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NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Guard Island Lighthouse.

other names/site number Guard Island Light Station (AHRS Site No. KET-025).

2. Location

street & number Guard Islands in the Clarence Strait at the north end of the Tongass Narrows 9.6 miles northwest of Ketchikan
city or town: Ketchikan ☑ vicinity ☐ not for publication

state Alaska code: AK county Ketchikan Gateway Borough code 130 zipcode 99901

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☑ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☑ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☐ nationally ☑ statewide ☐ locally. (☐ See continuation sheet for additional comments.)

Doug Mearis, CAPT, USCG Date 21 NOV 2003
Signature of certifying official/Title
Department of Homeland Security, United States Coast Guard.
State or Federal Agency and Bureau

In my opinion, the property ☑ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Joan M. Antonson, Deputy State Historic Preservation Officer Date 29 October 2003
Signature of certifying official/Title Alaska
Alaska Department of Natural Resources Division of Parks and Outdoor Recreation Office of History and Archaeology.
State or Federal Agency and Bureau

4. National Park Service Certification

I hereby certify that the property is:

☑ entered in the National Register
☐ See continuation sheet.
☐ determined eligible for the National Register
☐ See continuation sheet.
☐ determined not eligible for the National Register
☐ removed from the National Register
☐ other, (explain)_____

Signature of the Keeper **Date of Action**

Edson H. Beall 1·14·04

5. Classification

Ownership of Property
(Check as many boxes as apply)
- ☐ private
- ☐ public-local
- ☐ public-State
- ☑ public-Federal

Category of Property
(Check only one box)
- ☐ building(s)
- ☑ district
- ☐ site
- ☐ structure
- ☐ object

Number of Resources within Property
(Do not include previously listed resources in the count).

Contributing	Noncontributing	
1		buildings
1		sites
1	1	structures
		objects
3	1	Total

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing)
Light Stations of the United States

Number of contributing resources previously listed in the National Register

6. Function or Use

Historic Functions (Enter categories from instructions)
Transportation: water related: lighthouse

Current Functions (Enter categories from instructions)
Transportation: water related: lighthouse

7. Description

Architectural Classification (Enter categories from instructions)
Modern Movement: Moderne

Materials (Enter categories from instructions)

foundation	Concrete
roof	Concrete with sealed membrane
walls	Concrete
other	

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

See Continuation Sheets

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [x] **A** Property is associated with events that have made a significant contribution to the broad patterns of our history
- [ ] **B** Property is associated with the lives of persons significant in our past.
- [x] **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [x] **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply)

Property is:

- [ ] **A** owned by a religious institution or used for religious purposes.
- [ ] **B** removed from its original location.
- [ ] **C** a birthplace or grave
- [ ] **D** a cemetery.
- [ ] **E** a reconstructed building, object, or structure.
- [ ] **F** a commemorative property
- [ ] **G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

Maritime history;
Transportation;
Architecture;
Archaeology: Historic - Non-aboriginal

Period of Significance
1904-1953

Significant Dates
1924
1904

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation
Euro-American: federal government lighthouse service

Architect/Builder
J.T. Elliot/U.S. Lighthouse Service

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets). See continuation sheets

9. Major Bibliographical References

Bibliography (Cite books, articles, and other sources used in preparing this form on one or more continuation sheets)

Previous documentation on file (NPS):

- [ ] preliminary determination of individual listing (36 CFR 67) has been requested
- [ ] previously listed in the National Register
- [ ] previously determined eligible by the National Register
- [ ] designated a National Historic Landmark
- [ ] recorded by Historic American Buildings Survey #
- [ ] recorded by Historic American Engineering Record #
- [x] Other — Previously recommended by Alaska SHPO as Eligible, but no formal determination

Primary location of additional data:

- [ ] State Historic Preservation Office
- [ ] Other State agency
- [x] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Name of Repository:
U.S.C.G. CEU Juneau; National Archives

10. Geographical Data

Acreage of Property 10.4 .

UTM References
(Place additional UTM references on a continuation sheet).

Quadrangle: USGS Ketchikan B-6 (1994) 1:63,360

	Zone	Easting	Northing		Zone	Easting	Northing
1	09	317855	6147938	3	09	317936	6148100
2	09	317865	6148141	4	09	317936	6147918

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared by

name/title: Robert M. Weaver .

organization: Hart Crowser, Inc. date: 6/16/03 .

street & number: 1910 Fairview Avenue E. telephone: (206) 324-9530 .

city or town: Seattle state Washington zip code 98102 .

Note: Archaeological Survey performed by Robert Weaver, RPA and Bruce Ream, RPA, Hart Crowser, Inc.

Additional Documentation

Submit the following items with the completed form:
Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minutes series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources

Photographs

Representative **black and white photographs** of the property.

Additional items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO)

name Commander (s), Maintenance & Logistics Command-Pacific, U.S. Coast Guard .

street & number Coast Guard Island, Building 54D telephone (510) 437-5941 .

city or town Alameda state California zip code 94501-5100 .

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public Reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service. P.O. Box 37127, Washington, DC 2001307127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 10503

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(8-86)

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The Guard Island Light Station consists of a standing light and fog-signal building and an associated cistern, archaeological remnant features of the former station buildings complex, and historical archaeological dumps, scatters, and features related to the occupation and operation of the facility.

BACKGROUND AND SETTING

The Guard Islands consist of two small outcrop islands, connected at lower tides, which lie within the Clarence Strait west of Point Higgins and north of Gravina Island in the Ketchikan Gateway Borough of Southeast Alaska. The original reserve was established by Executive Order in 1901 as part of an initial major construction of aids to navigation in Alaskan waters. Impetus came through significant explosion in shipping and travel brought on by the Klondike and subsequent gold rushes as well as the increased exploitation of Alaska's rich natural resources. The Guard Island Light Station formed part of a string of stations (see continuation sheets) along the Inside Passage, which served as the main passenger and freight corridor to points in southern Alaska from West Coast ports.

The southern smaller island has a maximum elevation of about 22 feet above mean water and during winter storms the island is swept and scoured by waves. Although limited vegetation clings to the highest points, soil development is limited. The light station is located on the larger of the two islands, which rises to an elevation of roughly 50 feet above mean water and runs 800 feet N-S by 300 feet E-W. The existing light and fog-signal building, which replaced an earlier structure, continues to serve as a marker to the northern entrance of the Tongass Narrows, a channel between Revillagigedo and Gravina Islands.

The original station was constructed during the summers of 1903 and 1904. It consisted of a signal tower, a keeper's residence, a boathouse, and a tram house. The tramway system moved supplies from the water to station buildings and launched the small station skiffs. No standing buildings or structures exist from the initial occupation. A new light and fog-signal building was built in 1923-1924 at the highest point on the south end of the island along with a second keeper's quarters.

CONTRIBUTING BUILDINGS AND STRUCTURES

The light and fog-signal building as built in 1923-1924, with an associated cistern, remains the only fully intact feature of the Guard Islands Light Station. A similar plan was applied at a sister station built at the same time, the Point Retreat light station on the north tip of Admiralty Island west of Juneau. The main signal building stands at the south-central area of the main island at a base elevation of about 50 feet above mean water level. Designed by J.T. Elliot at the Lighthouse Service's 16th District base in Ketchikan, the first lighting occurred on February 25, 1924. The building design stems from an engineer-designed interpretation of the Moderne style. With the exception of the black metal lantern, the entire building fabric consists of cast-in-place reinforced concrete painted white (with red roof).

