

# Staff Ride Handbook for the Attack on Pearl Harbor, 7 December 1941: A Study of Defending America

LTC Jeffrey J. Gudmens  
and the Staff Ride Team  
Combat Studies Institute



Combat Studies Institute Press  
Fort Leavenworth, Kansas 66027

Cover photos: The photo of the attack on Pearl Harbor on 7 December 1941 is from the Naval Historical Center. The photo of the 11 September 2001 attack on the World Trade Center is from the US Air Force Counterproliferation Center.

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## Foreword

The *Pearl Harbor Staff Ride Handbook* is the ninth study in the Combat Studies Institute's (CSI's) Staff Ride Handbook series. LTC Jeffrey Gudmens' handbook on Pearl Harbor allows individuals and organizations to study this battle not only in the context of the Japanese attack but, more importantly, in the context of issues that are relevant to the current global war on terror. In addition to analyzing the actual attack, Gudmens also enables users of this work to examine the problems associated with conducting joint planning and operations between the US Army, the Army Air Forces, and the US Navy. He also provides insights into the problems of a Homeland Security environment in which intelligence operatives from a foreign nation (and potentially even recent immigrants from that foreign nation who are now US citizens) can operate with little hindrance in a free and open democratic society. Additionally, this study provides an opportunity to look at how military commanders and planners prepared for their wartime mission with inadequate resources and equipment. Each of these issues, and others analyzed herein, is as relevant to us today as it was almost 65 years ago. Modern military professionals for whom this handbook was written will find a great deal to ponder and analyze when studying the events leading up to, and including, the attack on Pearl Harbor. They are lessons that we cannot afford to forget. *CSI—The Past is Prologue!*

Timothy R. Reese  
Colonel, Armor  
Director, Combat Studies Institute



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## Introduction

Surprise, when it happens to a government, is likely to be a complicated, diffuse, bureaucratic thing. It includes neglect of responsibility, but also responsibility so poorly defined or so ambiguously delegated that action gets lost. It includes gaps in intelligence, but also intelligence that, like a string of pearls too precious to wear, is too sensitive to give to those who need it. It includes the alarm that fails to work, but also the alarm that has gone off so often it has been disconnected. It includes the unalert watchman, but also the one who knows he'll be chewed out by his superior if he gets higher authority out of bed. It includes the contingencies that occur to no one, but also those that everyone assumes somebody else is taking care of. It includes straightforward procrastination, but also decisions protracted by internal disagreement. It includes, in addition, the inability of individual human beings to rise to the occasion until they are sure it is the occasion which is usually too late. Finally . . . surprise may include some measure of genuine novelty introduced by the enemy, and possibly some sheer bad luck.\*

In his farsighted foreword to Roberta Wohlstetter's excellent book about our failures before Pearl Harbor, Thomas C. Schelling described how and why the Japanese were able to successfully attack the US Pacific Fleet at Pearl Harbor in 1941. Prophetically, his words ring true in describing the successful al-Qaeda attack against the United States on 11 September 2001.

On 7 December 1941 the United States suffered a devastating surprise attack that thrust it into a worldwide war. Our enemy had extensively planned the attack, conducted detailed reconnaissance of its target to determine how to achieve the most destruction, and had innovatively planned the operation to overcome all obstacles. Two services that needed to work together were never ordered to do so, losing synergy that was sorely needed. The United States had indications that an attack was possible but had no single agency to gather all of the available information for an analysis that would suggest an attack. When the attack started, there were indications that something large was happening, but the word was never spread, and our enemy's attack was devastating.

Sixty years later the United States was again thrust it into a worldwide

war. On 11 September 2001 enemies of our nation conducted an overwhelming surprise attack against our homeland. Our enemy had again meticulously planned the operation and conducted extensive reconnaissance of its targets before its destructive attacks. Many agencies in our government had indications of an attack, but again, there was no single agency that analyzed all available intelligence to provide us a warning. As word of the attack spread, people refused to accept that the impossible was happening, and again our enemy delivered an overwhelming attack.

As our nation prosecutes the global war on terrorism, it is imperative that we in the profession of arms study those events in which our homeland has been successfully and directly attacked in the past. While attacking our enemies around the world, we must first ensure that our homeland remains completely protected and safe. Not only should we study the tactics, techniques, and procedures of recent operations, but we also need to study history—events where we analyze the actions of both attacked and defender so we are better prepared to handle similar situations that may arise in the future. We should study what mistakes we made and what things we did well as well as the enemy's successes and failures. We must do all of this to increase our ability to prevent another attack on the United States.

The United States is a nation in which it is easy to move about and see, even in a time of war, and our homeland is now a part of the battlespace, a target for our enemies. How do we prevent an enemy from observing a target when it is not overtly breaking the law? Our many intelligence agencies provide outstanding intelligence, but how do we gather all of the information to synergistically determine our enemies' intentions and get this information to the commanders who need it? Our job is to keep America safe, and even when we are in the midst of fighting a war, it is critical that we take the time to study the past so we do not make the same mistakes in the future.

A staff ride has three distinct phases—a preliminary study, a field study, and integration (see *The Staff Ride* by Dr. William G. Robertson, published by the Center of Military History, for information on planning and conducting staff rides). The preliminary study phase prepares students to travel to the field and can be conducted through individual study, instructor-led lectures, discussion, or a combination of these. The field study phase allows students to better understand historical events by studying them from actual locations. Finally, the integration phase allows the students to understand what happened, why it happened, and most important, what can be learned by studying the battle.

The *Staff Ride Handbook for the Attack on Pearl Harbor, 7 December 1941* provides a systematic approach to analyzing how Japan planned for the attack, the failures the United States made in preventing it, and the attack's disastrous results. Throughout the book, pragmatic comparisons of 7 December 1941 and 11 September 2001 are presented for analysis and discussion. Part I describes the organization of the Japanese and American forces, detailing their respective ships, aircraft, strategy, tactics, and logistics. Part II consists of a campaign overview that encompasses the road to war, planning, and intelligence, allowing students to understand how the forces met on the battlefield.

Part III consists of a suggested route to use in conducting a staff ride of the attack on Pearl Harbor. For each stop, or "stand," there is a set of travel directions, an orientation, a description of the action or event that occurred there, and most important, a list of discussion points that a staff ride leader can explore at each stand. Part IV provides information on conducting the integration phase of this staff ride and suggests areas to discuss during the integration phase. Part V provides administrative information on conducting a staff ride at Pearl Harbor, including sources of assistance and logistics considerations. Appendix A provides the Japanese order of battle at Pearl Harbor while Appendix B provides the order of battle of American forces in Hawaii during the battle. Appendix C gives brief biographical information on key participants. Appendix D is a list of Medal of Honor recipients from the Pearl Harbor attack. An annotated bibliography provides sources for preliminary study.

All dates used in this book are Hawaiian time (Japan is one day ahead of Hawaii). The attack on Pearl Harbor occurred on 7 December, which was 8 December in Japan.

\*Roberta Wohlstetter, *Pearl Harbor: Warning and Decision* (Stanford, CA: Stanford University Press, 1962), viii.



# I. The Militaries

## US Organization

In 1941 Franklin D. Roosevelt was the President of the United States and, as such, was Commander in Chief of the Army and Navy. He was assisted by the Secretary of War who oversaw the Army, including the Army Air Forces, and the Secretary of the Navy who oversaw the Navy and the Marine Corps.

The Secretary of War in 1941 was Henry L. Stimson, who was 74 years old (see figure 1). Stimson had served as the Secretary of War, 1911-1913; Secretary of State, 1929-1933; and had begun his second term as Secretary of War in July 1940. The Army Chief of Staff was General George C. Marshall, 60 years old at the time of the attack, who had been Chief of Staff since 1939. Under Marshall were three deputy chiefs of staff and his staff (the G1, G2, G3, and G4 and the War Plans Division).

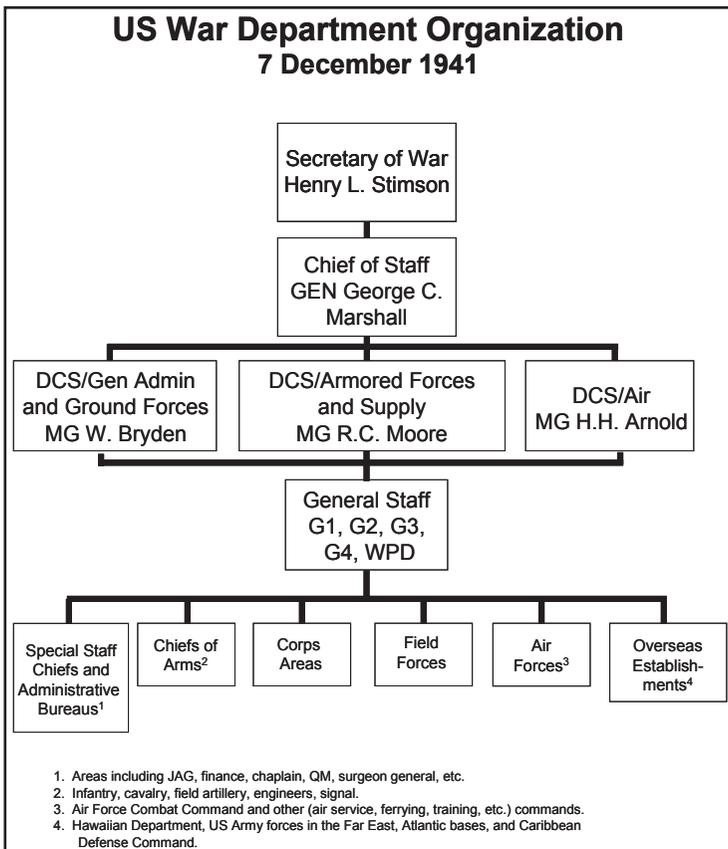


Figure 1.

Under the General Staff were six different component groupings. The first group was the chiefs of the service and administrative bureaus (ordnance, quartermaster [QM], judge advocate general [JAG], finance, etc.) that kept the Army's administration, supply, and services straight. Next were the chiefs of arms, the branches responsible for doctrine and training the soldiers assigned to the field forces. The continental United States (CONUS) was geographically divided into nine corps areas, the headquarters of which were responsible for training, administration of, and mobilizing Regular Army, Reserve, and National Guard units within their corps areas. The Chief of Staff was also the commander of the field forces, the "warfighters" of the Army. Field forces were broken down into a CONUS section and an overseas establishment. Air forces was the fifth component grouping, which was broken down into combat commands (the numbered air forces) and other commands (training, ferrying, etc.).

The last component, which was really a subcomponent of the field forces, was overseas establishments. It was broken down into four sub-components: the Hawaiian Department, US forces in the Far East, Atlantic bases, and the Caribbean Defense Command. In December 1941 the Army had 1,600,000 men on active duty. The US Army's Hawaiian Department (see figure 2) had 42,857 men in December 1941 and was commanded by Lieutenant General (LTG) Walter C. Short, who was 61. The Hawaiian Department's mission was to defend the Pearl Harbor Naval Base against attack from the air, by expeditionary forces, enemy fleets, or sympathizers. To do this, Short had two understrength divisions, four antiaircraft (AA) regiments, four harbor defense regiments (two incomplete), a bombardment wing, a pursuit wing, aircraft warning units, and other support units.

The Hawaiian Department was plagued by shortages of vital equipment. The air defense regiments had 86 of 98 authorized 3-inch AA guns, 20 of 120 37-millimeter (mm) guns, and 113 of 246 .50-caliber machine guns. The Hawaiian Army Air Force had only 12 of the modern B-17s, 33 B-18s (obsolete), and 12 A-20s. For fighters, it had 99 modern P-40s and 53 obsolete P-36s and P-26s. The Hawaiian Department was also short extended-range reconnaissance aircraft. The aircraft warning units had only received three of six authorized long-range fixed radar sets, but the National Park Service held up installation on property that it controlled, so on 7 December none were operational. The Hawaiian Department additionally had six mobile radar sets, but due to a lack of qualified crews, they were only operational a few hours each day.

The Secretary of the Navy in 1941 was Frank Knox, who was 67. At

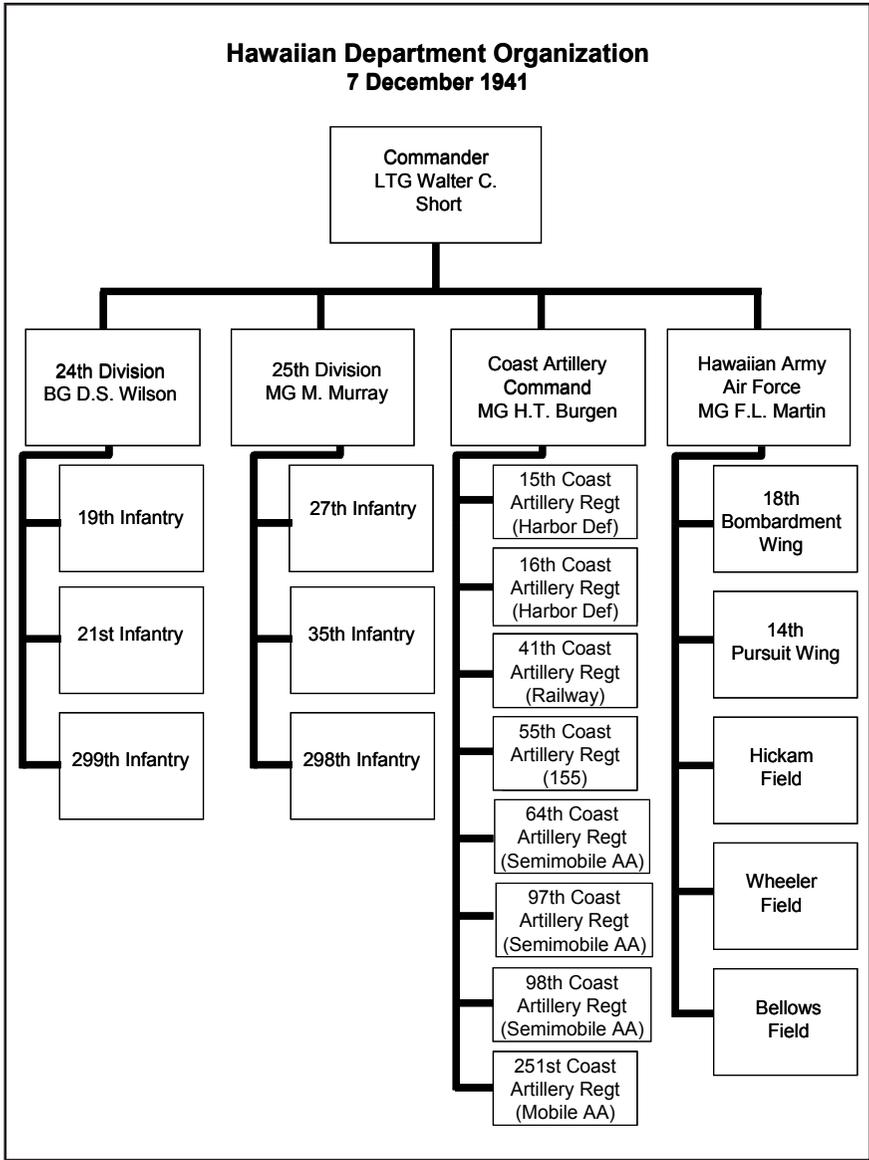


Figure 2.

the outbreak of the Spanish-American War, Knox enlisted and joined Theodore Roosevelt's "Rough Riders." Knox was impressed with Roosevelt and became one of his main advisers. Knox had been a newspaperman. Starting as a reporter, he worked his way up to general manager of all of William Randolph Hearst's newspapers and finally to become the publisher of the Chicago Tribune. Despite being a Republican, Franklin Roosevelt

appointed him Secretary of the Navy. Knox's Chief of Naval Operations (CNO) was Admiral Harold R. Stark, who was 61 and had spent his career as a battleship and cruiser man.

The Navy Department's organization (see figure 3) was similar to that of the War Department, but there were some differences. Like the War Department, there were many administrative and logistics bureaus (ordnance, supplies and accounts, and ships), but unlike the War Department, the Navy bureaus worked directly for the Secretary of the Navy. The CNO coordinated with these agencies, but he had no direct command authority. The US Marine Corps (USMC) also directly reported to the Secretary of the Navy.

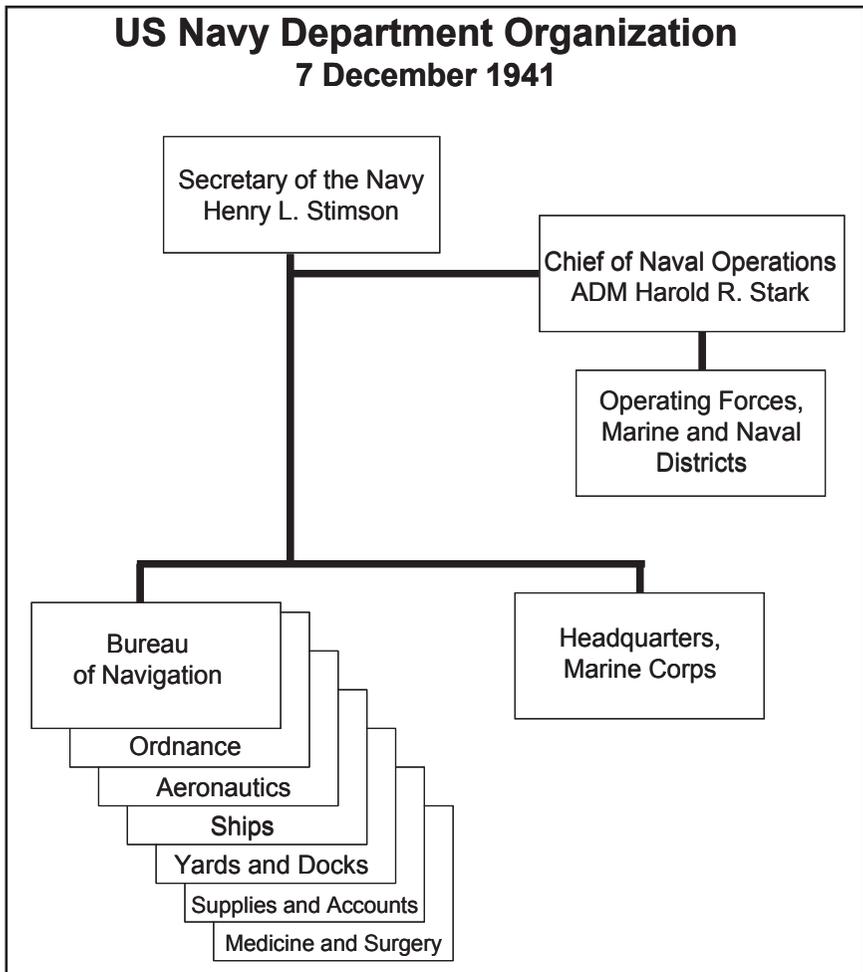


Figure 3.

