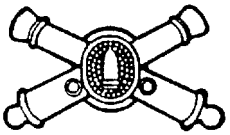

Coast Artillery Organization
A Brief Overview

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Artillery Organization

The organization of American coast artillery is a complex story. Until World War I, coast artillery meant seacoast artillery; the World War brought additional functions, especially antiaircraft artillery.

Seacoast artillery was always caught in an organizational conundrum. The other combat arms served with the field army, organized in regiments of fixed strength. Seacoast artillery, however, primarily served at separate harbors, manning varying numbers of batteries with widely differing sizes and number of guns. No uniform system of manning would suit all the different harbors.

One obvious answer was to give the coast artillery a flexible, or task, organization, tailoring the different forces to the varying requirements. Different size units could man different batteries, and the number of batteries could vary for each harbor. However, in the event of war, if there was no serious threat against the coastline, the coast artillery had no intention of being left out of the struggle, or the laurels that would result from victory. To the extent that an organizational structure fit the requirements of harbor defense, it was ill suited to field service. In addition, a regimental structure fostered unit identity and esprit de corps. This dilemma had no clear resolution, and over the next half-century the War Department opted for different organizational solutions, resulting in frequent organizational changes.

In partial response, the coast artillery developed a twin-track chain of command. One track was administrative, responsible for housing, clothing, feeding, instructing, and disciplining personnel, as well as for keeping of the individual and unit records for which the army has always been known. The authority and responsibility of both the tactical and administrative chains of command were carefully defined in army regulations.

The tactical chain of command was concerned solely with the control of men and materiel in action. Sometimes the tactical grouping coincided with the administrative organization, and sometimes it did not. This conflict between roles and organizational systems haunted the coast artillery to the very end. This paper, however, shall be limited to the administrative organization.

The Old Regiments

With the first potential struggle between the new republic and a foreign power in the 1790s, formation of a seacoast artillery organization was authorized. This, termed the Corps of Artillerists and Engineers, was charged with constructing and manning the "First" System of fortifications to guard the new nation's harbors and seaports. By the beginning of the 19th century, this corps had expanded into two regiments of Artillerists and Engineers, and in 1808 a light artillery regiment was constituted in part to help man a new "Second System" of seacoast fortifications that largely replaced the First System. At the beginning of the second war with Great Britain in 1812, two additional regiments of artillery were formed. During the War of 1812, these were amalgamated into the Corps of Artillery.

In 1821, the army was reduced, and the Light Artillery, the Ordnance, and the Corps of Artillery were consolidated into four regiments of artillery, each having nine firing companies, lettered A through I. One company in each regiment was designated a light battery. Each company was commanded by a captain,

while a tenth captain in each regiment performed ordnance duty. In 1832, when the Ordnance Corps was created, the ordnance captains were separated from the artillery and transferred to the new corps, but artillery lieutenants continued regimental ordnance work under four-year details until the Act of July 5, 1838, at the onset of the Second Seminole War, completed the severance of the Ordnance Department from the artillery. The light batteries in each regiment were not "horse artillery," whose men were all mounted. Not until 1836 was one battery in each regiment authorized mounts, making them horse artillery.

The Act of July 5, 1838, also authorized the addition of a tenth lettered company, K, to each regiment, and with the beginning of the War with Mexico, the Act of March 3, 1847, added Companies L and M to each of the four regiments. In both of these conflicts, especially the Second and Third Seminole Wars, the artillery companies functioned more as infantry, a role that would be repeated into the 20th century.(1)

Concurrent with the reorganization of the artillery in the early 1820s, a Third System of seacoast fortification was begun, resulting in the construction or rebuilding of more than three dozen fortifications to protect the nation's harbor and seaports, and the planning of several dozen more before the outbreak of Civil War in 1861. Before the Civil War, the four regiments were most often posted in the numerous seacoast fortifications and rotated on an irregular basis between the southern and northern coasts.

With the onset of the Civil War, the 5th Regiment of U.S. Artillery was constituted. During that war, the regimental structure was primarily administrative rather than tactical, as the artillery companies were chiefly employed individually in support of infantry and cavalry brigades. As part of the field armies, they were rarely formed in tactical organizations larger than a battalion and were generally single companies attached to the various infantry brigades and divisions of the army. Of the 60 companies of Regular Army artillery in the Civil War, only four remained in the seacoast defenses, the reminder serving with the armies in the field. Heavy artillery regiments of the state militias were used to man the seacoast fortifications, as well as those those surrounding the capital, until late in the war, when they were used as infantry.

Following the Civil War, many companies returned to their primary prewar role of manning the seacoast forts. The Act of July 28, 1866, designated the unmounted, or "foot" companies of the regiments as batteries. The mounted batteries were redesignated May 20, 1871, as "light batteries," and the foot companies were commonly termed "heavy" batteries.(2)

In the aftermath of the Civil War, the forts of the Third System were alarmingly vulnerable, and Congress had no interest in financing their replacement, even if there had been any consensus on what to replace them with, which there was not. The principal post-Civil War army functions, fighting Indians and occupying the conquered South, demanded little in the way of artillery. The five regiments of artillery each had 12 batteries, A to M, omitting J. Two of these 12 batteries were designated horse or light artillery and the remainder as heavy batteries. In general, "light" meant field artillery and "heavy" meant seacoast. However, the artillery materiel differed only in size, and techniques were sufficiently similar that heavy batteries could be used as light artillery when needed.

The "heavy batteries," however, had a dual role. In theory, they were trained as both seacoast artillery and as infantry, but several factors tended to emphasize their infantry role. The few serviceable seacoast guns actually mounted did not justify a large force, practice ammunition for the large guns was expensive in a time of austerity, and lastly, no foreign threat seemed sufficiently dangerous to tie down a large portion of the small peacetime army in harbor defenses at the expense of other, more pressing demands.

The individual batteries of the artillery regiments were scattered over many posts, essentially infantry, with rudimentary seacoast artillery training and a handful of light batteries mixed in. Complaints by officers that these troops were unready to actually serve the seacoast armament were increasingly aired in popular and professional publications. Zealous artillery officers saw remarkable improvements in the artillery being adopted in European armies, and pondered how to make the artillery ready for the time when Congress would loosen the purse strings and begin to equip our defenses with modern armaments. These officers insisted that the artillery should be artillery in more than name only, and they debated how best to organize the artillery to make it most effective.

Endicott Era

In the decades following the Civil War, as navies adopted steam, armor, and rifled guns, American seacoast defenses became so weak as to be an absolute embarrassment to the country. Finally, in 1885, Congress was moved to action, or at least to the discussion of action. Congress directed President Grover Cleveland to appoint a board of officers and civilians, chaired by Secretary of War William C. Endicott, to report what fortifications or other defenses were necessary to defend America's harbors.

Given the unsettled state of technology, the Endicott Board recommended guns on a variety of mountings. The recommendations were enormous and arguably unrealistic, covering 27 locations at a cost of over $126 million, including armament, floating batteries, submarine mines, and torpedo boats. Initial Congressional response was not enthusiastic, and appropriations only averaged about a half million dollars a year until 1896 - after all, the army was only then completing development of its first generation of breechloading weapons.

During the end of the 1880s, the artillery began to move slowly toward the emerging technology. As they agitated for increased spending on armament and fortifications, artillery officers attempted to remake the seacoast artillery into the technically advanced body of troops required to serve the new guns and their accessories. Civil War-era Rodman cannon, whether smoothbore or rifled, required little sophistication, and fire control changed little in half a century. However, as new, breechloading guns and mortars began to appear in the mid-1890s, it was obvious that their greatly increased range would require new methods and devices for fire control. In addition, forward-thinking officers could see the need for searchlights and electrical power, all requiring greater expertise of a more technical nature.

These questions, of course, were not to be settled by the artillery alone, but also by Congress and the executive branch, who were vigorously debating the role, form, and function of the entire military establishment.

Congress was not quick to reorganize the army, but funding for fortifications increased as the conflict with Spain broke out. In 1898, Congress increased the strength of the artillery by two regiments, the 6th and 7th, and authorized 14 batteries for each of the seven regiments.(3) Since there was little need for heavy artillery with the mobile army, the regular artillery largely manned siege and field artillery during the brief Spanish-American War. Following that war, heavy batteries were retained in the captured defenses of Cuba and Puerto Rico, while both heavy and light batteries served in the field against the Philippine Insurrectionists.

The military incompetence exposed by the Spanish-American War, combined with the panic that swept the seaboard, fueled demands for change. The start of the new century saw sweeping changes in the organization of the army, and one of the branches most affected was the artillery.

1901 Corps Organization

In 1901, Congress became convinced that the coast artillery should have a task organization, and so it abolished the artillery regiments and created an artillery corps. Reflecting the divergence in methods and equipment since the old muzzleloading days, the corps was composed of 30 companies of field artillery and 126 companies of coast artillery. Coast artillery companies were numbered 1 to 126 and field artillery batteries from 1 to 30, but they were united in one branch of service, under a single chief of artillery. Eighty-two existing heavy batteries were designated coast artillery companies, and 44 new companies were created by splitting existing ones, after which both units filled out their ranks with new recruits.

At the head of the Artillery Corps was a chief of artillery, with the rank of brigadier general. Although more of an inspectorate than a command position, the importance of this position can hardly be overstated. For the first time, there was a systematic attempt to regularize the equipment and training of the artillery. Further, seacoast defense planning, until now almost entirely the province of the Corps of Engineers, was now largely the responsibility of the artillery.

Coast Artillery Companies were units of men, and batteries were the fixed emplacements with their guns. Each company was authorized 109 enlisted men, including non-commissioned officers. Although the secretary of war was empowered to fix the strength of individual companies as needed, it does not appear he took advantage of this authority.(4)

Depending on its assignment, one company might man more than one battery. Companies were assigned to forts, which were administrative units commanded by the senior officer present.(5) The forts at each harbor were grouped into artillery districts (the occasional isolated small harbor was included in a larger artillery district), which were the primary tactical and administrative units, with the bulk of the staff and logistical services. The artillery district commander was analogous to a regimental commander in the infantry or cavalry; in turn, he was subordinate to the general who commanded all the troops in the territorial department.(6) The administrative relationship of these troop units was not markedly different from other army units, and was spelled out in detail in army regulations. Over the next half-century, the administrative organization was repeatedly changed, as the army struggled to balance the conflicting requirements and find the most efficient organization.

As the new batteries were created and manpower grew, the new officer positions were filled by West Point graduates, transfers from other branches, and appointments from civilian life. Officers who had served in the Volunteers during the recent war took advantage of the opportunity to join the Regular Army. Unlike the infantry and cavalry, the Artillery Corps continued to be all white, reflecting both its level of technical sophistication and the prevailing views of the capabilities of blacks.

1907 Organization, Refining the Corps Organization

Within five years, technological advances had become even more rapid, further separating field artillery from seacoast. No longer was an officer considered qualified to command both light and heavy artillery. The techniques were now too different, and specialization was required.

As a result, in 1907, Congress split field artillery and coast artillery into separate branches, creating a separate Coast Artillery Corps (CAC). Artillery officers had to opt for either coast or field. The responsibilities of the seacoast artillery had grown since 1901. America was beginning to construct harbor defenses to protect its newly acquired overseas possessions, and additional troops were required to man them. In addition, companies were assigned to plant and control the submarine mines. In an attempt to keep up with these expanded responsibilities, Congress authorized an increase in the Coast Artillery Corps to 170 companies, and the army again struggled to create and fill the new companies. In 1908, the chief of artillery became chief of coast artillery, severing his connection with the field artillery.

Administratively, the change made little difference except that officers now served solely in one branch or the other. All the coast artillery defending a given harbor remained in an artillery district, commanded by a field grade CAC officer, who assigned tactical command roles to his officers as additional duties.

These were in many ways the golden years of the coast artillery. Finally united in their own branch, they enjoyed a reputation as the most scientific of the combat arms, and recruitment was aided by the prospect of relatively settled garrison duty, safer and more comfortable than duty in the field. As the expenditures recommended by the Endicott and Taft Boards finally began to create modern defenses for the country with the technical accessories now necessary, and as barracks accommodations finally caught up with the expanding force, the principal problem the CAC faced was finding enough men to man all the guns now in place.

Although the corps did not muster its authorized strength, had it done so, it would still have been well short of enough to man the guns on a war footing. The chief of coast artillery calculated he needed three shifts, or reliefs, for every gun, with fewer reliefs for the searchlights. The men who planted the mines could man the rapid-fire guns defending their minefields, but the number of men needed to fully man the batteries was extraordinary. The chief of coast artillery proposed a method to deal with this shortage: the

most sophisticated units, such as mine planters and searchlight crews, would have to be manned at full peacetime strength by Regular Army units, as would the territorial garrisons, who were too isolated to count on reinforcement in the event of war. In addition, the regular army would supply one relief for batteries defending home harbors. The remainder of the reliefs would be supplied by state troops.

Since raw troops could not be substituted for trained men in the event of sudden hostilities, the chief attempted to persuade the states to form and train coast artillery companies within their National Guard or militia. Some states, most notably New York, responded well, and the army put considerable effort into training these citizen soldiers. The results for many units were encouraging, but the strength of the coast artillery militia was never nearly enough to man the guns on a wartime footing. This problem was actually never solved, despite the continued efforts of successive chiefs of coast artillery.(7)

In 1913, the defenses of individual harbors were renamed coast defenses, as in "the Coast Defenses of San Francisco." Coast artillery districts were retained, but the term now had a different meaning. Three continental coast artillery districts were created within the geographic departments: The North Atlantic Coast Artillery District (Portland to the Delaware, but the Delaware was soon transferred to the South Atlantic District) and the South Atlantic Coast Artillery District (Baltimore to Galveston) in the Eastern Department, and the Pacific Coast Artillery District (San Diego to Puget Sound) in the Western Department. The Philippine and Hawaiian Departments and the Canal Zone included all troops within their limits, including the coast defenses.(8) This had the additional advantage of creating more positions for coast artillery colonels. Over the coming years, as the organization of the army changed, the number and composition of coast artillery districts was adjusted accordingly.

Repeated Renumbering 1916-17

On June 3, 1916, the years of persistence finally paid off. No doubt with a view to the World War then consuming Europe, Congress voted a large increase in the CAC. The strength of the corps was to be increased by about a third, to 29,469 enlisted men, over the next five years, in annual increments ending with that of July 1, 1920. The foreign defenses would get 6,352 men - 1,533 for Oahu, 2,470 for the Philippines, and 2,349 for Panama. The remaining 23,117 men would defend the continental United States. Based on the 1908 formula, the militia was to provide 17,329 men, but the 10,860 men actually in the militia coast artillery, while substantially stronger than the year before, was still considerably short of the number required.(9)

On July 24, 1916, coast defense commanders were authorized to subdivide their manpower into companies as they deemed fit, with the companies to be redesignated as companies in their fort, as "1st Company, Ft. Flagler." A year later, in furtherance of this end, the companies were again renumbered, this time within each coast defense, as "13th Company, Coast Defenses of Puget Sound."(10)

This introduced great confusion into the historical record. No longer were units created by the War Department; they were now created or abolished by coast defense commanders. To further the confusion, the new companies were not given additional designations in the CAC-wide serially numbered system. Their only designation was within their fort from mid-1916 until August 1917 and from August 1917 within their coast defense. Lastly, as companies were assigned to regiments being organized for service in France, their place was taken by new companies. Thus, if the 3rd Co., Long Island Sound, were assigned to a regiment being formed, the 18th Company, LIS, could be redesignated the 3rd Co., LIS (II). In some cases, three or four companies were created with the same designation, kept separate only by Roman numerals.

As a result, the exact disposition of the coast artillery companies between 1916 and 1922 cannot be fully delineated. We will outline the general changes, while Appendix I, The Coast Artillery in World War I, lists what has been uncovered about specific companies during this period.