The 34- by 20-foot fog-signal building, standing 14 feet to the top of the cornice, forms the base for the light tower. The façade (east elevation) reflects the symmetrical interior functional order, with two full bays flanking a half-bay

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entrance. The corners have 4-foot wide simplified pilasters each with a shallow recessed panel to provide relief. A pair of wood panel doors with upper single lights are flanked by 1'4"- wide solid pilasters. The walls and entry are topped with a band of three window openings running between the pilasters just below the cornice line. All primary openings use industrial metal sash window panels. The two flanking openings each hold two 4'2"-square sash frames of 3-by-5 lights; the narrower central window (5'6"-wide by 4'2"-high) holds one frame of 3-by-6 lights with an operable 2-by-4 center panel. The opposite (west) elevation repeats the design elements and dimensions of the façade but without the central door feature. Also the south window opening has been replaced with plywood as a ventilation panel. The window design gives a sense, both inside and out, of a continuous band of glazing circling three sides of the building; the light pours into the inside near the ceiling and creates an airy and well-lit interior space.

The south and north elevations repeat the corner pilasters with one central bay. The south elevation contains one window consisting of two metal sash frames of 3-by-5 lights flanking a central 3-by-3 unit; the north elevation has no fenestration and a ventilation panel and vent have replaced the original door. The hipped roof slopes gently (less than one-half inch per foot) to blind cast-in-place gutters that provide a continuous outline at the perimeter. A guardrail was added to the perimeter in 1959 along with an exterior metal cage ladder. A 12,000-gallon concrete cistern completed the complex just outside the southeast corner of the building. The cistern structure remains intact and now has solar panels installed on the top.

The interior of the fog-signal building originally formed an open volume divided into two working spaces, the air compressor room and the engine room, which were separated by a standard 4'6"-diameter centrally-located spiral staircase. Each functional area measured approximately 14 by 18 feet symmetrically about the staircase. Currently, a temporary stud and plywood structure partitions off the former north engine room. All equipment has been removed along with the tower staircase.

Originally the interior housed a cast iron Pennsylvania brand compressor powering a Type C diaphone fog signal. This was replaced in 1946 with a dual horn system using two Davey Model 60B compressors powered by two Hercules electric generators. Airlines fed the two diaphones, which protruded vertically from the roof at the north end of the building. Air receivers stood in opposite corners of the engine room. The system again received an upgrade in 1959 when the facility was converted to A.C. electrical power. The light tower stairs were removed to provide space for three diesel generators, and the compressors were moved to the north end of the building near the northeast air receiver. Final equipment modifications occurred in 1966 and 1969, when the station became automated. An ELG-300/02 fog signal supplemented the existing Type-C diaphones in 1966. An additional FA-232 standby fog signal was added in 1969 and all generators and engines were replaced with a single Kohler 15ROT61 generating unit.

The light tower consists of an 8- by 8-foot-wide by 4-foot-high cube jutting from the center of the fog-signal building roof. A 12- by 12-foot concrete platform or gallery, beveled at the edges, supports the original 1904 metal lantern house. A pipe railing surrounding the gallery, guards the perimeter. The fourth-order lantern house design

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came from the Third Lighthouse District offices in New York. Eight curved iron panels form a 7'8"-diameter base that supports an helical-astragal glazed system. The base stands 3'6" high, while the glazed area has a height of 3'1". Cast iron ribs support the 8'6" diameter roof, which originally included a 17-inch-diameter ventilator ball and lightning rod. The lantern consisted of the original buoy-drum lens at a new height above water of 74 feet. Historical upgrades have removed the ventilator ball and original lens system. In 1939, the lantern was electrified and the original lens replaced with a 300mm buoy-drum lens and 100-watt spotlight. A DCB-36 Airways-type beacon replaced the primary system in 1959. The beacon, with a 1,780,000 candlepower rating, was placed on the top of the lantern's roof and an access platform with railing was added around the perimiter of the roof. The 300-mm lens remained as a backup. With automation in 1969, the lantern house again provided housing for the main light, the current DCB-24R unit; a 250-mm emergency light was stationed atop the roof.

In 1942, a radio room was attached to the north end of the signal building. The frame building, which measured 18 by 14 feet rested on concrete footings. Although utilitarian and of different materials, attention was paid to the design of the exterior. The flat roof included cornice details similar to the signal building and the features and proportions of the false pilasters were carried through. The exterior finish consisted of "super-hardboard" with furring strips providing a base for hardboard architectural details that imitated the base and pilaster system of the original building. Entry occurred at a single paneled door at the southeast corner of the new building or through the former single north-end exterior door of the signal building. Fenestration consisted of 2-by-3-light metal sash casement units at 2- by 4-foot with a pair centered in the east wall, three centered on the north side, and one on the west elevation. The interior was simple: the 14- by 12-foot radio room and a 6- by 14-foot battery room. Interior finish consisted of quarter-inch plywood with trim. Ceiling height was 10 feet. Overall, the building reached about 14 feet above grade. The addition was removed during the 1968-1969 automation of the facility.

The complex from the 1923-1924 construction phase includes one structure, a 12,000-gallon cistern that lies 9 feet south of the southwest corner of the light and fog-signal building. The cistern is a simple concrete box structure, 11-feet square and 5'6" deep with 9-inch thick walls. The cistern is partially buried with between one and two feet of the concrete surfaces exposed above grade. Currently, a non-contributing structure, a solar panel array for automated operation of the light system, is mounted on the top concrete surface of the cistern. The solar array structure has an angle iron frame 5- by 10-foot at the base with four triangular angle iron bents. The structure stands 12 feet above the top of the cistern. A series of solar panels are attached to the steeper sloped south side of the frame running from base to top; corrugated sheet metal covers the rear side from the peak half way down the rear braces. A fixed aluminum ladder attached to an east cross brace provides access to the upper panel area.

THE DEMOLISHED BUILDING COMPLEX

Most station improvements, with the exception of the existing light and fog-signal building and cistern, have been demolished. The original tower came down with the installation of the new signal building in 1924. The original keepers house was razed in 1962 and various other smaller buildings and structures changed through time. In March

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1970, the U.S. Coast Guard (successor to the U.S. Lighthouse Service) let a contract to demolish all remaining facilities except the light and fog-signal building. Nevertheless, foundations, walkways, and remnants of most facilities can be identified at their original locations.

The Original Light Station Layout

The following section describes the original installation as begun in 1903. Of the original design, only the boat house, tram house, and tramway survived to automation in 1969.

The original station consisted of a light and fog-signal tower that stood about 45 feet northwest of today's existing building at a slightly lower elevation along with the typical complement of buildings and structures for a full station. The design came out of the engineering office of the 13th Lighthouse District in Portland, Oregon under the design guidance of W.C. Langfist. The wood-frame tower perched near the edge of the island's west cliff. It had a base approximately 20-feet square. The tower tapered from the base to a 12-foot square lantern house gallery at about 30 feet above grade. A wood balustrade enclosed the gallery. The existing lantern house perched on top of the gallery and the lantern had a designated height of 79 feet above mean water. Based on the few existing photographs, the building had an internal landing half way up, with windows on all elevations for each story. The Guard Island station was always considered a minor facility, and the fog-signal equipment was unusual to Alaska. A 1,200-pound bell hung from the north face of the tower. Machinery, operated by a weight-and-clockwork system, moved a horizontal hammer that struck the bell every 20 seconds.

The other main facility features included an oil and coal house, a keeper's residence, a combined boat house and workshop, a tram (car) house, and a tramway system to move supplies and equipment. The oil and coalhouse stood approximately 50 feet east southeast of the tower. Based on standardized Lighthouse Service plans, it had a frame skeleton sheathed in corrugated metal siding on the outside and tongue-and-groove interior paneling. The 9- by 15-foot house stood 8'6" to the rafter sills and 13 feet high overall with a side-gabled roof arrangement. Two reinforced metal-sheathed doors on the longitudinal elevation facing the signal building served each storage compartment; metal ventilators topped the ridgeline.