The CNO was the Navy’s warfighter (see figure 4) and was charged with “the operations of the fleet, and with preparation and readiness of plans for its use in war. . . .” The CNO’s main warfighting subordinates were the commanders of the Atlantic Fleet, Pacific Fleet, and Asiatic Fleet. The senior of these three fleet commanders was also designated as the Commander, US Fleet, whose mission was to command if two or more fleets were combined. The Naval Coastal Frontier Forces were responsible for defending ports and other coastal areas deemed important to the Navy. The special task forces were groupings of ships task organized and assembled for particular missions, and once the mission was complete they were disbanded. Special duty ships were ships that performed specific missions, such as surveys, that the Navy only had a few of. The Navy Transportation

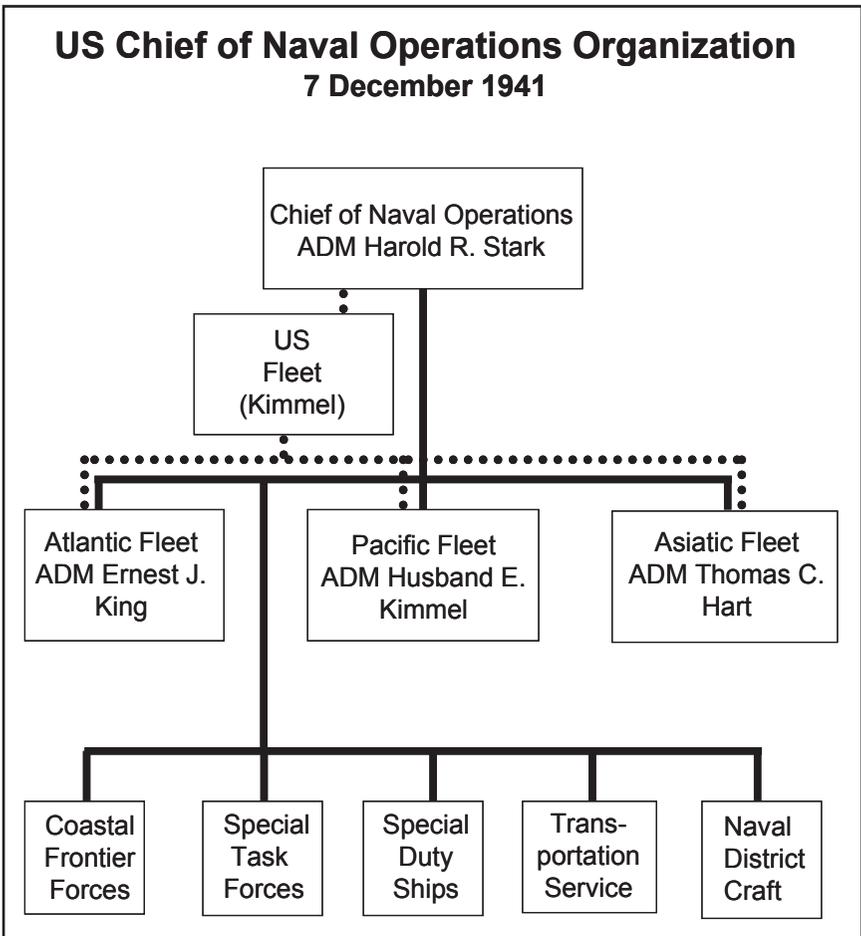


Figure 4.

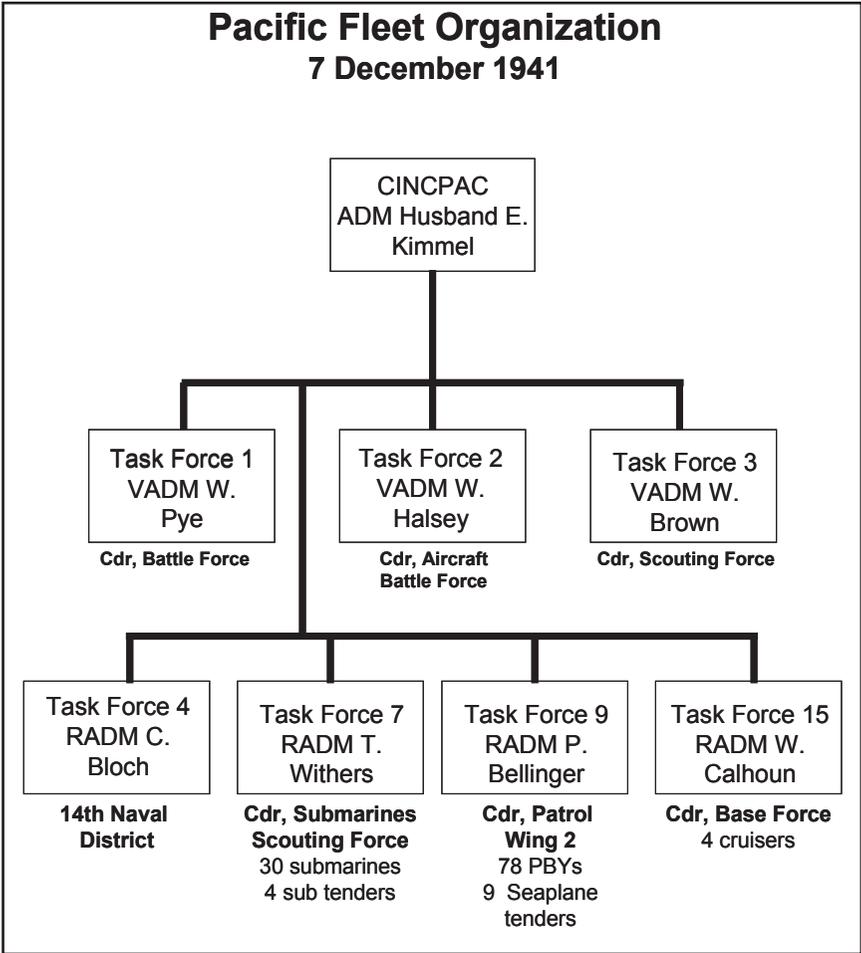


Figure 5.

Service was responsible for all logistics shipping while the naval district craft were specific craft assigned to support naval districts (floating dry docks, submarine chasers, etc.).

On 7 December 1941 the US Navy had 800 commissioned vessels (eight carriers, 17 battleships, 18 heavy cruisers, 19 light cruisers, 171 destroyers, 112 submarines, 87 patrol craft, 66 mincraft ships, 184 tenders, 67 supply ships, 37 transports, and 14 special duty ships) and 284,000 men serving (plus 54,000 marines). The Commander in Chief, Pacific Fleet (CINCPAC) since February 1941 was Admiral Husband E. Kimmel, who was 59 years old. He had spent his career serving as a battleship man. Kimmel organized the Pacific Fleet into task forces for operations and training (see figure 5). Task Forces 1, 2, and 3 were the main warfighting

task forces. Task Force 4 was the naval district commanded by Rear Admiral Claude C. Bloch. Its mission was to organize, train, and develop the bases—Pearl Harbor, Midway, and Wake—and provide service to fleet units engaged in operations.

Task Force 7, under the command of Rear Admiral Thomas Withers, was a submarine force whose mission was to provide submarine operations for offensive operations, either independently or in conjunction with other fleet units or bases. Rear Admiral Patrick Bellinger commanded Task Force 9 whose mission was to provide long-range air scouting and air striking forces for the fleet. Task Force 15 was commanded by Rear Admiral William Calhoun and was responsible for protecting trans-Pacific shipping. In December 1941 the Pacific Fleet had three aircraft carriers, nine battleships, 22 cruisers, and 53 destroyers.

Vice Admiral William Pye (see figure 6) commanded Task Force 1,

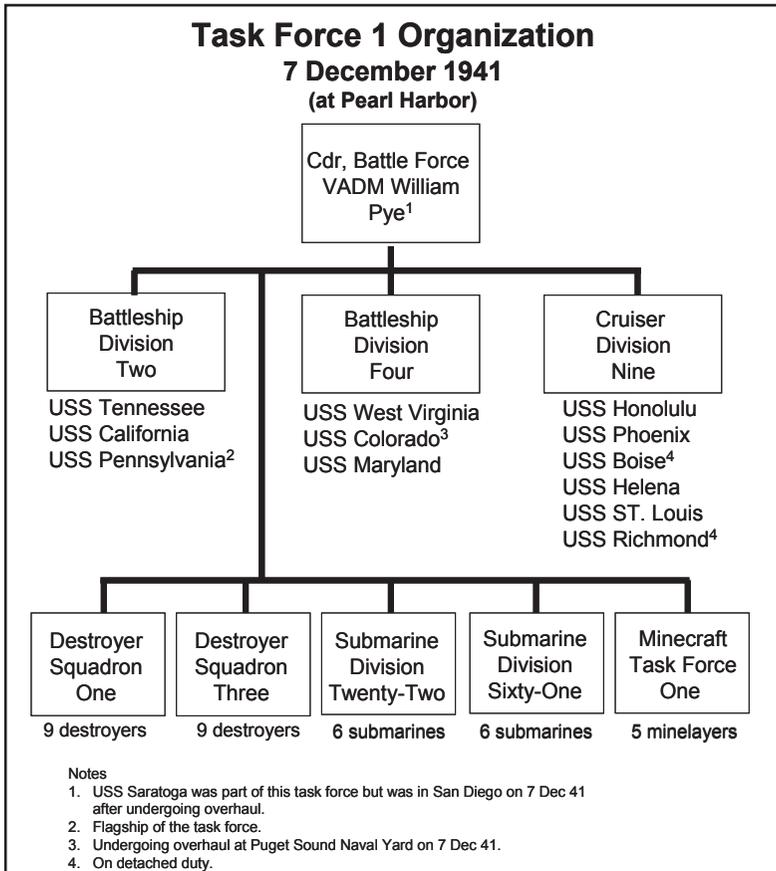


Figure 6.

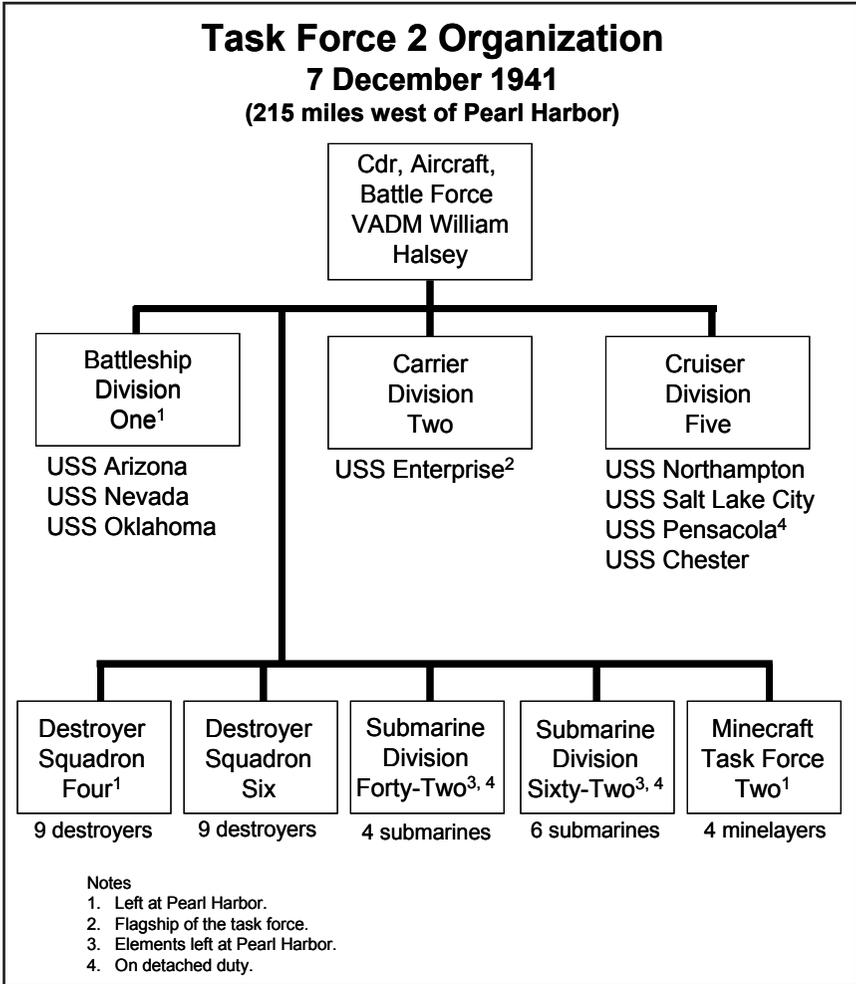


Figure 7.

which had an aircraft carrier, six battleships, and six cruisers. Task Force 1's missions were to cover the operations of any other task force and to engage an enemy in fleet action. In December 1941 Task Force 1's aircraft carrier and one of its battleships were on the west coast of the United States undergoing overhaul.

Vice Admiral William Halsey commanded Task Force 2, which had an aircraft carrier, three battleships, and four cruisers (see figure 7). Its mission was to conduct raids on enemy objectives, particularly on land. On 28 November 1941 Kimmel organized Task Force 8—Task Force 2's carrier, cruisers, and half of its destroyers—and sent it to Wake Island to deliver

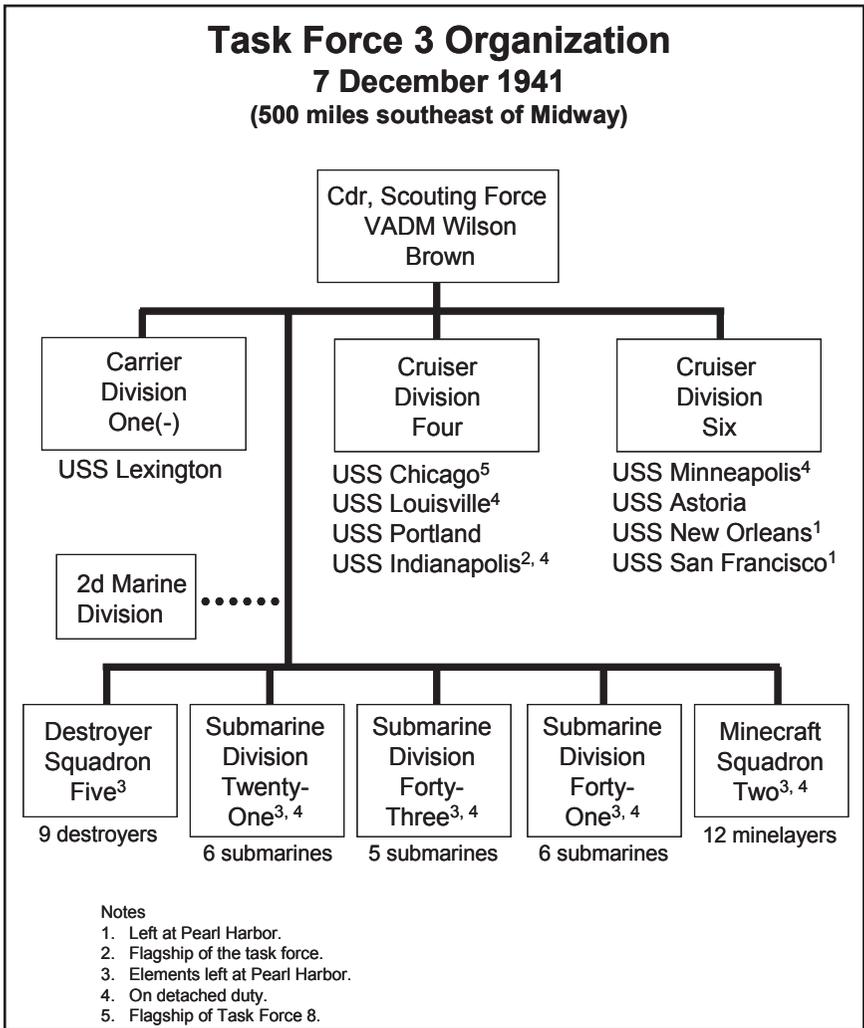


Figure 8.

some marine fighters. It was 250 miles away from Pearl Harbor when the attack began.

Task Force 3 (see figure 8) was commanded by Vice Admiral William Brown and was composed of an aircraft carrier and eight cruisers that could have the 2d Marine Division attached for operations. Its mission was to capture enemy land objectives and to conduct amphibious operations. Kimmel organized Task Force 12 out of Task Force 3 (the carrier, three cruisers, and five destroyers), which on 5 December 1941 left Pearl Harbor to deliver bombers to the marines on Midway. It was 500 miles southeast of Midway when the attack started.

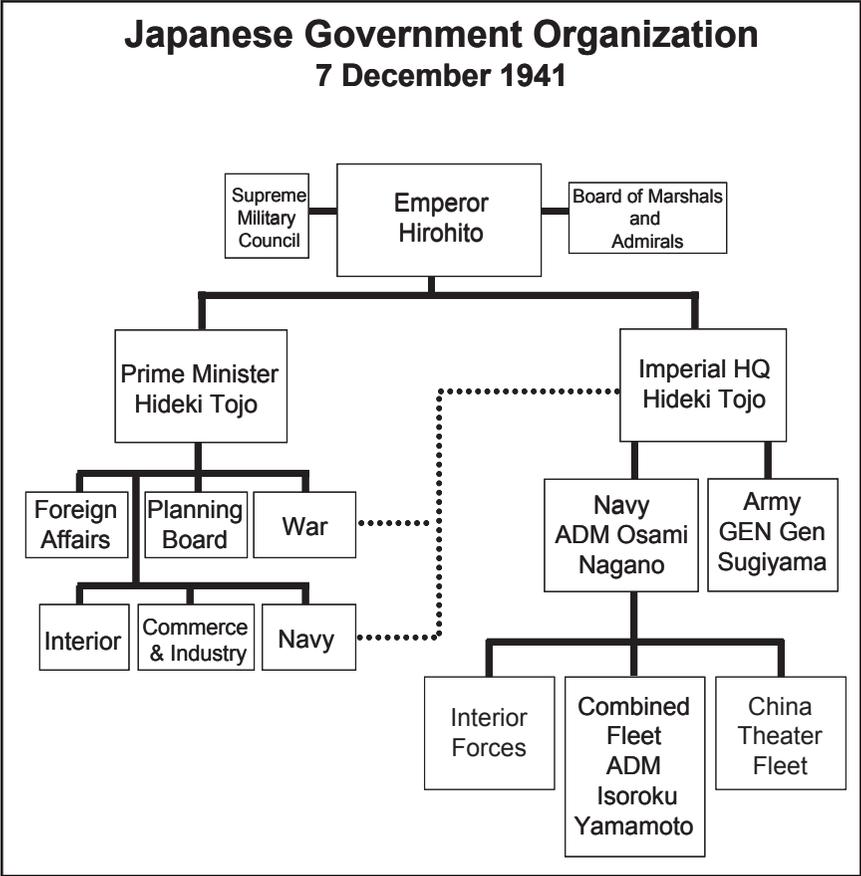


Figure 9.

The USMC had a small component on Oahu. Marine Air Group 21 was at Ewa Field and had Marine Corps Bombing Squadron (VMB)-232, Marine Utility Squadron (VMJ)-252, Fixed-Wing Marine Fighter Squadron (VMF)-211 (Rear Echelon), and VMB-231 (Rear Echelon). Together these squadrons had 10 fighters, 29 bombers, and eight other aircraft. The marines had a ground element at Pearl Harbor consisting of the 1st Defense Battalion(-), 2d Engineer Battalion, 3d Defense Battalion, and 4th Defense Battalion. The marine ground element had 652 men, 12 AA guns, and 36 machine guns. Sixteen ships (eight battleships, two heavy cruisers, four light cruisers, and two auxiliaries) had USMC detachments embarked.

### Japanese Organization

Emperor Hirohito of Japan (see figure 9) was the head of state, not the head of government. The Japanese people considered him half god,

half man. He was 41 years old in 1941 and had been emperor for 15 years. The emperor presided over all cabinet meetings (although he did not say a word during the meetings) and had to approve all matters of state, although he always approved items that were presented to him. Military commanders kept him informed on all military subjects. Hirohito had a Supreme Military Council and a Board of Marshals and Admirals, but these were only advisory boards that had no real authority.

Hideki Tojo, who had served in the army and the government for 36 years, was the prime minister and the de facto dictator of Japan. Besides being prime minister, he was also war minister and chief of the Imperial Staff. As prime minister, he had ministers serving underneath him (foreign affairs, interior, etc.) and as war minister and chief of the Imperial Staff, he dominated military affairs. He believed in the theory of total war and believed Japan needed to expand to capture those areas rich in natural resources that Japan lacked. As chief of the Imperial Staff, he had complete command of the Japanese military.

