

## EXISTING CONDITION ASSESSMENT AND LANDSCAPE ANALYSIS

The existing condition assessment and landscape analysis for the Sand Island Light Station are presented in this section. The light station reservation and grounds are documented as one entity through those landscape characteristics that together comprise its cultural landscape. The presentation of the existing conditions assessment and analysis is organized by landscape characteristics - spatial organization, topography, views and vistas, and circulation. The landscape analysis identifies those buildings, structures, small scale features and vegetation that contribute to the significance and integrity of the cultural landscape of the light station. An overview of the CLR methodology is presented in Volume I, Chapter 2: Methodology.

The landscape analysis, presented as narrative text, follows and provides an evaluation of the significance and integrity of each characteristic. The landscape characteristics for the Sand Island Light Station are as follows. Their associated character-defining features contribute to the overall integrity of location, design, materials, workmanship, setting, association, and feeling.

- Spatial Organization - is the arrangement of elements creating the ground, vertical and overhead planes that define and create space, including the arrangement of topography and buildings.
- Topography - is the three-dimensional configuration of the landscape surface characterized by features and orientation; includes bluffs, cliffs, slopes and drainages.
- Views and Vistas - are features that create or allow a range of vision which can be natural or designed and controlled; these include views of the light stations from Lake Superior and views from the light towers and lighthouses.
- Circulation - are spaces, features, and materials that constitute systems of movement.
- Buildings - buildings that are either currently or were historically habitable are presented in the Historic Structure Report.
- Structures - are smaller non-habitable buildings or significant features (now or historically) such as privies, tramways, and outbuildings.
- Small Scale Features - are elements that provide detail and diversity combined with function and aesthetics; including paving, structural remnants, site walls, signs, and walls of building ruins.
- Vegetation - are indigenous or introduced trees, shrubs, vines, ground covers, and herbaceous materials; including lawns, shrubs and landscape garden areas.

The existing condition of the Sand Island Light Station is presented first as a paragraph description. Annotated photographs support the condition assessment. The following criteria were used to evaluate condition:

- **GOOD** - Those features of the landscape that do not require intervention; only minor or routine maintenance is needed at this time.
- **FAIR** - Some deterioration, decline, or damage is noticeable; the feature may require immediate intervention; if intervention is deferred, the feature will require extensive attention in a few years.
- **POOR** - Deterioration, decline, or damage is serious; the feature is seriously deteriorated or damaged, or presents a hazardous condition; due to the level of deterioration, damage, or danger the feature requires extensive and immediate attention.

The landscape analysis compares the site history with its existing condition to identify and evaluate those landscape characteristics that retain integrity and contribute to the significance of the light station.

The Sand Island Light Station has integrity as it retains the majority of its character-defining features and buildings that depict its role in the development of navigational aids in the Apostle Islands. The most important features include the buildings and concrete walks as these defined the setting and lifestyle of the keepers that created many of the landscape features.

### **Spatial Organization**

The spatial organization of the Sand Island Light Station occurs at two distinct scales-the spatial organization of the reservation and that of the light station grounds. While they are distinct, they are also directly related.

**Existing Condition.** The spatial organization of the light station reservation consists of the relatively cleared area of the light station grounds on the north tip of the reservation, contrasted by the forested areas of the remainder of the reservation created by the relationship of the forest to the cleared area where the Light Station Quarters and other structures are located. The light station grounds are located on the northern-most peninsula of Sand Island on a bluff approximately 20 feet above Lake Superior. The Light Station Quarters is set closest to the bluff, commanding the view from the water. The edge of the forest defines the south edge of the grounds and the bluff forms the north, east and west edges. The 44-foot tall Light Station Quarters is the dominant feature with walks and structures radiating out from it in an organized, asymmetrical arrangement. This arrangement reflects the functional need to reach the grounds from the south and to connect to the

South of the light station grounds approximately 0.5 miles is the former location of the Boathouse and dock. There is a small clearing at the top of the bank where the footpath reaches the shoreline overlook.

