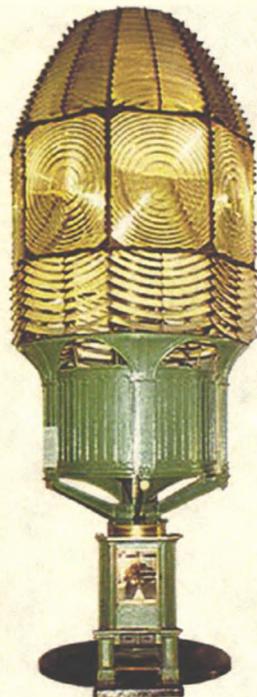




# Return of the Fire Island Lighthouse First Order Fresnel Lens



Fire Island Lighthouse  
Preservation Society



## RETURN OF THE FIRE ISLAND LIGHTHOUSE FIRST ORDER FRESNEL LENS

### **Bring the Beacon Home**

- The Fire Island First Order Fresnel Lens was originally at the Fire Island Lighthouse from 1858 to 1933.
- Millions of immigrants viewed its 7.5-second flash as the first encounter with the land of their dreams.
- The First Order Fresnel Lens completes the Fire Island Lighthouse interpretative experience.
- The First Order Fresnel Lens is an educational feature but also a scientific and engineering marvel of the 1800's.

One of the greatest human migrations in history took place between the 1820's and the 1940's. Irish tenant farmers fleeing the great potato famine, eastern Europeans escaping from Czarist pogroms, Italians fleeing poverty and oppression all made the dangerous crossing from Europe to the continental United States. In many cases ships wrecked on the treacherous shoals that line the coast of Long Island.

The large number of lives lost on these shores necessitated the building of several lighthouses along the south shore of Long Island. The most important of these was the Fire Island Lighthouse built in 1826. Realizing that the tower was not tall enough it was torn down and a new tower was constructed in 1858. A magnificent state of the order first order Fresnel lens of cut prismatic glass set in brass was installed in the Lantern Room at the top of this Lighthouse. It sent a beam of light 24 miles out to sea warning vessels from clipper ships to steamers to stay clear of the dangerous coastal sandbars and direct ships to New York harbor. For most of our ancestors, this was the first light they saw shining in the new land they would call home.

This lens, this jewel, this beacon of freedom, now sits in crates in Philadelphia having been removed from the Lighthouse tower by the U.S. Lighthouse Service in 1933. Now the time has come to bring this beacon home. The Lighthouse, which almost fell victim to the wrecking ball, sits restored and proud guarding the approaches to New York Harbor again. A hundred thousand people visit this site annually and participate in the educational

programs and tours offered year round. The only piece of history missing is its soul - the original first order Fresnel lens.

Recently, representatives from the National Park Service and the Fire Island Lighthouse Preservation Society met to determine the alternatives for displaying and protecting the First Order Fresnel Lens and bringing the lens back to Fire Island.

In 1894, an experimental electric station was constructed adjacent to the 1826 lighthouse foundation. The building was constructed to house two steam driven generators to produce electricity to illuminate the light on top of the 1858 lighthouse. The experiment apparently was not successful and the generators were removed. The building remained intact until the 1940's when it was removed and the lighthouse boathouse from the bay dock was moved onto the existing cement foundation.

The preferred alternative for the return of the Fire Island Lighthouse First Order Fresnel Lens was to build a similar structure resembling the historic electric station and reassemble the Fresnel lens inside this new building. The proposed structure would be designed to incorporate the best construction elements for preservation, protection and interpretation of the lens and to maintain the historic scene from the 1940's.

At the current time, historic building plans were not found from the National Archives or the US Coast Guard. Historic photographs and postcards have identified the exterior shape and approximate size of the building. These photographs were used to construct current architectural plans, drawings and a model.

The reconstructed building would resemble the exterior shape and appearance of the historic structure and have a modern open aspect inside to provide visitors an opportunity to see all sides of the lens and at the same time provide security and protection to the First Order Fresnel lens.

### **Return of First Order Fresnel Lens to the Lighthouse:**

The lens should be returned to the Fire Island Lighthouse tract for many reasons.

