



Historic American Buildings Survey Level II Report



LORSTA ATTU Attu Island, Alaska



Final
October 2011



Prepared by

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U.S. COAST GUARD LORSTA ATTU
Attu Island
Aleutians West Census Area, Alaska

HABS AK-232

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WRITTEN HISTORICAL AND DESCRIPTIVE DATA
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**HISTORIC AMERICAN BUILDINGS SURVEY
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U.S. Department of the Interior
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- Index to Photographs/National Register of Historic Places Color Transparencies
- Alaska Building Inventory Forms
- Architectural Drawings
- HABS Release Form

- Name:** USCG LORAN-C Station Historic District, Attu
- Location:** USCG LORSTA Attu, Building 26, P.O. Box 190090, Kodiak, AK 99619
- Present Owner:** U.S. Fish and Wildlife Service, 605 West 4th Avenue, Rm. G-61 Anchorage, AK 99501
- Present Use:** Attu Battlefield National Historic Landmark
Aleutian Islands National Wildlife Refuge
- Significance:** Long Range Aid to Navigation (LORAN) was a government-provided, terrestrial navigation system established for military and civilian users throughout the United States, Canada, Europe, Asia, and Russia. Since its inception in 1940, LORAN provided marine, air, and land positions to users during World War II (WWII), through the Cold War, and into the twenty-first century. LORAN-C, a later version of the long-range navigation series, operated as a low frequency hyperbolic navigation system using the time difference in pulses from three or more transmitting stations to obtain a position. It was highly accurate, all-weather, and available twenty-four hours a day. In 2010, the United States and Canada both ceased operation of the system.
- The LORAN-C system was deployed on Attu in 1961 by the U.S. Coast Guard (USCG). In addition to the Signal and Barracks Building, the station consisted of a Generator Building, a Transmitter Building, and one 625' guyed tower. The LORAN-C station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as an historic aid to navigation, representing the federal government's growing involvement and responsibility for safe navigation. The transmission tower was demolished in 2010. All buildings associated with the operation of LORAN-C are considered contributing elements to the district.
- Historian:** Terri Asendorf, Architectural Historian, MSHP
Jacobs Engineering Group Inc. (Jacobs)
- Project Information:** The USCG LORAN-C Station Historic District, Attu, Alaska, recording project was performed under contract with the U.S. Army Corps of Engineers (USACE) for USCG under the direction of the Alaska State Historic Preservation Officer and the Advisory Council on Historic Preservation. The historical reports and photographs were prepared by Jacobs. Terri Asendorf served as architectural historian and Casey Martin served as architect.

I. Historical Information

I.a. Physical History

I.a.i. Date of Erection

1960-61

I.a.ii. Architect

USCG

I.a.iii. Original and Subsequent Owners, Occupants, Uses

U.S. Navy Department, Naval Air Facility, 1943–1946

USCG, LORAN-A and LORAN-C Stations, 1943–2010

I.a.iv. Builder, Contractor, Suppliers

625' guyed antenna: Swager Tower Corporation

Transmitters: AN/FPN-44B Tube-Type

Diesel Generators: NC Machinery Company Power Systems and Zenith Automatic Control Equipment

LORAN-C Monitoring Receiver: Locus

Vacuum Tubes: Econco

Obstruction Light Assembly: Hughey & Phillips, Inc.

I.a.v. Original Plans and Construction

These are discussed individually below and on the attached architectural building inventory forms. Site plans and architectural drawings of the facilities are also provided.

I.a.vi. Alterations and Additions

These are discussed individually below and on the attached architectural building inventory forms. Site plans and architectural drawings of the facilities are also provided.

I.b. Historical Context

I.b.i. LORAN-A to C

Historically, maritime and aviation positioning was done using dead reckoning, celestial navigation, and later, radio beacon. With the approach of World War II (WWII), the development of a more accurate system was needed for defense operations, and in 1940 the Army Signal Corps issued a requirement for "Precision Navigational Equipment for Guiding Airplanes." The pulsed, hyperbolic, long-range radio navigation system that eventually became known as LORAN was proposed by physicist Alfred L. Loomis, working under the direction of the National Defense Research Committee (NDRC). In 1941, his proposal was accepted and trial stations were established at inactive USCG lifeboat stations at Montauk Point in Long Island, New York, and Fenwick Island, Delaware. Corporations such as RCA,

Sperry, Bell Laboratories, Westinghouse, and General Electric filled equipment orders for the model stations (Pierce, McKenzie, and Woodward 1948).

LORAN was further developed by scientists at the Radiation Laboratory of the Massachusetts Institute of Technology. Generally derived from the British GEE (generalized estimating equation) system, the first iteration of LORAN operated at the 1,850 and 1,950 kilohertz (kHz) frequencies. Later called “LORAN-A,” its use by naval and air convoys in defense missions quickly increased due to requirements by the Allied forces for a means of a tactical bombing system (Joint Aids to Navigation Panel 1957). Under the Lend-Lease program established in 1941, the United States used LORAN-A to guide planes and bombers to the former Soviet Union during the war (Thomas 2011).

Between 1942 and 1944, LORAN-A use rapidly increased, and by 1945, there were stations built all over the world providing some sixty million square miles of coverage (Pierce, McKenzie, and Woodward 1948). The stations were grouped into regional chains consisting of one “master” transmitting station and two or more “secondary” transmitting stations, each separated by several hundred miles. Station location and orientation were determined by coverage requirements. By 1944, approximately 75,000 receivers were distributed to military and civilian users with seventy-five U.S. and fifteen British and Canadian LORAN transmitters providing coverage over 30 percent of the earth’s surface (Pierce, McKenzie, and Woodward 1948), including high-traffic water and air routes.

Originally a U.S. Army-driven effort, the LORAN-A program was later transferred to the U.S. Navy because of its mission to precisely and safely route convoys and guide and deliver defense material – tasks which could be achieved using LORAN. In November 1941, the U.S. Treasury Department transferred the USCG to the U.S. Navy to support war efforts. Given its official role as operator and administrator of U.S. Aids to Navigation, the USCG assumed management of the LORAN program for the Navy. After the war, in 1946, the USCG was transferred back to the Treasury Department and retained management of the LORAN program (Thomas 2011). Incidentally, USCG was transferred to the Department of Transportation in 1967, and then again to the Department of Homeland Security in 2002.

In 1947, the International Telecommunications Union Conference (ITU) allocated the frequency band 90–110 kHz for the development of a farther-reaching, long distance, radio navigation system on a worldwide basis (Dickinson 1959). This was partly in response to a need for less signal interference: the higher ranges were allocated solely for military use during wartime, but when they were returned to civilian use after the war, signal interference increased. Over the next decade, various military branches were attempting to improve LORAN including the U.S. Air Force (USAF) which developed the Cycle Matching Tactical Bombing and Navigation System (CYTAC). CYTAC was an experimental electronic strategic bombing system that used the same hyperbolic principles as LORAN-A, but at the lower frequencies allocated by the ITU. Since the tactical bombing application of CYTAC was classified, its use for civilian navigation was limited; therefore, USAF declassified the civilian application of CYTAC and named it “LORAN-C,” while the

tactical bombing application remained confidential (Joint Aids to Navigation Panel 1957). The first LORAN-C navigation system was installed on the U.S. East Coast in 1957 at stations in Carolina Beach, North Carolina, Martha's Vineyard, Massachusetts, and Jupiter Inlet, Florida.

In 1974, LORAN-C was authorized by the Secretary of Transportation to be the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ), which is defined as the area seaward of a harbor entrance to fifty nautical miles offshore, or the edge of the Continental Shelf, whichever is greater. This mandate drove the expansion of LORAN-C service to all coasts of the United States – including Alaskan waters and the Gulf of Mexico – and to the Great Lakes by 1980. LORAN-C also aided early environmental initiatives. In the 1970s, the system was used to guide oil tankers along the Pacific Coast from Alaska to Canada and the contiguous United States to assure high precision navigation and minimize potential collision-related damage from growing tanker traffic.

I.b.ii. LORSTA Attu

LORSTA (LORAN station) Attu is located on Attu Island, Alaska, the western-most island of the Aleutian archipelago. Roughly thirty-seven miles long and 120 acres, Attu is approximately 1,100 miles from the Alaska mainland and less than 200 miles from the Russian Komandorski Islands. The closest town is forty miles away at Shemya Island, Alaska. The first known inhabitants on Attu were the Aleuts, an Alaskan Native group. Their population was drastically decreased by the Russian Empire, who discovered the Aleutians in the 1740s and exploited them for fur-trading. Attu became American territory in 1867. In 1913, President William Taft established the Aleutian Islands Refuge, which included Attu. The island saw few visitors until June 1942, when it was captured by the Japanese in WWII. During the invasion, the Aleuts were either killed or imprisoned at internment camps in Japan, never to return to Attu. In 1943, Americans retook the island in the Battle of Attu, which was the only WWII battle to take place on American soil.

During the remainder of the war, the Navy used the island as a base and staging area for the planned invasion of Japan. "Navy Town" consisted of more than 200 Quonset huts and two paved runways on the eastern end of the island at Point Barbara (Department of the Navy 1947). In 1943, USCG built the LORAN-A station on Theodore Point. At the war's peak, more than 7,000 USCG and U.S. Navy servicemen were housed at Navy Town, in addition to the rotating battalions of U.S. Army and USAF personnel (Department of the Navy 1947). In 1948, with the beginning of the Cold War, the LORAN-A station was moved to Casco Cove near Murder Point, where it was better located for receiving supplies (State of Alaska 1997). The following year, the Navy constructed a large Aerological Station Building at Navy Town. The Station Building served to monitor weather for bomber routes to the USSR and seismic information to detect nuclear submarines (USCG 1959). The building was decommissioned in 1957.

In 1961, the LORAN-C system was deployed on Attu. For thirty years, Attu served as a secondary station within the North Pacific chain where St. Paul was the designated master and Port Clarence and Kodiak were additional secondary stations. In 1991, Attu became a dual-rated station, producing two different sets of

timed pulses from the same transmitter to provide coverage in a larger area. Attu was unique because it was the only dual-rated station connected to a Russian LORAN chain, or *Chayka*. Stations in Petropavlovsk, Kamchatka, and Alexandrovsk, Sakhalin Island were connected to Attu to form the Russian-American Chain.

At the end of the Cold War, when the Russian-American Chain became operational, there were estimated to be more than 572,000 users of the LORAN-C system: 82 percent domestic and international marine users, 14 percent civil aviators, and 3.8 percent land users (USCG 1992).

Construction

From the beginning of the LORAN program, it was apparent that a typical station would need several basic components. First, the antenna and grounding system for LORAN signal transmission would be required. Second, a building to house the technical apparatus for the transmission and communications systems, and a building to house the diesel-electric generators and other parts of the power plant were needed. Finally, staff quarters' offices; facilities for the mess hall, galley, and sick bay; and supporting infrastructure including sewage disposal, and a water system were necessary.

The existing LORAN-A complex on Casco Cove consisted of a Main Station Building, a Transmitter Building, and a warehouse for storage. According to the original site investigation conducted in 1959, while the Casco Cove site was considered electronically well-suited for the installation of the LORAN-C system, the facilities would have required a large addition to house the extra equipment and crew, as well as two miles of new roadway to connect to the airstrip and pier. Alternatively, the USCG could easily re-use the large Navy Aerological Station (NAS) Building at Massacre Bay for operations, housing, and everything, except actual transmission. Additionally, the building was perfectly situated next to the extant Navy airstrip for logistic support. Therefore, in order to efficiently operate the transmittal of both signals from the same building, the LORAN-A equipment was transferred to the NAS Building when the LORAN-C system was installed. The A signal was phased out over the next two decades so that users had ample time to upgrade their receivers from LORAN-A to LORAN-C devices. The LORAN-A signal was officially terminated in 1979 on Attu Island, and the A system in its entirety was terminated in the United States on December 31, 1980.

USCG Crew - Isolated Duty

To serve duty on Attu was to be isolated. As one of the last three operational, isolated, restricted-duty LORAN stations (all of which were located in Alaska), Attu was the most remote. Being in a maritime climate zone, it also suffered extreme weather conditions. According to the Alaska Climate Research Center website, Attu has an average annual temperature of 38°F, average annual rainfall of 48", and accumulated snowfall of 74".

Each LORAN station was run by a crew of USCG servicemen and officers who formed departments including Operations, Engineering, and Administration. There

were twenty servicemen on Attu including officers, electronics technicians, engineers, mechanics, firemen, a medic, a storekeeper, and two cooks.

Crewmembers typically held an eight-hour work day that entailed performing their specific duties. In the evenings, or when off-duty, most of the crew would participate in extracurricular activities that varied according to the season. Hiking the island and fishing were popular sports in the summer; snowboarding was enjoyed in the winter. Throughout the year, the crew could relax in the station lounge, or “rec-deck,” which included a movie screen and movie theater seating, a beer bar, and a convertible pool/ping-pong table. Internet service was made available to the crew for personal use beginning in 2004, which helped lessen the impacts of seclusion.

The crew depended on USCG Air Station Kodiak on Kodiak Island, Alaska, to bring in supplies every two weeks. These flights were the crews’ primary contact with other people for mail, food, supplies, and travel to and from the island. Occasionally, researchers and bird enthusiasts visited the island; sailors used the island as a rest stop; and the Japanese have visited several times to recover remains from the Battle of Attu. During sixty-six years of operation, 1,300 Coast Guardsmen served on Attu. This included a few women before 2004 when women were excluded entirely from serving on the island.

I.b.iii. State of LORAN

In 1993, as a response to the advent of Global Navigation Satellite Systems (GNSS), the Department of Defense advised that there was no longer a requirement for LORAN. As a result, USCG attempted to close U.S. LORAN stations and returned operation of all international stations to the host countries. The Russian-American Chain that included Attu remained in operation as a gesture made by both countries to promote peace after the Cold War. Moreover, Congress did not allow for closure of U.S. stations based on the protests of civilian users, and the program continued in operation for another fourteen years (Thomas 2011).

In October 2009, in an overall effort to eliminate unnecessary federal programs, the U.S. Department of Homeland Security signed into law an act terminating the LORAN-C system. The USCG began a phased decommissioning of LORAN-C stations throughout the United States in February 2010 including demolishing transmission towers, which were an obstruction to air traffic, and placing all associated buildings in layaway. LORAN-C remains in use in several countries including the United Kingdom, France, Germany, Norway, Saudi Arabia, India, Korea, Japan, China, and Russia.

The domestic LORAN-C signal on Attu Island was terminated on February 8, 2010 and the Russian Chayka signal was terminated on August 1, 2010. Several members of the current crew attended the termination ceremonies. The USCG Navigation Center in Alexandria, Virginia coordinated the last signal shutdown, calling Attu to express their gratitude for the crews’ dedication in operating the LORAN-A and LORAN-C signals continuously for sixty-six years in an extremely isolated location. On the count of three, two servicemen threw the switches for

Transmitters A and B (named Karen and Ashley by the crew) and the sound of 1.6 megawatts of radiated power died. The crewmembers were subsequently stationed at the USCG base of their choice in exchange for having spent one year on the remote island. The tower was demolished on August 14, 2010, and the official decommissioning ceremony took place on August 27, 2010.

Future of LORAN

The termination of LORAN-C in the United States and Canada has incited speculation on the need for a backup navigation system should disruptions occur with GNSS. Enhanced LORAN, or eLORAN, is the latest iteration of LORAN technology, providing navigation services completely independent of GNSS. eLORAN has enhanced the LORAN-C signal by providing: (1) better control and tolerance of timing and pulse shape; (2) time-of-transmission synchronization to universal coordinated time (UTC) at each transmitter site independent of any changes in signal propagation; and (3) the addition of a digital data broadcast capability called the LORAN data channel which can be used to send time-synchronization and text messages.

Several European countries, including the United Kingdom, Saudi Arabia, and South Korea are converting former LORAN stations to eLORAN technology, while other countries including Ireland and Sweden are building new stations (Schue 2011). In North America, debate over which system should serve as backup for GNSS has prevented a transition from LORAN-C to eLORAN.

II. Architectural Information

II.a. Physical History of Buildings (USCG 2005)

II.a.i. Fire Cart Garage and Terminal Building, 1960

Original Plans: This building is a 430-square-foot rectangular building, approximately 26' x 16' with a 4.5' x 3' entry. Floor joists span the short direction of the building over a 16' x 16' area; the remainder of the floor is asphalt. This paved portion serves as the fire cart storage area and is accessible via an overhead door. The walls are timber-framed with plywood sheathing. The mono-shed roof consists of 2' x 10' rafters sheathed with plywood featuring exposed-fastener corrugated metal. The windows are site-built in wood frames. The door is hollow metal with a hollow metal frame. There is a steel, manually-operated garage door at the fire cart storage room.

Alterations and Additions: An alteration is documented for 1984 but no details of the modification are apparent.

II.a.ii. Flammable Materials Storage Shed, ca. 1990

Original Plans: This is a prefabricated steel structure with a square plan measuring 5' x 5' and a slab-on-grade foundation.

II.a.iii. Fuel Farm Catwalks, 1960

Original Plans: Galvanized steel stairs and steel grate catwalks provide access to the top of fuel tanks one through eight in the Fuel Tank Farm. The catwalk is 3' wide x 120' long. It features handrails with a top height of 29" above the top of the steel grating; there is no toe plate. The catwalk that accesses tanks nine through fifteen is approximately 3' wide x 110' long and has galvanized steel grating with galvanized steel handrails 42" tall. Five 8' x 3' access platforms with aluminum framing and grating and 42"-tall steel handrails on each side provide access to the tank fill valves. A timber-framed catwalk connects the two sections of galvanized steel catwalks. The timber-framed catwalk is approximately 80' long and has 29"-tall, timber-framed handrails consisting of wood posts and rails.

II.a.iv. Fuel Tank Containment Area, 1984

Original Plans: The original tank farm containment area has a 4" slab-on-grade reinforced concrete floor that is approximately 10,800 square feet. The perimeter of this tank farm has 6" x 6' walls with 2' x 10" strip footings that are buried 4' below grade. The total length of the perimeter walls is 470'. The tanks are supported on concrete saddles that are approximately 1' x 5.5' with 1'-3" x 8'-6" concrete footings. There are approximately 586' of these saddles in the original tank farm. The total estimated concrete volume in the original containment area is approximately 605 cubic yards.

Alterations and Additions: In 1993, the tank farm containment area was expanded an additional 5,040 square feet. The slab is 6" thick with four 71'-long thickened strips to support welded steel tank saddles. The perimeter walls are 8" x 1'-8" with a 1' x 2' footing. There are approximately 180' of perimeter walls. The total amount of concrete in this newer fuel containment area is 133 cubic yards.

II.a.v. Fuel Transfer Building, 1984

Original Plans: This structure consists of a conventional perimeter foundation wall with strip footing supporting 8"-thick concrete block walls and a metal roof. The building is 8'-8" x 10'-8". The foundation is a 6" slab-on-grade foundation. The building is 8'-0" tall at the rear and 8'-8" at the façade.

II.a.vi. Generator Building, 1991

Original Plans: The Generator Building consists of a conventional poured perimeter foundation wall with strip footing, a slab-on-grade foundation, and reinforced concrete walls made from pre-cast concrete panels. The roof consists of open-webbed steel roof joists and a steel roof deck. Each generator sits on an isolated, elevated slab-on-grade foundation. Tube steel columns support crane rail beams, but no crane was installed. The roofing consists of an ethylene propylene diene monomer (EPDM) membrane over rigid insulation with an adhered walk protection layer over the entire roof. The exterior walls are exposed pre-cast concrete panels with interior wood-stud furring and batt insulation. There are no windows in the building. The doors are hollow metal in hollow metal frames; there is one steel overhead coiling door.

II.a.vii. Hazardous Material Storage Shed, ca. 1990

Original Plans: This structure is a 15'-0" x 20'-8", prefabricated, modular steel structure. It is supported on timber sleepers placed on a gravel pad. The timber sleepers are anchored at each end to a reinforced concrete beam. The door is accessed via a 28" x 44" galvanized steel grated landing and a galvanized steel stairway connected to the landing. The building features a roll-up door for freight access.

II.a.viii. Signal and Barracks Building, 1949

Original Plans: The Signal and Barracks Building is the largest building at LORSTA Attu; it is approximately 29,024 gross square feet. The building was originally constructed by the U.S. Navy in 1949 as an aerological station. In 1957, it was decommissioned as such, and in 1961 the USCG began using the building for LORAN-A and LORAN-C operations.

