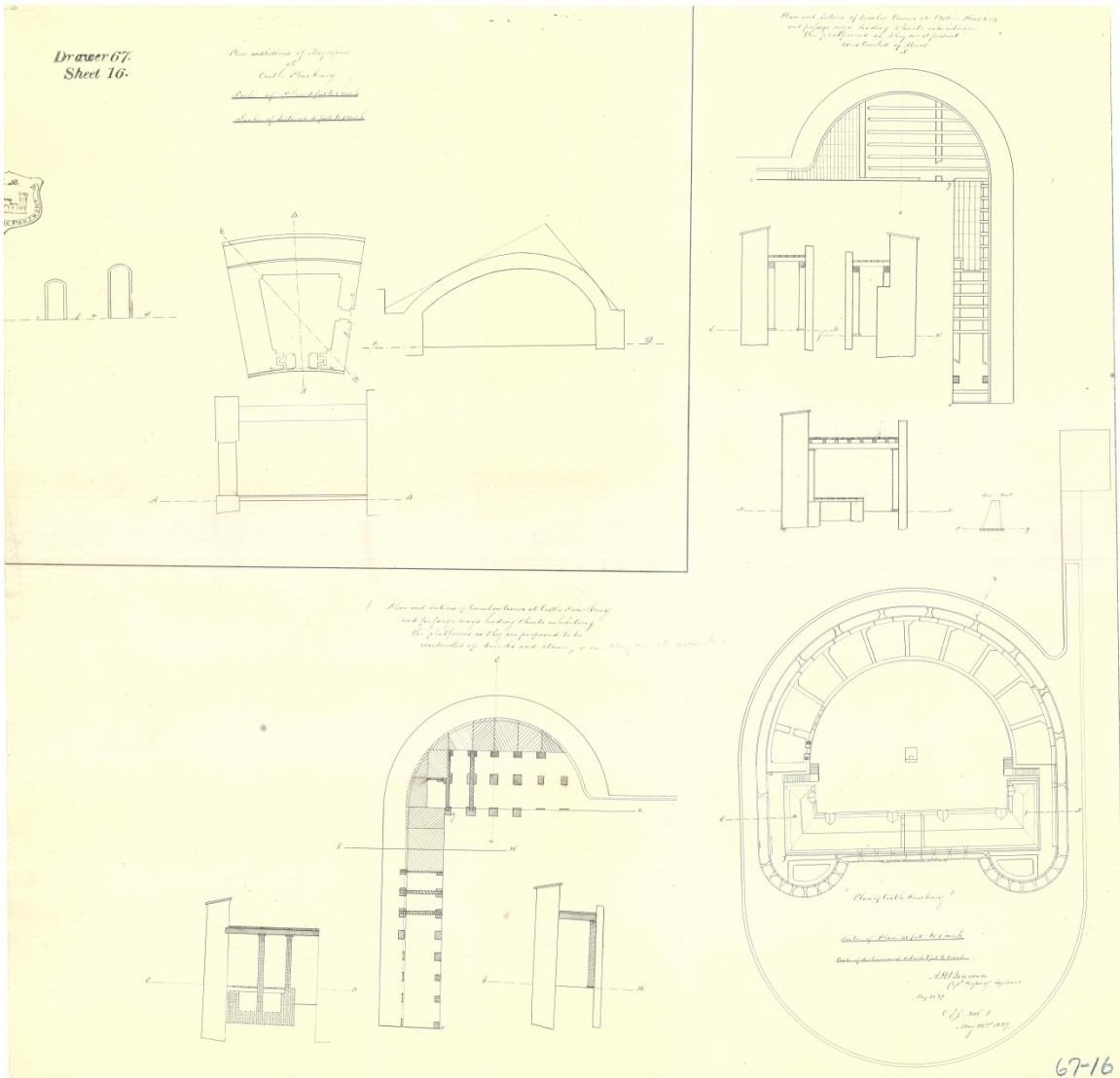


Figure B.11

“Plan and Sections of circular towers at Castle Pinckney and passage ways leading thereto exhibiting the platforms as they are proposed to be constructed of bricks and stone, and as they are at present.” Drawn by Captain Bowman, 1839. One of several drawings that detail Captain Alexander Bowman’s proposed improvements to Castle Pinckney. The drawing shows his proposal to construct the platforms in the small semicircular towers out of bricks and stone, in replacement of the existing timber ones. The platforms were used for defense of the gorge wall. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 13

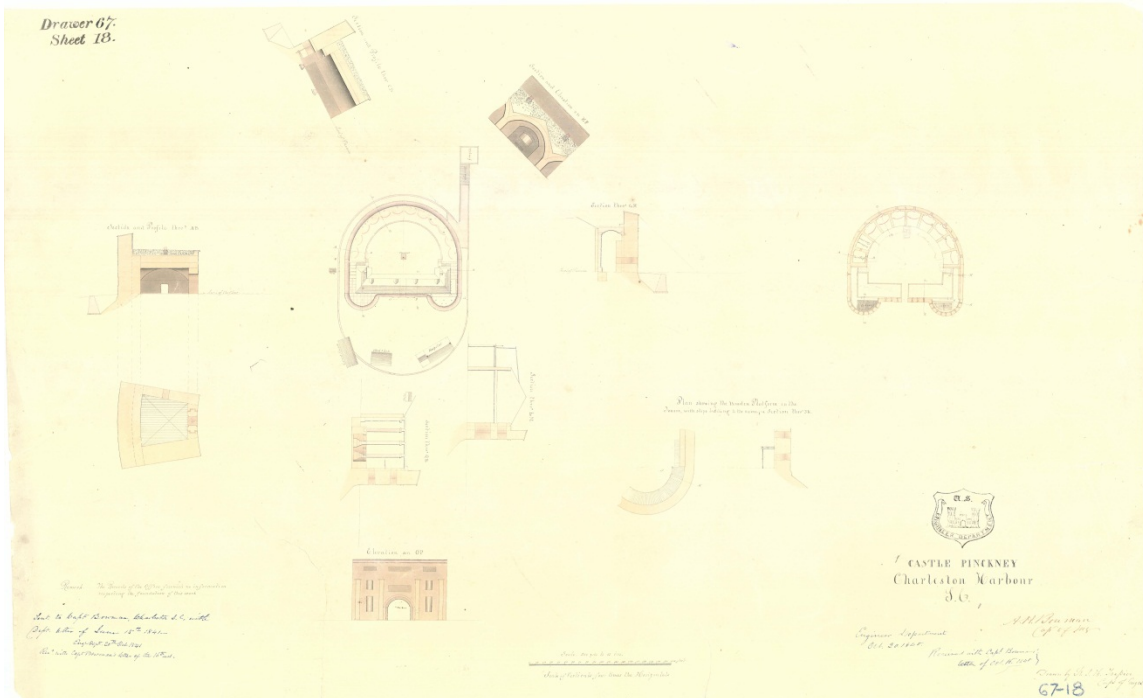


Figure B.12

“Castle Pinckney, Charleston Harbour, S.C.” Drawn by Lieut. James H. Trapier, 1840. This drawing is a study of Castle Pinckney showing plans and detail sections. It is the only known drawing to show the north elevation after the fort was constructed. It is useful for comparing the elevation as design and as built (or as it existed in 1840). National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 18

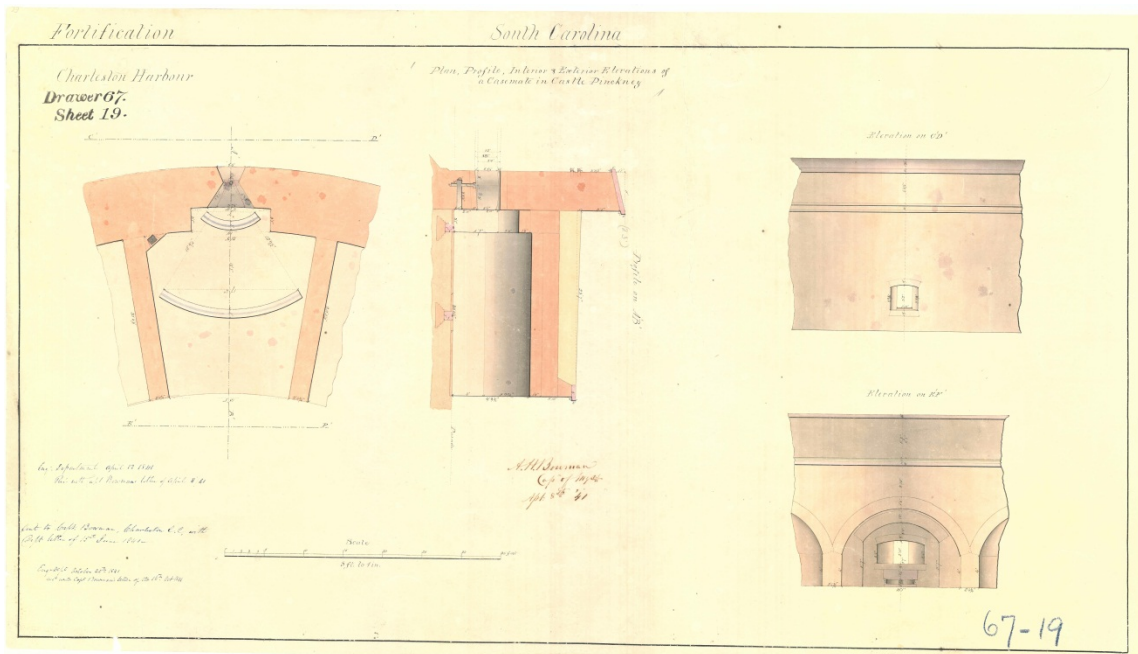


Figure B.12

“Plan, Profile, Interior and Exterior Elevations of a Casemate in Castle Pinckney.” Drawn by Lieut. James H. Trapier, 1841. A study of one of the casemates at Castle Pinckney. These drawings show the casemates in great detail, including dimensions and locations of important gun emplacement features like traverse circles and pin configuration. National Archives II, Architectural and Cartographic Records, RG 77, Dr. Sheet 19