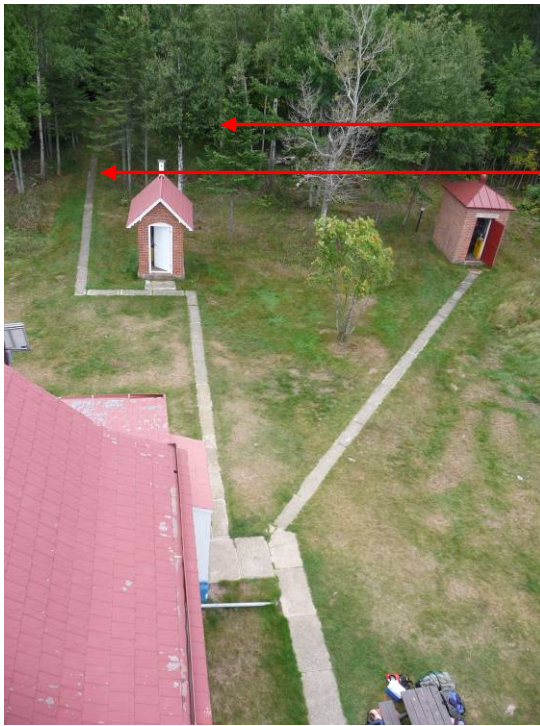
The spatial organization of the light station, reservation and grounds is in fair condition.

**Analysis.** The spatial composition of the light station reservation has significantly changed from the island's early history as an aid to navigation. While the spatial organization of the prominent buildings and small scale features at the light station grounds remain in place from the period of significance, the surrounding clearing has been greatly reduced due to forest encroachment (Site Image SI-24, SI -26). Once the island was no longer operated as a light station with a light keeper, the regular clearing of forest vegetation diminished since early years of the light station.

The loss of buildings and structures has had an adverse impact on the integrity of the spatial organization of the light station grounds. This includes the loss of the fenced garden area behind the Light Station Quarters as well as the Tool Shed and Wood Shed. At the boathouse site, the Boathouse and dock have been lost and the cleared area has filled in with forest vegetation. Remnant Landing Cribs are extant under the water. The total loss of structures on this site diminishes the integrity of the cultural landscape.

Spatial composition is an important contributing feature and the encroachment of the forest and loss of buildings and structures has diminished the integrity of this feature and the light station.

1 ***Spatial Organization Photographs***



Nonextant Garden Area

Concrete Walk to  
Nonextant Tool Shed

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3 *Site Image SI-24: Arrangement of Privy and Oil Building to the south of the Light Station Quarters with path to a nonextant*  
4 *Tool Shed, 2009 (Source: MBD P1020414.JPG)*



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7 *Site Image SI-25: Light station grounds between Oil Building and Light Station Quarters, 2009 (Source: MBD*  
8 *DSC\_0294.JPG)*



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*Site Image SI-26: View of Light Station from the east – note reduction in cleared area to left and growth of forest; top, c. 1913 (Source: NPS APIS Archives); below, 2009 (Source: MBD DSC\_0250.JPG)*



## Topography

**Existing Condition.** Sand Island's overall topography consists of gently rolling, forested hills with steep banks or rocky cliffs at the water's edge, with areas of rocky or sandy beaches. The highest point of the island is approximately 58 feet above Lake Superior. The light station grounds on Sand Island are set on a bluff, rising approximately 20 feet above Lake Superior. The light station grounds are generally level, sloping gently toward the steep rocky cliffs along the north shoreline. The topography of the light station is in good grounds condition.

**Analysis.** The practice of locating light station grounds on a high bluff near the water's edge is characteristic common of the Apostle Island's navigational aids. At Sand Island, the common level topography provided a good building location requiring few modifications. Today, the topography remains as it was historically, since the development of the light station. Modifications include regrading the lawn adjacent to the Light Station Quarters by the NPS to provide drainage away from the building. The resulting change does not diminish the cultural landscape. The topography of the reservation and light station grounds retains its integrity and contributes to its significance.