It consists of three stories and a basement. The basement includes the barracks, showers, fitness rooms, a laundry room, a wood shop, mechanical and electrical equipment, a timer room, storage space, and offices. The first floor contains the mess hall, galley, storage space, commander's quarters, offices, exchange, more barracks, sick bay and toilet, vehicle storage bays, a boiler room, and parts storage. The second floor contains even more barracks and a recreation deck; the third level contains the ham deck which serves as an outdoor recreation area.

The building consists of a conventional reinforced concrete foundation with perimeter foundation walls with strip footings and internal spread footings and slab-on-grade floors at the basement level. Structural reinforced concrete beams, walls, and slabs form the first, second, and third floors. The roof deck is a concrete slab supported by reinforced concrete beams and columns. The lateral load-resisting system consists of reinforced concrete slab diaphragms and shear walls.

The snow blower garage was added later. It has a slab-on-grade floor, timber-framed walls with plywood sheathing, and a roof system consisting of wood chord trusses with steel webs and a plywood roof deck. A timber-framed wall on the south side of the garage and the garage bay concrete wall on the north side of the garage support the roof trusses.

The paint storage shed was also added. It consists of a concrete slab-on-grade floor, timber-framed walls supporting timber rafters, and a plywood deck. The timber walls consist of 2" x 4" studs at 16" on-center and plywood sheathing. The roof over the paint storage shed is un-insulated plywood deck with roll tar roofing.

In the original generator room, there is an overhead crane with a manual chain-operated hoist. The crane has double bridge girders and rail beams on each side of the room. Corbels off the concrete columns support the rail beams.

Roofing over the major portion of the building consists of modified bitumen roof membrane on plywood substrate over wood furring and insulation. The roof over the basement floor vestibules – excluding the stairway, the paint storage shed, and the kitchen storage shed – consists of un-insulated plywood deck with roll tar roofing.

The exterior walls for the major portion of the building – including the stair vestibules – consist of painted concrete. A variety of other substrates occur in smaller areas as follows: the basement floor vestibules and kitchen storage are un-insulated walls with painted plywood siding; the rec-deck vestibule and ham deck vestibule are insulated walls with painted plywood siding. The windows are aluminum-insulated with storm sashes. The doors are hollow metal in hollow metal frames.

Alterations and Additions: According to the *USCG Door III Site Survey* (USCG 1959), several renovations were to have been completed circa 1958 when the USCG converted the building to LORAN purposes. Renovations are also documented as having been completed in 1984 and 2003. In 1984, the snow blower garage and paint shed were added.

Two arctic entries were added to the basement entrances of the building. These consist of concrete slab-on-grade floors, 2" x 4" stud walls constructed on the edges of the slabs, and 2" x 4" rafters with plywood roof sheathing.

The incinerator room was also added to the main building after original construction. The structure consists of a slab-on-grade floor, tube steel columns supporting steel roof beams, light-gauge steel roof joists, a metal roof deck, and metal siding walls. The roof on the incinerator addition is a standing seam metal roof.

II.a.ix. Sewage Treatment Plant, 1960

Original Plans: The Sewage Treatment Plant is a 288-square-foot structure consisting of a slab foundation that is at exterior grade for one-quarter of the building, and recessed 7'-8" below exterior grade for the remaining three-quarters of the building. This recessed area has reinforced concrete retaining walls on each side up to the level of the exterior grade. Above the exterior grade, the walls are

timber stud walls with plywood sheathing on both sides of the studs. The walls support timber roof trusses and plywood roof sheathing. The lateral load-resisting system includes the roof deck diaphragm and plywood shear walls.

The roofing over the major portion of the building consists of modified bitumen roof membrane on plywood substrate. The roof is not insulated. There are no windows in this building. The door is hollow metal with a hollow metal frame.

II.a.x. Water Tank, 1960

Original Plans: The structure containing the three below-grade water tanks consists of a reinforced concrete floor, reinforced concrete walls, and reinforced concrete roof. It is 57'-0" x 27'-4" with 8'-8" x 8"-thick retaining walls. The floor slab varies in thickness from 6" to 9". The roof is an 8"-thick concrete slab. Two 10"-thick walls divide the length into three 18' x 26' chambers.

II.a.xi. Transmitter Building, 1991

Original Plans: The newer Transmitter Building is a 3,851-square-foot structure consisting of a conventional reinforced concrete spread footing foundation with perimeter foundation walls with strip footings and internal column spread footings. Concrete walls made from interconnected pre-cast concrete panels and tube steel columns support steel roof beams that support open-web steel roof joists and a steel roof deck. Pre-cast wall panels are welded together and to the foundation at cast imbeds.

The lateral load-resisting system consists of the metal deck roof diaphragm and shear walls made of the pre-cast wall panels. The roofing consists of EPDM membrane over rigid insulation with an adhered walk protection layer over the entire roof. The exterior walls are exposed pre-cast concrete panels with interior plywood sheathed wood-stud furring and batt insulation. There are no windows. The doors are hollow metal in hollow metal frames.

II.a.xii. Transmitter Building, "Old", 1960

Original Plans: The 1,922-gross-square-foot building consists of a conventional spread footing foundation with perimeter foundations walls with strip footings, a slab-on-grade floor, cast-in-place reinforced concrete walls, a concrete slab roof, and concrete roof beams. The lateral load-resisting system consists of the roof slab diaphragm and the concrete shear walls.

The roofing over the major portion of the building consists of modified bitumen roof membrane on what is assumed to be plywood substrate over wood furring and insulation. The windows are double-hung wood with un-insulated glass. The doors are hollow metal in hollow metal frames.

Alterations and Additions: This building was abandoned in 1995 for the newer Transmitter Building.

II.a.xiii. Warehouse, ca. 1943

Original Plans: The original Warehouse is 12,321 square feet. It consists of a foundation system of perimeter and internal timber pony walls supported by timber sills bearing on the gravel, and timber strip footings beneath the interior timber

columns. The pony walls are parallel with the building ridge and are approximately 10' on-center. The pony walls are cross-braced at approximately 10' on-center.

The pony walls support timber floor joists and timber floor decking. The sidewalls consist of approximately 14'-tall timber stud walls that support rafters. The rafters are spaced approximately 21" on-center and span between the sidewalls and the internal beams at posts parallel to and approximately 12' from the sidewalls.

Trusses spaced at approximately 42" on-center span the beam lines at approximately 36'. The trusses are made of 3x timber framing with bolted connections. The beams consist of triple 2" x 14" timbers and span approximately 14'-4".

At the posts, frames are created from the roof trusses, double-stud columns at the external walls, a strut between the top of the external walls and the posts, double rafters at the post, diagonal bracing between the mid height of the wall and the mid span of the rafter, and diagonal bracing from the underside of the strut at the post to the quarter point of the roof trusses. The frame members are connected by bolted joints. Between the double-stud columns at the exterior walls, alternate wall studs and aligning rafters are braced with diagonal bracing between the mid height of the wall studs and mid span of the rafters. This bracing is not present in some locations that are believed to be former openings with recently-replaced studs.

The sidewalls once contained windows and doors that led to loading docks on each side of the Warehouse. The loading docks have been demolished and the windows and doors framed-in. End walls consist of timber studs with a plate at approximately 14' above the floor deck. The east wall is framed for an overhead door. The west wall has no door openings.

The roof sheathing consists of straight-sheathed timber decking. The sidewalls are sheathed with a combination of plywood and diagonal timber. This sheathing, the floor decking, the foundation cross-bracing, and the frames at the columns comprise the lateral load-resisting system of the building. The roofing consists of corrugated metal roof with exposed fasteners. Plywood siding clads the exterior. There are no windows. There are two doors; one is hollow metal with a hollow metal frame, and the other is site-built of a wood frame and plywood. There is one large vehicle door opening for an overhead coiling door. The door is present onsite but was never installed.

Alterations and Additions: Renovations were completed in 1969 and 1976. They consisted of removing the loading dock doors along the length of the building and installing translucent fiberglass panels. The panels were removed and the openings framed with wood studs and sheathed with siding in 1976.

II.a.xiv. Water Pump House, 1960

Original Plans: The Water Pump House is a 518-square-foot building with a reinforced concrete vault foundation beneath the building. The vault is approximately 8' deep and has a concrete floor and sidewalls. The vault space below the main level floor is a collection gallery for the auxiliary water supply.

The main level floor is an 11"-thick concrete slab. Above the floor, 8"-thick concrete walls support a 12"-thick concrete roof slab and supporting beams. The roof slab has a single direction slope. A single gable, timber-framed roof was constructed above the concrete roof slab. The roof is comprised of 2' x 6' rafters at 2' on-center and plywood sheathing.

The roofing consists of asphalt shingles. The gable end walls are enclosed with plywood siding. The exterior walls are exposed cast-in-place concrete. There are no windows in this building. The doors are hollow metal in hollow metal frames.

II.a.xv. Water Treatment Building, 2001

Original Plans: The Water Treatment Building is a timber-framed modular unit supported on timber sleepers on an exterior slab-on-grade foundation. The building is 11'-3" x 8'-3". The floor joists are 2" x 10", laid at 16" on-center, and support a plywood floor. The walls are 2" x 6" studs with 5/8"-thick interior sheathing and plywood exterior sheathing. The roof is a single gable, timber-framed roof with plywood sheathing.

II.a.xvi. 625' Guyed Antenna, 1960

Original Plans: The Antenna or "Tower", now razed, was a 625' tower comprised of galvanized steel structural members (legs, girts, and diagonals) anchored by guy wires. The tower featured a ladder, safety rail, and lighting system; it was painted entirely in orange and white aviation warning paint. The base of the tower consisted of an approximately 10' x 10' reinforced concrete foundation that was 9' thick. The foundation supported a fiberglass rod insulator, from which the tower rose. It was connected to the Transmitter Building by the signal feed line.

Alterations and Additions: The tower was demolished on August 27, 2010.

III. Site Description (USCG 2005)

LORSTA Attu is located on the southeast side of Attu Island overlooking Massacre Bay, 3,000' northwest of Point Barbara. By air, the station is accessed from the runway by 0.2 miles of a one-lane, asphalt-surfaced roadway. By ship, it is accessed using the beach landing. When occupied, there was minimal security at the site because of the station's remoteness and limited accessibility.

To function in such a remote location, the station had to be self-sustaining and the facilities had to be built to withstand a harsh environment. As a result, the buildings were constructed to form an easily-accessible cluster approximately 800' from shoreline. The Signal and Barracks Building housed the crew and the operations, and large areas dedicated to fuel storage and secondary buildings for treating water and processing waste were built around it.

The Signal and Barracks Building is a sprawling three-story structure with the longest dimension (central corridor) positioned in a north-south orientation; three wings extend from the central corridor. The mess deck/galley wing extends from the central corridor to the west and is approximately 70' from the north end of the building. Approximately 140' from the north end of the building, the barracks wing extends east of the central corridor. At the south end of the building, the garage/maintenance bays extend east of the central corridor, and the boiler room and old generator room (now a parts room) extend to the west of the central corridor. Attached to the west end of the old generator room is the newer Generator Building. The incinerator is in a shed on the south side of the old generator room. The snow blower garage is located at the southeast corner of the building.

The fire protection tanks (two 25,000-gallon for fire protection purposes), water storage tanks, and Water Treatment Building are located west of the garage/maintenance bays and boiler room wings.

The newer Transmitter Building and old Transmitter Building are approximately 1,600' south of the Signal and Barracks Building and are accessed via the asphalt-surfaced Transmitter Road.

The Sewage Treatment Plant is located along the gravel Warehouse Road approximately 250' northeast of the Signal and Barracks Building's north end. Warehouse Road connects the warehouse to the Signal and Barracks Building. The warehouse is approximately 200' from the beach and 1,200' northeast of the Signal and Barracks Building. The warehouse is oriented with the longest building dimension in a southeast-northwest orientation.

The Fuel Tank Farm is located approximately 120' southeast of the Signal and Barracks Building and contains fifteen fuel tanks. A fuel oil fill pipeline runs from the barge beach access to the Fuel Tank Farm. The beach access, where barges deliver freight and fuel, is approximately 1,000' east northeast of the Signal and Barracks Building.

There is a Hazardous Materials Storage Shed, a Fuel Transfer Building, and a Flammable Materials Storage Shed located north of the Fuel Tank Farm and east of the Signal and Barracks Building's garage/maintenance bays wing.

The operational, 6,000'-long, North-South runway is located approximately 1,050' west of the Signal and Barracks Building and is connected to the building by means of Runway Road. In the event that this runway is being serviced, LORAN Station Attu also has the 6,000'-long asphalt-surfaced East-West runway.

A Fire Cart Garage and Terminal Building and an aircraft-parking apron with tie-downs are located on the east side of the North-South runway, approximately 2,100' from the north end of the runway.

The Water Pump House is located approximately 1,050' southwest of the Signal and Barracks Building, approximately 150' from the North-South runway centerline, and 200' from the centerline of the Peaceful River.

There are numerous un-maintained roadways and four-wheeler trails connecting the facilities. There are also abandoned taxiways, piers, and U.S. Navy buildings, and three unexploded ordnance zones in the area. The LORAN-A buildings at Casco Cove are still extant, although in severe disrepair.

Attu Island is a National Historic Landmark commemorating the Battle of Attu. Recorded and unrecorded archeological artifacts from this period and earlier are scattered about the island, including some from the Aleut settlement at Chichagof Harbor, which the Japanese destroyed during the war (National Register of Historic Places 1985).

IV. Reference List

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NATIONAL REGISTER OF HISTORIC PLACES PHOTOGRAPH LOG
(COLOR TRANSPARENCIES CONTACT SHEETS)**

HISTORIC AMERICAN BUILDINGS SURVEY

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U.S. COAST GUARD LORSTA ATTU
Attu Island
Aleutians West Census Area
Alaska

HABS AK-232

INDEX TO COLOR TRANSPARENCIES

Casey Martin, Photographer, July 2010

Photographic documentation was conducted according to the National Register of Historic Places (NRHP) standards, per the stipulations in the Programmatic Agreement.

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7/27/2010	1	Station - Southeast Elevation
7/27/2010	2	Station - Southeast Elevation 2
7/27/2010	3	Station - Northeast Elevation
7/27/2010	4	Station - Northwest Elevation
7/27/2010	5	Station - Southwest Elevation
7/27/2010	6	Station - Exterior Perspective 1
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7/27/2010	12	Station - Exterior Perspective 7
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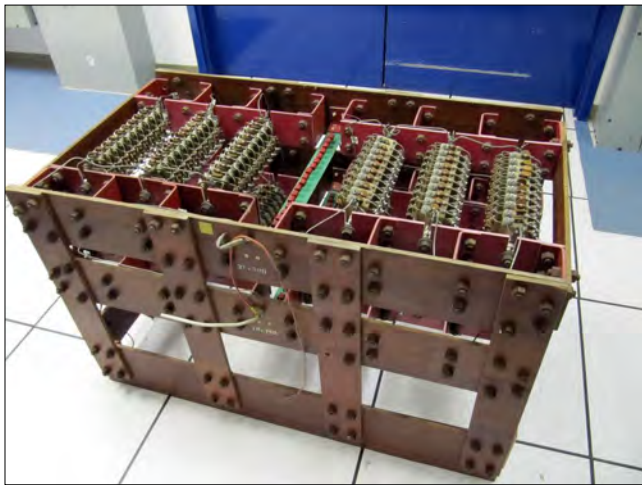
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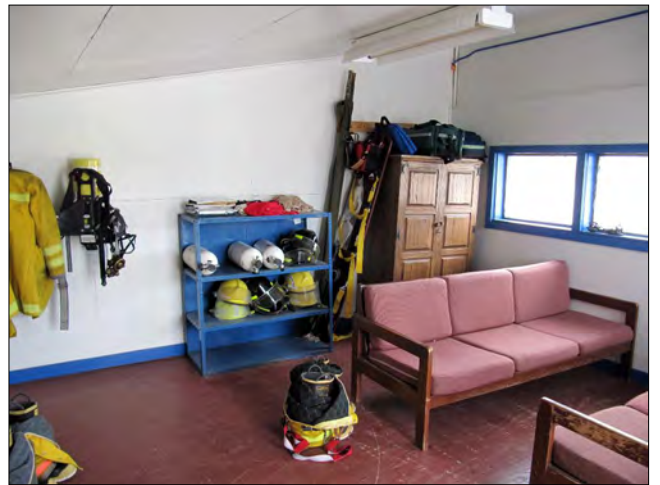
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ALASKA BUILDING INVENTORY FORMS

Alaska Building Inventory Form

AHRS: ATU-260 Associated District: Attu

Historic Name: 625-foot Guyed Antenna	Other Name: N/A
Building Address: Attu Island, AK	City: Attu
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747	
USGS Quad Name and Map Sheet: Attu C-3	Section: s084s264w
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041	UTM: Zone 59N Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Communications Facility	2. Antenna	3.	4.
Current Function and Sub-function:			
1. Communications Facility	2. Antenna	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1958	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input type="checkbox"/> Site <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. N/A 2.	
Architectural Style: Utilitarian		Building Type: Structure	

Number of Ancillary Structures: 0		Plan: N/A	Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete 2. Galvanized Steel		Roof Materials: 1. N/A 2.	Exterior Wall Materials: 1. Galvanized Steel 2.	Other Materials: 1. Copper 2.
Architectural Description (Include setting & outbuildings):			Statement of Significance:	
<p>The antenna or "tower" was a 625' tower comprised of galvanized steel structural members (legs, girts and diagonals) anchored by guy wires (including some copper). The tower featured a ladder, safety rail, and lighting system, and was entirely painted in orange and white aviation warning paint. The base of the tower consisted of a reinforced concrete foundation, approximately 10' x 10', and 9' tall) with fiberglass rod insulator out of which the tower rises. It is connected to the transmitter building by the signal feed line. The tower was demolished on August 27, 2010.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>	

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-251

Associated District:

Attu

Historic Name: Fire Cart Garage and Terminal Building		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Eastings 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Air-related	2. Terminal/Storage	3.	4.
Current Function and Sub-function:			
1. Air-related	2. Terminal/Storage	3.	4.
Significant Person(s):		Significant Dates	
1.	2.	1. 1984 (date unknown) - Renovation plan for building completed	2. 1987 (date unknown) - As-built drawings completed for building renovation
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1960	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. Unknown if alteration/renovation was completed	2.	3.	4.
Resource Type <input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. 1 2.	
Architectural Style: Utilitarian		Building Type: Warehouse	

Number of Ancillary Structures: 0		Plan: Rectangular		Cultural Affiliation: US Government	
Foundation Materials:		Roof Materials:		Exterior Wall Materials:	
1. Reinforced concrete		1. Plywood		1. Plywood	
2.		2. Corrugated metal		2.	
Architectural Description (Include setting & outbuildings):			Statement of Significance:		
<p>The fire cart garage and terminal building serves as both a passenger waiting area at the Attu runway and fire vehicle response area. It is a one-story, rectangular, 430-square-foot building with timber-framed plywood walls. The foundation is concrete slab; the roof is corrugated metal above a plywood-sheathed slab. The building features wood-framed windows. The terminal area is accessed by a single, hollow metal door (no interior doors are present within the waiting area). The fire cart garage is accessed by a single, steel-sectioned mechanical (manual-operated) rollup door.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-253

Associated District:

Attu

Historic Name: Flammable Materials Storage Shed		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Industrial Storage	3.	4.
Current Function and Sub-function:			
1. Industry	2. Industrial Storage	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: Unknown	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type		Stories	
<input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		1. 1 2.	
Architectural Style: Utilitarian		Building Type: Warehouse	

Number of Ancillary Structures: 0		Plan: Square		Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete 2.		Roof Materials: 1. Steel 2.		Exterior Wall Materials: 1. Steel 2.	
				Other Materials: 1. N/A 2.	
Architectural Description (Include setting & outbuildings): This structure is a free-standing, pre-fabricated steel structure that measures 5' x 5'. A slab-on-grade supports this structure, which houses flammable liquids.			Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRIS: ATU-252

Associated District:

Attu

Historic Name: Fuel Farm Catwalks		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2.	3.	4.
Current Function and Sub-function:			
1. Industry	2.	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1960	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input type="checkbox"/> Site <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. N/A 2.	
Architectural Style: N/A		Building Type: Utilitarian	