- Historically, this is where it belongs and was first used for over 75 years.
- Present Lighthouse staff/volunteers are available to provide interpretation of this most important piece of the lighthouse story.
- The First Order Fresnel Lens is a major part of the complete Lighthouse story.
- The Fire Island Lighthouse is open year round with over 115,000 visitors a year including over 6,000 schoolchildren a year.
- FILPS has financial resources to provide for safety, interpretation and accessibility to the public.
- FILPS has demonstrated its ability to operate and maintain the Lighthouse for the NPS and raise funds for projects when necessary.
- This First Order Fresnel Lens is one of only a few on display through out the United States and one of two on display in the Northeast.
- The First Order Fresnel lens compliments the "light" history and progression of optics at the Lighthouse.

- The Lens would be positioned at ground level so that all visitors can see the magnitude of the Lens close-up.

**Building requirements:** –

- Large enough so that lens can be displayed and visitor inside building cannot reach (touch) the lens.
- Solid side to south, (180°) to avoid sun damage and heating effect.
- Vandal proof windows in the structure for maximum protection.
- Partial internal ramp to allow visitors to see flash panels at eye level.
- Height of building to be enough for lens plus area for exhaust at top (approx. 18').
- Visitors would have access into building only with interpretive guide or behind the glass foyer.
- Building can be constructed to adequately safeguard the lens against the harsh environment.
- Public can fully view lens and clock work mechanism.
- Cost of building would not be excessive
- New building would be in character and resemble the historic scene

**Fire Island Lighthouse Preservation Society (FILPS):**

The Lighthouse is presently operated and maintained by FILPS, a non-profit partner group, for the National Park Service (NPS) over the last 20 years. It is the intent of FILPS that the lens be on loan to the NPS and located at the Fire Island Lighthouse. It is also FILP'S intent to fiscally support the operation and maintenance for the lens and new building at no cost to the government. The FILPS staff and volunteers will interpret the lighthouse, lens and building in the future.

**American Lighthouse Coordinating Committee Position Statement (ALCC):**

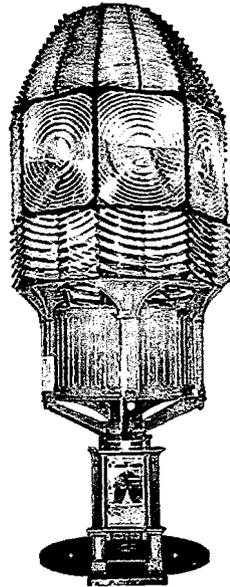
The ALCC was established in 1997 by individuals concerned with the preservation of America's historic lighthouses, and comprises professionals from a broad cross-section of disciplines who represent the growing lighthouse community in the United States.

This group includes representatives from the U.S. Coast Guard and the NPS. The following are excerpts from their October 2002 meeting (attachment 3) in Buffalo, NY.

- Transfer to regional or national museums shall only take place once the State Historic Preservation Officer has stated in writing that no local willing and capable or on-site museum, historical facility and/or non-profit organization, can be located within the area or state to assume responsibility for the historic optic.
- If removal is necessary, the historic optic should be located in a safe and secure exhibit on the site of the lighthouse of origin or, that not being possible or prudent, made available to local museums, historical facilities and/or non-profit organizations which can demonstrate the ability, both technically and financially, to properly transfer, repair, exhibit and maintain the historic optic.

## **Documents Enclosed**

- A. *Return of the Fire Island Lighthouse First Order Fresnel Lens* – original concept plan for bringing the Fresnel Lens to Fire Island
- B. *Disassembly of the FI Lighthouse Lens at the Franklin Institute* – Final Report detailing the FI Lens by the NPS December 2000
- C. *Fire Island Lighthouse Electric Station Proposal* – detailed photos of the Power House/Electric Station
- D. *Assessment of Alternatives for the First Order Lens Return* – NPS and FILPS Fresnel Lens Committee report
- E. *Fire Island Lighthouse Electric Station Preliminary Drawings and Elevations* – Detailed drawings of Power Station Building
- F. *Fire Island Lighthouse Electric Station and Fresnel Lens Return Proposal* – PowerPoint summary of project
- G. *Fire Island Lighthouse First Order Fresnel Lens Return and Display Environmental Assessment* – Environmental Assessment
- H. *Support Letters in Favor of the Lens Return Proposal* – NY State Senator, NY State SHPO, USFSW, and US Coast Guard