During 1916, 24 new coast artillery companies were constituted and organized. In some cases, these companies were formed by disbanding Regular Army companies that had been in existence before the 1916 reorganization. (11)

World War I

Effective May 1, 1917, just after America entered the World War, the number of continental coast artillery districts was increased to five: the North Atlantic Coast Artillery District (Portland to Narragansett Bay), the Middle Atlantic Coast Artillery District (Long Island Sound to Chesapeake Bay), the South Atlantic Coast Artillery District (The Cape Fear to Galveston), the South Pacific Coast Artillery District (San Diego to San Francisco) and the North Pacific Coast Artillery District (The Columbia and Puget Sound). Overseas, the coast defenses of the Panama Canal were under the Panama Coast Artillery District, while the coast defenses of Hawaii and the Philippine Islands were under their respective departments.(12)

America's entry into World War I caused widespread changes throughout the entire army, but it primarily impacted the CAC in four ways. First, the timetable for the previously authorized increase in manpower was accelerated. Eight companies of the 1917 augmentation had been created when the United States entered the war on April 6, 1917, at which time the remaining 1917 augmentation was immediately ordered. Further augmentations were authorized later in 1917 and in 1918. After the declaration of war, another 71 companies were organized in April, May, June, and July. Only one company of Regular Army coast artillery was constituted between August and December 1917, in October. In December 1917, another 27 Regular Army companies were constituted and organized. Before the war ended, nearly 276 new companies were constituted and organized in the CAC, in addition to the National Guard companies called into federal service. (See Coast Artillery in WWI article)

Secondly, National Guard coast artillery was called into federal service. Between July 1917 and February 1918, 171 state National Guard coast artillery companies were called into federal service. Legally, these units lost their National Guard identity when federalized, and as personnel were transferred into and out of the units, they began to lose their state identities.

Thirdly, the CAC largely devoted its efforts to training tens of thousands of men in heavy land artillery. When it entered the war, the United States had neither the men nor the materiel to provide the large force of heavy artillery necessary for warfare in France. Since the field artillery was hard pressed to provide the lighter, more mobile, artillery needed, the Coast Artillery Corps was the logical source of men to man the heavy artillery, especially since the dominance of the Royal Navy insured that the German navy would not seriously threaten the American seacoast. In addition, the only heavy artillery in this country was the fixed seacoast defenses. Spurred no doubt by fear of the consequences of sitting out the war at home, safe and uninvolved, the CAC largely devoted its efforts to training men in the new techniques of heavy land artillery, with such advice, manuals, and equipment as our more experienced allies could provide. Meanwhile, the army removed many guns from fixed fortifications, to be mounted on railway and wheeled carriages for use in France. However, most of these railway guns did not arrive in France before the Armistice, and in their absence, we utilized French and British heavy weapons. Had the war lasted a year or two longer, American-built heavy artillery might have made a significant impact.

To man these guns, a provisional brigade of three coast artillery regiments, each with 12 firing batteries, was formed. Initially numbered the 6th, 7th, and 8th Provisional Regiments, CAC, they were renumbered in February 1918 as the 51st, 52nd, and 53rd Artillery Regiments, CAC. Beginning in December 1917 and continuing into 1918, Regular Army and National Guard companies were combined, creating the 54th through the 71st Artillery Regiments, CAC. Selected batteries from the 51st, 52nd, and 53rd Artillery Regiments were used to organized the Provisional Howitzer Regiment, which was later designated the 44th Regiment. In a July 1918 reorganization, the 51st, 52nd, and 53rd Regiments were reduced in size to six firing batteries; the excess batteries were used to organize the 42nd and 43rd Regiments. To meet the need for higher units to command and control theses regiments, additional brigades were created.

A total of 57 regiments were constituted in the CAC at coast artillery forts. The first regiments were created by assigning entire companies, either National Guard or Regular Army. Later regiments were formed by assignment of individuals. Of these regiments, 34 arrived overseas, where they were grouped into 11

brigades; the rest were either organizing or awaiting transportation when the war ended. (See Coast Artillery in WWI article). (13)

Lastly, the evolving nature of warfare created a new weapon, the airplane, and therefore the requirement for weapons to combat it. Again, the job went to the Coast Artillery Corps, which at least had experience in firing at moving targets. Before the war ended, ten gun and six machine-gun battalions were organized, of which seven gun and five machine-gun battalions made it to France. The battalions, assigned to army corps, consisted of a headquarters battery and four lettered batteries. During the last month of the war, the American antiaircraft forces were reorganized to better correspond to the French organization. The gun battalions were abolished and numbered sectors were formed, with a headquarters and supply battery and numbered firing batteries. These sectors were assigned as field army troops. This organization was short lived, as the AA units soon began to return to the United States.(14)

At the end of WWI, the CAC, with an enlisted strength of 147,000, was much more varied than it had been two years before, with heavy artillery batteries, regiments, and brigades with or destined for the field armies; and antiaircraft and trench mortar units for specialized roles. In the U.S. and its possessions, gun, mortar, mine, and searchlight companies remained organized into coast defenses, for harbor defense.

1919-1921

Many of the companies created during WWI, whether for regiments destined for overseas service or for the coast defenses, were demobilized during the six weeks that followed the signing of the armistice. This demobilization was so precipitous, especially in the coast defenses, that in many cases new companies had to be reconstituted in 1919 and 1920 to provide even a semblance of garrisons for the coast defenses.(15)

Most of the stateside regiments intended for France were discharged in December 1918, the remainder in January 1919. The regiments in France were largely demobilized as soon as possible after return to the states, typically by March 1919. However, 12 regiments that had served in France were retained in active service at the end of the war for training purposes. This number was shortly reduced to 10: 42nd, 43rd, 52nd, and 53rd Artillery, CAC (Ry) formed the 30th Brigade, posted at Camp Eustis, VA. The 31st Brigade, consisting of the 55th, 57th, and 59th Artillery, CAC (TD), was initially posted at Fort Winfield Scott, CA, before moving to Camp Lewis, WA, in the later months of 1919. The 39th Brigade, at Camp Jackson, SC, was composed of three more tractor-drawn regiments: the 44th, 51st, and 56th Artillery. CAC (TD).(16)

On October 5, 1920, the five CA districts were numbered (1st, 2nd, 3rd, 4th, and 9th) to correspond to the numbered corps areas, the coast artillery districts coinciding with the corps area boundaries. Of the nine corps areas in the continental United States, five, the I, II, III, IV, and IX Corps Areas, had coastal boundaries, while the other four, V, VI, VII, and VIII Corps Areas, were in the Zone of the Interior. The I Corps Area and the 1st Coast Artillery District encompassed New England. The II Corps Area and 2nd Coast Artillery District comprised the states of New York, New Jersey, Pennsylvania, and Delaware. The III Corps Area and 3rd Coast Artillery District was made up of the states of Maryland, Virginia, and about half of North Carolina. The IV Corps Area and the 4th Coast Artillery District encompassed part of North Carolina, as well as the states of South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. The IX Corps Area and the 9th Coast Artillery District covered the states of California, Oregon, Washington, and the Territory of Alaska. In Hawaii, the Panama Canal Zone, and the Philippines, the harbor defenses were designated administratively as separate Coast Artillery districts within the Hawaiian, Panama, and Philippine Departments.(17)

Continental coast artillery regiments were all assigned to corps areas. The coast artillery district commander was responsible to the corps commanders for the "instruction, training, and tactical employment of all coast artillery troops within his district." On the other hand, the district commanders were not charged with any duties pertaining to administration and supply.(18)

The Coast Artillery Corps had seized the opportunity presented by the shortage of heavy field artillery to secure an important role in the World War. In the future, however, the Field Artillery could not be expected to view this with favor, and admittedly, it blurred the distinction between field and coast artillery. On August 1, 1921, the War Department ruled that the CAC would furnish all artillery necessary for land and coast fortifications, and all AA, railway, and trench mortar artillery for use either with fortifications or with the armies in the field. This was not, however, the final word on the subject. The general order went on to say that nothing would prohibit "the organization within the coast artillery of such mobile units as may be needed in land or coast fortifications or the employment of such units with field armies whenever or wherever conditions of combat indicate the desirability of such employment." Thus, the door was clearly left open for the CAC to again supply heavy field artillery for use in the field.(19)

Reductions in the size of the army ordered in 1920 and 1921 took a major toll on the units that had been retained for training at the end of the World War. In early summer 1921, the 31st Brigade (TD) and the 57th Artillery were inactivated and their personnel transferred to the 55th and 59th Artillery Regiments, which were transferred later that summer to Hawaii and the Philippine Islands, respectively. By August 1921, the 39th Brigade (TD) and the 44th and 56th Artillery Regiments were also inactivated and the 51st Artillery was transferred to Camp Eustis, VA, where what remained of the mobile units retained in the continental United States were posted. The 42nd, 43rd, and 53rd Artillery, CAC (Ry), Regiments and the 1st Bn, 52nd Artillery, CAC (Ry), were also inactivated in August. The 2nd and 3rd Bns, 52nd Artillery (Ry), were retained at Camp Eustis in active status, although at reduced strength levels.

Although the size of the CAC had been reduced substantially in the post-war economy, efforts were made to continue training for the missions acquired during the World War. The overseas and insular possessions required garrisons strong enough to withstand attack until relief could arrive. Consequently Hawaii, the Philippine islands, and the Panama Canal Zone, having the largest coast artillery garrisons, became the principle training locations for all of the CAC's assigned missions: seacoast artillery, antiaircraft artillery, and mobile railway and tractor-drawn artillery. For that reason, the 60th Artillery Bn (AA) was shipped to the Philippines in 1921 and the Hawaiian Railway Bn was constituted and organized in Hawaii in 1922. As emphasis on antiaircraft training continued to increase, in 1921 the War Department authorized three AA battalions for service in the United States: 1st, 2nd, and 3rd Artillery Bns, CAC (AA), each consisting of a headquarters detachment, a searchlight battery, a gun battery, and a machine gun battery. In Hawaii, an antiaircraft regiment, the 64th Artillery (AA), with eight firing batteries in addition to the usual headquarters, service, and battalion headquarters batteries, was also constituted and organized in 1921. These AA units were created by inactivating existing seacoast artillery organizations and transferring their personnel to the new units.

1922-24 Renumbering Again

In May 1922, the Hawaiian Railway Bn and the Hawaiian AA Regiment were redesignated the 41st Artillery Bn and the 64th Artillery (AA). At the same time, the 1st through the 3rd AA Bns were renumbered the 61st through the 63rd Artillery Bns (AA).(20)

At the end of 1921, there were some 274 CAC companies. Of these however, 188 were active and 86 were inactive. In an attempt to restore the esprit de corps and historic lineage of the companies that in some cases traced back over one hundred years, in 1922 the 170 companies organized prior to the 1916 reorganization had their pre-1916 serially numbered designations restored, and those active companies organized following the 1916 reorganization were designated the 171st – 198th Companies, CAC. Twenty-five pre-1916 companies had been assigned as batteries of regiments formed during the World War and demobilized at the end of the war. These units were reconstituted and consolidated with active companies then serving in the coast defenses and the consolidated company assigned the pre-1916 designation held by the reconstituted company. In addition, the regimental headquarters and firing batteries retained as active

or inactive units following the war were also designated as companies of the CAC, typically between 199 and 274. (See Appendix III, 1922 Station List.)(21)

Under War Department orders issued in 1922, Regular Army CAC companies were numbered between 1 and 300; National Guard companies were numbered between 301 and 500, and Organized Reserve companies between 501 and 950.

Coast defense commanders were instructed to divide the men assigned to their command into the number of companies that corresponded to the number of first sergeants allotted to the command, with one headquarters company per coast defense. Where coast defense commands contained only caretaking units, those men would be assigned to the headquarters battery, which would be kept active, although at reduced strength.(22)

In 1922, another 45 companies were inactivated, but later in the year, 14 companies of Philippine Scout Coast Artillery, numbered 275 through 288, were organized in the Harbor Defenses of Manila and Subic Bays, followed by the 289th Co. in January 1923.

1924, Return of the Regiments

Meanwhile, the War Department and the Office of the Chief of Coast Artillery continued to reevaluate the organization of the seacoast artillery. While the current organizational system was well suited to the demands of harbor defense, the World War had shown that regimental organization was necessary for units serving with the mobile army. In addition, a regimental organization was expected to improve morale by enhancing unit identification. After much thought and discussion, the decision was made to reorganize the Coast Artillery Corps, once again. The antiaircraft, railway, and tractor-drawn units had always been organized into regiments and battalions. Now, the seacoast artillery would also be organized into regiments.

Effective July 1, 1924, the serially numbered company designations were abolished and the sole designations held after July 1, 1924, by the CAC were as batteries of the various regiments and battalions in existence from the World War and immediate postwar period, and those regiments constituted in 1924. These regiments would be of four different types: mobile tractor-drawn 155 mm gun (three regiments), mobile railway artillery (two regiments), mobile antiaircraft artillery (five regiments), and harbor defense (sixteen regiments). The 16 newly constituted harbor defense regiments (1st-16th) were assigned to the domestic and territorial coast defenses. In addition to the first 16 harbor defense regiments, the companies of Philippine Scouts were organized into the 91st and 92nd CA Regiments, Philippine Scouts.

The initial assignments for the 16 harbor defense regiments were:

1st CA:	Panama Canal Department
2nd CA:	Panama Canal Department
3rd CA:	CD of Los Angeles, San Diego, and the Columbia
4th CA:	Panama Canal Department
5th CA:	CD of Southern New York
6th CA:	CD of San Francisco
7th CA:	CD of Sandy Hook and the Delaware
8th CA:	CD of Portland and Portsmouth
9th CA:	CD of Boston
10th CA:	CD of Narragansett Bay and New Bedford
11th CA:	CD of Long Island Sound
12th CA:	CD of Chesapeake Bay
13th CA:	CD of Pensacola, Charleston, Key West, and Galveston
14th CA:	CD of Puget Sound
15th CA:	Hawaiian Department
16th CA:	Hawaiian Department

Implementation of the new order resulted in the 1st-7th harbor defense regiments adopting and continuing the historic lineage of the seven artillery regiments that had been abolished in the 1901 reorganization. As most batteries of the old regiments had become companies of coast artillery in the 1901 reorganization, the War Department directed that those companies formed from batteries of the old regiments be assigned to the newly constituted coast artillery regiments as far as was practicable. In reality, the batteries were normally transferred "less personnel and equipment." This generally meant that the unit and its equipment did not move, but were redesignated. It was said that the only thing that actually moved was the flag, although unit records were also transferred.

However, by June 1924, of the 289 coast artillery companies, only 144 were active. The new regiments were made up of units, now termed batteries instead of companies, assigned to numbered battalions in each regiment. The number of batteries per regiment varied from seven to eleven; one was the headquarters battery and the rest were lettered batteries. Again, the number of active batteries equaled the number of first sergeants allotted, plus one reduced-strength caretaking battery. One or more batteries in each coast defense command would be a general utility battery; the remainder of the batteries would man gun, mine, or searchlight batteries. (See Appendix IV, Coast Artillery Batteries, July 1924)

The War Department had previously organized the National Guard coast artillery into regiments, and this was extended to the Organized Reserve. The number of assigned batteries and battalions in the National Guard and Organized Reserve varied considerably due to their allocation by state. The Organized Reserve regiments were organized into brigades to facilitate mobilization. Regimental numbers between 1 and 100 were reserved for Regular Army regiments; between 195 and 299 were reserved for National Guard regiments; and Organized Reserve units were numbered between 500 and 699. When additional Organized Reserve regiments were created in 1930, they were numbered between 900 and 999.(23)

1925-1941

At the start of 1925, the 18 harbor defense regiments contained 18 HQ batteries and 60 active lettered batteries, an average of a little more than three active firing batteries per regiment. The two railway regiments were in much the same condition, while the six AA regiments did a little better. The three tractor-drawn regiments were the strongest, averaging six lettered batteries per regiment.(24)

On June 9, 1925, coast defense commands were renamed harbor defense commands, to describe their true role more accurately, and to emphasize that the coast artillery was to defend key locations, rather than the entire coastline.(25)

The 1920s and 1930s were a period of continual retrenchment; many units were deactivated in whole or in part, and in army terminology, demobilized, inactivated, reorganized, redesignated, or reassigned. These terms, which had precise meanings within the War Department, often meant that a unit existed for years in name only, with no actual personnel assigned. As an example, a regiment might be listed on active status, but only two or three of its batteries would actually be active. The rest would be inactive, and the regimental manpower would be no greater than a weak battalion.

In addition, units might be reassigned less personnel and equipment, units were transferred between the Regular Army, Organized Reserves, and National Guard, and inactive units were moved between organizations. It is not easy to keep track of which units existed in reality at any given time. This reached a crescendo in World War II, when units appeared and disappeared like props in a magician's show.

The turf battle between the CAC and the field artillery continued, and at the close of 1927, all divisional, corps, and general headquarters artillery (except for railway and antiaircraft) was assigned to the field artillery. The 155 mm tractor-drawn coast artillery units were now dedicated to seacoast defense, no longer charged with supporting the field armies as they had in WWI. Additionally, the CAC was relieved of the need to train on and maintain the larger howitzers of the siege artillery. While this threatened the CAC role in any future war, it did simplify training, allowing the CAC to focus its meager resources on seacoast and antiaircraft defense. Shortly thereafter, all trench mortar units were transferred to the field artillery.(26)

The headquarters batteries for regular army HD regiments were assigned to the headquarters post of a harbor defense. Some of the smaller harbor defenses received a detachment from a regular regiment assigned to one of the larger harbor defenses. For example, batteries of the 3rd Coast Artillery, headquartered at the Harbor Defenses of Los Angeles, were assigned to the Harbor Defenses of the Columbia River and the Harbor Defenses of San Diego, neither of which received its own regiment until 1940. The regular army AA, TD, and Ry units were headquartered either at a large coast artillery post or at some other army location that had space for storing and firing armament, such as Fort Eustis, VA, and Fort Sheridan, IL.