## Topography Photographs



Site Image SI-27: Light station grounds sloping gently to rocky cliffs along the shoreline, looking west, 2009 (Source: MBD DSC\_0277.JPG)



Site Image SI-28: North Landing rocky outcropping northwest of the light station grounds, 2009 (Source: MBD DSC\_0248.JPG)



Site Image SI-29: Rocky cliff at the eastern edge of the light station grounds, 2009 (Source: MBD DSC\_0249.JPG)

## **Views and Vistas**

**Existing Condition.** The Light Station Quarters, is set on a bluff above rocky cliffs and is visible from passing ships and pleasure boats on Lake Superior as they move towards the island. From the light station grounds notable views include those from the top of the Light Tower to the north over Lake Superior and to the south across the island. Clearing projects have been undertaken to open vistas to and from the light station. Another important view is from the southern trail, as many visitors approach the station from the south. Views and vistas are generally in fair condition.

**Analysis.** The light station grounds are located on Sand Island's northernmost tip, high on the bluff immediately adjacent to Lake Superior in a broad clearing. This setting provided a clear view towards the light (in the Light Tower, in the Light Station Quarters), which was essential for the island to function as a navigational aid. Today, the extent of views and vistas to the light station grounds has been reduced from the clear open views present during the period of significance. This is due to the encroachment of forest vegetation across the entire north peninsula, filling in what had historically been clearings of low brush. While the current clearing does not reflect the extent of the clearing during the period of significance, the views to the Sand Island Light Station are the best of the light stations in this study. In 1992, and again in 2005 clearing projects partially removed some forest vegetation restored the open vistas to and from the light station. Views from the south to the Light Station Quarters have been diminished by the encroachment of forest vegetation into the historically cleared area of the garden and sheds. The placement of the solar panel and battery storage unit immediately south of the building detracts from the view towards it.

Views and vistas are a contributing feature. However, the modification of views and vistas from the lake and hiking trail has diminished the integrity of the light station.



1 *Views and Vistas Photographs*



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*Site Image SI-30: View of Light Station Quarters from Lake Superior; top, c. 1891 (Source: NPS APIS Archives); below, 2009 (Source: MBD P1020458.JPG)*





Note Solar Panel and  
Battery Unit Obscuring  
Southern View

Note Vegetation Blocking  
Southern View

Site Image SI-31: View to Light Station Quarters from the south; top, c. 1920 (Source: NPS APIS Archives); below, 2009 (Source: MBD DSC00708.JPG)

## Circulation/Accessibility

The circulation feature addresses overall access and patterns of circulation in the cultural landscape. Individual features such as concrete walks are presented in the small scale features section.

**Existing Condition.** Circulation at the Sand Island Light Station relates to its primary means of arrival and departure – boat landings. These include one on the rocky cliffs – the North Landing, near the light station; and the more commonly used East Bay Landing Dock. Access to the island is water based and the East Bay Landing Dock is the only formal boat landing on the island. The East Bay Landing Dock is used by NPS staff and visitors in small pleasure boats. The dock cannot be accessed by large day-cruise boats.

An approximately two mile-long trail provides pedestrian circulation through the forest from the East Bay Landing Dock north to the light station. This hiking trail is primarily a soil surface, with some areas of wooden boardwalks and wood plank walks. At an opening in the forest along Lighthouse Bay, the hiking trail provides a view towards the site of the nonextant Boathouse, a former boat landing that serviced the light station.

On the light station grounds, footpaths connect the light station grounds to boat landing areas on the rocky shore east and west of the station. At these points, pedestrians climb the rock outcrops to reach the rocky landings. A wooden staircase from the concrete walk leading to the Light Station Quarters provides pedestrian circulation from the North Landing, a natural rocky ledge, to the light station grounds.

Concrete walks connect the features of the light station grounds, including the Light Station Quarters, Oil Building, and Privy. One leads southeast from the Privy approximately 85 feet to the area of the nonextant Tool Shed. The trail, from the East Bay Landing Dock connects to the concrete walk via a wood plank walk (Site Image SI-34).

The wooden staircase is described under the Structures section. The concrete walks are described under the Small Scale Features section.

In general, circulation on the light station grounds is in fair condition. Circulation to the light station grounds is in good condition.