Number of Ancillary Structures: 0		Plan: N/A	Cultural Affiliation: US Government	
Foundation Materials: 1. Galvanized steel 2.		Roof Materials: 1. N/A 2.	Exterior Wall Materials: 1. N/A 2.	Other Materials: 1. N/A 2.
Architectural Description (Include setting & outbuildings):			Statement of Significance:	
<p>Galvanized steel access stairs and steel grate catwalks provide access to the top of the Tanks 1 to 8 in the fuel tank farm. This older catwalk, built in 1960, is 3' wide; approximately 120' long. It has handrails with a top height that is only 29" above the top of the steel grating. The handrails have no toe plate. These catwalks have steel with a galvanized coating that is near or past the end of its effective life. The catwalk access stairs land within the containment area.</p> <p>The catwalk accessing Tanks 9 to 15 is approximately 110' long by 3' wide and has galvanized steel grating and galvanized steel handrails. The handrails are 42" high on each side. Five 8' long by 3' wide access platforms with aluminum framing, aluminum grating, and steel with 42" high handrails on each side, provide access to fill valves on the newest five tanks.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>	

<p>A timber-framed catwalk connects the two sections of galvanized steel catwalks. The timber catwalk, approximately 80 LF, also has 29-inch high, timber -framed handrails on each side. The handrails consist of 2x posts and rails.</p>		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>		<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>	
		<p>Date: 12/2/2010</p>	
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-252

Associated District:

Attu

Historic Name: Fuel Tank Containment Area		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Fuel Tank	3.	4.
Current Function and Sub-function:			
1. Industry	2. Fuel Tank	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1984	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. 1993	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input checked="" type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. N/A 2.	
Architectural Style: Utilitarian		Building Type: Storage	

Number of Ancillary Structures: 0		Plan: L-shaped with rectangular addition		Cultural Affiliation: US Government	
Foundation Materials:		Roof Materials:		Exterior Wall Materials:	
1. Concrete		1. N/A		1. Concrete	
2.		2.		2. N/A	
Architectural Description (Include setting & outbuildings):			Statement of Significance:		
<p>The original tank farm containment was constructed in 1984. It has a 4" slab-on-grade with thickened edges. The slab area is approximately 10,800 square feet. The perimeter of this tank farm has walls 6' wide by approximately 6' tall, with 2' x 10" strip footings that are buried 4' below grade. Thus, the top of the walls is approximately 2' above the exterior grade.</p> <p>Tanks are supported on concrete saddles, which are approximately 12" wide and 5.5' tall with 15" thick by 8.5' wide concrete footings. There are approximately 586 linear feet of these saddles in the original tank farm. The total estimated concrete volume in the original containment area is approximately 605 cubic yards of concrete. A spray-on liner is present on the original containment area.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>		

<p>In 1993, the tank farm containment area was expanded an additional 5040 square feet. The slab is 6-inches thick with four 71-foot long thickened strips to support welded steel tank saddles. The perimeter walls are 8-inches thick by 1'-8" tall with a 12" x 2'-0" footing. The total amount of concrete in this newer fuel containment area is 133 cubic yards. The new containment area has no liner.</p>	<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>	<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>	<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>		
<p>Minor Recommendations and Comments Include:</p>		
<p><input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>		
<p>Authorized Signature:</p>	<p>Date:</p>	

Alaska Building Inventory Form

AHRS: ATU-252

Associated District: Attu

Historic Name: Fuel Transfer Building		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Fuel Transfer	3.	4.
Current Function and Sub-function:			
1. Industry	2. Fuel Transfer	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1945	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. 1 2.	
Architectural Style: Utilitarian		Building Type: Warehouse	

Number of Ancillary Structures: 0		Plan: Rectangle		Cultural Affiliation: US Government	
Foundation Materials:		Roof Materials:		Exterior Wall Materials:	
1. Concrete		1. Metal roofing		1. Concrete block	
2.		2.		2.	
Architectural Description (Include setting & outbuildings):			Statement of Significance:		
<p>This structure consists of a conventional perimeter foundation wall with strip footing supporting 8" concrete block walls that support metal roofing. The building is 8'8" x 10'8" (outside measurements). A 6" slab-on-grade is at the floor. The building is 8'0" high at the rear and 8'8" at the front. The building houses fuel piping, fuel valves, and fuel pump.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p>		

	<p>Operation and maintenance of Loran stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some seventy million square miles of coverage. While Loran-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the Loran-C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the Loran-C system, with 82% being domestic and international marine users, 14% civil aviation and 3.8% land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G	
Prepared by: Terri Asendorf	Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None	Date: 12/2/2010
SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)		
Minor Recommendations and Comments Include:		
<input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance		
Authorized Signature:	Date:	

Alaska Building Inventory Form

AHRS: ATU-250

Associated District: Attu

Historic Name: Generator Building		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Generator	3.	4.
Current Function and Sub-function:			
1. Industry	2. Generator	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1.	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1991	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. 1 2.	
Architectural Style: Modern		Building Type: Communications Facility	

Number of Ancillary Structures: 0		Plan: Rectangle		Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete 2.		Roof Materials: 1. EPDM membrane 2. Steel		Exterior Wall Materials: 1. Pre-cast concrete panels 2.	
				Other Materials: 1. Gypsum 2. Plywood	
Architectural Description (Include setting & outbuildings): Roofing consists of EPDM membrane over rigid insulation with an adhered walk protection layer over the entire roof. Exterior walls are exposed pre-cast concrete panels with interior wood-stud furring and batt insulation. There are no windows. Doors are hollow metal in hollow metal frames with one steel overhead coiling door. Partitions are of painted gypsum on wood-stud furring against pre-cast concrete panels or wood studs with painted plywood panels. Floors are painted concrete. Wall finish is painted gypsum wallboard or painted plywood. Ceilings are exposed metal deck except in the entry vestibule where 2" x 4" acoustical panels occur.			Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.		

<p>The structural system of the Generator Building consists of a conventional perimeter foundation wall with strip footing, a slab-on-grade floor with isolated thickened and elevated slabs on grades at generators, reinforced concrete walls made from pre-cast concrete panels with supporting open-webbed-steel roof joists supporting a steel roof deck. Tube steel columns support crane rail beams, but no crane was ever installed. Above the motor control panels, an interior structure appears to be a rain shelter for the electrical equipment below. This structure consists of steel beams supporting metal roofing panels. The beams are supported by steel beam struts and diagonal tie rods secured to the pre-cast wall panels.</p>	<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>	<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>	<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>		
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>		
<p>Authorized Signature:</p>	<p>Date:</p>	

Alaska Building Inventory Form

AHRS: ATU-254

Associated District:

Attu

Historic Name: Hazardous Material Storage Shed		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Storage	3.	4.
Current Function and Sub-function:			
1. Industry	2. Storage	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: Unknown	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type		Stories	
<input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		1. 1 2.	
Architectural Style: Utilitarian		Building Type: Storage	

Number of Ancillary Structures: 0		Plan: Rectangle		Cultural Affiliation: US Government	
Foundation Materials: 1. Timber 2. Concrete		Roof Materials: 1. Steel 2.		Exterior Wall Materials: 1. Steel 2.	
				Other Materials: 1. Gravel 2.	
Architectural Description (Include setting & outbuildings): This structure is a hazardous materials storage shed that measures 15'0" by 20'8". It is a freestanding, pre-fabricated, modular steel structure supported on timber sleepers placed on the gravel pad. The timber sleepers are anchored at each end to a reinforced concrete beam. The man-door is accessed with a galvanized steel grated landing, 28" x 44" and a stairway, connected to the landing, of two galvanized steel stairs treads. There is a roll up door for freight access adjacent to the man-door.			Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>	
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>		
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>		
<p>Authorized Signature:</p>		<p>Date: 12/2/2010</p>

Alaska Building Inventory Form

AHRS: ATU-201 Associated District: Attu

Historic Name: Lower Henderson River Bridge		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Eastings 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Current Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1945	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input type="checkbox"/> Site <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. N/A 2.	
Architectural Style: N/A		Building Type: Bridge	

Number of Ancillary Structures: 0		Plan: Rectangle	Cultural Affiliation: US Government	
Foundation Materials: 1. Timber 2.		Roof Materials: 1. N/A 2.	Exterior Wall Materials: 1. N/A 2.	Other Materials: 1. N/A 2.
Architectural Description (Include setting & outbuildings):		Statement of Significance:		
<p>This bridge is on the beach road, which provides access between the LORAN Station and the Hogsback Road, which is part of the ROF 5-Mile Road, that provides access to the Air Force ROF site and the Japanese war monument.</p> <p>This structure is a 105' long, single lane (approximately 13' wide), multi-span timber bridge. Timber piles support timber pile caps. Timber stringers span across pile caps. Timber bracing, across piles and caps, provides transverse load resistance and stiffness. Timber decking spans across stringers. An additional wear deck has been placed over the original deck. There are no bridge rails. Backwalls are timber planks against piles and cap at abutment.</p> <p>The bridge is not useable as all timber is rotten, one span has collapsed, and there is considerable erosion at the abutments.</p>		<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>		<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>	
		<p>Date: 12/2/2010</p>	
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-247

Associated District:

Attu

Historic Name: Signal and Barracks Building		Other Name: Main Building	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Eastings 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Defense	2. Coast Guard Station	3.	4.
Current Function and Sub-function:			
1. Defense	2. Coast Guard Station	3. Maintenance Shop (wood)	4. Storage
Significant Person(s):		Significant Dates	
1. N/A	2.	1. 1984 - First Renovation	2. 2003 - Second Renovation
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1958	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. 1984	2. 2003	3.	4.
Resource Type		Stories	
<input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		1. 3 2.	
Architectural Style: Modern/International		Building Type: Barracks/Offices	

Number of Ancillary Structures: 0		Plan: Irregular		Cultural Affiliation: US Government	
Foundation Materials: 1. Reinforced concrete 2.		Roof Materials: 1. Metal 2. Modified bitumen 3. Plywood		Exterior Wall Materials: 1. Concrete 2. Metal siding (incinerator addition) 3. Plywood	
				Other Materials: 1. Aluminum insulation (windows) 2. Gypsum (interior partitions) 3. Asbestos board (ext. and int.)	
Architectural Description (Include setting & outbuildings):			Statement of Significance:		
<p>The existing Main building is located roughly 800' east of the north-south runway centerline and 1,100' northwest of the existing/old Transmitter Building. The Main building connects to the existing Boiler and Power Generation Building, making this combined structure the largest footprint of all existing buildings on site. The building's structural system consists of a conventional reinforced concrete foundation with perimeter foundation walls with strip footings and internal spread footings, slab-on-grade floors at the basement level, structural reinforced concrete beams, walls and slabs at the first, second and third Floors, and a concrete roof deck slab supported by reinforced concrete beams and columns. The lateral load-resisting system consists of reinforced concrete slab diaphragms and shear walls. Building additions include a snow blower garage, paint storage shed, arctic basement entries, galley stores (which replaced original incinerator room) and new incinerator room.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-201

Associated District:

Attu

Historic Name: Runway Bridge Peaceful River		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Current Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1960	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input type="checkbox"/> Site <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. N/A 2.	
Architectural Style: N/A		Building Type: Bridge	

Number of Ancillary Structures: 0		Plan: N/A	Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete 2. Steel		Roof Materials: 1. N/A 2.	Exterior Wall Materials: 1. N/A 2.	Other Materials: 1. Timber 2. Rocks
Architectural Description (Include setting & outbuildings):			Statement of Significance:	
<p>The bridge is a 250' wide by 56' long, two-span, reinforced concrete structure with concrete pile caps and steel pipe piles. Pipe piles are 10" diameter at 10' on center. Some of the piles are galvanized and some have welded splices. Pile caps are 30" wide by 30" deep concrete beams that support 30" deep by 5' wide pre-stressed, pre-cast, channel-shaped deck panels. The panels are grouted at the sides to adjacent panels and at mid-span over the cap.</p> <p>Abutments consist of pre-cast concrete panels placed against the steel pipe piles and pile caps. The upper panels are 4' tall and the lower are over 5' tall.</p> <p>Upstream and downstream wing walls are made of creosoted, horizontal 6" x 12" timbers supported by creosoted timber piles. Large rock has been placed in front of the base of the wing walls.</p> <p>Bridge rails consist of 2" x 8" top rails and 2" x 4" side rails at the top of posts. Posts are 6" x 8" timbers extending 26.5" above the deck level.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>	

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRs: ATU-258

Associated District:

Attu

Historic Name: Sewage Treatment Plant		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Eastings 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Sewage treatment	3.	4.
Current Function and Sub-function:			
1. Industry	2. Sewage treatment	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1958	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type		Stories	
<input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		1. 1 2.	
Architectural Style: Utilitarian		Building Type: Warehouse	

Number of Ancillary Structures: 0		Plan: Rectangle		Cultural Affiliation: US Government	
Foundation Materials: 1. Reinforced concrete 2.		Roof Materials: 1. Modified bitumen membrane 2. Plywood substrate		Exterior Wall Materials: 1. Plywood 2. Suspected asbestos	
				Other Materials: 1. Metal doors 2.	
Architectural Description (Include setting & outbuildings):			Statement of Significance:		
<p>The existing sewage treatment plant is a rectangular utility building with reinforced concrete retaining walls on each side up to the level of the exterior grade. Above the exterior grade, timber stud walls have plywood sheathing on both sides of studs. Walls support timber roof trusses and plywood roof sheathing. The lateral load-resisting system includes the roof deck diaphragm and plywood shear walls. Partitions appear to be of painted asbestos board (samples needed to confirm) on wood studs. The door is wood in a wood frame. It is unknown if the doors and frame are insulated. Floor finishes consist of painted concrete. Wall finishes are painted asbestos siding. Ceilings are not provided, as the roof deck and roof trusses are exposed to view.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-201

Associated District:

Attu

Historic Name: Water Tank		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Water Tank	3.	4.
Current Function and Sub-function:			
1. Industry	2. Water Tank	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1960	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input type="checkbox"/> Site <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. N/A 2.	
Architectural Style: N/A		Building Type: Tank	

Number of Ancillary Structures: 0		Plan: Rectangle	Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete 2.		Roof Materials: 1. Concrete 2.	Exterior Wall Materials: 1. Concrete 2.	Other Materials: 1. N/A 2.
Architectural Description (Include setting & outbuildings): The structure of the three below-grade water tanks consists of a reinforced concrete floor, reinforced concrete walls, and a reinforced concrete roof. The structure is 57' by 27'4", outside measurement, with 8'8" high by 8" thick retaining walls. The floor slab varies in thickness from 6" to 9". The roof is a concrete slab, 8" thick. There are two dividing walls ten inches thick that divide the length into three 18' by 26' chambers. Two 12" by 14" concrete beams, which span from end retaining walls across the interior dividing walls, supports the roof.			Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The Loran system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first Loran system (later called "Loran-A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio navigation system on a world-wide basis. Loran-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. It was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available twenty-four hours per day.	

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-249

Associated District: Attu

Historic Name: Transmitter Building		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Communications Facility	3.	4.
Current Function and Sub-function:			
1. Industry	2. Communications Facility	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1991	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. 1 2.	
Architectural Style: Modern		Building Type: Communications Facility	

Number of Ancillary Structures: 0		Plan: Rectangle		Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete 2.		Roof Materials: 1. EPDM membrane 2. Steel		Exterior Wall Materials: 1. Pre-cast concrete panels 2.	
Architectural Description (Include setting & outbuildings):		Statement of Significance:			
<p>The structural system for the Transmitter Building consists of a conventional reinforced concrete spread footing foundation with perimeter foundation walls that have strip footings and internal column spread footings, concrete walls made from interconnected pre-cast concrete panels, tube steel columns supporting steel roof beams, which, in-turn support open-web steel roof joists and a steel roof deck. Pre-cast wall panels are welded together and to the foundation at cast imbeds. The building is 3,851 GSF.</p> <p>Roofing consists of EPDM membrane over rigid insulation with an adhered, walk protection layer over the entire roof. Exterior walls are exposed pre-cast concrete panels with interior plywood sheathed wood stud furring and batt insulation. There are no windows. Doors are hollow metal in hollow metal frames. Transmitter rooms are protected with a halon extinguishing system.</p>		<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>			

<p>Partitions are of painted gypsum on plywood sheathed wood studs. Doors are hollow metal with hollow metal frames. Floor finishes consist of 30" x 30" raised access floor system in the transmitter areas and 12" x 12" VCT or exposed concrete in the remaining areas. Walls are painted gypsum wallboard. Ceilings are exposed metal decking in the mechanical spaces and painted gypsum wallboard or 2" x 4" acoustical panels in the electrical rooms and transmitter rooms.</p>	<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>	<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>	<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>		
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>		
<p>Authorized Signature:</p>	<p>Date:</p>	

Alaska Building Inventory Form

AHRS: ATU-248

Associated District:

Attu

Historic Name: Transmitter Building		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Industry	2. Communications Facility	3.	4.
Current Function and Sub-function:			
1.	2.	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. 1995 - Abandoned	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1960	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories	
Architectural Style: Modern		1. 1 2.	
		Building Type: Communications Facility	

Number of Ancillary Structures: 0		Plan: Rectangle		Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete (spread footing) 2.		Roof Materials: 1. Modified bitumen 2. Plywood		Exterior Wall Materials: 1. Concrete (load bearing) 2.	
				Other Materials: 1. Hollow metal (doors) 2. Asbestos board (walls, ceiling and interior partitions)	
Architectural Description (Include setting & outbuildings): The Old Transmitter Building consists of a conventional spread footing foundation with perimeter foundation walls that have strip footings, a slab-on-grade floor, cast-in-place reinforced concrete walls, a concrete slab roof, and roof beams. The lateral load-resisting system consists of the roof slab diaphragm and the concrete shear walls.			Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-201

Associated District:

Attu

Historic Name: Upper Henderson River Bridge - North		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Current Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1945	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input type="checkbox"/> Site <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. N/A 2.	
Architectural Style: N/A		Building Type: Bridge	

Number of Ancillary Structures: 0		Plan: N/A	Cultural Affiliation: US Government	
Foundation Materials: 1. Timber 2.		Roof Materials: 1. N/A 2.	Exterior Wall Materials: 1. N/A 2.	Other Materials: 1. N/A 2.
Architectural Description (Include setting & outbuildings): <p>This bridge is on the Smith Lake Road, several hundred yards from the Upper Henderson Bridge South. This road provides an alternative means of accessing the Hogsback Road from the LORAN Station. The Hogsback road is part of the ROF 5-Mile Road, which provides access to the Air Force ROF site and the Japanese war monument.</p> <p>This structure is a double-span 28' long single lane (approximately 13.5' wide) timber bridge. Timber piles at abutment and mid-channel support timber pile caps. Stringers span across pile caps. Timber deck spans across stringers. An additional wear deck has been placed over the original deck. Backwalls consist of horizontal timber planks placed across piles and caps. Backwalls are approximately 7' tall. There are no bridge rails.</p> <p>This bridge is in very poor condition and should be condemned; however, is currently in use as other routes to access the Hogsback Road are impassable.</p>			Statement of Significance: <p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>	

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRs: ATU-201

Associated District:

Attu

Historic Name: Upper Henderson River Bridge - South		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Current Function and Sub-function:			
1. Road-related	2. Bridge	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1945	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input type="checkbox"/> Building <input type="checkbox"/> Site <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object		Stories	
Architectural Style: N/A		1. N/A 2.	
		Building Type: Bridge	

Number of Ancillary Structures: 0		Plan: N/A	Cultural Affiliation: US Government	
Foundation Materials: 1. Timber 2.		Roof Materials: 1. N/A 2.	Exterior Wall Materials: 1. N/A 2.	Other Materials: 1. N/A 2.
Architectural Description (Include setting & outbuildings):			Statement of Significance:	
<p>This bridge is on the Smith Lake Road, which provides an alternative means of accessing the Hogsback Road from the LORAN Station. The Hogsback road is part of the ROF 5-Mile Road, which provides access to the Air Force ROF site and the Japanese war monument.</p> <p>This structure is a double span 23.5' long single lane (approximately 13.5' wide) timber bridge. Timber piles at abutment and mid-channel support timber pile caps. Stringers span across pile caps. Timber deck spans across stingers. An additional wear deck has been placed over the original deck. Backwalls consist of horizontal timber planks placed across piles and caps. Backwalls are approximately 7' tall. There are no bridge rails.</p> <p>The bridge is in very poor condition and should be condemned; however, it is currently in use as other routes to access the Hogsback Road are impassable.</p>			<p>Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years.</p> <p>At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.</p>	

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-255

Associated District:

Attu

Historic Name: Warehouse		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Eastings 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Defense	2. Warehouse	3.	4.
Current Function and Sub-function:			
1. Defense	2. Warehouse	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. 1969 - First Renovation	2. 1976 - Second Renovation
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: circa 1943	Date Moved: N/A	Destruction Date: Loading Docks (date unknown)	Reconstruction Date: N/A
Alteration Dates			
1. 1969	2. 1976	3.	4.
Resource Type		Stories	
<input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		1. 1 2.	
Architectural Style: Utilitarian		Building Type: Warehouse	

Number of Ancillary Structures: 0		Plan: Rectangle	Cultural Affiliation: US Government		
Foundation Materials: 1. Timber 2.		Roof Materials: 1. Timber 2. Plywood 3. Corrugated Metal	Exterior Wall Materials: 1. Plywood 2. Suspected asbestos	Other Materials: 1. Metal door (metal frame) 2. Plywood door (plywood frame)	
Architectural Description (Include setting & outbuildings): The existing warehouse building is situated nearly adjacent to the coastline and is located roughly 2,000' east-northeast of the existing north-south runway and the main station building. The building's structural system consists of a perimeter foundation of pony walls and internal timber pony walls supported by timber sills bearing on the gravel and timber strip footings beneath the interior timber columns. Between the double-stud columns at the exterior walls, alternate wall studs and aligning rafters are braced with diagonal bracing between the mid-height of the wall studs and mid-span of the rafters. This bracing is not present in some locations, believed to be locations of windows and recently replaced studs. Side walls once contained windows and doors that led to loading docks on each side of the warehouse. The loading docks have been demolished and the windows and doors framed-in.			Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p> <p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRs: ATU-256

Associated District:

Attu

Historic Name: Water Pump House		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Eastings 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Processing	2. Water Pump House	3.	4.
Current Function and Sub-function:			
1. Processing	2. Water Pump House	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 1958	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. 1 2.	
Architectural Style: Utilitarian		Building Type: Outbuilding; utility	

Number of Ancillary Structures: 0		Plan: Rectangle		Cultural Affiliation: US Government	
Foundation Materials: 1. Reinforced concrete 2.		Roof Materials: 1. Asphalt shingles 2.		Exterior Wall Materials: 1. Concrete 2.	
				Other Materials: 1. Plywood, brick 2. Metal doors	
Architectural Description (Include setting & outbuildings): The Water Pump House is located approximately 1,050' southwest of the Station/Barracks Building, and 150' from the centerline of the runway, on the bank of the Peaceful River. It is a one-story, rectangular, 518-square-foot concrete building with a gable roof. The foundation is concrete slab; the roof is timber-framed above a concrete roof slab. The building does not feature any windows. Doors are hollow metal in hollow metal frames.			Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p>	
		<p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

Alaska Building Inventory Form

AHRS: ATU-257

Associated District: Attu

Historic Name: Water Treatment Building		Other Name: N/A	
Building Address: Attu Island, AK		City: Attu	
Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747			
USGS Quad Name and Map Sheet: Attu C-3	Section:	Township: s084s264w	Range:
GPS Coordinate (NAD-27 Alaska): N 52 50.755 E 173 11.041		UTM: Zone 59N	Easting 5857364 Northing 647082

Historic Associations

Historic Function and Sub-function:			
1. Waterworks	2. Water Treatment	3.	4.
Current Function and Sub-function:			
1. Waterworks	2. Water Treatment	3.	4.
Significant Person(s):		Significant Dates	
1. N/A	2.	1. N/A	2.
Architect, Builder, Contractor, Designer: USCG		Original Owner: USCG	

Architectural Information:

Date of Construction: 2001	Date Moved: N/A	Destruction Date: N/A	Reconstruction Date: N/A
Alteration Dates			
1. N/A	2.	3.	4.
Resource Type <input checked="" type="checkbox"/> Building <input type="checkbox"/> Site <input type="checkbox"/> Structure <input type="checkbox"/> Object		Stories 1. 1 2.	
Architectural Style: Utilitarian		Building Type: Outbuilding; utility	

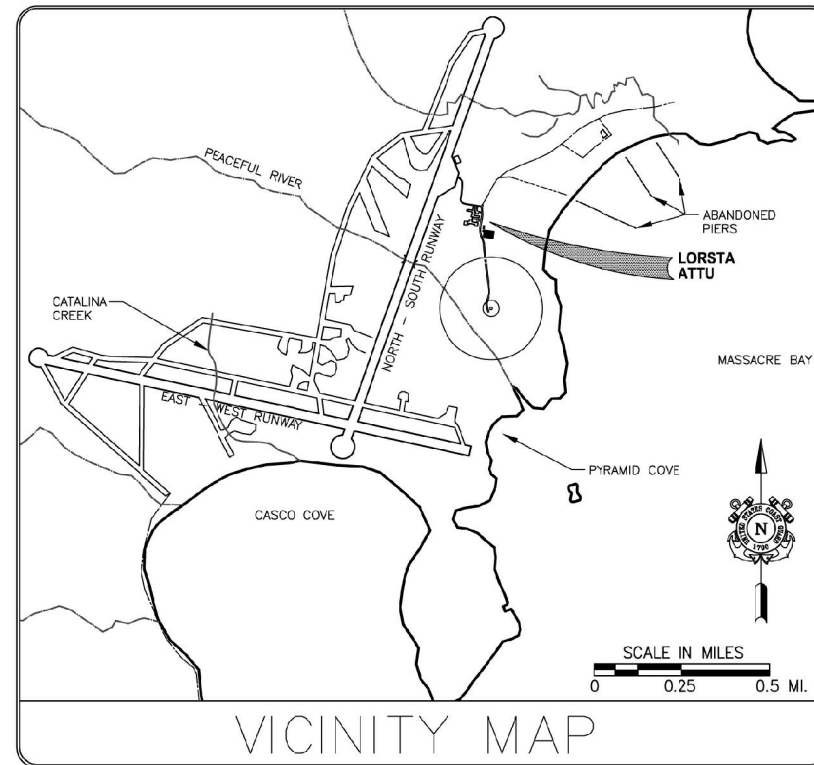
Number of Ancillary Structures: 0		Plan: Rectangle	Cultural Affiliation: US Government	
Foundation Materials: 1. Concrete 2. Timber		Roof Materials: 1. Timber 2. Plywood	Exterior Wall Materials: 1. Timber 2. Concrete	Other Materials: 1. N/A 2.
Architectural Description (Include setting & outbuildings): Built in 2001, the Water Treatment Building is a timber framed modular unit supported on timber sleepers on an exterior slab-on-grade. The building is 11'3" x 8'3" outside measurement. Floor joists are 2" x 10" at 16" on center that support a plywood floor. Walls are 2" x 6" studs with 5/8" thick interior sheathing and T1-11 exterior plywood sheathing. The roof is a single-gable, timber-framed roof with plywood sheathing. This building houses muratic and chlorine tanks, pumps, unit heaters and lights needed to treat water from the pump house prior to pumping it into the water cisterns.		Statement of Significance: Long-Range Navigation (LORAN) was the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ) from approximately 1940 to 2010. (The CCZ is defined as the area seaward of a harbor entrance to 50 nautical miles offshore or the edge of the Continental Shelf, whichever is greater.) The LORAN-C Station at Attu is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation that represented growing State and Federal government involvement and responsibility for safe navigation. The station is also eligible under Criterion Consideration G, as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning or celestial navigation. As State and Federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at the Massachusetts Institute of Technology and generally modeled after the British Gee system. The first LORAN system (later called "LORAN -A") operated at frequencies between 1,850 and 1,950 kHz. In 1947, the International Telecommunications Union Conference allocated the frequency band 90-110 kHz for the development of a further-reaching long distance radio-navigation system on a world-wide basis. LORAN-C operated in this low-frequency as a hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. The system was highly accurate (better than 0.25 nautical mile absolute accuracy in the defined coverage area), all-weather, long-range, and available 24 hours per day.		

		<p>Operation and maintenance of LORAN stations was transferred to the U.S. Coast Guard (USCG) in 1943. By that time, stations were built throughout the U.S., Russia, Canada, Asia, and Europe to eventually provide some 70 million square miles of coverage. While LORAN-A stations were built during WWII and used for war-time activity throughout the Cold War, by the time it was developed in 1957, the LORAN C technology was primarily used as an aid to civilian navigation. After World War II, the USCG shifted its mission from military support to providing navigational assistance to civilians, including mariners and aviators (and some terrestrial users later). In 1991 there were estimated to be more than 572,000 users of the LORAN C system, with 82 percent domestic and international marine users, 14 percent civil aviation and 3.8 percent land users.</p>	
		<p>The Attu LORAN-C Station was constructed in 1958 by the USCG and decommissioned in 2010. The LORAN-C Station at Attu functioned as a dual rated station, meaning that it produced two different sets of timed pulses to provide coverage in a larger area. It served as a secondary station within the North Pacific Chain, where St. Paul was the designated master, and Port Clarence and Kodiak were two additional secondary stations. But Attu was unique in that it was the only U.S. station that also produced signals for a Russian LORAN Chain, known as the Russian-American Chain. The two chains together are known as the Gulf of Alaska Chains. The station consisted of one 625' guyed tower.</p>	
<p>Eligibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p>		<p>Criteria Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input checked="" type="checkbox"/> G</p>	
<p>Prepared by: Terri Asendorf</p>	<p>Reviewed by Professional that meets the following Professional Qualifications: <input type="checkbox"/> Architect <input checked="" type="checkbox"/> Architectural Historian <input type="checkbox"/> Historian <input type="checkbox"/> Historic Architect <input type="checkbox"/> None</p>		<p>Date: 12/2/2010</p>
<p>SHPO Response: <input type="checkbox"/> Eligible (Concur) <input type="checkbox"/> Eligible (Do Not Concur) <input type="checkbox"/> Not Eligible (Concur) <input type="checkbox"/> Not Eligible (Do Not Concur)</p>			
<p>Minor Recommendations and Comments Include: <input type="checkbox"/> Need more information related to: <input type="checkbox"/> Historic Context <input type="checkbox"/> Integrity <input type="checkbox"/> Architectural Description <input type="checkbox"/> Period of Significance</p>			
<p>Authorized Signature:</p>			<p>Date:</p>

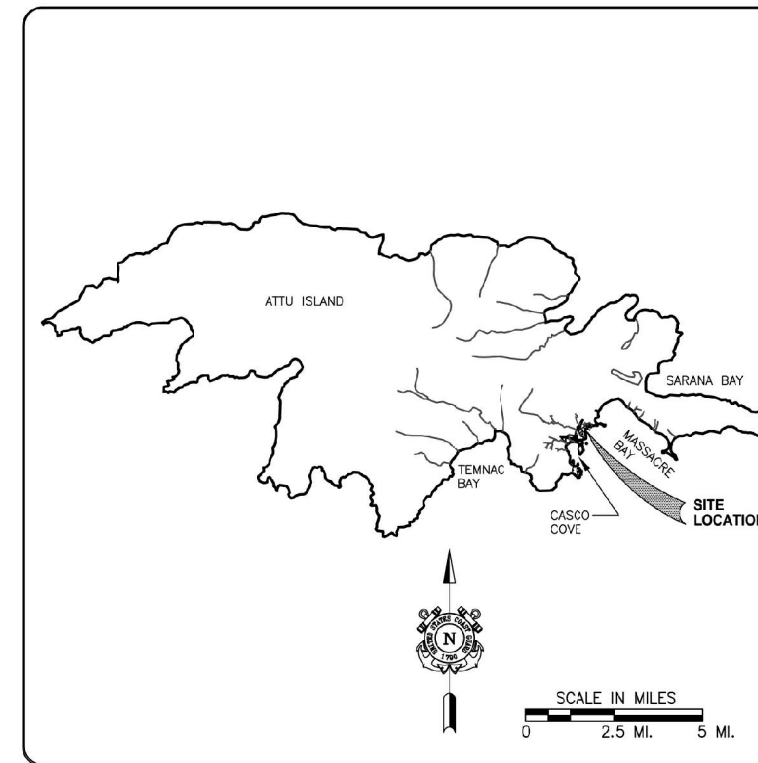
ARCHITECTURAL DRAWINGS

U.S. COAST GUARD CIVIL ENGINEERING UNIT LORSTA ATTU

DRAWING INDEX		
SHEET NO.	DWG. NO.	TITLE
1 OF 17	C1	COVER, VICINITY MAP, DRAWING INDEX
2 OF 17	C2	OVERALL SITE PLAN
3 OF 17	C3	PARTIAL SITE PLAN
4 OF 17	C4	PARTIAL SITE PLAN
5 OF 17	C5	PARTIAL SITE PLAN
6 OF 17	C6	PARTIAL SITE PLAN
7 OF 17	A1	FLOOR PLAN - STATION BUILDING
8 OF 17	A2	FLOOR PLAN - GENERATOR BUILDING
9 OF 17	A3	FLOOR PLAN - TRANSMITTER BUILDING
10 OF 17	A4	FLOOR PLAN - TRANSMITTER BUILDING OLD
11 OF 17	A5	FLOOR PLAN - FIRE CART GARAGE & TERMINAL
12 OF 17	A6	FLOOR PLAN - WELL PUMP BUILDING
13 OF 17	A7	FLOOR PLAN - WAREHOUSE
14 OF 17	A8	FLOOR PLAN - SEWAGE TREATMENT BUILDING
15 OF 17	A9	FLOOR PLAN - WATER TREATMENT BUILDING
16 OF 17	A10	FLOOR PLAN - FUEL GAS BUILDING
17 OF 17	A11	FLOOR PLAN - HAZ MAT BUILDING



ATU = 17
OPFAC = 40198
INSTALLATION = 17030
SITE = 00



ASBUILT



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Incorporated
3220 Hospital Drive Ste 200 Phone: 907.586.2093
Juneau, Alaska 99801 Fax: 907.586.2099

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
JUNEAU



USCG. CEU JUNEAU
709 WEST 9TH STREET, ROOM 817
JUNEAU, ALASKA 99801

ISSUE		
REV. MARK	DATE	DESCRIPTION
REV.1	9/23/05	ASBUILT

A/E PROJECT NO: 042077.01
CAD FILE NAME: S-3674E-C1-ASBUILT.dwg
DESIGNED BY: KEI
DRAWN BY: LRG
EDITED BY: LRG
CHECKED BY: CMG

SCALE: AS INDICATED PLOT SCALE: 1:1

SHEET TITLE

FY 2004 FAC. COND. ASSESSMENT
USCG LORSTA ATTU
ATTU ALASKA
LORSTA CIVIL
COVER, VICINITY MAP, DRAWING INDEX

REVIEWED BY: M.G.	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

KARL H. CALVO, CAPT.
APPROVING OFFICER DATE

PROJECT NUMBER	DRAWING NUMBER
17-J04070	S-3674E

DISCIPLINE/SHT NO	SHEET
C1	1 OF 17



LEGEND

---	TOWER GUYS		BUILDINGS
---	GROUNDING PLANE PERIMETER LIMITS		ROADS
---	RIVERS		ASPHALT SURFACE
---	ROADS CENTERLINE		LANDFILL
---	TELEPHONE LINES	● CB	U.S. COAST GUARD BRASS CAP MONUMENT
---	ELECTRICAL LINES	☒	CATCH BASIN
---	WATER LINE	☐ FD	FLOOR DRAIN
---	SEWER LINE	○ MH	MANHOLE
---	ANTENNA COMMUNICATION LINE		
---	FUEL OIL LINE		
---	GASOLINE LINE		
---	FIRE WATER LINE		

RPFN [REDACTED]
 NAME: L001
 DESCRIPTION: LAND
 SIZE: 800 AC.

RPFN [REDACTED]
 NAME: V06
 DESCRIPTION: RESERVOIR (ABND)
 SIZE: 6 MG.

RPFN [REDACTED]
 NAME: X05
 DESCRIPTION: AIRCRAFT TAXI
 WAYS (ABND)
 SIZE: 254,200 SY.

RPFN [REDACTED]
 NAME: R11
 DESCRIPTION: METALS DUMP
 ROAD
 SIZE: 7,555 SY.

RPFN [REDACTED]
 NAME: R06
 DESCRIPTION: LORAN A ROAD
 SIZE: 23,643 SY.

RPFN [REDACTED]
 NAME: R04
 DESCRIPTION: DISPOSAL ROAD
 SIZE: 1,525 SY.

RPFN [REDACTED]
 NAME: R08
 DESCRIPTION: LOWER HEN RIVER
 BRIDGE
 SIZE: 157 SY.

RPFN [REDACTED]
 NAME: R09
 DESCRIPTION: UPPER HEN RIVER
 BRIDGE SOUTH
 SIZE: 35 SY.

RPFN [REDACTED]
 NAME: R10
 DESCRIPTION: UPPER HEN RIVER
 BRIDGE NORTH
 SIZE: 42 SY.

RPFN [REDACTED]
 NAME: R05
 DESCRIPTION: ROF 5 MILE ROAD
 SIZE: 44,235 SY.

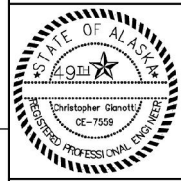
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 NAME: M01
 DESCRIPTION: MONUMENTS &
 MEMORIALS
 SIZE: 4 OF 6 EA.

SITE [REDACTED]
 ATU: 17
 OPFAC: 40187
 INSTALLATION: 17026
 NUMBER: 00
 DESCRIPTION: USCG LORSTA ATTU

1 OVERALL SITE PLAN

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 3220 Hospital Drive Ste 200 Phone: 907.586.2093
 Juneau, Alaska 99801 Fax: 907.586.2099



U. S. COAST GUARD
 CIVIL ENGINEERING UNIT
 JUNEAU



USCG. CEU JUNEAU
 709 WEST 9TH STREET, ROOM 817
 JUNEAU, ALASKA 99801

ISSUE		
MARK	DATE	DESCRIPTION
REV.1	9/23/05	ASBUILT

A/E PROJECT NO: 042077.01
 CAD FILE NAME: S-3674E-C2-ASBUILT.dwg
 DESIGNED BY: KEI
 DRAWN BY: LRG
 EDITED BY: LRG
 CHECKED BY: CMG

SCALE: AS INDICATED PLOT SCALE: 1:1

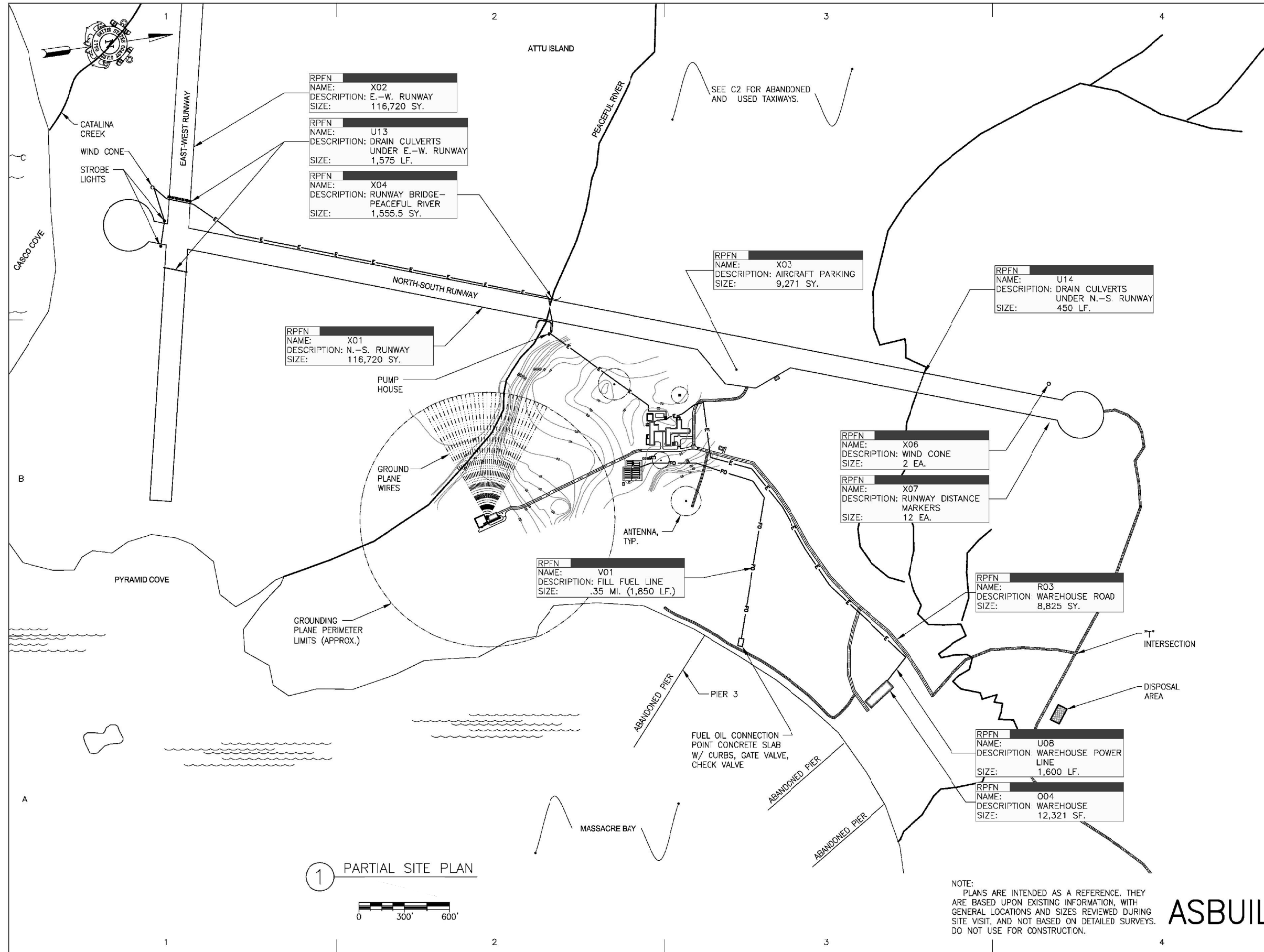
SHEET TITLE
 FY 2004 FAC. COND. ASSESSMENT
 USCG LORSTA ATTU
 ATTU ALASKA
 LORSTA
 CIVIL
 OVERALL SITE PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
KARL H. CALVO, CAPT. APPROVING OFFICER		DATE

PROJECT NUMBER 17-J04070	DRAWING NUMBER S-3674E
DISCIPLINE/SHT NO C2	SHEET 2 OF 17

NOTE:
 PLANS ARE INTENDED AS A REFERENCE. THEY ARE BASED UPON EXISTING INFORMATION, WITH GENERAL LOCATIONS AND SIZES REVIEWED DURING SITE VISIT, AND NOT BASED ON DETAILED SURVEYS. DO NOT USE FOR CONSTRUCTION.