National Guard HD regiments were headquartered at National Guard armories in their representative states. In the case of large cities, like New York, the entire regiment might be based at one armory. In other cases, the different batteries would be assigned to armories at towns and cities around the state, usually near the coast. The batteries held regular training programs during the year at their armories and the regiment as a whole usually conducted a 2-week summer camp at a coast artillery post. The same was true for the National Guard TD regiments. National Guard AA regiments were not necessarily based in states anywhere near the coast and they could hold their summer camps wherever appropriate training facilities could be found.

The Organized Reserve, consisting largely of cadres of volunteer officers and senior NCOs, were often headquartered at a federal facility, such as a post office, in cities around the nation. These units varied greatly in manpower and training activities. Some OR regiments did not have enough personnel to conduct regular training, but other OR regiments built up enough recruits to hold summer camp training exercises and win performance awards.

At this time, regiments in the army were developing distinctive regimental crests and insignia. In 1919, unique unit coats of arms were added to the regimental colors (flags) in place of the arms of the United States, thus making the colors distinctively individual, while the retention of the eagle showed the Federal nature of the organization. Regimental insignia, based on the regimental crest, were designed, approved, and worn on the uniform, in addition to many unofficial uses, such as on stationery, pictures, etc. As the coast artillery in 1920 had few regiments, coats of arms had been designed for a number of the coast defenses. After 1924, as new regular regiments were formed, their regimental designs were approved by the War Department. When all harbor defense troops were assigned to regiments, the regimental insignia superseded the coast defense insignia. Many Organized Reserve regiments also received approved arms and insignia.(27)

The overall picture of the organization of the Coast Artillery Corps remained more or less stable for a dozen years after 1925. By 1930, most regular harbor defense units in the continental United States were reduced to mere skeletons and nearly all of the continental harbor defenses were in caretaker status. The territorial defenses were maintained near full peacetime strength, and most of the training was concentrated there. A few new units were added and some units transferred or inactivated. Other units swapped armament, were reassigned or inactivated during the late 1920s and 1930s. For example: The 17th Coast Artillery regiment was designated for the Hawaiian Department in 1926, but was never activated. As time went by, the antiaircraft role grew, and four more antiaircraft units were added (66th-69th).

Five additional National Guard units were added in the late 1920s. The 1st and 4th Coast Artillery Regiments were converted to mixed harbor defense and antiaircraft in 1932, while the 2nd Coast Artillery Regiment was sent to Fort Monroe and the 12th Coast Artillery Regiment was inactivated. The 59th and the 92nd Coast Artillery Regiments switched armament, and several National Guard units were moved to different states or to non-coast artillery assignments. Some Organized Reserve units were transferred to the regular army for other uses, making the history of these units complicating the history of these units.(28)

Eventually, the harbor defense units were standardized as type-A, B, and C regiments; type-D regiments were in reality only separate battalions. The units' organization was governed by the tactical requirements of the harbor defenses. By the late 1930s, a number of National Guard cavalry organizations were reclassified as coast artillery, the best known being the 200th CA, which served on Bataan. In 1940, as new Regular

Army coast artillery regiments were activated and National Guard regiments were called into federal service, the initial type assigned to some regiments was altered. In most cases, the original 16 harbor defense regiments were reduced in size. When war came, the various elements of the regiments were increased in size and inactive units were activated, but the number of elements remained constant.

All harbor defense regiments were made up of a regimental HQ and HQ Battery, a searchlight battery, band, and a varying number of battalions, each of which contained an HQ and HQ Battery or Detachment and three firing batteries.(29)

Type-A regiments contained three battalions, with a total authorized strength in 1940 of 1911 officers and men.

Type-B regiments contained two battalions; the regimental HQ and HQ Battery and medical detachment were reduced in comparison to type-A regiments. The total authorized strength in 1940 was 1370 officers and men.

Type-C regiments contained four battalions; the regimental HQ and HQ Battery and the medical detachment were increased in comparison to type-A regiments. The total authorized strength in 1940 was 2320 officers and men.

*Type-D regiment*s consisted of a single battalion with a small regimental HQ and HQ Battery, later designated as a HQ Detachment. The authorized strength of a type-D regiment was 802 officers and men.

Finally, on July 1, 1935, Congress authorized an additional 5,918 men for the CAC, an increase of almost 50 percent. Since these increases were all in the grade of private, with no increases in officers, no new units were formed, but existing units were significantly augmented. In addition, the National Guard CAC was increased to 12,960.(30)

In 1940, the Selective Service Act resulted in the first peacetime draft, and a rapid build-up of all Regular Army coast artillery regiments. Existing National Guard coast artillery regiments were called into federal service, originally for a year's training.(31)

The harbor defense assignments were readjusted and six additional Regular Army harbor defense regiments were established (18th-23rd). New antiaircraft regiments were authorized (70th-78th) and a few other mobile regiments, such as the 56th.(32)

In 1941, the National Guard regiments federal service was extended indefinitely. During the same time, regiments assigned to the Organized Reserve were activated. Using their original officers and senior NCOs as cadre, the regiments were built up using volunteers and draftees. These Organized Reserve regiments, however, were redesignated and assigned new regimental numbers.

By 1940, antiaircraft regiments were either mobile or semi-mobile, the primary difference being the number of motor vehicles assigned to the regiment. AA regiments had one gun battalion, which included a searchlight battery, and one machine-gun battalion. During World War II, when first 37 mm and then 40 mm automatic weapons became available, the MG battalion became an automatic weapons battalion.(33) In the spring of 1942 most AA regiments received a third battalion that became the regimental automatic weapons battalion and the former MG battalion was reequipped with 90 mm guns.

World War II

At the beginning of the war, the coast artillery, seacoast and AA, was largely grouped in regiments, with a few separate battalions and batteries for special assignments. The seacoast regiments were assigned to harbor defenses and to temporary harbor defenses, including smaller ports that had not previously been defended and some whose defenses had been abolished between the world wars. Many of the AA regiments were grouped into brigades.

In 1941, the army was reorganized into defense commands—territorial agencies within the continental limits of the United States that coordinated, prepared, and initiated the employment of army forces

and installations against enemy action within their boundaries. Four continental defense commands were established on March 17, 1941: The Northeastern, Southern, Central, and Western Defense Commands. The Northeastern Defense Command was designated the Eastern Theater of Operations on December 20, 1941, and renamed the Eastern Defense Command on March 20, 1942. The Western Defense Command was additionally designated the Western Theater of Operations on December 11, 1941. The Eastern Defense Command absorbed the Central Defense Command on January 15, 1944, and the Southern Defense Command on March 1, 1945. On October 23, 1943, the Western Defense Command's status as a theater of operations was terminated and on November 1, 1943, Alaska was separated from the Western Defense Command, becoming a separate theater of operations.

Each defense command was divided into sectors, which were in turn divided into sub-sectors and/or local sectors. Sectors, usually one or more harbor defenses, were the wartime equivalent of coast artillery districts. Sub-sectors were generally the wartime equivalent of harbor defenses. Some sub-sectors could contain more than one harbor defense. The Florida sub-sector of the Southern Sector contained the Harbor Defenses of Key West as well as the Temporary Harbor Defenses of Miami Beach, Fort Lauderdale, Jacksonville, and Tampa. A local sector was a subdivision of a sub-sector, and might or might not have harbor defense units, but might have bases for the support of the harbor defenses.(34)

In a major reorganization of the army, on March 9, 1942, the harbor defenses were placed under Army Ground Forces and the Antiaircraft Command was established. Each coastal defense command had an antiaircraft command (the Eastern, Southern, and Western AA Commands).(35)

On December 24, 1942, a major reorganization of the army's AA units was initiated. The AA regimental organization had proven insufficiently flexible, and in response, the War Department split the regiments into separate battalions. Where it was desirable to combine battalions, primarily AA, they were assigned to groups, which were flexible headquarters that could control a variable number of battalions.

By early 1944, a similar reorganization was undertaken with regard to HD and TD regiments. Harbor defense battalions were generally stationed in fixed continental defenses, Panama, Alaska, and Hawaii. Tractor-drawn units reinforced the harbor defenses, established and maintained temporary harbor defenses, and defended overseas bases, largely in the Pacific and Caribbean. Antiaircraft groups and separate battalions were initially assigned to the continental U.S. and to Panama and Hawaii, but soon AA units were widely assigned to mobile armies in theaters around the globe.

While not all units went through the same transitions at the same time, there are general patterns. At the start of the war, coast artillery units and posts swelled with an influx of new men and units. As the war moved away from American shores, the number of seacoast artillery units and their strength declined sharply. By early 1943, general service personnel were being replaced by limited service troops, releasing the general service personnel for overseas service. A number of units were disbanded, their personnel augmenting other harbor defense units. The remaining harbor defense regiments were broken up into separate HD battalions in October 1944. Excess personnel were often organized into field artillery battalions. In 1945, the remaining coast artillery units were assigned as batteries of newly created harbor defenses.

As new fixed-gun batteries were completed at harbor defenses, and the threat to the temporary harbor defenses in the continental U.S. waned, the need for tractor-drawn units at home decreased. On the other hand, the need for mobile coast defense units to defend newly taken islands in the Pacific was growing. The tractor-drawn regiments, like the harbor defense regiments, were broken up into separate battalions in 1944. Some of these battalions were formed into groups, primarily for overseas service, while others remained as separate battalions.

Beginning in 1943, coast artillery (AA) battalions, groups, and brigades were redesignated "Antiaircraft Artillery" (AAA) battalions, groups, or brigades. Headquarters batteries of the AA regiments became headquarters batteries of AAA groups, and subsequently, additional groups were created. The former AA regiments were broken up into separate AAA gun, automatic weapon, and searchlight battalions. These battalions were renumbered and assigned to groups, which were often assigned to brigades.(36)

The entire picture is much more complicated than can be fully given in a brief account. Early in the war, some battalions from coast artillery regiments were assigned to separate missions, both in and out of the continental United States. These battalions were often redesignated, while the parent regiment recreated new battalions out of recruits, bearing the old designation.

The situation in Hawaii was particularly complex. Separate HD and AA batteries were created with troops hastily forwarded to the island early in 1942, and all types of units were formed, disbanded, redesignated, and transferred to the war zone with dizzying rapidity.(37)

A number of tractor-drawn battalions saw duty, guarding American-held islands in the Pacific. These units seldom saw action as seacoast artillery, but some were used against land targets as heavy field artillery, pre-war policy notwithstanding. Similarly, AA battalions were deployed in considerable numbers in both the European and Pacific Theaters. The general absence of an aerial threat from the Luftwaffe resulted in many of the AA units, primarily automatic-weapon battalions, in the ETO being employed in a ground support role. In the Pacific, there was a greater threat of Japanese attack, and consequently, less diversion of the AA units to other roles.

As the odds of even isolated naval raids on the U.S. coast diminished, the manpower of the harbor defenses was further reduced, and units were disbanded or inactivated, their personnel converted to other roles. By the end of the war, only a few coast artillery batteries were left to watch over the fixed defenses. Ironically, the remaining batteries were grouped into harbor defenses, continuing the cyclic nature of coast artillery organization.

Postwar 1946-1972

In 1946, the demobilization of the army was well underway, and the skeleton seacoast artillery units were again relegated to caretaking status. In 1950, army artillery was once again combined into a single branch. One aspect of this reorganization was the establishment of the Army Antiaircraft Artillery Command (ARAACOM) for continental defense, followed by the re-activation (and in some cases re-designation) of the army antiaircraft artillery battalions. Sixty-six Regular Army antiaircraft battalions, World War II-era coast/antiaircraft artillery battalions de-activated at the end of the war, were reactivated by ARAACOM during 1950-1953, followed by National Guard AAA battalions. The Regular Army and the National Guard contained automatic weapon, gun, and later missile battalions. Antiaircraft battalions were assigned to combat divisions, as well as to continental defense.

The regimental artillery organization reappeared in 1957 when the combat arms regimental system (CARS) was adopted to provide a regimental structure that would perpetuate unit history and tradition, while allowing the flexibility of a battalion organization. Battalions were listed as elements of historic regiments, but the regiments exercised no command or supply functions, and the battalions were given assignments without regard to the other battalions in the regiment. With the creation of the regiments, the identity of the separate AA battalions disappeared.

On June 20, 1968, air defense artillery became a branch of the army, separate from the field artillery. Over the next few years, 24 air defense artillery regiments were formed, a mixture of old coast artillery regiments and new regiments (or battalions) formed during 1942-1945. These ADA regiments were numbered in parallel to regiments in the field artillery, field artillery and ADA regiments having the same numbers. (38)

In summary, the initial Corps of Artillerists and Engineers became a regimental structure that again gave way to a corps organization and in 1821 again became a regimental structure. This was converted to a corps of serially numbered companies in 1901; a regimental structure was subsequently reactivated in 1924, followed by the conversion to a group/battalion organization during World War II, ending with the redesignation of the remaining active harbor defense batteries as elements of the harbor defense command, e.g. Battery A, HD of New York. The AAA battalions were reactivated in the 1950s; a regimental air defense artillery echelon was reestablished in 1957, ending with the creation of a separate air defense artillery branch. This progression of changes, along with the creation, renumbering, consolidation, and transfer, with and without personnel and equipment, of so many units, makes it very difficult to trace the heritage of the coast artillery units.

Previous issues of this journal contain many histories of CAC units, and of specific defenses. These contain much more detail than is possible in this brief overview. Brief histories of individual coast artillery companies and regiments will follow in succeeding issues of the *Coast Defense Journal.*

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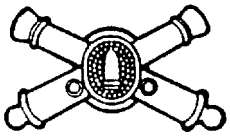


ORGANIZATION OF THE COAST ARTILLERY CORPS,1939

From *R.O.T.C. Manual, Coast Artillery, Basic, 11th Edition (Revised)*
Military Service Publishing Company, Harrisburg, PA (1939)

GENERAL ARTILLERY ORGANIZATION

Introduction

Of the manifold types of weapons with which a modern army is equipped, the most important is that one which is generically termed a gun (fire-arm). In its most general meaning, a gun may be defined as a tubular machine, closed at one end, in which the expansive force of gas is utilized to propel a projectile in a definite direction; but there are so many different kinds of guns that the term is not often used in this comprehensive sense. It is more usual to classify guns as small arms, which have an interior diameter of less than one inch, and cannon, which have an interior diameter of one inch or more.

Originally, the term artillery was applied to all devices for propelling missiles through the air, so when firearms were introduced they were included with the other missile-throwing weapons. To distinguish them from the mechanical weapons, all guns, whatever their size, batteries are designated according to their functions as headquarters batteries, gun batteries, howitzer batteries, mortar batteries, machine-gun batteries, submarine mine batteries, searchlight batteries, service batteries, ammunition batteries, or sound-ranging batteries.

A **headquarters battery** is assigned organically to each battalion, regiment, and brigade. It is organized for purposes of command, intelligence, reconnaissance, observation, administration, signal communication, liaison, fire direction, and supervision of supply. Its strength, composition, and organization depend upon the functions of the unit to which it is assigned.

Gun, howitzer, mortar, and machine-gun batteries are organized primarily for the delivery of fire. Each is equipped with pieces of like type and caliber and has personnel and equipment necessary for command, maneuver, signal communication, observation, and delivery of fire. Each normally operates as a part of a battalion, and each is given a permanent alphabetical designation within the regiment.

Submarine mine batteries are organized for the installation, operation, and maintenance of controlled submarine mine fields in the defense of harbors. Their strength and organization depend upon the extent of the mine fields and upon the armament with which they may be provided.

Searchlight batteries are organized primarily for the operation of searchlights used in the illumination of targets at night.

A **service battery** is assigned organically to each regiment of mobile artillery. It is organized for the supply and baggage transport of the regiment.

Ammunition batteries are organically a part of an ammunition train and are organized for the transport and supply of ammunition.

Sound-ranging batteries are organized primarily for the purpose of determining ranges by observation on sources of sound.

Combat trains, which are analogous to batteries, are organically a part of some battalions. They are organized for the purpose of furnishing a mobile reserve of ammunition for the battalions and a means of transporting ammunition from an ammunition distributing point to the batteries. In time of peace, battalion combat trains may be combined with battalion headquarters batteries.

