

## Harbor Defense Works of the First and Second Systems

Derived from the article “Early Coast Fortification,” *Coast Artillery Journal* Volume 70 (1929) pp. 134-144.



It is a singular fact that of all the plans submitted to Congress at the close of the Revolutionary War looking to the organization of a peacetime military establishment, not one took into consideration the necessity of providing for the defense of the maritime frontier. During the war, coast defense had been a function of the several States, the Government finding it necessary to devote its entire attention to defeating the enemy in the field. It is probable that the proponents of the peace measures considered—if they thought of the matter at all—that the States could continue to furnish their own coast fortifications, but if so they neglected the obvious fact that the States had not theretofore provided effective fortifications. Even during the colonial period, the defenses had almost invariably been inadequate to the requirements; and at the close of the Revolution there were few coastal works not in ruins, and none serviceable condition.

In the years immediately following the disbanding of the Continental troops the entire force—too small to be called an army—in the service of the United States was employed along the land frontiers. The artillery was armed as infantry and served as infantry. The only difference between the two branches was that the artillery also served the guns in the frontier forts and those taken on expeditions against the Indians. Properly speaking, they were artificers rather than artillerymen, and when the time came to take up their duties in coast defense they were unprepared.

The threat of war with Great Britain, growing out of disputes over unsettled boundaries and over British treatment of American seamen, turned the eyes of the infant nation from the depths of the backwoods to the undefended seaboard. Here was opening up an entirely new field of service for the artillery, on which brought about the reorganization and expansion of that branch of service under the act of May 9, 1794.

Before this date, however, the fortification of the coast had been begun. On February 27, 1794, a committee had recommended to Congress the fortification of sixteen points along the Atlantic shore line—Portland, Portsmouth, Cape Ann, Salem, Marblehead, Boston, Newport, New London, New York, Philadelphia, Baltimore, Norfolk, Wilmington (N.C.), Ocracoke Inlet, Charleston, and Savannah, to which Wilmington (Del), Annapolis, Alexandria, and Georgetown (S.C.) were subsequently added. On March 20, Congress appropriated the necessary funds, and by the end of the year the project was near completion save in Boston Harbor and at one or two other points.

This first project contemplated the erection of earthen batteries, faced timbers at such places where earth of an adhesive quality could not be obtained. The strictest economy was necessary, and it was felt that a tenacious earth, properly sloped, sodded, and seeded with knot-grass, would be durable and would afford sufficient protection so far as naval attacks were concerned.

Naval science had not then developed to a point where landings in force on an open beach were considered practicable, and the coast batteries were therefore required only to prevent the use of harbors and wharves by the enemy and to protect communities from bombardment. Small landings on beaches were, nevertheless, practicable, and the batteries themselves required protection from land attack or raids. This introduced into coast defense a conception from which the Coast Artillery is still suffering (in 1929)—local defense by the artillerymen themselves.

In the immediate vicinity of each battery, or group of batteries, particularly where the battery occupied an exposed position at a distance from the town it defended, on a point of land, or on an island, there was to be erected a strong redoubt or other inclosed work (or a blockhouse for batteries of lesser importance), in which one or two pieces of light artillery would be mounted. This redoubt, or blockhouse, thus became a barrack for the garrison and a citadel protecting the battery from attack from the landward side. In case of such an attack, the apparent idea was that the gunners would retire to the citadel, take up the small arms with which they were provided, and become infantry for the time being—an idea which the Artillery accepted without protest until within very recent years.

The weapons best suited for the coast forts were considered to be the 24 and 32-pounders, of which the entire project called for about 450. Of these, it was thought that 150 could be obtained from materiel on hand and 150 from guns in possession of the States, leaving about 150 to be manufactured. To allow for possible shortages, the purchase of one hundred of each of these heavier calibers was authorized by Congress.

At that time there was on hand a great variety of calibers remaining from the Revolutionary War. The return of ordnance, arms, and implements, of December 14, 1793, shows 214 iron guns, 49 iron howitzers, 2 iron mortars, 2 iron cohorns, 153 brass guns, 43 brass howitzers, 63 brass mortars, and 1 brass cohorn. The calibers included: Iron, 1, 2, 3, 4, 6, 9, 12, 18, and 24-pounder cannon, 3-1/2 and 5-1/2-inch howitzers, 13-inch mortars, and 18-pounder carronades; brass, 2, 3, 4, 6, 8, 12, and 24-pounder guns, 2-3/4, 4-1/2, 5-1/2, and 8-inch howitzers, and 4, 4-1/2, 5-1/2, 8, 10, 13, and 16-inch mortars. The following were available among the heavier types:

	<i>Iron</i>	<i>Brass</i>
24-pounder	12	3
18-pounder	36	—
12-pounder	49	11
8-inch howitzer	—	18
5-1/2-inch howitzer	2	17
16-inch mortar	—	1
13-inch mortar	2	4
10-inch mortar	—	19
8-inch mortar	—	3
5-1/2-inch mortar	—	19
	103	92

Prior to 1800 there was no noteworthy change in the calibers of artillery constructed for seacoast artillery. The 42-pounder was added in 1801 and the 50-pounder Columbiad in 1811. In the project of 1818, these, as well as 100-pounder, formed a part of the seacoast materiel.