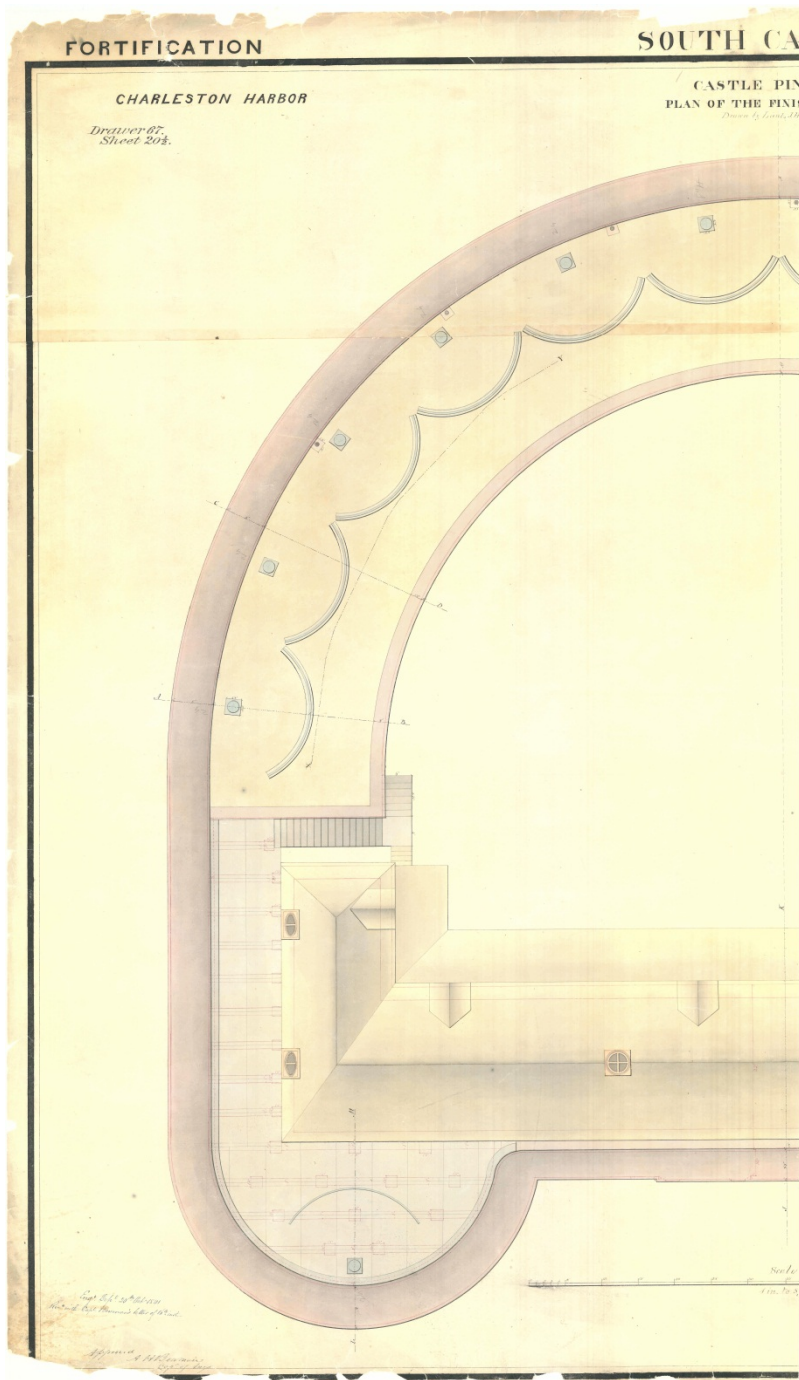


Figure B.13.1
 “Castle Pinckney, Plan of the Finished Work.” Drawn by Lieut. James H. Trapier, 1841. After several years of planning and studies, these drawings are a remarkably complete and detailed documentation of Castle Pinckney after its thorough repair. Figures B.13.1 and B.13.2 show the barbettes, roof plan, and platforms. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 20.5 (1)



Figure B.13.2
"Castle Pinckney, Plan of the Finished Work." Drawn by Lieut.
James H. Trapier, 1841. National Archives II, Architectural and
Cartographic Records, RG 77, Dr. 67, Sheet 20.5 (2)

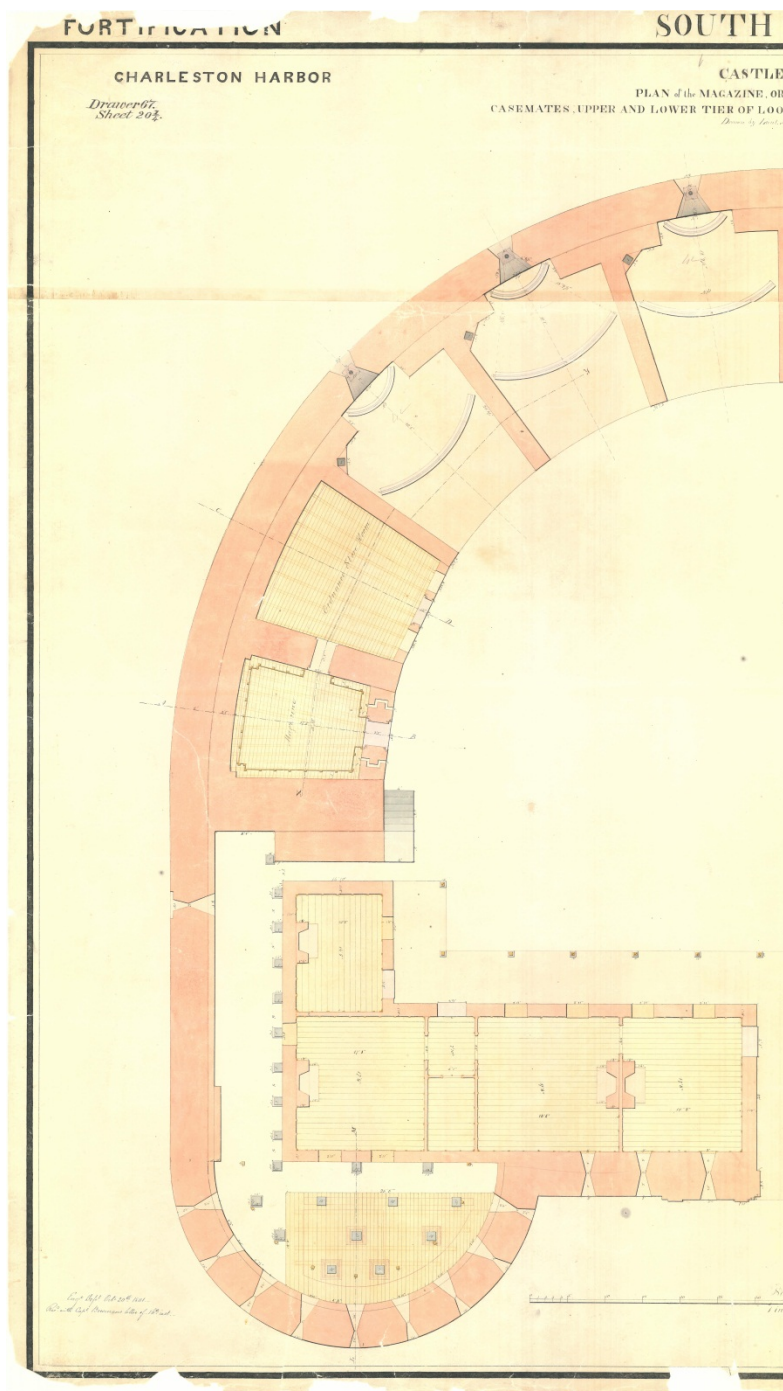


Figure B.14.1

“Castle Pinckney, Plan of the Magazine, Ordnance Store Room, Gun Casemates, Upper and Lower Tier of Loop Holes, Lower Story of Quarters, Cisterns.” Drawn by Lieut. James H. Trapier, 1841. The most detailed plan drawings of Castle Pinckney to date. Important features include the reconfigured magazine, the barracks, and the reconstructed platforms. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 20.25 (1)