Original Fire Island Lighthouse  
First Order Fresnel Lens  
Long Island, New York

The First Order rotating Fresnel Lens was state of the art technology when it was installed in the second Fire Island Lighthouse, built in 1858. The beehive shape lens, mounted on the base, stood 16 feet high. The lens was comprised of a series of glass prisms, set into brass framework. Prisms on the top and bottom panels captured 83% of the light emitted from the lamp within the center of the lens. Each prism refracted and reflected light sending it out in narrow sheets. The convex bulls eye at the center of each 8 panels acted as a magnifying glass, which further concentrated the light producing an intense beam from each panel. The entire lens rotated on the base by means of clockwork mechanism. The system of weights, which drove the clockworks, had to be wound every four hours throughout the night as part of the keepers routine duties. Each time the bulls eye passed between the lamp and and an observer, it gave the illusion of a flash. This light could be seen for a distance of 21-24 miles.

**Attachment 1**  
Description of Lens

# **THE FIRE ISLAND LIGHTHOUSE FIRST ORDER FRESNEL LENS**

(A soul returned)

One of the greatest human migrations in history took place between the 1820's and the 1940's. Irish tenant farmers fleeing the great potato famine, eastern Europeans escaping from Czarist pogroms, Italians fleeing poverty and oppression all made the dangerous crossing from Europe to the continental United States. In many cases ships wrecked on the treacherous shoals that line the coast of Long Island.

The large number of lives lost on these shores necessitated the building of several lighthouses along the south shore of Long Island. The most important of these was the Fire Island Lighthouse built in 1826. Realizing that the tower was not tall enough it was torn down and a new tower was constructed in 1858. A magnificent first order Fresnel lens of cut prismatic glass set in brass was installed in the Lantern Room at the top of this Lighthouse. It sent a beam of light 24 miles out to sea warning vessels from clipper ships to steamers to stay clear of the dangerous coastal sandbars. For most of our ancestors this was the first light they saw shining in the new land they would call home.

This lens, this jewel, this beacon of freedom, now sits in crates in Philadelphia having been removed from the Lighthouse tower by the U.S. Lighthouse Service in 1933. Now the time has come to bring this beacon home. The Lighthouse, which almost fell victim to the wrecking ball, sits restored and proud guarding the approaches to New York Harbor again. A hundred thousand people visit this site annually and participate in the educational programs and tours offered year round. The only piece of history missing is its soul - the original first order Fresnel lens.

Join the Fire Island Lighthouse Preservation Society in its dedication to bringing the lens back to the Lighthouse site, where it can be conserved and properly displayed in its proper interpretive context.

Bring the lens home to the Lighthouse. Bring home its soul. Nothing else makes historical sense!

### **Background:**

The entire Fire Island Light Station was constructed with Federal funds to support the First Order light (attachment 1) that was installed in the Lighthouse lantern room in 1858. The original lens was removed in 1933 and sent to the Franklin Institute in Philadelphia where it has been on display until recently. The lens has been disassembled and crated and is now in storage in Philadelphia. The storage is being paid for by the Fire Island National Seashore (FINS) from funds originally allocated for the new Fire Island Lighthouse exhibits. These funds had been requested by the Fire Island Lighthouse Preservation Society (FILPS). The lens is still owned by the U.S. Coast Guard.

When the lens was disassembled it was determined that repairs will be necessary before it can be exhibited.

The present light in use at the Lighthouse is an airport type beacon installed in 1986 as part of the restoration effort of the Preservation Society. The Coast Guard has indicated that this light will be replaced by a VEGA type unit in the near future.

### **Fire Island Lighthouse Preservation Society:**

The Lighthouse is presently operated by FILPS, a non-profit group, for the National Park Service (NPS). It is the intent of FILPS that the lens be on loan to the NPS and located at the Fire Island Lighthouse. It is also FILP'S intent to pay for lens restoration and exhibition at no cost to the government.