The guns available in 1794 were of both brass and cast iron. Though more expensive than cast iron, brass cannon were favored because there was less danger of bursting. The Revolution had practically compelled the colonists to use the iron and thus demonstrate its possibilities, and there ensued a long contest between the two metals (the brass being substantially what was afterwards known as bronze), with cast iron steadily

growing in favor. In the end it displaced brass, only itself to be superseded at about the opening of the Civil War. In the heavier guns for coast defense, the project of 1794 established cast iron as the metal to be used, and from that time until wrought iron appeared, no other metal was used for the heavy coast cannon.

The multiplicity of calibers was not, of itself, a great inconvenience, but there were many varieties of each caliber, owing to the fact that each foundry cast its guns according to its own plans. This led to great confusion in the manufacture of gun carriages. These carriages were, as a rule, wooden frames, although there were also carriages made in two parts—a chassis and a top carriage. In 1818 cast-iron carriages were adopted to replace those made wood, but in 1839 a reactionary spirit brought the wooden carriage again into favor, where it held its place for fifteen years before being definitely and finally displaced.

The project of 1794 contemplated the use of two kinds of carriages for seacoast armament—“coast” carriages (which might be casemate or barbette) and “traveling” carriages. These latter, which must not be confused with the “light field” carriages, are particularly worthy of note in view of the use of mobile artillery in coast defense today.

The term “traveling carriage” was not applied to the carriages of any particular calibers. There were “heavy” and “light” guns for every caliber in the service. Light field carriages were used with the light guns of whatever calibers constituted the field artillery of a force in the field. The traveling carriage, less mobile and more rugged in construction, was used to transport every type of “heavy” gun, and was therefore as necessary with the heavy 48-pounder as with the heavy 24-pounder. Guns mounted on traveling car were employed as siege or garrison artillery or, in battle, as guns of position. In coast defense they were, as a rule, held in reserve, to be moved into position when and where danger threatened.

The construction and occupation of the works of 1794 demanded both engineers and artillerymen, of which the Army possessed neither. Pending the organization of the Corps of Artillerymen and Engineers, the Government employed a number of civilians as temporary engineers to put up the necessary works. Stephen Rochefontaine, assigned to the New England coast from New London north, was the most capable of the engineers so employed, and by the end of the year had his works practically completed, except at Boston, where the Governor would not approve the plans without the sanction of the Legislature, which delayed taking action. Charles Vincent, appointed engineer for New York; John Jacob Ulrick Rivardi, for Baltimore and Norfolk; and Paul Hyacinte Perrault, for South Carolina and Georgia, had their portions of the project well under way by December. Charles L'Enfant, engineer for Philadelphia and Wilmington; John Vermonnet, for Annapolis and Alexandria; and Nicholas Francis Martinon, for North Carolina, accomplished little.

The project called for a battery, a redoubt, and a blockhouse each at Portland, Portsmouth, Governor's Island (Boston), New London, Groton, Governor's Island (New York), Paulus [Sandy?] Hook, Baltimore, Norfolk, Wilmington (N. C.), Charleston (three sets), and Savannah; a battery and a blockhouse each at Gloucester (Cape Ann), Salem, Marblehead, in New York City (several sets), and Ocracoke Inlet; traveling carriages, with no battery, at Newport; and repair of works only at Castle Island (Boston), Goat Island (Newport), and Mud Island (Delaware). The total estimated cost was \$76,053.62 for the fortifications, and \$96,645.00 for the manufacture of two hundred cannon.

With the dissipation of the war clouds there was a relaxation in the matter of coast defense, although some work continued. The first project may be considered to have been complete by the end of 1795, but almost at once preparations on a second project became necessary, for war with France appeared to threaten. The earthen works of 1794 had deteriorated rapidly and large appropriations were necessary to effect repairs. Philadelphia, New York, Newport, Baltimore, and Charleston were considered inadequately defended and large sums were spent at these points in new construction. No new places appear[red] in the project of 1798, but Cape Ann, Wilmington (Del), Annapolis, Alexandria, and Georgetown (S. C.) disappear[ed]. At a few of the other harbors no funds were spent, but at most of them some repairs were found necessary. Later, the Louisiana purchase brought New Orleans into the program.

