

Small Scale Features

The small scale features at the Long Island Light Station include concrete walks, concrete footings, a cistern, signs and other small site elements. The small scale features range in condition from good to poor. The following describes the contributing small scale features that are important to the light station's history of navigation. They are the features that convey the development of navigational technology at the light station and influenced the manner in which the station operated. At the Long Island Light Station these notable features include concrete walks, concrete footings of nonextant towers, the cistern and piping, and remnant boardwalk. Descriptions and analysis of individual features are organized by the three individual sites and described below. Additional descriptions of other individual features, both contributing and noncontributing, and their respective condition are included in Table LI-4.

LaPointe Site

Concrete Walks

Existing Condition. Similar to several of the Apostle Islands light stations, the concrete walks appear to be constructed of precast units 2.5'×4'×4" thick with some smaller units also installed. The units have a fine aggregate finish and tooled edges. Other portions of the concrete walks appear to have been poured in place to infill odd shapes and address building edges. The shifting sands of Long Island have covered many of the walks. Additional walks may be uncovered with further investigation. Overall the concrete walks are in good condition with only a few slabs showing significant cracking and sloughing along the edges.

Analysis. The concrete walks on the grounds were installed during the Light Towers (1890-1938) and Triplex/Coast Guard periods (1938-1965) many of them following the previous layout of wood planks typical of the Apostle Islands. Historic photographs indicate the concrete units were placed on top of the ground surface rather than excavated and placed. The walks are directly related to the unique operation of the three connected sites of the light station. The production and installation of the precast units was common to the other light stations and conveys the interrelationship of the light stations. The concrete walks are important to the light station due to their installation during the period when the light station was at its most vibrant. The concrete walks are contributing features.

Concrete Footings

Existing Condition. There are two sets of concrete footings on the LaPointe site. Concrete Footings – A (Radio Beacon) are located north of the Fog Signal Building foundation and Concrete Footings – B (Radio Antennae) are in the forest approximately 120' southeast of the Fog Signal Building foundation.

Concrete Footings – A include four footings spaced at 6' on center in a square pattern, each with a 2' square base, narrowing to 1.5' square at the top at 4' above grade. The vertical edges have a 1" chamfer. The top of each footing has galvanized mounting bolts and base plates. Concrete Footings – A are in good condition.

Concrete Footings – B include four footings with 4' × 4' square bases, spaced at 8' on center in a square pattern. The footings rise approximately 3-4" above adjacent grade and each have a 12" × 12" centered concrete platform with a metal support. Concrete Footings – B are in fair condition.

Analysis. The concrete footings are important to the cultural landscape because their installation occurred during the period when the light station was at its most active and they represent an advance in navigational aid technology at the light station. Concrete Footings – B are the footings for the radio beacon erected in

1927, and Concrete Footings – A are the base of the radio tower erected in 1936. Both steel frame towers were taller than the 67' LaPointe Light Tower, and the absence of these two vertical elements today alters both the site's spatial organization and views to the grounds from Lake Superior from the period of significance. Both towers were removed in the 1980s and their concrete footings are important contributing features marking the locations of two nonextant features.

Cistern

Existing Condition. The cistern is located approximately 75' north of the Fog Signal Building foundation and is surrounded by encroaching vegetation. It is 8' in diameter, 2' above grade, and is brick with a concrete cap. Depth of the cistern is unknown. The cistern is in good condition.

Analysis. The cistern is one of the oldest extant features at the LaPointe site, built in 1891 after the Fog Signal Building in 1890. The cistern was part of a water supply system necessary for the operation of the fog signal. In 1901 the water supply system was improved and the cistern continued to be used for water storage. The cistern is an important contributing feature since it represents some of the earliest construction at the LaPointe site. The cistern is currently hidden from view under encroaching vegetation, and has trees growing directly adjacent to it that could potentially cause damage to the cistern. The loss of the cistern would diminish the integrity of the cultural landscape.

Remnant Boardwalk

Existing Condition. The remnant boardwalk is located approximately 100' north of the Fog Signal Building foundation. The boardwalk is constructed with milled wood planking and is 4' wide and approximately 40' in length. The boardwalk is in poor condition.

Analysis. Throughout the historic periods at the LaPointe site, several boardwalks have existed connecting the Fog Signal Building to the shoreline and landing cribs/docks. Historic photographs indicate that both elevated boardwalks and wood planks laid directly on the sandy surface have existed. The various boardwalks, while different in appearance, all followed the same alignment, leading straight north from the concrete walk east of the Fog Signal Building to the shoreline. There are large portions of the boardwalk missing both north and south of the extant boardwalk; however it remains in its historic alignment and is a contributing feature.

Table LI-4: Small Scale Features – LaPointe Site

Feature	Site Image #	Description	Condition	Contributing? /Rationale
Concrete Walks (1909- 1938)	LI-51, LI-52	Concrete walks, 30"-36" in width connecting buildings and site improvements	Good	Contributing; see text
Concrete Footings – A (c. 1936)	LI-53	Four concrete footings, rising approx. 4' above grade. Former location of steel frame radio tower (visible in Historic Image LI-14).	Good	Contributing; see text
Concrete Footings – B (1927)	LI-54	Four concrete footings in forested area southeast of light station. Footings are 4' x 4'	Fair	Contributing; see text

		square, 3-4" above adjacent grade. Former location of steel frame radio beacon tower.		
Cistern (c. 1891)	LI-55	Round, brick cistern, 8' diameter with concrete cap, 2' above ground, depth below ground unknown	Good	Contributing; see text
Remnant Boardwalk (1897- 1938)	LI-56	Remnant wooden boardwalk, 48" width. Location of boardwalk aligns with concrete walk to east of Fog Signal Building foundation.	Poor	Contributing; see text
Flagpole (c. 1939)	LI-57	Steel flagpole (fallen) with cleat on 36" x 36" concrete base	Poor	Contributing; related to Triplex, installed during period of significance
Rubble Pile (unknown)	LI-58	Rubble pile containing corrugated metal sheeting and wood – source of material unknown, possibly debris from Fog Signal Building	Poor	Contributing; from period of significance
Pipe Crib (c. 1940)	LI-59	Galvanized piping imbedded in beach – remnant of former water source for Triplex residence from Lake Superior	Fair	Contributing; related to fog signal water supply, from period of significance
Septic Bed (1938 – 1970)	LI-60	Leach field for Triplex septic system		Contributing; related to Triplex, from period of significance
Utility Box (1970 – 2009)	LI-61	Electrical transformer - switch box	Good	Noncontributing; contemporary Noncompatible
Floating Boardwalk (2009)	LI-62	4' wide wooden boardwalk placed on dune	Fair	Noncontributing; contemporary improvement Compatible; nonpermanent installation
Footpath	NA	Footpath to Chequamegon Bay covered with corrugated metal sheets	Fair	Contributing; from period of significance
Fuel Tank	LI-63	Metal fuel tank located south of Fog Signal Building Foundation	Fair	Noncontributing-compatible; installed after the period of significance

1 **LaPointe Site Small Scale Feature Photographs**



2
3 Site Image LI-51: Concrete walk south of LaPointe Light Tower, 2009 (Source: MBD DSC01349.JPG)



Area of Damaged Concrete

5
6 Site Image LI-52: Concrete walk east of Triplex, 2009 (Source: MBD DSC01343.JPG)



Site Image LI-53: Concrete footings (A) for nonextant steel frame radio tower northeast of LaPointe Light Tower, 2009 (Source: MBD P1020343.JPG)



Site Image LI-54: Concrete footings (B) for nonextant radio beacon tower, 2009 (Source: MBD DSC01408.JPG)



Site Image LI-55: Concrete and brick cistern, 2009 (Source: MBD DSC01401.JPG)