Under the Imperial Staff were the army and the navy. The Chief of the Army General Staff was General Gen Sugiyama who had been minister of war when Japan invaded China, but with Tojo now over him, Sugiyama's powers were limited.

The Chief of the Naval General Staff was Admiral Osami Nagano who was the oldest serving officer in the Japanese navy. He had previously served as vice chief of the General Staff, navy minister, and commander, Combined Fleet. Nagano had three main subordinate elements under him: the Interior Forces that controlled the naval districts and ports; the China Theater Fleet (composed of a few cruisers and destroyers but mainly patrol and gunboats), which was prosecuting the war in China; and the Combined Fleet, the main power of the Japanese navy. In December 1941 the Japanese navy had 10 aircraft carriers, 10 battleships, 38 cruisers, and 110 destroyers.

Admiral Isoroku Yamamoto commanded the Japanese Combined Fleet. Yamamoto had started his career in cruisers (where he lost two fingers at the Battle of Tsushima) and battleships. He later studied at Harvard and had served as the Japanese naval attaché in Washington, DC. While not a pilot himself, Yamamoto became an air power advocate while commanding an air training base and an aircraft carrier division.

In 1941 the Combined Fleet was a mighty armada consisting of 10 subordinate fleets and units (see figure 10). Yamamoto kept three battleships and three cruisers under his direct control. The 1st Fleet was the

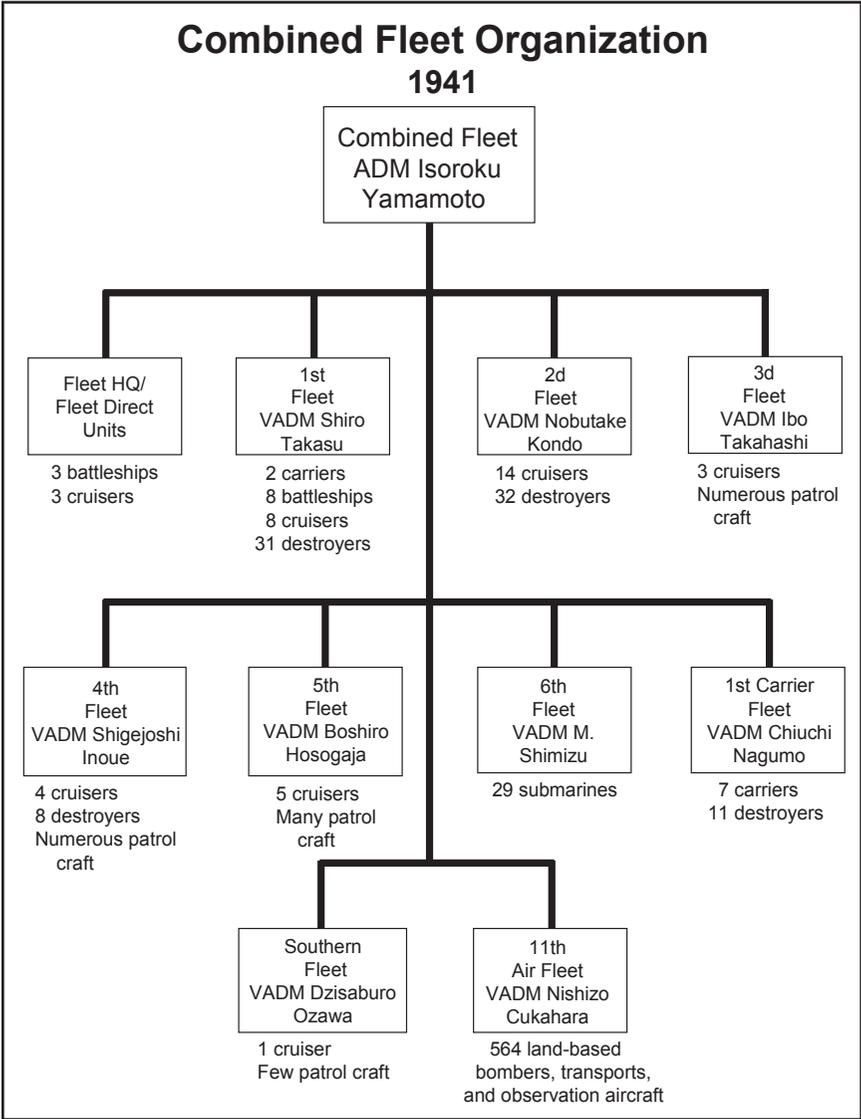


Figure 10.

Battle Force of the Combined Fleet, charged with destroying any enemy fleet. The 2d Fleet was the scouting force, and the 3d Fleet was the blockade and transport force. The 4th and 5th Fleets were charged with defending the Mandated Islands—the Marshalls, Carolines, and Marianas. The 6th Fleet was the submarine force while all of the seaborne aircraft striking power was in the 1st Carrier Fleet. The Southern Fleet was responsible for operations south of and excluding China, and the 11th Air Fleet was the

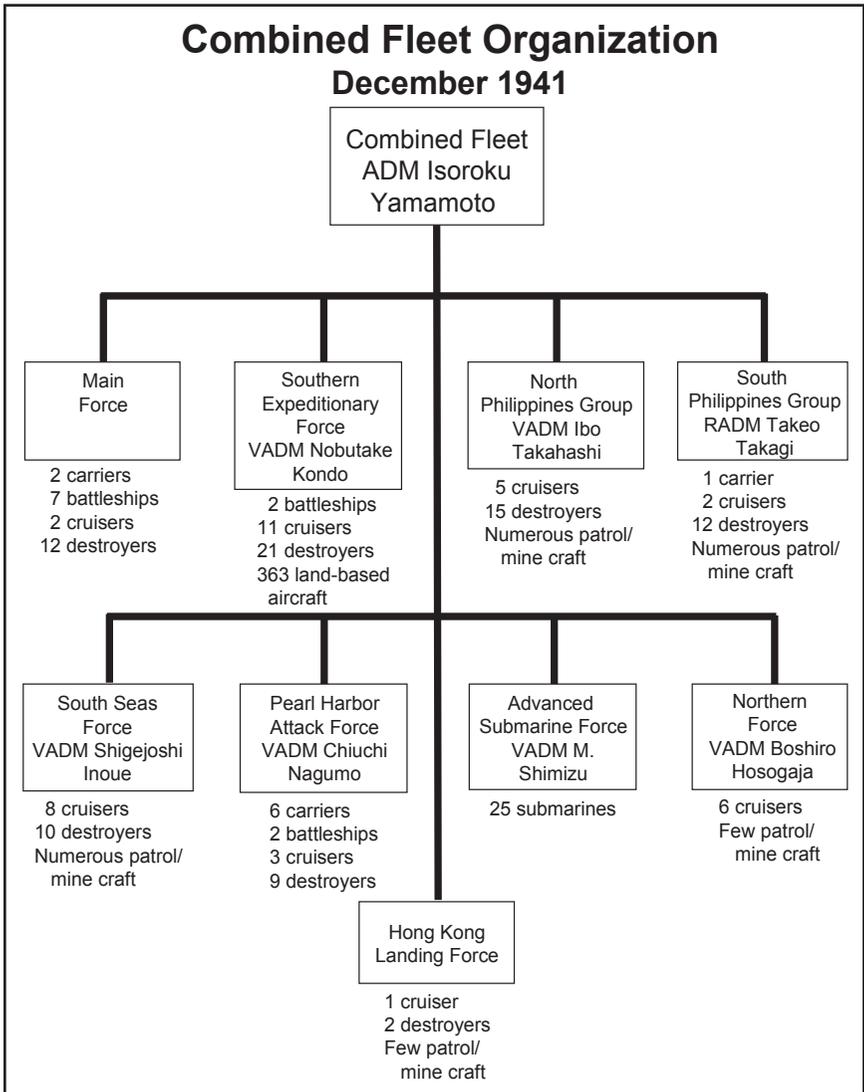


Figure 11.

land-based air-striking force of the Combined Fleet. It had Nell and Betty bombers, flying boat observation aircraft, and transports.

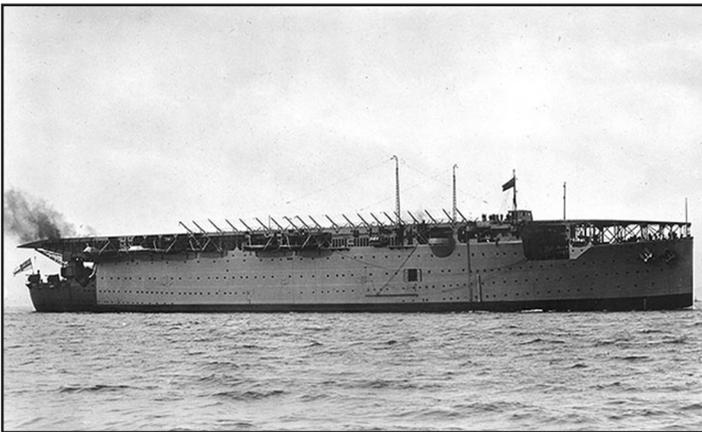
As war with the Western Powers became inevitable, Yamamoto re-organized the Combined Fleet to support the numerous operations it was tasked to conduct (see figure 11). Built around the 2d Fleet, the Southern Expeditionary Force was responsible for operations during the landings in Malaysia. The North Philippines Group was built from the 3d Fleet and

was responsible for operations around the northern half of the Philippine invasion. The South Philippines Group was created by taking ships from different fleets and was responsible for operations around the southern half of the Philippine invasion. The 4th Fleet was the nucleus of the South Seas Force; it was to defend the Mandate Islands while also supporting operations during the landings on Guam and Wake Island. The Pearl Harbor Attack Force was built around the 1st Carrier Fleet and was tasked to destroy the US Pacific Fleet while the 6th Fleet became the advanced submarine force that would conduct reconnaissance, downed pilot picket, and attack missions to support the Pearl Harbor operation. The 5th Fleet became the Northern Force that was responsible for defending the northern portion of the Mandate Islands. The Hong Kong Landing Force was fashioned from other fleets and supported the landings at Hong Kong.

## Ships

### Aircraft Carriers

Navies understood the significance of air power soon after the Wright Brothers took their first flight. In 1908 the US Navy sent observers to watch the Wright Brothers demonstrate their plane to the US Army, and the Navy asked the Wright Brothers to create an aircraft that could be launched from a ship, but they were not interested. The Navy turned to Glenn Curtiss who accepted the project. On 14 November 1910 Eugene B. Ely, an employee of Curtiss, launched his plane from a specially constructed platform on the light cruiser USS *Birmingham*. After this successful test, naval aviation prospered. Curtiss soon invented a plane and ship system whereby a sea-plane could land next to a ship, be winched aboard, and be lowered back to the sea to take off again.



Naval Historical Center

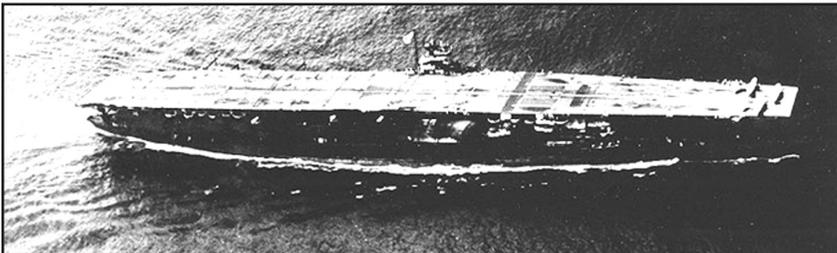
Figure 12. HMS *Argus*.

On 19 July 1918 the British conducted the first carrier strike in history. Seven planes took off from the HMS *Furious* and attacked Zeppelin sheds at Tondern, Germany. The planes, however, had to ditch in the ocean because the *Furious*' deck was not set up for landing. The HMS *Argus* was the first true carrier, and it was launched in November 1918.

In 1922 the United States launched its first aircraft carrier, the USS *Langley*, which was a converted collier. The United States added two more carriers, the *Lexington* and *Saratoga*, in the 1920s by converting battle cruisers that were under construction. In 1934 the US Navy commissioned the USS *Ranger*, the first US aircraft carrier built as a carrier from the keel up. By December 1941 the United States had seven fleet carriers and one escort carrier. Three of these carriers were assigned to the Pacific Fleet.

The Japanese also learned to incorporate aircraft carriers into their fleet. Their first carrier was the IJN *Wakamiya*, which was a seaplane tender, but late in its career, it received a platform from which to launch aircraft. Japan also converted battle cruisers into aircraft carriers, and in 1925 it launched the *Akagi*, soon followed by the *Kaga*. By December 1941 the Japanese had 10 fleet carriers.

### *Japanese Aircraft Carriers*



Naval Historical Center

Figure 13. *Akagi*.

Converted from a battle cruiser during construction.  
Completed in 1927; overhauled 1935-38.  
Displacement: 36,500 tons  
Maximum speed: 31 knots  
Crew: 2,000  
Aircraft: 72 (91 in an emergency)



Naval Historical Center

Figure 14. *Kaga*.

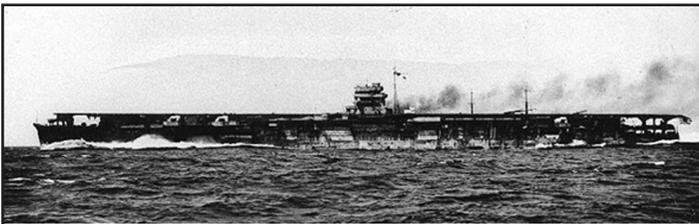
Converted from a battle cruiser during construction.  
Completed in 1928; overhauled 1934-35.  
Displacement: 38,200 tons  
Maximum speed: 28 knots  
Crew: 2,016  
Aircraft: 72 (90 in an emergency)



Naval Historical Center

Figure 15. *Soryu*.

Converted from a flight deck cruiser during construction.  
Completed in 1939.  
Displacement: 18,800 tons  
Maximum speed: 34 knots  
Crew: 1,100  
Aircraft: 63 (71 in an emergency)



Naval Historical Center

Figure 16. *Hiryu*.

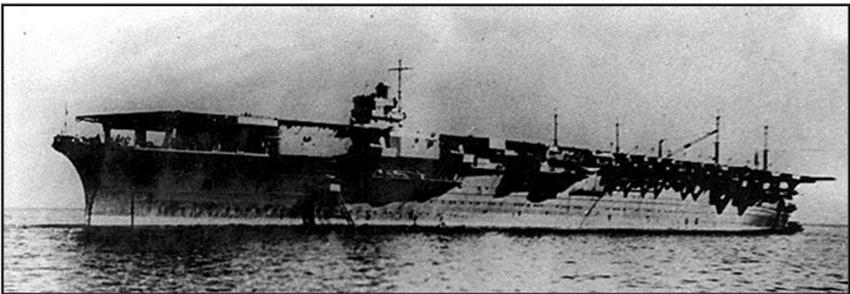
Converted from a flight deck cruiser during construction.  
Completed in 1939.  
Displacement: 20,250 tons  
Maximum speed: 34 knots  
Crew: 1,101  
Aircraft: 63 (73 in an emergency)



Naval Historical Center

Figure 17. *Shokaku*.

Completed in August 1941.  
Displacement: 36,000 tons  
Maximum speed: 34 knots  
Crew: 1,660  
Aircraft: 72 (84 in an emergency)



Naval Historical Center

Figure 18. *Zuikaku*.

Completed in September 1941.  
Displacement: 36,600 tons  
Maximum speed: 34 knots  
Crew: 1,660  
Aircraft: 72 (84 in an emergency)

## American Aircraft Carriers



Naval Historical Center

Figure 19. USS *Lexington*, CV-2.

Converted from a battle cruiser during construction.  
Completed in 1928.  
Displacement: 41,000 tons  
Maximum speed: 34 knots  
Crew: 2,122  
Aircraft: 81



Naval Historical Center

Figure 20. USS *Saratoga*, CV-3.

Converted from a battle cruiser during construction.  
Completed in 1928.  
Displacement: 33,000 tons  
Maximum speed: 34 knots  
Crew: 2,111  
Aircraft: 81

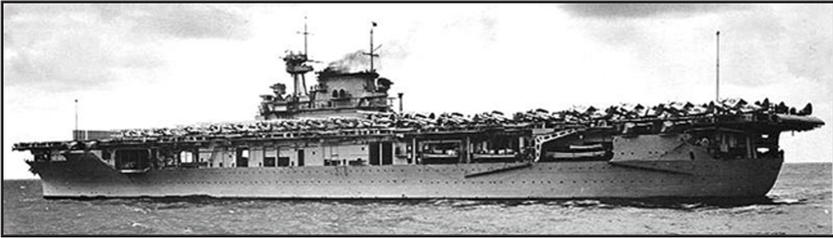


Figure 21. USS *Enterprise*, CV-6.

Completed in 1938.  
Displacement: 19,800 tons  
Maximum speed: 33 knots  
Crew: 2,919  
Aircraft: 90

## Battleships

Battleships had been the mainstay of fleets for generations. As early as the 1850s, nations had been designating their main, big gun ships as “battleships.” As technology improved, nations kept building larger, better-armored ships, and technology also allowed larger guns to be produced for these heavily armored but slow ships. An example of this era of ships is the USS *Ohio*, which was completed in 1904, displaced 12,000 tons, had a maximum speed of 18 knots, and was armed with four 12-inch guns, 16 6-inch guns, and other smaller weapons.

At the Battle of Tsushima in 1905, the opponents started firing at 19,000 yards, questioning whether the secondary armaments (6-, 8-, and 9-inch guns) were needed on battleships. Because of this phenomenon, the United States and England began work on classes of all “big gun” battleships. The British won the race when they completed the HMS *Dreadnaught* in 1906. It displaced 18,000 tons, had a maximum speed of 21 knots (due to steam turbine engines), and was armed with 10 12-inch guns. Its speed, armor, and firepower made all previous battleships obsolete. Nations scrambled to build all “big gun” battleships so that by 1941 nations were building battleships that displaced 35,000 tons, could reach speeds of 27 knots, and had 16-inch guns.

## *Japanese Battleships*



Naval Historical Center

Figure 22. *Hiei*.

Built as a battle cruiser; converted to a battleship during overhaul.  
Completed in 1914; overhauled 1936-40.  
Displacement: 29,300 tons  
Maximum speed: 27 knots  
Crew: 1,221  
Armament: eight 14-inch guns, 16 6-inch guns, eight 5-inch AA guns



Naval Historical Center

Figure 23. *Kirishima*.

Built as a battle cruiser; converted to a battleship during overhaul.  
Completed in 1915; overhauled 1927-30, 1935-36.  
Displacement: 32,000 tons  
Maximum speed: 28 knots  
Crew: 1,200  
Armament: eight 14-inch guns, 16 6-inch guns, eight 5-inch AA guns

## *American Battleships*



Naval Historical Center

Figure 24. USS *Nevada*, BB-36, Nevada class.

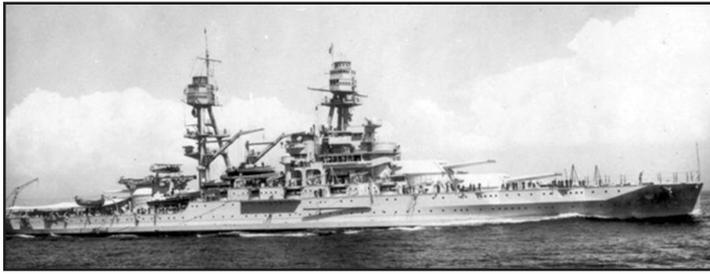
Completed in 1916; overhauled 1927-30.  
Displacement: 27,500 tons  
Maximum speed: 20 knots  
Crew: 1,552  
Armament: 10 14-inch guns, 24 5-inch guns



Naval Historical Center

Figure 25. USS *Oklahoma*, BB-37, Nevada class.

