

# Overview of Ladd Field, Fort Wainwright

Fort Wainwright was originally established in 1939 as Ladd Field, a natural winter laboratory and home to the Cold Weather Test Detachment.

At Ladd Field, military and civilian personnel made vital advancements in communications, aircraft maintenance, and combat operations, helping to unravel the mysteries of Arctic flying. With the entrance of the United States into World War II, Ladd Field also became important strategically to the defense of Alaska and as a link on the international supply route.

To accommodate the increased wartime missions, Army and civilian workers built a second runway, constructed six additional hangars, and added hundreds of temporary buildings. Ladd Field emerged as the Alaskan Air Transport Command hub, supporting military operations throughout the region, including the Aleutian Islands campaign.



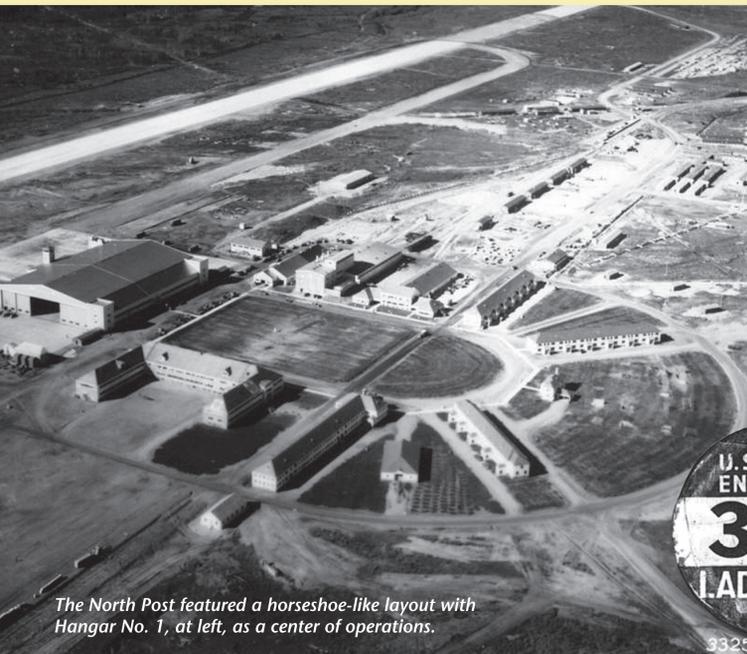
During WWII, the most significant new task was Ladd Field's international role as the transfer point for nearly 8,000 aircrafts U.S. crews delivered the airplanes to the Soviet Union under the Lend-Lease program, under which the United States provided military aid to its allies.



U.S. crews prepare Lend-Lease fighter aircraft for delivery to the Russians at Ladd Field during World War II.

American pilots flew planes along the Northwest Staging Route through Canada to Ladd Field where Russian pilots took over and ferried the aircraft to Europe. Hundreds of Russian personnel were stationed at Ladd Field during much of the war, working alongside their American counterparts. While there was some early friction, the project succeeded, as Otis Hays Jr. of the Alaska Defense Command put it, because the Russians and Americans cooperated and "refused to let mutual suspicion overwhelm them."

Cooperation gave way to confrontation during the late 1940s as Cold War tensions and reconnaissance units replaced wartime alliances. During the 1950s, Ladd Field saw a construction boom brought on by the Cold War. Air defense networks and aircraft tests dominated the base until the Air Force transferred most of its operations to Eielson Air Force Base and Elmendorf Air Force Base near Anchorage in 1960.



The North Post featured a horseshoe-like layout with Hangar No. 1, at left, as a center of operations.



Cold weather testing at 35 below zero helped improve Army technology during World War II.



The Quartermaster Building and power plant were part of the original facilities on the field.



Hangar No. 1, the largest building in Interior Alaska, takes shape in the winter of 1940-41.



The 1st Stryker Brigade Combat Team is an integral part of the Army's modern role at Fort Wainwright.

# A Battle Against The Cold

In the years before World War II, the Army knew little about flying planes in the Arctic or how to deal with cold weather. Solving these problems would be critical in advancing military objectives and in saving pilots' lives.

A 5,000-foot runway opened in 1940 and a small contingent of aircraft arrived that winter, put to the test by flyers who came to be called the "Cold Nose Boys."

The test pilots, bombardiers, engineers, photographic and support officers worked with scientists and factory representatives to solve problems as they were discovered.

By the end of the war, more than 700 troops and civilian personnel had a part in attempting to solve the mysteries of cold weather operations for 22 types of aircraft.



Airmen of the Cold Weather Test Detachment, Ladd Field, 1940. Courtesy of Elmendorf AFB History Office.

Testing the effects of extreme cold on the tail-gun mountings of a B-29. Ladd Field Midnight Sun, Special Magazine Section. Candy Waugaman Collection.