### **American Lighthouse Coordinating Committee Position Statement (ALCC):**

The ALCC was established in 1997 by individuals concerned with the preservation of America's historic lighthouses, and comprises professionals from a broad cross-section of disciplines who represent the growing lighthouse community in the United States.

This group includes representatives from the U.S. Coast Guard and the NPS. The following are excerpts from their October 2002 meeting (attachment 3) in Buffalo, NY.

- Transfer to regional or national museums shall only take place once the State Historic Preservation Officer has stated in writing that no local willing and capable or on-site museum, historical facility and/or non-profit organization, can be located within the area or state to assume responsibility for the historic optic.
- If removal is necessary, the historic optic should be located in a safe and secure exhibit on the site of the lighthouse of origin or, that not being possible or prudent, made available to local museums, historical facilities and/or non-profit organizations which can demonstrate the ability, both technically and financially, to properly transfer, repair, exhibit and maintain the historic optic.
- Furthermore, whenever possible, the historic optic should be returned to use as an aid to navigation. It is the position of the ALCC that consideration of priority should be given For the return of historic optics to their place of origin contingent on its placement in a safe and secure environment.

### **Return of lens to the Lighthouse:**

The lens should be returned to the Lighthouse tract for many reasons.

- Historically this is where it belongs.
- Present Lighthouse staff/volunteers are available to provide interpretation.
- Lens is a major part of the complete Lighthouse story.
- Lighthouse is open year round with 100,000 visitors.
- FILPS has financial resources to provide for safety and accessibility to the public.
- FILPS has demonstrated its ability to operate the Lighthouse for the NPS and raise funds for projects when necessary.

### **Lens display at the Lighthouse:**

There are two options that are presently being considered:

#### **1. Return lens to the lantern room at the top of the Lighthouse.**

- This would be extremely expensive.
- Need to raise delicate lens pieces to the top.
- Installers need to climb to top to complete lengthy assembly task.
- There is minimal space at top to assemble lens.
- Need to fabricate turning mechanism.
- Maintenance of an active aid to navigation could be costly.
- Coast Guard may not permit reinstallation.
- Visitors could not adequately view lens.

#### **2. Construct a building near the Lighthouse.**

- Building can be constructed to adequately safeguard lens.
- Public can fully view lens.
- Cost of building would not be excessive.
- Space exists on site, not within the "historic" view of the terrace.

### **Location of building to display lens:**

#### **A. Area to east of boardwalk next to boat house.**

- This area is far enough from Lighthouse terrace to be outside of historic view.
- Base of building to be approximately 3' above present terrain (height of boardwalk).
- Will require archeological excavation in advance of base installation.
- Electricity can be easily accessed.
- Lighthouse Keeper's Quarters alarm system can be extended to building.
- Close enough to Lighthouse for easy control/interpretation using Lighthouse staff and volunteers.
- If height of building above ground can be held to 20', boathouse will hide it when viewed from the west.

#### **B. Area to north of checkpoint (Along east/west boardwalk).**

- Not preferred – Does not meet criteria of site A.