At this time the artillery was scattered in many small detachments along the seacoast and on the land frontier. The largest detachment, in December 1802, consisted of 118 officers and men at New Orleans; and no other exceeded seventy-five. Ten stations were garrisoned by from fifty to seventy-five officers and men; twelve had from twenty-five to fifty; and four numbered less than twenty-five. It was therefore impracticable to keep the coast forts in good air, especially those not garrisoned. In 1807, under the stress of imminent war with Great Britain, the necessity for the repair of the coast defenses brought out an entirely new project.

In December, 1807, the Government, in preparing this new program, classified the harbors into the more important ports and those of minor importance. In the two groups it listed practically all the ports and harbors of the Atlantic and Gulf seaboard, and then, from fear that some might have been overlooked, it made provision for other places that might be found to require defense. Work was undertaken promptly and was advanced rapidly. By February, 1810, \$640,000 had been expended. When the war actually broke out, the project was essentially complete; at which time the results of the three programs— 1794, 1798, and 1807—were about as follows, all works being in good condition unless otherwise stated:

*Passamaquoddy: Fort Sullivan*, erected on Moose Island in 1808-1809, was a circular battery of stone, mounting four heavy guns, covered by a blockhouse.

*Machias*: Under the project of 1807 there was erected a circular battery of stone, mounting four heavy guns, covered by a blockhouse.

*Penobscot*: Under the project of 1807 there was erected a small inclosed battery, mounting four heavy guns.

*Castine: Fort George*, at Robinson's Point, on the east side of St. Georges River, erected in 1808-1809, was a small inclosed battery, mounting three heavy guns.

*Damariscotta*: On the southeastern angle of Narrow Island, and in the town of Boothbay, on the Damariscotta River, there was erected, under the project of 1807, a small inclosed battery, mounting three heavy guns, covered by a blockhouse.

*Edgecomb*: On Davis' Point, on the east side of Sheepscot River, there was erected a small inclosed battery, with six heavy guns, covered by a blockhouse, as a part of the project of 1807.

*Georgetown*: On Shaw's Point, on the west side of the mouth of Kennebec River, there was erected in 1808 an inclosed work, with a battery of six heavy guns.

*Portland: Fort Sumner*, authorized in 1794, was built on the hill formerly occupied by Fort Allen as a small inclosed work with parapets supported by stone walls and sod; largely rebuilt in 1798-1799, and kept in repair until 1802; comprised also a blockhouse and a detached battery for heavy cannon near the water; rebuilt in 1808 as a battery of five guns, with a brick gunhouse containing four and eighteen-pounders on traveling carriages. *Fort Preble* (1808), on Spring Point, at the entrance to the harbor, was an inclosed star fort of stone and brick masonry, with a circular battery with flanks, mounting fourteen heavy guns. *Fort Scammel* (1808), on House Island, opposite Fort Preble, was a circular battery of masonry, mounting fifteen heavy guns covered in the rear with a wooden blockhouse mounting six guns.

*Portsmouth: Fort Constitution*, on the eastern point of Newcastle Island, at the entrance to Piscataqua River, three miles below Portsmouth, was begun in 1794 as a fort of masonry and sods, with a citadel; practically rebuilt in 1800-1801, it was completed under the project of 1807 as an irregular work of masonry, mounting thirty-six heavy guns. *Fort McClary* (1808), on Kittery Point, opposite Fort Constitution, was a circular battery of masonry, inclosed by earth and palisades, mounting ten heavy guns. In *Portsmouth*, a brick arsenal (1808) contained three 24-pounders and three 18-pounders on field carriages.

*Newbury port*: On the east point of Plum Island, at the mouth of Merrimac River, an inclosed battery of timber and earth, mounting five heavy guns, was built as part of the project of 1807.

*Gloucester (Cape Ann)*: In 1794 a battery and a blockhouse were erected at the head of the harbor on the site of an old fort. Omitted from the project of 1798. An inclosed battery, mounting seven heavy guns, covered with a blockhouse, was erected under the project of 1807.

*Salem: Fort Pickering*, situated on the west side of the harbor entrance, was erected in 1794 on the site of old Fort William as an inclosed work of masonry and sods; repaired in 1800 and improved in 1808 to mount six heavy guns.

*Marblehead: Fort Sewall*, situated on the west point of the entrance to the harbor, erected in 1794 on the site of an old fort, was an inclosed work of masonry and sods, covered with a blockhouse; rebuilt in 1799 and improved in 1808 to mount eight heavy guns.

Boston: Boston Harbor was included in the project of 1794, but delay in securing State approval of the plans prevented any work except a limited amount of repairs among the ruins of *Castle William*, on Castle Island, on the south side of the inner harbor. *Fort Independence*, a regular pentagon, with five bastions of masonry, mounting forty-two heavy guns, and two batteries for six guns, was begun in 1800, practically completed in 1803, and extensively repaired under the project of 1807. *Fort Warren*, on the summit of Governor's Island, opposite Fort Independence, a star fort of masonry, mounting twelve guns, was erected under the project of 1807. On the south point and the west head of the island, circular batteries of masonry, mounting ten guns each, were also constructed.