Completed in 1916; overhauled 1927-29.  
Displacement: 27,500 tons  
Maximum speed: 21 knots  
Crew: 1,552  
Armament: 10 14-inch guns, 24 5-inch guns



Naval Historical Center

Figure 26. USS *Pennsylvania*, BB-38, Pennsylvania class.

Completed in 1916; overhauled 1940-41.

Displacement: 31,400 tons

Maximum speed: 21 knots

Crew: 1,620

Armament: 12 14-inch guns, 24 5-inch guns



Naval Historical Center

Figure 27. USS *Arizona*, BB-39, Pennsylvania class.

Completed in 1916; overhauled 1929-31.

Displacement: 31,400 tons

Maximum speed: 21 knots

Crew: 1,588

Armament: 12 14-inch guns, 24 5-inch guns



Naval Historical Center

Figure 28. USS *Tennessee*, BB-43, Tennessee class.

Completed in 1920.

Displacement: 33,100 tons

Maximum speed: 21 knots

Crew: 1,625

Armament: 12 14-inch guns, 16 5-inch guns



Naval Historical Center

Figure 29. USS *California*, BB-44, Tennessee class.

Completed in 1921; overhauled 1929-30.  
Displacement: 32,300 tons  
Maximum speed: 21 knots  
Crew: 1,623  
Armament: 12 14-inch guns, 16 5-inch guns



Naval Historical Center

Figure 30. USS *Maryland*, BB-46, Colorado class.

Completed in 1921.  
Displacement: 32,600 tons  
Maximum speed: 21 knots  
Crew: 1,623  
Armament: eight 16-inch guns, 18 5-inch guns



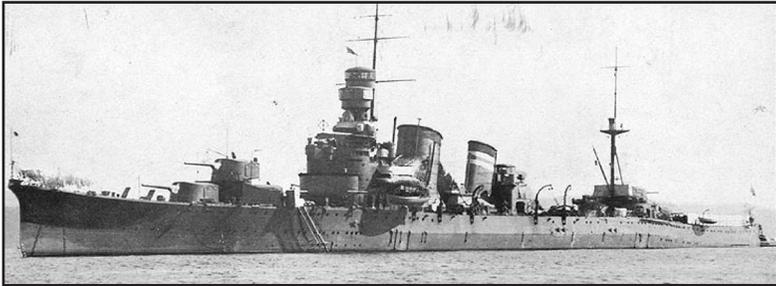
Naval Historical Center

Figure 31. USS *West Virginia*, BB-48, Colorado class.

Completed in 1923.  
Displacement: 33,590 tons  
Maximum speed: 21 knots  
Crew: 1,626  
Armament: eight 16-inch guns, 26 5-inch guns

## Cruisers

Cruisers were lightly armored, heavily armed, fast ships designed to screen formations and to scout out enemy fleets. Their survivability depended on speed, not armor. Japan developed classes of battle cruisers armed with 14-inch guns, but they were converted to battleships during overhauling. The United States and Japan had each decided to build a new class of battle cruiser (lightly armored but armed with 14- or 16-inch guns), but the limitations of the Washington Naval Treaty of 1922 only allowed cruisers to displace 10,000 tons or less so cruisers became smaller and more lightly armed. By 1941 Japan had 38 cruisers, and the US Pacific Fleet had 21 cruisers. Each side had different classes, and a sample of a cruiser from each side follows.



Naval Historical Center

Figure 32. Japan's *Furutaka*.

Completed in 1926.  
Displacement: 10,507 tons  
Maximum speed: 33 knots  
Crew: 625  
Armament: six 8-inch guns, four 4.7-inch guns,  
eight 24-inch torpedo tubes, 42 25mm guns



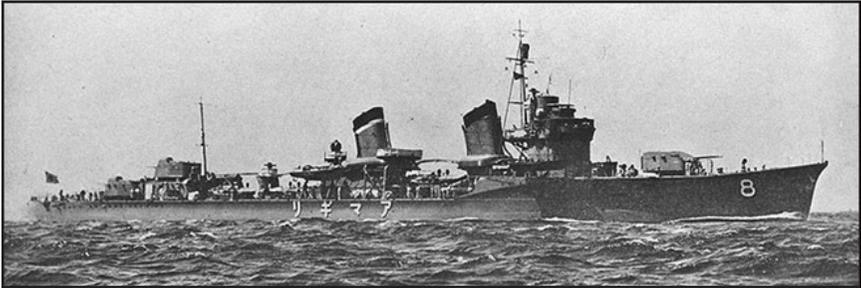
Naval Historical Center

Figure 33. USS *New Orleans*, CA-32, New Orleans class.

Completed in 1923.  
Displacement: 9,950 tons  
Maximum speed: 33 knots  
Crew: 708  
Armament: nine 8-inch guns,  
eight 5-inch guns, 16 40mm guns

## Destroyers

Destroyers had been around since the 1890s. Originally named “Torpedo Boat Destroyers,” these ships were small, fast, and armed with rapid-firing guns to destroy enemy torpedo boats. With the invention of the submarine, destroyers took on the antisubmarine mission, and the name of this type of ship was shortened to “destroyer.” By 1941 navies used destroyers as screening vessels, scouting vessels, anti-torpedo-boat ships, and antisubmarine ships. By 1941 Japan had 110 destroyers, and the US Pacific Fleet had 53. Each side had different classes, and a sample of a destroyer from each side follows.



Naval Historical Center

Figure 34. Japan's *Amagiri*.

Completed in 1928.  
Displacement: 2,090 tons  
Maximum speed: 38 knots  
Crew: 197  
Armament: six 5-inch guns,  
18 depth charges, nine 24-inch torpedo tubes



Naval Historical Center

Figure 35. USS *Helm*, DD-388, Bagley class.

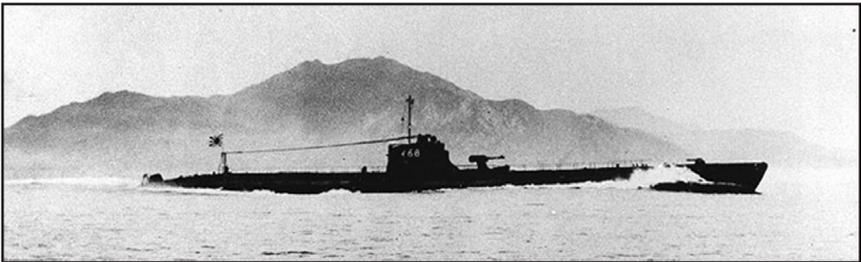
Completed in 1928.  
Displacement: 1,850 tons  
Maximum speed: 36.5 knots  
Crew: 158  
Armament: four 5-inch guns, 12 21-inch torpedo tubes

## Submarines

Navies had experimented with submarines since the 1860s, and as technology increased, the submarine's capabilities improved greatly. During World War I, Germany sank more than 5,000 Allied ships using their submarines, but these era submarines were limited by range, so postwar improvements led to submarines that could cross the Atlantic or Pacific Oceans easily and return.

The United States started seriously working to acquire a submarine fleet in the late 1890s, and in 1900 it launched its first submarine. From 1900-41 the United States continued to improve its submarine fleet.

In 1905 Japan was locked in combat with Russia and looked for asymmetric ways to defeat the superior Russian navy and started acquiring submarines. Their first five submarines were purchased from the United States. After the war with Russia, Japan developed its own submarines and continued to improve them, developing numerous types including seaplane carriers, mine warfare submarines, and midget submarines. By 1941 Japan had 65 fleet submarines, and the US Pacific Fleet had 23. Each side had different classes, and a sample of a submarine from each side follows.



Naval Historical Center

Figure 36. Japan's *I-68*.

Completed in 1934.

Displacement: 1,400 tons

Maximum speed: 23 knots surface, 8 knots submerged

Crew: 84

Armament: six 53-centimeter (cm)  
torpedo tubes, one 10cm gun



Figure 37. Japan's HA-19.

Completed in 1938.  
Displacement: 46 tons  
Maximum speed: 23 knots surface,  
19 knots submerged  
Crew: 2  
Armament: two 53cm torpedo tubes



Figure 38. USS *Tautog*, SS-199, Tambor class.

Completed in 1934.  
Displacement: 1,475 tons  
Maximum speed: 20 knots surface, 9 knots submerged  
Crew: 65  
Armament: 10 21-inch torpedo tubes, one 3-inch gun

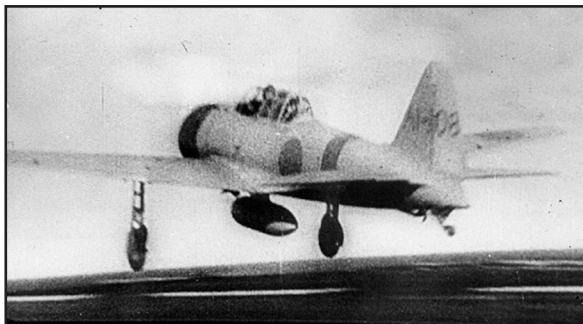
## Aircraft

### Fighters

Military use of aircraft predates the invention of the airplane. As early as the 1860s, nations used balloons to conduct reconnaissance of enemy positions. Militaries first employed aircraft in observation roles to gain valuable information on the enemy, and during World War I nations started arming their aircraft so they could destroy any enemy observation aircraft that appeared. These early armed aircraft were termed “fighting scouts.” They were plagued with very short range and, as such, were defensive aircraft. As aviation technology improved during the war, nations were able to increase their fighters’ range, and they were used to attack ground targets. Air superiority became a prerequisite for any operation; militaries wanted control of the air so they could prevent the enemy from using their aircraft to attack and observe while they used their own to attack the enemy. Allied air superiority over the Central Powers was an important aspect of their victory in World War I.

After World War I technological advances improved the fighter’s performance as metal replaced wood in aircraft structure and aerodynamics improved to allow the monoplane to replace the biplane. Other improvements included adding optical sights, more and bigger machine guns, radio communications, and retractable landing gear. By 1941 fighters were both an effective offensive and defensive weapon. In the offensive role, fighters protected other aircraft, and if there were no enemy fighters, they could be employed to strafe targets. In the defensive role, fighters could remain at their base, and once a threat was detected, take off and attack the enemy.

#### *Japanese Fighter*



Naval Historical Center

Figure 39. A6M2 Zero fighter.

User: Army and Navy

Crew: 1

Speed: 340 miles per hour (mph)

Range: 1,160 miles

Armament: two 20mm cannons, two 7.7mm machine guns

## American Fighters



US Air Force Museum

Figure 40. P-40 Warhawk.

User: Army  
Crew: 1  
Speed: 362 mph  
Range: 850 miles, 1,200 with auxiliary tank  
Armament: six .50-caliber machine guns,  
up to 700 pounds (lb) of bombs



US Air Force Museum

Figure 41. P-36 Hawk.

User: Army  
Crew: 1  
Speed: 313 mph  
Range: 830 miles  
Armament: two .30- or .50-caliber machine guns



Naval Historical Center

Figure 42. F4F3 Wildcat.

User: Navy and Marine Corps

Crew: 1

Speed: 320 mph

Range: 770 miles

Armament: six .50-caliber machine guns, 200 lb of bombs

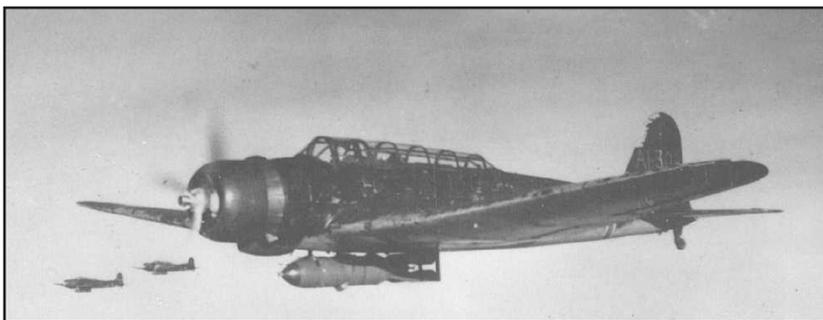
## Bombers

As aircraft took on the role of attack, pilots soon carried small bombs with them to drop on the enemy. Nations saw the utility of being able to deliver bombs from the air and developed aircraft whose primary mission was to drop bombs. Dirigibles were employed to deliver bombs, but soon technological advances allowed the construction of larger aircraft that could deliver bigger payloads. During World War I, large bombers were used to attack enemy homelands. The Germans used the Gotha bomber to bomb London while the British used the Handley-Page bomber to bomb Germany. After the war, technology allowed for bigger and better bombers as aerodynamics and engine improvements led to larger bombers with bigger payloads and the ability to carry machine guns for self-protection and optical sighting improvements led to increased bombing accuracy.

Tests during the interwar period led many innovators to believe that air power could attack and destroy ships, a fact not lost on farsighted naval officers. Navies developed bombers that could be launched from ships, and while smaller than land-based bombers, seaborne bombers could deliver devastating strikes against ships. Navies also developed dive bombers—airplanes designed to carry smaller bombs that started their attack high above the target, then dove on their target in a steep dive, thus increasing accuracy. Torpedoes had devastating effects against shipping

in World War I, so navies developed airplanes that could skim across the water and deliver torpedoes against enemy ships. Some navies also used these torpedo planes as high-level bombers because they were able to carry heavy loads.

### *Japanese Bombers*



Naval Historical Center

Figure 43. B5N2 Kate torpedo/high-level bomber.

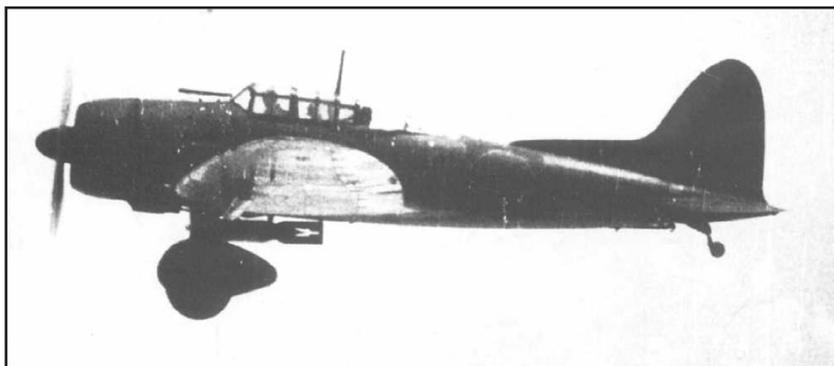
User: Navy

Crew: 3

Speed: 235 mph

Range: 683 miles

Armament: two 7.7mm machine guns in cowling,  
one 7.7mm machine gun in rear cockpit,  
one 1,750-lb torpedo or 1,750 lb of bombs



Naval Historical Center

Figure 44. D3A Val dive bomber.

User: Navy

Crew: 2

Speed: 281 mph

Range: 874 miles

Armament: two 7.7mm machine guns over the engine,  
one 7.7mm machine gun in rear cockpit, one 550-lb bomb

*American Bombers*



US Air Force Museum

Figure 45. B-17B Flying Fortress.

User: Army

Crew: 6

Speed: 292 mph

Range: 3,000 miles

Armament: seven .50-caliber machine guns, 6,000 lb of bombs



US Air Force Museum

Figure 46. B-18 Bolo.

User: Army

Crew: 6

Speed: 217 mph

Range: 1,200 miles

Armament: three .30-caliber machine guns,  
4,400 lb of bombs



Naval Air Station, Jacksonville

Figure 47. PBY-5 Catalina.

User: Navy  
Crew: 7 to 9  
Speed: 189 mph  
Range: 2,900 miles  
Armament: two .50-caliber machine guns,  
4,000 lb of bombs/depth charges/torpedo



Naval Historical Center

Figure 48. SBD-2 Dauntless dive bomber.

User: Navy and Marine Corps  
Crew: 2  
Speed: 255 mph  
Range: 1,345 miles  
Armament: two .50-caliber machine guns forward,  
two .30-caliber machine guns in rear cockpit,  
1,600 lb of bombs



Figure 49. TBD-1 Devastator torpedo/high-level bomber.

User: Navy

Crew: 2 to 3

Speed: 207 mph

Range: 700 miles

Armament: one .50-caliber machine gun forward,  
one .30-caliber machine gun in rear cockpit,  
1960 lb of bombs/torpedoes

### Strategy

Despite the fact that Japan had been an ally during World War I, American war planning in the interwar years focused on war with Japan, and Japanese planning focused on the United States. Responsibility for US joint strategic war plans fell to the Joint Board, which had been organized in 1903. From its inception through World War I, the Joint Board was ineffectual and produced little of strategic value, so it was reorganized in 1919 to provide some real jointness to war planning. The Board now consisted of six members—the Army Chief of Staff, Chief of Naval Operations (CNO), their deputies, and their chiefs of war plans. Additionally, the Joint Planning Committee was formed to give the Joint Board a staff for joint war planning, and the Army and Navy each provided four officers from its War Plans Division to conduct the detailed preparations of joint plans. The Joint Planning Committee started work on a series of war plans that focused on fighting one enemy at a time. The plans were named “color plans” because each potential enemy was a different color—orange for Japan, red for England, etc. The plans the Joint Planning Committee produced were the basis for developing subordinate supporting plans for each of the services.

The original series of Orange Plans for war against Japan called for

offensive naval war against Japan. To accomplish this, the Navy needed a base in the Far East to service the entire US Fleet, and Manila provided the only capable port west of Pearl Harbor. Therefore, the Army's responsibility became to defend and hold Manila Bay until the US Fleet arrived with Army reinforcements.

Diplomatic actions hindered US planning for war with Japan during the 1920s and 1930s. In 1922 the United States signed the Five Power Naval Treaty that called for the United States, Japan, Great Britain, France, and Italy to not fortify any of their Far Eastern possessions. Japan never had plans to fortify any of its positions in the Mandate Islands, and this treaty ensured that the Philippines, Guam, and Hong Kong could not become fortresses in Japan's backyard.

Politicians and diplomats, in response to the devastation of World War I, looked for ways to prevent war, and treaties and agreements seemed like the answer. The Washington Naval Conference of 1922 led to an agreement whereby the United States, Great Britain, and Japan would limit their capital ships based on the ratio 5-to-5-to-3. On paper, this seemed like a bargain for the United States and Britain because their navies could be 40-percent larger than Japan's. The problem was that the United States and Britain had to reduce their navies (the United States scrapped 15 battle-ships and cruisers that had been under construction) while the Japanese had to build up to get to their "limitation." With the stroke of a pen, Japan reduced the size of the US Navy while being allowed to increase the size of its own navy.

While writing joint war plans was important to US war planners, by 1937 they realized that their basic assumption of having to fight only one enemy at a time was doubtful. In 1936 and 1937 Japan, Germany, and Italy had executed a number of agreements that created what became known as the Axis Alliance. The possibility of having to simultaneously fight in the Atlantic and Pacific forced planners to reassess their assumptions. The Joint Board and the Joint Planning Committee focused on the problem, and in 1939 they developed guidelines for a new series of war plans called the "Rainbow" plans. This name signified that multiple potential enemies were involved, thus different color plans were combined. The planners developed five Rainbow war plans, numbered one through five, all of which first provided for the defense of the Western Hemisphere in accordance with the Monroe Doctrine (see figure 50).

Rainbow 1 assumed the United States would fight without allies and would focus action in the Atlantic while maintaining a strategic defensive

## Rainbow War Plans

Plan	Allies	Primary Area	Secondary Area
1	None	Atlantic	Pacific
2	Britain, France	Pacific	Atlantic (limited)
3	None	Pacific	Atlantic
4	None	South Atlantic	Pacific
5	Britain, France	Atlantic	Pacific

Figure 50. Rainbow war plans.

in the Pacific. When the situation in the Atlantic allowed, the United States would concentrate in the Pacific. Rainbow 2 assumed that the United States would fight with Britain and France and, therefore, could focus on the Pacific. Rainbow 3 assumed that the United States would fight without allies and would concentrate on the Pacific first. Rainbow 4 was similar to Rainbow 1—the United States would not have any allies and would have to focus on the Atlantic—but this plan called for the Army to be sent to South America for operations. Rainbow 5 specified that the United States would be allied with Britain and France, and would ensure the defeat of Germany before concentrating on Japan.