#### **C. Restore Generator Building to original site (where the boathouse is located).**

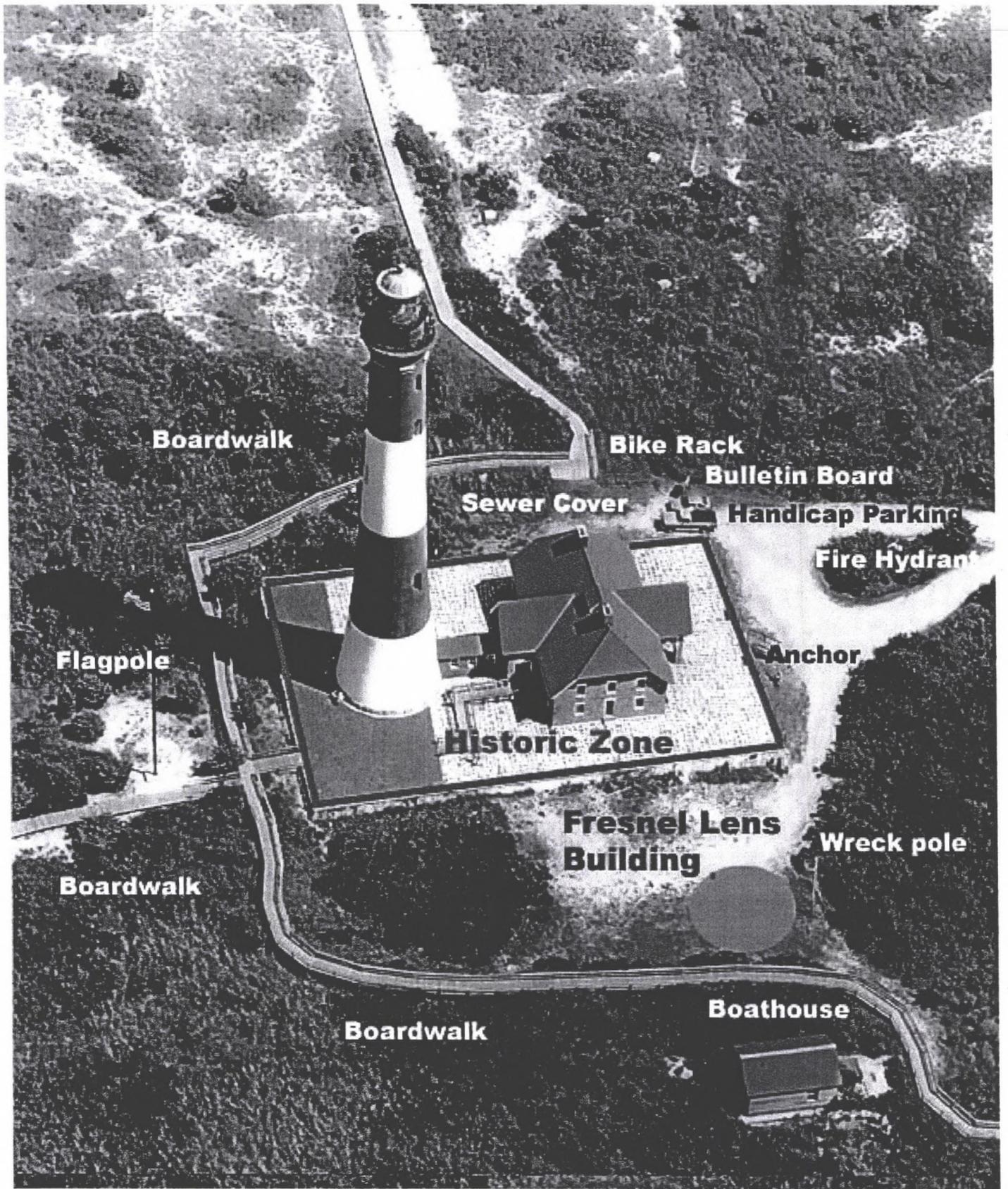
- Sight of Generator Building (see following page) would provide ample room for lens and other exhibits. Building is approximately 25' x 50' x 27').
- Boathouse could be moved to an area along the boardwalk that goes along the bay. That is closer to its original location at the waters edge.
- The advantages of closeness to the Lighthouse sited in Option A would apply, plus the location would be as high as the Lighthouse tower above mean high water.
- The negative would be the size of the building and the visual impact on the Lighthouse area.
- Historically this building was present from 1890 to 1930's. (Attachment 6)

#### **D. Use base of old Generator Building for new lantern type (glass) building.**

### **Historic Zone:**

The terrace represents the only "Historic Zone", based on the following:

- Boathouse was not in present place in history.
- Boardwalk was not present.
- Anchor in front not historic.
- Flag pole to north not historic.
- Bulletin Board/Sign.
- Handicapped parking to east.
- Bike rack.
- Fire Hydrant.
- Gate/Stop Sign.
- Electric Transformer.
- Vegetation was significantly less in history.
- Wreck pole to west of Lighthouse not historic.
- See 1940 Building in location west of terrace. (Attachment 5).
- See National Register of Historic Places Inventory-Nomination Forum - only terrace and building on it are nominated (Attachment 7)



Fire Island Lighthouse Site Plan

**Building:** – see following pages (building to replicate look of lantern).

- Large enough so that lens can be displayed and visitor inside building cannot reach (touch) lens.
- Solid side to south, (180°) to avoid sun damage and heating effect.
- Bullet proof glass around rest of structure with additional pull down panels for maximum protection.
- Partial internal ramp to allow visitors to see flash panels at eye level.
- Height of building to be enough for lens plus area for exhaust at top (approx. 18’).
- Visitors would have access into building only with interpretive guide.
- Building would require NEPA Section 106 compliance.
- Example of separate building – Ponce DeLeon inlet Lighthouse (attachment 8).