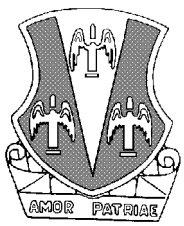
Battalion. The battalion is primarily a tactical unit. It consists of a headquarters and headquarters battery, a battalion combat train (except in certain units of seacoast artillery and of general headquarters reserve artillery), and either three batteries, as in light artillery, or two batteries, as in medium and heavy artillery. Battalions normally operate as part of a regiment and are given permanent numerical designations within the regiment.

Groups and Groupments. It is sometimes necessary to distribute batteries and battalions so that tactical control from battalion and regimental headquarters becomes difficult or even impossible. In such cases, it is customary to form temporary organizations known as groups and groupments from among units having a common tactical mission. Commanders and staffs are obtained from the headquarters of the organic units from which the groups and groupments are assembled. Groups and groupments are not organized unless the normal organization is inadequate or unsuitable. A group consists of two or more batteries assembled from different battalions. A groupment consists of two or more battalions, groups, or larger tactical units assembled from different organic units.

Regiment. The regiment is both an administrative and a tactical unit. It consists of a headquarters and headquarters battery, a band, a service battery, an attached chaplain, an attached medical detachment, and either three 2-battery battalions, as in medium and heavy artillery, or two 3-battery battalions, as in light artillery. Regiments of fixed artillery have a variable organization which depends upon the amount of seacoast artillery available. Regiments of field artillery normally operate as part of a brigade; regiments of antiaircraft artillery may operate as part of a brigade; regiments of seacoast artillery are not organized into brigades. A regiment is given a permanent numerical designation.

Ammunition Train. An ammunition train is assigned organically to each infantry division, corps, and field army. In divisions and corps, the train is an integral part of the artillery brigade. Ammunition trains are organized to provide a mobile reserve of ammunition and to transport ammunition. Each consists of a train headquarters and ammunition batteries of a number and type which depend upon the type of train (division, corps, or army).

Brigade. A brigade is the largest organic artillery unit. Its functions are primarily tactical, and it consists of a headquarters and headquarters battery, three or more regiments, and, in division and corps artillery, an ammunition train. In addition, a corps artillery brigade or a brigade of heavy artillery from general headquarters reserve artillery includes a sound and flash battalion for observation and an attached ordnance company for ordnance repairs.



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The R.O.T.C. Manual, Coast Artillery, Basic, 11th Edition (revised)
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In the Army of the United States, the service of artillery is divided between two arms known as the Field Artillery and the Coast Artillery Corps. When the two arms were first separately organized, the Field Artillery served mobile weapons and the Coast Artillery Corps served fixed weapons; but the recent rapid development of armament and the introduction of new types have modified the original distinction. At present, the Field Artillery may be defined as that arm of the military service which mans and operates all mobile artillery designed and equipped primarily for use against relatively immobile targets; and the Coast Artillery Corps may be defined as that arm of the military service which mans and operates all artillery designed primarily for use against mobile targets. Thus, with some modification both arms may make use of weapons of the same type and caliber.

Coast Artillery Corps

The Coast Artillery Corps includes all fixed artillery, all antiaircraft artillery, all railway artillery, all tractor-drawn artillery especially assigned for coast-defense purposes, all controlled submarine mine installations, and all subaqueous sound-ranging installations, together with the searchlights, power plants, communications, trains, and other accessories necessarily incident to the maintenance and tactical employment of these weapons. It consists of units of the Regular Army, of the National Guard, and of the Organized Reserves. Its mission is the attack of enemy naval vessels by means of artillery fire and submarine mines and the attack of enemy aircraft by means of fire from the ground.

The Chief of Coast Artillery

Supervision of all activities of the Coast Artillery Corps devolves upon the Chief of Coast Artillery, under the Chief of Staff of the Army. He does not exercise any command of troops. His duties pertain solely to supervision of coast artillery training, development, assignment, and other activities, to the formulation of tactical doctrines and mobilization plans, to cooperation with other arms and services, and to advice of the Chief of Staff on matters pertaining to the Coast Artillery Corps. He is assisted by a staff consisting of an executive, a personnel section, a materiel and finance section, an organization and training section, and a plans and project section.

Coast Artillery Districts

All coast artillery troops within corps areas embracing sections of the seacoast are organized into coast artillery districts, which have territorial limits and numerical designations coinciding with those of the corps areas. The district headquarters consisting of a district commander and such staff as may be assigned by the War Department, is normally at or near the headquarters of the corps area of which it forms a part. The district commander commands all coast artillery troops stationed within the territorial limits of the district, including the coast artillery units of the Organized Reserves and those of the National Guard when in the service of the United States.

In time of war, the sea frontier of the United States will be organized into frontier commands, sectors, and subsectors. When such commands come into existence, the command of all coast artillery troops located within them passes automatically from the coast artillery district commander to the frontier, sector, or subsector commander, as the case may be. The coast artillery district commander then becomes available for assignment to duty by the frontier commander.

Unit Organization

For purposes of administration and training and for the purpose of facilitating tactical employment outside of harbor defenses, coast artillery troops other than subaqueous sound-ranging units are organized into batteries, battalions, and regiments. A brigade organization is provided for antiaircraft and tractor-drawn artillery. Subaqueous sound-ranging troops are organized into batteries only.

The organization of all the various kinds of artillery is very similar, since it provides in all cases for the command, service, and tactical employment of artillery weapons. Differences in the details of the organization necessarily exist because of the differences in caliber, tactical use, mobility, and means of transport of the various weapons.

Coast artillery regiments of the Regular Army are designated by number from 1 to 100; those of the National Guard are numbered from 101 to 300; and those of the Organized Reserves are numbered from 301 upward. Brigades of the Regular Army are numbered from 1 to 50, those of the National Guard from 51 to 150, and those of the Organized Reserves from 151 upward.

Antiaircraft Artillery

The assignment of antiaircraft artillery to the elements of armies in the field is as follows:

(1) To each corps: 1 antiaircraft artillery regiment (3 inch guns).

(2) To each field army: 1 antiaircraft artillery brigade (3 inch or 105-mm guns).

(3) To general headquarters reserve: all available antiaircraft artillery not allotted to armies and corps. These units are used in covering establishments, sensitive points, and important places in the communications zone and as a reserve for reinforcing armies, and equipped of equipment, independent corps, and cavalry operating directly under general headquarters. Reinforcement of subordinate units may be by brigade or by regiment.

(4) For overseas possessions and for the zone of the interior, such fixed and mobile antiaircraft artillery brigades and regiments are provided as defense projects may require.

(5) For frontier defense, brigades and regiments are assigned according to the special requirements as determined by defense plans.

Railway and Tractor-Drawn Artillery

Railway and tractor-drawn artillery units are normally allotted to frontier, sector, subsector, and harbor-defense commands in accordance with the requirements of the situation. Their distribution is based upon the needs of the localities to be defended, and they are generally assigned by battalion or regiment. In coastal operations, battalions are usually so widely separated that direct control by regimental commanders becomes impracticable. At the same time, battalions from different regiments may be so located that they may readily be grouped under a single commander. For these reasons, battalions will frequently be formed in groupments, as is usual with fixed artillery in harbor defenses.

In the defense of unfortified harbors, mobile seacoast artillery is organized and emplaced under the same principles that govern the organization and emplacement of artillery in a harbor defense. Such groups and groupments are formed as the mission, local hydrography, and tactical considerations may demand. When large amounts of mobile artillery are assembled in a particular locality, tactical and administrative considerations may warrant their formation by the sector commander into harbor defenses.

When assigned to harbor defenses, railway and tractor-drawn artillery units are absorbed in the harbor-defense organization and become an integral part of the command. They are assigned to positions by the harbor-defense commander so that their fire best supports or supplements that of the fixed armament and to groups and groupments or forts as the organization may require.

Fixed Antiaircraft Artillery

The organization of antiaircraft artillery regiments assigned to fixed armament is made to conform to the requirements of each locality provided with such armament. They are given a flexible organization which can be adapted to the requirements of the fixed armament or to employment with the field forces without extensive reorganization. The gun defense may be organized into one or more battalions, the number of batteries may vary, and the size of each battery conforms to the number of guns and to the character and amount of the equipment. The organization of the machine gun units will conform more closely to that prescribed for mobile units, because their employment may require changes of position and alterations of concentration of fire to meet special situations or the tactics of the enemy.

Brigades

There are two types of brigades, the antiaircraft and the 155-mm gun, tractor-drawn brigades.

The Antiaircraft Brigade. The antiaircraft brigade consists of a headquarters and headquarters battery, and three regiments. Its staff consists of nine officers in peace and war. (Executive, adjutant, intelligence officer, plans and training officer, supply officer, communications officer, munitions officer, assistant communications officer and two aides).

The 155-mm Gun Tractor-Drawn Brigade. This brigade consists of a headquarters and headquarters battery and three regiments. Its staff is organized as shown for the antiaircraft brigade.

Antiaircraft Regiments

This regiment is composed of a headquarters and band, headquarters battery, service battery and two battalions. The 1st battalion is a gun and the 2d battalion, a machine gun battalion. The staff consists of the executive, adjutant, intelligence officer, plans and training officer, supply officer (commands the service battery and is included in the totals of that organization), communications officer, munitions officer. (See Plate 1.)

a. Antiaircraft regimental headquarters battery. The headquarters battery consists of a battery headquarters, a maintenance section and an operation section which is made up of a regimental headquarters detail, intelligence detail, plans and training detail and communication detail.

b. Antiaircraft regimental service battery. This battery consists of a battery headquarters section, a regimental section (divided into a personnel detail and a supply officers' detail), a battalion section (with a battalion detail for the two battalions) and a maintenance section.

c. Antiaircraft gun battalion. The first battalion, gun, consists of a headquarters battery and combat train, searchlight battery and (in war-time) three and (in peace), two batteries. (See Plate 2.)

(1) *The headquarters and headquarters battery and combat train.* This organization includes the battalion headquarters. The staff consists of the executive, adjutant, intelligence officer, plans and training officer, communication officer, reconnaissance officer, and the munitions officer who commands the combat train. The battalion supply officer commands the battalion section of the service battery and is included in the totals of the service battery.

The headquarters battery proper consists of the battery headquarters section; an operations section (consisting of a battalion headquarters detail, intelligence detail, and a communication detail; combat train (war time) consisting of a headquarters and three sections; and a maintenance section.

(2) *Searchlight battery*. This battery consists of a headquarters section, maintenance section and two (peace) and three (war) platoons. Each platoon consists of five sections with a platoon headquarters and a communication detail.

(3) *Antiaircraft gun battery.* This battery is organized into (a) battery headquarters consisting of a battery headquarters section, command detail, range detail and communication detail; (b) a firing section consisting of four gun sections and machine gun and executive officers' detail, and (c) a maintenance section.

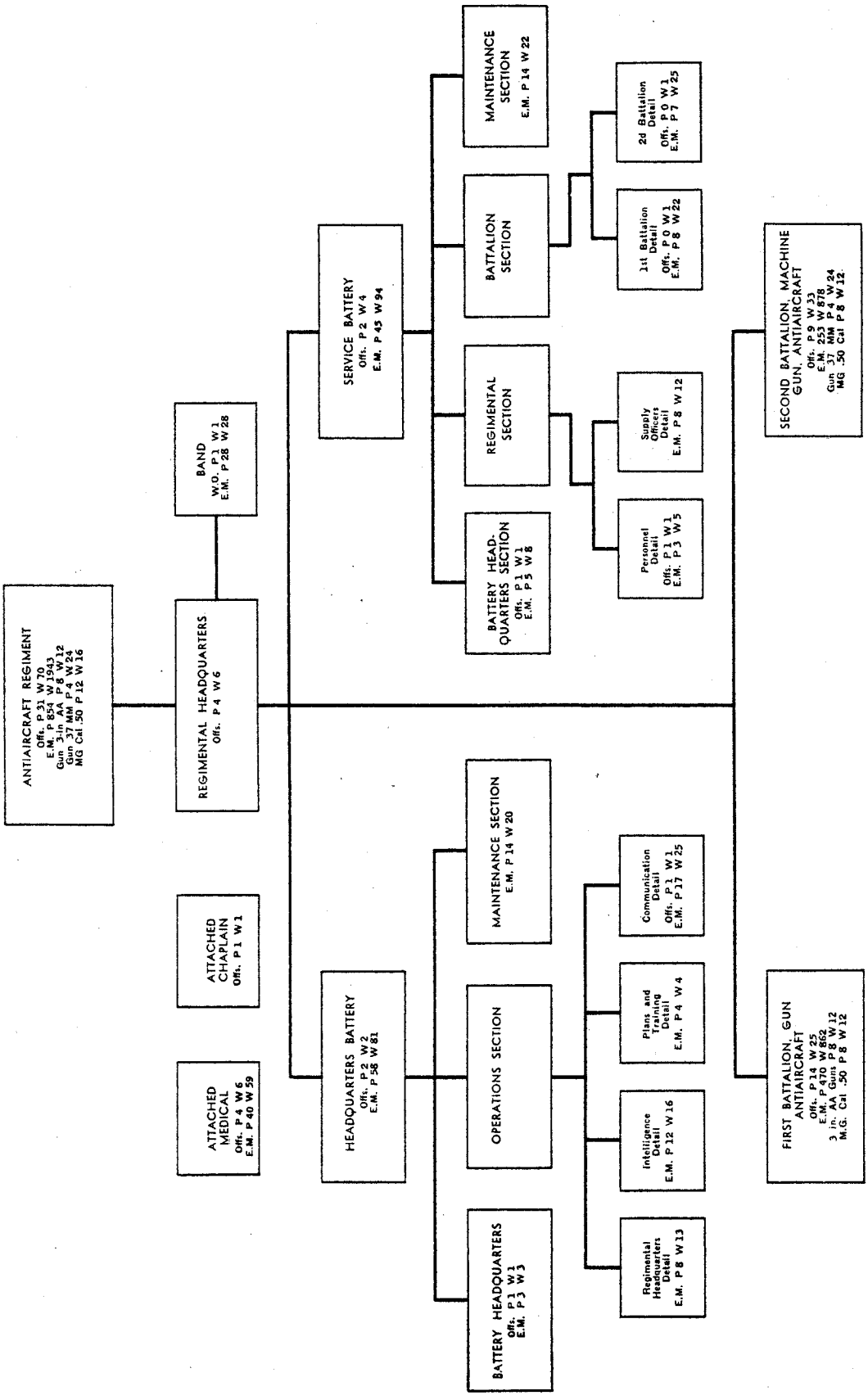


Plate 1. The Antiaircraft Regiment.