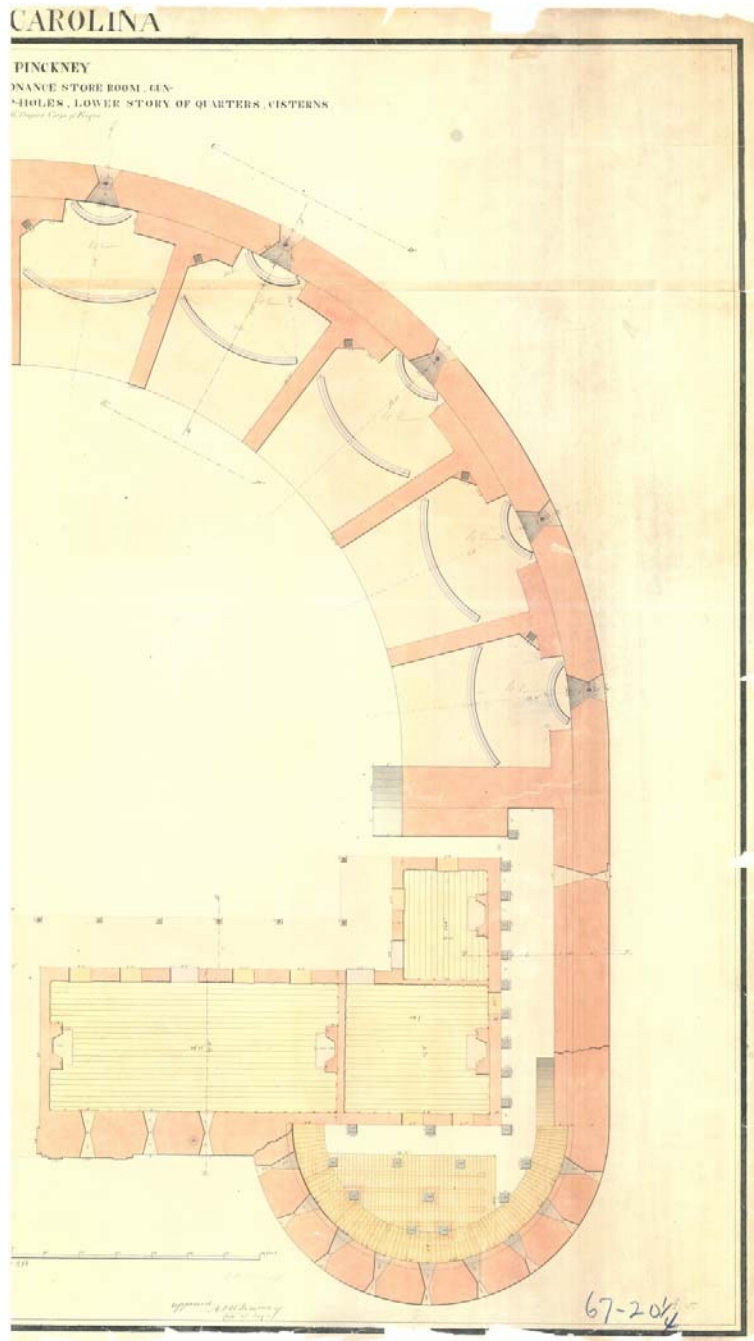


Figure B.14.2
"Castle Pinckney, Plan of the Magazine, Ordnance Store Room, Gun Casemates, Upper and Lower Tier of Loop Holes, Lower Story of Quarters, Cisterns." Drawn by Lieut. James H. Trapier, 1841. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 20.25 (2)

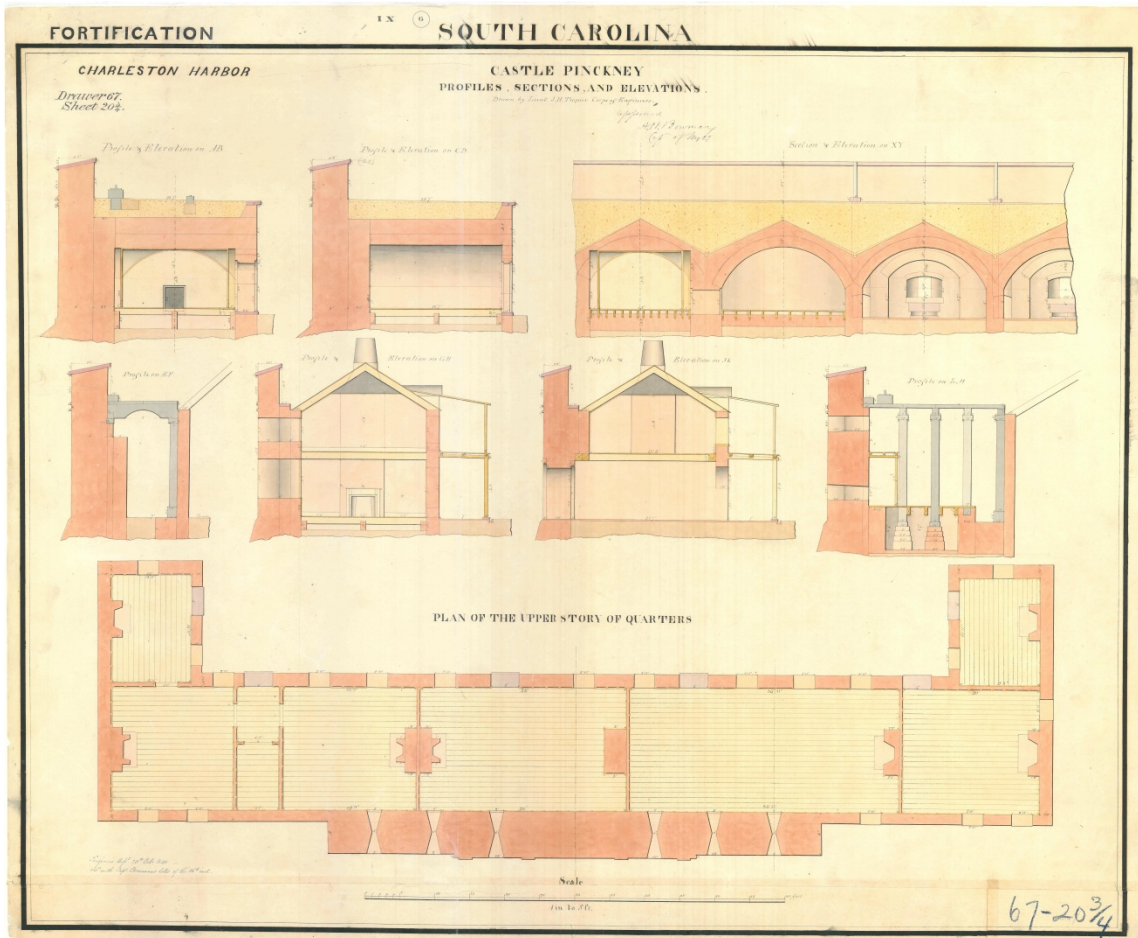


Figure B.15
 "Castle Pinckney, Profiles, Sections, and Elevations." Drawn by Lieut. James H. Trapier, 1841. Detail plans and sections of the barracks, platforms, and casemates. These drawings represent a final version of Trapier's earlier studies of Castle Pinckney. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 20.75

