Contents

Illustrations

CHAPTER I.

Tactics and Organization

Tactics

Doctrine

Japanese basic tactical doctrine is characterized by a strong aversion to the defensive. Defensive operations are considered merely a temporary phase of combat necessitated by the momentary preponderance of the strength of hostile forces. The Japanese try to terminate this phase as quickly as possible by whittling down the superiority of the enemy until they can revert to the offensive and force a decision by assault. They apply this concept to defense against amphibious operations, maintaining that combat of this nature is actually offensive in character. Their mission is to annihilate the enemy forces before a landing can be effected or as soon after the initial landings as possible. As one Japanese order expressed this principle, the object of the defense is "to frustrate the enemy's landing plans with a counterattack like an electric shock, and at the proper moment to annihilate the enemy by close range fire, by throwing hand grenades, and by hand-to-hand combat."

Thus far U. S. forces have encountered Japanese coast defense forces mostly on small islands with vital airstrips, or lagoons utilized as anchorages for seaplanes. Where the island was not large, a perimeter defense was organized, and when this was pierced, the possibility of continued defense of the island virtually disappeared. Where the island was long and narrow, or otherwise unsuited for a perimeter layout, the defense was concentrated within a vital area which was surrounded with tank ditches, barricades, and other obstacles.

The basic problem of coast defense, according to Japanese doctrine, is the shortage of men and fire power inherent in all such operations where the defense has to be dissipated over long coastal strips, while the enemy by his choice of a landing site can bring a concentration to bear at a selected time and place. This problem can be solved in two fundamental ways: The defender can attempt to stop a landing at the shoreline, or he can retain a large mobile reserve and defeat the hostile forces, after the landing, by a counterattack.

The defender can attempt to combine these two solutions, holding the more vital areas in strength and retaining a mobile reserve to cover the less likely landing areas. The Japanese have tried to follow the combination method and can be expected to use it on the shores of their home islands and on the Asiatic Continent. In the organization of the defense of a long shore line they try to anticipate the general areas in which landings will be made by Allied forces, to organize the most suitable landing beaches for strong defense, and to cover the intervening coast with mobile and static patrols.

If Allied troops undertake an attack on the well defended areas of the coast, the Japanese plan to prevent the landing by superior fire power; but, if the landing actually is made despite their efforts, they expect to defeat it at the water's edge with counterattacks by the beach garrison and by mobile reserves located well forward. If the landing is made on a stretch of poorly defended coast, the Japanese anticipate the destruction of these forces by counterattacks made by mobile land reserves held in centrally located areas and by counter-landings.

According to Japanese doctrine, positions should be constructed on high ground immediately behind the shoreline to dominate the beaches by fire power and interdict them to hostile landing forces. Otherwise, the positions will be sited near the water line to engage the landing forces at the critical moment when they are dealing with beach obstacles and their heavy fire power is not available. The defensive positions will be sited to take maximum advantage of terrain and to provide both frontal and flanking fire on the beaches. Artillery is boldly sited, although, thus far, limited expenditure of ammunition and failure to achieve any real concentration of fire have been weaknesses characteristic of Japanese defense against amphibious as well as other types of operations.

Occasionally, the Japanese have withdrawn entirely from the coast and have attempted to base their plans for defense on counterattacks from the interior, and on the holding of naturally strong features of the terrain. Usually this withdrawal has been undertaken because their prepared positions near the shore line were rendered completely or partially untenable by our heavy preliminary air and naval bombardment, rather than because of any fundamental change in their doctrine. However, in a few instances, the decision may have been taken because of the strong cave positions available in the interior of many of the larger Pacific islands. The success that the Allies have had in hitting the Japanese in areas where they were relatively unprepared does not mean that they have given up the doctrine of defense in force of vital areas; it simply indicates that they cannot fortify every foot of landing ground and have been forced to concentrate on areas where they consider it likely that we will land. Allied operations thus far show that these strategic estimates often have been faulty.