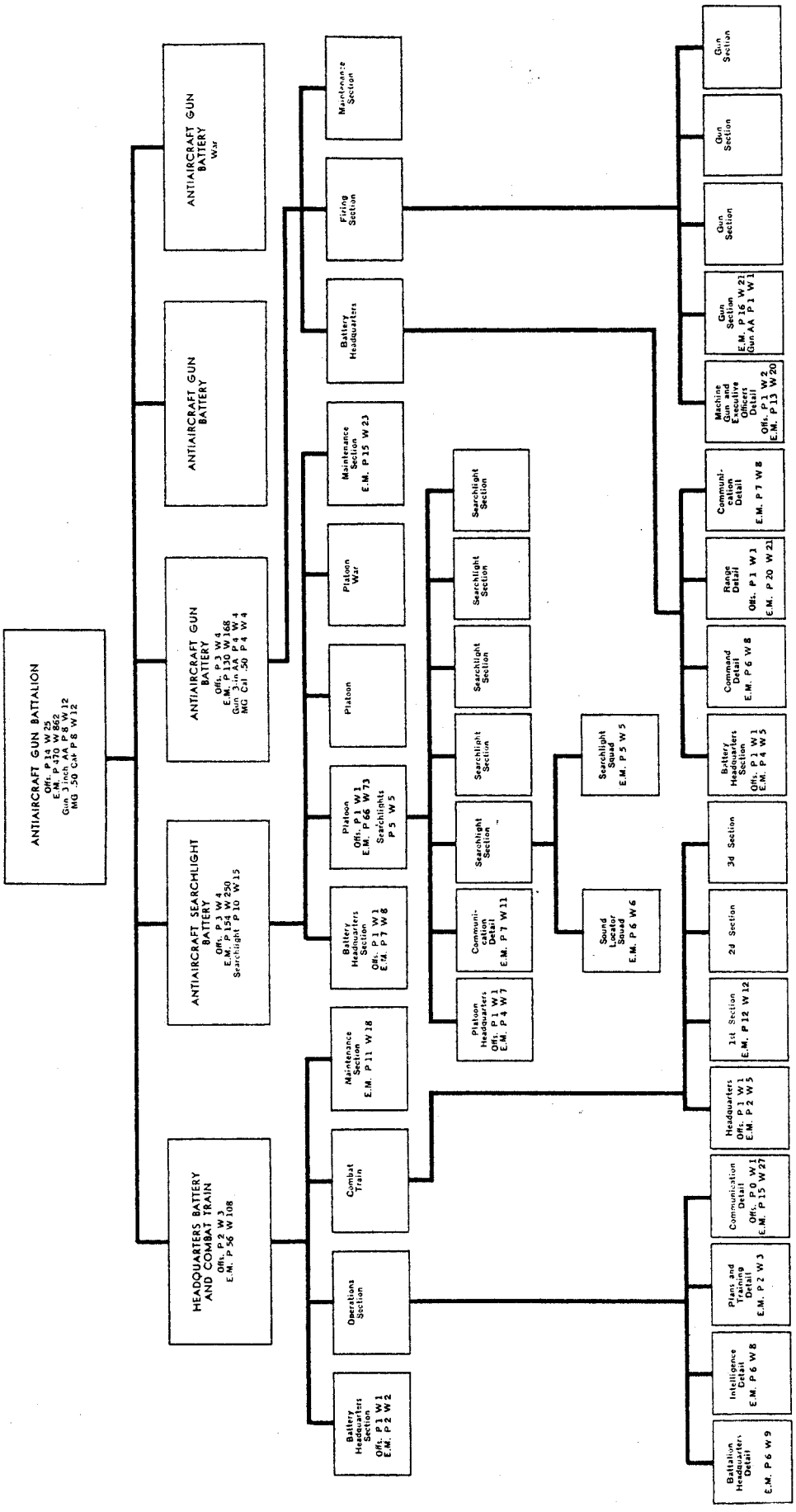


Plate 2. The Antiaircraft Gun Battalion.

d. *Antiaircraft machine gun battalion*. The organization of this battalion consists of a headquarters and headquarters battery and combat train, a machine gun battery, and one (peace) or three (war) 37 -mm batteries. The command and staff consists of a battalion commander, an executive officer, adjutant, communication officer (commands headquarters battery); plans and training officer; supply officer (member of service battery); and the munitions officer who commands the combat train. (See Plate 3.)

(1) *Headquarters, headquarters battery and combat train.* This organization consists of battalion headquarters (4 officers in war time); a battery headquarters section; an operations section which consists of a battalion headquarters detail, intelligence detail, plans and training detail, and a communication detail; a combat train (war); and a maintenance section.

(2) *Antiaircraft machine gun battery.* This organization consists of a battery headquarters; an operations section, consisting of a command detail and a communication detail; a maintenance section, and two (peace) or three (war) platoons. Each platoon (.50 caliber machine gun) has a headquarters and range section and two sections of two squads each.

(3) *Antiaircraft 37 -mm gun battery.* This, battery consists of (a) a battery headquarters section; (b) an operations section, consisting of command detail and communication detail; (c) a maintenance section and (d) two (peace) or four (war) platoons, each consisting of a platoon headquarters, a range section, and two gun sections.

155-mm Gun Tractor-Drawn Regiments

The peace organization of this regiment consists of a regimental headquarters and band, headquarters battery, service battery and two battalions. In time of war it has an additional battalion. Its war time regimental staff consists of the executive, the adjutant, intelligence officer, the plans and training officer, supply officer, communications officer, munitions officer, reconnaissance officer assistant communication officer and assistant plans and training officer. The supply office commands the service battery and is included in the totals of that organization. (See Plate 4.)

a. *Regimental headquarters battery, 155-mm gun.* This battery consists of (1) a battery headquarters; (2) operations section organized into a regimental headquarters detail, plans and training detail, intelligence and liaison detail, reconnaissance detail and a communication detail; and (3) a maintenance section.

b. *Regimental service battery, 155-mm gun*. The battery comprises (1) a battery headquarters section; (2) the regimental section, consisting of a personnel detail and a supply officer's detail; (3) three battalion sections and a (4) maintenance section.

c. *155-mm gun, tractor-drawn battalion*. The battalion consists of a headquarters and headquarters battery, a combat train, and two batteries. At war strength, the battalion is commanded by a major. The staff consists of the executive, adjutant, plans and training officer, intelligence officer, liaison officer, reconnaissance officer, communication officer, and the supply officer, who commands the battalion section of the service battery and is included in the totals of that battery.

(1) *155-mm gun tractor-drawn battalion headquarters battery.* The battery consists of (a) a battery headquarters section; (b) an operations section comprising a battalion headquarters detail, a plans and training detail, an intelligence and liaison detail, a reconnaissance detail and a communication detail; and (c) a maintenance section.

(2) *155-mm gun tractor-drawn battalion combat train.* This train consists of (a) headquarters section; (b) two platoons of two sections each and a maintenance section.

(3) *155-mm gun tractor-drawn battery.* The battery consists of (a) a battery headquarters section; (b) an operations section, consisting of a command post detail, a communication detail and a reconnaissance detail; (c) the firing battery comprising two gun platoons and a machine gun detail. A gun platoon consists of two gun sections and platoon detail. There are four 155-mm guns in the battery.

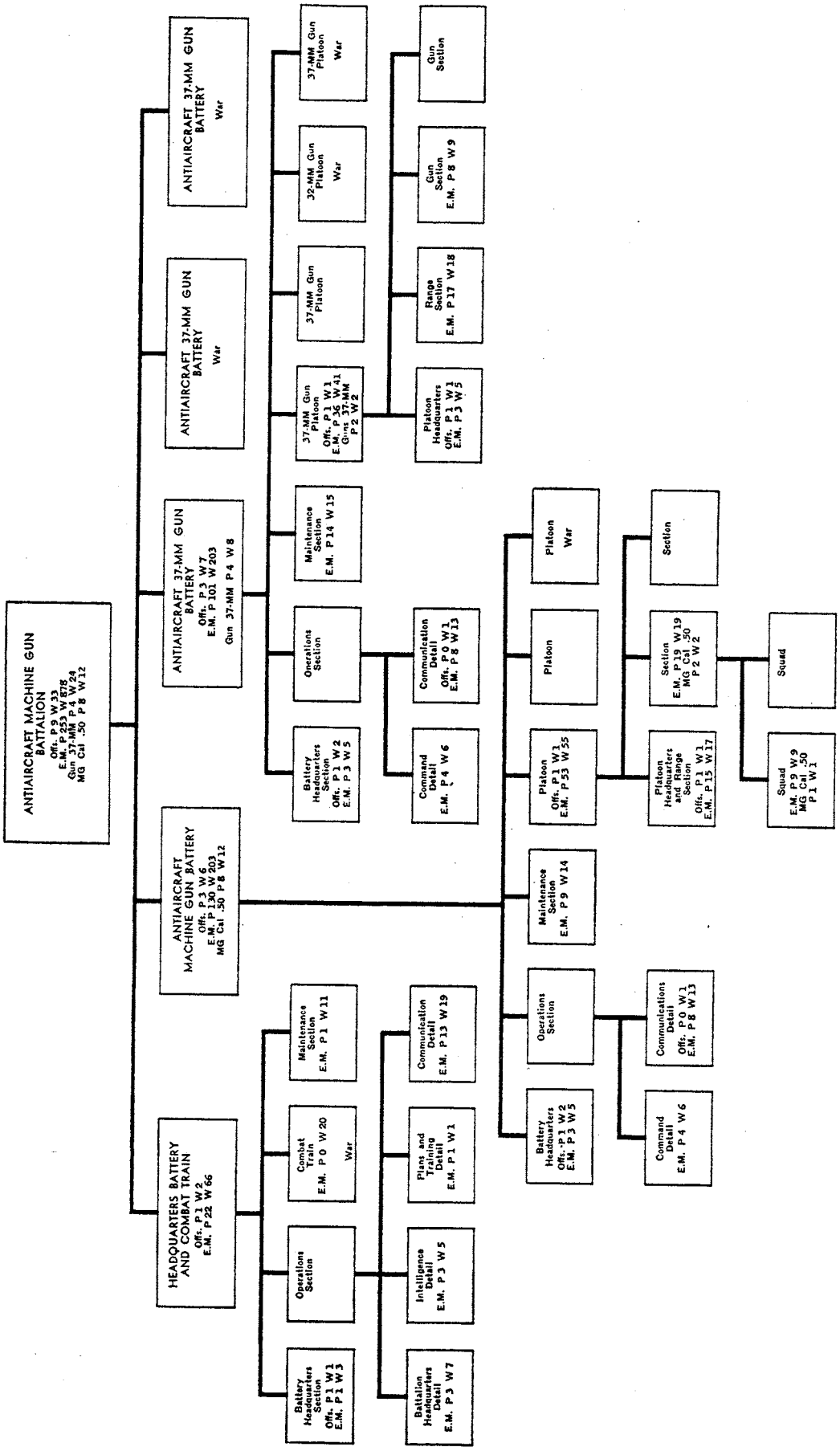


Plate 3. The Antiaircraft Machine Gun Battalion.

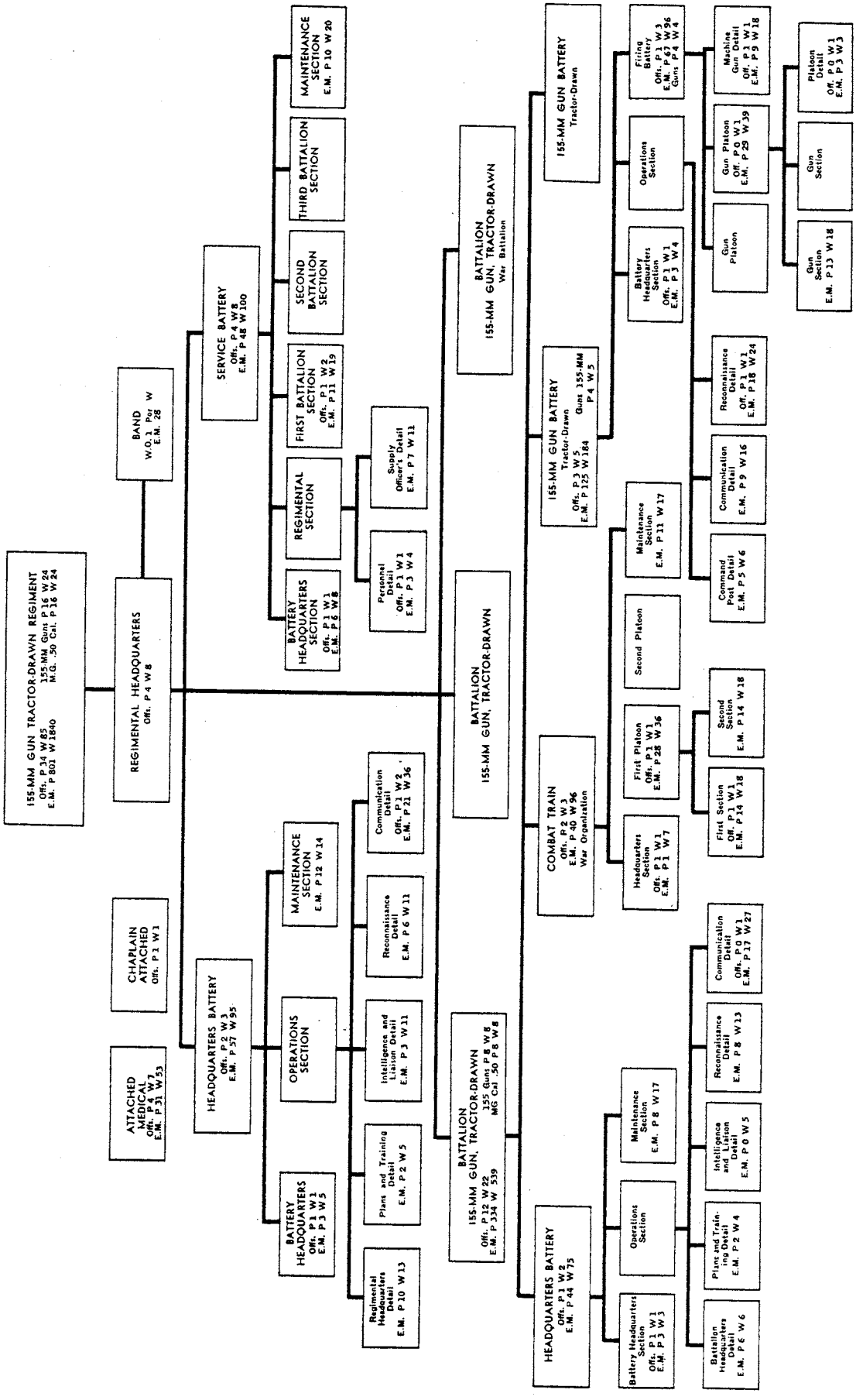


Plate 4. The 155-mm Gun, Tractor-drawn Regiment.

Railway Artillery Regiments

The peace-time organization of this regiment consists of a headquarters and band, headquarters battery, service battery and two battalions. The war time organization has an additional battalion. The staff consists of the executive, adjutant, intelligence, plans and training officer, supply officer (commands service battery and is included in the totals of that organization), communication officer, reconnaissance officer, railway and munitions officer. (See Plate 5.)

a. *Regimental headquarters battery, railway artillery.* The battery consists of (1) a battery headquarters; (2) the regimental section, subdivided into a regimental headquarters detail, intelligence detail, plans and training detail, communication detail, reconnaissance detail and a railway and munitions detail; and (3) a maintenance section. The organization of this battery is the same for both types of railway regiments. b. *Regimental service battery, railway artillery*. The battery has (1) a battery headquarters section, (2) a regimental section, consisting of a personnel detail and a supply officer's detail; (3) a maintenance section and (4) three battalion sections.

c. *Railway artillery battalion* (except those for 12-inch and 14-inch guns, see below.) The battalion consists of a headquarters battery and two batteries. It is commanded by a major, and his staff consists of an adjutant, plans and training officer, intelligence officer, communication officer, reconnaissance officer, railway and munitions officer, and a supply officer who commands the battalion section of the service battery and is included in the totals of the service company.

(1) *Battalion headquarters battery, railway battalion.* The battery consists of (a) a battery headquarters section; (b) an operations section, made up of a battalion headquarters detail, intelligence detail, plans and training detail, communication detail, reconnaissance detail, railway and munitions detail; and (c) a maintenance section. This organization is used by both types of railway regiments.

(2) *Railway artillery battery* (except those for 12-inch and 14-inch guns, see below). The battery has (a) a battery headquarters, consisting of a command detail, range section, and communication section; (b) a firing section consisting of four gun sections and a machine gun and executive officer's detail. This battery is armed with four 7-inch, 8-inch, or 10-inch guns or with 12-inch mortars. It is also provided with four 50 caliber machine guns AA, Browning.

The only difference in the organization of railway artillery regiment for 12-inch and 14-inch guns and the other railway regiments is in the number of guns in the firing battery, two instead of four, and the number of enlisted men in the battalion and gun batteries.

Harbor Defense Regiments

There are three types of harbor defense regiments known as "A", "B", and "C". All three have the same command and staff. The colonel commands the regiment and his staff consists of an executive, adjutant, intelligence officer, plans and training officer, supply officer, searchlight officer, communication officer, assistant adjutant and assistant plans and training officer. In the type "A" regiment its organization in war time consists of a regimental headquarters and band, a headquarters battery and three battalions of three batteries each. In peace it has one less battalion. The type "B" regiment is organized in the same manner except that in war and in peace it has two battalions of three batteries each. The type "C" regiment is the same except that in war time it has three battalions of four batteries each and in two battalions of three batteries each. (See Plates 6, 7, and 8.)

a. *Regimental headquarters battery, harbor defense types "A", "B," and "C."* This battery has (1) a harbor defense section, consisting of (a) an administrative section composed of a headquarters, supply and maintenance sections; (b) a tactical section containing an intelligence, plans and training, and command post sections; (c) technical section, consisting of an artillery engineer, searchlight, and communication sections; and (2) a battery section consisting of a headquarters and a maintenance section.