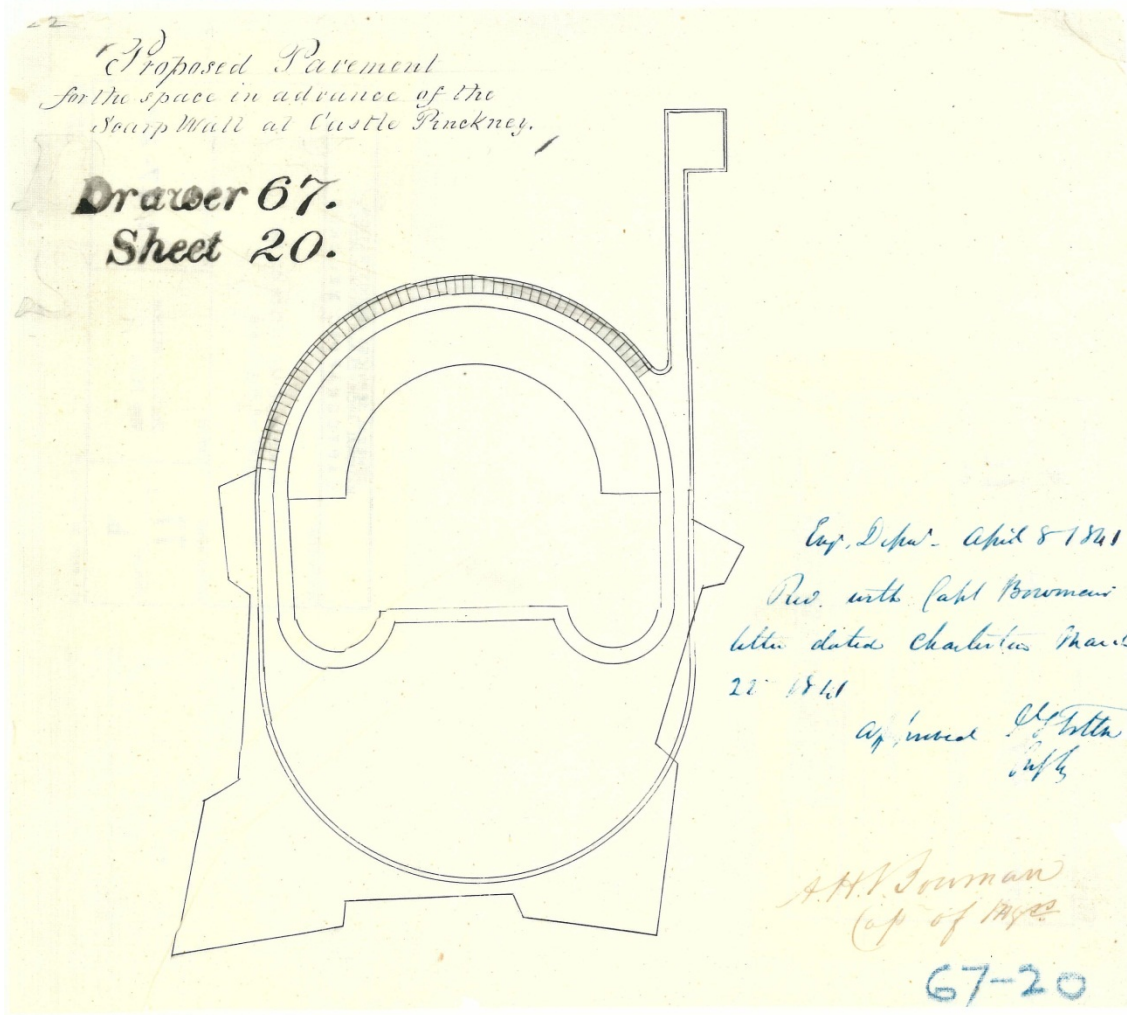


Figure B.16
"Proposed pavement for the space in advance of the scarp wall at Castle Pinckney." Drawn by Captain Alexander Bowman, 1841. A drawing of another of Capt. Bowman's recommended improvements to Castle Pinckney – stone paving along the abse of the south, scarp wall. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 20

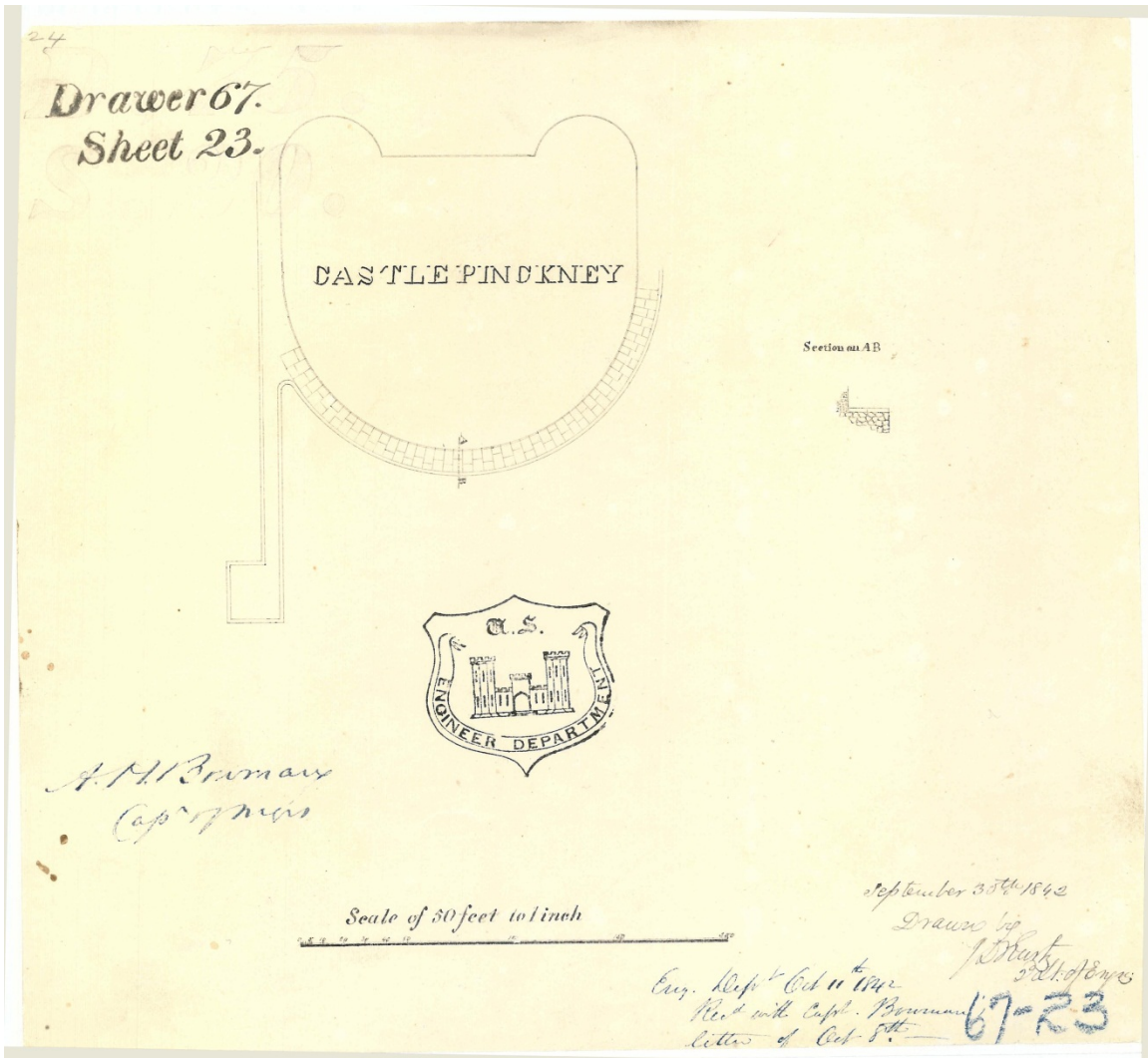


Figure B.17

“Castle Pinckney.” Drawn by Captain Alexander Bowman, 1842. Another drawing showing Bowman’s proposed pavement around the base of the wall. It includes a simple section illustrating the general dimensions and configuration of the paving. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 23

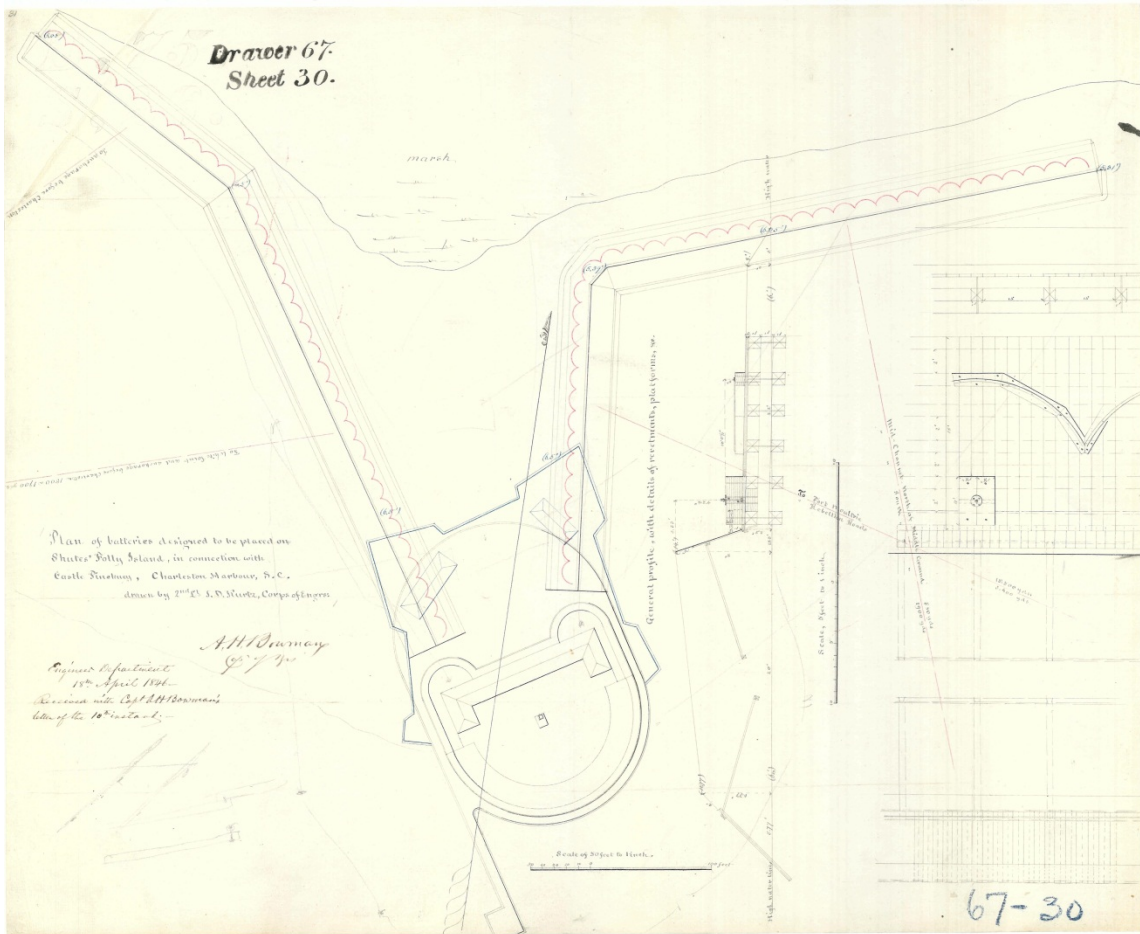


Figure B.18

“Plan of batteries designed to be placed on Shutes Folly Island, in connection with Castle Pinckney, Charleston Harbour, S.C.” Drawn by Lieut. J.D. Kurtz, 1846. A proposal by Bowman to dramatically increase the armament of Shutes Folly Island in response to the Mexican American War. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 30