In most areas that have been subjected to United Nations landing operations, the Japanese have had ample time to complete their defensive prep-

arations. However, such defenses were not always ready on time. On Saipan, for example, the organization of the island for defense was scheduled to be finished by October of 1944, and at the time of our landings there the work was not as far along as it theoretically should have been. Primarily this failure was due to the shortage of shipping but, had the Japanese desired, the entire job could have been done years before the war began. Such failures indicate a poor strategic appreciation of Allied capabilities. Reports from Leyte indicate that there too the Japanese defenses were incomplete. Unmounted guns were found near empty emplacements, and little effort had been made to construct offshore obstacles or barricades.

Figure 1.—Japanese coast defense gun on Saipan captured before it fired a single round.

Nevertheless, as we move farther into the inner Empire, the Japanese will have had even more time to prepare for our coming, the shipping shortage will be less of a factor, and the strategic necessity of a well-prepared defensive will have been even stronger. Therefore, we shall be safe if we assume that the defense of the beaches on which we land in the future will combine all of the sound features that have been found on the landing grounds we already have used, and the only errors will be those that have been constant factors in the operations thus far conducted.

To date the Japanese coastal defense has been confined largely to the areas of the beaches. In his shore-line defensive positions the enemy has fought largely to the last man, and this fanatical devotion to duty has pro-

longed, to a measurable degree, the period of the defense and has compensated, to a considerable extent, for the shallow depth of the organized area. Once the beaches were passed, the enemy defense degenerated into last-man defenses of key terrain features and wild banzai charges.

It does not follow that this will be the case in all shore-line defensive operations; rather, in areas where the original garrison of the coastal zone can be reinforced from the mobile reserve, the enemy can be expcted to defend in depth until such time as he feels that he has accumulated sufficient force to resume the offensive in superior strength. The movement forward of these reinforcements may be by land or sea, depending on the geographical location and the relative ease of movement over the two media. This type of action appeared to be the enemy plan for the defense of Leyte.

Despite the possibility of additional defense in depth, the Japanese are committed to the defense of the important beach areas and can be expected to organize the vital landing sites in strength comparable to that encountered in the central Pacific, and to attempt to destroy the attacker before he lands, or at the water's edge if the landing is made. In addition to beach defense, operations from now on can expect to encounter better organized and more effective resistance in depth, but an acutal landing on a defended beach will be opposed in the same general manner as heretofore.

Basic Principles

In the Pacific areas where fringing coral reefs are to be found around practically all of the islands, the Japanese based their first line of defense on these reefs. The reefs are commonly an obstacle to the landing craft in themselves, as they lie only a few feet below water level at high tide and are generally exposed at low tide. Even those that can be crossed by shallow-draft landing craft under normal conditions at high tide may become impassable if the wind is strongly offshore and drives back the water to lessen the depth over the reef to less than the draft of the boats. This condition was one of the unfavorable factors encountered at Tarawa.

The Japanese do not trust to the reef alone but strengthen this obstacle with log barricades, coral or concrete tetrahedrons, and waterproof mines. These mines can be detonated by direct contact, by fouling a trip wire, or by remote control from shore positions. In addition, a large quantity of the available artillery is ranged in on the reef. There, because of the slower progress of the attacking forces in that area, artillery fire can do the most damage to them.

The average fringing reef is not, in most instances, a solid ring of coral around the island but is broken in places where wind or water conditions are unfavorable to coral growth. These portions of the reef area are given especial strengthening by the Japanese so far as time and the available materials permit. The sinking of small vessels filled with coral rock has been one method used to close open channels through the reef. The amount

of artillery, the normal barrage of which is located in this area, will be larger than that ranged on other portions of the reef, and an increased number of sea mines will be used.