Site Image LI-56: Remnant of wooden boardwalk between Fog Signal Building foundation and water, 2009 (Source: MBD DSC01372.JPG)



Site Image LI-57: Flagpole on north side of Triplex Building, 2009 (Source: MBD DSC01340.JPG)



Site Image LI-58: Rubble pile west of Fog Signal Building foundation, 2009 (Source: MBD P1020347.JPG)



Site Image LI-59: Pipe crib at edge of water, 2009 (Source: MBD DSC01397.JPG)



Site Image LI-60: Septic bed, 2009 (Source: MBD P1020344.JPG)



Site Image LI-61: Utility box, 2009 (Source: MBD DSC01411.JPG)



Site Image LI-62: Floating boardwalk, 2009 (Source: MBD P1020345.JPG)



Site Image LI-63: Fuel tank, 2009 (Source: MBD DSC01354.JPG)

Original LaPointe Lighthouse Site

Existing Condition. The extant small scale features at the Original LaPointe Lighthouse site include portions of concrete walks and a below ground root cellar. Portions of concrete walks found adjacent to the Original Lighthouse ruin and adjacent to the Oil Building. The root cellar is located to the east of the Original Lighthouse ruin and is constructed of logs with a sheet metal roof that is partially covered with soil and forest debris. The root cellar is extant but mostly buried and in poor condition. Descriptions of the individual small scale features are presented in Table LI-5.

Analysis. The portions of concrete walks are similar to the precast units found at the LaPointe site and on other light stations in the Apostle Islands. The root cellar is collapsed and buried but provides insight into the operation of the light station and the lives of the keepers and their families. The extant small scale features Original LaPointe Lighthouse site are contributing features. Field investigations for the CLR were limited and it was noted in the 1988 archeological survey of Long Island that this site may be a productive site if further archeological investigations are to occur.

Table LI-5: Small Scale Features – Original LaPointe Lighthouse Site

Feature	Site Image #	Description	Condition	Contributing? /Rationale
Concrete Walks (1897 – 1909)		Concrete walks at structure edges	Fair	Contributing; see text
Root Cellar (1891 – 1938)	LI-64	Buried root cellar with exposed roofing and framing	Poor	Contributing; see text

Original LaPointe Lighthouse Site Photograph



Site Image LI-64: Root cellar east of Original LaPointe Lighthouse ruin, 2009 (Source: MBD IMG_9424.JPG)

Chequamegon Point Site

Existing Condition. The small scale features at Chequamegon Point include concrete walks, concrete footings, and landing crib remnants. Power poles for the overhead electric line begin at the LaPointe site and connect to the USCG Culvert Tower. Descriptions of the individual small scale features are presented in the table below.

Analysis. The portions of concrete walks extant on the site represent the terminus of the sidewalk that once linked the LaPointe site to Chequamegon Point. Small portions of the walk are visible and others may be buried under the shifting sand. The concrete footings located at the water's edge formerly held the Chequamegon Point Light Tower. The tower was moved inland to its current location but the footings remain in place on the beach and in the water. Just off the beach, in the water, remnants of former wood and stone landing cribs can be seen. The concrete walk, original concrete footings, and landing crib remnants are all contributing features.

Table LI-06: Small Scale Features – Chequamegon Point Site

Feature	Site Image #	Description	Condition	Contributing? /Rationale
Concrete Walks (c. 1909)	LI-65	Portions of concrete walk located in the vicinity of the original light tower. Portions of sidewalk covered by dunes. Portions of walk broken.	Fair	Contributing; from period of significance, relates to operation of light station.
Concrete Footings (c. 1897)	LI-66	Four concrete footings approximately 4'x4'x4' in size located at beach edge and in water. Footings remain from previous Light Tower location.	Fair	Contributing; from period of significance relates to navigational aid.
Rubble Crib Remnants (1897 – 1910)	LI-67	Stone rubble remnants of landing cribs	Poor	Contributing; from period of significance
Power Poles	LI-68	Power Poles for the electric line	Good	Noncontributing; outside period of significance Compatible

1 ***Chequamegon Point Site Small Scale Feature Photographs***



2
3 Site Image LI-65: Concrete walk at Chequamegon Point, 2009 (Source: MBD DSC01349.JPG)



5
6 Site Image LI-66: Concrete footings remain from the former location of the Chequamegon Point Light Tower, 2009 (Source:
7 MBD DSC_0021.JPG)



Site Image LI-67: Rubble landing crib remnants at Chequamegon Point, 2009 (Source: MBD DSC_0049.JPG)



Site Image LI-68: Typical power pole for electric line, 2009 (Source: MBD DSC_0088.JPG)

Vegetation

Existing Condition. Long Island is a barrier spit with ridge and swale topography, and sandy soil that supports red pine (*Pinus resinosa*), jack pine (*Pinus banksiana*), and oak (*Quercus* sp.) and contains swales dominated by sphagnum-sedge bogs. Extensive areas of the island are covered in dune vegetation dominated by beach grass (*Ammophila breviligulata*). Long Island also includes maintained areas, and historically cleared areas that have been infiltrated by the adjacent, encroaching forest.

The three sites (LaPointe, Original LaPointe Lighthouse and Chequamegon Point) have differing settings and vegetation characteristics. The LaPointe grounds are enclosed with natural forest vegetation, primarily pine, enclosing the site. The Original LaPointe Lighthouse site is completely overgrown with the naturalized forest of oak and pine. Chequamegon Point is in an open landscape of low dune vegetation. The only remnants of planted species are several cottonwoods (*Populus* sp.) and a single cultivar maple (*Acer* sp.) found in the forest at the Original LaPointe Lighthouse site. Similar to the Michigan Island Light Station, periwinkle (*Vinca minor*), a known invasive plant, can be found in the forest near the light station development.

The vegetation features, primarily related to the cleared area at the LaPointe and Original LaPointe Lighthouse sites are in poor condition. The vegetation features at Chequamegon Point are in good condition.

Analysis. Historic drawings and photographs indicate a significantly larger cleared area on the reservation existed than exists today. Since the Light Towers period (1890–1938), the cleared area of the light station has continued to decline from approximately 13.6 acres at the end of the period to approximately 2 acres in 2009. During the Light Towers and Triplex/Coast Guard periods the light station grounds were maintained as low dune/beach grass vegetation. The historic corridor connecting the three sites was maintained native soil or sand. Today, this connection has been completely lost to encroaching forest vegetation.

At the LaPointe site, approximately 9.5 acres immediately surrounding the Triplex, LaPointe Light Tower, and Fog Signal Building was historically an open clearing that was maintained primarily for visibility to and from the grounds. Today, approximately 4 acres of the original cleared area is extant. In total, approximately 55% of the open area present during the period of significance has been lost to the shifting shoreline and the growth of vegetation, primarily pine trees. The most notable loss is the open area between the grounds and shoreline of Lake Superior. Little evidence was found of domestic landscape or garden plantings on the LaPointe site.

Historic photographs indicate a substantial area around the Original LaPointe Lighthouse was cleared of, or lacked forest vegetation. Today, the Original LaPointe Lighthouse retains none of that cleared area and the grounds have been completely overgrown with naturalized forest vegetation. As previously presented, the relationship of the grounds to the Lake Superior shoreline has dramatically changed since the Lighthouse was first built. Although the sandy soil made gardening difficult, historic photographs indicate several domestic tree plantings along the sides of the lighthouse/keepers quarters. Historic documents refer to vegetable gardens in stone cribs were planted by the keepers and their families. Several cottonwoods and maples extant on the site closely correspond with historic photographs and may be original plantings or descendents of original plantings. These plantings are contributing features.