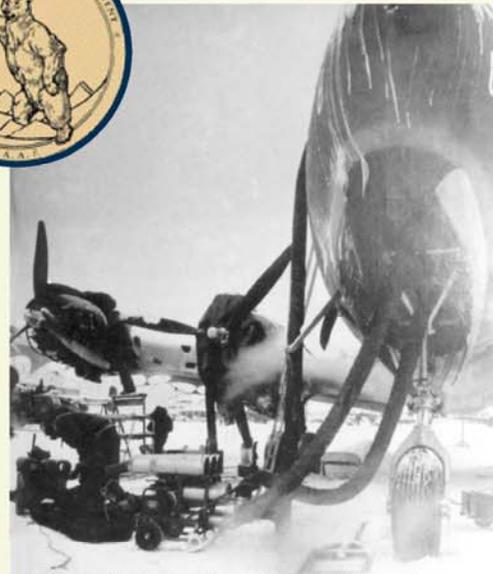


The work was not without risk. During the detachment's first five years, 36 men lost their lives; some in combat in the Aleutians, and others in crashes during training and test flights or in other accidents.

In addition to testing fighters, bombers and other aircraft, the detachment also field-tested clothing, ground support equipment and other items for use in the cold.



Heated hangar space was in short supply. A portable hangar can be heated to allow for more comfortable working conditions. The plane is a P-38. Ladd Field Midnight Sun, Special Magazine Section. Candy Waugaman Collection.



A C-54 gets a hot-air treatment before flying into the cold, blue yonder. Ladd Field Midnight Sun, Special Magazine Section. Candy Waugaman Collection.



Cold Weather Testing Detachment ground equipment test area, east side of Hangar One. Note C-13 battery carts and Herman-Nelson heaters. B-26 in background. Temperature -35°. AAF photo ca. 1944.



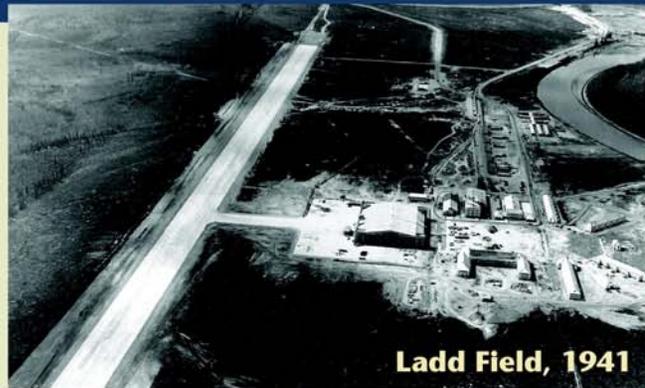
# World War II Heritage

Ladd Field began to take shape in 1939, when the surveying and clearing work began on a small cold weather test station, the first modern military installation approved by Congress for Alaska.

Cold weather testing remained an important element of Ladd Field operations from the outset of World War II, but another task soon emerged as the dominant mission. The United States and the Soviet Union agreed that Ladd Field would be the transfer point for aircraft provided to the Soviets to help fight the Germans.



Cold weather testing (CWT) was performed on all models of planes ferried up from the Lower 48 manufacturers.  
Courtesy Pioneer Air Museum/Stanley Acord.



**Ladd Field, 1941**

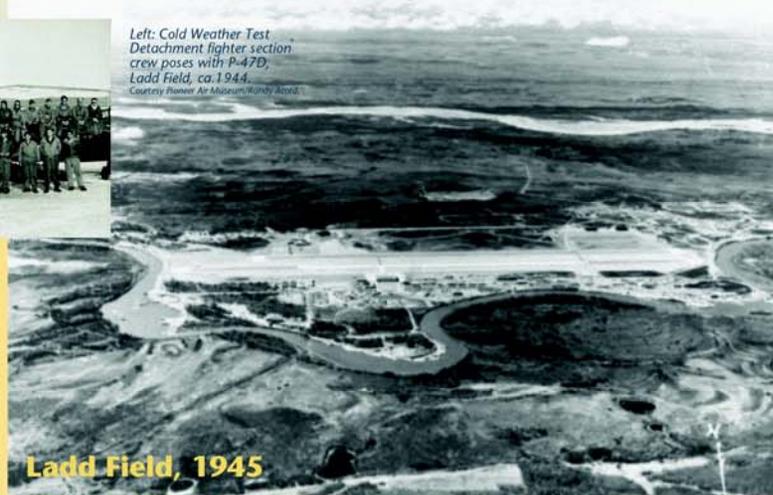


Left: Cold Weather Test Detachment fighter section crew poses with P-47D, Ladd Field, ca.1944.  
Courtesy Pioneer Air Museum/Stanley Acord.



An American applies the Soviet red star to the belly of a plane early in the Lend-Lease program.  
Alaska Air Command, USAF 87-149-33

American crews flew the bombers, fighters and cargo planes to Fairbanks, where Russian pilots took over. For three years, the Soviet red star was a common sight in the skies over Fairbanks, painted on 7,926 U.S.-built aircraft that roared off into the western skies, winter and summer, bound for the war in Europe. Without question, this supply route benefited the Allied cause.



**Ladd Field, 1945**

By the end of the war, Ladd Field had expanded to many times its original size. There were nearly 700 buildings and facilities that could house more than 4,500 personnel. A second runway paralleling the first increased landing and take-off capacity, and seven hangars dotted the field.