The keeper's residence stood about 80 feet northeast of the lantern tower. The 28- by 38-foot building faced west, and was built into the eastern slope of the island, forming a daylight basement surrounded by a white-painted full-height concrete foundation. The design featured symmetrical elevations and paired double hung fenestration. Small central end-gabled dormers projected from each primary side of the hipped roof attic. The exterior was sided in 1- by 6-inch beveled tongue-and-groove fir. The main floor included a 4- by 8-foot interior weather vestibule with a single door reached by two concrete steps. The basic configuration followed a hall and parlor scheme with a central hall providing access to four 11- by 14-foot rooms: a dining room, kitchen, and two bedrooms, respectively. The basement included storage facilities, a laundry room, and furnace room. A 1942 remodel into an assistant keeper's house (presumably for two unmarried keepers) added a kitchen, bedroom, bathroom, and small living room to the

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basement. A 12-foot-diameter concrete cistern off the northwest corner of the house provided fresh water for the residence. The cistern was half-buried in the ground and had a concave roof. A 10,000-gallon above ground stave tank with conical roof later was added south of the house. The original keeper's house was razed in May 1962, although the foundation stood until final station demolition in 1970.

The boathouse and tramway completed the station. The frame end-gabled boathouse measured 40- by 16-foot with a 14- by 16-foot workshop in the west end. Height to ridgeline was 16 feet. It was located northwest of the keeper's house at the lower north end of the island. Again, 6-inch tongue-and-groove siding covered the exterior. A set of composite tongue-and-groove cross-braced doors faced the tramway run to the ocean. The north elevation had two 2-by-2-light fixed sash windows, with a single window on the north end. The south elevation followed the general symmetry, but with one sash window and a single door leading into the workshop. A small tram-car house flanked the boathouse on a perpendicular axis off the northeast corner. The windowless car house also followed the end-gable design of the boathouse, but at a much smaller 8- by 14-foot scale. A feature of most Alaskan light stations, the tramway ran from the northeast corner of the island to the boathouse. A turntable switched the small cars between the boathouse, car house, and the track to the residential area and the light and fog-signal building. Track consisted of 30-pound rail at a 3-foot gauge. Remnants of the ramp leading to a small cove include a 5-foot-wide ribbed concrete pad with inset beveled wood stringers to support the rails. The water entry ran 200 feet from the turntable system, while the branch to the light and fog-signal building ran south along the spine of the island another 200 feet.

The 1924 Keeper's House

Another keeper's house was added during the 1924 rebuild, also designed by Elliot. Originally built for the assistant keeper, by 1940 it had become the main keeper's residence. The one- and one-half-story cottage style house was 26 by 36 feet. The east façade consisted of a central lighted doorway flanked by a single column of vertical sidelights. The main floor was elevated by a raised foundation, and accessed by a 5-foot-wide, seven-tread concrete stair. Simple two-over-two double-hung sash windows centered on each side bay, and flanked the entry. A neatly pedimented end gabled dormer in the center of the side-gabled roof provided space and lighting (through a small two-over-two sash) to an upstairs bathroom. Cedar shingles covered the 7-in-12 pitched roof. End elevation details consisted of two pairs of double-hung sash windows spaced symmetrically on the first floor, with a smaller pair in the gable end for upstairs bedroom spaces. The gables carried cornice returns up to the edge of the windows. The residence showed unique methods and materials in terms of other construction in Alaska. Although somewhat similar in form to the housing at its companion station, Point Retreat, the Guard Island quarters used concrete brick for walls. A molded-cement water table capped the concrete foundation. The 8- by 4- by 2-inch gray, rough surfaced concrete brick lay in a double course; cast-concrete casings formed the surrounds for openings. Another detailed cement-molded trim, which mirrored the water table, defined the entablature line at the top of the walls.

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The interior arrangement consisted of a 6-foot square central hall bay with central stairwell and rear pantry flanked by a 14- by 24-foot combination living and dining room on the south side. The other bay included an equally sized front bedroom and kitchen space, the latter accessed by a rear concrete porch and stairs. The kitchen was remodeled in 1957 by installing metal cabinetry and "Marlite" finishes. A girder truss supported the upper floor, which included two additional bedrooms flanking the stair hall, with storage under the eaves. Ceiling heights were 8'6" for the main floor and 8'0" on the second. Surface finish was plaster on metal lath. The two-thirds basement was equally divided on the north end into a laundry room and a furnace room. A concrete cistern off the southwest corner of the building provided water supply.

Radio Beacon Towers

Ship radio operations began in 1938, and additional tower systems were added in 1956 as aids to aircraft navigation. Remaining tower features consist of concrete support piers and anchor points. One set of four piers lies about 20 feet southeast of the fog-signal building. These appear to date from the original beacon installation. By 1950, the radio antenna system consisted of a mast located 10 feet west of the radio room and another wood mast at the cistern for the 1924 residence. An existing pair of tower pads marks the final system for a radio beacon antenna system. Towers stood on the north half of the island, one immediately east of the original residence building and the other at the north tip. The system was installed in 1963 and consisted of two 60-foot masts supporting a 230-foot antenna wire along with a fenced enclosure for the coupler unit near mid-span of the wire.

Miscellaneous Buildings and Structures

Field observation and maps held by the U.S. Coast Guard show several other structures and buildings associated with the lighthouse station. These include the station flagpole, which formerly stood halfway between the residential area and the light and fog-signal building. The pyramidal concrete base and stub of the flagpole still remain, although not in the original location. Another relatively unique feature of the station was a "rain shed" platform adjacent to the oil house. The platform had a horizontal surface of corrugated metal sheeting supported by a braced timber column structure. The 40- by 30-foot surface tipped toward a trough along the east side, which distributed the collected rainwater to a nearby aboveground tank.

Several relatively short-lived buildings and structures show on a 1950 plat map, but are not represented in other historical photos or drawings. These include a blacksmith shop about 15 feet off the southwest corner of the signal building, a carpenter shop adjacent to the tram storage building, and an outhouse on the edge of the bluff west of the signal building. Indications of these buildings were observed during field investigation. A final structure consisted of a saltwater intake structure at tide level on the west side of the island. The unit pumped saltwater for use in sanitary facilities to conserve fresh water supplies.

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Narrative Statement of Significance:

Alaskans have relied on and continue to rely on their marine highway as one of the important commercial links to the Lower 48 and the Pacific Rim. Since 1904, the Guard Island Light Station has served an important role as part of a string of aids to navigation guiding ships to the commercial and economic centers of Alaska. Both treacherous reefs and treacherous seas confront mariners as they wend their way up the coast to Skagway, Anchorage, the Aleutians, and the Yukon drainage. The lighthouses of Alaska in aggregate represent not only the danger associated with crucial maritime travel, but also stand as beacons to the economic development and exploitation of the farsighted purchase of the territory by the United States in 1867. Prior to the fledgling beginnings of air travel in the 1920s and construction of the Alcan Highway during World War II, shipping provided the only connection between the states and the wild but opportunistic ventures of the Alaska territory.

The Guard Island Light Station is significant under three of the four main National Register criteria. Although the current station was built in 1923-1924, it clearly maintains an integrity that conveys its relationship to the critical need for navigational aids as first established in response to the rush for gold at the turn of 20th century. As such, its feel and association with the events that fostered commercial development of Alaska and the awareness of that territory on the national consciousness remain. The architecture of the remaining light and fog-signal building, along with its twin at Point Retreat, represents the beginning of a simplified Moderne architectural style within the Alaska lighthouse system. In addition, the remaining features, observed surface artifacts, and probable subsurface archaeological resources associated with light station activities form an archaeological site that has the potential to address questions related to occupation and activities during the early days of the facility. The relevant period of significance, therefore dates between 1904 when the first light was lit to 1953, the latter based on the 50-year threshold.