While the main concentration of fire and defense is planned for the reef area, if one exists, Japanese doctrine applies in coastal areas where reefs do not exist such as the China coast, Formosa, the main islands of the Philippines, and the Japanese home islands. On such coast lines, the basic doctrine is still to break up the landing before the enemy craft can reach the shore. Underwater obstacles, land and sea mines, and concentrated artillery fire will still be the main defenses employed by the Japanese.

The exact plan of defense will depend on the topography landward and seaward of the beach. As the larger and more strongly fortified regions are reached, the caliber of the defending guns and the distance at which they can engage our landing units will increase. Flat trajectory weapons will be in the majority, and they will be placed well forward on the beach where they can be brought to bear on the convoy at the maximum range and later laid directly on the landing craft as they approach the beach.

While the Japanese expect to break up any landing attack before it reaches the beach, they realize that landings can be made if the hostile forces are willing to bring sufficient matériel into the action. Increasing consciousness of the inferiority of their air, naval, and artillery support has induced the Japanese to emphasize the destruction of hostile forces after they have landed but before they consolidate their positions and extend their beachheads. They therefore work out in detail the plan for the defense of the beach itself. This defense is built around the regimental and battalion guns which usually are sited in open emplacements (though the 37/47-mm AT gun is often found in closed emplacements), located in a line of strong points dispersed in shallow depth and usually not organized for all-round defense. These strongpoints are either emplacements or pillboxes which generally are constructed of local materials but may be built with reinforced concrete placed over a prefabricated steel base when time and the supply situation permit.

Emplacements and pillboxes are designed to be mutually supporting and are covered by riflemen in fox holes sited around the strongpoints. Positions are connected by communication trenches to permit rapid and relatively safe shifting under rifle fire. To insure a certain amount of protection during the heavy shelling that precedes the usual Allied landing, shelters are constructed under or in the close vicinity of the emplacements and pillboxes. Japanese machine guns usually fire along a final protective line, while the mortars fire against frontal targets. Antitank, antiaircraft (when used against ground targets), and field artillery guns ordinarily fire singly or in small numbers against oblique or enfilade targets. Mortars, in most instances, are sited behind the first available defilade, and the artillery is emplaced well forward, some even on the beach itself, though most of the dispositions are relatively normal.

All weapons are ranged in previous to the assault, and buoys with flags mounted on them are anchored at various points out from the shore to act as range markers. There has been a tendency, however, especially at Saipan, for the individual artillery pieces to fire on the equivalent of a machine-gun final protective line. Guns have been observed placing shells with great rapidity and accuracy in areas of water untraversed by any landing craft. On Saipan, 75-mm guns were so emplaced on the beaches as to fire on the boats as they reached the water line. They were disposed in both covered positions and in shallow, open positions.

The Japanese, however, do not rely on fire power alone to defend the beach. Their doctrine calls for their main infantry and tank forces to participate in counterattacks immediately after hostile forces land. Such counterattacks of course require close cooperation and liaison with artillery, not only with that of the infantry units but with artillery under the control of higher commanders as well. This necessary cooperation has not been too well effected so far, probably in large measure as a result of the disrupting effect of the prelanding bombardment on mental reactions and communication equipment. To provide personnel for these counterattacks, the Japanese place their reserves farther forward than is considered valid practice in other armies. Strategic concentration points along the beaches that may be used by hostile forces are selected in advance as objectives.

At points where bluffs or cliffs, 15 yards or more in height, are situated immediately back of the coast line, Japanese defensive commanders are instructed to concentrate their strength on high ground to the rear, from which positions they can debouch at a favorable moment to destroy the hostile force by counterattack. Thus far, however, the doctrine appears to be not unreasonable, but the Japanese go on to say that, if the attacker has a firm foothold on the beach, and it is impossible to counterattack with full strength, they will employ small forces to carry out surprise attacks, utilizing heavy cover, night, or dense fog to conceal their preliminary movements.