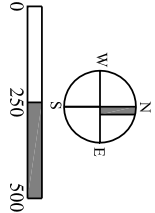
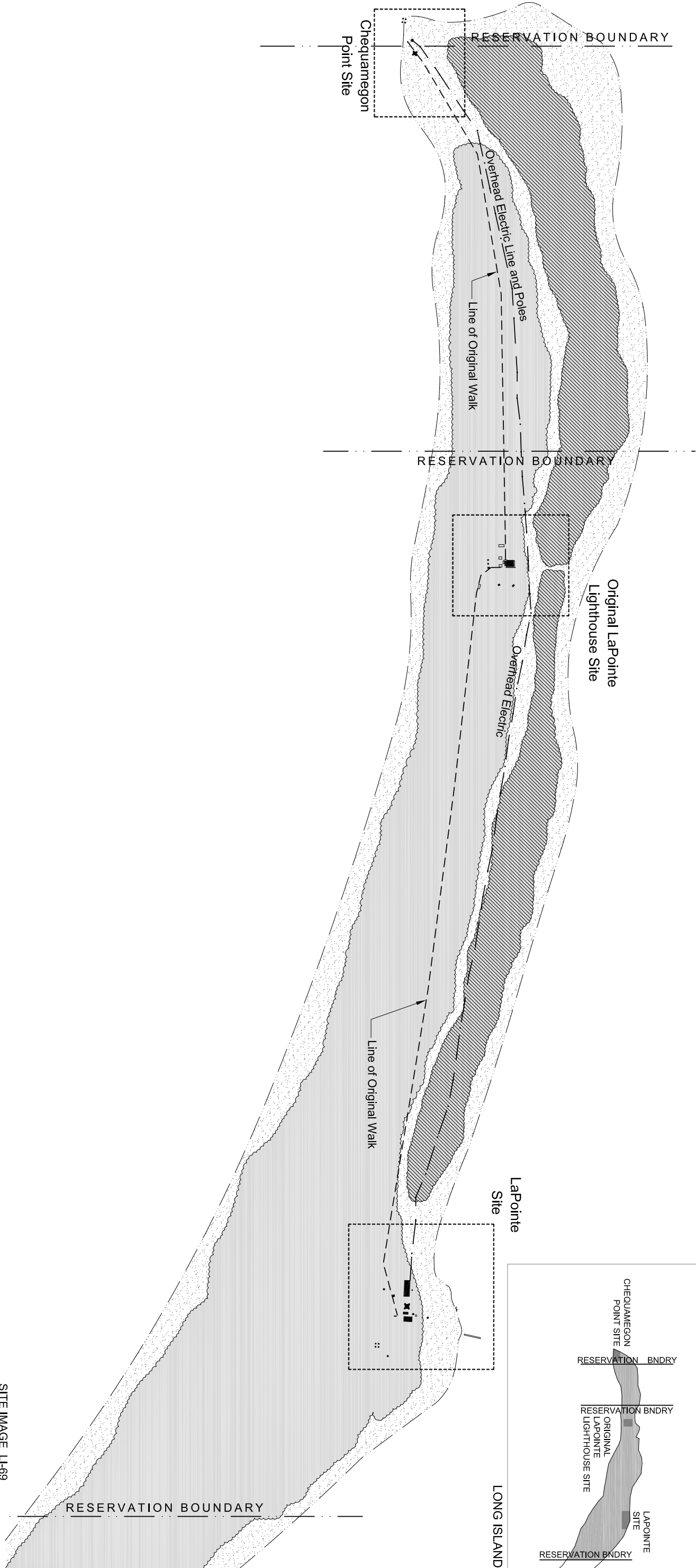
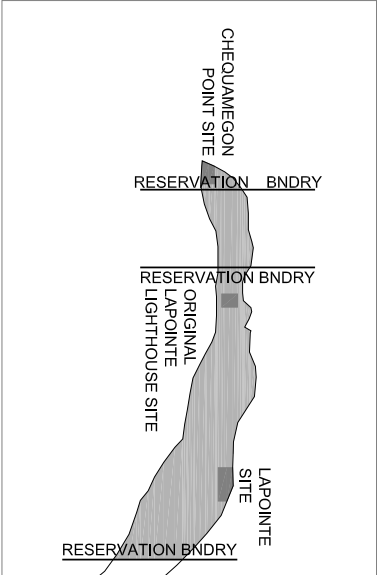
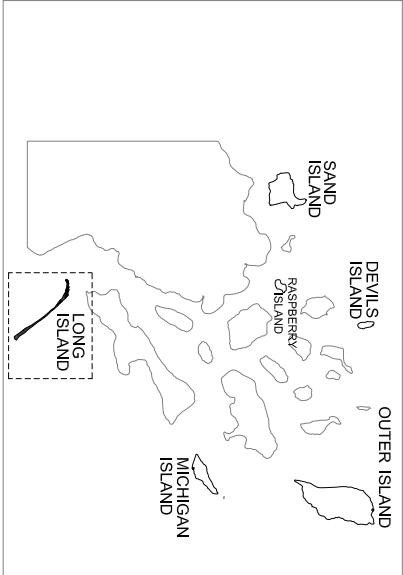
At Chequamegon Point, the site remains cleared as it was during the period of significance. The area has remained low dune vegetation with minimal forest encroachment from the east.

Periwinkle (*Vinca minor*) has encroached into the surrounding forest. No documentation was found as to where periwinkle was planted historically at the Long Island Light Station but it was commonly used as an ornamental ground cover at other light stations.