**Financial requirements:**

- |                                  |                  |
|----------------------------------|------------------|
| • Repair and reassemble lens.    | \$150,000        |
| • Design and construct building. | <u>\$250,000</u> |
|                                  | \$400,000        |

It is recommended that a fund-raising campaign be progressed to raise the needed capital. A “Return the Lens to the Fire Island Lighthouse” campaign could generate a lot of public support.

During the fund-raising period it is recommended that the Fire Island National Seashore work on providing the necessary NEPA Section 106 compliance.

**Fund raising plan**

Upon approval of lens return to Lighthouse site FILPS will initiate a fund raising plan.

**Attachments:**

1. Description of lens.
2. Lens Dimension
3. Lens and Lanterns Conference Summary
4. ALCC Position Statement...
5. 1940’s building in area.
6. Historic Generator Building
7. National Register of Historic Places Inventory-Nomination Forum
8. Ponce Inlet lenses building.

# **Attachments**

**Description of Lens**

**Lens Dimensions**

**Lens and Lanterns Conference Summary**

**ALCC Position Statement**

**1940's Historic Buildings Photograph**

**Historic Generator Building Photograph**

**National Register Nomination Form**

**Ponce DeLeon Lens Building**

SKETCH ADDENDUM

Owner/Client

DRAWN by: THOMAS F Roberts III

5/10/97 (516) 422-1800

Property Address

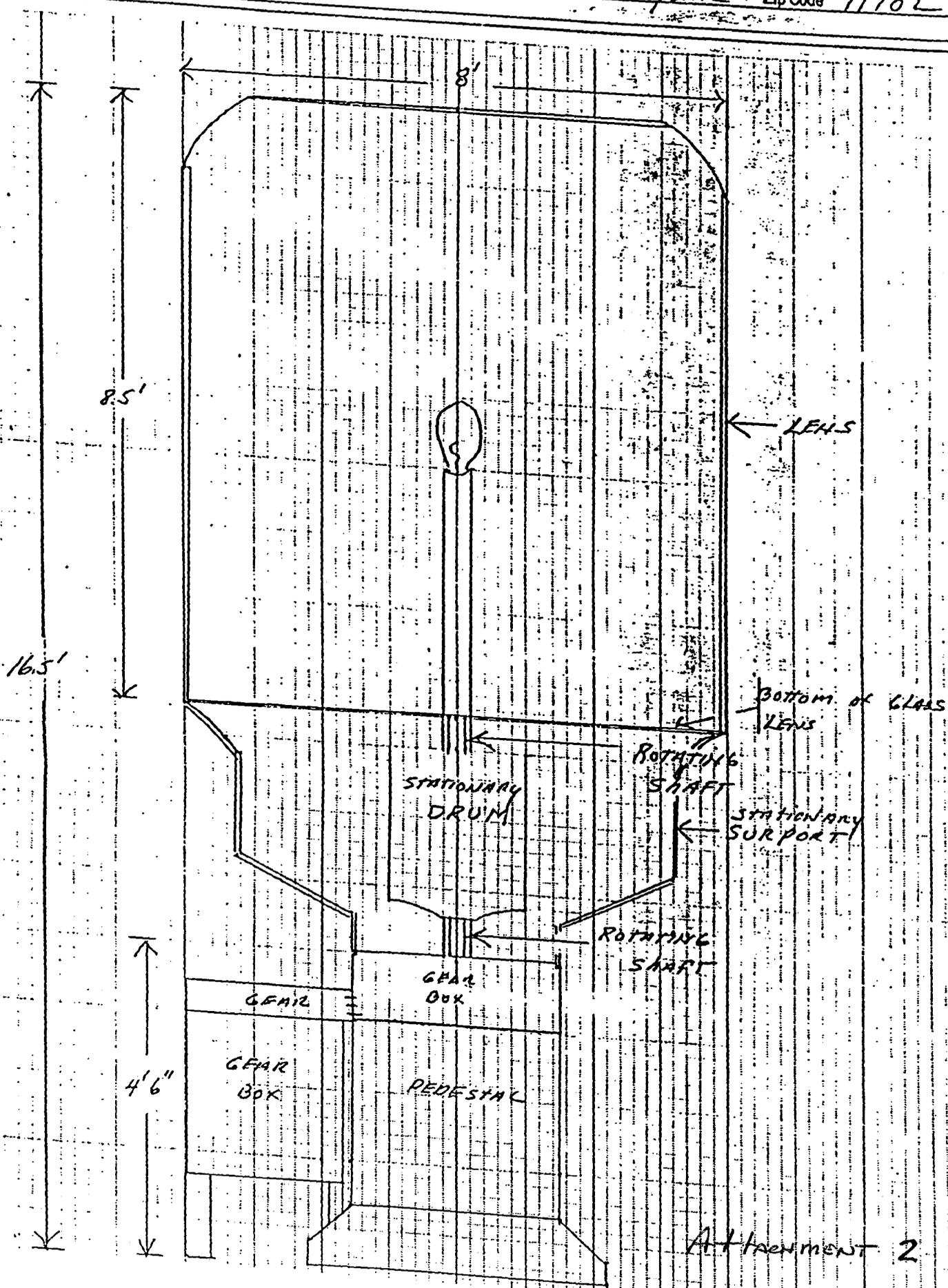
400 West MAIN Street

BABYLON

County SUFFOLK

State New York

Zip Code 11702



Attachment 2

## Attachement 3

### Lens and Lanterns II Workshop Conference October 15 – 17, 2002

#### Executive Summary

This conference was an outstanding technical workshop that dealt with the conservation and restoration of lighthouse lens and lanterns in the United States. It has been over ten years since this type of conference was held with this caliber of attendees. The course was attended and taught by the most knowledgeable authorities in the United States from the US Coast Guard, National Park Service and private lighthouse societies. The sessions included the history of lighthouses and illumination, a national lens inventory, the preservation techniques, contracting for repair of lighthouses, maintenance of Fresnel lens, protection and restoring of lantern rooms and lighthouse, and the US Coast Guard curator's perspective on stewardship of lighthouses.