**Analysis.** Circulation on Sand Island remains similar to the original routes that were developed during the period of significance with one exception. Primary transit to the island was historically, and continues to be by boat, however the location of the primary landing has changed. The nonextant Boathouse and dock, located about one-half mile south of the light station at the north end of Lighthouse Bay, a sheltered area on the west side of the northern tip of the island, served as the primary landing location for the Sand Island Light Station from the 1880s until the features fell into disrepair beginning in the 1920s. Historic photographs indicate that a wooden ramp was used to ascend the bank from the dock. Today, the primary landing location is the East Bay Landing Dock, an area much further south of the light station (approximately 2 miles), and on the east side of the island. The existing trail is thought to follow the route of the original footpath between the light station grounds and East Bay Landing. This route also served as part of the island's overall circulation system, when there was a community of farmers, loggers, and miners on Sand Island. Fellow Sand Island residents would often visit the light station on foot.

A historic illustration indicates a secondary landing existed southeast of the Light Station Quarters, the drawing showing a wooden boat ramp. Historic photographs from the 1920s and 30s show a ladder from the North Landing to the light station grounds, near the location of the extant wooden staircase. Together, these historic images indicate that boat access during the period of significance occurred much as it does today, at the rocky ledges along the light station's immediate shoreline. The need for multiple boat landing

locations along the light station's shore was needed due to the heavy wave action and unpredictability of Lake Superior.

Concrete walks built during the period of significance, remain today. Typical to the Apostle Islands light stations, the concrete walks were narrow in width; placed in straight lines connecting buildings and other site features. Concrete walks connected the Light Station Quarters with the Oil Building and Privy, as well as to the North Landing and south to the former location of the Tool Shed. The concrete walks were preceded by wooden plank walks, laid on the ground surface.

Today, the historic circulation system, consisting of the concrete walks on the light station grounds and the trail to the former Boathouse site and East Bay Landing Dock are contributing features. The loss of the Boathouse and dock diminishes the integrity of the cultural landscape. The wooden staircase at the North Landing did not exist historically, and its location and character diminishes the integrity of the light station.

**Accessibility (ABAAS).** Visitor accessibility to the light station, including its buildings and structures, is limited due to the change in elevation from the rocky outcrops used for boat landings, the lack of an accessible route along the 2 mile-long-plus trail from the East Bay Landing Dock, and limited ABAAS compliant improvements. Barriers to universal accessibility include: 22 steps on the wooden staircase connecting the north landing to the light station; steps leading into and through buildings and structures; and the narrow width of site walks. The light station grounds present few barriers to accessibility as the terrain is generally flat. The buildings present individual accessibility barriers and are presented in the HSR.

#### *Circulation Photographs*



Site Image SI-32: East Bay Landing Dock, 2009 (Source: MBD DSC00740.JPG)





Site Image SI-33: Boardwalk section of trail corridor between the Light Station and East Bay Landing Dock, 2009 (Source: MBD DSC00697.JPG)



Site Image SI-34: Wood plank walk section of trail corridor between the Light Station and East Bay Landing Dock, 2009 (Source: MBD DSC00698.JPG)





Site Image SI-35: Trail corridor, natural surface, between the Light Station and Boathouse, 2009 (Source: MBD DSC\_0228.JPG)



Site Image SI-36: Connection between concrete walk and hiking trail south of Light Station Quarters, 2009 (Source: MBD DSC\_0300.JPG)





Footpath

Site Image SI-37: Footpath leading from Light Station Quarters to east shoreline, 2009 (Source: MBD P1020416.JPG)



Wooden Staircase

Concrete Walk

Site Image SI-38: Wooden staircase at north landing offset from historic concrete walk, 2009 (Source: MBD DSC\_0263.JPG)



## **Buildings**

The Sand Island Light Station buildings include the Light Station Quarters, Oil Building, and Privy. For information, refer to the Historic Structure Report for Sand Island.

## **Structures**

The structures on Sand Island provide a human scale to the island and many convey important history and use of the light station. The structures include a wooden stairway at the North Landing, a nonextant boat dock south of the light station at the boathouse site, and an NPS installed vault toilet.