These small-scale counterattacks have as their primary objectives enemy headquarters, artillery, tanks, and key personnel. Frequently no adequate concentration of personnel and fire power can be built up by the Japanese when their basic plan envisions the frustration of the hostile landing attempt at the shore line. The application of these small-scale attacks against the usually compact front of the early beachhead have resulted in excessive losses in comparison with the results achieved. Tanks, theoretically at least, are held in mobile reserve for counterattack missions at critical times and places, but the practice has fallen short of the theoretical goal because of the inherent weakness of the Japanese tanks *vis à vis* U. S. antitank guns and because of their piecemeal commitment.

A recent development in Japanese defensive doctrine calls for the use of counter-landing units against unopposed enemy landings, in areas where it is impossible to garrison the entire coast, or against beachheads established

despite Japanese defensive preparations. These units embark along a quiet section of the coast in such craft as are available and, under naval escort, proceed to the site of the hostile landing to land in the rear of the hostile force. Usually the unit will be transported in destroyers and transshipped to smaller landing craft which either are carried on the ships or towed by them.

To achieve the essential measure of surprise, the seaborne movement and the counter-landing usually must be undertaken at night. Obviously, the success of any operation carried out by such a unit will depend on sound training, perfect timing among the various units of the command, and an exact knowledge of the enemy situation. The possibility of the successful employment of these units therefore is not great, but their use must be guarded against in any Allied landing operations.

In contrast to the mobile counter-landing units whose mission is the elimination of an entire beachhead, amphibious assault and infiltration units have been organized. Their mission appears to be to move short distances by sea to strike key objectives within the enemy perimeter such as command posts, vehicles, guns, and supply dumps. The unit is of company size, and its three combat platoons are trained with the primary emphasis for each as follows: (1) hand-to-hand combat, (2) infiltration, and (3) amphibious guerrilla assault. The unit has a large quantity of explosives and demolition material and is issued rafts, waterproof bags, and small cargo tubes which indicate that surprise approach by sea is the favorite tactical method. Operations of such units, or portions of them, have been noted frequently in the Pacific area and their use is likely to increase.

Another new type of Japanese unit, which is used to oppose landing operations, is a platoon composed of strong swimmers whose mission is the night attack of landing craft. There appear to be at least two methods of operation. The first is to swim under water toward the enemy landing craft until they are within grenade-throwing range. The swimmers then surface and throw their grenades, which have a four- or five-second delay, at the approaching landing craft. The second method is for the men to swim toward the landing craft, pushing anti-boat mines before them until they make contact with the boats. These mines are supported by wooden frames connected to the mine by wire, and are of the horn type.

Defense of Attu

The Japanese plan for the defense of Attu was based on a supposedly correct appraisal of the possibilities of an attacking force. They assumed that hostile forces would land in the main bay area (Holtz Bay, Sarana Bay, and Massacre Bay) and would proceed up the valley beds of the streams emptying into these bays. They believed "that there was only one channel along which the American attack could come, and that they had determined that channel infallibly." They accordingly planned a

defense to hold the high ground to the rear of each bay area with positions that commanded the flanks and rear of any forces that would advance inland up the valleys. Positions of extreme inaccessibility were prepared for machine guns, mortars, and even field pieces, and in almost every case these commanded effective fields of fire.

Machine-gun positions on slopes and hillsides were individually well sited and prepared, but little effort was made to ensure effective coordination of these positions. Terrain features were exploited to the maximum to bring hostile forces under plunging fire from concealed defensive positions. But in most cases, the Japanese opened their machine-gun fire too soon and failed to search or traverse their weapons sufficiently. Effective close-in defense of machine-gun positions usually was neglected.

Artillery was sited to cover the bays so that no landing boat presumably could reach shore while even one gun was still in action. The dual-purpose guns, in addition to their antiboat mission, were used for antiaircraft protection. Practically no obstacles were erected, for the Japanese apparently believed that the difficult terrain was sufficient to slow down any advance by landing forces.