*Charlestown*: Near the Navy Yard, on the point formed by Charles and Mystic Rivers, a circular battery of earth, on a stone foundation, mounting eight heavy guns, was erected in 1808.

*Plymouth*: On Gurnet Point, at the entrance to the harbor, an old inclosed fort, mounting five guns, was repaired with stone and sod in 1808.

*New Bedford*: On Eldridge Point, at the entrance to the inner harbor, an inclosed work of masonry, mounting six guns, was erected in 1808.

Newport: In 1794, a fort on *Goat Island*, a guard house on Tammany Hill, and a battery at Howland's Ferry were erected. *Fort Adams*, on Briton (Brenton) Point, on the east side of the entrance to the harbor, was an irregular fort of masonry, with an irregular indented work of masonry adjoining it, mounting seventeen heavy guns, begun in 1798 and repaired and extended in 1808. *Fort Wolcott*, on Goat Island, in the center of the harbor, was a small inclosed irregular work, with open batteries, extending from two opposite flanks, of stone and earth, mounting thirty-eight heavy guns; principally built in 1798 on the site of the 1794 fort, and repaired and extended in 1808. On *Rose Island*, situated to defend the north and south passages of the harbor, a regular work of masonry with four bastions (two of them circular), to mount sixty guns, was begun in 1798, but was left unfinished. On a bluff of rocks called the *Dumplings*, on Conanicut Island, nearly opposite Fort Adams, a circular tower of stone, with casemates, was begun in 1798, but was left unfinished. On *Eaton's Point*, at the north point of the town, an elliptical stone battery had been erected, but was in ruins by the end of 1811. In Newport were some guns on traveling carriages.

*Bristol*: Ten guns on traveling carriages protected this town under the project of 1807.

*Stonington*: A brick arsenal, with four 18-pounders on traveling carriages, was provided by the project of 1807.

New London: *Fort Trumbull*, situated on the west side of the harbor, was an inclosed irregular work of masonry and sod, mounting eighteen heavy guns, erected during the Revolutionary War, repaired in 1794-1795, restored in 1799, and further improved in 1808.

*Groton*: A fort of earth and sods was begun in 1794, but was left unfinished.

New Haven: *Fort Hale*, on the eastern side of the harbor, was an elliptical inclosed battery, mounting six heavy guns, erected in 1808-1809.

New York: *Fort Jay*, on Governor's Island, within half a mile of the city, was a regular inclosed work, with detached batteries for heavy cannon and mortars. The first fort, of earth, with two detached batteries, which had been built in 1794-1795, was rebuilt in 1798-1801 at considerable expense; but in 1806 the whole was demolished except walled counterscarp, grate, sallyport, magazine, and two barracks) and removed as rubbish to make room for a new work of the same shape. *Fort Columbus*, built on the site of Fort Jay, was a regular inclosed pentagonal work of masonry, with four bastions and a ravelin, mounting sixty heavy guns. *Castle William*, on a projecting point of rocks at the western extremity of the island, begun in 1808, was a stone tower, with fifty-two 42 and 32-pounders, mounted in two tiers, under a bomb-proof roof with a terrace above intended to mount twenty-six 50-pounder Columbiads. *Bedloe's Island*, nearly opposite Governor's Island, was provided with a battery in 1794. *Fort Wood*, a star fort of masonry, mounting twenty-four heavy guns, with a brick arsenal, was erected in 1809-1810. *Ellis (Oyster) Island*, opposite Fort Columbus, was also provided with a battery in 1794-1795. *Fort Gibson* an inclosed circular battery of masonry, mounting fourteen heavy guns, was erected in 1809 to cover the entrance to North River. In New York, a formidable battery of heavy cannon and mortars, erected at the southwest point of city in 1794-1795, was in ruins by 1806. *Castle Clinton*, an inclosed circular battery of stone, mounting twenty-eight heavy guns, was erected in 1809 about a hundred yards in front of the west head of the grand battery. *Humbert Battery* an inclosed circular stone battery, mounting sixteen heavy guns, was built in 1809 one mile up North River. Within the city was a brick arsenal, with one brass 24-pounder, seven 12-pounders, 4 brass howitzers, and twenty-two iron 18-pounders, all on traveling carriages; and three miles above the city was a brick arsenal and laboratory.

*Sagg Harbor*: Under the project of 1807, a brick arsenal, with four 18-pounders on field carriages, was provided.

West Point: *Fort Putnam* was repaired and altered in 1794-1795.