This plane manufactured in Hopedale, Texas, was painted with its patriotic logo before being flown to Fairbanks.  
Courtesy Pioneer Air Museum/Stanley Acord.

Writing in 1942, author Jean Potter praised the "extraordinary job" done by those who built Ladd Field and the other Alaska military installations of the era.

"In these days of all-out war activity, when bomber factories are taking shape almost overnight on the sites of apple orchards, the Alaskan fortification may seem like a routine achievement. It was much more than that. It was a frontier task, in a strange and little-known region of treacherous, fog-bound coasts, huge unexplored mountains, and permanently frozen inland plains--a no man's land with almost no population, offering almost no developed means of food or fuel supply."

The two central themes of World War II at Ladd Field are relevant for Fort Wainwright today and into the future. First, the demands of cold weather operations and the need to train and test in Arctic conditions remain. Second, the location of Interior Alaska on world air routes is as important today for the accomplishment of Army missions as it was for the Lend-Lease operations of World War II.

# Aviation History of Ladd, Fort Wainwright



**During World War II, the Cold Weather Test Detachment tested all aircraft in the American arsenal. It's mission was to make every plane operable at temperatures of 65 degrees below zero. The aircraft manufacturers and support companies that made everything from tires to engines sent representatives to Alaska to work with the detachment.**

The aeronautical research effort grew into a sophisticated enterprise through which more than 700 military personnel tested 22 types of aircraft and related equipment. Knowledge gained on the ground and in the air helped the U.S. military and the aviation industry conquer engineering challenges of extreme conditions.

In 1947, the Air Force opened a cold weather test hangar at Eglin Air Force Base in Florida.

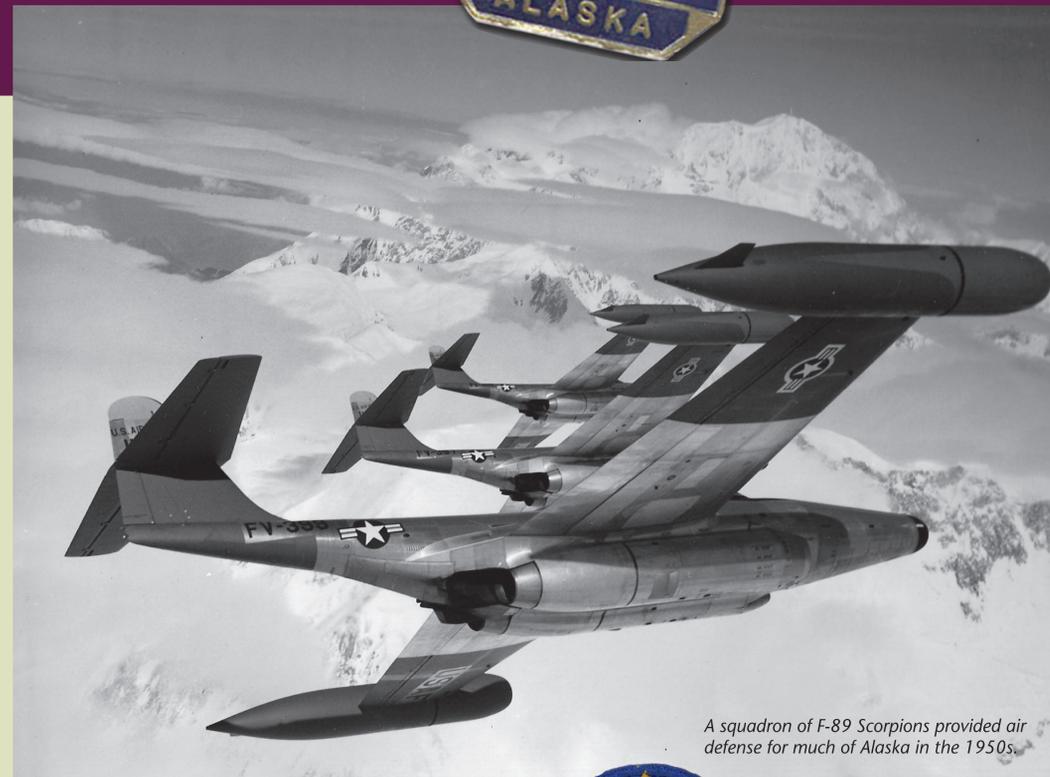


A P-38 crew warms up the aircraft for a winter flight from Ladd Field.

Cold weather test operations continued in Alaska on a reduced basis, while strategic reconnaissance, air defense, research, and search and rescue missions became the main mission of Ladd Air Force Base.



The F-13s of the 46/72nd Reconnaissance Squadron fly in formation through the Alaska Range. The F-13 was the reconnaissance version of the B-29.



A squadron of F-89 Scorpions provided air defense for much of Alaska in the 1950s.



Long-range reconnaissance flights from Ladd assessed Soviet activities and weather conditions before the era of satellites and the U-2 spy plane. While details about reconnaissance flights remained secret, the public closely followed news accounts of the 10th Air Rescue Squadron, which performed numerous military and civilian mercy flights.



Pilots of the Alaskan Air Command put the F-82 Twin Mustang through its paces on reconnaissance and surveillance missions in the early 1950s.