With the start of World War II and after the fall of France, the US planners reconsidered all of their alternatives. Western Europe had fallen, Britain was barely hanging on, and if it fell, Germany and Japan could attack the Western Hemisphere. Reinforcing England seemed to be the logical priority in any war situation. CNO Admiral Harold Stark produced what has been called Plan Dog (because the recommendation was contained in paragraph D, “Dog,” in the phonetic alphabet of the time). Stark’s analysis

indicated that it was key to the United States to ensure Britain did not fall. If it did, Germany and Italy would likely expand into the Western Hemisphere, and retaining England, as a staging base for future land actions against the European continent, was imperative. Stark thought that Britain did not have the manpower and was too weak economically to fight alone so he recommended that the United States assist Britain in any way possible. His recommendations were accepted, and the Atlantic became the primary theater of operations.

Japan had desired to be the most powerful nation in the Far East since the 1890s. As part of that plan, Japan had to expand to acquire areas that were rich in natural resources not available in Japan and to form a protective outer ring away from the home islands. With victories over the Russians and Chinese in the late 1890s/early 1900s, Japan had obtained Formosa, Korea, the Kuril Islands, and parts of Manchuria. As an ally at the end of World War I, Japan was mandated from Germany possession of the Marshall Islands, the Caroline Islands, and the Mariana Islands. Japan thought the best way to be the foremost power of the Far East was through economics, so the United States, the real economic competitor in the area, became the most likely adversary.

Despite diplomatic successes (the Five-Power Naval Limitation Treaty, Washington Naval Conference, etc.), Japan was still militarily inferior to the United States and had to develop a plan for war that ensured victory. Because of the limitations of the Washington naval treaty, the Japanese looked for ways to gain any naval advantage. Its submarine fleet was wanting (and there were no treaty limitations on submarines), so Japan concentrated on improving and increasing it. Additionally, the treaty limited the tonnage of cruisers and battleships but allowed ships under construction to be converted to aircraft carriers of limited tonnage (of which the Japanese underreported the size of its new carriers). With improved submarine and aircraft carrier capabilities, but with an inferior capital ship ratio, Japan developed the concept of “Kantai Kessen” (decisive fleet battle).

Kantai Kessen assumed that any war with the United States would be primarily a naval war. Therefore, Japan wanted the fight to be near the Japanese home islands. They envisioned the United States sailing a large fleet toward Japan. Along the way Japanese submarines would track and attrit the US fleet. The Americans would have to bypass Japanese bases on the Mandate Islands, which could then be used to attack the fleet from the air and would also be astride the lengthening US line of communication. As the now-attrited US fleet approached the Japanese home islands, the

main Japanese fleet, supported by land-based air power, would fight and defeat the US fleet.

## Operational

In response to the Rainbow plans, the US Pacific Fleet reorganized (see figure 5). Rainbow 5 was the most likely plan to be executed, so in July 1941 Kimmel issued his own plan for executing Rainbow 5. Since the United States' main effort was the Atlantic, Kimmel developed a plan that defended Hawaii and the West Coast while simultaneously setting the conditions for future operations. At the outbreak of war, the Pacific Fleet would sweep the ocean of all Japanese shipping west of Hawaii, conduct reconnaissance and raids on the Marshall Islands, move the 2d Marine Division to Hawaii, and prepare to invade the Marshall Islands. Once these tasks were completed, the Pacific Fleet would seize Truk Island in the Marshall Islands to use as an advanced fleet base in subsequent operations. Eventually, the Pacific Fleet would seize all of the Marshall and the Caroline Islands. Once the Pacific Fleet had seized the Marshall and Caroline Islands, it would develop plans for subsequent operations. Other tasks assigned to the Pacific Fleet were defending Guam, protecting the sea lines of communication, and defending territory in the Pacific to prevent Japanese expansion into the Western Hemisphere. The purpose of these operations was to divert enemy strength away from the western Pacific to "support the forces of the associated powers in the Far East."

The Japanese developed plans for executing Kantai Kessen, and the Combined Fleet was organized to execute the plan (see figure 10). The 6th Fleet of the Combined Fleet had three types of submarines to support Kantai Kessen. Scouting submarines equipped with seaplanes would locate and maintain contact with the US fleet. Command submarines would coordinate raids by attack submarines and cruisers from the 2d Fleet. As the US fleet steamed west, it would be attacked from the air by land-based bombers from the 11th Air Fleet stationed in the Mandate Islands. The 1st Carrier Fleet's aircraft would locate the American carriers and attack them with dive bombers to destroy their flight decks, attempting to prevent American air operations. As the US fleet neared the home islands, more submarines would lay minefields and launch midget submarines to continue to attrit the enemy. Once within range of Japan, more land-based aircraft of the 11th Air Fleet would attack the US fleet. The 1st Fleet's battleships and heavy cruisers would clear away any US screening forces so that swift light cruisers and destroyers could sweep in for massed torpedo attacks. At this point, the battleships and heavy cruisers would join the fight to finish off the American fleet.

## Tactics

Naval tactics of the 1940s were based on time-tested principles of getting as much steel on a target as fast as possible. Fleets had a submarine component whose mission was to locate and track enemy fleets, with the secondary mission of attacking smaller combat vessels or logistics ships. Scouting forces were a major part of any fleet, and their purpose in the offense was to locate and attack the enemy fleet with high-speed cruisers and destroyers using torpedoes. Additionally, the scouting forces' speed allowed them to get ahead of an enemy's main force to "cross the T" (the process of steaming in line across the front of an enemy line, thus allowing you to maximize fire on the enemy while he cannot bring all of his guns to bear on you. (See figure 51.)

In the defense, the scouting force would protect the main fleet by preventing the enemy's scouting force from locating and/or attacking the main fleet and attacking the enemy main fleet as it closed. Aircraft carriers were used to launch aircraft to locate enemy fleets and to control the gunfire of the battleships and cruisers. Eventually, dive bombers were developed to strike an enemy carrier's flight deck so it could not launch its own aircraft. Torpedo planes could be used in conjunction with torpedo attacks by cruisers and destroyers. The battle force of any fleet was the main fighting unit of any navy. Large battleships and battle cruisers, supported by faster light cruisers and destroyers, would maneuver to gain position on the enemy. The preferred tactic was to cross the T, but doctrine

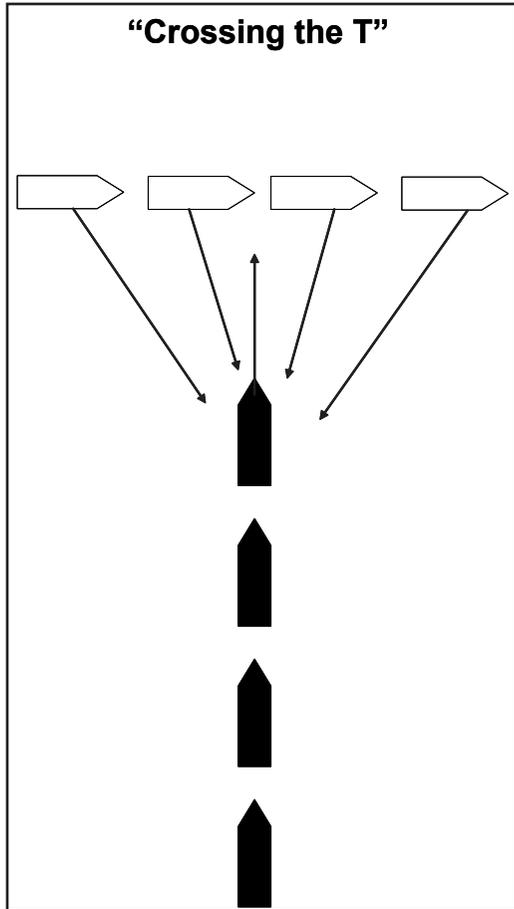


Figure 51.

existed for parallel attacks, either steaming in the same direction or sailing opposite the enemy (see figure 52). The keys to success for any naval engagement were maneuvering to gain an advantageous position on your enemy and the crews' gunnery skills; those who could hit targets from great distances would win the battle.

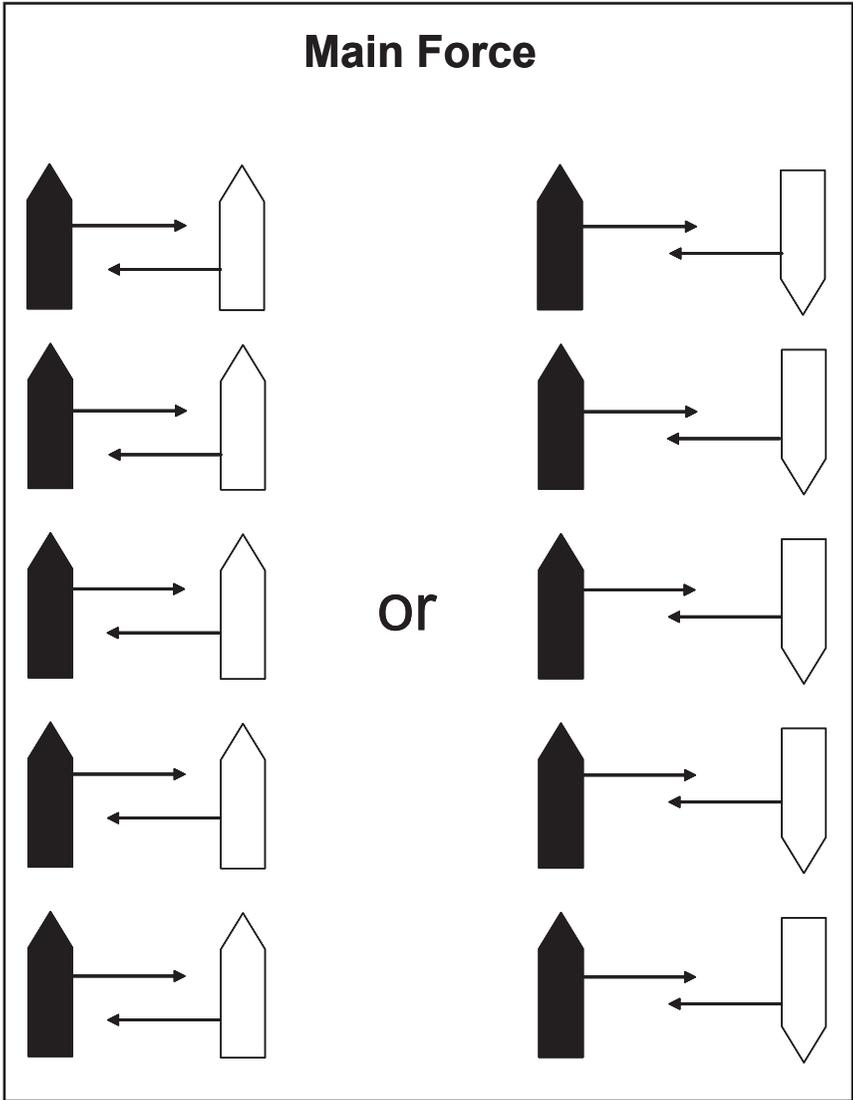


Figure 52.

## Logistics

Due to the distances involved in the Pacific, logistics was a concern to both sides. The US fleet had its main ports and naval yards along the US West Coast at Puget Sound and San Diego. These yards could resupply, refit, repair, and completely overhaul ships. In 1940 Pearl Harbor was the home base of the Hawaiian Detachment (a carrier, a cruiser, and some destroyers), but it possessed only limited capabilities. Ships could refit, refuel, and rearm, but major repairs and overhauls still had to be accomplished on the West Coast. All across the Pacific, the United States maintained small naval bases at such places as Johnston Island, Midway, Palmyra, American Samoa, Wake Island, and Guam. Each of these small bases maintained an airfield, and some served as submarine bases and/or refuel and rearm points. The Navy Base at Subic Bay in the Philippines was another of the Navy's major bases, but it also only possessed limited capability to refuel, rearm, and repair ships of the fleet.

In 1940 the Pacific Fleet shifted its home port from the West Coast to Pearl Harbor. Immediately, work was started to convert Pearl Harbor into a base that would be capable of supporting the Pacific Fleet with all services required except major repair and overhaul. New docks, dry docks, and fuel tanks were added to the facility, and by 1941 Pearl Harbor was a major base.

The major limitation of ships of the 1930s and 1940s was the amount of fuel they could carry. The ships could carry enough food and water for the sailors, but they needed to stop to refuel. Destroyers had the shortest range and could travel about 6,000 nautical miles at 15 knots before refueling, while battleships could range 13,000 miles and carriers 15,000 miles. Due to the limited ranges, the Navy had to have bases all across the Pacific to service its fleet. In 1941 ships were able to refuel at sea, but it was not a common practice so the Navy still depended on bases to refuel their ships.

Everything the Pacific Fleet (and the smaller Asiatic Fleet in the Philippines) used had to be moved by ship from CONUS to the servicing bases. As part of its organization, the Pacific Fleet had Task Force 4, which was responsible for organizing, training, and developing the bases (Pearl Harbor, Midway, Wake) and providing service to those fleet units engaged in operations. Additionally, Task Force 15 was to secure shipping coming from the United States.

The Navy had limited shipping assets to support its fleet. In 1941 the Navy had the following logistics ships (numbers in parentheses are ships supporting the Pacific Fleet):

Oilers	29 (11)
Munitions ships	4 (2)
Cargo ships	22 (5)
General stores ships	3 (2)
Provisions ships	9 (4)
Transports	37 (8)
Hospital ships	2 (1)

Due to the distances involved, logistics was critical to Japan. Japan maintained its ports and navy yards throughout the home islands. They maintained larger bases at locations, including Yokosuka, Kure, Sasebo, Maizuru, and Bako. These bases could provide all required services for ships up to and including overhaul. There were many smaller yards and bases throughout the home islands that provided more limited support. Japan, like the United States, depended on forward bases for their ships. Their base on Truk Island was the most advanced, with services including refuel, rearming, and repairing. Other bases away from the home islands were Saigon and Formosa. Like the United States, Japan's ships could also refuel while under way, but it was not a practiced skill and was very rarely used.

The Japanese navy had built a lot of ships, but it, like the United States, did not have enough logistics ships to properly support its fleets. In 1941 the Japanese navy had the following logistics ships (numbers in parentheses are ships supporting the Combined Fleet):

Oilers	37 (31)
Munitions ships	1 (1)
Cargo ships	7 (1)
General stores ships	11 (3)
Provisions ships	12 (12)
Transports	64 (59)
Hospital ships	5 (4)

## II. Pearl Harbor Campaign Overview

In July 1853 Commodore Matthew Perry, in command of four US Navy ships, arrived at Edo (now Tokyo) under orders from President Millard Fillmore to make contact with the Japanese to open commercial relations with the reclusive nation. The Japan of 1853 was much like the Japan of 1653, a feudal nation of many different clans headed by the warrior class samurai, with a shogun (meaning “general”) leader with dictatorial powers. The emperor was the head of state (but not of the government) and Japan’s religious leader, but he had no real power. Starting in 1653 the shoguns had kept Japan in isolation; missionaries who attempted to enter the country were killed, traders were driven off, and shipwrecked seamen were imprisoned.

When Perry entered the bay at Edo, the Japanese leaders observed his ships belching smoke and bristling with modern cannons, and while impressed with the show of force, the Japanese would not agree to Perry’s terms. He departed, determined to return to complete the mission.

In February 1854 Perry did return, but this time he brought seven warships and a large contingent of marines. Perry came ashore with a marine band leading and immediately started negotiating a treaty with the Japanese. The shogun was intimidated by the power of the United States and reluctantly agreed to the Treaty of Kanagawa, which was signed on 31 March 1858. The treaty called for friendship between the nations, opening two ports for the United States to use, safety guarantees for shipwrecked seamen, and allowances for the United States to acquire supplies and provisions from the Japanese. Soon, other nations arrived to negotiate treaties with Japan, and the once isolationist country was now thrown open to the West.

However, some of the clans in western Japan were upset with the shogun’s inability to keep Japan isolated, which led to internal strife for control of the country. What were initially small clashes between the shogun’s forces and the western clans led to full-scale war in 1868. For seven months the western clans battled the shogun’s supporters, but on 4 July 1868 the western clans won the Battle of Venno and control of the nation. They immediately restored the emperor to power and effectively ended the feudal era.

The new government realized that Japan, now open to the West, had to modernize to achieve equality and immediately implemented measures to attain this goal. Feudalism and its associated samurai class were abolished, modern administrative zones within the country were established,

an Imperial Army was raised through conscription, and an Imperial Navy was created by purchasing British ships. To support these efforts, the government organized a banking system that allowed commerce to flourish, created a national school program that preached loyalty to the emperor, and significantly improved the nation's infrastructure. By 1890 Japan was a regional power in the Far East.

In need of raw materials and new markets, Japan fought China in the Sino-Japanese War in 1894-95. Fought in Korea and Manchuria, the Imperial Army and Imperial Navy won numerous victories, forcing China to sue for peace, in which China ceded Korea and Formosa and paid a large indemnity. Russia now intimidated the defeated Chinese and was able to acquire Port Arthur and the Chinese Eastern Railway, which sowed the seeds for future conflict with the Japanese.

Starting in 1900 Japan prepared for war with Russia to ensure it dominated the area and to extract revenge for Russian meddling after the Sino-Japanese War. On 8 February 1904, before war was declared, Japan attacked the Russian Far East fleet in Port Arthur with torpedo boats, causing extensive damage. The now superior Japanese fleet trapped the weakened Russian fleet in the port. Japanese ground troops laid siege to Port Arthur on 25 May 1904 and finally forced the Russian garrison and fleet to surrender on 2 January 1905. Meanwhile, the Russians had decided to move their Baltic fleet to the Far East and after a horrific journey, the numerically superior, but qualitatively inferior, Russian Fleet was destroyed at the Battle of Tsushima on 27 May 1905. Admiral Heihachiro Togo, the fleet commander, became a national hero, and a young ensign named Isoroku Yamamoto, who was serving on one of the Japanese cruisers, was wounded, losing two fingers in the fight. The United States brokered a peace treaty whereby Russia gave up its interests in the area, including Port Arthur. Japan was now the clear power in the Far East.

Japan joined the Allies during World War I, a prudent act for which Japan reaped great rewards. The other allied nations required materials, and Japanese industry flourished as it worked to meet the allied war demands. Japan occupied the German possessions of the Mariana, Caroline, and Marshall Islands, which were mandated to Japan after the war. While only suffering 300 military deaths, Japan expanded its empire to the Central Pacific and also became an industrial power.

After the carnage of World War I, nations were seeking ways to avoid future slaughter, and treaties were completed to accomplish this. Between 1921 and 1934 various nations signed seven major disarmament treaties,

but the Washington Naval Conference, 1921-22, had the greatest impact on Japan and the United States as they moved toward World War II. The major points of the resulting treaty were a capital ship tonnage ratio of 5-to-5-to-3 for the United States, Great Britain, and Japan; a 10-year moratorium on capital ship construction; and a prohibition on constructing and improving fortifications of Pacific possessions. On paper this treaty looked like a huge triumph for the United States, but Japan was the true victor.