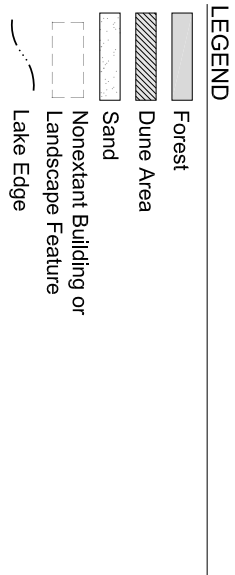
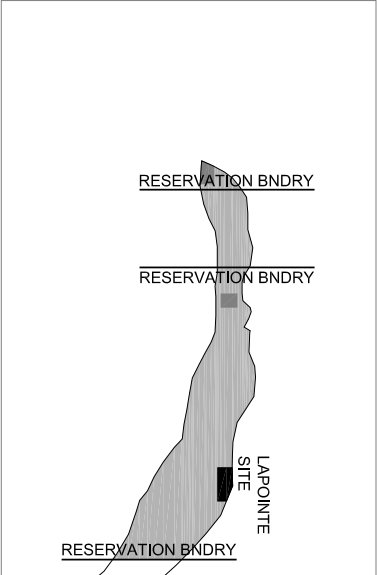
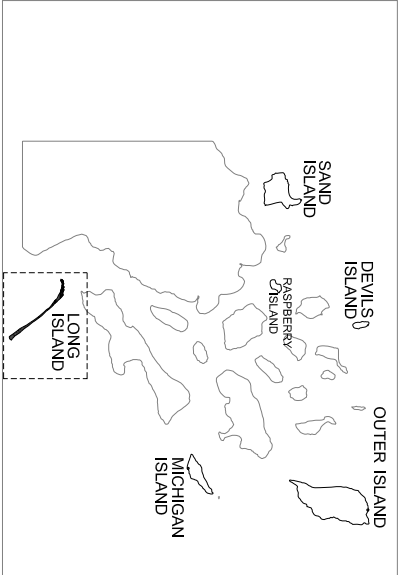
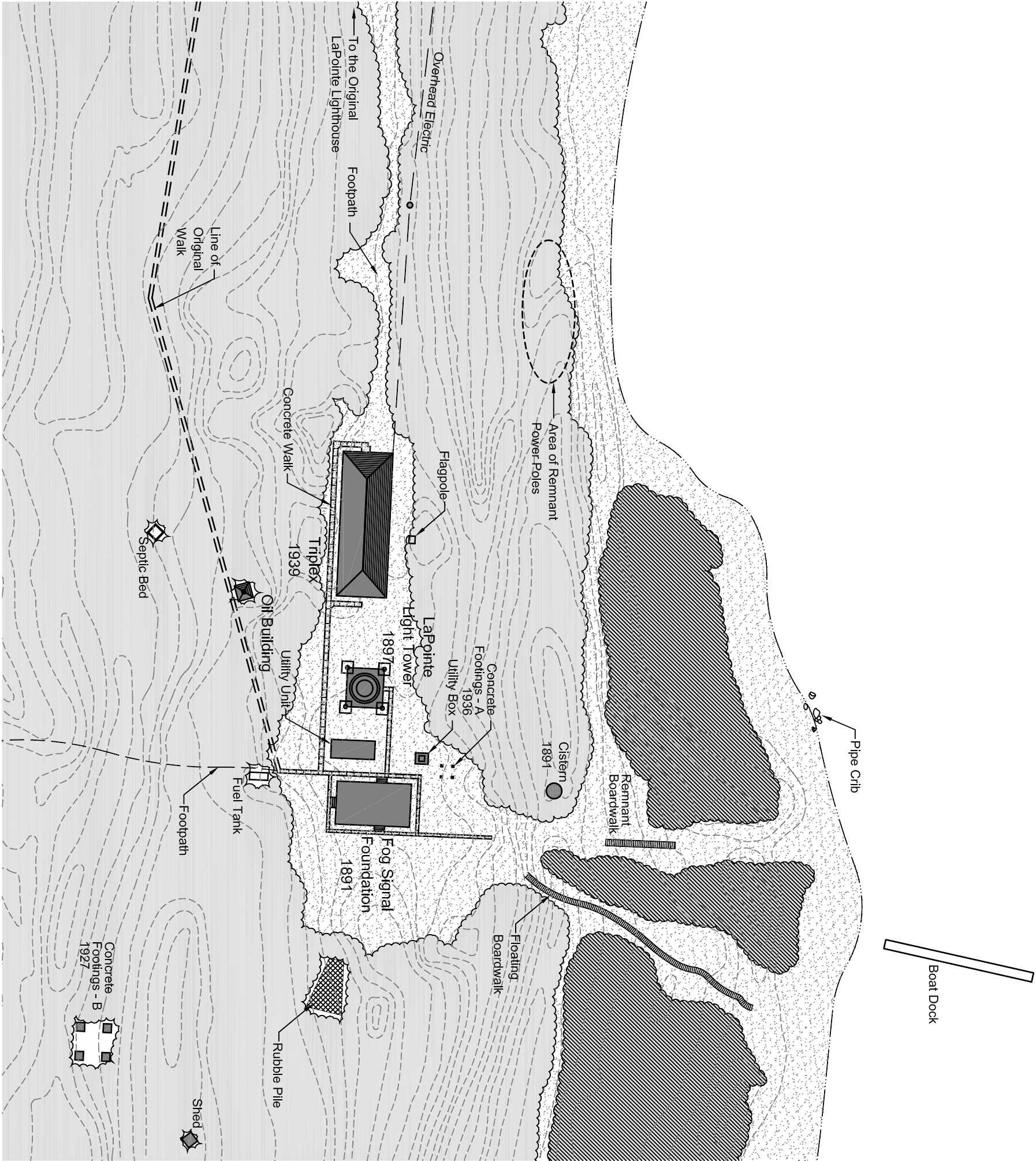
Long Island is very dynamic and the vegetation community is very fragile. Plants that hold the sand together are very sensitive to disturbance and areas quickly become denuded of both vegetation and plant litter, greatly increasing erosion.

The cleared area of the light station sites are an important contributing feature. The relationship between the extent of the cleared area and forest vegetation on the reservation has changed significantly since the period of significance. The extensive encroachment of forest vegetation diminishes the integrity of the cultural landscape.

- LEGEND
- Forest
 - Dune Area
 - Sand
 - Lake Edge

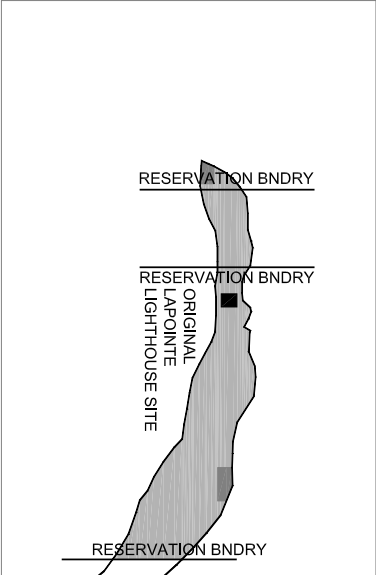
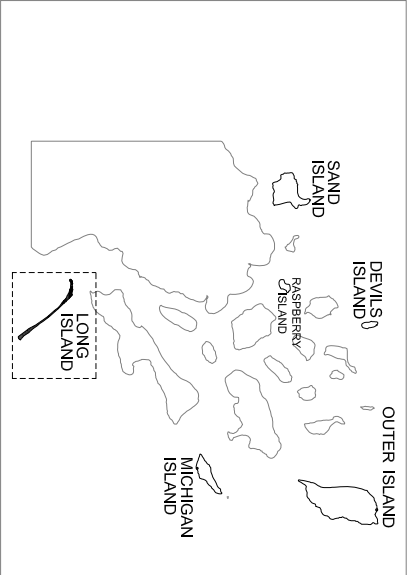
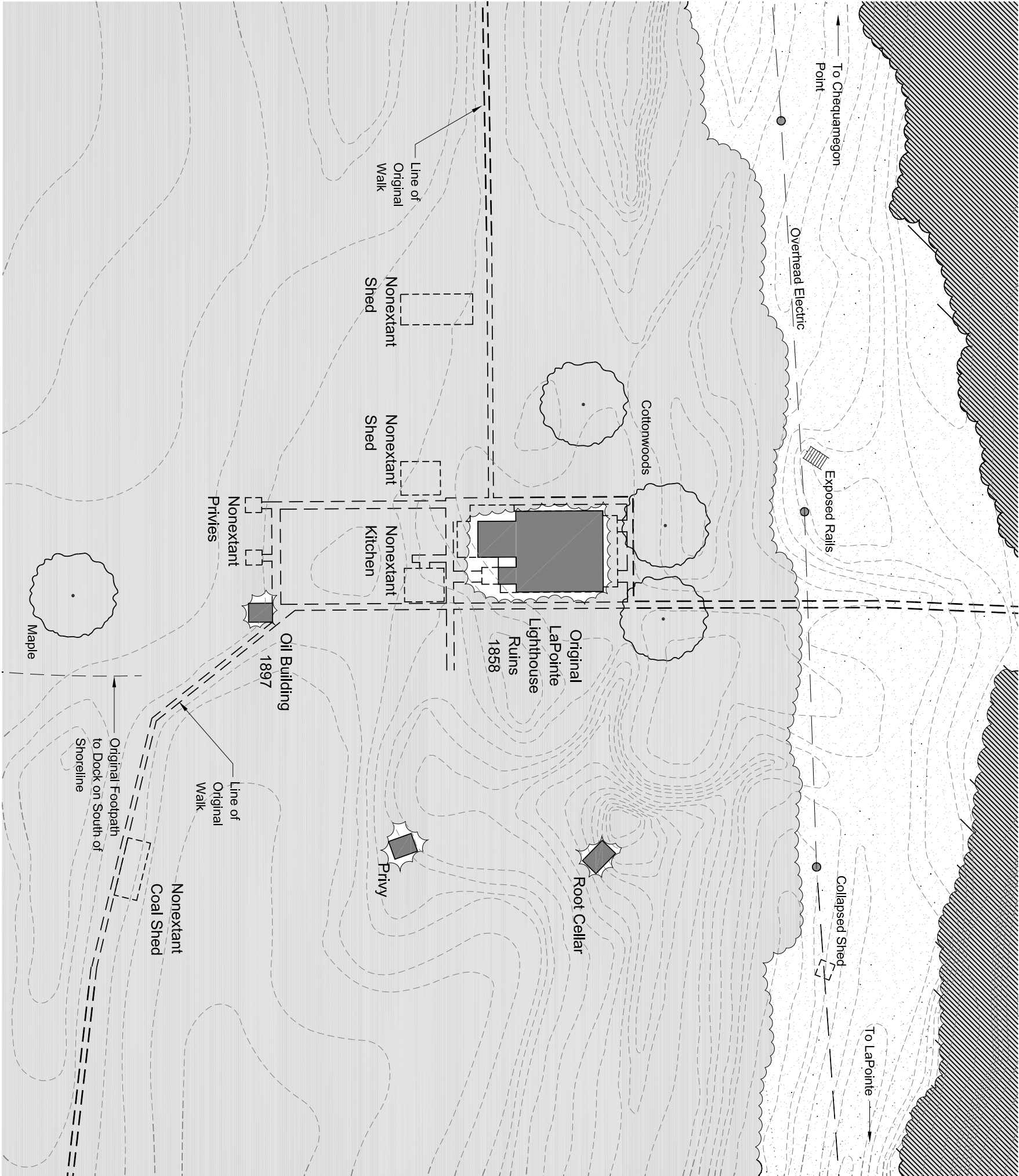