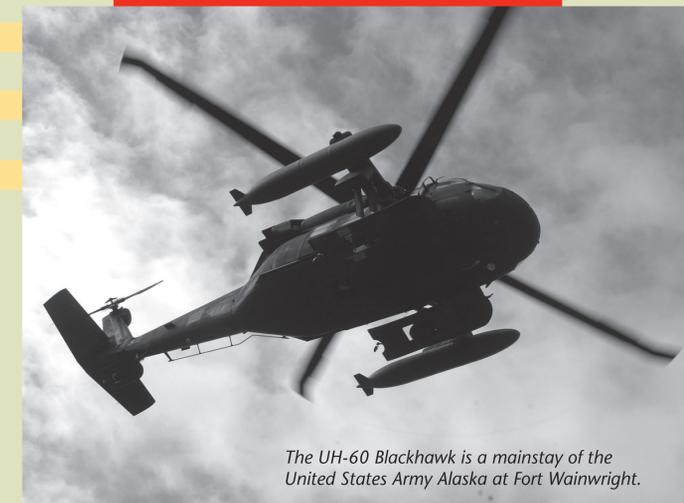
Fighter-interceptor squadrons provided air defense for central and northern Alaska, first with the F-82 H and later with the F-89 Scorpion.

After the Army took control of the installation in 1961, a variety of fixed-wing and helicopter aviation units operated from the airfield, with a primary mission of supporting ground defense and providing air mobility for the infantry.

When the Army assumed control of Ladd Field and renamed it Fort Wainwright in 1961, the aviation mission shifted to one of providing support and mobility for ground troops, a task that continues to this day.

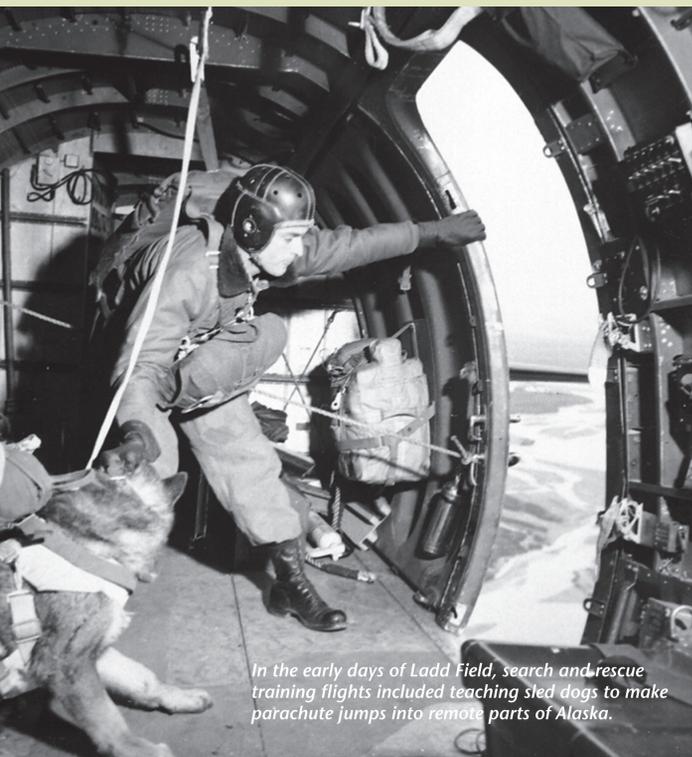


Successive generations of Army helicopters such as the HU-1 Huey, the UH-21 Shawnee, the CH-47 Chinook, the OH-58 Kiowa and the UH-60 Blackhawk have been based at Fort Wainwright, along with a variety of observation aircraft, supporting operations in Alaska and around the world.



The UH-60 Blackhawk is a mainstay of the United States Army Alaska at Fort Wainwright.

In 2006, the airfield was renamed Ladd Army Airfield, recognizing its place in the military and aviation history of Alaska and the nation.



In the early days of Ladd Field, search and rescue training flights included teaching sled dogs to make parachute jumps into remote parts of Alaska.

# The Secret Airway To Russia

Though it could have hardly been more distant from the battlefields where the Allies fought the Germans, Ladd Field played a vital role in the European war.



For three years during World War II, Ladd Field served as the transfer point where pilots from the Soviet Union took possession of U.S.-built warplanes. The United States had started to provide the aircraft to aid Russia in the fight against Hitler, after Germany invaded Russia. Nearly 8,000 airplanes changed hands here. Although the northern air route was well known in northern communities, its existence was an official secret until 1944.