### ***Stairway***

**Existing Condition.** A wooden stairway connects the light station grounds to a natural rock outcrop (approximately 18' high) used as a boat landing. The stairway is built of dimension lumber, is 4' wide with railing on both sides, and approximately 3' high. There is a 1' x 4' step on the light station grounds leading up to a 6' x 4' landing. There are 22 steps leading from the landing to the rocky ledge. The bottom step appears to be a historic 2.5' x 4' precast concrete slab laid on the rocky ledge surface. The alignment of the stairway is offset from the historic concrete walks above by approximately 20'. The stairway is showing signs of disrepair and is in poor condition.

**Analysis.** The wooden stairway is used for accessing the North Landing rock ledge. Following a review of historic photographs and drawings, the first depiction of the stairway appears in the 1989 HABS drawings.

The stairway is from the NPS period and is a noncontributing, noncompatible feature that diminishes the integrity of the light station.

### ***Boathouse Site***

**Existing Condition.** No readily visible features of the Boathouse exist. Remnant materials from the Landing Cribs exist under the water.

**Analysis.** The boathouse site formerly consisted of a Boathouse, landing crib and boat dock. Serving as the primary landing point during the period of significance, the site of the harbor is important to the history and cultural landscape of the Sand Island Light Station and is a contributing feature. The loss of these resources has diminished the integrity of the light station.

### ***Nonextant Tool Shed and Wood Shed***

The Tool Shed and Wood Shed are nonextant and readily visible traces remain. A concrete walk leads to the site of the former Tool Shed from the Privy. The area of the Wood Shed is now covered with encroaching forest vegetation.

### ***NPS Vault Toilet***

**Existing Condition.** The NPS Vault Toilet is a wood-framed structure and vault located south of the Oil Building. The NPS Vault Toilet is not an accessible structure.

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2 **Analysis.** The NPS vault toilet is a recent addition and is a noncontributing feature. The current location of  
3 the NPS vault toilet, though surrounded by encroaching forest, is only 40' west of the former garden site in  
4 an area that was historically cleared. This location detracts from the historic spatial organization of the  
5 Sand Island Light Station and is a noncompatible feature.

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8 ***East Bay Landing Dock and Trail to Station***  
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10 The East Bay Landing Dock and boardwalks/wood plank walks of the 2 mile-long trail to the station are  
11 presented in the Circulation portion of the CLR. They are not included and described in detail (with  
12 dimensions and materials) under Structures as they were not included in the original scope of work for this  
13 report. The Circulation assessment for the Sand Island Reservation was expanded through the course of this  
14 project to examine possibilities for future ABAAS compliant trails from the East Bay Landing Dock to the  
15 Sand Island Light Station.  
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1 **Site Structure Photographs**