TITLE OF PROJECT CULTURAL LANDSCAPE REPORT	
TITLE OF DRAWING EXISTING CONDITIONS	
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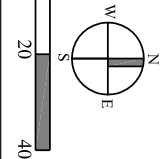


SITE IMAGE 11-70

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		REGION MIDWEST	STATE WISCONSIN
		COUNTY ASHLAND	

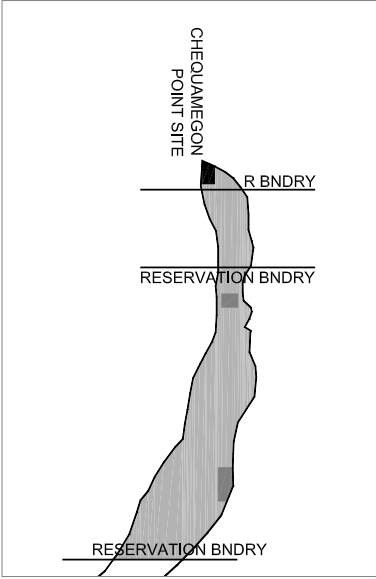
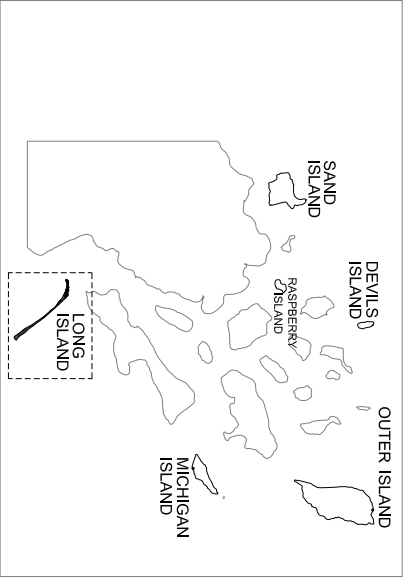
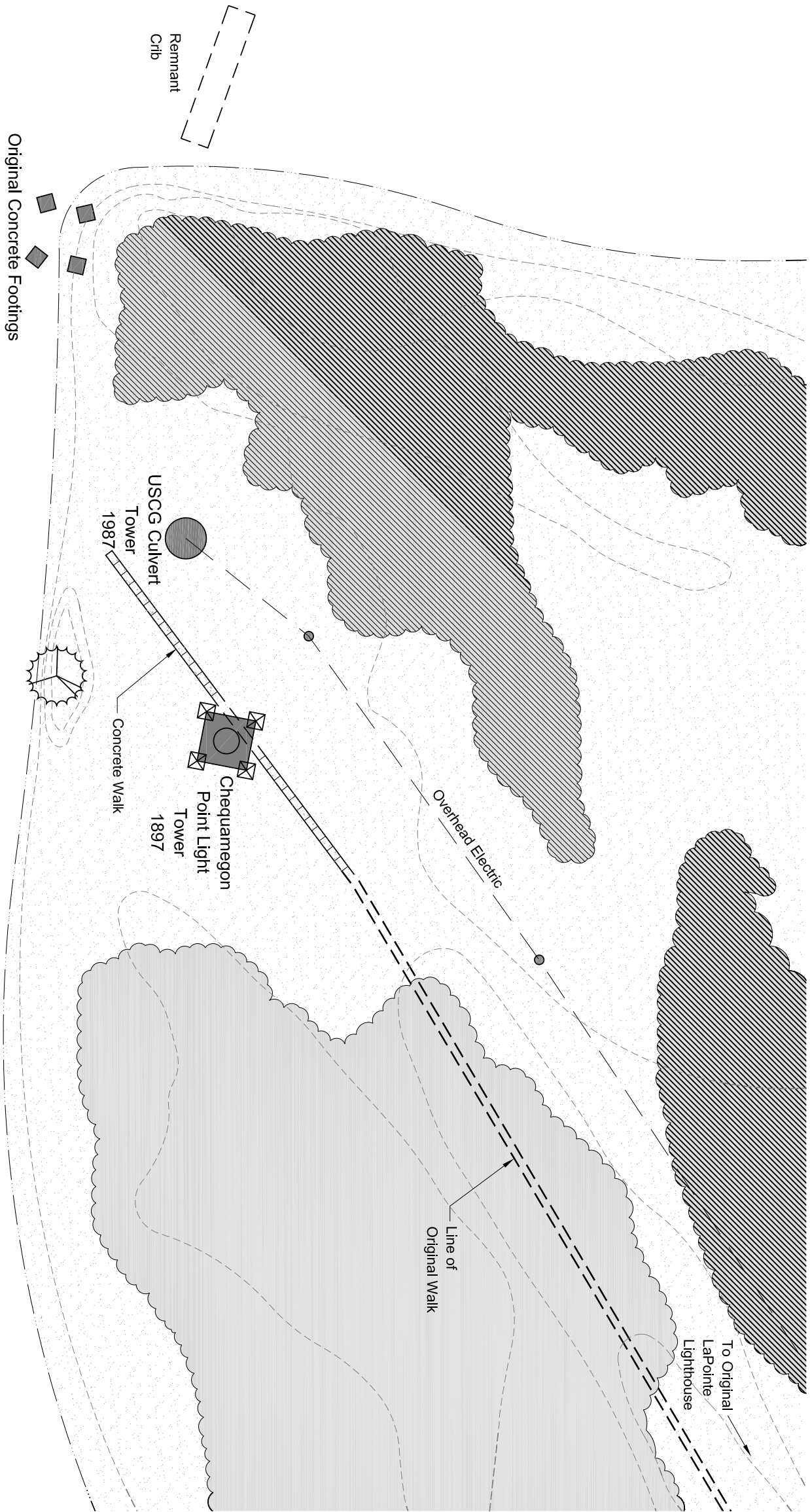


- LEGEND
- Forest
 - Dune Area
 - Sand
 - Deciduous Tree
 - Nonextant Building or Landscape Feature