The treaty allowed the United States to have 525,000 tons of capital ships while Japan could only have 315,000 tons. However, the United States had to decommission ships and stop constructing new ships (15 battleships and battle cruisers) to stay within the limits. As a result, the newest US battleship at Pearl Harbor during the attack was commissioned in 1923. Japan, on the other hand, had to build new ships to get to its limit and also had no plans to reinforce its bases in the Mandated Islands. Concurrently, the treaty prevented Britain and the United States from building fortresses in Japan's "backyard." Ultimately, the only type of ship that all three nations possessed fewer of than the treaty allowed was aircraft carriers. By 1937 both the United States and Japan were working hard to build new aircraft carriers.

In the late 1920s and early 1930s, Japan suffered from the international economic depression. The depression decimated Japan's economy, and the resulting unemployment bolstered the Japanese military's desire to seize parts of China to acquire much-needed natural resources. In September 1931 Japan initiated a war against China. Asserting that China had planned to blow up a Japanese railroad, Japan attacked Chinese troops in Manchuria. By February 1932 Japan had seized Manchuria, renamed it Manchukuo, installed a "puppet" government, and turned it into a Japanese colony. When the League of Nations protested, Japan simply withdrew from the league, which was one of the first steps in the league's ultimate demise.

Japan's desire to expand its empire led to the "China incident," a clash with Chinese troops near the Marco Polo Bridge on 7 July 1937. For the next six months, Japanese troops attacked to the west and south against ineffective Chinese resistance and were able to capture large expanses of territory. Logistics problems and Chinese guerrilla warfare caused the advance to slow but not before Japan had control of a vast amount of territory, including the capitol, Nanking. During the Japanese assault on Nanking, the USS *Panay*, a gunboat, was attacked by Japanese dive bombers and sunk. The attack outraged Americans, and the situation was only settled by a formal Japanese apology and payment of reparations.

Throughout 1938 Japan continued its assault on China by consolidating gains, fighting guerrillas in newly captured areas, and continuing to drive west. In October the Japanese seized the port town of Canton, which gave them control of all of China's main ports. Japan spent 1939 attempting to cut off all supply to the Chinese by capturing all of its remaining ports and concentrating on controlling the areas it occupied. Only the strong will of the Chinese people prevented China's total collapse.

In June 1940 Japan demanded of the French Vichy government permission to land forces in French Indochina. Unable to confront Japan anyway, the Vichy government accepted the demand. The United States, in turn, warned Japan to stay out of French Indochina, but in September Japanese troops started landing and occupying northern parts of French Indochina, quickly occupying and using the airfields and ports. President Franklin D. Roosevelt's administration reacted by placing an embargo on steel and scrap iron from the United States, an event the Japanese termed an "unfriendly act."

The United States wanted Japanese expansion to stop and took severe actions to show its intentions. Congress passed a bill that called for increasing the size of the Navy by 300 percent by 1944. The US Pacific Fleet, home ported in San Diego, was on maneuvers in the Hawaiian Islands in May 1940, and at the end of the maneuvers, President Roosevelt ordered the fleet to remain at Pearl Harbor as a deterrent to the Japanese. Pacific Fleet Commander Admiral James O. Richardson protested against the move because he was concerned about Pearl Harbor's ability to support the fleet logistically. Richardson protested so vehemently that he was relieved and replaced by Admiral Husband E. Kimmel in February 1941.

Kimmel was concerned about not having enough ships to fight the Japanese if a war came, and instead of gaining ships, he lost 25 percent of his fleet. The president and secretary of the Navy decided that the Atlantic Fleet needed to be reinforced because they considered the endeavor to keep the sea line of communication to England open as the main effort. The Atlantic Fleet had to take up part of the escort duty, and to do so, it needed to be reinforced. Kimmel, who had requested reinforcement, instead was ordered to send the aircraft carrier *Yorktown*; the battleships *Mississippi*, *Idaho*, and *New Mexico*; four light cruisers; 17 destroyers; and 16 supply and auxiliary ships to the Atlantic.

On 27 September 1940 Japan allied itself with Germany and Italy by signing the Tripartite Treaty in Berlin where each side promised to aid the

others for 10 years, but the treaty did not require Japan to declare war on Britain (who was at war with Germany and Italy).

In July 1941 Japan demanded more Indochinese bases and territory from the Vichy government, and when Japan moved to occupy these bases, the United States and its allies reacted swiftly and harshly. The United States, Great Britain, and the Netherlands froze Japanese assets, but more consequential to the Japanese, they imposed an all-out embargo against Japan, including the export of oil. Japan imported all of the oil it used and had now lost access to almost all of its sources. War in the Pacific grew closer.

Admiral Isoroku Yamamoto assumed duties as commander in chief of Japan's Combined Fleet in August 1939. Yamamoto was not a pilot himself, but he had learned to appreciate the value of naval aviation and had held important naval aviation commands, including duty at the Navy flight school, chief of naval aviation, and command of an aircraft carrier division. Additionally, he held other key assignments, including an extended period of study at Harvard University followed by attaché duty at the US Embassy, duty as a representative at the London Naval Conference, and a tour as the vice minister of the navy. Yamamoto desperately wanted to avoid a war with the United States, but he also wanted to be prepared if war became inevitable or if he was ordered to wage war. Yamamoto's experience taught him the United States' industrial and technological advantage would make a prolonged war between the nations a losing struggle for Japan. He therefore determined that Japan would have to cripple the United States early in the fight so Japanese expansion could prosper to such a degree that the United States would have to sue for peace. He determined that Japan had to have free reign in the Pacific for six months to achieve a chance at victory. He also thought that naval aviation was the tool to crippling the Americans by destroying the US Pacific Fleet. His plan would become known as Operation *HAWAII*.

As early as March 1940, Yamamoto first considered an aerial strike on the US Pacific Fleet, and his thoughts quickly concentrated on Pearl Harbor when the Pacific Fleet moved there in May. Yamamoto first publicly declared his plan in January 1941 when he sent a letter to Navy Minister Admiral Koshiro Oikawa stating that war with the United States had become inevitable and that Japan should "attack and destroy the U.S. main fleet at the outset of the war" and that the attack should be at Pearl Harbor.

Yamamoto did not wait for permission from the Navy Ministry but

began gathering the best aviation and naval minds he could to plan the attack. He asked Rear Admiral Takijiro Onishi, Chief of Staff, 11th Air Fleet and a trusted friend, to study the idea. Onishi knew he needed an experienced pilot and planner who was smart, innovative, and fearless so he sent for Commander Minoru Genda, then serving as an air staff officer on the aircraft carrier *Kaga*. Genda was known throughout the Japanese navy as an exceptional aviator and planner, but his writings and arguments about employing air power were radical and alienated him from the “mainline” navy. That made Genda the perfect planner that Onishi needed. Onishi briefed Genda on Yamamoto’s concept and asked him to study the feasibility and to draft a report. Genda studied the concept for 10 days and determined the plan was feasible, given nine conditions:

1. The attack had to be a complete surprise.
2. The main objective should be the US aircraft carriers.
3. US land-based aircraft had to be destroyed to gain air superiority.
4. Every available Japanese aircraft carrier should participate.
5. All types of aircraft (torpedo, dive, high-level, fighter) should be used.
6. Fighters had to play an active role.
7. The attack had to be a daylight attack.
8. Japanese ships had to refuel at sea.
9. Attack planning had to be done in strict secrecy.

Yamamoto took Genda’s proposal, presented it to his staff, and started it working on gathering information on numerous subjects such as logistics, weather, method of attack, etc. Yamamoto still did not have permission to conduct this planning, but he thought if war came, an attack on Pearl Harbor was the only hope for Japan to have a chance for victory.

Genda’s idea of combining the carriers into one organization had been debated throughout the navy for a few years. Opponents of the concept were afraid the concentrated carriers, if located by the enemy, would make an easy target. Proponents believed concentrated carriers allowed for concentrating aircraft for strikes on the enemy, and having the carriers together allowed escorts to mass their abilities to protect the carriers from all enemies—air, surface, and submarine. Yamamoto was in favor of creating the First Air Fleet, and in the end he won out. On 10 April 1941 the Japanese navy created the First Air Fleet by combining the First Carrier Division (two carriers), the Second Carrier Division (two carriers), and the Fourth Carrier Division (one carrier). Now Japan had a command that ensured Yamamoto could easily concentrate the power of his air arm for operations. The pieces of Genda’s plan were beginning to fall into place.

Japan had taken the radical step of creating an aircraft carrier fleet but soon blundered when it named Vice Admiral Chuichi Nagumo to command it. The revolutionary carrier fleet needed an innovative thinker and commander, but Nagumo was a conservative, traditional naval officer. He had spent an accomplished career as a surface officer commanding cruisers, battleships, and surface ship divisions, but he had never even served in an aviation assignment. It was now his mission to lead the fleet that would start the war and hopefully set the conditions for victory for Japan.

Nagumo needed a competent staff to help him run his carrier fleet, so most of the exceptional staff officers from the carrier divisions were selected to serve Nagumo. Rear Admiral Ryunosuke Kusaka, an officer with experience commanding two aircraft carriers, was selected as the chief of staff. Perhaps the most important selection was Genda, who joined the First Air Fleet staff as air officer.

Once the First Air Fleet was a reality, training became the priority. The fleet's ships maneuvered as they learned to work together as a fleet, while the aircraft on the carriers trained to conduct attacks against all kinds of targets under all kinds of conditions. The fleet staff worked to solve the problems determined in Genda's nine-point concept. To use all types of aircraft for the attack, fleet staff officers had to determine a technique to use to incorporate the torpedo bombers (military thought of the day deemed Pearl Harbor too shallow for torpedo bombers), and they had to develop a bomb for the high-level bombers that would penetrate a battleship's thick upper deck. Genda was the point man for each of these concerns.

Pearl Harbor was a very shallow port (approximately 40 feet), and Japanese torpedoes, using the current doctrine and equipment, would plunge to the bottom and get mired in the mud. Conventional wisdom said that the problem was insurmountable, but Genda believed the problem could be overcome. He gathered all of the best torpedo plane pilots from the fleet and told them they had to figure out how to employ or modify aerial torpedoes so they did not descend below 33 feet of water. Genda did not tell the pilots why, just that they had to solve the problem. The torpedo plane pilots worked frantically and tried all kinds of ideas before they came up with an acceptable solution. Japanese torpedo planes would fly at 30 to 60 feet altitude (normal attack altitude was 300 feet) at a very slow speed. Additionally, the torpedoes were modified with a large wooden fin on the tail that would break off when the torpedo hit the water but not before reducing the depth of the torpedo's plunge. Once the problem was resolved, Genda assigned the four best "Kate" squadrons to torpedo duty because he believed this would be the most difficult type of attack. The

selected crews began an intensive training regimen using the new techniques, still not knowing why.

The high-level bombers caused more of a problem for Genda than the torpedo bombers. Battleships had a thickly armored deck, and numerous large projectiles were needed to destroy a battleship. The Japanese did not have a bomb that could accomplish this. Additionally, the flyers' bombing accuracy was very poor. Many planners would have given up, but Genda was a determined man. He once again assembled the best high-level pilots, and they worked together to solve the dilemma. They made many attempts, and after numerous failures solved the problem by converting 16-inch battleship shells into bombs weighing 800 kilograms (1,700 lb). They discovered that if the bombs were dropped from 11,000 feet, they would penetrate a battleship's deck. To solve the accuracy problem, the high-level bomber leaders implemented three initiatives to improve accuracy. First, they changed from a nine-ship triangle formation to a five-ship triangle formation. Second, every plane in the five-plane group would drop its bomb when the lead plane dropped its. Finally, the best bombardiers were teamed with the best high-level pilots. These hand-picked crews were selected to lead each five-ship formation. The crews also started an intense training routine, which combined with the three initiatives, drastically improved the high-level bombers' accuracy.

The Japanese continued to incorporate Genda's nine points into the plan, but all would be for naught if the First Air Fleet could not figure out how to refuel the ships at sea. For security, the First Air Fleet would travel a little-used northern route to Hawaii, which would preclude any possibility of refueling at a naval base. The older Japanese carriers had very limited ranges because of the belief that they would fight near Japanese home waters, and some of the smaller ships had small fuel tanks that limited their range. To make the attack, the Japanese would have to master the art of refueling at sea. Genda solved this problem using the technique he used solving other problems—he gathered the best tanker ship captains and told them to solve the problem.

The captains realized that the techniques in place (the tanker traveled in front of the ship to be refueled, floated a hose back to it, and refueled the ship) were sound for smaller ships (destroyers and cruisers), but lack of training was the stumbling block. Battleships and aircraft carriers were too big and not maneuverable enough to do this, so the tanker captains learned to follow the big ships and pass the hoses forward. The tankers first rehearsed the procedures with their own ships until they were proficient; then they began training with the First Air Fleet ships. Three refuel-

ing exercises were conducted in November, and all of the ships rehearsed refueling as the fleet concentrated before departing for Hawaii. Another obstacle that Genda identified had been overcome by innovative thinkers and training.

Throughout summer 1941 the First Air Fleet continued a vigorous training program with aircrews flying numerous missions at Ariake Bay on Kyushu, the southern most of Japan's four main islands, which remarkably resembled Pearl Harbor. The ships continued maneuvering together, learning to sail and operate as a fleet while the tankers rehearsed their critical operations. The staff continued to refine the plan based on updated intelligence (covered in detail at the first stand) and changing circumstances.

In August Japanese war planning increased as the military leaders realized that war with the United States was more likely everyday. In response to the American embargo, the Imperial Staff developed the "Southern Operation," a plan for capturing the industrial rich Dutch East Indies and Malaya. Japan realized this action would force the United States and Great Britain into war, so the plan also called for seizing the American-held Philippines and Guam and the British possessions of Hong Kong and Burma. Once the southern areas were secured, Japan would occupy strategic positions in the Pacific and fortify them, thus forming a tough defensive perimeter around Japan and its newly acquired resource areas. Once the perimeter was secure, Japan would try to negotiate for peace. The planners thought it would take six months to accomplish all the tasks and had to be free of interference from the American Navy during that time. Yamamoto had the plan for ensuring that the US Pacific Fleet would not interfere for six months.

On 6 August 1941 Yamamoto decided the time was right to brief the naval general staff on the Pearl Harbor attack plan. The naval general staff was considering moving the annual naval exercises from late November to September, and Yamamoto thought the exercise would be a great opportunity to rehearse the Pearl Harbor attack with exercise umpires, which would allow for a general after-action review of the plan. The naval general staff was unenthusiastic about the plan, considering it a gamble with the possible loss of most of Japan's aircraft carriers as a real possibility. Despite its concerns, the staff accepted Yamamoto's plan for further review.

At the end of August and the beginning of September, events occurred that would have enormous benefits for the Pearl Harbor plan. On 24 August Commander Mitsuo Fuchida was assigned to the First Air Fleet as

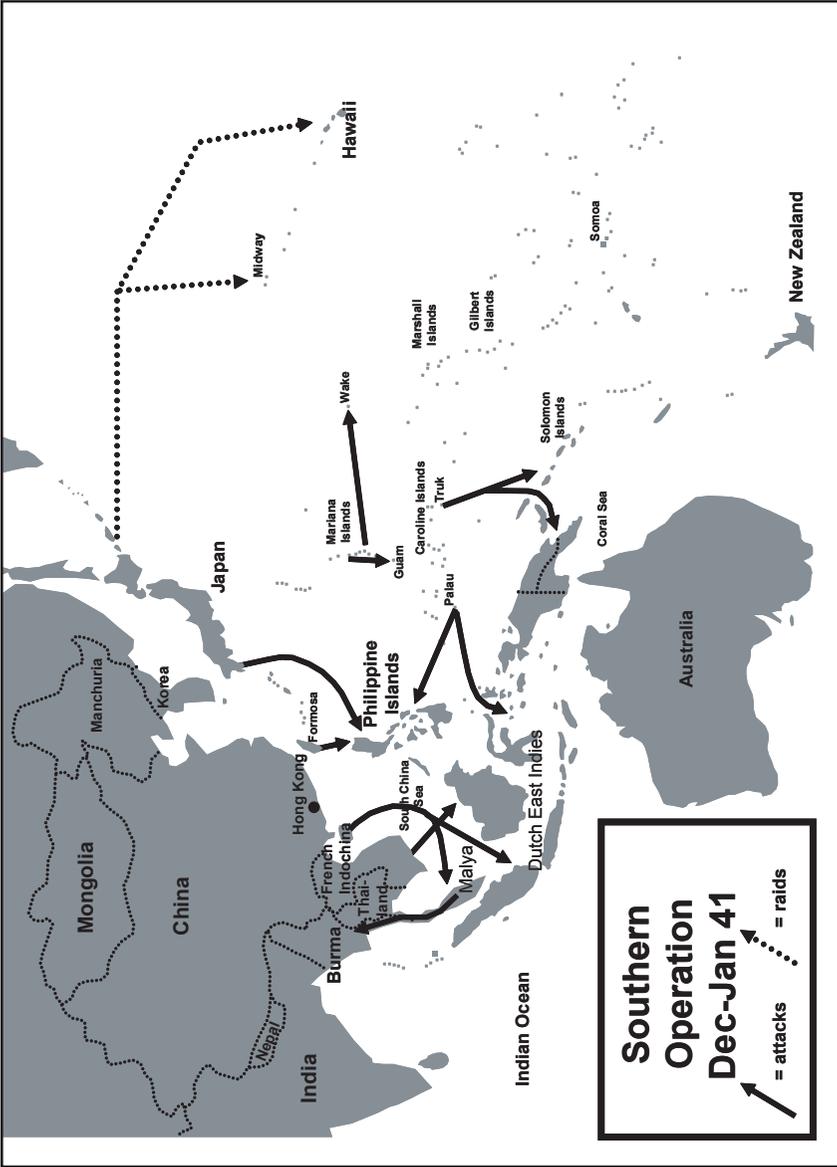


Figure 53.

commander of the air group responsible for leading the aircrews throughout training and would be the onsite commander during the actual raid. Fuchida had been Genda's classmate at the military academy, and the two had remained friends ever since. Fuchida was known as one of the best high-level bomber pilots in the Japanese navy, but his leadership was the key to him being selected to command. Fuchida was an outstanding combat leader, levelheaded and cool in critical situations, but he was selected to command because he was able to convey the detailed plans from the staff into maneuvers that the energetic aircrews could execute. Fuchida was told what tasks the aircrews needed to be able to accomplish without being told of the plan. It was not until late September that Genda briefed Fuchida on the details of the plan.

In early September the Imperial General Staff briefed the emperor on war preparations, usually a formality because the emperor listened at these meetings and never said a word. However, Hirohito spoke up at this meeting, warning his military officers not to forgo negotiations as a way to avoid war. He emphasized that the Foreign Ministry would continue to negotiate with the United States and its Allies to try to solve the disagreement peacefully, and that the military should not do anything to hamper the discussions.

By late September two new aircraft carriers, composing the 5th Carrier Division, joined the First Air Fleet. *Shokaku* was completed on 7 August, and *Zuikaku* joined the fleet on 24 September. Their air wings had been formed before the ships were completed and had been training, and they now joined their ships. The 4th Carrier Division was transferred to other fleets, and the 5th Carrier Division was added to the First Air Fleet, meaning that Operation *HAWAII* now had six first-line aircraft carriers.

While the First Air Fleet continued to work on the air attack of Pearl Harbor, Yamamoto added another method of attack to the operation—submarines. In the end, 27 of Japan's 63 submarines would take part in Operation *HAWAII*. Yamamoto wanted the submarines to participate to accomplish four tasks:

- Reconnaissance.
- Attacking ships leaving Pearl Harbor during and after the air attack.
- Protecting the First Air Fleet from any US surface fleet.
- Picking up downed flyers that could not make it back to the carriers.