DEVELOPMENT OF NAVIGATION AIDS IN ALASKA

The Russian explorer, Vitus Bering, first sighted Alaska in 1728 and his expanded expedition in 1740-1741 provided the impetus for the first permanent Russian settlement at Kodiak in 1784. A land of rich natural resources, Alaska has depended on the sea for communication, transportation, growth, and development since the initial Russian occupation. Given its northern climate and rugged coastline, however, the critical maritime connections have been challenging. Historian James A. Gibbs[1] described the territory as having "a wicked coastline, broken and battered with bold outlying ridges, and inside passages bristling with sharp turns, narrow defiles, and jagged

[1] Gibbs, James A., Jr. 1955. *Sentinels of the North Pacific*. Binford & Mort, Portland, Oregon

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headlands of the kind that give pilots grey hairs long before their time..." The coast, according to Gibbs is "...one of the best-filled marine graveyards anywhere."
American exploration by the U.S. Coast Survey shortly after the purchase of Alaska by the United States in 1867 resulted in recommendations for establishing light stations in Alaska as part of a study that covered Oregon, Washington Territory, and Alaska.[2] The report by George Davidson of the U.S. Coast Survey recommended a series of lighthouse locations near Sitka, Kodiak Island, and near Dutch Harbor in the Aleutians. Implementation of the recommendations, however, waited until the need became critical. Only a series of buoys and unlighted daymarks were placed but no lights or lighthouses.

Marine commercial traffic increased significantly throughout the 1870s and 1880s due to initial mineral discoveries and commercial fisheries, but in 1890, Alaska had only 27 buoys and 15 daymarks, with no lights or fog signals[3]. Although more protected than the open sea, the Inside Passage route through Southeast Alaska contained numerous marine hazards. In particular, the areas of the Tongass Narrows and Wrangell Narrows presented serious obstacles to safe navigation. At the time, Alaska fell under the command of the 13th Light House District headquarters at Portland, Oregon. The district also commanded the coastlines of Washington and Oregon, and these states received first priority. Only one buoy tender, the *Columbine*, covered all coastlines and could attend to Alaska only in the summer months. Initial visits to place and tend markers began in 1886.

Increasing traffic on the Inside Passage translated into greater losses. The decade of the 1880s saw wrecks with a total loss of over $40 million. Beginning in 1890, the federal Lighthouse Board pushed Congress for funds to construct a light and fog-signal station on Mary Island, which lies in the Revillagigedo Channel at the south end of the Tongass Narrows near Ketchikan (Guard Island protects the northern entrance to the narrows). The Board was ignored. It took the excitement, activity, and hardships of the Klondike Gold Rush to bring attention to Alaska. As miners, geologists, and entrepreneurs flocked north, the number of wrecks climbed substantially. The number of shipwrecks in Alaska in the 1880s and early 1890s averaged less than 10 annually. Between 1898 and 1899 alone, at least 46 vessels perished.[4] With the increased vessel traffic, the Lighthouse Board pushed again for funding. The Board proposed a series of light stations, mainly servicing the Inside Passage route to Skagway. Congress acted and appropriated $100,000. Immediately the Engineer and Chief Inspector of the 13th District conducted a

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[2] U.S. Senate, Executive Document 53, 40th Congress 3rd Session. Message of the President of the United States in relation to Points upon the coasts of Oregon, Washington Territory, and Alaska , for light-houses.

[3] Alaska Department of Natural Resources 1979. Aids to Navigation in Alaska History. Report authored by Charles M. Brown under the Alaska Office of Statewide Cultural Programs, Alaska Division of Parks.

[4] U.S. Mineral Management Service 1992. Shipwrecks of the Alaska Shelf and Shore. OCS Report MMS 92-0002. U.S. Department of Interior, Anchorage, Alaska.

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detailed examination of southeast and western Alaska.[5] They recommended 15 sites, the majority in Southeast Alaska, to be funded by supplemental appropriations of $300,000. After initiating design for two key locations, the Board provided a prioritized list indicating that the top four sites included Lincoln Rock, Mary Island, Tree Point, and Guard Island. These four locations covered the southern entry into Alaskan waters through the Tongass Narrows and north through the Clarence Strait along the main route to Skagway and the gold rush trails.

Planning, designs, and bids under the 13th District were developed between 1901 and 1903 under a total appropriation of over $500,000. By the end of 1903, when the Board was transferred to the Department of Commerce, five light stations were in operation. Six more lit their lamps in the next year. With the addition of the Eldred Rock station in 1906, the first major lighthouse complement had been completed. Only four more stations ever were added to the system.

Mining booms in the Yukon, discovery of copper at Kennicott in the Copper River drainage, construction of railroads from Seward and Cordova in the Gulf of Alaska, and increased traffic to the Yukon drove the subsequent limited additions to the chain of light stations that marked the marine highway. Supplemental stations included the Cape Hinchinbrook (1909-1910) and Cape St. Elias (1915-1916). Both extended navigation from the Inside Passage into the Gulf of Alaska for ships headed for Cordova, Valdez, and Seward in response to Copper River mining and the construction of the Alaska Railroad. The commitment by the federal government to the railroad drove additional measures related to sea traffic. In conjunction with a reorganization that abolished the Lighthouse Board and created the Bureau of Lighthouses, more commonly known as the Lighthouse Service in 1910, the government established the 16th District in Ketchikan to serve exclusively Alaskan waters. The Secretary of Commerce, William C. Redfield, speaking in 1914 noted that the value of the railroad would never be realized until Alaskan waters were as safe to shipping as in British Columbia.[6]

With the addition of the St. Elias light in 1916, however, conditions had improved to the point that no shipwrecks were reported for the year. The job of the lighthouse service, however, did not end there. Alaska was one of the first places to use newer technologies such as acetylene lamps at both light stations and at unattended lights. During the 1930s, radio beacon facilities were installed at many of the stations and at points along the coast. In addition, the Lighthouse Service began a modernization program, beginning in 1923 that replaced the original deteriorating structures with solid concrete towers. The replacements were designed out of the Ketchikan office and, on the whole, are unique to the national lighthouse system.

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[5] U.S. Senate 1901. Light-house and Fog-signal Stations in Alaskan Waters. Report No. 1909, U.S. Senate, 56th Congress, 2nd Session. U.S. Government Printing Office, Washington, D.C.

[6] DNR 1979

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In 1939, authority for operation of the lighthouses transferred to the U.S. Coast Guard. The Coast Guard inherited and, in particular due to the driving force of world war, improved upon an efficient system that formed the heart line of Alaskan Commerce. Over the years, improved technologies have affected the operations; it is a tribute to the initial planning, however, that most of the initial installations still shine their beacons to the sea. In the late 1960s most stations were automated using diesel generators and keeper facilities were demolished; recent improvements have replaced the generators with solar battery systems. The lights still shine, but the quiet structures are only shells of the originals. No longer do the voices of keepers, wives, and children echo about the remote promontories; all that is left is the efficient whirr of electronic equipment and the winds.

THE GUARD ISLAND STATION

The Guard Island Station was established under the early 20th century impetus to significantly improve the system of aids to navigation in Alaska. It still serves its primary role. Of the stations recommended under Congressional appropriations in 1901, the station ranked sixth out of fifteen sites. The location played a critical role in promoting shipping along the Southeast Alaska Inside Passage at the north end of the Tongass Narrows. The U.S. Lighthouse Board had recommended and prioritized a string of lights beginning at the boundary with Canadian waters northward to the primary gold rush destinations of Juneau and Skagway. The Tongass Narrows were noted by mariners as one of the more difficult passages along the route.

The Executive Order signed by President William McKinley in January 1901 established the Guard Islands lighthouse reservation. Surveyors dispatched by the 13th District provided topographic information on both the main and smaller islands in September of 1902. Maj. W.C. Langfelt, of the Army Corps of Engineers and attached as the engineer for the 13th District, supervised the designs for the island facilities. Final designs were sent to the Lighthouse Board on July 2, 1903. Shortly thereafter, a construction crew hired directly under the agency began work on the island. Clearing, grading, and excavation work was completed before winter weather halted work in January 1904. Work resumed in June, with first lighting occurring on September 15, 1904.