ASBUILT



1 PARTIAL SITE PLAN

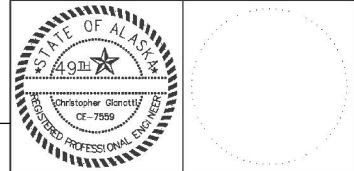


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3220 Hospital Drive Ste 200 Juneau, Alaska 99801 Phone: 907.586.2093 Fax: 907.586.2099



U. S. COAST GUARD CIVIL ENGINEERING UNIT JUNEAU



USCG. CEU JUNEAU
709 WEST 9TH STREET, ROOM 817
JUNEAU, ALASKA 99801

ISSUE		
REV. MARK	DATE	DESCRIPTION
REV. 1	9/23/05	ASBUILT

A/E PROJECT NO: 042077.01
CAD FILE NAME: S-3674E-C3-ASBUILT.dwg
DESIGNED BY: KEJ
DRAWN BY: LRG
EDITED BY: LRG
CHECKED BY: CMG

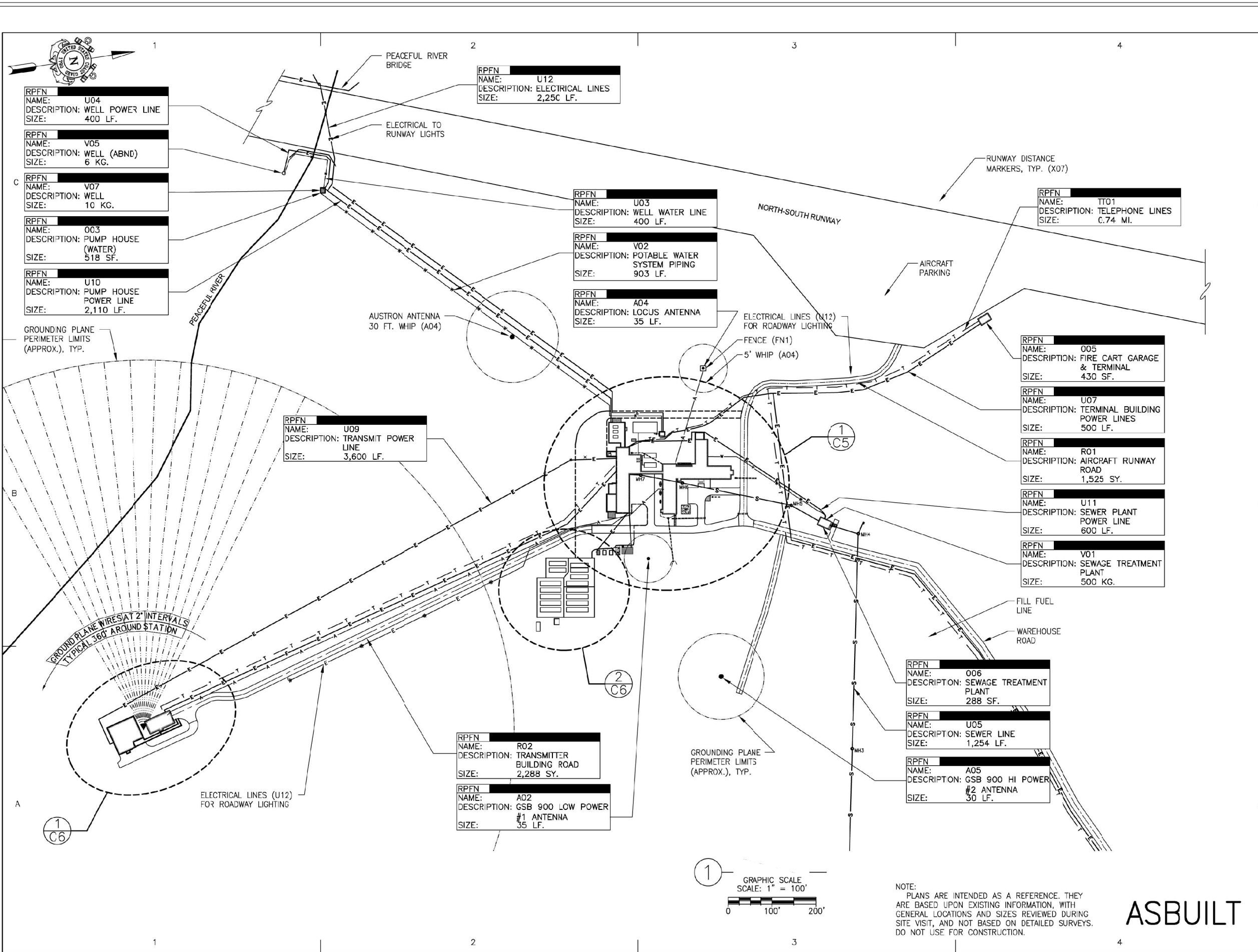
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SHEET TITLE
FY 2004 FAC. COND. ASSESSMENT
USCG LORSTA ATTU
ATTU ALASKA
LORSTA CIVIL
PARTIAL SITE PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

KARL H. CALVO, CAPT.
APPROVING OFFICER DATE

PROJECT NUMBER 17-J04070	DRAWING NUMBER S-3674E
DISCIPLINE/SHT NO C3	SHEET 3 OF 17



- RPFN U04
NAME: U04
DESCRIPTION: WELL POWER LINE
SIZE: 400 LF.
- RPFN V05
NAME: V05
DESCRIPTION: WELL (ABND)
SIZE: 6 KG.
- RPFN V07
NAME: V07
DESCRIPTION: WELL
SIZE: 10 KG.
- RPFN 003
NAME: 003
DESCRIPTION: PUMP HOUSE (WATER)
SIZE: 518 SF.
- RPFN U10
NAME: U10
DESCRIPTION: PUMP HOUSE POWER LINE
SIZE: 2,110 LF.

RPFN U12
NAME: U12
DESCRIPTION: ELECTRICAL LINES
SIZE: 2,250 LF.

RPFN U03
NAME: U03
DESCRIPTION: WELL WATER LINE
SIZE: 400 LF.

RPFN V02
NAME: V02
DESCRIPTION: POTABLE WATER SYSTEM PIPING
SIZE: 903 LF.

RPFN A04
NAME: A04
DESCRIPTION: LOCUS ANTENNA
SIZE: 35 LF.

RPFN U09
NAME: U09
DESCRIPTION: TRANSMIT POWER LINE
SIZE: 3,600 LF.

RPFN R02
NAME: R02
DESCRIPTION: TRANSMITTER BUILDING ROAD
SIZE: 2,288 SF.

RPFN A02
NAME: A02
DESCRIPTION: GSB 900 LOW POWER #1 ANTENNA
SIZE: 35 LF.

RPFN T01
NAME: T01
DESCRIPTION: TELEPHONE LINES
SIZE: 0.74 MI.

RPFN 005
NAME: 005
DESCRIPTION: FIRE CART GARAGE & TERMINAL
SIZE: 430 SF.

RPFN U07
NAME: U07
DESCRIPTION: TERMINAL BUILDING POWER LINES
SIZE: 500 LF.

RPFN R01
NAME: R01
DESCRIPTION: AIRCRAFT RUNWAY ROAD
SIZE: 1,525 SY.

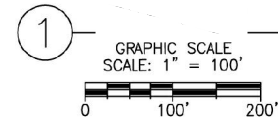
RPFN U11
NAME: U11
DESCRIPTION: SEWER PLANT POWER LINE
SIZE: 600 LF.

RPFN V01
NAME: V01
DESCRIPTION: SEWAGE TREATMENT PLANT
SIZE: 500 KG.

RPFN 006
NAME: 006
DESCRIPTION: SEWAGE TREATMENT PLANT
SIZE: 288 SF.

RPFN U05
NAME: U05
DESCRIPTION: SEWER LINE
SIZE: 1,254 LF.

RPFN A05
NAME: A05
DESCRIPTION: GSB 900 HI POWER #2 ANTENNA
SIZE: 30 LF.

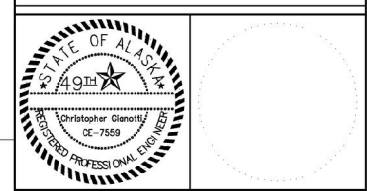


NOTE:
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3220 Hospital Drive Ste 200 Phone: 907.566.2093
Juneau, Alaska 99801 Fax: 907.566.2099



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CIVIL ENGINEERING UNIT
JUNEAU**

USCG. CEU JUNEAU
709 WEST 9TH STREET, ROOM 817
JUNEAU, ALASKA 99801

REV. MARK	DATE	DESCRIPTION
REV.1	9/23/05	ASBUILT

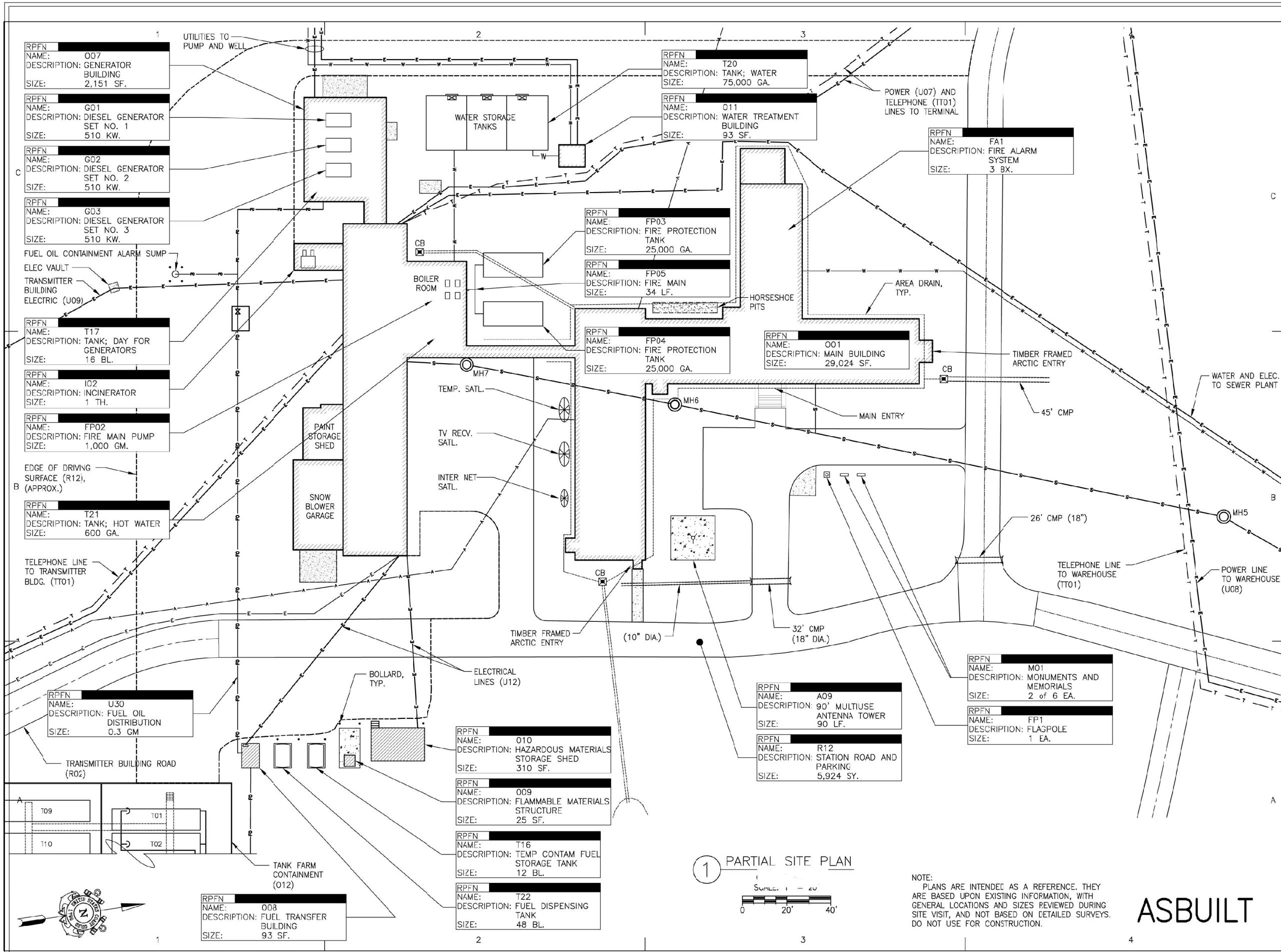
A/E PROJECT NO: 042077.01
CAD FILE NAME: S-3674E-C4-ASBUILT.dwg
DESIGNED BY: KEI
DRAWN BY: LRG
EDITED BY: LRG
CHECKED BY: CMG

SCALE: AS INDICATED PLOT SCALE: 1:1

**FY 2004 FAC. COND. ASSESSMENT
USCG LORSTA ATTU**
ATTU ALASKA
LORSTA CIVIL
PARTIAL SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
MLG	RCD	JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
KARL H. CALVO, CAPT. APPROVING OFFICER		DATE

PROJECT NUMBER	DRAWING NUMBER
17-J04070	S-3674E
DISCIPLINE/SHR NO C4	SHEET 4 OF 17

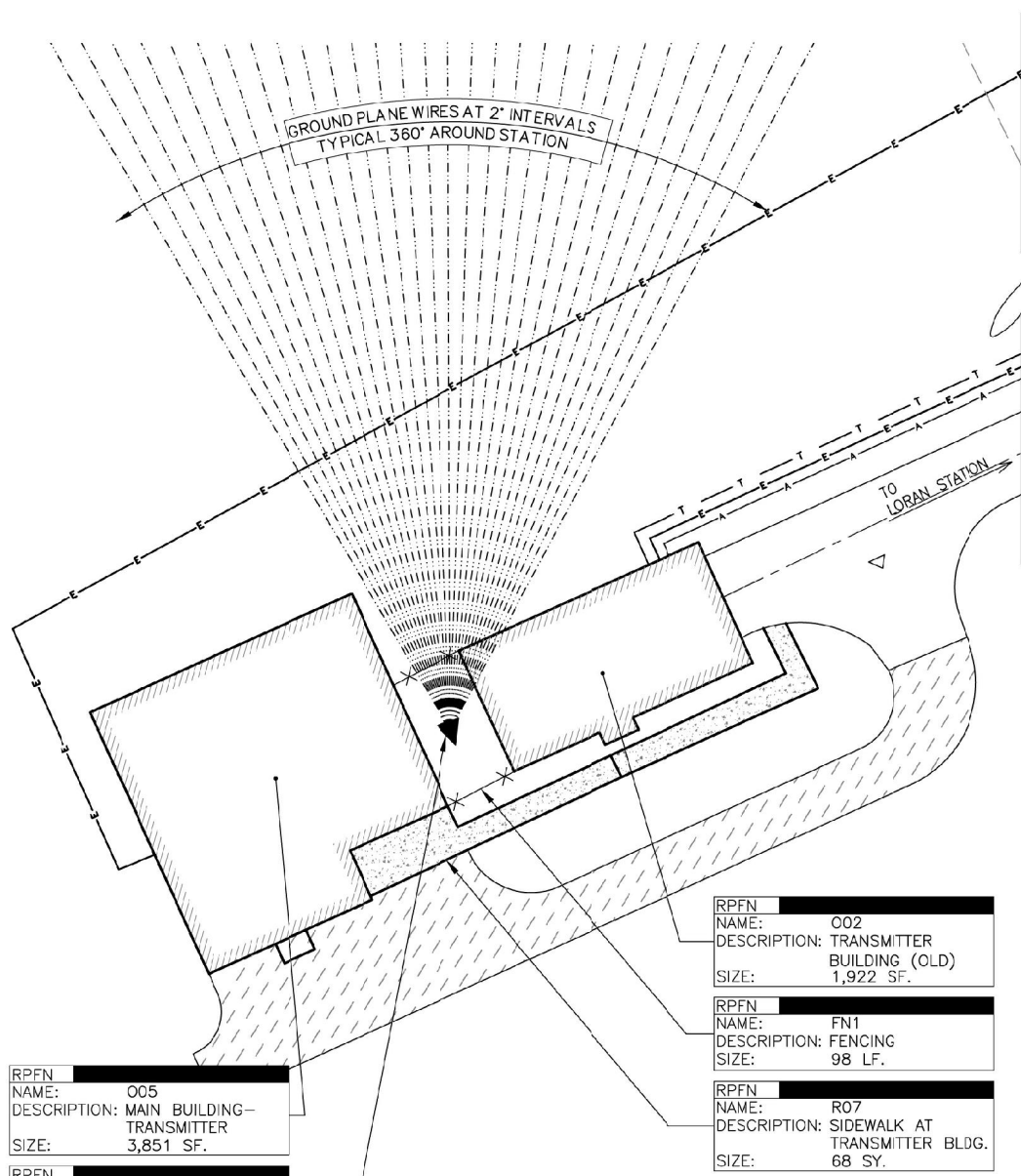


1 PARTIAL SITE PLAN
 SCALE: 1" = 20'
 0 20' 40'

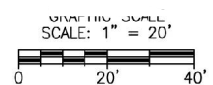
NOTE:
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ASBUILT

CONSULTANTS		
P N D CONSULTING ENGINEERS Incorporated 3220 Hospital Drive Ste 200 Phone: 907.516.2093 Juneau, Alaska 99801 Fax: 907.516.2099		
U. S. COAST GUARD CIVIL ENGINEERING UNIT JUNEAU 		
USCG. CEU JUNEAU 709 WEST 9TH STREET, ROOM 817 JUNEAU, ALASKA 99801		
ISSUE		
REV.1	9/23/05	ASBUILT
MARK		DESCRIPTION
A/E PROJECT NO: 042077.C1 CAD FILE NAME: S-3674E-C5-ASBULT.dwg DESIGNED BY: KEI DRAWN BY: LRG EDITED BY: LRG CHECKED BY: CMG		
SCALE: AS INDICATED PLOT SCALE: 1:1		
SHEET TITLE		
FY 2004 FAC. COND. ASSESSMENT USCG LORSTA ATTU ATTU ALASKA LORSTA CIVIL PARTIAL SITE PLAN		
REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
M.I.G	RCD	JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
KARL H. CALVO, CAPT. APPROVING OFFICER		DATE
PROJECT NUMBER	DRAWING NUMBER	
17-J04070	S-3674E	
DISCIPLINE/SHT NO	SHEET	
C5	5 OF 17	



1 PARTIAL SITE PLAN TRANSMITTER BUILDING



RPFN [REDACTED]
 NAME: O05
 DESCRIPTION: MAIN BUILDING-TRANSMITTER
 SIZE: 3,851 SF.