It is also notable that the Japanese had prepared many positions flanking the beaches in the Holtz Bay area, some of them even facing inward and to the rear. Behind the most satisfactory landing beaches were four successive lines of resistance, with the last at the head of the valley. The defensive plan failed because of its inelasticity and the failure to make adequate provision for the unexpected. The U. S. Northern Force took the defenders by surprise and outflanked their carefully prepared Holtz Bay positions, while in the Massacre Bay area the landing forces immediately advanced to high ground which outflanked and dominated the Japanese positions. The quick movement of this force had not been visualized, and no effective countermeasures were devised.

Use of Terrain—Biak

The cave defenses on Biak afforded a striking illustration of Japanese utilization of terrain features in beach defense. Biak island is of volcanic origin, and around the original land mass thus built up, a coral reef ultimately was formed. Successive thrusts raised the land mass from time to time, and additional coral reefs developed in the pauses between such thrusts, forming a series of broken cliffs, rises, and ridges, 8 to 200 feet high. Erosion and subsequent formation of faults and fissures resulted in the creation of a large number of caves.

Along the beaches were caves 3 to 50 feet deep which often gave access to other caverns or to transverse tunnels in the face of the cliff. These caves frequently were utilized by the Japanese for machine-gun emplacements as well as for storage of food and ammunition.

Tunnel-like caverns traversed the bases of narrow coastal ridges, at heights of 20 to 30 feet, with openings in the seaward cliffs. These open-

ings usually were strengthened by concrete machine-gun ports. Such caverns were irregular, approximately 15 to 25 feet long, 8 to 15 feet wide, and 3 to 60 feet high. Personnel entered, and supplies were brought in, through rear openings in the landward faces of the ridges. Machine guns frequently were sited in these caves with fields of fire that usually were exclusively frontal.

Some of the tunnels, however, had their seaward openings masked by aprons consisting of portions of cliffs which had been broken from the main faces by sea action or erosion. Between the cliffs and these aprons were narrow alleys, the ends of which frequently were sealed with concrete and pierced for machine-gun ports.

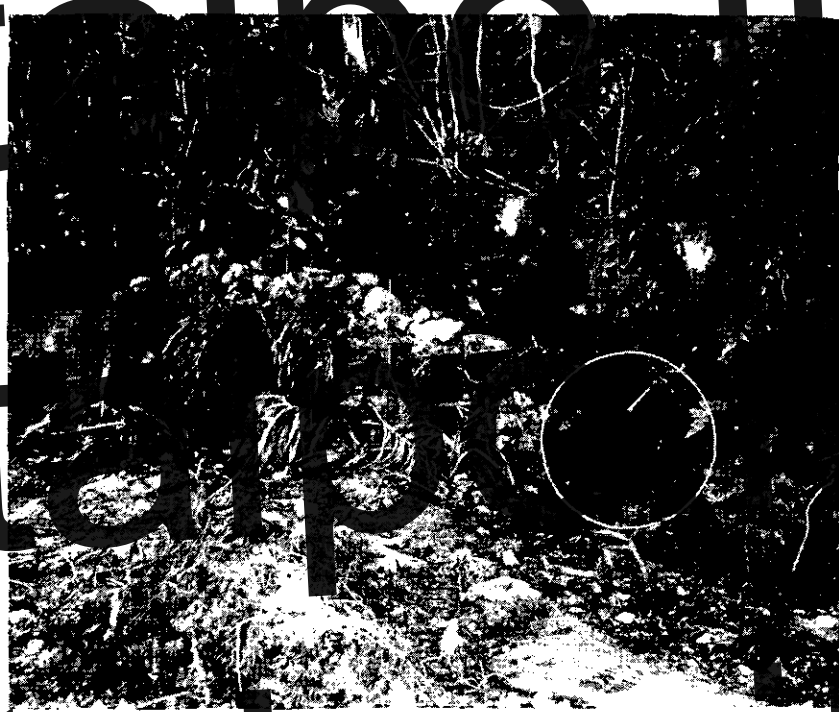
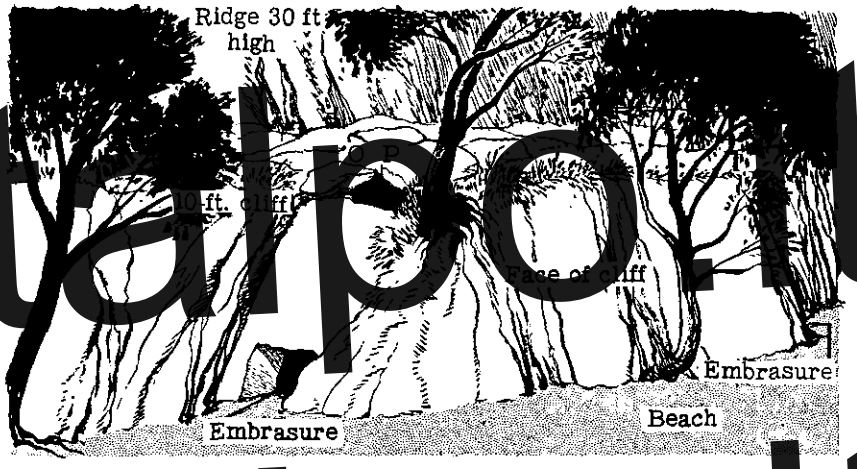