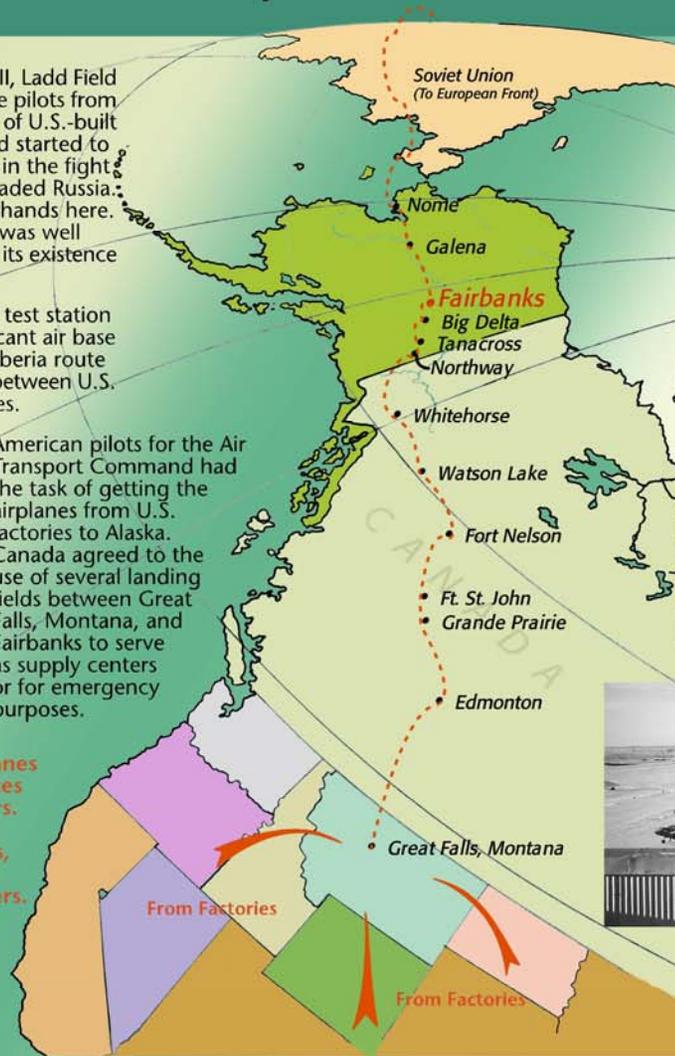
By 1943, the small cold-weather test station became an internationally significant air base for what was called the Alaska-Siberia route or ALSIB, the surest supply route between U.S. factories and the Soviet front lines.

American pilots for the Air Transport Command had the task of getting the airplanes from U.S. factories to Alaska. Canada agreed to the use of several landing fields between Great Falls, Montana, and Fairbanks to serve as supply centers or for emergency purposes.



P-63s lined up on the airfield at peak of ferrying operations. Ladd Field Midnight Sun Special Magazine Section.

More than half of the planes transferred to Soviet forces were P-39 or P-63 fighters. Also transferred were: 1,363 A-20 light bombers, 707 C-47 transports and 733 B-25 medium bombers.



For most of the Russian pilots, the chance to ferry the planes from Ladd Field to their homeland was a welcome break from combat. The constant flow of airplanes transferred to the Soviet air force kept hundreds of mechanics and other support personnel busy. One of the mandatory jobs, if it had not already taken place at an early staging point, was to paint the planes with the red star and tail to identify the [now] Soviet aircraft.



The 5,000th aircraft delivered at Ladd Field, September 1944. Randy Acord Collection



UAF Archives. Rex and Lillian Wood Collection, 2002-0164-00051



Soviet pilots' briefing room, Hangar One. AAF photo

At Ladd, the Soviets took over the west half of Hangar One where they had maintenance shops, a pilots' briefing room and other offices. The Soviet pilots would take off in groups, usually including one B-25 bomber and several A-20 light bombers and P-39 fighters.



Early in the program, the Soviet Red Star was painted on the aircraft at Ladd Field. September 1942. Ladd Field Special Magazine publication.



UAF Archives. Rex and Lillian Wood Collection, 2002-0164-00044

It became common in Fairbanks to see men in Soviet uniforms buying consumer goods they couldn't find in their homeland.

# Cold War in Alaska

The end of World War II brought cutbacks to defense spending throughout the United States and raised questions about Ladd Field's future, but rising tensions with the Soviet Union led to major new investments in Alaskan installations, including Ladd Field.

**In 1935, Gen. Billy Mitchell had famously predicted, "I believe that in the future, he who holds Alaska will hold the world." It was during the Cold War that U.S. strategic planners recognized that Alaska had become the first line of defense against any potential invasion or attack by Soviet bombers.**

Ladd Air Force Base became an important air defense site with an emphasis on squadrons of fighter-interceptors and antiaircraft batteries ready to repel any invaders. Ladd AFB was the Alaska Air Command headquarters for all the territory north of the Alaska Range. Its mission was to identify and destroy any enemy attackers. The Air Defense Control Center at Ladd coordinated defense operations and training exercises within the region.



Early in the Cold War, the 46th/72nd Reconnaissance Squadron conducted long-range flights to gather information about the potential Soviet threat to the United States.

As weapons technology changed, Intercontinental Ballistic Missiles replaced bombers as the greatest threat, leading to cutbacks in military spending in Alaska in the 1960s and 1970s. After the Army took over Ladd Air Force Base and rededicated it as Fort Wainwright in 1961, a series of new missions developed. Aviation, infantry and artillery units defended Alaska and supported a variety of Arctic training exercises.

By the time the Cold War ended in 1991 with the collapse of the Soviet Union, Fort Wainwright's mission had changed to supporting rapid worldwide deployments of troops, a mission that continues today.