The Guard Island station differed significantly from the others built during this first phase of construction. The tower consisted of a rectangular slightly pyramidal wood structure with an oil-fired fixed buoy-style lens-lantern light that was displayed 34 feet above land and 79 feet above water. The otherwise white light had a red sector lens covering a 34 degree angle to the southeast toward Vallenar Point at the north end of Gravina Island and the Tongass Narrows. Original drawings show a lantern house design typically used for "Apparatus of the 4th, 5th, and 6th Orders" with the design originating out of standard plans developed by the Third Lighthouse District in New York, but the light did not include a fresnel lens system. The station was classified as a minor aid, more for technical reasons of equipment rather than the importance of function.

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The Guard Island station was unusual for other reasons. The fog signal apparatus was a clockwork-driven bell mounted on the north face that chimed every 20 seconds.[7] While not unique to other places in the lighthouse service, this is the only station-mounted bell system known within the Alaska group. As described in Section 7, the station included one keeper's house, a boathouse, and a tramway system. The first keeper, John O. Carlson, occupied the house with an assistant keeper, Gus Hall. Subsequent keepers brought families to the island, and a second house, finished in 1924, provided separate space for two families. In fact, the Guard Island group gained a local reputation in the Ketchikan region for their contentiousness: "Actually, back in the early part of this century, Guard Island's two families were known best for their bickering, petty grievances against one another, and escalating tensions."[8]

The harsh Alaska climate took its toll on wood structures. Improvements at Guard Island were anticipated as early as 1917 when the Ketchikan Depot designed a temporary structure for the light and fog bell. Appropriations and design for a new light and fog-signal building were underway in 1921 with design completed by March 2, 1922. As with the initial station, weather delayed construction, and full operation began in February 1924. The new keepers house, built as part of the program, employed a novel construction method using concrete brick. Unfortunately, the building remains only as a demolished ruin.

For all intents and purpose, the Guard Island light station achieved the goals expected for a navigational aid. A review of an inventory of Alaskan sea disasters shows only four wrecks near the station.[9] One occurred in 1912 when the gas schooner *Laclabell* sprang a leak and foundered 1.5 miles west of the islands. Two accidents, a collision and a fire occurred during the rebuilding phase in 1923 near Vallenar Point; and a gas screw, the *Panama*, sank in 3 minutes after opening a seam in the hull between Guard Island and Caamano Point. Records do not show that the keepers were involved in rescue action for any of these events.

Keepers, however, did launch their boat during the national Prohibition. "A trolling boat with no pilot at the helm drifted by, listlessly licked by the waves, bobbing about on an aimless course. The keepers rowed out to it, and inside the boat's cabin, they discovered the bodies of two men who had been brutally murdered." According to locals "bootlegging and gambling were rampant in Southeast [Alaska]. It wasn't that uncommon for folks who got in over their heads to show up dead."[10]

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[7] U.S. Lighthouse Board 1908. List of Lights, Buoys, and Daymarks on the Pacific Coast. U.S. Government Printing Office, Washington, D.C.

[8] Alaska Magazine, November 1990. Guard Island. P.31

[9] U.S. Mineral Management Service 1992. Shipwrecks of the Alaska Shelf and Shore. OCS Report MMS 92-0002. U.S. Department of Interior, Anchorage, Alaska.

[10] Alaska Magazine, November 1990. Guard Island. P. 31

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The Guard Island station has been subject to improvements of technology throughout its years of service. None are outstanding in terms of timing relative to either Alaska or the Lower 48. A radio beacon system was installed just prior to World War II, which complemented a system begun in the early 1930s. The transition to electrical lights also occurred in 1939. As systems were automated in the 1950s and 1960s, the need for full-time caretaker diminished. The station was automated in 1969 and more recently shifted to solar power. The original keeper's house, then used by assistants, was demolished in 1962, and the remainder of the main compound was demolished in 1970.

SUMMARY

The Guard Island Light Station is significant because of its association with the critical development of a system to protect commerce and transportation in Alaska (Criterion A), first along the Inside Passage of Southeast Alaska, and then over a broader expanse of coastline at the beginning of the 1900s. The heightened awareness of the Territory created by the rush for gold and other natural resources in the 1890s resulted in a population explosion and significantly increased maritime traffic from the West Coast to Alaska. The path north, the only transportation connection at the time, was perilous. As traffic north increased, so did the number of casualties and the demand for federal intervention to protect the safety of seafarers.

In the initial recommendations to Congress, Guard Island ranked high in the list of priorities of aids to navigation. The Tongass Narrows, which lies immediately southeast, are dotted with names given to reefs and rocks memorializing wrecks of the 19th century. Guard Island forms one link in the chain of major light stations that were established in the treacherous Alaskan waters as a response to the increase in maritime traffic that arose with the Alaska boom at the turn of the 20th century. Although the intact buildings and structures from the original 1904 station no longer exist, the 1924 light and fog-signal building, in much its original form, stands as a representative beacon to the critical system of navigational aids that opened Alaska to development.

The 1924 building also retains the necessary qualities to qualify under architectural significance (Criterion C). It was designed in Alaska at the main lighthouse District base in Ketchikan specifically for Alaskan conditions. The design for the Guard Island Light Station's fog-signal building and light tower clearly reflect the early influence of a Modern style idiom. The building stands much as it did when first built. With the exception of the emergency beacon protruding from the cupola of the lantern house and an associated access structure, the building presents itself up close and from down the channel with the same look and feel as 80 years ago.

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Geographic Data (cont.)

Verbal Boundary Description:

The boundary of the Guard Island Light Station includes all lands within the reserve as originally surveyed by 13th Lighthouse District engineers in 1902 and transmitted to the Light-House Board in 1903 (Figure 2). This includes all surfaces that are exposed at extreme low water as defined at the time of survey and encloses both the main and smaller Guard Islands. The outline is irregular, but extends roughly 1400 feet N-S by 500 feet E-W. The Guard islands lie within the SW corner of Section 15 and the NW corner Section 22, Township 74 S, Range 89 E, Copper River Meridian.

Boundary Justification:

The boundaries have been set to low tide (and incorporates all of both islands, which are connected at low tide) for two primary reasons: historical archaeological potential and visual impacts to the property. Archaeological resources relating to lighthouse occupation occur both on the main island and along tidal margins. In addition, features of the tramway system run to the extent of low tide along the northeast portion of the island. Areas of potential archaeological materials, however, are not ubiquitous. Primary zones are shown on Figure 2. The boundary incorporates the standing light and fog-signal building and its associated cistern along with all observed features associated with the former station facilities. The post-1980 solar panel structure on top of the historic cistern also lies within the described boundary, but as discussed above, does not contribute to the resource.

Secondly, the communication of significance for the Guard Island Light Station has much to do with the integrity of its setting. The existing light and fog-signal building perches atop a small natural outcropping at the juncture of the Tongass Narrows and Clarence Strait. The raw nature of both Guard Islands counterpoint the built feature that, in part, was located here to protect maritime traffic from these islands and nearby shoals. As such, the natural outcropping form as much of the overall setting as does the lighthouse itself.