Philadelphia: A fort on *Mud Island*, seven miles below Philadelphia, was begun in 1794, and a large pier, as a foundation for a battery, was laid on a sand bar opposite the island. *Fort Mifflin*, principally built in 1798-1800 and extensively repaired in 1808-1809, was an irregular inclosed work of masonry, defended by bastions, demi-bastions, etc., mounting twenty-nine heavy guns, with a water battery without the works, mounting eight heavy guns.

*Wilmington, Del.*: A site was selected and surveyed in 1794, but no works were erected. A brick arsenal, with four 12-pounders on field carriages, was built in 1809.

*Newcastle*: A brick arsenal, with four heavy guns on field carriages, was built in 1809.

*Baltimore*: Under the project of 1794, a battery was erected and some guns mounted. *Fort McHenry*, at the entrance to the harbor, erected principally in 1798-1800, was a regular pentagon of masonry, mounting thirty guns, with a water battery, mounting ten heavy guns.

*Annapolis*: A site was selected and surveyed in 1795 and some preliminary work was done, but an unfavorable report caused the project to be abandoned. *Fort Madison*, at the western entrance to the harbor, erected in 1809, was an inclosed work of masonry, comprehending a semi-elliptical face, with circular flanks, mounting thirteen guns. *Fort Severn*, on Windmill Point, a circular battery of masonry, mounting eight heavy guns, was erected in 1809.

Washington: *Fort Washington*, at Warburton, on the east side of Potomac River, between Alexandria and Mount Vernon, erected in 1808-1809, was an inclosed work of masonry, comprehending a semi-elliptical face, with circular flanks, mounting thirteen heavy guns, defended in the rear by an octagon tower of masonry, mounting six guns.

*Alexandria*: Some progress had been made in the construction of works in 1795, but an unfavorable report upon the plans caused the project to be abandoned.

Norfolk: *Fort Nelson*, on the western side of Elizabeth River, begun in 1794, extensively repaired and improved in 1802-1804, and again repaired in 1808, was an irregular work, defended by whole and half bastions, built of brick and sods, closed in the rear by a brick parapet, mounting thirty-seven guns. *Fort Norfolk*, on the northeastern side of Elizabeth River, a thousand yards distant from Fort Nelson, erected in 1794-1795 and rebuilt in 1808-1809, was an irregular inclosed work of masonry, comprehending a semi-elliptical battery defended on the flanks and rear by irregular bastions, mounting thirty heavy guns.

Hood's Point: *Fort Powhatan*, on James River, begun in 1808, was a strong battery of masonry, intended for thirteen guns, but unfinished in 1811.

*Ocracoke Inlet*: The foundation of a fort was laid on Beacon Island in 1794, but no further work was done; in 1799 an inclosed work was ordered on the ruins of the former work, but none was erected.

Wilmington, N. C.: *Fort Johnston*, on the right bank of Cape Fear River, twenty-eight miles below Wilmington, was originally a colonial fort. In 1794, a battery was erected on the site of the old fort, and in 1799-1800 some progress was made in constructing new works. Delays prevented the completion of the fort until after 1806. As finished, it was a flank battery of tapia, mounting eight heavy guns.

Beaufort: *Fort Hampton*, on Old Topsail Inlet, erected in 1808-1809, was a small inclosed work, mounting five guns.

*Georgetown, S. C.*: A battery was begun in 1794, but was abandoned because of the unhealthfulness of the site. *Fort Wingaw*, a small battery and blockhouse, was erected in 1809.

Charleston: *Charleston* was included in the projects of 1794 and 1798, but, since the State had not then ceded any sites to the United States, little was accomplished until the project of 1807. *Fort Johnson*, on James Island, *Fort Moultrie*, on Sullivan's Islands, at the entrance to the harbor, and *Fort Pinckney* were colonial or Revolutionary War forts. In 1794 Fort Johnson was orders repaired and foundations for forts were laid at Forts Moultrie and Pinckney. Work was soon suspended, except for a battery (*Fort Mechanic*) in Charleston which was completed by the mechanics. In 1798-1799 the old works were repaired and improved but were practically demolished by an unusual storm in 1804. As rebuilt under the 1807 project, the new *Fort Johnson* was a marine battery of irregular form, built of brick and wood, mounting sixteen guns; the new *Fort Moultrie* was a brick work of irregular form, presenting a battery of sides on the sea front, with the whole inclosed with ramparts, parapets, etc., mounting forty guns; *Castle Pinckney* was a brick work of elliptical form, with two tiers, mounting thirty guns; the new *Fort Mechanic (Mechonric)*, on the point of the city, crossing its fire with that of the Castle at nine hundred yards, was a temporary masonry battery, falling into decay; in *Charleston* was a brick arsenal.

Beaufort, S. C: *Fort Marion*, a work of tapia, circular of form in front and straight line in rear, was begun in 1809 but was unfinished in 1811.