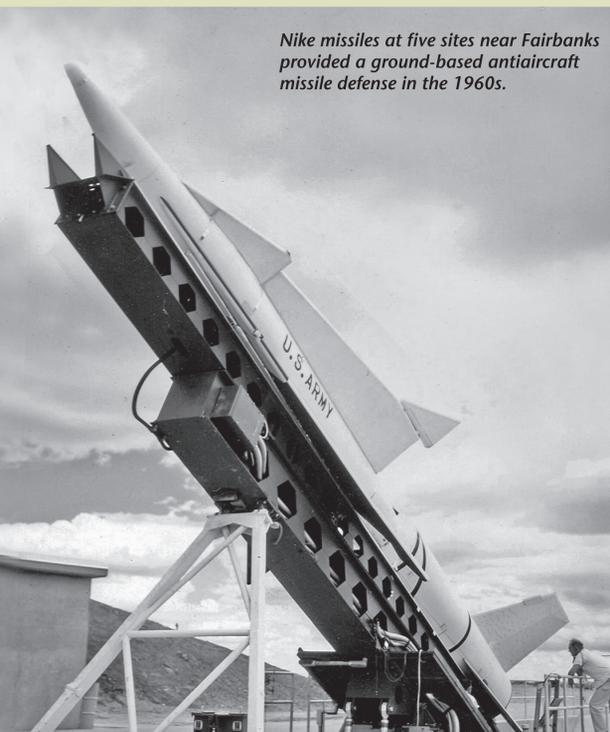
Infantry and artillery units from Fort Wainwright train in all conditions.



Reconnaissance of the potential Soviet threat led to the stationing of the 46th/72nd Reconnaissance Squadron at Ladd Field early in the Cold War. In addition to long-range surveillance flights, the 46th/72nd helped to improve navigation in the polar region and develop techniques for flying in what had been uncharted territory. The knowledge gained by the 46th/72nd allowed commercial carriers to make polar flights routine.



The crew from the F-13 christened "Bucket of Bolts" checks out maps for a long-distance flight across the Arctic.



Nike missiles at five sites near Fairbanks provided a ground-based antiaircraft missile defense in the 1960s.

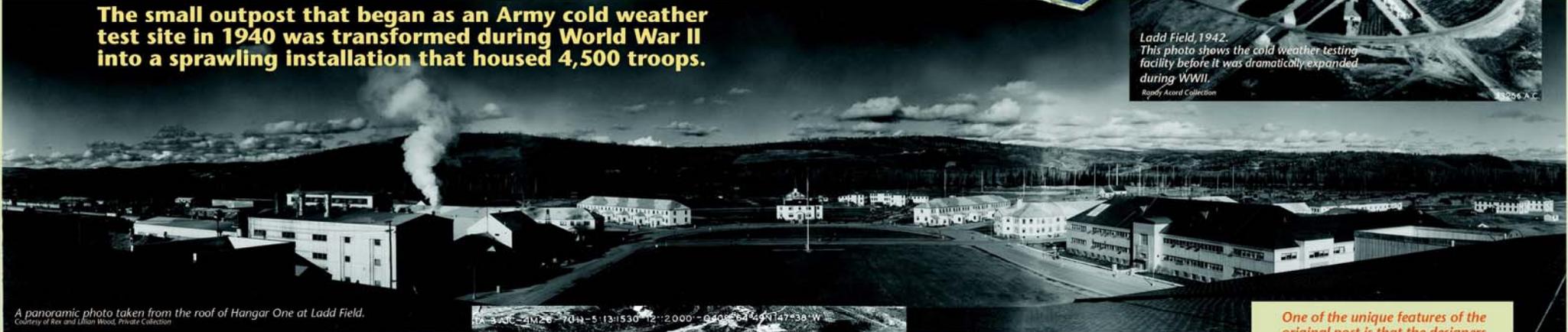


# A Treasury of American History



Ladd Field, 1942. This photo shows the cold weather testing facility before it was dramatically expanded during WWII.  
Baptist Accord Collection

The small outpost that began as an Army cold weather test site in 1940 was transformed during World War II into a sprawling installation that housed 4,500 troops.



A panoramic photo taken from the roof of Hangar One at Ladd Field. Courtesy of Rex and Lilian Wood, Private Collection

The buildings on the North Post are at the center of the National Historic Landmark that recognizes Ladd Field as one of the treasures of American history from the World War II era. These buildings were closely related to the two major missions of Ladd Field during World War II—cold weather testing and the Lend-Lease transfer of aircraft to the Soviet Union to help in the war against Germany.

The Air Transport Command, which was in essence a military air service, established the air route from Montana to Alaska. The ATC served as a vital link in the Aleutian war effort, transporting personnel and cargo from the United States to Alaska before shipment to the front.



The orderly design reflects the era in which the post was conceived, before the demands of war created an emergency situation in which appearances were expendable, and utility and speed were all that mattered. Considerable planning is evident in the design of the Post, an architectural framework visible to this day.