FIGURES AND MAPS

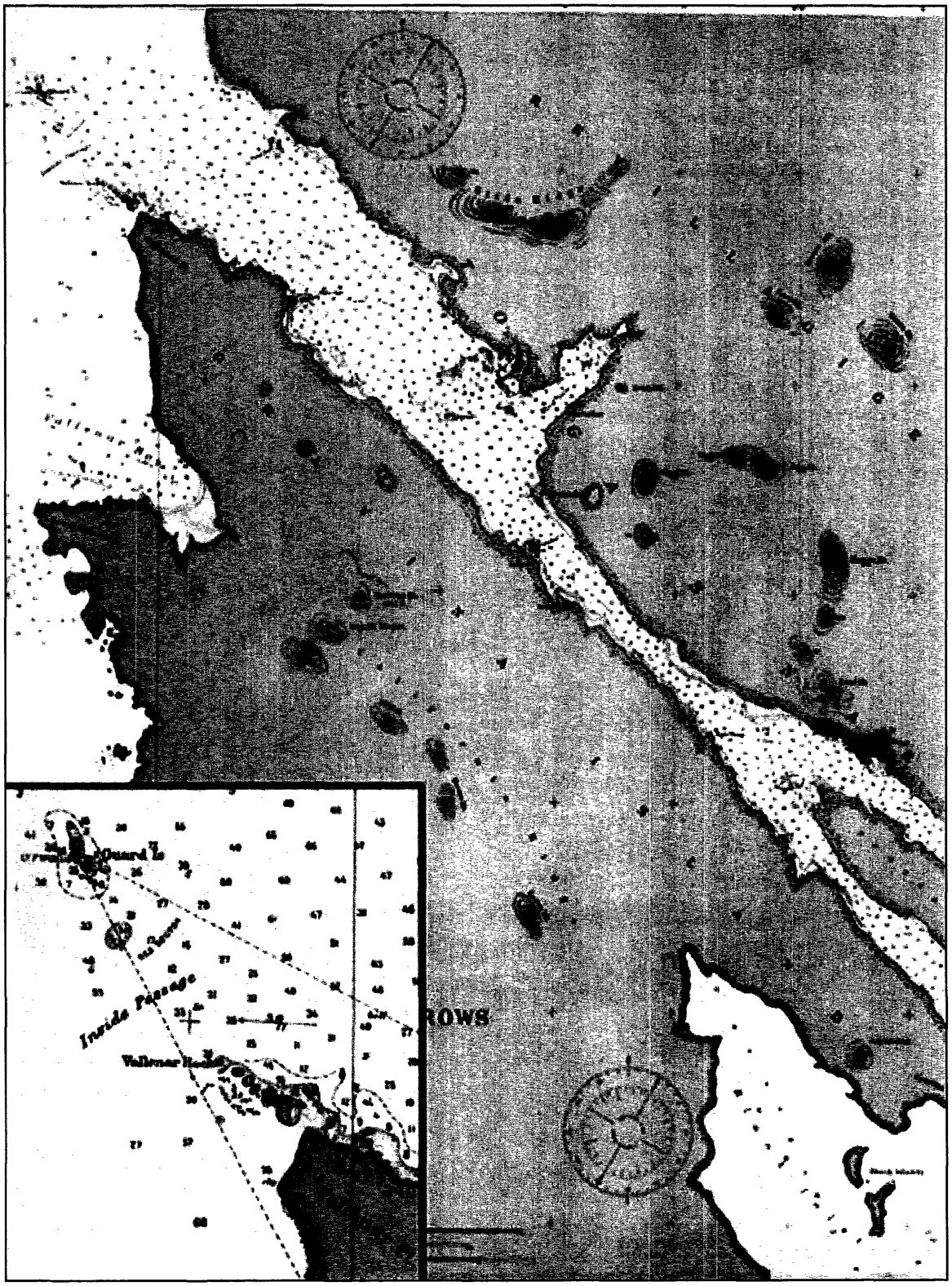


Figure 1 – Guard Island Location Map. Source USC&GS Tongass Narrows 1911

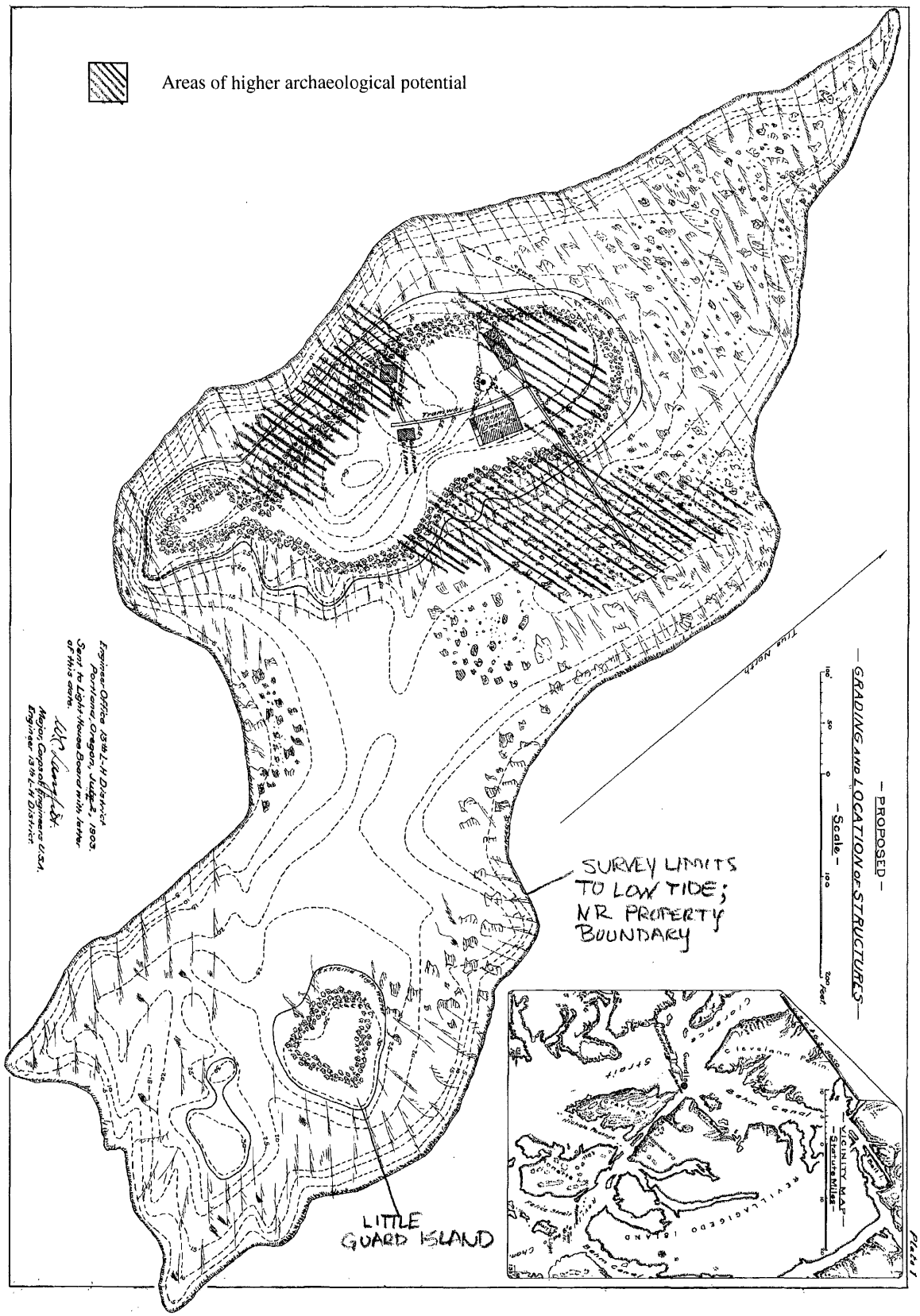


Figure 2 – Guard Islands Property Boundaries and Areas of Higher Archaeological Potential (Source: original reservation survey and 1903 Light Station layout plan set)