Figure 2—Cave used by Japanese in defense of Biak.

Galleries, or series of intermittently connected cavities 4 to 8 feet high and 3 to 6 feet deep, were found at various elevations. Those east of the Parai defile, for example, were 80 feet above the coastal road and 200 yards back from the beach. They were reached by a 75-degree slope of rotten coral. Continuity of the galleries was interrupted by limestone masses or by unions of stalactites and stalagmites, but such obstructions occasionally were bypassed by short connecting tunnels. In the wooded area behind the cliffs a number of mortars were sited, and machine guns were emplaced above the face of the cliff.

On ridges north of the coastal plain there were many holes or faults, circular in shape, 30 to 75 yards in diameter, and 15 to 75 feet deep. The sides of these holes were sheer or very steeply sloped. One or more caves opened from the bases of these holes and were used as personnel and supply shelters. The so-called West Cave accommodated 900 men and contained radio installations and electric lighting. Mouths of these caves often



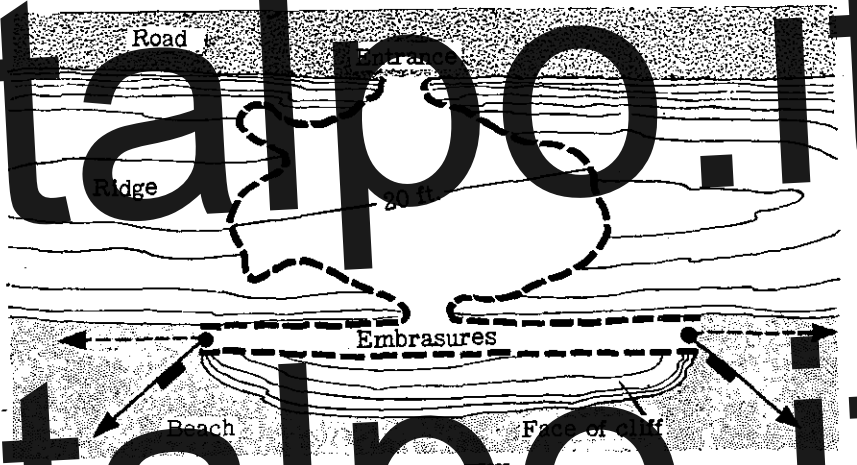


Figure 3.—Japanese observation post on Biak.

were screened by stalactites or stalagmites which, if they did not actually conceal the openings, frequently deflected fire.