East elevation of combined Air Corps barracks, theater, PX and hospital, ca. 1943. AAF photo

Ladd Airbase as it was in 1944 after two years of immense and rapid growth. A second landing strip has been built as well as dozens of new offices, housing units and shop and maintenance facilities. The orange-colored overlay shows the horseshoe configuration of the initial design, now known as North Post. AAF photo

One of the unique features of the original post is that the designers had decided that large tunnels would be built to keep the utility lines from freezing. The tunnels were six feet wide and eight feet high, large enough so that they became underground hallways in the winter. Troops regularly used them during cold weather to get from one building to another along the horseshoe in comfort.



Quartermaster building and the adjacent power plant, ca. 1943. AAF photo



# Communications On The Last Frontier

In 1900, the U.S. Army built a telegraph system from Washington to its farthest Alaska outposts. The **Signal Corps** installed the telegraph lines to connect posts across the District.



A typical Signal Corp structure during World War II. There were several of these small structures scattered throughout the Alaska Interior. USF Archives 1987-0149-00023

The need for instant communication was never more critical than during World War II. The task of staying in touch with other units was largely the responsibility of the Signal Corps and its **Alaska Communications System** network soon grew to meet the challenges of wartime.

The Signal men maintained the telephone and other communications facilities.

Ladd Field Midnight Sun Special Magazine Section



Army personnel monitor incoming radio traffic from the Lower 48 and everywhere else in the Army Airways Communications System station located in Hangar One. Ladd Field Midnight Sun Special Magazine Section

Responding to the keen need for airfield communications, the **Army Airways Communications System** (AACS) began operating in 1941 to provide air traffic control and air weather reports. By 1944, eight officers and about 90 enlisted men served with the AACS.

A panoramic photo taken from the roof of Hangar One at Ladd Field shows the radio communications facility and its surrounding antenna array. Rex and Lillem Wood, Private Collection



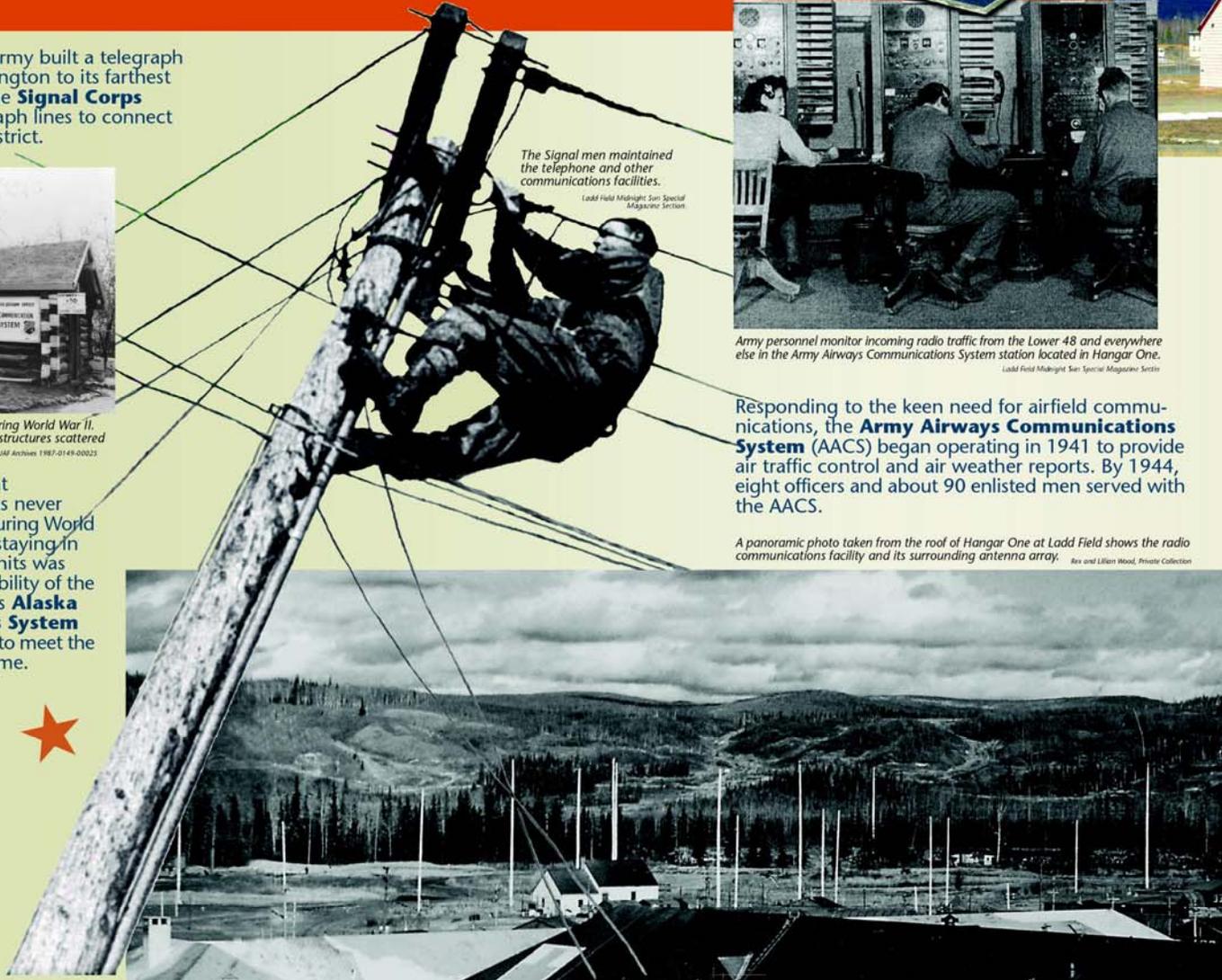
## Radio Transmitter Building (Building 1024)

One of the most important buildings at Ladd Field during the war was the Radio Transmitter building. Constructed in 1941 in an open field and surrounded by an array of transmitter antennas on poles, this building housed radio transmitters and other communications equipment vital to the war effort.