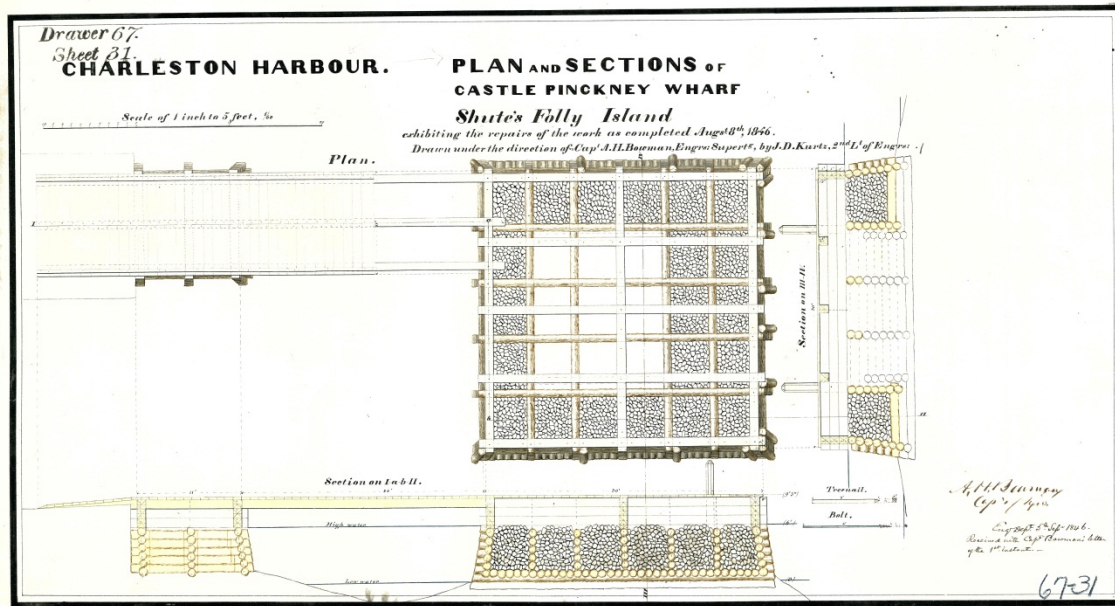


Figure B.19

“Plan and Sections of Castle Pinckney Wharf, exhibiting the repairs of the work as completed August 8th, 1846.” Drawn by J.D. Kurtz, 1846. The only known drawing to illustrate detailed plans and sections of the Castle Pinckney wharf. Of note are its heavy timber frame filled with rubble stones. This wharf appears to pre-date the existing granite pier. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 31

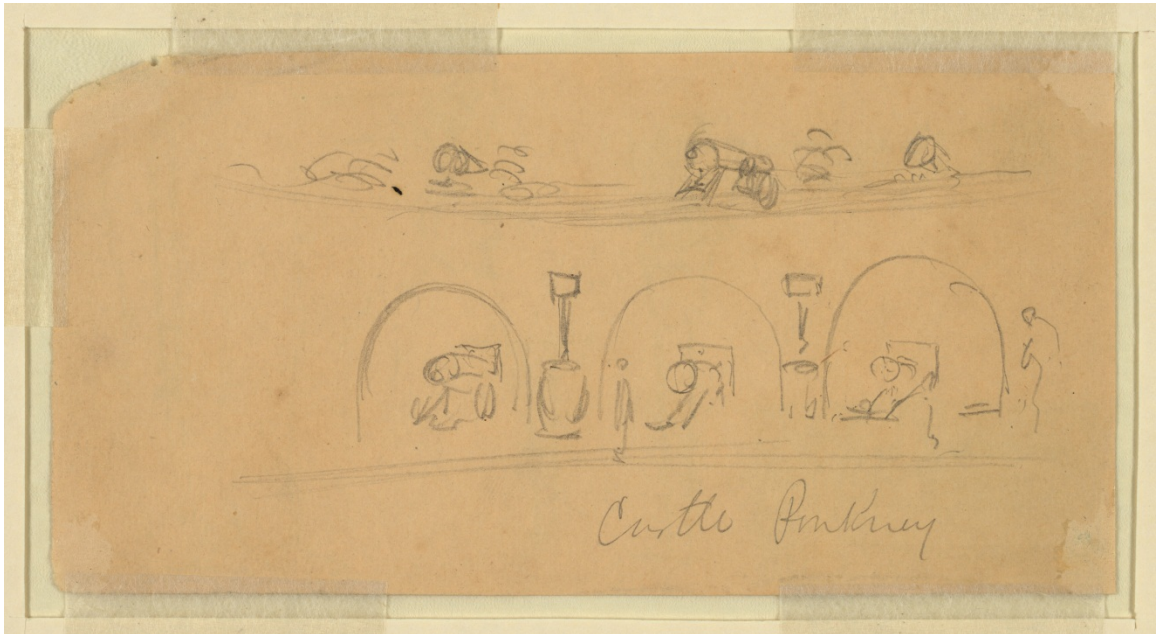


Figure B.20

“Castle Pinckney.” Drawn by Alfred Waud, date unknown. Alfred Waud became famous for his illustrations of Civil War scenes. His sketch of Castle Pinckney likely dates from shortly after the beginning of the war since the guns appear to have not yet been removed for other batteries around Charleston. Library of Congress, Prints and Photographs Online Catalog.

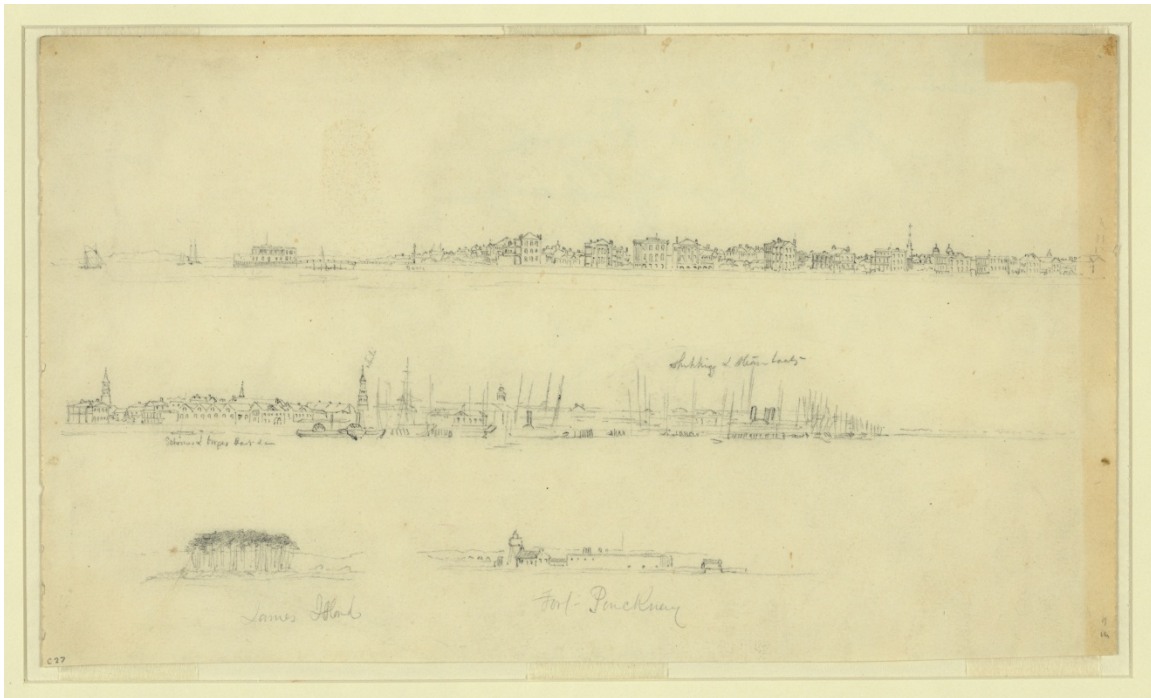


Figure B.21

Sketch by Alfred Waud, date unknown. This sketch shows several views of Charleston Harbor. The top view is of East Battery, the second, middle sketch is the wharves of Charleston, the bottom left sketch is a scene from Johns Island, and the bottom middle sketch is of Castle Pinckney, referred to as "Fort Pinckney" in the drawing. Waud's sketch of Castle Pinckney contains very little detail, but shows the fort, several out buildings, and the navigational light constructed 1853. Library of Congress, Prints and Photographs Online Catalog.