TITLE OF PROJECT CULTURAL LANDSCAPE REPORT	
TITLE OF DRAWING EXISTING CONDITIONS	
UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE	LONG ISLAND-ORIGINAL LAPOINTE LTHOUSE SITE NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
REGION MIDWEST	COUNTY ASHLAND
	STATE WISCONSIN

SITE IMAGE 11-71

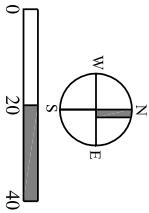


LEGEND

- Forest
- Dune Area
- Sand
- Evergreen Tree
- Nonextant Building or Landscape Feature
- Lake Edge

SITE IMAGE LI-72

UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE		CULTURAL LANDSCAPE REPORT TITLE OF PROJECT TITLE OF DRAWING EXISTING CONDITIONS	
		LONG ISLAND - CHEQUAMEGON POINT SITE NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE	
		REGION MIDWEST	COUNTY ASHLAND
		STATE WISCONSIN	



LONG ISLAND LIGHT STATION CLR TREATMENT

Introduction

In conjunction with the HSR the treatment section of the CLR recommends a strategy for the long-term management of the cultural landscape and historic structures of the Long Island Light Station. The strategy is based on the analysis of the cultural landscape's characteristics, the history and period of significance for the light station, the existing condition of the historic features, and contemporary use of the light station.

A general management philosophy of rehabilitation has been identified as the appropriate approach for the treatment of the cultural landscape. Rehabilitation will allow for repairs, alterations, and additions that will be necessary for the compatible use of the light station, and will preserve the characteristics and features that convey the light station's historical, cultural and architectural values.³² The recommended treatment will enable the park to preserve the contributing features of the cultural landscape, while allowing for specific alterations to accommodate contemporary use and interpretation of its history.

TREATMENT GOALS

- Preserve extant contributing cultural resources
- Reestablish missing resources
- Reveal the cultural landscape by representing the important characteristics from the period of significance
- Improve the understanding of the overall system of light stations in the Apostle Islands for both visitors and park staff by incorporating interpretation of landscape resources that have been repaired or reestablished
- Aid in the preserving the natural resources of the light station reservation by monitoring and controlling invasive plant material and directing visitor use

TREATMENT TERMINOLOGY

The following terms are used frequently in the CLR for actions that address the cultural landscape and its features, and are defined below. A more detailed glossary is presented in the Glossary of Terms at the end of this volume.

Maintain. Maintain includes the standard maintenance practices (mowing, pruning, thinning of vegetation, painting and cleaning of small scale features) that are necessary to retain a features or area as a contributing resource. Maintenance activities are usually not classified as repair, however minor repair such as replacement of posts or railings or segments of paving are included.

Plant. Plant or planting includes the planting or removal and replanting of landscape material and vegetation as part of maintenance activities, or the restoration of missing landscape planting features.

Reestablish. The measures necessary to depict a feature or area as it occurred historically. Reestablish may include replacement of missing features (such as replacement of a pattern of planting) or a missing quality (e.g., reestablishment of a view).

³² Landscape Lines.

Relocate. Relocate includes the removal and resetting of features in new locations. This is usually associated with noncontributing features.

Remove. The actions required to remove nonhistoric or noncontributing features. This is usually associated with noncompatible features in the landscape.

Repair. Repair includes the measures necessary to maintain features, components of features, and materials that require additional work. These may include repairing declining structures, small scale features (e.g., repair of a railing) or landscape plantings (e.g., repair mass planting by adding infill plantings). Features that are repaired shall match the original in design, color, texture, and where possible, material.

Restore. The measures necessary to depict a feature or area as it occurred historically. Restoration may include repair of a feature so that it appears as it did historically.

Retain. These are actions that are necessary to allow for a feature (contributing or noncontributing) to remain in place in its current configuration and condition.

Stabilize. Stabilize refers to immediate measures (more extensive than standard maintenance practices) that are needed to prevent deterioration, failure, or loss of features.

PREFERRED TREATMENT ALTERNATIVE

Three treatment alternatives were considered during the development of the CLR/HSR. The CLR/HSR presents only the Preferred Treatment Alternative. The other treatment alternatives considered are presented in the Environmental Assessment.

Intent of Preferred Treatment Alternative

The Long Island Light Station is significant to the Apostle Islands system of light stations because of 1) its representation of the development of navigational aids along the southern shipping route to Ashland and Bayfield; 2) its intertwined relationship with the Michigan Island Light Station; and 3) its clear depiction of advances in navigational and light station technology. The lives of the keepers and their families were impacted by the progression of new navigational technologies made evident by the historic features of the cultural landscape. By preserving, rehabilitating, or reestablishing these features, the treatment approach of the CLR/HSR strives to clearly depict the story of the Long Island Light Station.

The intent of the preferred treatment is to rehabilitate the cultural landscape of the Long Island Light Station to portray the period of navigational history the light station best represents within the system. The period of significance for the Long Island Light Station (1858 –1964) begins with the establishment of the Original LaPointe Lighthouse, and ends with automation of the LaPointe Light Tower. The extant contributing features best represent the Light Towers (1890-1938) and Triplex/Coast Guard (1939–1964) periods described in the Site Development section of this chapter. The treatment approach for the contributing features emphasizes these periods when the light station was in its most vibrant state. Recommendations also include the restoration of landscape features lost since the period of significance.

Preferred Treatment Alternative (Site Image LI-75, Site Image LI-76, Site Image LI-77, Site Image LI-78)

The treatment measures are intended to preserve and rehabilitate the cultural landscape features. This requires a variety of actions that may be accomplished by either a series of preservation steps implemented over time or as a one-time action paired with future maintenance. Emphasis should be placed on the preservation and/or rehabilitation of the contributing features that most strongly define the character of the landscape as outlined above.

Specific treatment measures are depicted in a series of plan drawings and are accompanied by detailed narrative descriptions, organized by landscape characteristics and presented as follows.

SPATIAL ORGANIZATION/VIEWS AND VISTAS

Spatial organization is a key feature of the cultural landscape and is primarily defined at the Long Island Light Station by the relationship between the light station grounds and Lake Superior; and the relationship between buildings, structures, circulation features and the cleared area of the light station. The arrangement of buildings and structures has remained intact; however the cleared area of the three sites and the historic connecting corridor have been substantially changed and reduced from the period of significance. The encroachment of forest vegetation into the historically cleared areas of the reservation has reduced the cleared area immediately around the LaPointe and Original LaPointe Lighthouse sites and changed the open character of these areas. The views from Lake Superior and Chequamegon Bay to the grounds and navigational aids are also an important component of the cultural landscape and have been changed by the encroachment of forest vegetation, most notably at the LaPointe grounds. This encroachment of forest vegetation has diminished the integrity of the cultural landscape.

Additional information regarding the means and methods of clearing forest vegetation is presented in Volume I, Chapter 5: Management Issues and under the vegetation section.