RPFN [REDACTED]
 NAME: A08
 DESCRIPTION: 625' LORAN TOWER SYSTEM
 SIZE: 625 LF.

RPFN [REDACTED]
 NAME: O02
 DESCRIPTION: TRANSMITTER BUILDING (OLD)
 SIZE: 1,922 SF.

RPFN [REDACTED]
 NAME: FN1
 DESCRIPTION: FENCING
 SIZE: 98 LF.

RPFN [REDACTED]
 NAME: R07
 DESCRIPTION: SIDEWALK AT TRANSMITTER BLDG.
 SIZE: 68 SY.

RPFN [REDACTED]
 NAME: U30
 DESCRIPTION: FUEL OIL DISTRIBUTION
 SIZE: 0.3 GM.

RPFN [REDACTED]
 NAME: U29
 DESCRIPTION: FUEL FARM CATWALKS
 SIZE: 310 LF.

RPFN [REDACTED]
 NAME: O12
 DESCRIPTION: FUEL TANK CONTAINMENT AREA
 SIZE: 0.38 AC.

RPFN [REDACTED]
 NAME: T09
 DESCRIPTION: TANK NO. 9
 SIZE: 595 BL.

RPFN [REDACTED]
 NAME: T10
 DESCRIPTION: TANK NO. 10
 SIZE: 595 BL.

RPFN [REDACTED]
 NAME: T11
 DESCRIPTION: TANK NO. 11
 SIZE: 714 BL.

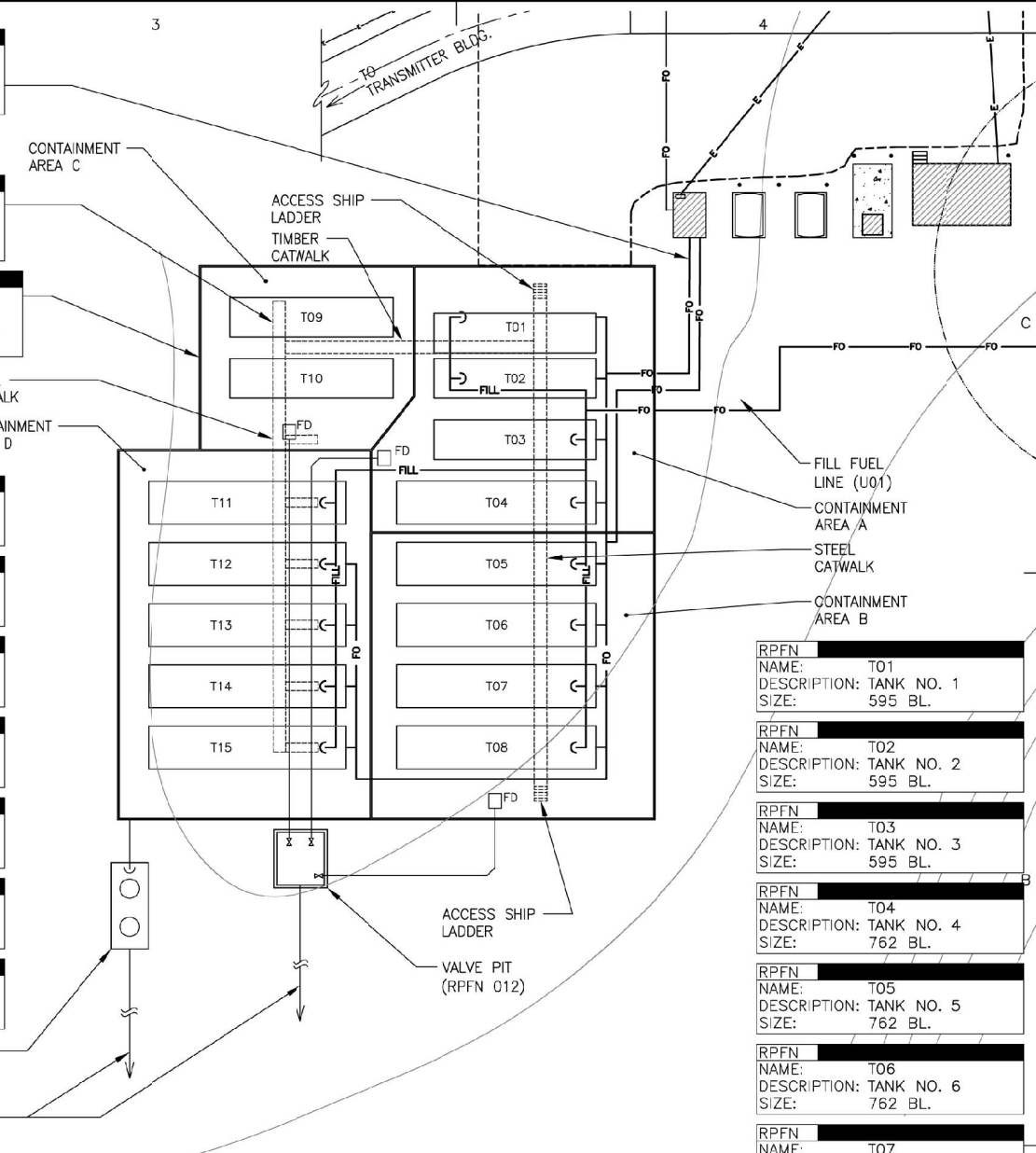
RPFN [REDACTED]
 NAME: T12
 DESCRIPTION: TANK NO. 12
 SIZE: 714 BL.

RPFN [REDACTED]
 NAME: T13
 DESCRIPTION: TANK NO. 13
 SIZE: 714 BL.

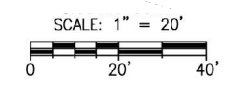
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 NAME: T14
 DESCRIPTION: TANK NO. 14
 SIZE: 714 BL.

RPFN [REDACTED]
 NAME: T15
 DESCRIPTION: TANK NO. 15
 SIZE: 714 BL.

OIL WATER SEPARATOR (RPFN 012)
 DRAIN TO DAYLIGHT



2 PARTIAL SITE PLAN BULK FUEL FARM



RPFN [REDACTED]
 NAME: T01
 DESCRIPTION: TANK NO. 1
 SIZE: 595 BL.

RPFN [REDACTED]
 NAME: T02
 DESCRIPTION: TANK NO. 2
 SIZE: 595 BL.

RPFN [REDACTED]
 NAME: T03
 DESCRIPTION: TANK NO. 3
 SIZE: 595 BL.

RPFN [REDACTED]
 NAME: T04
 DESCRIPTION: TANK NO. 4
 SIZE: 762 BL.

RPFN [REDACTED]
 NAME: T05
 DESCRIPTION: TANK NO. 5
 SIZE: 762 BL.

RPFN [REDACTED]
 NAME: T06
 DESCRIPTION: TANK NO. 6
 SIZE: 762 BL.

RPFN [REDACTED]
 NAME: T07
 DESCRIPTION: TANK NO. 7
 SIZE: 762 BL.

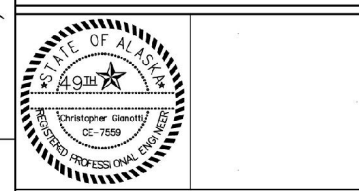
RPFN [REDACTED]
 NAME: T08
 DESCRIPTION: TANK NO. 8
 SIZE: 762 BL.

NOTE:
 PLANS ARE INTENDED AS A REFERENCE. THEY ARE BASED UPON EXISTING INFORMATION, WITH GENERAL LOCATIONS AND SIZES REVIEWED DURING SITE VISIT, AND NOT BASED ON DETAILED SURVEYS. DO NOT USE FOR CONSTRUCTION.

ASBUILT

CONSULTANTS

P N D CONSULTING ENGINEERS
 Incorporated
 3220 Hospital Drive Ste 200 Phone: 907.586.2093
 Juneau, Alaska 99801 Fax: 907.586.2099



U. S. COAST GUARD
 CIVIL ENGINEERING UNIT
 JUNEAU

USCG. CEU JUNEAU
 709 WEST 9TH STREET, ROOM 817
 JUNEAU, ALASKA 99801

ISSUE		
REV.1	DATE	DESCRIPTION
9/23/05	ASBUILT	

A/E PROJECT NO: 042077.01
 CAD FILE NAME: S-3674E-C6-ASBUILT.dwg
 DESIGNED BY: KEI
 DRAWN BY: LRG
 EDITED BY: LRG
 CHECKED BY: CMG

SCALE AS INDICATED PLOT SCALE: 1:1

SHEET TITLE

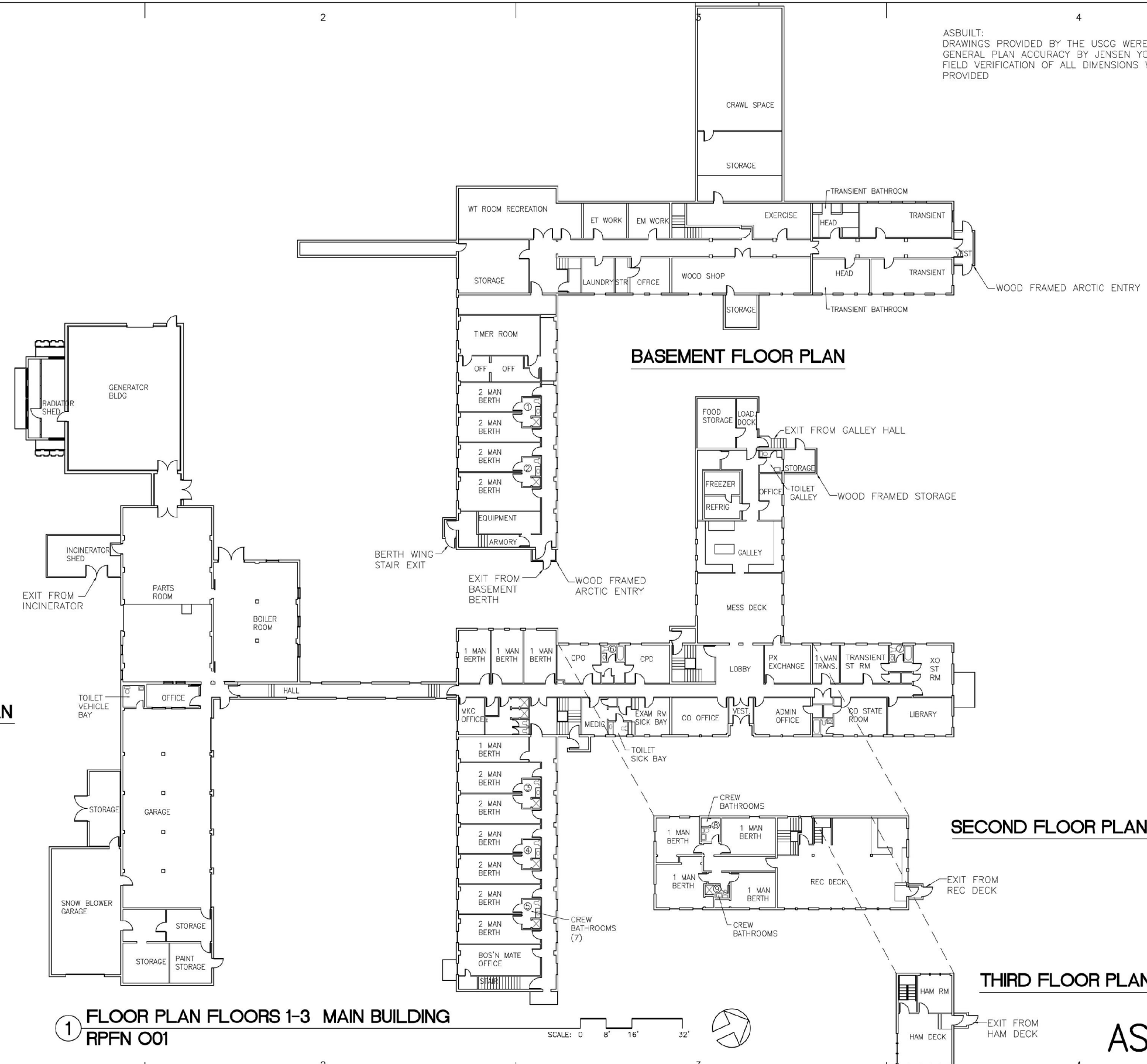
FY 2004 FAC. COND. ASSESSMENT
 USCG LORSTA ATTU

ATTU ALASKA
 LORSTA CIVIL
 PARTIAL SITE PLAN

REVIEWED BY: NLG	REVIEWED BY: ROD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
KARL H. CALVO, CAPT. APPROVING OFFICER		DATE

PROJECT NUMBER	DRAWING NUMBER
17-J04070	S-3674E
DISCIPLINE/SHT NO	SHEET 6 OF 17
C6	

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FIELD VERIFICATION OF ALL DIMENSIONS WAS NOT
PROVIDED



FIRST FLOOR PLAN

BASEMENT FLOOR PLAN

SECOND FLOOR PLAN

THIRD FLOOR PLAN

1 FLOOR PLAN FLOORS 1-3 MAIN BUILDING
RPFN 001

SCALE: 0 8' 16' 32'

ASBUILT

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P N D CONSULTING ENGINEERS
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3120 Hospital Drive Ste 200 Juneau, Alaska 99801 Phone: 907.586.2093 Fax: 907.586.2099

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522 West 10th Street Juneau, Alaska 99801 phone 907-586-1070 fax 907-586-3959 jensenyorbалott.com



U. S. COAST GUARD
CIVIL ENGINEERING UNIT
JUNEAU



USCG, CEU JUNEAU
709 WEST 9TH STREET, ROOM 817
JUNEAU, ALASKA 99801

ISSUE		
MARK	DATE	DESCRIPTION
JL	04/29/05	ASBUILT

A/E PROJECT NO: 0441
CAD FILE NAME: S-3674E-A1-ASBUILT.dwg
DESIGNED BY:
DRAWN BY: LE
EDITED BY: DF
CHECKED BY: JL

SCALE AS INDICATED PLOT SCALE: 1:1

SHEET TITLE
FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU ALASKA
ATTU STATION BUILDING ARCHITECTURE FLOOR PLAN

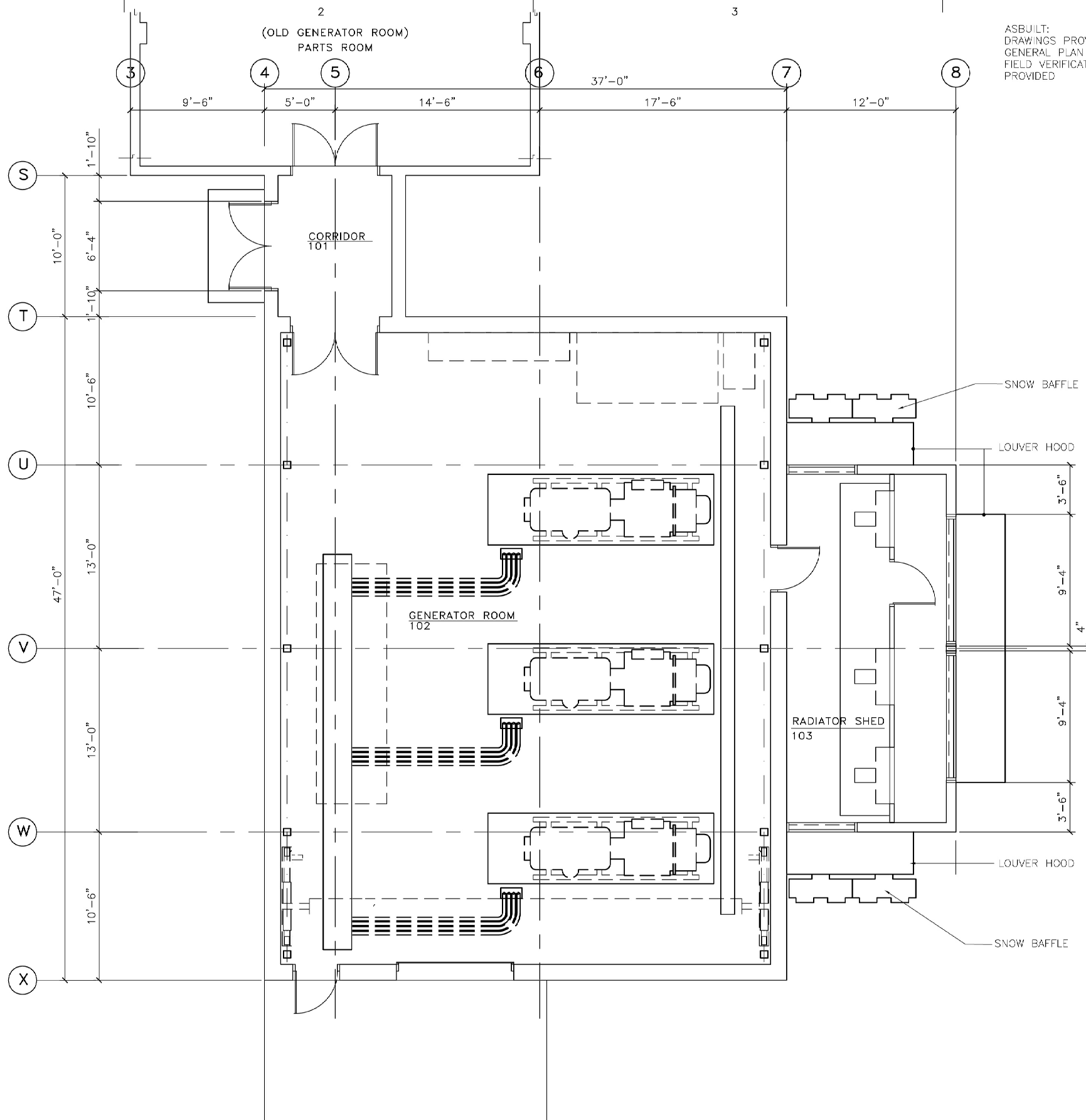
REVIEWED BY: WLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

KARL H. CALVO, CAPT.
APPROVING OFFICER DATE

PROJECT NUMBER 17-J04070	DRAWING NUMBER 3674E
DISCIPLINE/SHT NO A1	SHEET 7 OF 17

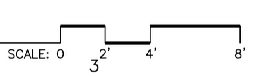
DRAWN BY: USCG
 USCG ALASKA LORAN-C STATIONS RECORDATION
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR
 ATTU STATION
 STATION BUILDING FLOOR PLAN
 ALASKA AK-232
 HISTORIC AMERICAN BUILDINGS SURVEY
 DATE OF DRAWING: 7/07/05

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING



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GENERAL PLAN ACCURACY BY JENSEN YORBA LOTT, INC.
FIELD VERIFICATION OF ALL DIMENSIONS WAS NOT
PROVIDED