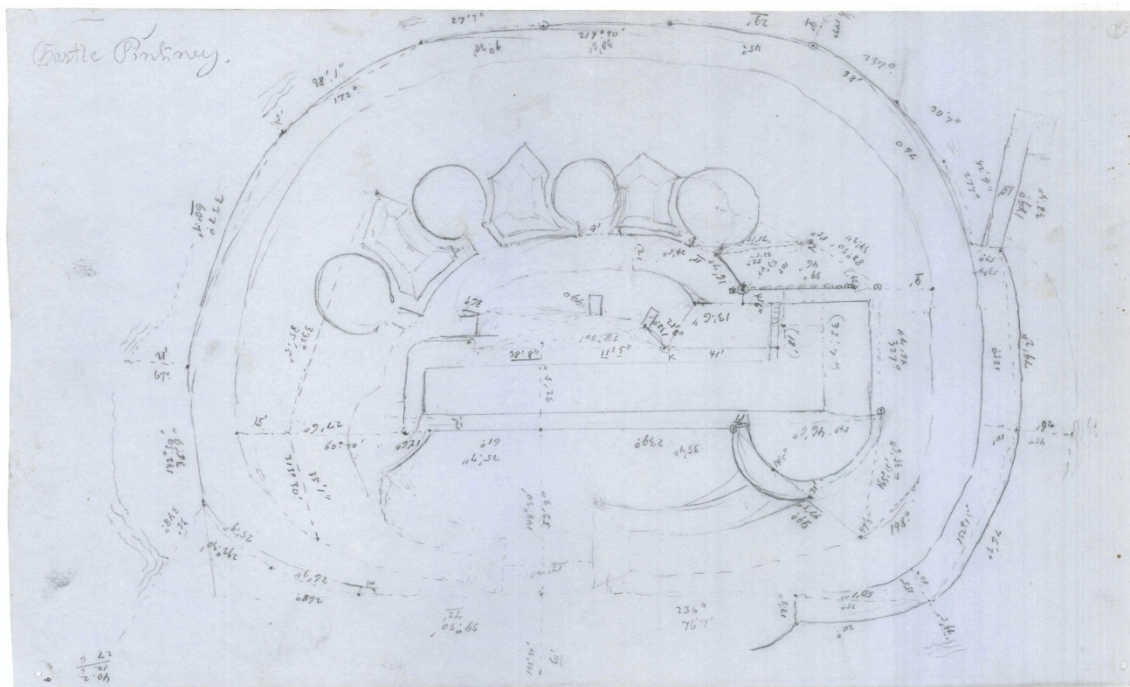


Figure B.22

A sketch of proposed changes to Castle Pinckney. Drawn by unknown, 1863. As rifled shells devastated the masonry fortifications of Charleston Harbor, Confederate leaders planned to improve Castle Pinckney as a second line of defense. This sketch shows the details of the plan to turn the fort into a large earthwork by burying the walls. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 193, Sheet 4-B-8

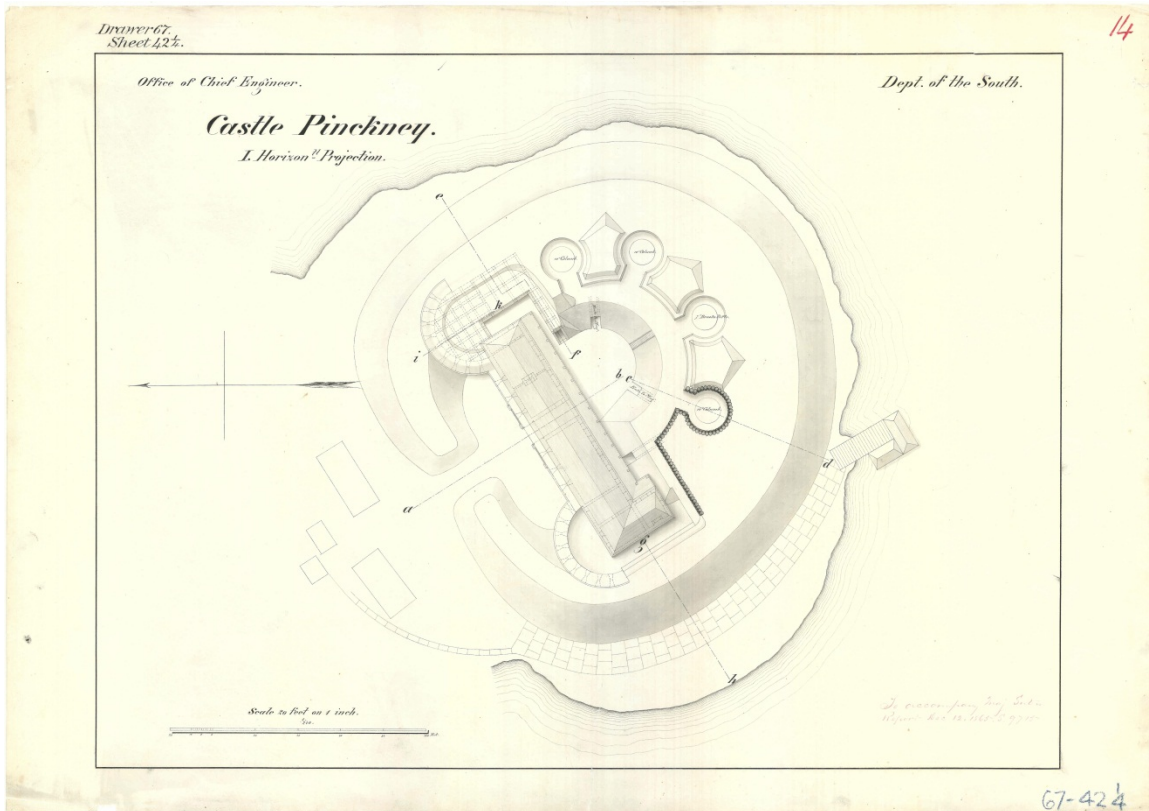


Figure B.23

“Castle Pinckney, Horizontal Projection.” Dawn by unknown, 1863-1864. This drawing is a final version of the sketch (Figure B.22). It shows Castle Pinckney’s conversion to an earth work. The walls were buried under large earthen slopes, and one large gun placed in each of the four circular emplacements shown in the drawing. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 42.25

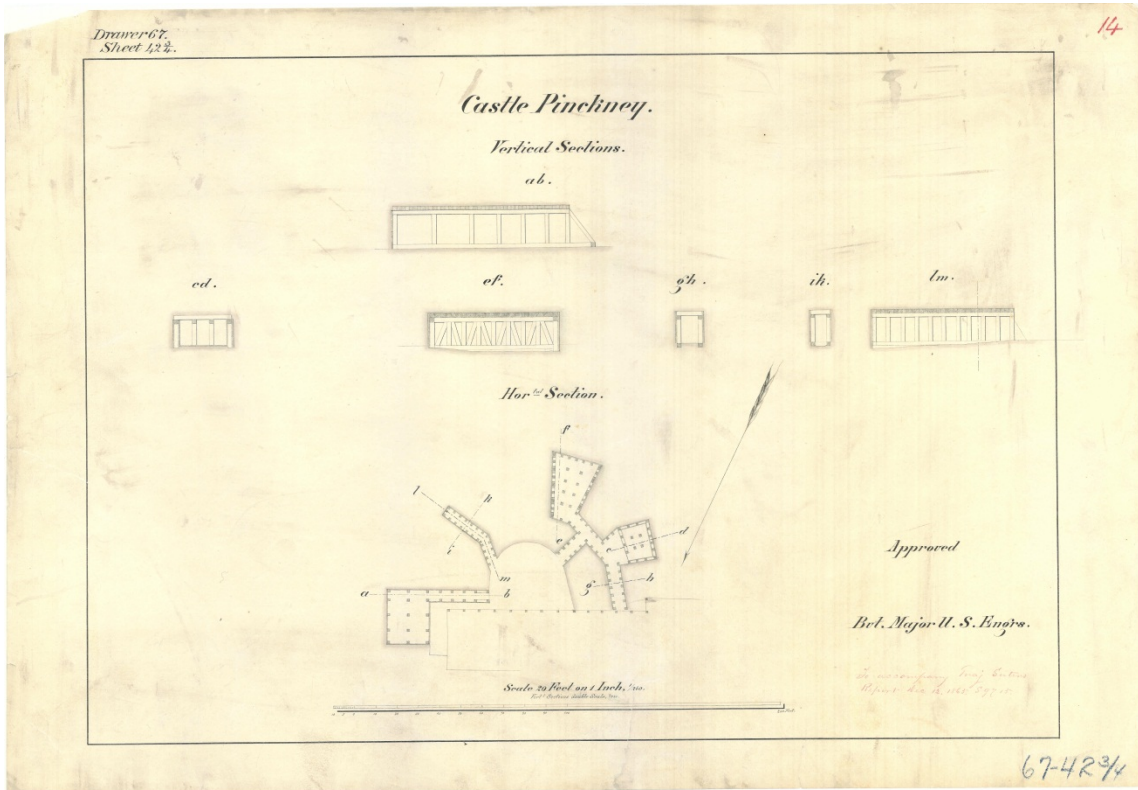


Figure B.25

“Castle Pinckney, Vertical Sections.” Drawn by unknown, 1863-1864. The drawing on the bottom of the page is a plan of the tunnels constructed under the earth mound at Castle Pinckney. A system of tunnels lead to several of the casemates, which were used as magazines. The sections above show construction details of the tunnels, which were framed and ceiled with sturdy timbers. National Archives II, Architectural and Cartographic Records, RG 77, Dr. 67, Sheet 42.75