The treatment recommendations include 1) preserving the existing organization of buildings, structures, and site features; 2) reestablishing the cleared area of the landscape to better depict its condition during the period of significance; 3) clearing to maintain fire buffers at buildings; 4) clearing of historic circulation routes; and 5) maintaining views from the lake and bay to the light station by removal of trees along the shoreline. Individual treatment measures are presented as follows:

Vegetation clearing to reestablish portions of the cleared area may be undertaken on an incremental approach addressing the most critical and beneficial areas of clearing areas first. Emphasis should be placed areas that most strongly define the character of the landscape listed below in order of priority:

- Clearing for fire protection adjacent to existing buildings and structures;
- Clearing to reestablish the view from Lake Superior to the LaPointe site;
- Clearing to prevent deterioration of contributing structures or small scale features such as the sheds and root cellar;
- Incremental clearing at the Original LaPointe Lighthouse site to protect the ruin and reestablish a portion of the historic cleared area;
- Clearing along the connecting corridor leading away from each site to indicate the direction of the nonvisible or nonextant connecting concrete walk;
- Clearing to reestablish a portion of the historic cleared area at each site;

Light Station Clearing

Reestablish the cleared area of the three sites to a condition that better represents the period of significance, specifically the Light Towers period (1890–1938). Clearing includes the careful removal of forest vegetation (trees and large shrubs) that have encroached on the grounds of the sites. At the LaPointe and Original LaPointe Lighthouse sites clearing includes the removal of forest trees in a portion of the historically cleared area and allowing establishment of low dune/beach grass vegetation found adjacent to each site. The low dune vegetation may contain beach grasses, junipers and other native species, as well as areas of bare sand. Further study is required to develop a specific species list and plan for revegetation, that will be suitable and noninvasive, and guidelines for removal of forest vegetation. Regular maintenance and protection of the cleared areas will be required as the dune vegetation and soils are sensitive to disturbance and overuse. Maintenance primarily includes the manual removal of trees, control of invasive or undesirable vegetation, and protection of sensitive areas from foot traffic.

The clearing work at the Original LaPointe Lighthouse site may be approached on an incremental basis with the first step being the removal of vegetation from the ruin itself and future steps expanding the cleared area of the site to a size (e.g. 30' around ruin) that the Park deems maintainable. Any clearing done at this site will help to increase the understanding of the history and use of the light station.

Reestablish Connecting Corridor

This treatment measure is intended to reestablish and reestablish the linear connecting corridor between the three sites to a condition that better represents the period of significance, specifically the Light Towers period (1890-1938).

The treatment includes the removal of forest vegetation that has encroached into the historic alignment of the connecting corridor, to better depict the light station as it was during the period of significance. The corridor is intended to follow the historic line of the concrete walk that formerly connected the sites during the period of significance. Clearing includes the removal of forest trees and shrubs in an 8' wide corridor, along the historic alignment to accommodate an informal footpath of native soil or sand. Regular maintenance and protection of the corridor will be required as the dune vegetation and soils are sensitive to disturbance and overuse. Maintenance primarily includes the manual removal of trees, control of invasive or undesirable vegetation, and protection of sensitive areas from foot traffic.

Reestablishing the connecting corridor between the three sites may be approached on an incremental basis with the first step being the reestablishment of the visual line away from each site as a way of indicating the historic use and form of the corridor. Future steps expanding the length of the corridor and connecting the sites may be done on a basis that the park deems maintainable. Clearing work shall avoid areas of wetlands.

Clearing for Fire Prevention

Maintain cleared areas, free of trees, to achieve a buffer of approximately 50' from the Triplex, LaPointe Light Tower, and Chequamegon Point Light Tower.

CIRCULATION/ SITE ACCESSIBILITY

The loss of circulation patterns and features on the Island has diminished the integrity of the cultural landscape. The preferred treatment alternative focuses on reestablishing the primary circulation route between the light station sites and preserving the extant, contributing circulation features.

The circulation patterns on the light station were changed during the Light Towers period (1880-1938) with the expansion of the light station to include two additional sites, one east and one west of the Original LaPointe Lighthouse grounds. A connecting corridor and concrete walk was established between the sites to support the operations and maintenance of the light station. The light station has had several boat landing structures during its history. The boathouses that once existed at all three sites are no longer extant and one boat dock remains.

The circulation features help to define the arrangement of the site and are important to the integrity of the cultural landscape. The treatment measures focus on retaining and reestablishing primary circulation patterns and reestablishing or preserving the circulation features. Actions important to maintaining the integrity of the light station include reestablishing the connecting corridor between the three sites, retaining the location of the LaPointe boat dock, and preserving concrete walks throughout the station.

LaPointe Site

Maintain all concrete walks in current locations and configurations to preserve historic circulation patterns. Retain the boat dock in its current location. Retain extant, remnant boardwalk to preserve the historic circulation pattern at LaPointe and allow for the temporary, floating boardwalk to be installed and relocated as necessary as the shoreline/sand dunes shift. Maintain the cleared corridor for the footpath leading from the LaPointe grounds to Chequamegon Bay and retain the sheet metal covering on the path.

Original LaPointe Lighthouse Site

Treatment measures at the Original LaPointe Lighthouse grounds are limited to reestablishing the corridor for the connecting footpath between the sites and maintaining existing concrete walks found on the site. Additional noninvasive site investigations should be done to determine if concrete walks are present beneath the sand.

Chequamegon Point Site

Treatment measures at the Chequamegon Point grounds are limited to reestablishing the corridor for the connecting path between the sites and maintaining existing concrete walks found on the site.

Accessibility (ABAAS)

An accessibility analysis separate from the CLR/HSR has been developed to provide an overall plan for the six light stations in the Apostle Islands – Raspberry, Michigan, Outer, Devils, Long, and Sand islands. This work is intended to address the light station system as a whole and the accessibility requirements to be achieved at each individual light station. At the time of this report publication the final accessibility report is in progress. The CLR/HSR incorporates the draft recommendations into each of the light station's plans. No preliminary accessibility recommendations have been identified for the Long Island Light Station in the

overall plan for the light stations. Further discussion regarding the overall accessibility approach for the system of light stations is included in Volume I, Chapter 5: Management Issues.

STRUCTURES

There are numerous structures on the light station that provide a human scale to the cultural landscape while conveying important details regarding the history and use of the light station. Treatment recommendations are described in detail for structures and are organized by site. In general the recommendations for these features are focused on preserving all of the contributing structures.

LaPointe Site

Boat Dock

Repair and maintain the boat dock to a working condition in its current location and configuration. The boat dock should be repaired as needed and determined by NPS. Boat dock planning work is currently under study under separate but related projects. Further discussion regarding boat docks is included in Volume I, Chapter 5: Management Issues.

Fog Signal Building Foundation

Maintain the foundation of the original fog signal building to prevent further deterioration of the feature. Treatment measures are as follows:

- Remove all vegetation on top of and adjacent to the foundation;
- Repair mortar and brick masonry where needed (new mortar to match existing);
- Clean and seal surface foundation cracks that may lead to increased deterioration.

Shed

Repair the shed by implementing the following treatment measures to stabilize and protect the shed from accelerated deterioration:

- Repair roof the shed with new roofing material;
- Provide new door to secure the interior of the shed from weather and wildlife;
- Paint of the shed exterior – protect from weather.

Original LaPointe Lighthouse Site

Structures at the Original LaPointe Lighthouse grounds include the ruins of the Original LaPointe Lighthouse, the Oil Building, a wooden shed, a root cellar and several remnant structures related to the Original LaPointe Lighthouse site.

Original Lighthouse Ruin

Stabilize the lighthouse ruin and make repairs related to visitor and operations safety. Treatment measures are as follows.

- Remove trees and shrubs from within the ruin that may potentially impact structural stability of the feature;
- Repair mortar in targeted areas to maintain stability and reduce the rate of deterioration (new mortar to match existing);
- Remove hazardous wood material from walls or flooring of the interior space and store for future use;
- After vegetation removal, level existing base material and rubble on interior of ruin to fill hazardous holes – do not remove material or excavate;
- Monitor deterioration of ruin on an annual basis to determine if further stabilization is required;
- Undertake archeological investigations as presented in Areas of Further Investigation.

Oil Building

Repair the Oil Building by implementing the following treatment measures:

- Secure the door with a locking latch;
- Paint the metal trim and door;
- Replace the floor joists and flooring (new material to match existing);
- Clean and paint the interior walls and ceiling.