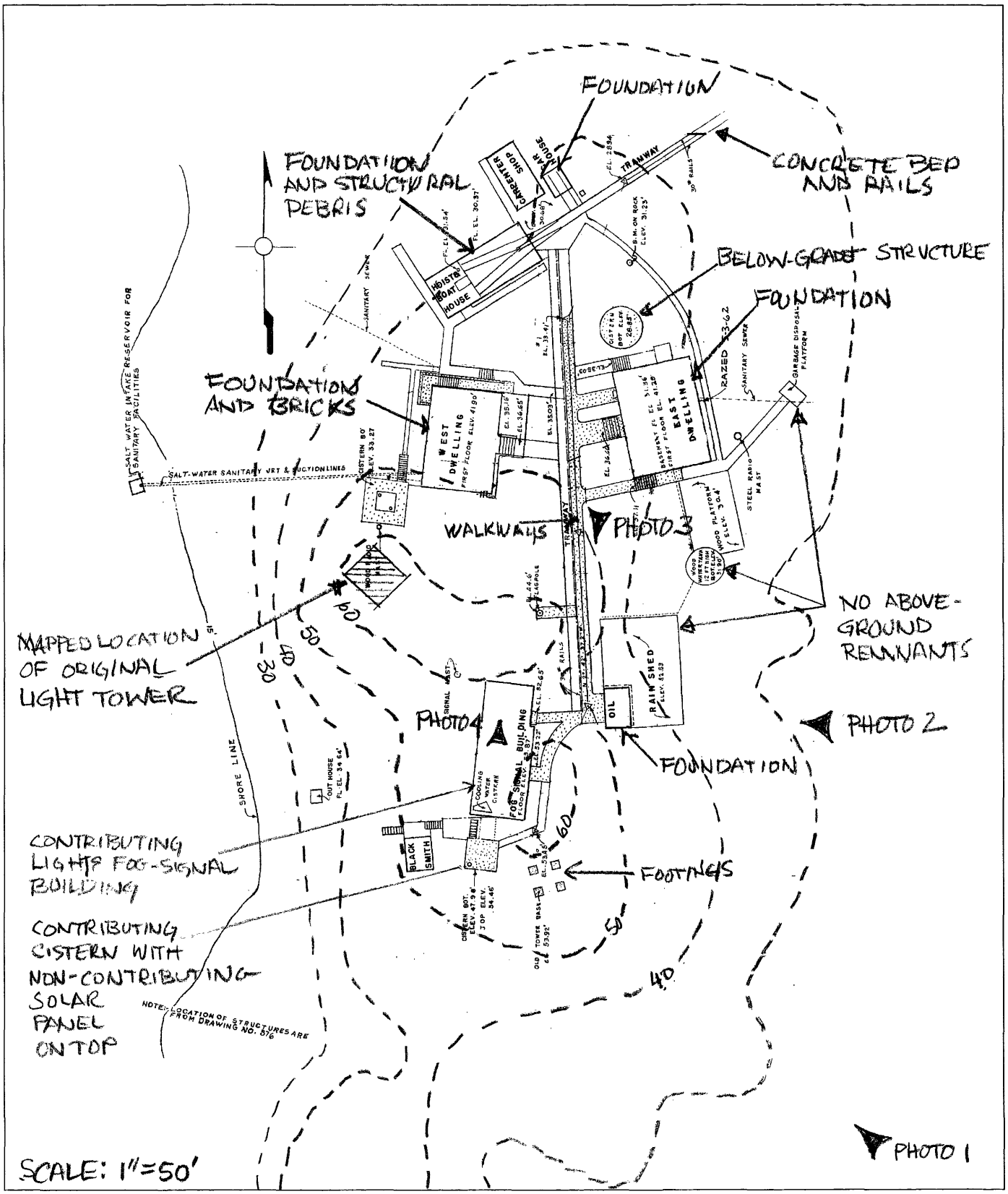
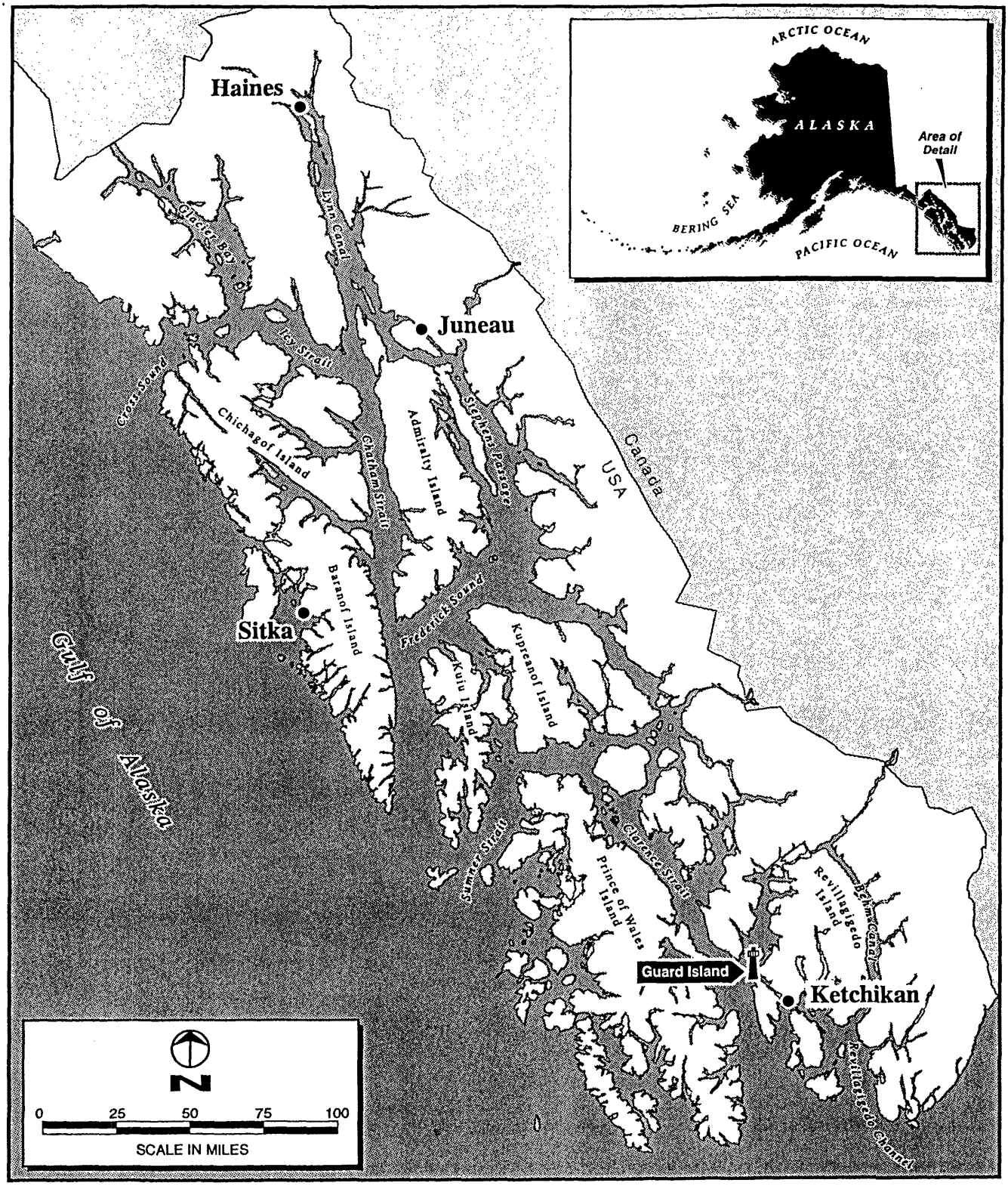


Figure 3 – Layout of Existing Guard Island Light Station Features
(Sources: USCG Drawing S-0627 and original station topographic survey)