Figure Figure B.26

A poster of the Union War Prisoners Association. The elaborate poster shows portraits of Union soldiers held in Confederate Prisons during the Civil War. The prisons include Libby Prison, Richmond, VA, Columbia Jail, Columbia, SC, Ligon's Tobacco Factory, Richmond, VA, the City Jail, Charleston, SC, and Castle Pinckney, Charleston, SC. Castle Pinckney is depicted in the center left image. The drawing shows the wharf, outbuildings, the old palisade, and the navigational light. The type and locations of the buildings closely resemble Alfred Waud's sketch of the same time period. Library of Congress, Prints and Photographs Online Catalog

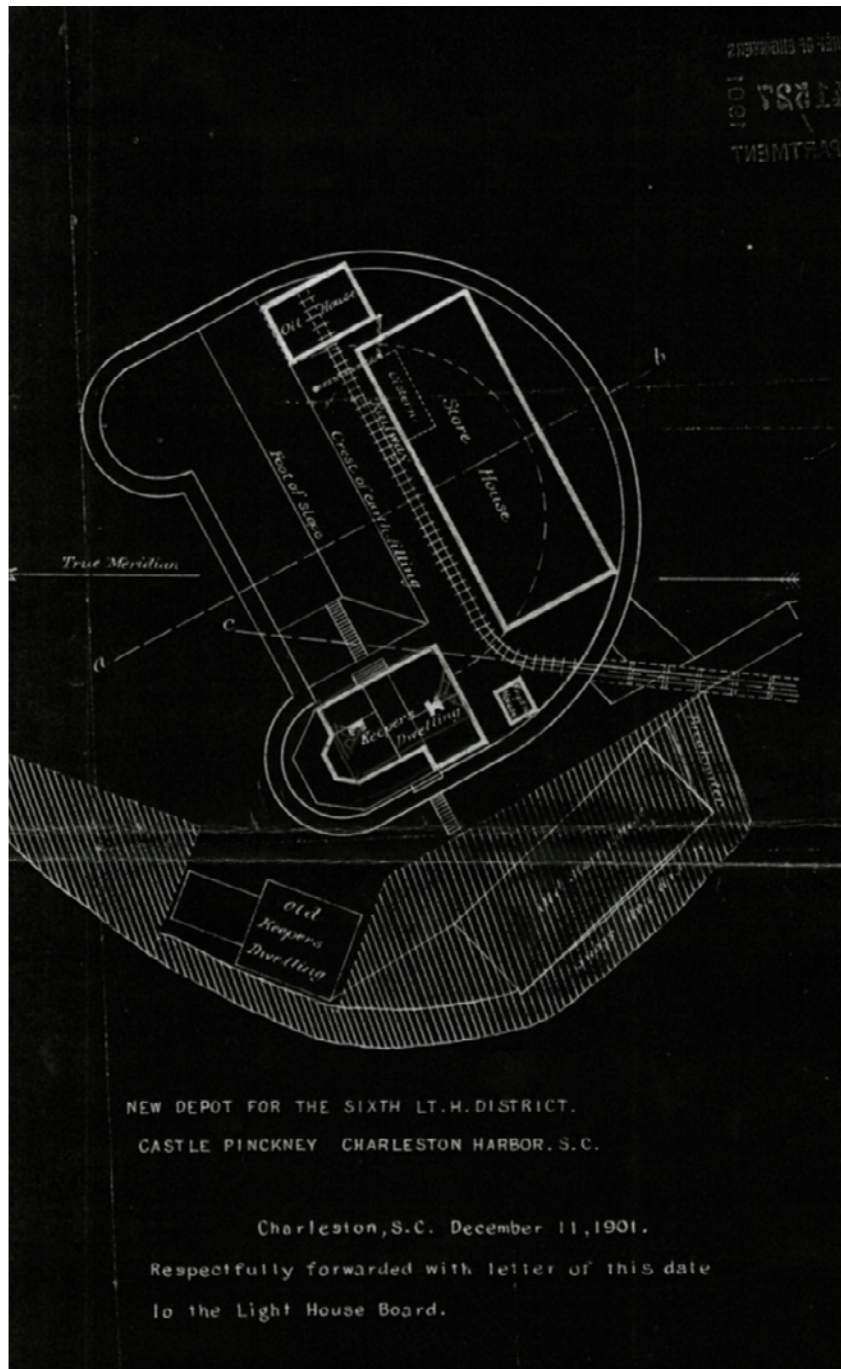


Figure B.27

“New Depot for the Sixth Lt. H. District, Castle Pinckney, Charleston, S.C.”
 Drawn by unknown, December, 1901. Drawing depicts the new buildings
 constructed when the Light House operations moved to the fort’s interior.

From this drawing it can be concluded that the barracks have been
 demolished. The “old keepers dwelling” is likely the same one story , gabled
 roof building drawn by Waud in the early 1860s. Records of the National
 Parks Service, Record Group 79; National Archives II, College Park, MD

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² *Messages and Papers*

³ *Messages and Papers*

⁴ "An Act to Provide for the Defense of Certain Ports and Harbors in the United States," 20 March 1794. *Laws of the United States of America, 1789 - 1815*. Philadelphia: John Bioren and W. John Duane, 1815. Volume II, pg. 381

⁵ "An Act to Provide for the Defense of Certain Ports and Harbors in the United States," pg. 384

⁶ Browning, Robert S. *Two if by Sea: The Development of American Coastal Defense Policy*. Westport: Greenwood Press, 1983. Pg. 11

⁷ Secretary of War Henry Knox to P.H. Perrault, 11 April 1794, *American State Papers, Military Affairs*. Vol. I, pg. 101. Hereafter referred to as ASP, MA.

⁸ Robinson, Willard B. *American Forts: Architectural Form and Function*. Chicago: University of Illinois Press, 1977. Pg. 23

⁹ Knox to Perrault, 11 April 1794, ASP, MA, Vol. I, pg. 101

¹⁰ Perrault to Knox, 12 May 1794, ASP, MA, Vol. I, pg. 102

¹¹ Perrault to Knox, 31 May 1794, ASP, MA, Vol. I, pg. 103

¹² Samuel Sewall's report to the U.S. House of Representatives on the state of fortifications, 8 March 1798, ASP, MA, Vol. I, pg. 119

¹³ Charles Cotesworth Pinckney, John Marshall, and Elbridge Gerry to Timothy Pickering, Secretary of State, *American State Papers, Foreign Affairs*, pg. 158-160.

¹⁴ Richard Stockton to Secretary of War James McHenry, 3 June 1797, ASP, MA, Vol. I, pg. 118

¹⁵ Young, Rogers W. "Castle Pinckney, Silent Sentinel of Charleston Harbor." *The South Carolina Historical and Genealogical Magazine*, January 1938, Vol. 34, pg. 5

¹⁶ Browning, pg. 13

¹⁷ Secretary of War Henry Dearborn reports to the U.S. House of Representatives on the state of fortifications, 18 February 1806, ASP, MA, Vol. I, pg. 195

Chapter Two – A More Permanent Defense, 1802 – 1811

¹⁸ Browning, pg. 12

¹⁹ Ziegler, Christopher T. *The Origins and Development of America's Forgotten Castle: Castle Pinckney*. Master's Thesis, Department of History, University of South Carolina, 2007., pg. 20

²⁰ Coles, Harry L. *The War of 1812*. Chicago: The University of Chicago Press, 1965, pg. 7

²¹ *The Public Statutes at Large of the United States of America*. Boston, 1845, Vol. 2, pg. 453. Accessed online at <http://memory.loc.gov/ammem/amlaw/lwslink.html>.

²² Robinson, pg. 11

²³ Browning, pg. 17

²⁴ Secretary of War Henry Dearborn reports to the U.S. House of Representatives on the state of fortifications, 7 December 1807, ASP, MA, Vol. I, pg. 224

²⁵ Dearborn to U.S. House of Representatives, ASP, MA, Vol. I, pg. 224

²⁶ Excerpt from an annotation on “Plan of Four Sites” a map from 1840 made as a certified, accurate copy of a map dating from the original survey in 1807. The map includes written description of surveyed sites. National Archives II, Cartographic and Architectural Records, RG 77, Dr. 64, Sheet 19.

²⁷ “Plan of A Projected Castle for Charleston Harbor So. Carolina” National Archives II, Cartographic and Architectural Records Section, RG 77, Dr. 67, Sheet 3. Map includes a written description of cost estimate.

²⁸ “Plan of A Projected Castle”.