Savannah: *Fort Green*, on Cockspur Island, near the mouth of Savannah River, erected in 1794-1796, was an irregular work, with a battery. In 1804 the works were totally destroyed and a part of the garrison drowned in an unusually severe storm. *Fort Jackson*, at Five Fathom Hole, in a marsh on the west side of Savannah River, three miles below the town and twelve hundred yards from the nearest dry land, begun in 1808, was an inclosed work of masonry and mud, mounting six heavy guns.

*St. Mary's (Point Petre)*: A battery of timbers, filled with earth and in-closed with pickets, was erected in 1799-1801 but was abandoned before 1804. Included in the 1807 project, no work had been accomplished because no site had been secured.

New Orleans: *Fort St. Philip*, at Plaquemines, on the eastern side of Mississippi River, thirty-two nautical miles from the mouth, an irregular work of brick built by Governor Carondelet in 1793, was acquired in 1803 in poor repair and rebuilt as an inclosed work of masonry and wood, mounting twenty guns. At *English Turn*, on the ruins of some French works, an inclosed work, with two bastions and a battery of masonry, for nine guns, was built in 1809-1811. When acquired in 1803, *New Orleans* was surrounded by five redoubts— Forts Burgundy, St. John, and St. Ferdinand in the rear, and Forts St. Louis and St. Charles in front, all dilapidated—connected by a line of ditches. *Fort St. Charles*, immediately below and at the northeast corner of the city, was restored as an inclosed redoubt of five sides, of masonry and earth, mounting nineteen guns. On the site of the Spanish *Fort St. John*, on Lake Ponchartrain, at the mouth of Bayou St. John, a strong battery of six guns, commanding the approach to New Orleans by way of the lake, was erected under the 1807 project.

The war with England brought about additional construction, and the acquisition of Florida in 1819 added to the ports and harbors to be defended. As a result the following new fortifications appear in the war and post-war years: Fort Lewis, New York; Craney Island, Virginia; Fort Scott, Point Petre, Georgia; Fort Marion (Castillo de San Marco, or St. Mark's fort), Florida; Fort Barrancas, Florida; Fort Bowyer, Mobile Point; Pass Christian, and a number of lake and river forts.

In 1819, while a new coast project was in process of formation, the coast and inland forts were manned by the following garrisons:

Station	Guns	Commanding Officer	Organization	Aggregate
Fort Sullivan, Maine	4	Lieut. Merchant		
Machias, Maine	4		Det., Corps of Arty.	39
Fort George, Maine	9	Capt. Leonard	1 Co., Lt. Arty.	70
Damariscotta Maine	3			
Edgecomb, Maine	6			
Georgetown, Maine	6			
Fort Preble, Maine	14			
Fort Scammel, Maine	15	Bvt. Major Crane	1 Co., C. of Arty.	98
Old Fort Sumner, Maine	5			
Fort McClary, Maine	10	Bvt. Lt. Col. Walbach	2 Cos., C. of Arty.	195
Fort Constitution, N. H.	36			
Fort Pickering, Mass	6			
Gloucester, Mass.	6			
Fort Sewall, Mass.	8	Bvt. Lt. Col. Harris	1 Co., Lt. Arty.	70
Fort Independence, Mass.	42			
Fort Warren, Mass	12	Bvt. Lt. Col. Eustis	5 Cos., Lt. Arty.	390
Boston, Mass. (2 batteries)	14			
Plymouth, Mass.	5			
New Bedford, Mass	6			
Fort Wolcott, R. I	28			
Fort Adams, R. I	17			
Fort Hamilton, R. I.		Bvt. Lt. Col. Towson	2 Cos., Lt. Arty.	146
Fort Green, R. I	6			
Dumplings, R. I	10			
Fort Griswold, Conn.	12	Capt. McDowell	1 Co., Lt. Arty.	53
Fort Trumbull, Conn.	18			
Fort Hale, Conn.	6			
Fort Columbus, N.Y.	60			
Castle William, N. Y.	102			
Fort Lewis, New York				
Fort Wood, New York	24	Lt. Col. House	Corps of Arty.	345
Fort Gibson, New York	14			
Castle Clinton, New York	28			
Humbert [North] Battery, NY	16			
Fort Gansevoort, N. Y.	12			
Sagg Harbor, New York	6			
Fort Mifflin, Pa.	37	Major Biddle	1 Co., C. of Arty.	121
Fort McHenry, Md.	30	Col. Hindman	1 Co., C. of Arty.	118
Fort Madison, Md.	13	Capt. Reed	1 Co., C. of Arty.	103
Fort Severn, Md	6			
Fort Washington, Md.	19	Lt. Col. Jones	2 Cos., C. of Arty.	123
Fort Nelson, Va	37	Lt. Col. McRea	Corps of Arty.	88
Fort Norfolk, Va.	30	Lieut. McIlvain	Corps of Arty.	50
Craney Island, Va	20			
Fort Powhattan, Va.	13			