Architecturally, it was designed in the Neo-classical Cape Cod style, with a masonry chimney and a copper roof. It is the only building of this style that remains within the Landmark today.



Mobile VHF antenna, Signal corps. USF Archives 1987-0149-00030





# Gathering In The Chapel

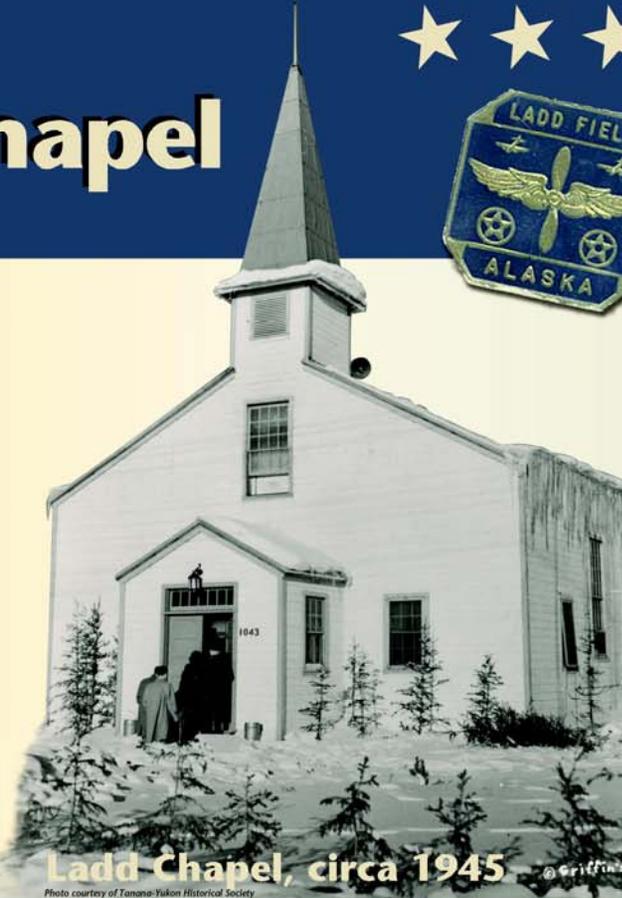


In 1944 the US Army provided the community at Ladd Field with its first formal house of worship.

With an architectural style reminiscent of New England churches and seating capacity for 240 people, the chapel soon became a welcome place for the community to come together. From 1940 until the completion of the Ladd Chapel in early 1944, multi-denominational services were held in improvised quarters around the airbase. The population of Ladd Field quickly grew from 520 in 1941 to over 6,000 by the end of 1944. This compared to a Fairbanks population of 3,455 in 1940. By 1944, a new chapel was clearly needed. Though it ceased hosting religious services in 1978, a place of community, a sense of place, of permanence, the aura of days gone by lingers on.



Photo courtesy of Fairbanks Pioneer Memorial Museum collection



Ladd Chapel, circa 1945

Photo courtesy of Tanana-Yukon Historical Society



Photo courtesy of Tanana-Yukon Historical Society

## The 800 Series Buildings

Ladd Chapel is an example of the 800 series of prefabricated wooden buildings used during the war by the U.S. Army. The buildings were based on a modular design that changed only in overall length, in ten foot increments, and the number of stories. The chapel steeple is the most obvious characteristic that distinguishes it from the other buildings on the base.

The 800 series buildings had inside plumbing, electricity and forced air heat, no more and no less than the basic comforts of home in a highly adaptable design.

## Wartime Mobilization

During the war years of 1942-1945, hundreds of new buildings went up on Ladd Field. Many were of standard wood frame construction while others were prefabricated Quonset and Pacific huts with distinctive arched sides and roofs.

The Army turned to prefabricated buildings because of the need for speed and economy. Nation-wide, housing and office space had to be created for millions of men and there was no time to waste. The wartime mobilization plan required standar-

dized plans, precut lumber and an assembly-line approach to construction. The buildings were designed to be temporary, and with some exceptions, such as the chapel, that was the case at Ladd Field.



Right: Detail from a panorama of the North Post photographed from the top of Hangar One. Visible are the many temporary quarters and offices erected just northeast of what is today the base headquarters building.  
 Ken and Lilian Wood, Private Collection



Pacific Huts with connecting woodframe building, Orderly Unit, Zone 100. May 1944.  
 AAF photo, courtesy Ken Wood