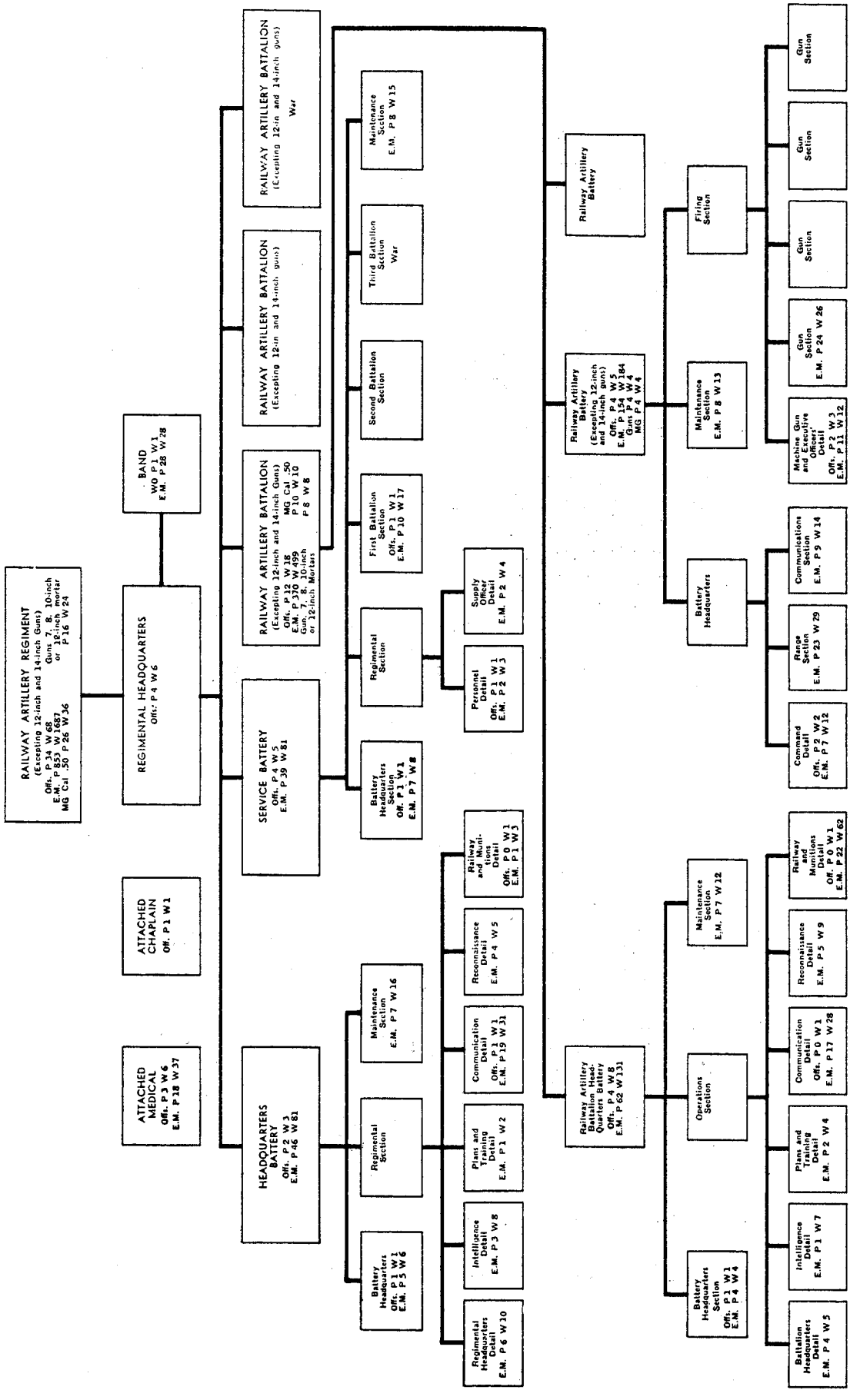


Plate 5. Railway Artillery Regiment (excepting 12-inch and 14-inch guns).

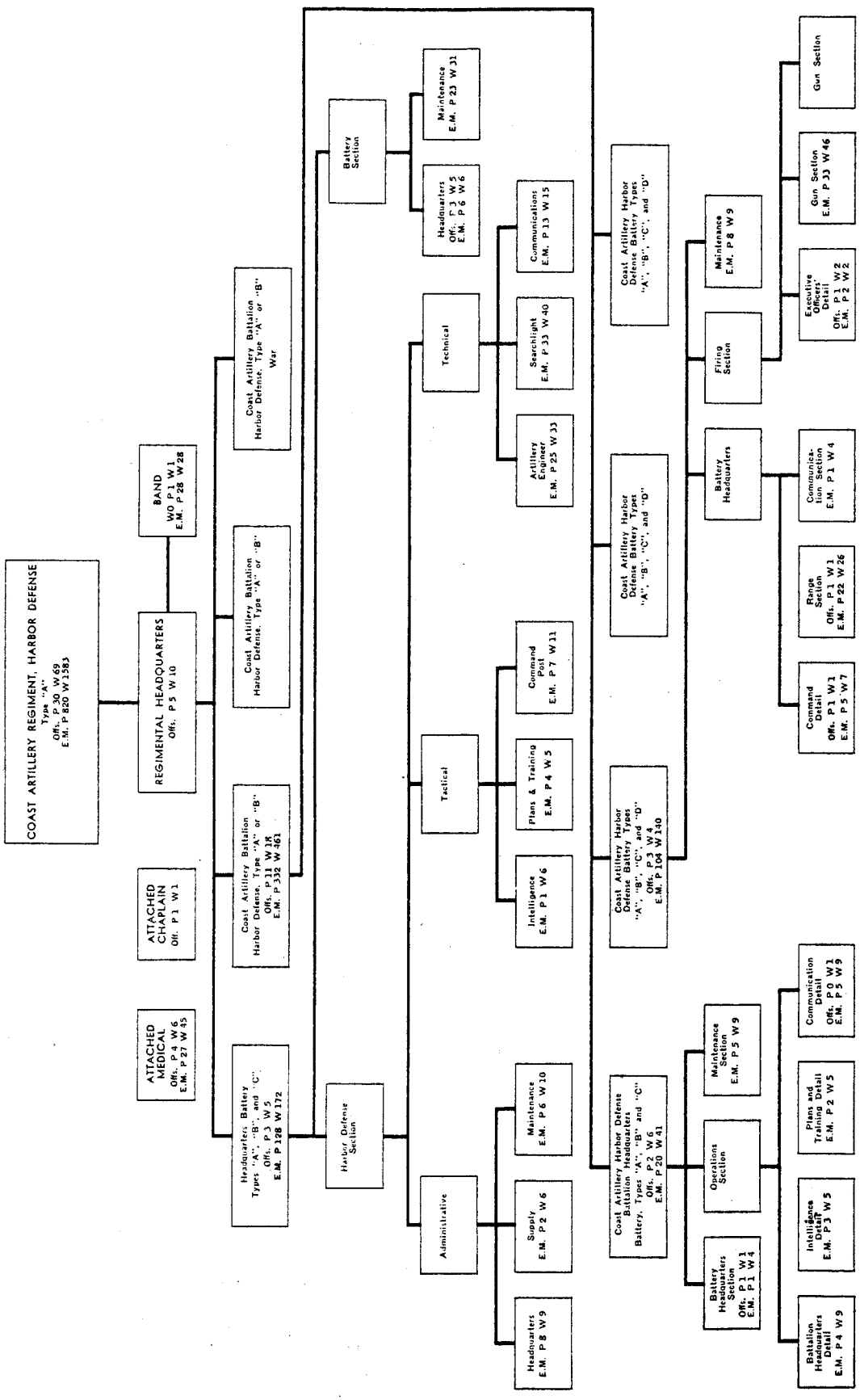


Plate 6. Harbor Defense Regiment, Type "A."

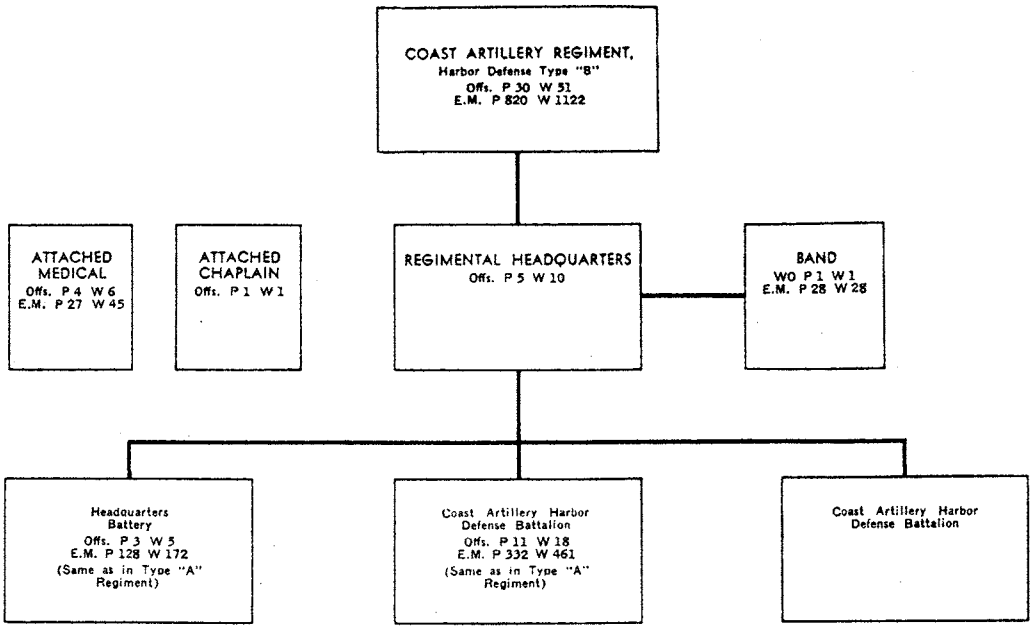


Plate 7. Harbor Defense Regiment, Type "B."

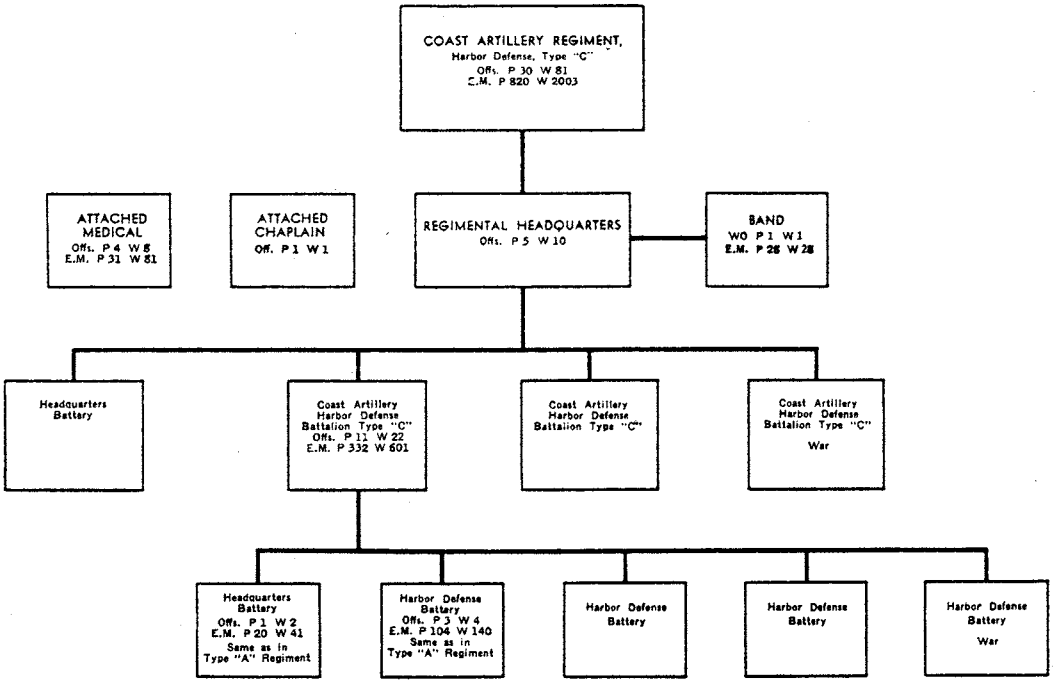
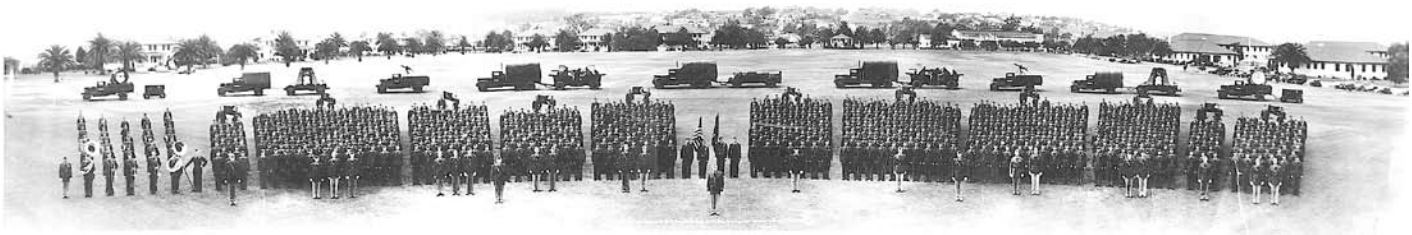


Plate 8. Harbor Defense Regiment, Type "C."



The 63rd Coast Artillery (AA) Regiment assembled on the parade ground at Fort MacArthur, CA, in 1939. Note the presence of the band, 11 lettered batteries with their guidions, and the regiment's antiaircraft equipment behind. The regiment commander, Col. E.A. Stockton, stands out center in front of the regimental flags. (Fort MacArthur Museum)

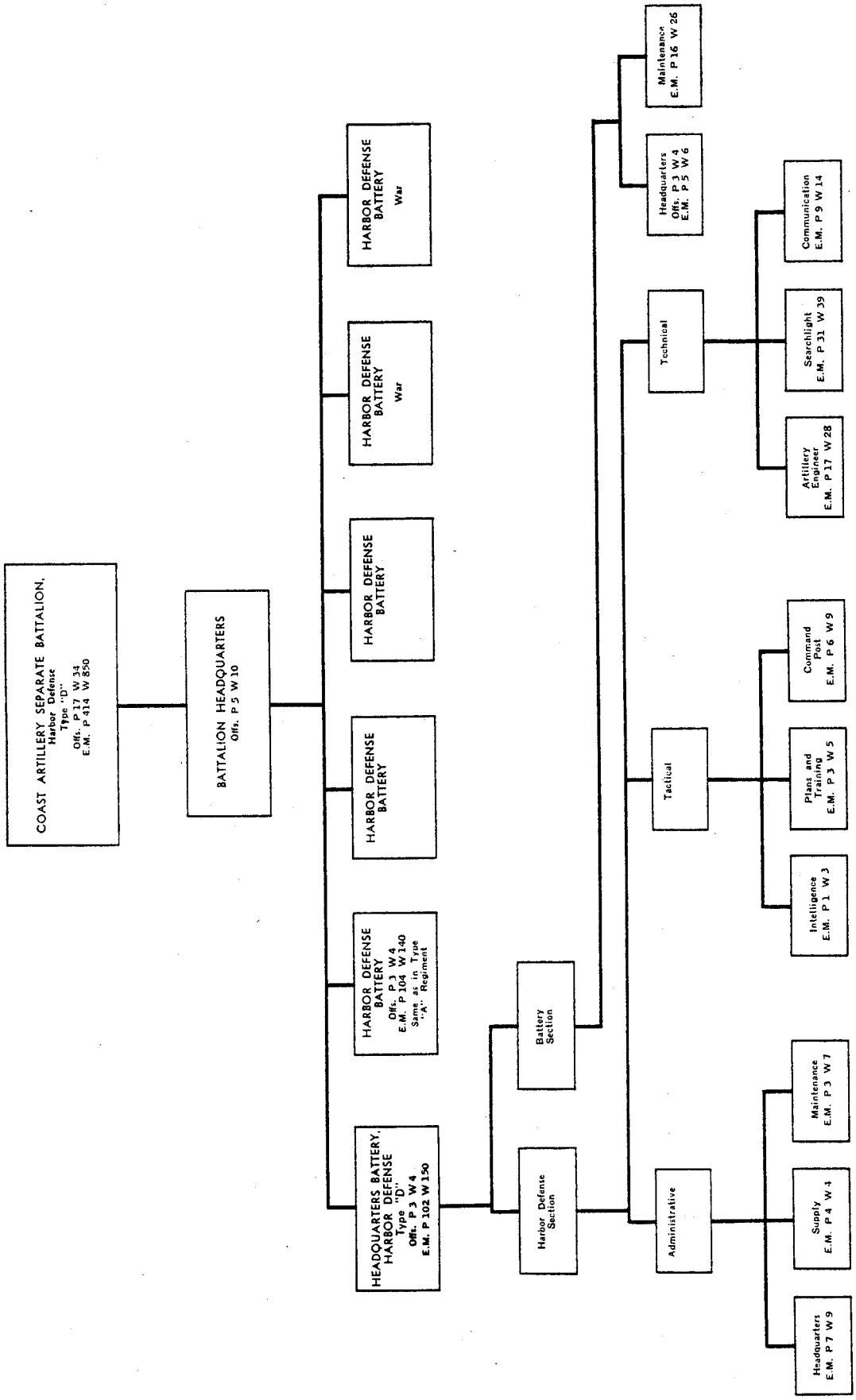


Plate 9. Harbor Defense Separate Battalion, Type "D."

b. *Harbor defense battalion, types "A," and "B."* This type of battalion consists of a (1) battalion headquarters; (2) a headquarters battery; and (3) three firing batteries. It is commanded by a major whose staff consists of an adjutant, intelligence officer, plans and training officer, and communication officer.

c. *Harbor defense battalion, type "C."* This battalion is similar to types "A" and "B" except that in time of peace it has three firing batteries and in time of war four firing batteries.