Station	Guns	Commanding Officer	Organization	Aggregate
Fort Johnston, N. C.	9	Lieut. N. G. Wilkinson	Corps of Arty.	10
Fort Hampton, N. C.	5			
Fort Wingaw, S. C.	6			
Fort Johnson, S. C.	16			
Castle Pinckney, S. C.	30	Lieut. Washington	Small det., C. of A.	
Fort Mechanic, S. C.	7			
Fort Moultrie, S. C.	40			
Fort Marion, S. C.	6	Mil. Stork'p'r McCall		
Fort Jackson, Georgia	6			
Fernandina, Amelia Island		Capt. Payne	Corps of Arty.	222
Fort St. Mark's, Florida		Major Fanning	C. of A. and Inf'y. 108	
Fort San Carlos de Barancas		Major Brook	C. of A. and Inf'y. 77	
Fort Charlotte, Alabama				
Fort Bowyer, Alabama			C. of A. and Inf'y. 46	
Fort St. Philip, La.	20	Major Humphreys	1 Co., C. of Arty.	85
Fort Petit Coquille, Lake Ponchartrain			1 Co., C. of Arty.	34
Bayou St. John, La.		Major Maney	1 Co., C. of Arty.	57
Fort St. Charles, La.				
Sacketts Harbor, New York		Col. Brady	Inf. & 1 Co., C. of A.	432
Greenbush, New York		Capt. Worth	Inf. & 1 Co., C. of A.	99
Fort Niagara, New York		Lt. Col. Pinkney	Inf. & Corps of Arty.	4
Detroit, Michigan Ter.		Major Marston	Inf. & 1 Co., C. of A.	169
Mackinac, Michigan Ter.		Capt. Pierce	1 Co., C. of A., & Inf.	131
Fort Scott, Georgia		Capt. Donoho	C. of Arty. and Inf.	75
Fort Gaines, Georgia			G. of Arty. and Inf.	13
Newport, Kentucky		Capt. L. Scott	1 Co., C. of Arty.	31



Above) The exposed casemates (of Fort Pickens, a Third System fortification near Pensacola, FL. The missing section was a bastion destroyed by a magazine explosion in the 1880s. (photo by Mark Berhow, 2003)

(Right) The scarp wall of Fort Pulaski, GA showing the damage from the bombardment in 1863 (Mark Berhow 1998)



**COASTAL DEFENSES OF THE THIRD SYSTEM, 1819-1860**

<u>Name</u>	<u>Location</u>	<u>Notes</u>	<u>current status</u>
Fort Sullivan	Eastport, ME	Second System blockhouse & battery	buildings only
Fort Edgecomb	Wiscasset, ME	Second System blockhouse & battery	state park
Fort Knox	Bucksport, ME	Third System fort	state park
Fort Popham	Popham Beach, ME	Third System fort	state park
Fort Gorges	Portland, ME	Third System fort	city park
Fort Scammel	Portland, ME	Rebuilt Second System fort	private
Fort Preble	Portland, ME	Rebuilt Second System fort	college campus
Fort Constitution	Portsmouth, NH	Rebuilt Second System fort	state park
Fort McClary	Portsmouth, NH	Rebuilt Second System fort	state park
Unnamed (Glover)	Gloucester, MA	First System fort	city park
Fort Pickering	Salem, MA	First System fort	ruins, city park
Fort Lee	Salem, MA	First System earthworks	ruins, city park
Fort Sewall	Marblehead, MA	First System fort	city park
Fort Warren	Georges Island, MA	Third System fort	city park
Fort Winthrop	Governor's Island, MA	Rebuilt Second System fort	destroyed
Fort Independence	Boston, MA	Third System fort, replaced earlier work	city park?
Fort at Clark's Point	New Bedford, MA	Third System fort	city park?
Fort Phoenix	New Bedford, MA	battery added to Second System fort	county/city pk
Fort Adams	Newport, RI	Third System fort	state park
Fort Wolcott	Goat Island, RI	First System fort, batteries upgraded	destroyed
Fort Greene	Newport, RI	First System fort, batteries upgraded	destroyed
Barnett Point	Barnett Point, RI	Second System batteries upgraded	
Fort Hamilton	Rose Island, RI	Second System batteries upgraded	partial, navy land
Fort Trumbull	New London, CT	Third System fort	state park
Fort Griswold	New London, CT	battery replaced earlier work	state park
Fort Schuyler	Throgs Neck, NY	Third System fort	college campus
Fort Totten	Wilett's Point, NY	Third System fort, incomplete	City of NY park
Fort Hamilton	N. Narrows, NY	Third System fort	US Army
Fort Lafayette	N. Narrows, NY	transitional fort	destroyed
Fort Tomkins	Staten Island, NY	Third System fort, replaced earlier work	national park
Fort Richmond	Staten Island, NY	Third System fort, replaced earlier work	national park
Fort Wood	Bedlow's Island, NY	Second System fort	national park
Castle Clinton	Manhattan Island, NY	Second System fort	national park
Castle Williams	Governor's Island, NY	Second System fort	city property
Fort Columbus (Jay)	Governor's Island, NY	Second System fort	city property
Fort Gibson	Ellis's Island, NY	Second System fort	destroyed
South Battery	Governor's Island, NY	First System fort	city property
Battery Morton	Staten Island, NY	Second System Battery	destroyed
Battery Hudson	Staten Island, NY	Second System Battery	destroyed
Fort Ganesvoort	Manhattan Island, NY	Second System fort	destroyed
North Battery	Hubert Island, NY	Second System battery	destroyed
Fort at Sandy Hook	Sandy Hook, NJ	Third System fort, incomplete	national park
Fort Delaware	Pea Patch Island, DE	Third System fort	state park
Fort Mifflin	Philadelphia, PA	First System fort	city park
Fort Carroll	Baltimore Harbor, MD	Third System fort	private
Fort McHenry	Fort Point, MD	Second System fort	national park
Fort Severn	Annapolis, MD	Second System fort	destroyed
Fort Madison	Annapolis, MD	Third System battery	ruins