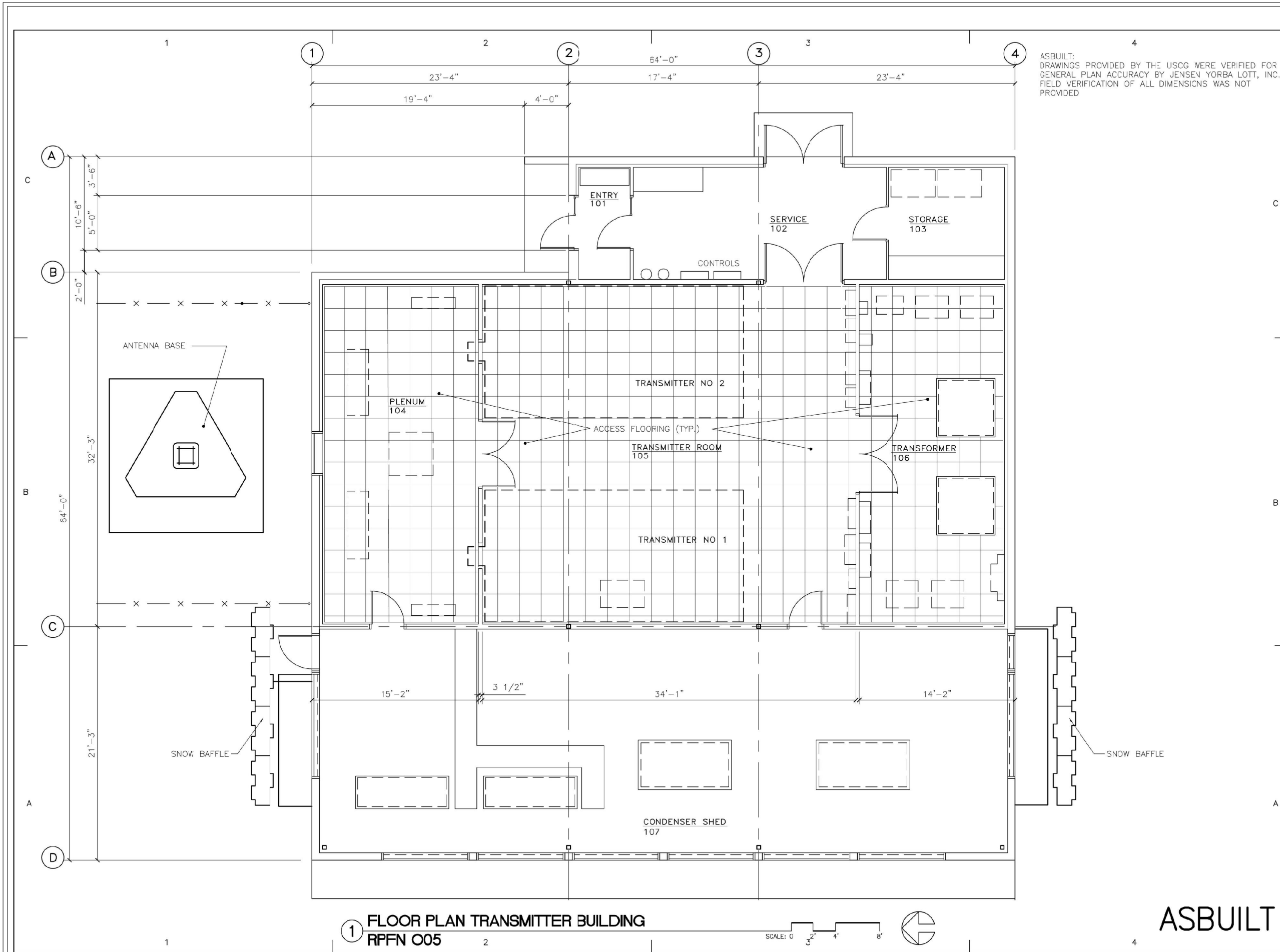
1 FLOOR PLAN GENERATOR BUILDING
RPFN 007



ASBUILT

CONSULTANTS		
Incorporated 3220 Hospital Drive Ste 200 Juneau, Alaska 99801 Phone: 907.586.2093 Fax: 907.586.2099		
Jensen Yorba Lott Inc.		
522 West 10th Street Juneau, Alaska 99801 phone 907-586-1070 fax 907-586-3959 jensenyorbalott.com		
U. S. COAST GUARD CIVIL ENGINEERING UNIT JUNEAU		
USCG. CEU JUNEAU 709 WEST 9TH STREET, ROOM 817 JUNEAU, ALASKA 99801		
ISSUE		
MARK	DATE	DESCRIPTION
JL	04/29/05	ASBUILT
A/E PROJECT NO: 0441		
CAD FILE NAME: S-3674E-A2-ASBUILT.dwg		
DESIGNED BY:		
DRAWN BY: LE		
EDITED BY: DF		
CHECKED BY: JL		
SCALE: AS INDICATED PLOT SCALE: 1:1		
SHEET TITLE		
FY 2004 FAC. COND. ASSESSMENT LORSTA ATTU ATTU ALASKA GENERATOR BUILDING ARCHITECTURE FLOOR PLAN		
REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
MLG	RCD	JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
KARL H. CALVO, CAPT.		DATE
APPROVING OFFICER		
PROJECT NUMBER	DRAWING NUMBER	
17-J04070	3674E	
DISCIPLINE/SHT NO	SHEET 8 OF 17	
A2		

DRAWN BY: USCG
 USCG ALASKA LORAN-C STATIONS RECORDATION
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR
 HISTORIC AMERICAN BUILDINGS SURVEY
 ALASKA AK-232
 ATTU STATION
 GENERATOR BUILDING FLOOR PLAN
 IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING



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GENERAL PLAN ACCURACY BY JENSEN YORBA LOTT, INC.
FIELD VERIFICATION OF ALL DIMENSIONS WAS NOT
PROVIDED

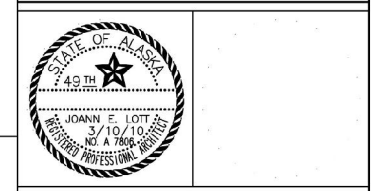
CONSULTANTS

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ENGINEERS
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Juneau, Alaska 99801 Fax: 907.586.2099

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JUNEAU

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JUNEAU, ALASKA 99801

ISSUE		
MARK	DATE	DESCRIPTION
JL	04/29/05	ASBUILT

A/E PROJECT NO: 0441
CAD FILE NAME: S-3674E-A3-ASBUILT.dwg
DESIGNED BY:
DRAWN BY: LE
EDITED BY: DF
CHECKED BY: JL

SCALE: AS INDICATED PLOT SCALE: 1:1

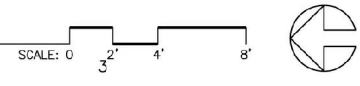
SHEET TITLE
FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU
ATTU ALASKA
TRANSMITTER BUILDING
ARCHITECTURE
FLOOR PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

KARL H. CALVO, CAPT.
APPROVING OFFICER

PROJECT NUMBER 17-J04070	DRAWING NUMBER 3674E
DISCIPLINE/SH# NO A3	SHEET 9 OF 17

1 FLOOR PLAN TRANSMITTER BUILDING
RPFN 005

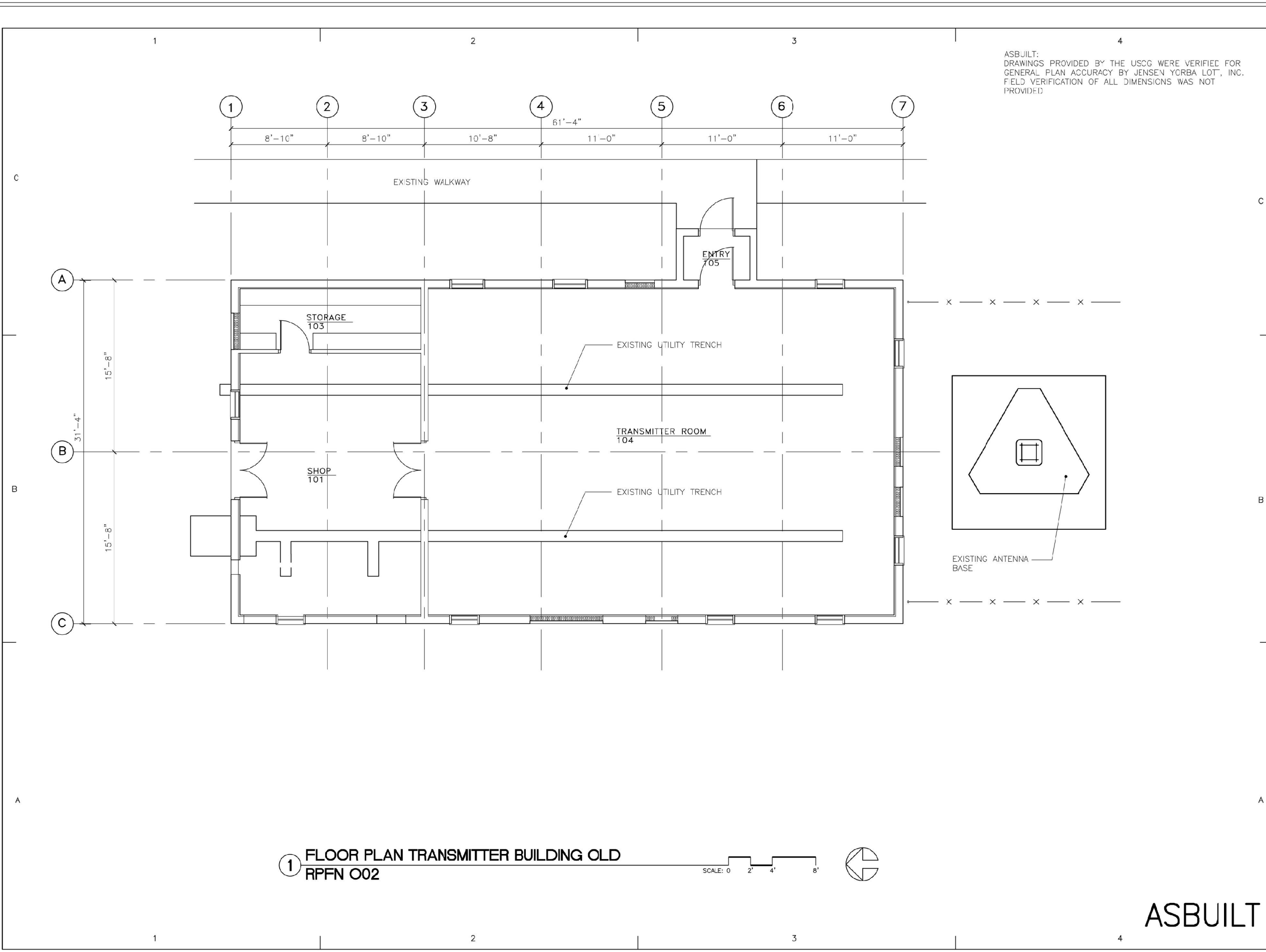


ASBUILT

DRAWN BY: USCG
 USCG ALASKA LORAN-C STATIONS RECORDATION
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR
 TRANSMITTER BUILDING FLOOR PLAN
 ATTU STATION
 HISTORIC AMERICAN BUILDINGS SURVEY
 ALASKA AK-232
 SHEET NO. 9 OF 17
 DATE OF DRAWING

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING

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1 FLOOR PLAN TRANSMITTER BUILDING OLD
RPFN 002

SCALE: 0 2' 4' 8'



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CIVIL ENGINEERING UNIT
JUNEAU



USCG. CEU JUNEAU
709 WEST 9TH STREET, ROOM 817
JUNEAU, ALASKA 99801

ISSUE		
MARK	DATE	DESCRIPTION
JL	04/29/05	ASBUILT

A/E PROJECT NO: 0441
CAD FILE NAME: S-3674E-A4-ASBUILT.dwg
DESIGNED BY:
DRAWN BY: LE
EDITED BY: DF
CHECKED BY: JL

SCALE: AS INDICATED PLOT SCALE: 1:1

SHEET TITLE
FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU
ATTU ALASKA
TRANSMITTER BUILDING OLD
ARCHITECTURE
FLOOR PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

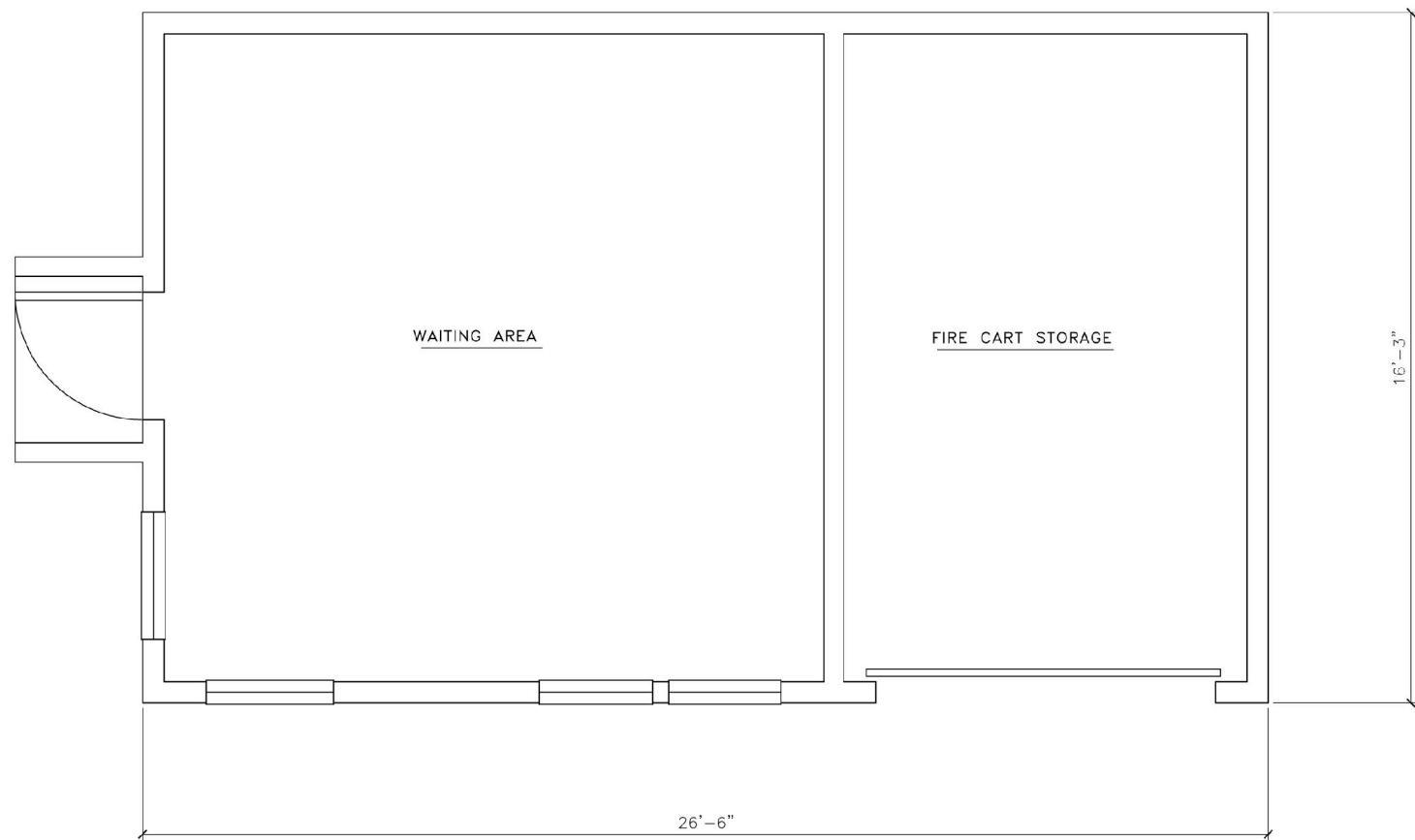
KARL H. CALVO, CAPT.
APPROVING OFFICER DATE

PROJECT NUMBER 17-J04070	DRAWING NUMBER 3674E
DISCIPLINE/SHT NO A4	SHEET 10 OF 17

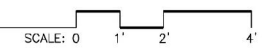
ASBUILT

DRAWN BY: USCG
 USCG ALASKA LORAN-C STATIONS RECORDATION
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR
 HISTORIC AMERICAN BUILDINGS SURVEY
 SURVEY NO. ALASKA AK-232
 OLD TRANSMITTER BUILDING PLAN
 ATTU STATION
 IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING

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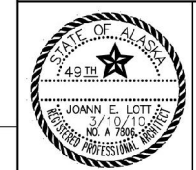
1 FLOOR PLAN FIRE CART GARAGE AND TERMINAL
RPFN 005



ASBUILT

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Jensen Yorba Lott Inc.
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phone 907-586-1070 fax 907-586-3959
jensenyorbалott.com



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CIVIL ENGINEERING UNIT
JUNEAU



USCG. CEU JUNEAU
709 WEST 9TH STREET, ROOM 817
JUNEAU, ALASKA 99801

ISSUE		
MARK	DATE	DESCRIPTION
JL	04/29/05	ASBUILT

A/E PROJECT NO: 0441
CAD FILE NAME: S-3674E-A5-ASBUILT.dwg
DESIGNED BY:
DRAWN BY: LE
EDITED BY: DF
CHECKED BY: JL

SCALE: AS INDICATED PLOT SCALE: 1:1

SHEET TITLE
FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU
ATTU ALASKA
FIRE CART GARAGE & TERMINAL
ARCHITECTURE
FLOOR PLAN

REVIEWED BY: MLG PROJECT ENG.	REVIEWED BY: RCD BRANCH CHIEF	REVIEWED BY: JSC TECH. DIRECTOR
-------------------------------------	-------------------------------------	---------------------------------------

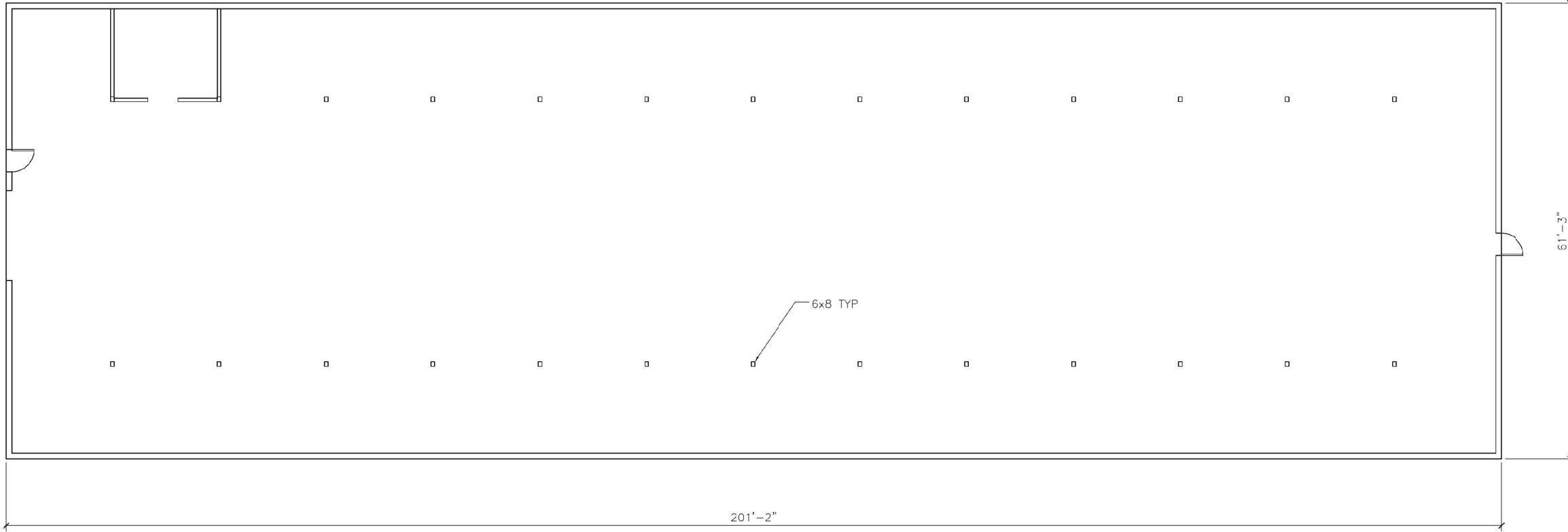
KARL H. CALVO, CAPT.
APPROVING OFFICER

PROJECT NUMBER 17-J04070	DRAWING NUMBER 3674E
DISCIPLINE/SHT NO A5	SHEET 11 OF 17

DRAWN BY: USCG
 USCG ALASKA LORAN-C STATIONS RECORDATION
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR
 ATTU STATION
 FIRE CART GARAGE AND TERMINAL FLOOR PLAN
 ALASKA AK-232
 HISTORIC AMERICAN BUILDINGS SURVEY
 11 OF 17

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1 FLOOR PLAN WAREHOUSE
RPFN 004

SCALE: 0 4' 8' 16'



ASBUILT

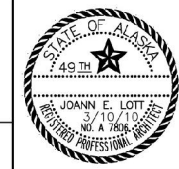
CONSULTANTS

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ENGINEERS
Incorporated

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CIVIL ENGINEERING UNIT
JUNEAU



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709 WEST 9TH STREET, ROOM 817
JUNEAU, ALASKA 99801