Despite the natural advantage presented by the terrain, the Japanese failed to defend Biak successfully, primarily because they predicated their entire defense plan upon their conviction that the caves were invulnerable. They relied too heavily on a passive defense, permitting the American task force to land virtually unopposed and withdrawing their outpost forces

Figure 4.—Coast-defense gun emplacement on Guam.

627501°—45——2

Figure 5.—Map of Guam showing landing beaches.

without fighting. Japanese reserves were wasted by piecemeal commitment, and their tanks were sacrificed in disastrous combat with American tanks.

Cave defenses on Guam also were elaborate. One cave, about 60 yards long, and 10 to 30 feet high, was used as a field hospital. The natural cavern had been considerably enlarged by excavation. The hills behind the beaches were honeycombed with artificial caves, reinforced to be shrapnel-proof. They were interconnected by tunnels, and many were used for living quarters. Entrances, in many instances, were barred by reinforced concrete doors.

Figure 6.—Cave defenses on Guam.

The Japanese did not fail to utilize other means of defense on Guam. The comprehensive defense plan included coast-defense batteries, antiaircraft batteries, both heavy and light, and a formidable pattern of blockhouses and pillboxes. Buildings on or flanking beaches suitable for landing were skilfully employed as strongpoints, and the beach obstacles alone were so well constructed and sited that no landings could have been made until they had been removed.

Numerous caves along the Peleliu ridges were used effectively by the Japanese for the emplacement of weapons as well as for personnel shelters. Ammunition and food supplies for long periods were stored in the caves and water was obtained from seepage. Entrances to many of the caves

Figure 7.—Map of Japanese defenses on North Head, Kiska.

were barricaded with reinforced concrete, oil drums and barrels filled with stones and gravel, logs, and in some cases steel doors. Bombardment was not very effective against these cave positions, and it usually was necessary to dislodge the Japanese with demolition procedures, smoke, flame throwers, and grenades.

Kiska

On Kiska, the Japanese made excellent use of the rugged terrain, a shore line with steep cliffs with sand or gravel strips at the heads of the coves. Defense installations interdicted the steep stream valleys which rise abruptly between towering hills to high ridges of the interior. Accessible beaches were heavily mined, and tank traps blocked the overland exits from them. Barbed wire was strung between breaks in the line of bluffs, and from the high ground at their extremities the beaches were covered by well-camouflaged and strongly constructed machine-gun positions and rifle pits, with 37-mm and 75-mm guns emplaced in covered positions at a few strategic coves. All artillery except antiaircraft was dug in and covered. All machine guns were connected by underground approaches. One hundred fifty miles of interior roads and trails had been constructed to facilitate the shifting of defense forces.

In contrast, defenses on Attu were not nearly as well developed. There was no road net, and neither water nor power systems were comparable with those on Kiska. While Attu was defended only by 75-mm and 20-mm antiaircraft guns, and 75-mm and 37-mm mountain guns, Kiska, in addition to these, had 6-inch, 4.7-inch, and 76-mm naval coast defense guns, 25-mm and 13-mm single and dual-purpose antiaircraft guns, and 3 light tanks.

Tarawa Atoll

The defensive system of Betio (Tarawa Atoll) "was a small island edition of the German West Wall, with one extremely important difference—no depth," according to a report. An all-round, decisive defense at the beach was planned which would utilize the 13-mm heavy machine gun as the basic beach defense weapon along the north coast and both sides of the eastern tip, while the 7.7-mm heavy machine gun would be the backbone of the defense on both the western and southwestern coasts. The 13-mm machine guns were located in open emplacements to allow their use as antiaircraft as well as ground weapons and were sited to cover most likely approaches between the beach obstacles with frontal fire and the forward side of the diagonally placed barriers on the reefs with flanking fire. Carefully built rifle and light machine-gun emplacements were sited in and immediately behind the beach barricade to provide local protection for the automatic weapons.

Coast defense and dual-purpose guns were mounted carefully in strongly constructed emplacements of reinforced concrete or coconut logs revetted