Name	Location	Notes	current status
Fort Washington	Potomac River, MD	transitional work	national park
Fort Monroe	Hampton, VA	Third System fort	US Army
Fort Calhoun (Wool)	Hampton, VA	Third System fort	city park
Fort Norfolk	Norfolk, VA	First & Second System fort	army property
Fort Nelson	Norfolk, VA	First & Second System Fort	destroyed
Fort Macon	New Bern, NC	Third System fort	state park
Fort Hampton	Beaufort Inlet, NC	Second System fort	destroyed
Fort Caswell	Oak Island, NC	Third System fort	ruins, private
Fort Johnson	Cape Fear River, NC	Second System fort	ruins, city park
Fort Win yaw	Georgetown, SC	Second System fort	destroyed
Fort Sumter	Charleston, SC	Third System fort	national perk
Fort Moultrie	Charleston, SC	Second System fort	national park
Castle Pickney	Charleston, SC	Second System tower	private
Fort Johnson	Charleston, SC	First, Second System fort	ruins
Beaufort Battery	Port Royal, SC	First System battery	destroyed
Fort Pulaski	Savannah, GA	Third System fort	national park
Fort Jackson	Savannah, GA	Second System fort	state park
Fort Clinch	Jacksonville, FL	Third System fort	state park
Fort Marion	St. Augustine, FL	Spanish fort	national park
Fort Taylor	Key West, FL	Third System fort	state park
East Martello Tower	Key West, FL	Third System tower	priv. museum
West Martello Tower	Key West, FL	Third System tower	private
Fort Jefferson	Dry Tortugas, Fl	Third System fort	national park
Fort Pickens	Pensacola, FL	Third System fort	national park
Fort Barrancas	Pensacola, FL	Third System fort, with earlier works	national park
Advanced Redoubt	Pensacola, FL	Third System fort	national park
Fort McRee	Pensacola, FL	Third System fort	destroyed
Fort Morgan	Mobile, AL	Third System fort	state park
Fort Gaines	Mobile, AL	Third System fort	county park
Fort Massachusetts	Ship Island, MS	Third System fort	national park
Fort Pike	Rigolet, LA	Third System fort	state park
Fort Wood (Macomb)	Chef Menteur, LA	Third System fort	state property
Battery Bienvenue	New Orleans, LA	Third System battery	private
Tower Dúpre	New Orleans, LA	Third System tower	private
Tower at Proctor's Ld	New Orleans, LA	Third System tower	county property
Fort Jackson	Plaquemines, LA	Third System fort	county park
Fort St. Phillip	Plaquemines, LA	Spanish, Second System fort	private
Fort Livingston	Grand Terra Island, LA	Third System fort	county property
Fort on Alcatraz Is.	San Francisco, CA	Third System fort	national park
Fort Point	San Francisco, CA	Third System fort	national park
Great Lakes Forts			
Fort Mackinac	Mackinac Island, MI	Second System fort	state park
Fort Wayne	Detroit, MI	Third System fort	state property
Fort Niagara	Lewiston, NY	First, Second, Third System fort	state park
Fort Ontario	Oswego, NY	Third System fort, replaced earlier work	state/county
Fort Montgomery	Rouses Point, NY	Third System fort	ruins, private
Fort Porter	Buffalo, NY	Third System tower	destroyed