Source: USCG Civil Engineering Unit, Juneau, *SEAK Lighthouse Map*

Figure 3-1

Vicinity Map

United States Coast Guard
Guard Islands Light Station

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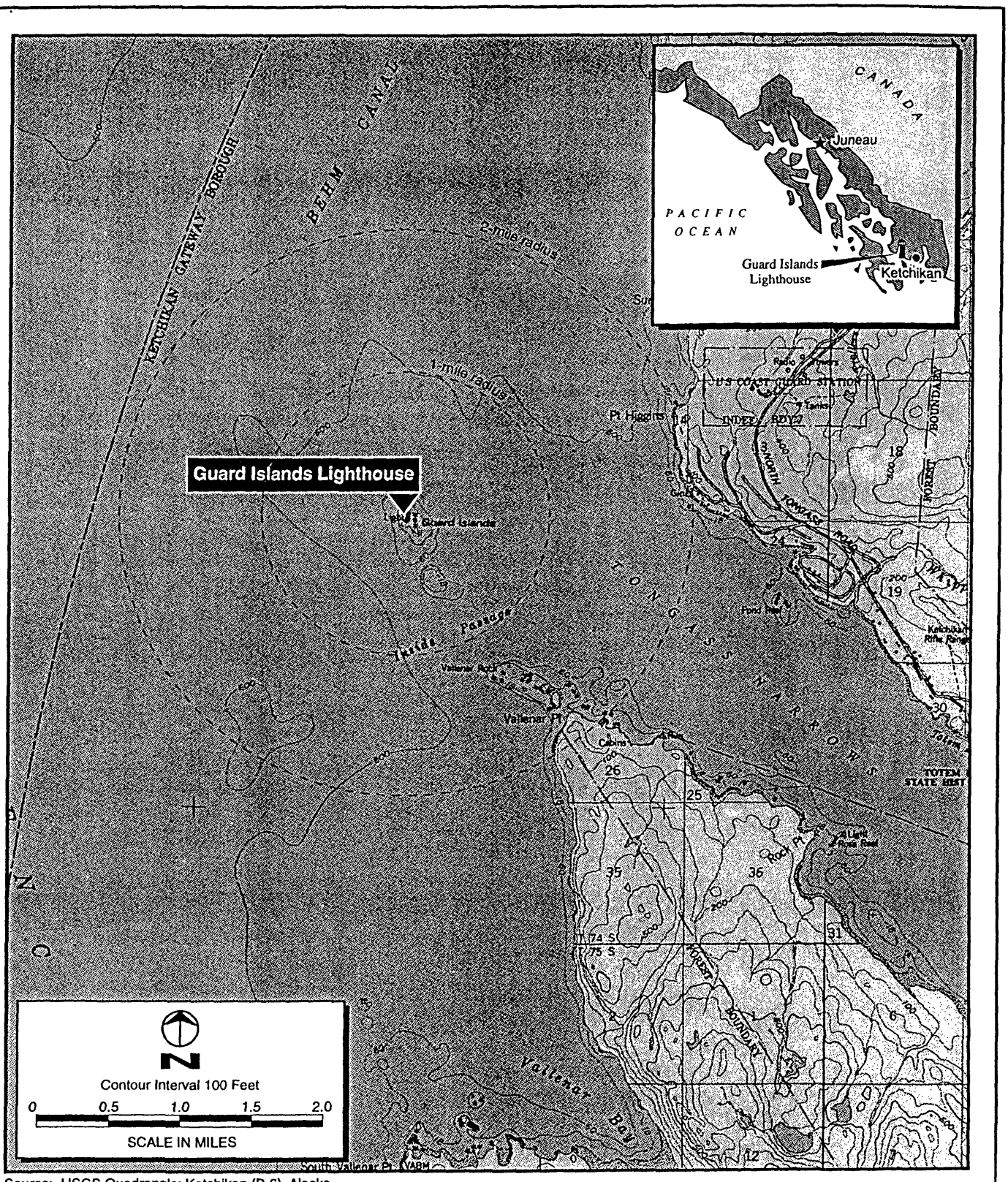

Source: USGS Quadrangle: Ketchikan (B-6), Alaska

Figure 3-2

Location Map

United States Coast Guard
Guard Islands Light Station

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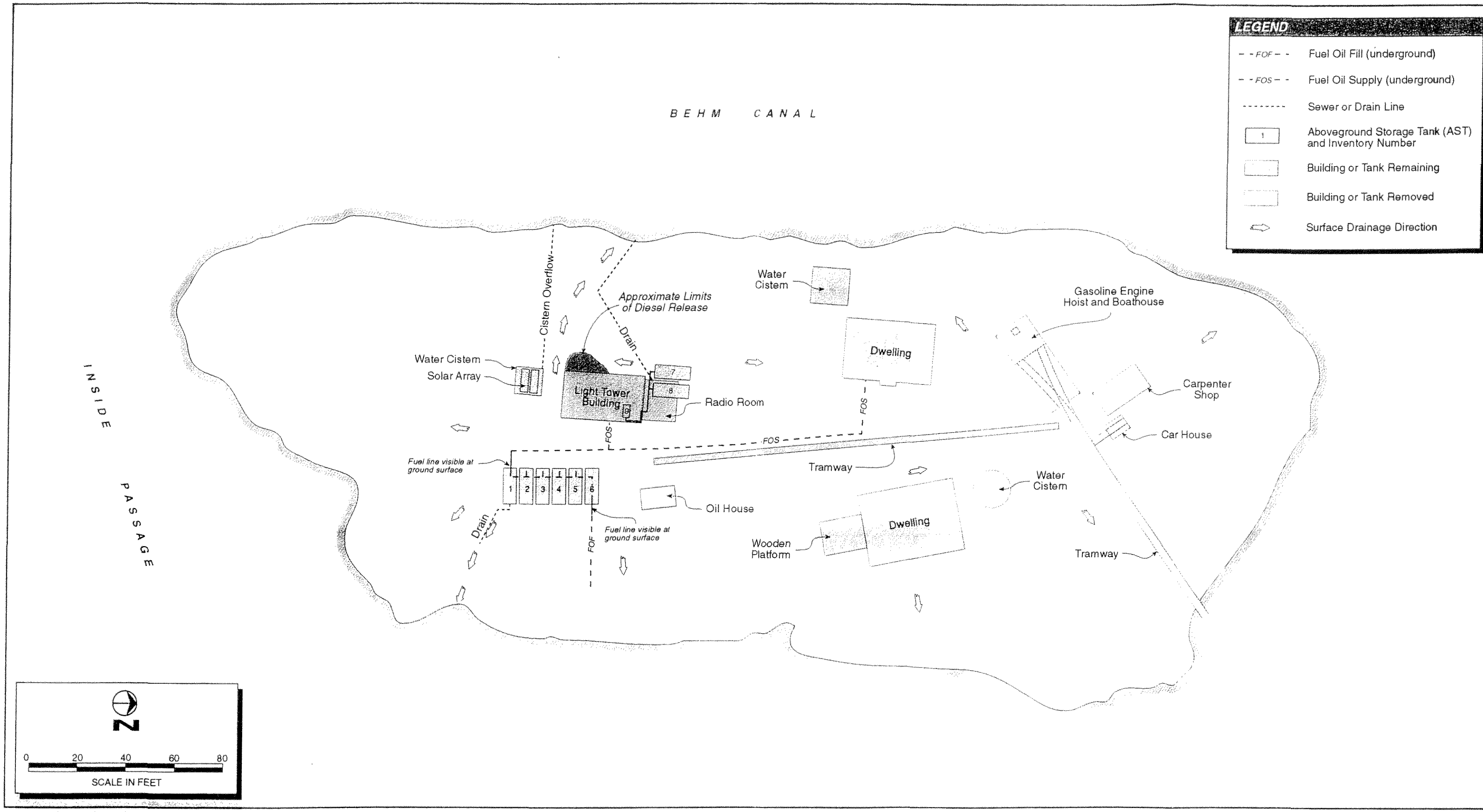

Source: USCG 17th District Drawing No. M-731

Note: See Table 6-1 for storage tank inventory

Figure 3-3
Site Plan
United States Coast Guard
Guard Islands Light Station

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HISTORICAL PHOTOGRAPHS

ORIGINAL DRAWINGS