(1) Battalion headquarters battery, harbor defense, types "A," B," and "C." The battery consists of a (a) battery headquarters, section, (b) an operation section, composed of a battalion headquarters detail, intelligence detail, plans and training detail, and communications detail; and (c) a maintenance section.

(2) *Harbor defense battery, types "A,"B," "C," and "D."* The battery has (a) a battery headquarters, consisting of a command detail, range section, communication section; (b) a firing section consisting of two gun sections and executive officers detail; and (c) a maintenance section.

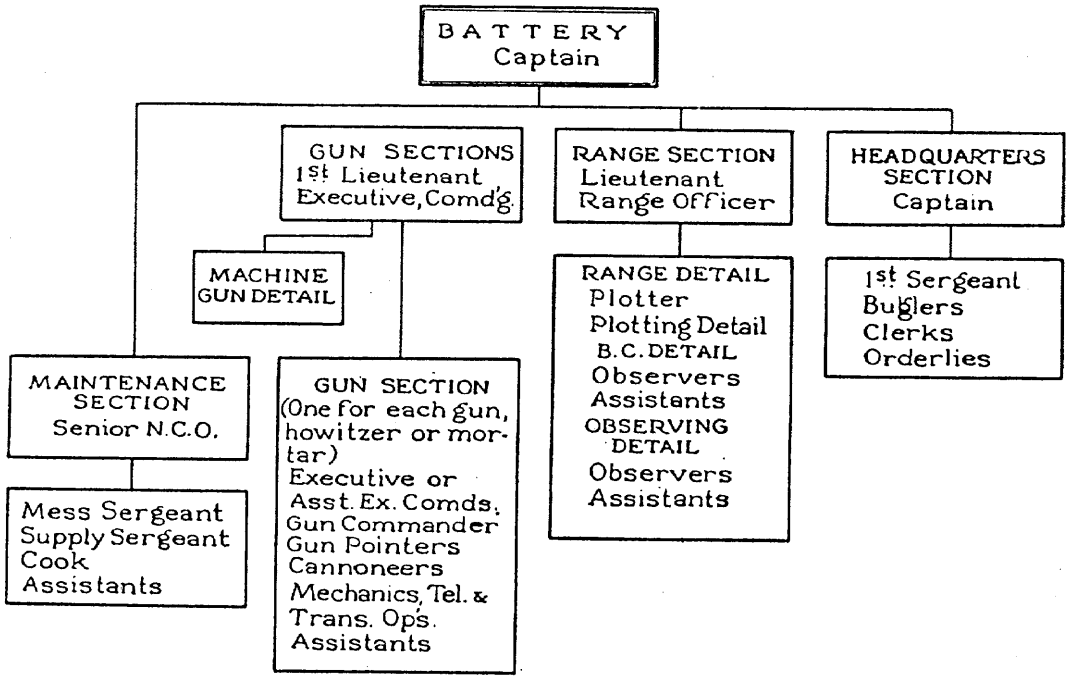
d. *Separate harbor defense battalion, type "D."* This battalion consists of a battalion headquarters, a headquarters battery and in peace three and in war five firing batteries. The firing battery is of the same type as found in the other harbor defense organizations. The battalion is commanded by a lieutenant colonel and has a staff consisting of an executive, adjutant, intelligence officer, plans and training officer, supply officer, searchlight officer, communication officer, assistant adjutant, and assistant plans and training officer. (See Plate 9).

(1) Separate harbor defense battalion headquarters battery, type "D." This battery has a harbor defense section, composed of (a) an administrative section which has a headquarters section, a supply section, and a maintenance section; (b) a tactical section which consists of an intelligence section, plans and training section, and command post section; (c) a technical section consisting of an artillery engineer section, searchlight section, and communication section. It also has a battery section with a headquarters and a maintenance section.

The Gun Battery

The gun battery is a complete administrative and fire unit and includes both materiel and personnel It may on occasion be employed as a tactical unit, in which case the battery commander exercises functions of fire direction. It may pertain to fixed, tractor-drawn, railway, or antiaircraft artillery; and its weapons may

GUN BATTERY, FIXED ARTILLERY



be guns, howitzers, mortars, or machine guns. Antiaircraft searchlight batteries, submarine mine batteries, and subaqueous sound-ranging batteries are analogous to gun batteries. Each battery manning cannon, antiaircraft machine guns, antiaircraft searchlights, or submarine mines receives a permanent alphabetical designation, beginning with Battery A in each regiment.

Comparison of Batteries. The following 1937 table compares the battery organization and the strength of the various sections:

	TD	Ry	AA Gun	AA MG	AA SL
Commissioned personnel:					
Battery commander	1	1	1	1	1
Executive	1	-	1	-	-
Assistant executive	2	2	1	-	-
Range officer	-	-	1	-	-
Reconnaissance officer	1	1	-	-	-
Reconnaissance & communication officer	-	-	-	1	-
Railway officer	-	1	-	-	-
Platoon commanders	-	-	-	3	3
Total commissioned	5	4	4	4	4
Enlisted personnel:					
Battery headquarters section	5	5	7	4	1
Operations section:					
Command-post detail	6	7	8	7	-
Range detail	-	24	21	-	-
Reconnaissance detail	-	24	-	-	-
Communication detail	17	17	7	9	-
Firing platoons	-	-	-	138	-
Firing sections	-	114	-	-	-
Firing battery	86	-	100	-	-
Platoons	-	-	-	-	216
Maintenance section	16	22	28	23	23
Total enlisted	184	100	109	181	210

Fixed Battery

A battery of fixed artillery consists of a number of permanently emplaced cannon of the same caliber and characteristics, grouped with the object of concentrating their fire on a single target and of being commanded by a single individual, together with all personnel, structures, installations, and equipment provided for their protection, command, and service. The number of cannon vanes from one to four, depending principally upon the caliber, which may vary from 3 to 16 inches. The permanent emplacement of each fixed battery is given an individual name by the War Department, as Battery Ruggles, by which it is known and distinguished from other emplacements.

Submarine Mine Battery

A submarine mine battery is an administrative and fire unit of the harbor defense and is employed for the installation, maintenance, and operation of a controlled mine field. It is divided into a battery headquarters section, an operations section (containing a command-post detail and a range detail), a casemate section, a loading and property section (consisting of loading, cable, explosive, and maintenance details), a planting section (consisting of mine planter, distribution-box boat, and small boat details), and a maintenance sec-

tion. In addition, fire-control and gun sections may be included for manning certain of the mine defenses, or the loading and planting sections may have an additional assignment as gun sections. The battery officers include a battery commander, an executive, a casemate officer, and a loading officer.

Sound-Ranging Battery

Subaqueous sound-ranging batteries are formed as required for employment either within or without harbor defenses. No prescribed organization has been adopted, and the details of organization would be determined by local requirements and the equipment available. Each subaqueous sound-ranging battery receives a permanent numerical designation, beginning with *1st Sound-Ranging Battery.*

Battery Subdivisions

Battery headquarters section. Under the direct supervision of the battery commander, the battery headquarters section handles all the administrative work of the battery.

Operations section. The command-post detail, under the direct supervision of the battery commander, establishes and operates the battery command post and assists the battery commander in the conduct of fire. In railway batteries, it makes such reconnaissance of roads, gun positions, observing stations, and spotting stations as may be necessary and prepares such maps and orientation data as may be required.

Range detail. The range detail, under the command of the range officer, installs and maintains all fire-control and position-finding equipment, mans the position-finding, observing, and spotting stations, furnishes the data for determining the range and direction to targets, determines the positions of impacts, operates the plotting and computing devices used to determine the firing data, and records and transmits data at prescribed intervals. In tractor-drawn batteries, the duties of the range detail are included in those of the reconnaissance detail. Machine gun batteries have no range detail.

The reconnaissance detail, under the command of the reconnaissance officer, reconnoiters routes and positions, performs all topographical operations, assists in the preparation of maps and charts, and establishes observation posts.

The communication detail is responsible for the establishment of all means of signal and fire-control communication available to the battery. Its duties include the installation and maintenance of the battery telephone system, operation of the battery panel station and establishment and operation of the battery message center. The usual means of communication within the battery is the telephone, although the megaphone is frequently used for short distances. Visual signaling and messenger service are provided to insure communication in case of disruption of the telephone service. In addition electrical and mechanical devices are used in fixed and antiaircraft artillery for the transmission of data and signals.

Maintenance section. The maintenance section is charged with the procurement, storage, care, and issue of supplies, rations, clothing, and equipment and with the care and operation of all transportation provided for the battery.

Firing section. The firing section of a battery is subdivided into gun sections, one gun section for each gun assigned to the battery, except in machine gun batteries, where a gun section consists of two gun squads.

An antiaircraft machine gun detail, provided in each gun battery, is a part of the firing section. Equipped with four antiaircraft machine guns, it is responsible for providing protection against low-flying enemy aircraft.

Duties of Battery Officers

Battery commander. The battery commander, normally a captain, is responsible for the efficiency of the battery, for the maintenance of all armament, accessories, and fire-control equipment in serviceable condition and for the readiness of the battery for war service. He is charged with the basic training of the individuals comprising the battery and with the administration, subsistence, and supply of the battery. He conducts the fire of the battery In practice and in action, and he keeps up to date the gun or emplacement

book and other records prescribed by regulations and orders. When the battery is not operating as part of a battalion (or group), when communication with the battalion (or group) command post is disrupted, and when battery commander's action is ordered, he exercises the functions of fire direction usually exercised by the battalion (or group) commander and conducts the battery action as nearly as possible in conformity with the particular tactical plan which is adapted to the existing tactical situation.

He keeps himself fully informed as to the ammunition supply of the battery and reports expenditures and deficiencies. When necessary, he reconnoiters and selects the exact positions for the battery, position-finding stations, observing stations, and spotting stations and the routes thereto. He makes frequent inspections of the battery and provides for the replacement of personnel, supplies, ammunition, and equipment. He keeps a permanent record of daily attendance at artillery instruction.

Executive. The battery executive, normally a first lieutenant, commands the firing section and is responsible to the battery commander for its training and efficiency. He makes all necessary preparations to expedite the opening of fire. He is charged with the care and operation of the materiel of the firing section, with the protection of the personnel and materiel at or near the gun positions, with the reliability of the communication system at his post, with the resupply of ammunition, and with the replacement of casualties in the firing section. All other officers assigned to the gun sections are assistants to the battery executive.

Range, reconnaissance, and communication officers. The range officer of fixed and antiaircraft gun batteries, the reconnaissance officer of railway and tractor-drawn batteries, and the reconnaissance and communication officer of antiaircraft machine gun batteries perform similar duties, the title indicating in each case the primary functions. The details of these duties depend to a great extent upon the character of the armament which is assigned to the battery. In general, this officer commands the range or reconnaissance detail and the communication detail and is responsible to the battery commander for their training and efficiency. He supervises the installation, care, and operation of the battery communications and of the fire-control and time-interval equipment with which the battery may be provided. He accompanies the battery commander on reconnaissance and makes the necessary surveys and computes the data for orientation of instruments and guns. He supervises the determination of the firing data and all corrections thereto.

Railway officer. The railway officer of a battery of railway artillery is in charge of the motor transportation and the rolling stock of the battery. Under the battery commander, he is directly in charge of the make-up of all trains and of train movements. He maintains a file showing the classes, number, and types of all guns and cars assigned to the battery and loading diagrams showing the axle loads, over-all dimensions, distances between wheels and trucks, maximum degree of track curvature for which the materiel is designed, the over-hang on curves, and end-view clearance diagrams showing the maximum contour around the mounts and cars. He also maintains a file showing the trackage and gauge of all railways in his locality, clearance diagrams of all structures having obstructions or clearance limitations, location of all curves greater than 9° maximum grade of tracks, and the weight of rails and kind of ballast.

The Harbor Defense

Composition. A harbor defense is an administrative and tactical unit provided for the defense of a harbor or other water area. Administratively, the harbor defense is composed of one or more forts, at which the elements of the harbor defense are located. Tactically, the harbor defense embraces one or more groupments, or groups, of seacoast artillery, usually supplemented by submarine mine defenses, and means for local defense against attack from sea, air, or land, together with the personnel, materiel, and accessories required for their administration and tactical employment.

The armament may include fixed and mobile seacoast artillery, fixed and mobile antiaircraft artillery, fixed and mobile searchlights, and controlled submarine mines, the amount and kind of each depending upon strategical and tactical considerations. The armament is manned by coast artillery troops, but the garrison of a harbor defense normally includes troops from the administrative, technical, and supply services and

may include troops from other combat arms. Harbor defenses are designated by the name of the harbor, city, locality, or water area they defend.

Administrative Organization. The administrative organization of a harbor defense is based entirely upon the fort as the administrative and supply unit. The fort commanders as such, enter the tactical chain of command only in the event of loss of communication with the harbor defense or in the immediate defense of their forts. When all of the elements of the harbor defense are located at a single fort, the administrative functions of the fort are absorbed in those of the harbor defense, and the fort organization, as such, is omitted.

Tactical Organization. The proper tactical organization of a harbor defense is essentially a matter of efficiency in administration, supply, and tactical employment. Each harbor defense is a separate problem and is organized to meet its particular requirements. In general, the organization contemplates grouping together the armament having fields of fire which cover the same, or adjacent, water areas, the actual location of the armament being a secondary consideration. Where there are two or more water approaches to the defended area, or where for any reason it is necessary to group part of the armament for the defense of one normal zone and part for another, or where the number of groups is such that they cannot be advantageously controlled by one individual, it is necessary to organize two or more groupments. Where the number of groups is not large and there is but a single approach to the defended area, the echelon of groupment may be omitted.

Normally, a harbor defense consists of a headquarters, a harbor defense section, two or more groupments or separate groups, and such administrative, technical, supply, and tactical units as may be assigned.

Headquarters. The harbor defense headquarters includes the harbor defense commander, a tactical staff, and an administrative staff. The senior coast artillery officer present for duty is the harbor defense commander. Often he commands both the harbor defense and a regiment. He organizes his staff from the available officers and assigns the other officers to appropriate stations and duties. He may also act as fort commander at the fort at which his headquarters and command post are established, in which case his staff functions also as the fort staff. He controls all seaward, landward, and antiaircraft defense with which his command is charged. In some cases, the landward or the antiaircraft defense or both may be provided by agencies not under his command. He organizes appropriate groupments and designates their commanders, and he coordinates the action of groupments by assigning normal and contingent zones, by prescribing missions, and by other appropriate instructions.

The tactical staff consists of an executive, a plans and training officer, an intelligence officer, a communication officer and a searchlight officer. The administrative staff consists of an adjutant, an artillery engineer, an ordnance officer, a chemical officer, a disbursing officer, a quartermaster, a surgeon, and a chaplain. Training, administration, and technical and staff functions of the harbor defense and routine duties connected with the exercise of these functions are performed at the harbor defense headquarters. Functions of tactical command are exercised from the harbor defense command post.

The Fort

Composition. A fort is an area within a harbor defense wherein are located harbor defense elements capable of offensive action against hostile war craft and which is organized to provide for such action and for its own protection and administration. It is primarily an administrative command, designed to provide a centralized control over the administrative and technical details pertaining to the personnel and materiel located thereat. Under exceptional circumstances, it may be employed as a tactical unit and its organization provides for the possibility of such use.

The amount, types, and calibers of the armament, the submarine mine installations and the auxiliary installations and equipment at a fort depend chiefly on the location of the fort with reference to the zones and areas defended by the harbor defense of which it is a part, and it may include fixed, mobile, and an-

tiaircraft artillery. All the seaward defenses of the harbor may be contained in a single fort or they may be distributed among several forts and may be augmented by mobile artillery in temporary emplacements.

The composition of a fort varies with local conditions and is not prescribed. It may contain one or more tactical commands or it may contain only parts of one or more tactical commands. The troops may consist of any or all classes of troops contained in a harbor defense garrison. Forts are designated by the names of persons who rendered distinguished service to the government during their public careers.