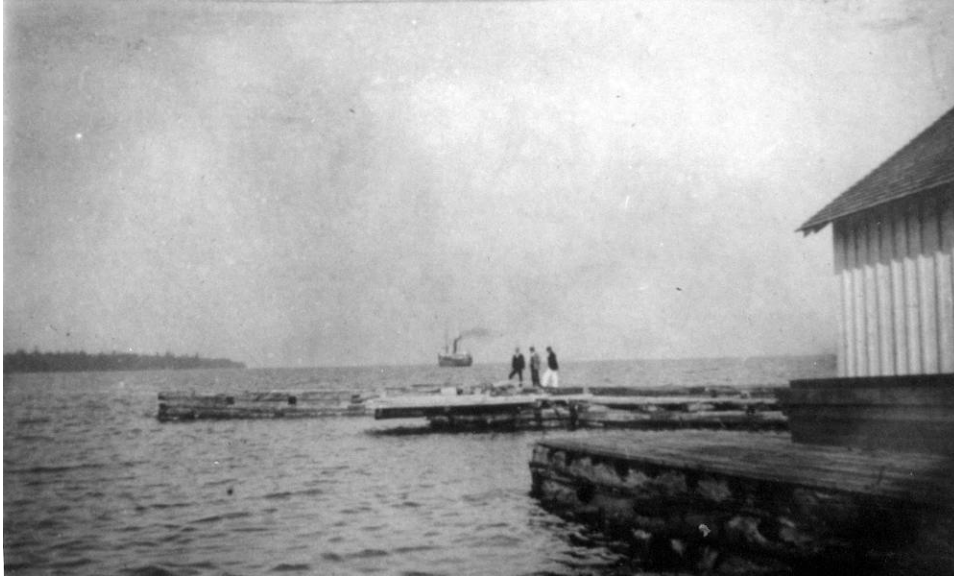


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3 Site Image SI-39: View of the wooden stairway at the North Landing, 2009 (Source: MBD DSC00711.JPG)  
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6 Site Image SI-40: View of the stairway from the North Landing, 2009 (Source: MBD DSC\_0274.JPG)  
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*Site Image SI-41: Former Boathouse area; top (c. 1904) (Source: NPS APIS Archives); below (2009) (Source: MBD DSC00705.JPG)*

## Small Scale Features

The small scale features at Sand Island Light Station include concrete walks, a flagpole, 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 Sand Island Light Station these features include concrete walks and dump sites. In addition to these features there are signs, a solar panel, and other site features that have been added to the site outside of the period of significance. Descriptions of other individual features, many of which are contributing, and their respective condition are included in Table SI-1.

### *Concrete Walks*

**Existing Condition.** The concrete walks were installed during the period of significance, many of them following the earlier alignment of wood planks as was typical of the Apostle Islands. Typical to several Apostle Islands light stations, the walks appear to be constructed of precast units (2.5' x 4 x 4" thick) with some smaller units also installed. The units have a fine aggregate finish and tooled edges. Historic photographs indicate that the concrete units may have been placed on top of the ground surface rather than excavated and placed. Other portions of the concrete walks appear to have been poured in place to infill odd shapes and address building edges. Overall the concrete walks are in good condition with only one area that appears to require replacement of concrete.

**Analysis.** The concrete walks are significant to the light station as their installation occurred during the period when the light station was at its most vibrant. They closely relate to the new technology and buildings that were developed at that same time. The walks are also important because of their production and installation as precast units, common to this and other light stations. This construction conveys the interrelationship of the light stations. The concrete walks are contributing features.

### *Dump Sites*

**Existing Condition.** Three dump sites and a site containing brick rubble exist in the forest vegetation in the area surrounding the Sand Island Light Station. The sites were located at varying distances from the light station, one as close as 60 feet away and another as far as 220 feet. The sites contain various materials. Dump Site 1 is primarily glass bottles and soda cans, Dump Site 2 consists of what appears to be fuel containers, and Dump Site 3 has remnant wood panels and other materials, possibly remnants of a building interior.

**Analysis.** The locations and materials within the dump sites indicate they are from different historic periods, the closer dump sites being newer as the encroaching vegetation reduced the size of the light station clearing. Dump sites such as these are unique to Sand Island. On Long Island, there are various materials left scattered in the forest, but not in designated areas such as those found on Sand Island. Very little is known about these sites and they may contain potential archeological features that will further tell the story of the Sand Island Light Station. The dump sites are contributing features.

### *Nonextant Wood Fencing*

The wood fencing enclosing the nonextant garden area, and is nonextant with no remnants remaining. The area is now filled in by encroaching forest vegetation.