Additionally, the 6th Fleet (the submarine fleet) was tasked to create a Special Attack Force, five submarines that would carry midget submarines to Pearl Harbor. Japan had used midget submarines before, but these were launched from surface ships. The Japanese modified fleet submarines to carry the midget submarines to within 10 miles of Pearl Harbor where they would be launched to enter the harbor and attack American warships. The midget submarines were 78 feet long, weighed 46 tons, were armed with two torpedoes, had a crew of two, and had a range of 80 miles surfaced and 18 submerged. The air planners were distressed by the addition of submarines to their plans. They thought the chance of one of the submarines being spotted was excessive and would cause the entire raid to lose the element of surprise, deemed key by the air planners. Yamamoto listened to his airmen, but in the end he decided to maintain the submarines as part of the operation.

From 11 to 15 September the leaders of the Japanese navy gathered at the Naval Staff College to participate in the annual naval exercise, a command post exercise conducted in the buildings of the college. In a closely guarded secret room, Yamamoto gathered all of the officers who were aware of Operation *HAWAII* for a separate war game. From 11 to 14 September Yamamoto participated in the exercise based on the Southern Operation. The different fleets conducted the operations they had been tasked to accomplish during the Southern Operation. For the most part, the exercise determined that that part of the plan was sound; only minor modifications were made.

On 15 September Yamamoto, closely watched by the representatives of the naval general staff, exercised Operation *HAWAII*. After discussions (some times heated) about which route to sail, the fleet, and preattack aerial reconnaissance, the exercise began. In the first iteration American reconnaissance aircraft located the Japanese fleet, resulting in the aircrews having to fight their way to the target and only causing minor damage to the US fleet. American bombers followed the Japanese planes back to their carriers where they sank two Japanese carriers and damaged two. A review of the action determined that the fleet had sailed too far south and had arrived at the launch point too early. The planners modified their plan and conducted another iteration in which the Americans did not spot the Japanese until the planes were over their targets. The Japanese destroyed two American carriers, four battleships, and three cruisers and damaged one carrier, one battleship, and three cruisers. Additionally, most of the American aircraft were destroyed. However, the few remaining American aircraft were able to locate the fleet and sink a Japanese carrier, a fact not

lost on Nagumo who determined a quick escape from the area was key to his operations.

The day after the exercise, the participants gathered to discuss the exercise. The “American” and Japanese commanders briefed, as did the umpires. All agreed that the fleet had to sail a northerly route to avoid detection. They determined they had to arrive 450 miles from Hawaii at sunset because all American scout planes would be returning to base at that time, thus allowing the fleet to sail to the launch point undetected. Satisfied with the exercise, Yamamoto gathered the participants for a dinner that night, but he still did not have the naval general staff’s permission to conduct Operation *HAWAII*.

The Foreign Ministry continued negotiations with the United States, but it was really an exercise in futility. The United States demanded that Japan leave French Indochina and China before trade resumed, while the Japanese demanded the resumption of trade as the catalyst for other agreements. The two sides were irreversibly divided, but negotiations continued. As dialogue with the Americans faltered, the cabinet ministry contrived to get Japan on a wartime footing. On 15 October the prime minister and all of his cabinet resigned to allow the country to form a new “war” government. Hirohito, on the advice of his advisers, selected ex-War Minister Hideki Tojo, an active duty army general, as the new prime minister. Tojo formed a cabinet with members he could control and also assumed the duties of war minister and army chief of staff. Japan now had a de facto military dictator, and any hope of a peaceful solution was over.

For the next month, the First Air Fleet refined its procedures while the naval general staff debated the merits of Operation *HAWAII*. Some on the staff considered the plan a gamble: how could six aircraft carriers sneak across the Pacific Ocean and attack the major US base without being detected? Others thought the assets earmarked for Hawaii could be better used in the Southern Operation. After all the Southern Operation was the main effort, and Operation *HAWAII* was a secondary effort. Yamamoto was convinced that the operation was imperative if Japan hoped to win any war with the United States. Therefore, on 17 October he sent one of his most trusted staff officers, Captain Kameto Kuroshima, to Tokyo to get a decision from the naval general staff. Kuroshima was no stranger to the naval general staff, having been dispatched by Yamamoto numerous times to brief it. Kuroshima briefed the merits of the plan one more time, but with each point he made, the staff responded by criticizing the plan.

Finally, Kuroshima played the trump card Yamamoto gave him.

Kuroshima informed the naval general staff that if Operation *HAWAII* was not approved, Yamamoto could no longer guarantee Japan's security, and he, therefore, would be compelled to resign. The staff officers could not believe their ears, but they did not want to risk losing the best admiral in the navy. They therefore approved the plan's implementation if Japan went to war, as long as Yamamoto promised to make the carriers available to the Southern Operation as soon as possible after the attack. Yamamoto and his staff had meticulously planned for nine months, and now they had permission to conduct their operation, convinced that it was Japan's best hope for defeating America.

During early November Japanese preparations accelerated as war became certain. Fuchida and the air planners completed their plan based on the war games. On 2 November Nagumo briefed all of the senior commanders (ship captains and carrier air group commanders) on the plan to attack the US fleet in Pearl Harbor. The First Air Fleet conducted full rehearsals of the attack on 3 to 6 November, with full after-action reviews and modifications to the plan based on events. Also on 6 November the Combined Fleet published Combined Fleet Order #1, which explained the entire plan (the Southern Operation and Operation *HAWAII*) from the initial attacks until the defensive perimeter was established. Events continued to transpire quickly.

The submarines began departing Japan on 11 November when the 3d Squadron sailed and was followed on 16 and 18 November by additional squadrons of submarines. All submarines proceeded to Japanese anchorages en route to refuel and were in position around Hawaii by 6 December. Throughout November, ships assigned to Operation *HAWAII* slowly slipped away from their home ports for the assembly point of Hitokappu Bay in the Kuril Islands. The Japanese intended to assemble the fleet in an isolated anchorage without drawing attention. By 22 November the fleet was assembled, and Nagumo briefed the operation to all of the subordinate commanders. He and his staff detailed the route they would sail, the plan of attack, contingencies if the fleet was spotted, logistics, etc. Yamamoto sent instructions to Nagumo on 24 November informing him that the fleet would sail the next day. The First Air Fleet, now renamed the Pearl Harbor Attack Force, lifted anchor and set sail on 25 November. Nagumo still did not have his attack orders; the diplomats were still trying. Nagumo would receive the attack order en route if negotiations failed.

The 30 ships of the Pearl Harbor Attack Force formed up and headed east led by the cruiser *Abukuma*, followed by four destroyers, the battleships

Fuchida Chart					
	Plane Type	Carrier	# Planned/Launched	Armament	Target
First Wave  CDR Mitsuo Fuchido Launch 0600-0615	Kate (High Level) 	Akagi Kaga Soryu Hiryu	15/15 15/14 10/10 10/10 } 49	One 1,750-lb armor-piercing bomb	Battleships
	Kate (Torpedo) 	Akagi Kaga Soryu Hiryu	12/12 12/12 8/8 8/8 } 40	One 1,750-lb aerial torpedo	Battleships Cruisers
	Val Dive Bomber 	Shokaku Zuikaku	27/26 27/25 } 51	One 550-lb bomb	Ford Island, Hickam and Wheeler Air Bases
Second Wave LCDR Shigekazu Shimazaki Launch 0715-0730	Zero Fighter 	Akagi Kaga Soryu Hiryu Shokaku Zuikaku	9/9 9/9 9/8 6/6 6/6 6/6 } 43 189/183	Two 20 mm cannons Two 7.7 mm MGs	Ford Island Air Base Hickam Air Base Wheeler Air Base Ewa Air Base Kaneohe Air Base
	Kate (High Level) 	Zuikaku Shokaku	27/27 27/27 } 54	Two 550-lb bombs or One 550-lb bomb and six 132-lb bombs	Ford Island, Hickam and Kaneohe Air Bases
	Val Dive Bomber 	Soryu Hiryu Akagi Kaga	18/17 18/17 18/18 27/26 } 78	One 550-lb bomb	Cruisers Battleships Destroyers
	Zero Fighter 	Akagi Kaga Soryu Hiryu	9/9 9/9 9/9 9/8 } 35 171/167 360/350	Two 20 mm cannons Two 7.7 mm MGs	Ford Island Air Base Hickam Air Base Wheeler Air Base Kaneohe Air Base

Figure 54.

*Hiei* and *Kirishima*, which led the six carriers flanked by destroyers. The cruisers *Tone* and *Chikuma* flanked the formation while three submarines brought up the rear, ready to move forward to scout ahead. As the fleet steamed toward Pearl Harbor, the destroyers had to refuel everyday in the stormy seas of the northern route, losing sailors overboard during one operation.

On 1 December the cabinet met with the emperor in the Imperial Palace, and the decision was made that Japan had to declare war on the United States, Great Britain, and the Netherlands. The naval general staff informed Yamamoto, and on 2 December he gave a warning order to all of his subordinate fleet commanders telling them the exact date and time of their attacks would be sent on a later date. On 2 December Yamamoto received a message from the naval general staff, "Climb Mount Niitaka 1208." The coded message meant the war would begin on 8 December (7 December Hawaiian time). Diplomacy had failed and Japan would attack the United States, Great Britain, and the Netherlands.

On 4 December the three tankers of Supply Group 2 refueled the task force and left formation to a linkup point where they would rendezvous with the task force during its return. On 6 December the four tankers of Supply Group 1 refueled all of the ships, and they too broke off to rendezvous with the fleet during its withdrawal. While the ships of the Pearl Harbor Attack Force refueled for the last time before the attack, Tojo cabled his ambassador to the United States, retired Admiral Kichisaburo Nomura, and informed him to be prepared to receive a 14-part message that had to be delivered to the United States before 0800, 7 December.

Once the tankers had departed, Nagumo raised the flag signal that Admiral Togo had raised before the Battle of Tsushima Straights: "The rise and fall of the Empire depends upon this battle: everyone will do his duty with utmost effort." The fleet, now unencumbered by the slow tankers, increased speed to 24 knots to race to the launch point. The last day of peace the United States would enjoy for the next 3½ years was 6 December 1941.

### **III. Suggested Route and Vignettes**

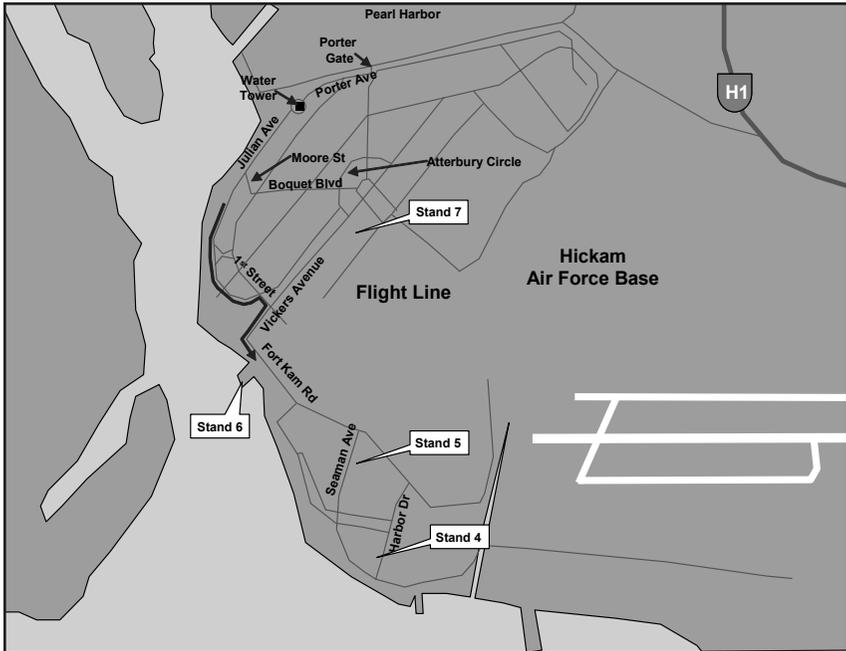
#### **Introduction**

The attack on Pearl Harbor occurred over two hours on 7 December 1941. The Japanese attacked six major military installations all across Oahu that morning, leaving death and destruction in their wake. This guide is designed to examine the entire attack during a one-day visit. To accomplish this, an early start is required. Only two of the six major installations attacked that morning will be visited on this staff ride; the other four will be discussed at other locations.

The first couple of stands will discuss the antagonists' preparations, and the last stands discuss the repercussions of the United States' failings and Japan's successes. The route of this guide follows no "tour" signs; therefore, the staff ride leader should recon the route before the staff ride and should have a detailed road map. Most of the stands are on active military installations, so be careful not to stray into off-limits areas.

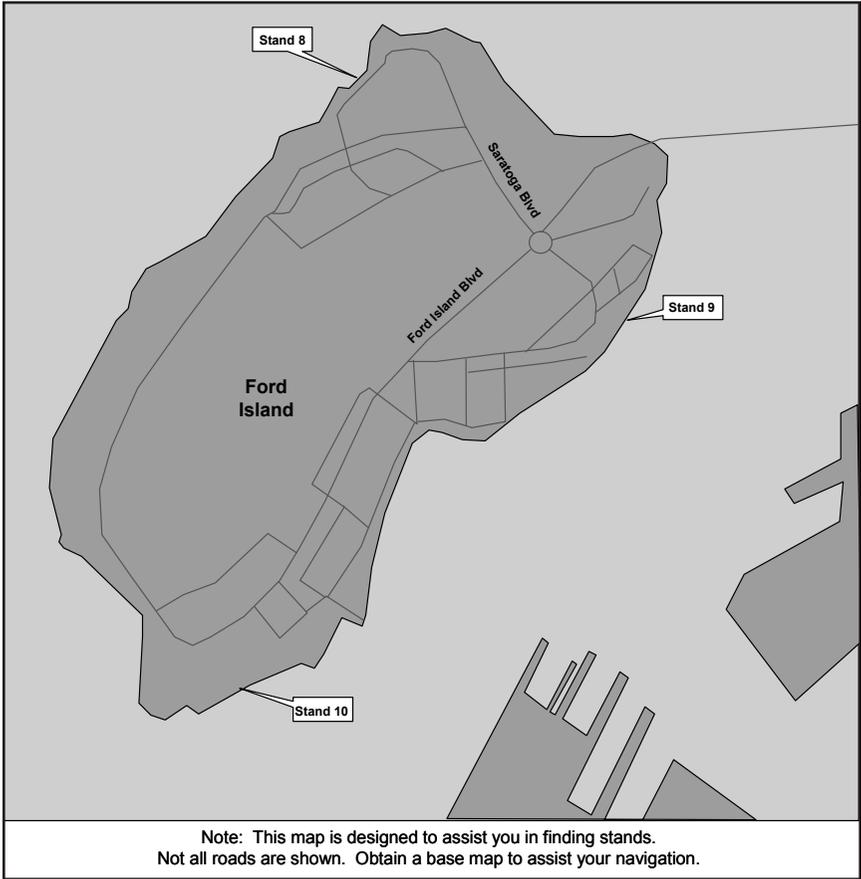
The staff group leader may want to start this staff ride at a location where he or she can discuss the overview of the attack (Part II of this guide). Locations for this stand may be the Aiea Bay State Recreation Area picnic area (the first stand of the staff ride is in the same location but by the water looking at Pearl Harbor). This information may be covered the day or night before the ride in a briefing format.

# Map to Stands 4-7



Note: This map is designed to assist you in finding stands.  
Not all roads are shown. Obtain a base map to assist your navigation.

# Map to Stands 8-10



## Stand 1

### Japanese Espionage

**Directions:** The first stand is conducted at Aiea Bay State Recreation Area. From Kamehameha Highway (State Route 99) turn onto McGrew Loop. Make an immediate left at the “Aiea Bay State Recreation Area” sign. Park in the parking lot. If you plan to conduct an overview, move to the vicinity of the picnic area. When the overview is complete, move to the edge of the water where you can see Pearl Harbor.

**Orientation:** You are standing in the Aiea State Recreation Area. Today, any person can stand here and observe the activities in Pearl Harbor just as the Japanese spies did in 1941. The East Loch is the water to your front, the location where the destroyers berthed. Ford Island is directly across the loch, and the battleship is the USS *Missouri*, which is moored just fore of the USS *Arizona* on Battleship Row. The northwest side of Ford Island is where the aircraft carriers usually berthed.

**Description:** If the Japanese had any hope of crippling the US Pacific Fleet, they had to have extremely accurate intelligence on the ships of the fleet, the anchorage, and the other bases on Oahu that could influence any attack. Hawaii had a large Japanese population, both US citizens of Japanese descent and expatriates, who had always been a security concern for the United States. The Japanese government maintained a consulate 7 miles from Pearl Harbor (it is still there) and had been using consulate personnel to observe US military activity for some time. When the Pacific Fleet transferred to Pearl Harbor in 1940, the Japanese government told Consul General Kiichi Gunji to send periodic reports on naval activity in Hawaii. Gunji selected the consulate’s treasurer, Kohichi Seki, to accomplish the task because he had attended the Naval Academy at Eta Jima before being discharged for medical reasons. The Honolulu newspapers published the schedule of fleet movements, and Seki simply rode a cab around Pearl Harbor to verify the newspaper accounts. As Seki continued his observations, he realized that the Pacific Fleet was extremely predictable; part of the fleet would depart on Monday and be back in port on Friday or Saturday. The Pacific Fleet was usually in port on Sundays.

As planning for Operation *HAWAII* progressed, the Japanese Consulate received a new employee, Tadashi Morimura, to assist with processing dual-nationality citizens. In fact, Morimura was actually Takeo Yoshikawa, a trained intelligence agent of the naval general staff. Yoshikawa was a graduate of Eta Jima who had been discharged from the Navy because of illness. He had extensive knowledge of the US Navy, and upon

his discharge, the naval general staff's intelligence division sent him to school to improve his English, and trained him on the US Pacific Fleet. Yoshikawa arrived in Honolulu on 27 March 1941 and was immediately assigned one of the consulate's bungalows and a car with driver, actions that seemed odd to the other members of the consulate staff.

Yoshikawa started his reconnaissance soon after his arrival. He selected several locations where he could observe Pearl Harbor, including Aiea. He soon confirmed the previous observation that the Pacific Fleet was usually in port on Sundays. As he became comfortable with his operations at Pearl Harbor, Yoshikawa began observing the other military installations on Oahu. He knew of the Naval Air Station (NAS) at Kaneohe, but he could not get close enough from the road to make accurate observations. He therefore decided to rent a boat, and using maids from the consulate as cover, anchored his "party" boat off the coast at Kaneohe and observed from there. When he had difficulty viewing Wheeler Field, he attended the Wheeler Field Open House on 6 August and was allowed to freely roam around the field. The only restriction was against taking pictures.

The airfields were the most difficult locations to observe, but the Japanese needed accurate information, so Yoshikawa continued to use the tourist cover. Taking one of the women employees of the consulate as his date, Yoshikawa rented an airplane and flew around all the different installations. Restrictions prevented him from overflying each installation, but observing the targets from the air allowed him to gather all the required information. At each airfield he was able to gather information on the runways, hangars, facilities, aircraft, and defenses. At Pearl Harbor he observed Ford Island NAS and the ships in anchorage. As Yoshikawa continued the routine of his espionage, he made another discovery that would be invaluable to attack planners. He noticed that US reconnaissance aircraft concentrated their searches south of Oahu. Yoshikawa was able to clearly view every major military installation and assess US forces' exploitable patterns, and he forwarded that information to the naval general staff in Japan.

Based on Yoshikawa's information, the naval general staff decided to recon the Pearl Harbor Attack Force's planned sailing route. Normal shipping between Japan and the United States was suspended, but an agreement between the countries allowed limited sailings to repatriate citizens from one country to the other. On 23 October 1941 *Tatuta Maru* arrived in Honolulu with two intelligence agents aboard who carried instructions for the consulate and a supply of radios for civilian spies who were in place on Oahu in case the United States closed the consulate. The second

ship, *Taiyo Maru*, arrived in Honolulu on 22 October, having sailed the exact route the attack force planned to use. The two intelligence agents aboard observed no other vessels on the route and learned that the US aerial screen line only extended 200 miles north of Oahu. The *Taiyo Maru* arrived in harbor at 0830, the planned time of attack, so the agents could observe conditions on Oahu at the scheduled time of attack.