²⁹ Wade, Arthur P. *Artillerists and Engineers: The Beginnings of American Seacoast Fortifications, 1794 - 1815*. PhD Dissertation, Manhattan, Kansas: Kansas State University, 1977, pg. 206

³⁰ Richards, George H. *Memoir of Alexander Macomb: The Major General Commanding the Army of the United States*. New York City: M'Elrath, Bangs & Co., 1833, pg. 14

³¹ Richards, pg. 25

³² Wade, pg. 125

³³ Richards, pg. 39

³⁴ Ziegler, pg. 38

³⁵ Ziegler, pg. 43

³⁶ Coles, pg. 7

³⁷ Ziegler, pg. 39

³⁸ Secretary of War Dearborn reports to President Thomas Jefferson and a joint session of congress on the state of fortifications, ASP, MA, Vol I., pg. 237

³⁹ Ziegler, pg. 43

⁴⁰ Secretary of War Eustis reports to the U.S. House of Representatives, ASP, MA, Vol. I., pg. 189

⁴¹ Eustis to House of Representatives, ASP, MA, Vol. I., pg. 311

Chapter Three – Antebellum Angst, 1812 – 1860

⁴² Adjutant and Inspector General D. Parker reports to Secretary of War John C. Calhoun, 21 October 1818, ASP, MA, Vol. 1, pg. 789

⁴³ Letter from the Engineer Department in Washington to a Lieutenant in Charleston Regarding the “Repair of Castle Pinckney” 23 April 1818. Records of the Office of the Chief of Engineers, Buell Collection, Record Group 77, National Archives I, Washington, DC.

⁴⁴ Letter from unknown official in Charleston, to Secretary of War Calhoun requesting a “Warrant for \$800,” 24 April 1818. Records of the Chief of Engineers, Buell Collection, Record Group 77; National Archives I, Washington, DC.

⁴⁵ Browning, pg. 25

⁴⁶ Robinson, pg. 86

⁴⁷ Robinson, pg. 85

⁴⁸ *The Plough Boy. And Journal of the Board of Agriculture.* Accessed online at http://books.google.com/books?id=QSZOAAAAYAAJ&pg=PA376&lpg=PA376&dq=capt+poussin&source=bl&ots=c38KOoWMoO&sig=TV5JcZAQZfJeueIQkztSblE7tEc&hl=en&sa=X&ei=x5AtT-HeOMGgtwf6k_HdDw&ved=0CCoQ6AEwAg#v=onepage&q=capt%20poussin&f=false

⁴⁹ Bell, William Gardner. *Commanding Generals and Chiefs of Staff, 1775 - 2005.* Washington: Government Printing Office, 2005., pg. 228

⁵⁰ “Letter from the Secretary of War, Transmitting Information in Relation to The Progress of the Board of Engineers, in the Selection of Sites of Fortifications,” 15 February 1821, 16th Congress, Congressional Serial Set, pg. 13, National Archives I, Washington, DC.

⁵¹ Sites of Fortifications, pg. 13

⁵² Ellis, Richard E. *The Union at Risk: Jacksonian Democracy, States' Rights, and the Nullification Crisis.* Oxford: Oxford University Press, 1987, pg. 8

⁵³ Ellis, pg. 47

⁵⁴ Daniel Webster to Levi Lincoln, 10 December 1832. *The Papers of Daniel Webster*, vol. III, pg. 200. See also: *The Union at Risk*, pg. 79

⁵⁵ Annual Report of the Secretary of War, John Eaton, to Congress, 8 December 1829. ASP, MA, Vol. IV, pg. 164

⁵⁶ Annual Report of the Secretary of War, John Eaton, to Congress, 21 November, 1831. ASP, MA, Vol. IV, pg. 729

⁵⁷ Ziegler, pg. 51

⁵⁸ Letter from Major General Alexander Macomb to Brevet Major J.F. Heileman, Commanding the troops of the United States in Charleston, 29 October 1832. ASP, MA, Vol. V, pg. 158

⁵⁹ Macomb to Heileman. ASP, MA, Vol. V, pg. 158

⁶⁰ Macomb to Heileman. ASP, MA, Vol. V, pg. 158

⁶¹ Ellis, pg. 94

⁶² Freehling, William W. *Prelude to Civil War: The Nullification Controversy in South Carolina, 1816 - 1836*. New York City: Harper Torchbooks, 1965, pg. 101

⁶³ Adjutant General R. Jones to Major General Alexander Macomb, 5 March 1836. ASP, MA, Vol. VI, pg. 167

⁶⁴ Stuart, Charles Beebe. *Lives and Works of Civil and Military Engineers of America*. New York City, 1871., pg. 152

⁶⁵ Stuart, pg. 163.

⁶⁶ *The Public Statutes at Large of the United States of America*. Boston, 1845, vol. 10, pg. 340

⁶⁷ Ziegler, pg. 52

⁶⁸ Freehling, pg. 359

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⁶⁹ *Annual Report of Capt. G.W. Cullum, September 30, 1857*. Records of the Office of the Quartermaster General, Record Group 95; National Archives I, Washington, DC.

⁷⁰ *Annual Report of Capt. J.G. Foster, June 30, 1858*. Records of the Office of the Quartermaster General, Record Group 95; National Archives I, Washington, DC.

⁷¹ *Return of Officers and Hired Men at Castle Pinckney Charleston Harbor S.C. for the Month of December 1860.* Records of the Chief of Engineers, Record Group 77; National Archives I, Washington, DC.

⁷² F.J. Porter, Assistant Adjutant-General to Colonel S. Cooper, Adjutant-General, November 11, 1860. *The War of Rebellion: A Compilation of the Official Records of the Union and Confederate Armies, Series I, Vol. I*, pg. 72. Hereafter referred to as *O.R. Series*

⁷³ Porter to Cooper, November 11, 1860. *O.R. Ser. I, Vol. I*, pg. 72

⁷⁴ Major Robert Anderson to Colonel S. Cooper, November 23, 1860. *O.R. Ser. I, Vol. I*, pg. 75 – 76

⁷⁵ Anderson to Cooper, *O.R. Ser. I, Vol. I*, pg. 75 – 76

⁷⁶ Anderson to Cooper, *O.R. Ser. I, Vol. I*, pg. 75 – 76

⁷⁷ J. G. Foster to Col. De Russy, December 27th, 1860. *O.R. Ser. I, Vol. I*, pg. 109

⁷⁸ Foster to De Russy, *O.R. Ser. I, Vol. I*, pg. 109

⁷⁹ Annual Report of Capt. J.G. Foster, June 30, 1861. Records of the Chief of Engineers, Record Group 77; National Archives I, Washington, DC.

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⁸¹ Engineer Journal of the Bombardment of Fort Sumter, Capt. J. G. Foster, Corps of Engineers, *O.R., Ser. I, Vol. I*, pg. 19

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⁸³ Riecke, pg. 7

⁸⁴ Sergeant J. C. Pemberton to Col. A.L. Long, January 21, 1862, National Archives

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⁸⁶ *O.R. Series I, Vol. XIV*, pg. 610

⁸⁷ *O.R. Series I, Vol. XLVII, Part I*, pg. 1009

⁸⁸ *O.R. Series I, Vol. XLVII, Part I*, pg. 1009

⁸⁹ Burton, Milby. *The Siege of Charleston, 1861 - 1865.* Columbia, S.C.: University of South Carolina Press, 1970.. Pg. 318

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⁹² Annual Report of the Chief of Engineers, Washington, 1870, pg. 23. Also see Young, pg. 60

⁹³ Letter from Secretary of War J. D. Cameron to the Secretary of the Treasury, November 15, 1876, Records of the U.S. Coast Guard, Light House Service, Record Group 26; National Archives I, Washington, DC.

⁹⁴ Letter from Secretary of War George McCrary to the Secretary of the Treasury, April 24, 1878. Records of the U.S. Coast Guard, Light House Service, Record Group 26; National Archives I, Washington, DC.

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⁹⁸ Letter from Ronald F. Lee, Acting Assistant Director, to Arthur E. Demaray, Director, February 28, 1938. Records of the NPS, RG 79; National Archives II, College Park, MD

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¹⁰¹ Lewis, Kenneth E. and Langhorne, William T. "Castle Pinckney: An Archeological Assessment with Recommendations." South Carolina Institute of Archeology and Anthropology, 1978, pg. 32

Chapter Six – Statement of Significance

¹⁰² Robinson, pg. 23

¹⁰³ United States Army. <http://www.history.army.mil/books/CG&CSA/CG-TOC.htm>

Chapter Seven – Conditions Survey

¹⁰⁴ Ercole Silva, *Dell'arte dei giardini Inglesi*. Milan, 1801

¹⁰⁵ Ashurst, John. *Conservation of Ruins*. Oxford, UK: Elsevier Ltd., 2007. Pg. xx

¹⁰⁶ Ashurst, pg. 76

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¹⁰⁸ Miller, E. N. Jr. *Soil Survey of Charleston County, South Carolina*, pg. 68

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¹⁰⁹ White, Amanda. *Interpretation and Display of Ruins and Sites*. Oxford, UK: Elsevier Ltd., 2007, pg. 248.

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