1 **Table SI-1: Small Scale Features**

Feature	Site Image #	Description	Condition	Contributing? /Rationale
Concrete Walks (c.1890)	SI-42 SI-43	Concrete walks (30" wide) connecting site buildings and structures, primarily precast concrete slabs set on grade	Good	Contributing; See text
Dump Site – 1 (1881 - 1969)	SI-45	Dump site of household items, bottles, tins, etc. – appears to be from period of significance	Fair	Contributing; See text
Dump Site – 2 (1881 - 1969)	SI-46	Dump site – appears to be from the period of significance	Fair	Contributing; See text
Dump Site – 3 (1881 - 1969)	SI-47	Dump site – appears to be from the period of significance	Fair	Contributing; See text
Stone Foundation (1881 - 1969)	SI-44	Stone foundation located east of Light Station Quarters – use unknown, possible well location	Poor	Contributing
Concrete Pad with Steel Plate (1939 - 1969)	SI-48	Three, 18" square concrete pads with square metal plate, Possible plumbing cleanout for waste water system for Light Station Quarters	Fair	Noncontributing; Compatible
Concrete Foundation (1881 - 1969)	SI-49	Concrete foundation, immediately south of Light Tower at Light Station Quarters. Approximately 30" x 6". Use unknown, appears to be from the period of significance	Fair	Contributing
Sign (1970 – 2009)	SI-50	NPS wooden interpretive sign	Fair	Noncontributing – contemporary; Compatible
Trail Sign (1970 – 2009)		NPS trail sign	Good	Noncontributing – contemporary Compatible
Fire Pit (1970 – 2009)	SI-51	Steel fire pit – located away from Light Station Quarters	Good	Noncontributing – contemporary; Compatible
Flagpole (1970 – 2009)	SI-52	Wooden flagpole similar in design to flagpoles at Michigan and Outer. As it is not pictured in any of the historic photographs, it appears that it is an NPS addition.	Good	Noncontributing – contemporary; Compatible
Modern Fiberglass Battery Storage Unit (1970 – 2009)	SI-53	Fiberglass battery storage unit at rear of Light Station Quarters	Fair	Noncontributing – contemporary; Compatible
Bench	SI-54	Wooden, rough cut log bench	Fair	Noncontributing – contemporary; Compatible
Wood Headwall (c.	SI-55	Wood headwall for drain	Good	Noncontributing –



Feature	Site Image #	Description	Condition	Contributing? /Rationale
1980)		outlet. Part of 1980s drainage system from the basement from the Light Station Quarters.		contemporary; Noncompatible
Stone North Arrow (c. 1983 - 2009)	SI-56	Arrow and 'N' composed of stones placed in landscape flush with adjacent grade.	Fair	Noncontributing – contemporary; Noncompatible
Footprint of Steel Frame Tower Foundations	SI-56	Four footprints near stone north arrow.	Poor	Noncontributing; Compatible
Solar Panel (1970 – 2009)	SI-57	Solar panel on steel post with electric line	Good	Noncontributing – contemporary; Noncompatible
Propane Tank (1970 – 2009)		White tank located south of the Oil Building	Good	Noncontributing; Noncompatible

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1 ***Small Scale Feature Photographs***



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3 *Site Image SI-42: Typical concrete walk of precast slabs, 2009 (Source: MBD DSC\_0290.JPG)*



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6 *Site Image SI-43: Typical concrete walk of precast slabs, and center, area of replacement concrete, 2009 (Source: MBD*  
7 *DSC\_0288.JPG)*





Site Image SI-44: Stone foundation east of Light Station Quarters, 2009 (Source: MBD DSC\_0253.JPG)



Site Image SI-45: Dump site No. 1, 2009 (Source: MBD P1020382.JPG)





Site Image SI-46: Dump site No. 2, 2009 (Source: MBD P1020387.JPG)



Site Image SI-47: Dump site No. 3, 2009 (Source: MBD DSC\_0227.JPG)





Site Image SI-48: Concrete pad with steel plate, 2009 (Source: MBD DSC\_0280.JPG)



Site Image SI-49: Concrete Foundation south of Light Tower at Light Station Quarters, 2009 (Source: MBD DSC01439.jpg)



Site Image SI-50: Park interpretive sign, 2009 (Source: MBD P1020387.jpg)



Site Image SI-51: Fire pit, 2009 (Source: MBD P1020454.JPG)





Site Image SI-52: Flagpole, 2009 (Source: MBD DSC01438.JPG)



Site Image SI-53: Fiberglass battery storage unit at rear of Light Station Quarters, 2009 (Source: MBD DSC\_0286.JPG)



Site Image SI-54: Bench along trail west of Light Station Quarters, 2009 (Source: MBD DSC\_0320.JPG)



Site Image SI-55: Wood headwall for drainage pipe, 2009 (Source: DSC\_0259.JPG)





Stone North Arrow

Footprints of Steel  
Framed Tower

Site Image SI-56: Footprints of steel framed tower (indicated by arrows above) and stone north arrow, 2009 (Source: MBD P1020412.JPG)



Site Image SI-57: Solar panel and battery unit, 2009 (Source: MBD P1020383.JPG)