Before the attack, Japan had developed an extensive collection plan for all of the information required to precisely plan an attack on the Pacific Fleet. The planners knew about each of the airfields and the aircraft assigned to each, which allowed the planners to properly assign assets to each target. They knew the exact location where ships berthed so the planners could select appropriate routes with the appropriate assets to attack each target. In short, the Japanese had excellent intelligence from which to plan their attack.

**Vignette:** In 1943 the counterintelligence section of Fourteenth Naval District's Intelligence Office published an analysis of espionage problems in Hawaii:

From the facts at hand, it must be said that almost all military and naval information known to have been transmitted from Hawaii to Japan, either by Consulate or agents sent here on special missions, was gathered by the simple expedient of open observation, without trespassing restricted areas. . . . In only a few instances were Consulate observers known to have used binoculars to observe Pearl Harbor and the Naval Air Station Kaneohe Bay, and even then, not illegally. . . . Accurate maps and charts of the Hawaiian Islands and adjacent waters long were on sale in downtown Honolulu, and available to any purchaser. Tourist maps showed the approximate location of many military and naval installations. Photographs of many strategic places on Oahu were on sale in Honolulu stores-even panoramic views of Pearl Harbor. . . . Unless vigorous, astute, and coordinated counter-espionage measures are placed in operation in Hawaii, the primary task of Counter-intelligence-denial of information to the enemy-will never be performed.

*(Hearings Before the Joint Committee on the Investigation of the Pearl Harbor Attack, Congress of the United States, Seventy-Ninth Congress, Washington DC, 1946, part 35, 556-57, 572, hereafter cited as IPHA.)*

*Teaching point 1. Counterespionage.* In a free society, how can we prevent an enemy from conducting reconnaissance of a target if that enemy does not overtly break any laws?

As the staff ride leader leads this discussion, there are a few topics to consider. If a person is not breaking a law, you can not stop them. However, have the students consider:

a. If a person is a foreign national, reports of suspicious activity may lead to a professional counterespionage agency observing that person more closely.

b. There are steps we can take to make information gathering more difficult: watch what is posted on websites or is commercially available, understand where an installation is vulnerable to legal observation, and mitigate any possible damage from that location.

c. Altering defensive measures (shifting “Jersey barriers,” access points) makes reconnaissance less effective.

*Teaching point 2. Predictability.* Did the Pacific Fleet pattern of sailing on Mondays and returning on Saturdays give the enemy an edge?

The staff ride leader can have the students discuss US failures by developing a pattern that the enemy exploited (always being in port on Sunday, always focusing aerial screens to the south). Once the discussion lags, ask them, “How do you prevent predictability?” Issues here may include constant use of the same route, unchanged entrance procedures to a facility, lax and unaltered security procedures (like airport security screening before 11 September), etc.

## Stand 2

### Homeland Defense

**Directions:** Retrace your route back to Kamehameha Highway (State Route 99). Turn right on Kamehameha Highway (State Route 99) heading toward Pearl Harbor. Turn into the USS *Arizona* Memorial parking lot, and turn left at the bottom of the hill. Pull the vehicle as far south as you can (parking may be difficult here). Dismount and walk until you can observe the Kamehameha Highway bridge over Halawa Stream.

**Orientation:** In 1941 this bridge was designated the “New Kam Highway Bridge over Halawa Stream” in the Hawaiian Department’s standing operating procedures (SOP). It was one of 19 highway bridges the Hawaiian Department ordered to be guarded in the event of any alert. The 25th Infantry Division was responsible for this bridge and was guarding it on 7 December 1941.

**Description:** In 1941, 37 percent of Hawaii’s population was Japanese; 24 percent was Caucasian; 15 percent was Hawaiian; and the remainder was mixed among Filipino, Chinese, Puerto Rican, and Korean. With such a large percentage of Japanese people living in Hawaii, the military was extremely concerned about sabotage. As such, it designated crucial civilian infrastructure for protection. In its SOP, the Hawaiian Department ordered numerous civilian facilities to be guarded during any alert. Those facilities included 51 railroad bridges, 19 highway bridges, five telephone exchanges, eight electric substations, one cold storage plant, four water pumping stations, and one radio station. Both the 24th and 25th Infantry Divisions developed their own SOPs that required their subordinate units to occupy defensive positions in case of attack by military forces and required protection for these critical locations (see figure 55).

When the Hawaiian National Guard was federalized in October 1940, the territorial governor was left with a void of military strength for his own use. Realizing it was his responsibility to guard the key facilities that the US Army was guarding, the governor passed a law creating the Hawaiian Territorial Home Guard, a militia organization that would replace the federalized National Guard. Unfortunately, the Hawaiian Territorial Home Guard had not been organized by 7 December 1941.

LTG Short was concerned about protecting the citizens of Oahu in case of attack. In March 1941 he published, in conjunction with local civilian governments, a plan to protect Oahu’s civilian population in case of bombardment. The extensive plan detailed how the city of Honolulu

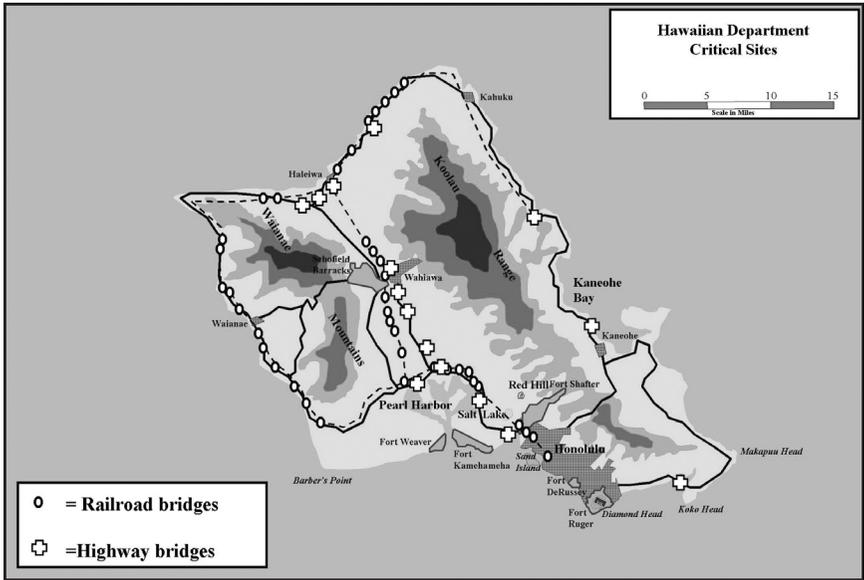


Figure 55.

and Oahu's territorial government would protect its citizens in case of an attack. The plan included sections on organization, air raid protection, evacuation, and use of workers.

In the event of attack, Honolulu would use the police and fire departments to deal with the situation initially. Then, a "General Committee," consisting of the mayor, a secretary, representatives of the Hawaiian Department and 14th Naval District, FBI, and chairmen of appointed subcommittees, would deal with the emergency. The subcommittees, headed by an appropriate official and with members from key organizations, would manage specific problems. The subcommittees follow.

<b>Subcommittee</b>	<b>Chairman</b>	<b>Duties</b>
Law Enforcement	Chief of Police	Patrolling Prison camps Traffic control Blackout enforcement
Relief	Red Cross Chairman	Food rationing Billeting Medical aid Casualty reporting
Damage Control	City Chief Engineer	Fire protection Clear ruins Construct defense works Bury the dead
Procurement	City & County Purchasing Agent	Food preparation Fuel maintenance Purchase supplies
Finance	City and County Comptroller	Control expenditures Emergency budget preparation
Legislative	City and County Attorney	Prepare legislation Special court estab- lishment Emergency labor laws
Public Relations and Publicity	Not mentioned	Morale Publicity Public education

Additional civilian subcommittees (advisory groups) were also planned. These included housing, food, transportation, labor, publicity, engineering, medical, and damage control.

Civilian protection from air attack was a major concern, so the officials extensively planned to protect the citizens from the air. Hawaii was divided into districts and divisions that contained medical support, chemical protection, rescue teams, and collection stations. The plan detailed diagrams and descriptions of shelters civilians could construct and maps to large, government shelters. In case of attack, officials wanted to evacuate all nonessential personnel to reduce casualties. The plan had locations (with the number of personnel the facility could accommodate) and a comprehensive transportation plan.

The planners realized extensive labor would be needed after an attack and planned to use 20,000 workers to assist in any recovery and in defensive preparation. The plan detailed “bed-down” locations for the workers and a general plan of requirements; detailed plans would be developed based on the situation. However, this effort ensured a ready pool of skilled workers prepared to provide any support that was needed.

**Vignette:** On 23 December 1941 Hawaii Governor J.W. Poindexter reflected on the plan to protect citizens in a letter to Hawaiian Department Commander LTG Walter Short: “The citizens of the Hawaiian Islands have always appreciated that these Islands were important to National Defense from a military standpoint, but it has been only since your arrival in these Islands on February 5, 1941 that it has been brought home to the civil population the importance of the part it would play in the event of a war in the Pacific. On December 7th, the citizens of these Islands met the hour of their test in such a manner as to make me proud to be the Chief Executive of these Islands. Your foresight in urging the population to prepare to meet the possible vicissitudes of war and the joint efforts of the Army and civil population in planning and preparing for this emergency was magnificently rewarded.” (IPHA, part 24, 1,932.)

*Teaching point 1.* Critical site defense. How extensively have we planned to defend civilian and military sites that are critical to military operations around our home bases?

The staff ride leader should get the students to discuss how prepared their units are to deal with an attack at their own installations. Before 11 September this seemed impossible, but now posts and units must be prepared to defend themselves at home. Ask the students what the critical locations are on and around their posts or bases and about the plan to defend them.

*Teaching point 2.* Civil defense. How extensively have our cities planned for civil defense?

Honolulu had a meticulous plan for dealing with an attack, and on 7 December, they were able to successfully respond to the Japanese attack. Fire units were quickly dispatched to fight fires and handle destruction, civilians were evacuated, work parties were quickly formed, and a blackout was quickly initiated and enforced, due largely to having a good plan on the shelf. Have the students discuss how well they think our citizens and towns are prepared for another attack. More important, have them discuss their responsibility for civil defense.

## Stand 3

### American Intelligence

**Directions:** Depart the USS *Arizona* Memorial parking lot and turn right on Kamehameha Highway (State Route 99). Enter Pearl Harbor Naval Base through the Makalapa Gate (security police will check your vehicle for Department of Defense stickers and check each person's identification). Once through the gate, turn left on North Road. At the Nimitz Gate, North Road becomes South Avenue. From the Nimitz Gate, drive 0.8 miles on South Avenue and turn right on Russell Avenue. Drive 0.4 miles (go straight at the Stop sign) and park near the two-story building with long, exterior balconies on the right. Conduct the stand in the grass in front of the building.

**Orientation:** This is Building 1 at Pearl Harbor, the Naval Shipyard Administration Building. In 1941 the Combat Intelligence Unit (CIU), commanded by Commander Joseph Rochefort, was located in this building. Rochefort and CIU determined that Japan was going to attack Midway in 1942, which allowed the United States to ambush and win the decisive Battle of Midway. (Hal Holbrook played Rochefort in the 1976 movie, "Midway.") Ford Island is 300 meters to the north, and Hickam Air Force Base is to the south.

**Description:** The American authorities knew the Japanese were conducting espionage all over Oahu, but there was nothing they could do to stop it. The FBI, the Navy District Intelligence Office (DIO), Hawaiian Department G2, and the Honolulu police all had learned of the consulate activities and observed the Japanese as they gathered their information, but since the Japanese were not overtly breaking the law, they could not stop them. These counterintelligence professionals let the Japanese know they knew they were conducting espionage in an attempt to intimidate them, would talk to them as they departed the consulate grounds, and let them know they were following them.

The counterintelligence agencies were able to get some wiretaps on a few phones in the consulate, but they concentrated on the senior members who were not involved in spying, so they did not gain any intelligence from the taps. In hope of determining what information the Japanese were passing to Tokyo, the DIO attempted to get copies of the cables sent from the consulate, but the telegraph companies would not violate the Federal Communications Act of 1934 that prohibited intercepting messages to and from a foreign country. While the counterintelligence agencies were unable to stop Japanese intelligence gathering, other government agencies

were having success in determining Japan's intentions; the United States was reading Japan's diplomatic traffic.

The Japanese had developed a series of codes for their diplomats to use. The most secure and the one the Japanese most trusted was termed "Purple." This was a system that used a combination of machinery and ciphers to secure message traffic and was so intricate that the Japanese were convinced that it could not be broken. The problem for the Japanese was that the United States had broken it in August 1940 and had been reading its most important diplomatic traffic ever since. The US Army Signal Intelligence Service hired the best cryptologists, spent 18 months working on the problem, and was eventually successful. The Japanese used other, less secure codes (mainly, the J-series codes) that the United States also broke. The information gathered from all of the diplomatic codes was called "Magic" intelligence. The US Army and Navy synergistically cooperated on Magic, with the Army concentrating on Purple while the Navy concentrated on the J series.

On the surface, Magic seemed like a great advantage for the United States, but it had many problems. Purple messages only contained information the foreign office wanted its diplomats to know, and often it was better if the diplomats in the United States did not know much. There were only eight Purple decrypting machines in existence, and the United States had to thoughtfully decide who should have them. In the end, four were placed in Washington (two for the Army, two for the Navy), three were provided to the British Allies, and the last was given to General Douglas MacArthur, commander, US Armed Forces Far East, in the Philippines. Hawaii did not have its own machine and depended on Washington for Magic information.

The Japanese sent an average of 26 messages a day using the Purple code, which caused difficulties for the US code breakers because it took up to a week to decode each message. Once decoded, the message had to go to another office to be translated, and due to an acute shortage of qualified Japanese linguists, it could take another week to translate any message. It could take up to 14 days before intelligence officers had the message in their hands.

The US intelligence experts had to decide carefully who could be exposed to Magic intelligence. If too many people knew of Magic information, the Japanese could determine that the Purple code was broken and they could change the code. Therefore, the Army only allowed the Secretary of War, the Chief of Staff, the Chief of War Plans, and the G2 to

be exposed to “Magic.” The Navy only allowed access to the Secretary of the Navy, the Chief of Naval Operations (CNO), the Chief of War Plans, and the Chief of Intelligence. The president had access to Magic, but even this was stopped for a while when a copy of a Magic message was found in his military secretary’s trash. Each service issued general guidance to their subordinates based on Magic but were very careful to conceal the source, which sometimes led to very simple information being delivered to commanders when more detailed information was available.

While intelligence units in Washington were reading the diplomatic traffic, the CIU was reading the Japanese navy’s “flag officer’s” code, the most secure naval code that was used to pass critical naval communications. The CIU had cracked the code in 1926 and had been reading it ever since. Unfortunately, on 1 December 1940 the Japanese changed the flag officer’s code, and the CIU could not break the new code until after the United States was thrust into the war. The CIU would, however, break the code again, which provided information that was instrumental in the overwhelming American victory at Midway.

Despite being able to read many of the Japanese codes, the Navy’s senior leaders were affected by a power struggle between the Chief of War Plans and the Chief of Intelligence. Each organization wanted to produce the data on Japanese intentions based on intelligence gathered by all sources. This in-fighting produced nothing but mistrust and poor information for the Navy’s senior commanders.

Despite the troubles and tribulations of gaining Magic, the intercepts did provide the United States with some critical information. On 24 September 1941 (message not decoded and translated until 9 October) the Japanese sent detailed instructions on how to report the locations of ships in Pearl Harbor to the consulate in Honolulu using a detailed grid system (this is known as the “bomb plot” message). Army intelligence analysts considered the message significant, but senior leaders did not and never forwarded any information about it to LTG Short, the Hawaiian Department commander. Navy senior leaders considered the message interesting but not critical and ordered the information passed to the Pacific and Asiatic Fleets. For unknown reasons Admiral Kimmel never received the message, but Washington assumed he had.

On 15 November 1941 (message not decoded and translated until 3 December) the Japanese consulate was ordered to make reports on Pearl Harbor twice a week and to alter the times they sent each report. Washington decided not to send this information to the commanders in Hawaii.

On 29 November 1941 the Japanese Foreign Ministry sent a message to all of its embassies and consulates around the world with a series of code words that would be broadcast on Japanese open shortwave radio networks during the weather report indicating when diplomatic relations were going to be severed, a step just short of war. There were codes for severing relations with the USSR, England, and the United States. The code for cutting relations with the United States was “East Wind Rain,” so the message became known as the “winds message.” Again, this information was never passed to Kimmel and Short, nor were they informed when one of the codes was heard on 3 December.

On 6 December 1941 the code breakers intercepted a message to the Washington embassy telling them to be prepared to receive a 14-part message that had to be delivered to the US State Department by 1300, 7 December (0800 Hawaiian time). When the message came in, the US code breakers were able to decrypt it and translate it faster than the Japanese embassy, and when Roosevelt read it, he supposedly said, “This means war.” (Popular lore says this message was a declaration of war. In fact, it was a reply to a previous message the United States sent. While the message “meant war,” it was not itself a declaration of war.) When Army Chief of Staff General George C. Marshall saw the message, he ordered war warnings to be sent to all commands. The Army Staff sent messages to all subordinate commanders, but atmospheric conditions prevented it from sending the message to the Hawaiian Department. The officer responsible for sending the message could have asked the Navy to send the message but instead decided to send it by civilian telegraph. The message arrived in Honolulu at 0733, 7 December and did not arrive at Fort Shafter (Hawaiian Department headquarters) until 1145. It was not decoded and into Short’s hands until 1458.

***Vignette:*** The counterintelligence agents’ frustration is apparent in Rear Admiral Theodore S. Wilkinson’s testimony to the Hart Commission in 1944. Wilkinson, who was a commander and Director, Office of Naval Intelligence, in December 1941, testified: “It would also be indicated similarly elsewhere, but the fact that a comprehensive espionage was being carried on was, I think, known through the district intelligence officers to the naval commanders in all of these ports, and I know that the time I was in Hawaii, that we were cognizant of that fact, and we were helpless to stop it. We could not censor their mails. We could not censor the dispatches. We could not prevent the taking of photographs. We could not arrest Japanese suspects. There was nothing we could do to stop it, and all hands knew that espionage was going on all along, and reports

were going back to Japan.” (*IPHA*, part 4, 1,841).

*Teaching point 1.* Freedom versus security. Do laws like the Federal Communications Act of 1934, which are passed to secure our freedom, in fact make the nation less safe?

The staff ride leader should get students to compare and contrast laws that secure our freedom and laws that limit freedoms but maintain security. As the discussion continues, inject the Patriot Act and ask students if the loss of certain civil liberties is worth the protection gained.

*Teaching point 2.* Language skills. How did a lack of skilled linguists affect the Americans’ ability to gather intelligence?

Due to this shortage, critical messages could take a week to translate. Ask students if our nation is better off today. (On 28 September 2004 the *New York Times* reported that 120,000 hours of potentially valuable terrorism-related recordings have not been translated due to a shortage of skilled linguists in the FBI.) Ask students how we can improve our language capability.

*Teaching point 3.* Dissemination. What good is having great intelligence if you cannot share it with the commanders who need it?

Have students discuss how to keep sources and methods secret while still being able to provide information to those who really need it. The staff ride leader can also discuss how certain staff officers in 1941 failed to ensure messages were received (Kimmel not receiving the bomb plot message and Short receiving Marshall’s war warning after the attack was over). Ask students if we are better at this today, or is it assumed that once we hit the “send” button, the action is complete?