Privy

Stabilize the privy by implementing the following treatment measures to reduce the rate of deterioration.

- Repair roof the privy with new roofing material;
- Repair and secure the door.

Chequamegon Point Site

USCG Culvert Tower

The culvert tower should be removed from the island after the completion of the repairs to the Chequamegon Point Tower. The return of the light to the Chequamegon Point Tower is subject to USCG approval.

SMALL SCALE FEATURES

There are numerous small scale features on the light station that provide a human scale to the cultural landscape while conveying important details regarding the history and use of the light station. Treatment recommendations are described in detail for notable, contributing small scale features and are organized by site. Treatment recommendations noncontributing features are presented in Table LI-7. In general the recommendations for these features are focused on preservation and include:

- Retain all contributing small scale features.
- Retain noncontributing, compatible features including park and trail signs.
- Remove noncontributing, noncompatible features

Concrete Walks

Concrete walks exist at all three sites. Repair and maintain all concrete walks in the current, historic locations. Repair includes the removal and replacement of isolated, severely cracked sections. Replacement of damaged sections shall be completed with precast units matching the dimensions of the existing concrete slabs, poured and finished prior to installation. The mix, aggregate size and finish of the replacement sections should match the historic material. Maintenance includes vegetation removal and minor leveling to eliminate trip hazards. At each site, use noninvasive methods to locate any walks that have been buried by sand but can be easily uncovered.

LaPointe Site

The LaPointe site contains both contributing and noncontributing small scale features. All of the contributing small scale features including, pipes along shore, pipe cribs, and rock cribs in the lake shall be retained and preserved. These contributing features directly relate to the technology and operation of the light station

Cistern and Piping

The brick and concrete cistern and associated piping was part of the original water supply to the fog signal. These features shall be preserved with the following measures:

- Remove vegetation adjacent to the cistern;
- Repair mortar joints and make minor masonry repair to the cistern (new mortar to match existing);
- Alter the concrete top to allow for a compatible, lockable cover;
- Retain all galvanized water supply piping in place.

Flagpole

Repair flagpole, by straightening if feasible, or cutting and reattaching with a sleeve, Repaint the pole, replace hardware and halyard and reset the pole on the extant concrete base.

Concrete Footings – A and B

Retain all concrete footings in the current locations. The footings mark the former locations of the radio antennae tower and radio beacon tower on the site.

Rubble Piles

Retain and protect all rubble piles. See Areas of Further Investigation - Archeological Features for additional information.

Original LaPointe Lighthouse Site

Root Cellar

Protect the root cellar by removing any vegetation that may be damaging buried portions of the structure and directing water away from structure. Provide additional noninvasive site investigations to determine extent and condition of buried structure.

Remnant Shed

Retain shed remnants, protect from vandalism. See Areas of Further Investigation for additional information.

Chequamegon Point Site

Retain all contributing small scale features including the remnants of rubble landing cribs and the concrete light tower footings located in the water along the shoreline.

The following table (Table LI-7) provides recommendations for small scale features identified as noncontributing.

Table LI-7. Small Scale Features (Noncontributing)

Feature	Compatible?	Status
Overhead Electric Line and Poles	Noncontributing Compatible	Remove – After electric power is no longer required for USCG Culvert Tower
Floating Boardwalk	Noncontributing Compatible	Retain – Allow for removal and replacement as dunes shift
Fuel Tank	Noncontributing Compatible	Remove
Utility Units	Noncontributing Noncompatible	Remove

VEGETATION

As previously presented under Spatial Organization the cleared area of the light station sites have been substantially reduced from the period of significance. This treatment recommendation includes the removal of forest vegetation at each site to reestablish a portion of each cleared area and provide a fire protection buffer for buildings and structures.

Maintain newly cleared areas as dune vegetation. Further study is required to develop a specific species list and plan for revegetation, that will be suitable and noninvasive, and guidelines for removal of forest vegetation. In general all clearing work shall be done in a selective and noninvasive manner to protect and preserve existing understory and dune vegetation. Further discussion on means and methods of clearing are discussed in Volume I, Chapter 5: Management Issues.

The light station reservation and individual sites should be monitored for the presence and growth of invasive plants. Remove periwinkle (*Vinca minor*) that has encroached into the surrounding forest. Do not introduce any potentially invasive plant material into the light station light station. Isolated wetland areas

1 occur in several areas on the light station primarily along the connecting corridor between Chequamegon
2 Point and the Original Lighthouse site. Wetland areas shall not be disturbed.

3
4 Historically, domestic landscape and garden plantings played a minor role in the cultural landscape of the
5 Long Island Light Station. Historic documents indicate the lighthouse keepers and their families planted
6 vegetable gardens in cribs at the Original LaPointe Lighthouse grounds. No extant remains of these gardens
7 have been found to date and no historic photographs were found during this study. No recommendations
8 are made regarding domestic plantings.

11 **AREAS OF FURTHER INVESTIGATION**

12 **Archeological Investigations**

13 Complete an archeological survey for all known resources in the light station reservation using
14 nondestructive investigations to document the extent of buried or nonvisible cultural resources that exist
15 across the Island. Consider using ground penetrating radar and other noninvasive measures to assist in
16 locating resources. If a comprehensive survey for the entire Island is not possible, complete archeological
17 investigations for proposed projects in advance of any other work on the project, including demolition. In
18 compliance with the National Historic Preservation Act, and in consultation with the NPS Midwest
19 Archeological Center, undertake archeological investigations for all projects, as appropriate to their scale,
20 impacts, and extent of ground disturbance.

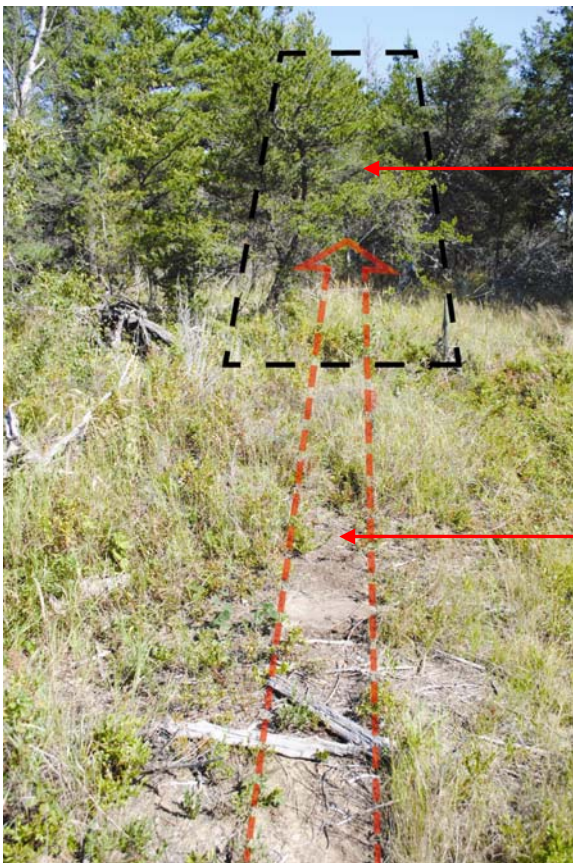
23 **Concrete Walks**

24 Further investigation should be undertaken to locate the concrete walk connecting the three sites. It is
25 possible, although no formal documentation exists, that a portion of the walk remain in place, nonvisible,
26 buried beneath the sand.

1 **Areas of Further Investigation Photographs**



2
3 Site Image LI-73: Typical low dune vegetation on Long Island, 2009 (Source: MBD DSC_0073.JPG)
4



5
6 Site Image LI-74: Reestablish the cleared corridor between the three sites and uncover extant concrete walks, 2009 (Source:
7 MBD DSC_0068_ANNOTATED.JPG)
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