Organization. The fort organization consists of a headquarters, a fort detachment, and such tactical units as may be specifically placed under the command of the fort commander. The fort detachment is a subdivision of the harbor defense section and is similar in organization and duties to the harbor defense detachment. The fort is organized to provide for the administration and technical control of the personnel and materiel located thereat, to facilitate the employment of tactical units by their respective commanders, and to permit employment of the fort as a tactical entity in the event of disruption of communication with the harbor defense or in the event of a landing attack made under conditions requiring the use of the fort troops for its defeat. When communication with other elements is disrupted, the senior line officer at the fort directs the action of all elements located thereat until normal tactical relations are re-established.

Headquarters. The fort headquarters includes a fort commander and an administrative staff. The tactical command exercised by the fort commander is normally restricted to that of a groupment, group, or battery, depending upon his position in the normal chain of command, other defense elements at the fort being commanded by the commanders of the tactical units to which such elements pertain in the normal chain. There is normally, therefore, no tactical staff provided for the fort headquarters, and when one is required it may be formed from the staff of the fort commander's normal tactical command and its duties and organization will then be similar to those of the harbor defense tactical staff to the extent required by the local situation. The fort administrative staff consists of an adjutant, an artillery engineer, an ordnance officer, a quartermaster, and a surgeon; and their duties are similar to those of corresponding staff officers of the harbor defense.

The Groupment

Composition. A groupment in a harbor defense is a tactical command composed of two or more groups, which cover the same or adjacent areas with their fields of fire, together with the personnel, materiel, and accessories required for its employment as a unit. The details of its composition vary in different harbor defenses but it normally consists of a number of gun, howitzer, and mortar groups and a mine group: It ordinarily includes such fixed and mobile armament and controlled mine fields as cover the same general defensive zone and can be advantageously handled in fire action by a single individual. In addition, the groupment may be provided with elements for local defense. Groupments are designated by the name of some geographical feature with which the groupment is by location identified.

Organization. The groupment consists of a headquarters, a groupment detachment, two or more groups; and such additional tactical units as may be assigned or attached to the groupment. The headquarters includes the groupment commander and a staff consisting normally of a plans and training officer, an intelligence officer, a communication officer, and a searchlight officer. The number of staff officers depends on local conditions, and when the groupment commander is also a fort commander appropriate fort and groupment staff duties are consolidated.

The groupment detachment is a subdivision of the harbor defense section and consists of the enlisted personnel necessary to assist the groupment commander and his staff in the exercise of their functions. Its organization and duties are, in general, similar to those of the harbor defense detachment.

The Gun Group

Composition. A gun group in a harbor defense is a tactical unit composed of two more rifle, howitzer, or mortar batteries which cover the same general water area with their fields of fire, together with the per-

sonnel and installations necessary for the employment of the group as a unit. In the organization of a gun group, fire direction is the governing consideration, and fire direction is facilitated when all the weapons of the group are of similar types and characteristics. However, it is frequently impracticable to obtain this condition without a prohibitive sacrifice of other desirable factors involved in fire direction, and in some cases such a group cannot be formed with the armament available. Hence, in general, a group composed of weapons that may suitably be employed against similar targets is considered to satisfy tactical requirements. Groups may be composed of fixed batteries, of mobile batteries, or of a combination of both. Groups are designated by number in each harbor defense.

Organization. The gun group consists of a headquarters, a group detachment, and two or more batteries. The headquarters includes the group commander and a staff consisting of a plans and training and intelligence officer, a communication and searchlight officer, and such other commissioned assistants as may be made necessary by special conditions. The group detachment is a subdivision of the harbor defense section and normally includes command-post, intelligence, plans and training, communication, and searchlight details. The functions of the group staff and the duties of the group detachment are, so far as applicable, similar to those of the groupment staff and groupment detachment.

The Mine Group

Composition. A mine group is a tactical and technical unit for the employment of controlled submarine mines provided for the defense of a given water area, together with the armament, structures, personnel, equipment, and vessels necessary for the planting, operation, and protection of the mine field.

Organization. The mine group consists of a headquarters, a mine group detachment, two or more batteries, and one or more mine planters. The group headquarters includes the group commander and a staff consisting of a plans and training and intelligence officer, a communication and searchlight officer, and a mine property officer. The mine group detachment is a subdivision of the harbor defense section and, with the addition of a mine property detail, is similar in organization and duties to a gun group detachment.

Duties of the Tactical Staff

The duties and responsibilities of corresponding staff officers of the several echelons are similar, although they vary in scope and in detail with the size and functions of the unit. In the higher echelons, assistants to the staff officers may be required; in the lower echelons, the duties of two or more staff positions may be assigned to a single officer.

Executive. The executive is the principal assistant and adviser to the unit commander. He acts as chief of staff, directs and coordinates the various sections 'of the staff, and acts for the commander in his absence.

Intelligence officer. The intelligence officer (S-2) is responsible for the collection, collation, and dissemination of all military intelligence; obtains and distributes maps; acts as agent of the artillery information service; prepares and maintains situation maps; establishes intelligence observation posts; supervises the unit scouts; and is responsible for the training of the intelligence detail.

Plans and training officer. The plans and. training officer (S-3) prepares all programs and schedules for the training of the unit, all plans for its tactical employment, all field orders, all charts and maps to accompany field orders, all plans for movements and all visibility, dead-space, and operation maps; keeps the war diary and a record of all operations; establishes the command post; and is responsible for the training of the plans and training detail.

Reconnaissance officer. The reconnaissance officer makes reconnaissance of routes and positions and special reconnaissance as directed, is in charge of topographical operations, supplies the intelligence and plans and training officers with information for situation and operation maps, assists the plans and training officer in the preparation of maps and charts, establishes and, maintains observation posts for plotting and spotting is in charge of plotting and spotting personnel, and is responsible for the training of the reconnaissance detail.

Communication officer. The communication officer supervises and coordinates the training of the communication personnel in the various units of the organization, establishes and maintains the signal communications of the unit, establishes and maintains the message center, is responsible for the care and maintenance of the signal equipment, assists in the administration of the headquarters battery, and is responsible for the training of the communication detail.

Munitions officer. The munitions officer is responsible for the requisition, receipt, and distribution of ammunition (including pyrotechnics) and for keeping the ammunition records and reports, keeps himself informed concerning ammunition supply throughout the unit, and in a battalion, commands the combat train or munitions detail.

Liaison officer. The liaison officer represents the artillery commander with a supported or other designated unit, is normally stationed at the command post of the designated unit, keeps the artillery commander informed of the artillery requirements and the situation confronting the designated unit, and advises the commander of the designated unit as to the nature of artillery assistance that may be expected.

Searchlight officer. The searchlight officer is responsible for the care, operation, maintenance, and minor repair of all searchlights and searchlight power plants under the control of the commander and advises the commander in matters connected with the tactical employment of the searchlights.

Mine property officer. The mine property officer is responsible for the serviceability of all mine storerooms, cable tanks, wharves, boat houses, and mine boats other than mine planters.

Duties of the Administrative Staff

Adjutant. The adjutant (S-1) is in charge of routine administrative matters, correspondence, assignment of quarters and billets, and postal and welfare services; commands the band; and is responsible for the training of all specialists not included in the various staff sections.

Supply officer. The supply officer (S-4) is responsible for the requisition, receipt, and distribution of rations, equipment, and supplies other than ammunition; receives, coordinates, and forwards all requisitions for supplies; and provides storage facilities for supplies kept on hand. The regimental supply officer commands the service battery; battalion supply officers command the battalion sections of the service battery.

Artillery engineer. The artillery engineer advises the commander on technical questions pertaining to the repair, maintenance, and operation of the systems of fire control, communication, searchlights, power plants and lines of power distribution, and is accountable for and maintains records of all property issued by the Corps of Engineers and the Signal Corps for the fixed armament.

Ordnance officer. The ordnance officer advises the commander on technical questions pertaining to the repair, maintenance, and operation of the armament; has supervision over the ordnance repair shops of the command; and is accountable for and maintains records of all property issued by the Ordnance Department for the fixed armament.

Disbursing officer. The disbursing officer is charged with the administration of all functions pertaining to the Finance Department (except the audit of property accounts) and with the disbursement of and accounting for public funds.

Surgeon. The surgeon commands the hospital and coordinates and supervises all Medical Department activities of the unit.'

Quartermaster. The quartermaster is responsible for the maintenance, operation and supply of all administrative water, animal-drawn, and motor transportation, for the storage and issue of rations, forage, fuel, clothing, and other supplies pertaining to the Quartermaster Department, and for the upkeep of buildings and grounds, and is accountable for and maintains records of all property issued by the Quartermaster Department.

Chemical officer. The chemical officer is charged with all chemical warfare activities including gas-proofing of plotting rooms, inspection of gas masks, and instruction of troops in defense against gas.

Catagories of Defense for Coast Artillery Operations In WW II

Compiled and edited by William C. Gaines

There were two groups of defense categories, tactical categories designated by letters, and readiness categories designated by numbers. Although there was a relationship between the two, they were designed to meet two distinct needs. The lettered categories, A, B, C, D, E, and F, were set down by the War Department in accordance with the provisions of JAAN 1935, and were based upon expectancy and intensity of enemy assault as determined by military intelligence. They were applied to the specific coastline or military area concerned in general.

The numbered categories, I, II, and III, were determined by the tactical command on the scene and were applied to the sub-sector, harbor defense, or specific armament within a harbor defense. While these conditions could be applied to a defense command or sector, attacks of that scope would be highly unlikely.

The use of the numbered categories obviated the need for detailed or lengthy orders to meet an emergency or attack. As an example, it was only necessary, when the Japanese air raid on Pearl Harbor came, for the 2nd Coast Artillery District to send the three word message to Colonel Ruhlen commanding the Harbor Defenses of the Delaware at Fort Miles: "Condition II Immediately." This brief message of alert was sufficient to set in motion a state of readiness that called for all harbor defense and antiaircraft artillery observation stations and communications to be manned on a constant basis. Further, if ordered, at least one major caliber battery and one secondary battery were to be manned (along with the necessary searchlights at night) and ready to fire.

The use, however, of one category classification did not necessarily demand the use of another. For example: Category E represented the greatest danger for the military area to which it was applied. The application of Category E, however, did not put all elements in Condition I. It is obvious that a high state of readiness can be maintained for only a limited time and should be used carefully if the military personnel strength is not to be dissipated before the attack is developed. On the other hand, Category A represents a condition in which the area is determined to be free from attack. It is possible, however, that an isolated enemy raid on an installation would throw a harbor defense or the armament concerned into Condition I.

For example: If an enemy force in strength were operating in the waters off Florida and Georgia, having occupied an island in the Bahamas as a base, the eastern seaboard would no doubt be thrown into Category E, but no defense would necessarily be put into Condition I. However, no harbor defense along coastline of the Carolinas, Georgia, and Florida would be less prepared for action than that demanded by Condition II.

If a coastline was declared free from attack and in Condition A, as in the case of the Eastern Seaboard in 1944, a raid by an enemy submarine or a surface raider disguised as a merchantman would surely throw a harbor defense into Condition I if they appeared in a harbor entrance.

Tactical Categories of Defense

(Abstracted from JAAN 1935)

Category A - Coastal frontiers (sea frontiers and defense commands) that would probably be free from attack, but for which a nominal defense must be provided for political reasons in sufficient strength to repel raids by submarines, by surface vessels operating by stealth or stratagem, or isolated raids by aircraft operating chiefly for morale effect.

Category B - Coastal frontiers that may be subject to minor attacks.

Category C - Coastal frontiers that in all probability would be subject to minor attack. Under this category, the coastal defense area should be provided in general with the means of defense, both army and navy, required to meet the following enemy naval operations: those incident to controlling the sea, those against shipping, and minor attacks against land areas. The harbor defenses should be fully manned and air support arranged. Long range air reconnaissance would be provided if practicable. If sufficient forces were available, outposts would be established outside of harbor defenses along the sensitive areas of the shoreline. The inner mine barrages would be established; a full inshore patrol and complete control of shipping would, as a rule, be instituted; and certain outer mine barrages and defensive sea areas may be established, and a limited off-shore patrol instituted.

Category D - Coastal Frontiers that may be subject to major attack. Under this category, the coastal defense areas should, in general, be provided with the means for defense, both army and navy, required to meet enemy naval operations preliminary to joint operations. All available means of defense would generally find application, and a stronger outpost and a more extensive patrol, inshore and off shore, than for Category C, would be required. Under this category, certain defensive sea areas and maritime control areas would be established. In addition, an antiaircraft gun and machine gun defense of important areas outside of harbor defenses should be organized; general reserves should be strategically located so as to facilitate prompt reinforcement of the frontiers; and plans should be developed for the defense of specific areas likely to become theaters of operations. Long range air reconnaissance would be provided and plans made for use of the GHQ air force.

Category E - Coastal frontiers that in all probability would be subject to major attack. Under this category, in additions to the measures required for Category D, there would be required generally the concentrations of the troops necessary to defend the area against a serious attack in force together with additional naval forces to provide intensive inshore and off shore patrols. Defensive sea areas and maritime control areas would be established. Air defense would be provided for as in Category D. All or a part of the GHQ Air Forces might be ordered to the threatened area to operate either under direct control of Army GHQ or that of the army commander of the theater of operations or frontier.

Category F - Possessions beyond the continental limits of the United States which might be subject to either minor or major attack for the purpose of occupation, but which cannot be provided with adequate defense forces. The employment of existing local forces and local facilities would be confined principally to the demolition of those things it was desired to prevent falling into enemy hands.

Readiness Categories of Defense

Condition One - Maximum readiness for action. In the harbor defenses, all stations, communications, and armament were manned in accordance with existing plans; antiaircraft troops similarly man observations posts and communications, and hold gun and searchlight crews at or in the immediate vicinity of their armament; supporting infantry maintain observation and patrol elements in accordance with plans and hold reserves in readiness. Coast artillery units were not able to continue on Condition One indefinitely with the personnel usually available; hence Condition One was ordered for brief periods only, in general, not exceeding six hours in any one day. When this condition was ordered on initial activation, immediate

readiness for action would be the first objective. The movement of supply elements and setting up messes and camps would be secondary.

Condition Two - The state of readiness that could be maintained indefinitely. Harbor defense and antiaircraft observation stations and communications were manned continuously, if necessary with reduced personnel or in reduced amounts, but at least one station per battery. Command posts of all echelons were operated continuously, with sufficient personnel for current requirements. Armament, equipment, and personnel not actually at battle stations would be kept in such readiness that Condition One might be assumed within three minutes during daylight hours and within five minutes during hours of darkness.

Condition Three - Minimum readiness appropriate to war or emergency conditions. At least one secondary battery in each harbor defense, with necessary searchlights, would be maintained in Condition Three; at least half of the total number of antiaircraft batteries, both fixed and mobile, would be maintained in Condition Two; at least one additional observation post per groupment would maintain continuous observation, harbor entrance control posts were operated continuously, and communications would be manned at command posts down to groupment and antiaircraft regiments. The remaining armament and personnel off duty would be able to assume Condition One within one hour.

Classification of Material

As a minimum, for each active lettered battery organization in each harbor defense, one complete battery or one complete unit of submarine mine material, together with accessories required to render it effective as a combat unit was classified as Class A. The initial classification of seacoast batteries in the continental United States was prescribed by the War Department in the harbor defense projects. The harbor defense commander concerned was then authorized to raise the classification of a battery from B or C to A by assigning the materiel to an organization primarily for the purpose of training or mobilization. Likewise, the same authority could return batteries to any classification not lower than that initially prescribed by the War Department.

Class A - Materiel which was assigned to an organization in a primary capacity for the purposes of regular and frequent training, together with all installations required to make that materiel effective. This materiel was maintained at all times in such condition as to permit its preparation for service by a full strength manning party in not more than twenty-four hours.

Class B - Materiel which was not assigned to an organization for frequent and regular training but which was important to the performance of the mission of a harbor defense. For this class the maintenance year was divided into the active and inactive seasons. The active season extended for approximately six months, as designated by the harbor defense or department commander, while the inactive period extended throughout the remainder of the year. During the active season, all materiel was placed in operating condition, fully assembled (with some exceptions) and maintained in such condition as to permit its being prepared for service by a full strength manning party in not more than twenty-four hours. During the inactive season, materiel was maintained in such a manner as to permit its being prepared for service by a full strength manning party within seventy-two hours.

Class C - Materiel which was not assigned to an organization for regular and frequent training, and was no longer considered vital to the performance of the mission of the harbor defenses, but which was still capable of furnishing some fire support. Maintenance of this class was ordinarily such that more than seventy-two hours would be required to restore the armament fully to an active condition. Such restoration, however, normally could be accomplished by a full strength manning party in less than fifteen days.