ISSUE		
MARK	DATE	DESCRIPTION
JL	04/29/05	ASBUILT

A/E PROJECT NO: 0441
CAD FILE NAME: S-3674E-A7-ASBUILT.dwg
DESIGNED BY:
DRAWN BY: LE
EDITED BY: DF
CHECKED BY: JL

SCALE: AS INDICATED PLOT SCALE: 1:1

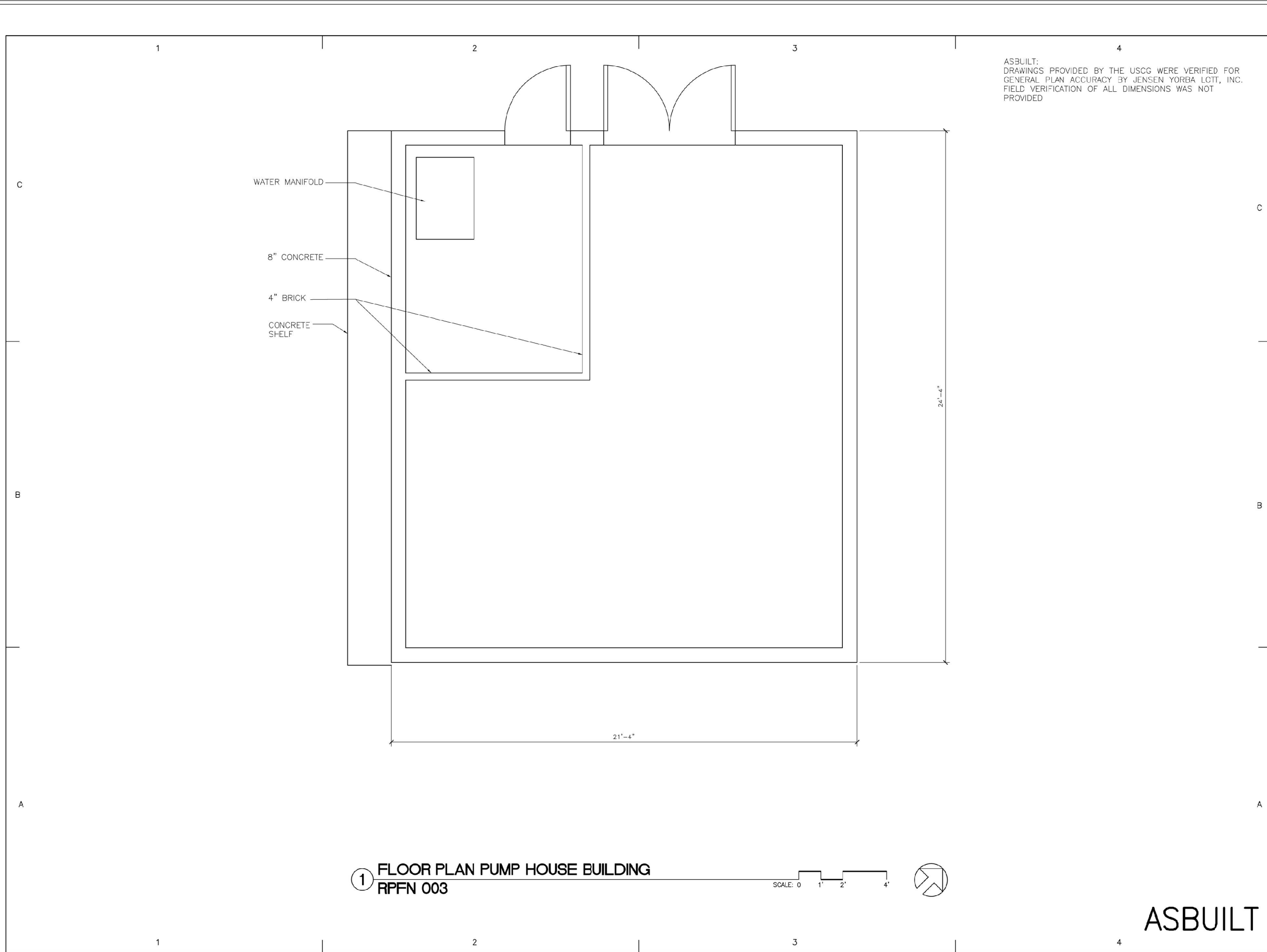
SHEET TITLE

FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU
ATTU ALASKA
WAREHOUSE
ARCHITECTURE
FLOOR PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

KARL H. CALVO, CAPT.
APPROVING OFFICER DATE

PROJECT NUMBER	DRAWING NUMBER
17-J04070	3674E
DISCIPLINE/SHT NO	SHEET 13 OF 17
A7	



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PROVIDED

WATER MANIFOLD
8" CONCRETE
4" BRICK
CONCRETE SHELF

1 FLOOR PLAN PUMP HOUSE BUILDING
RPFN 003

SCALE: 0 1' 2' 4'



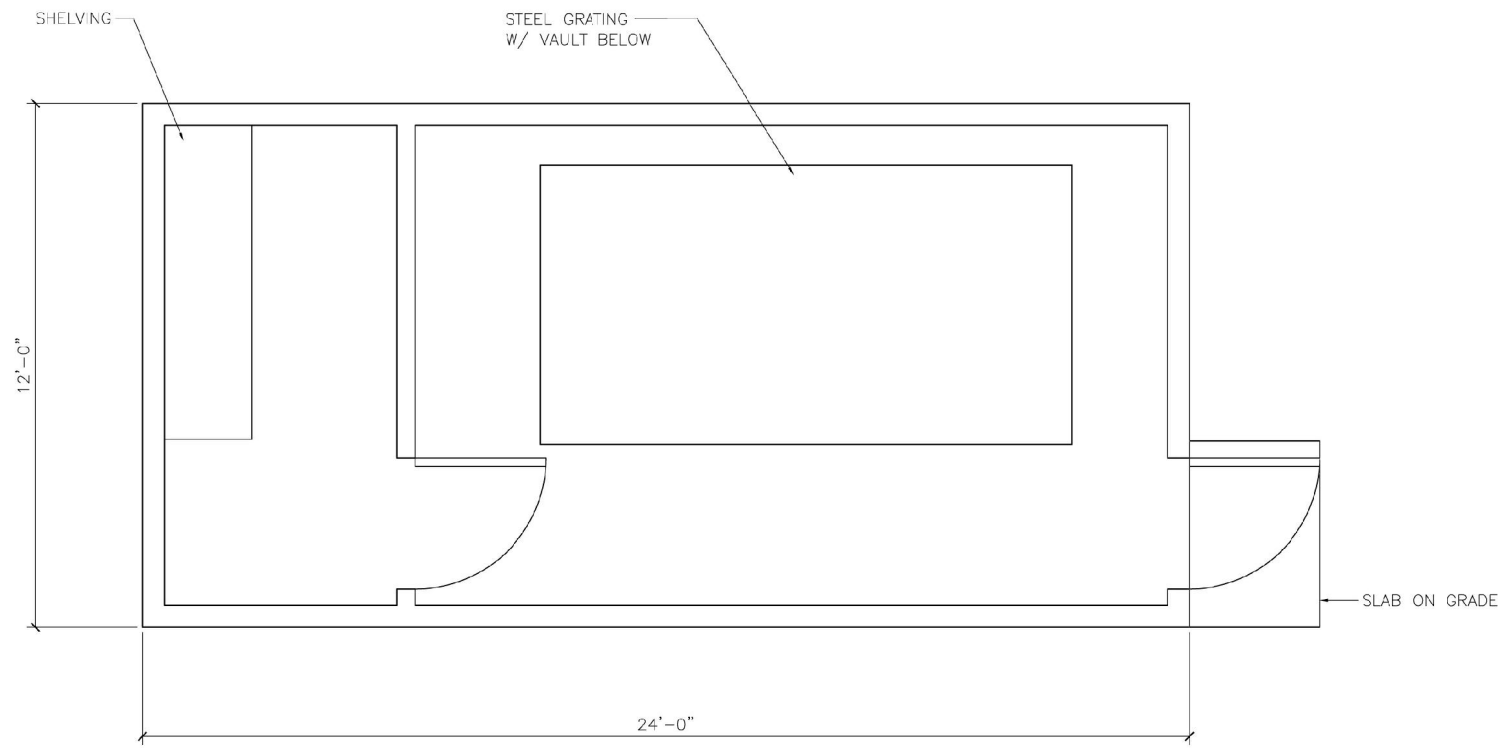
CONSULTANTS	
 P N D CONSULTING ENGINEERS Incorporated 3220 Hospital Drive Ste 200 Phone: 907.516.2093 Juneau, Alaska 99801 Fax: 907.516.2099	
 Jensen Yorba Lott Inc. 522 West 10th Street Juneau, Alaska 99801 phone 907-586-1070 fax 907-586-3939 jensenyorbalott.com	
U. S. COAST GUARD CIVIL ENGINEERING UNIT JUNEAU USCG. CEU JUNEAU 709 WEST 9TH STREET, ROOM E17 JUNEAU, ALASKA 99801	
ISSUE	
MARK	DATE DESCRIPTION
JL	04/29/05 ASBUILT
A/E PROJECT NO: 0441	
CAD FILE NAME: S-3674E-A6-ASBULT.dwg	
DESIGNED BY:	
DRAWN BY: LE	
EDITED BY: DF	
CHECKED BY: JL	
SCALE: AS INDICATED PLOT SCALE: 1:1	
SHEET TITLE	
FY 2004 FAC. COND. ASSESSMENT LORSTA ATTU	
ATTU ALASKA	
WELL PUMP BUILDING ARCHITECTURE FLOOR PLAN	
REVIEWED BY: MLG	REVIEWED BY: RCD
REVIEWED BY: JSC	
PROJECT ENG.	BRANCH CHIEF
TECH. DIRECTOR	
KARL H. CALVO, CAPT.	
APPROVING OFFICER	DATE
PROJECT NUMBER	DRAWING NUMBER
17-J04070	3674E
DISCIPLINE/SHT NO	SHEET
A6	12 OF 17

ASBUILT

DRAWN BY: USCG
 USCG ALASKA LORAN-C STATIONS RECORDATION
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR
 ATTU STATION
 WELL PUMP BUILDING FLOOR PLAN
 ALASKA AK-232
 HISTORIC AMERICAN BUILDINGS SURVEY
 13 OF 17

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FIELD VERIFICATION OF ALL DIMENSIONS WAS NOT
PROVIDED



1 FLOOR PLAN SEWAGE TREATMENT BUILDING
RPFN 006

SCALE: 0 1' 2' 4'



ASBUILT

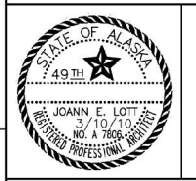
CONSULTANTS

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ENGINEERS
Incorporated

3220 Hospital Drive Ste 200 Phone: 907.586.2093
Juneau, Alaska 99801 Fax: 907.586.2099

**Jensen
Yorba
Lott
Inc.**

522 West 10th Street
Juneau, Alaska 99801
phone 907-586-1070 fax
907-586-3939
jensenyorbilott.com



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CIVIL ENGINEERING UNIT
JUNEAU

USCG. CEU JUNEAU
709 WEST 9TH STREET, ROOM E17
JUNEAU, ALASKA 99801

ISSUE		
MARK	DATE	DESCRIPTION
JL	04/29/05	ASBUILT

A/E PROJECT NO: 0441
CAD FILE NAME: S-3674E-AB-ASBUILT.dwg
DESIGNED BY:
DRAWN BY: LE
EDITED BY: DF
CHECKED BY: JL

SCALE: AS INDICATED PLOT SCALE: 1:1

SHEET TITLE

FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU

ATTU ALASKA
SEWAGE TREATMENT BUILDING
ARCHITECTURE
FLOOR PLAN

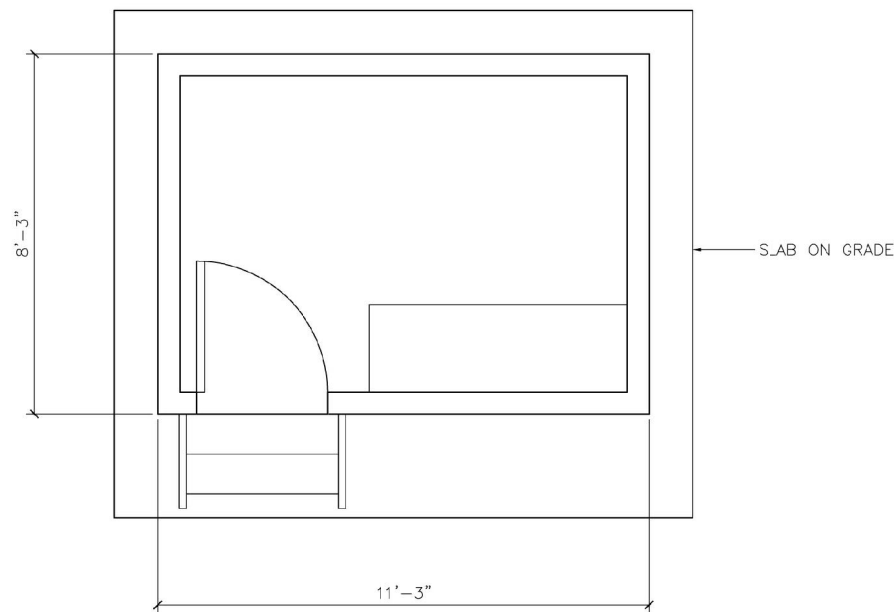
REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
KARL H. CALVO, CAPT. APPROVING OFFICER		DATE

PROJECT NUMBER	DRAWING NUMBER
17-J04070	3674E
DISCIPLINE/SHT NO	SHEET 14 OF 17
A8	

HISTORIC AMERICAN BUILDINGS SURVEY
 ALASKA AK-232
 SEWAGE TREATMENT BUILDING FLOOR PLAN
 ATTU STATION
 DRAWN BY: USCG
 USCG ALASKA LORAN-C STATIONS RECORDATION
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR

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1 FLOOR PLAN WATER TREATMENT BUILDING
RPFN 011

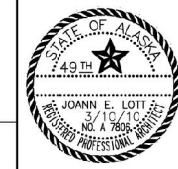
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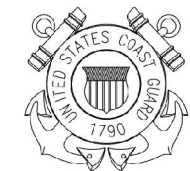
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ISSUE		
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A/E PROJECT NO: 0441
CAD FILE NAME: S-3674E-A9-ASBUILT.dwg
DESIGNED BY:
DRAWN BY: LE
EDITED BY: DF
CHECKED BY: JL

SCALE: AS INDICATED PLOT SCALE: 1:1

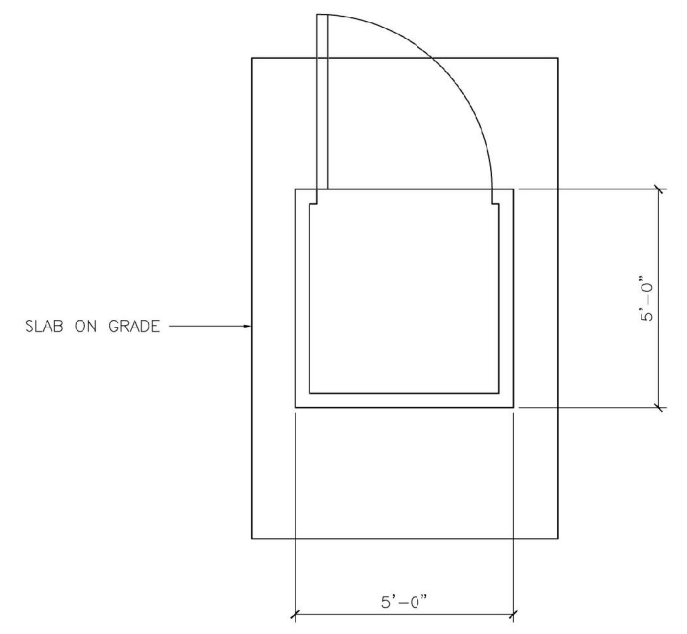
SHEET TITLE
FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU
ATTU ALASKA
WATER TREATMENT BUILDING
ARCHITECTURE
FLOOR PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

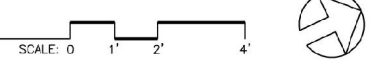
KARL H. CALVO, CAPT.
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PROJECT NUMBER	DRAWING NUMBER
17-J04070	3674E
DISCIPLINE/SHT NO	SHEET 15 OF 17
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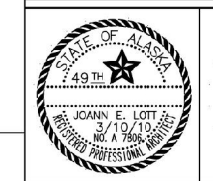


① FLOOR PLAN FLAMMABLE MATERIALS STRUCTURE
RPFN 009



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ARCHITECTURE
FLOOR PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

KARL H. CAVO, CAPT.
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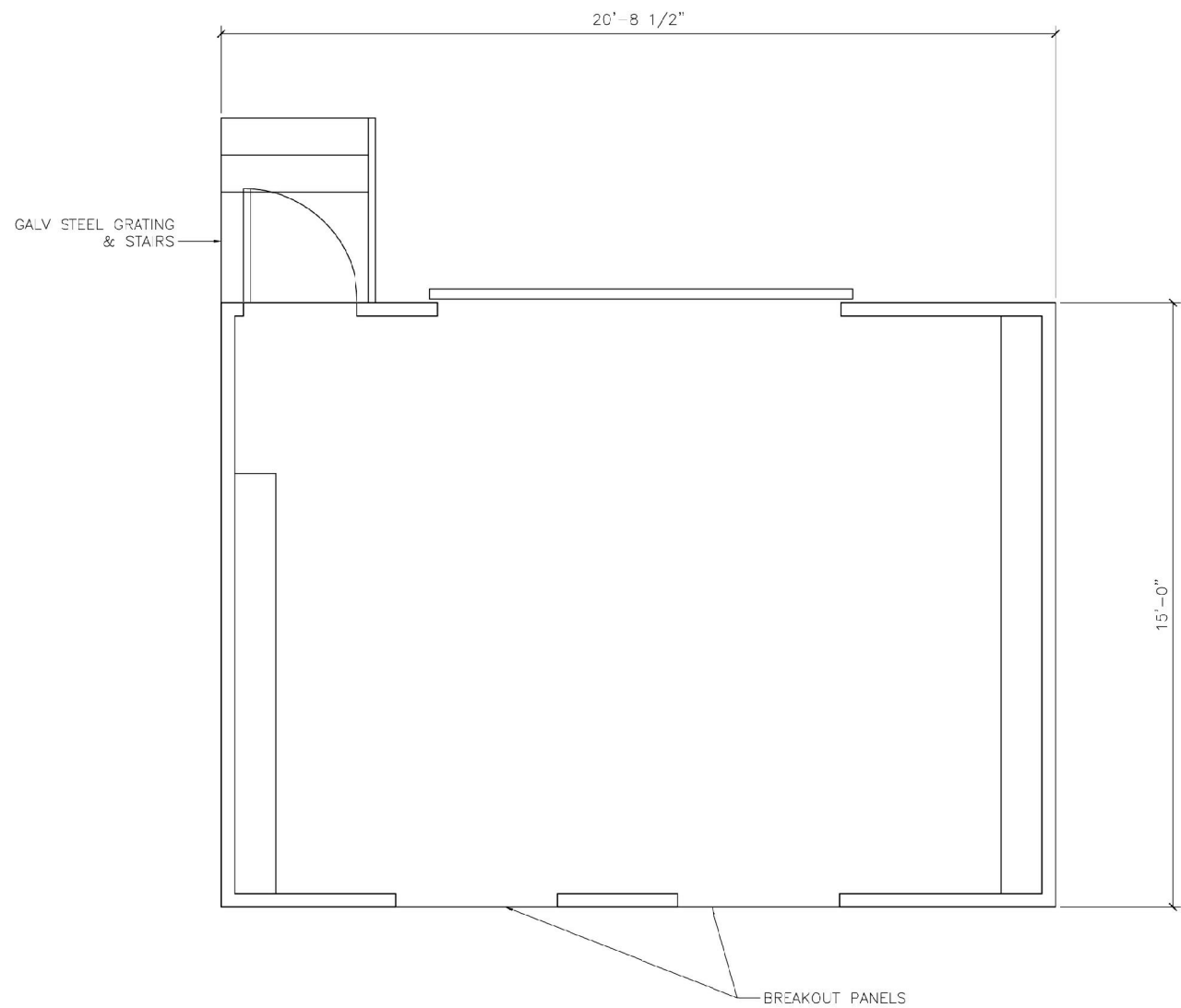
PROJECT NUMBER	DRAWING NUMBER
17-J04070	3674E
DISCIPLINE/SHI NO	SHEET 16 OF 17
A10	

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1 FLOOR PLAN HAZARDOUS MATERIALS STORAGE SHED
RPFN 010

SCALE: 0 1' 2' 4'

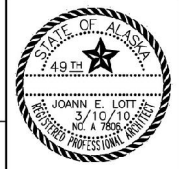
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SHEET TITLE

**FY 2004 FAC. COND. ASSESSMENT
LORSTA ATTU**

ATTU ALASKA
HAZ MAT BUILDING
ARCHITECTURE
FLOOR PLAN

REVIEWED BY: MLG	REVIEWED BY: RCD	REVIEWED BY: JSC
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

KARL H. CALVO, CAPT.
APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
17-J04070	3674E
DISCIPLINE/SHT NO	SHEET 17 OF 17
A11	

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 HAZARDOUS MATERIAL BUILDING FLOOR PLAN
 ALASKA AK-232
 HISTORIC AMERICAN BUILDINGS SURVEY
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