We received numerous updated lighthouse and lens inventories as well as surveys including the National Lighthouse Lens Survey, lens manufacturers, and the United States Coast Guard Lighthouse Inventory. We also received advanced copies of two excellent videos. "The History of Lighthouse Illuminations" by Artworks Production and the other providing information on lighthouse lens repair.

Discussion focused on Fresnel lens as priceless artifacts with unique natures making them the "soul" of the lighthouse. An overwhelming attitude was to return lenses to the original lighthouses to preserve them from further degradation, and to display the lenses for the public to see. Attached is a position paper by the American Lighthouse Coordinating Committee which strengthens the Preservation Society. Position VI states "It is the position of the ALCC that consideration of priority be given for the return of historic optics to their place of origin contingent on its placement in a safe and secure environment."

The team that dismantled and removed the Fire Island First Order Fresnel lens from the Franklin Museum observed that the lens is in worse condition than originally believed. Apparently there was heat duct directly above the lens which degraded the litharge resulting in severe damage to the top of the lens. Estimates to repair and prepare the lens for display could cost up to \$100,000. The lens is currently stored in Philadelphia until 2003. The Franklin Museum did not have a formal ownership agreement. The US Coast Guard is currently formalizing an agreement to transfer the lens to the NPS, as was agreed upon a few years ago.

Following are my thoughts concerning the future of the Fire Island First Order Fresnel Lens:

- The “soul of the lighthouse”, the lens, can best be interpreted at the exact location of the lighthouse.
- It would be best protected and most visible to the public if it is housed in a separate building designed expressly for the function of protection and viewing.
- The lens will be seen by the greatest number of people if it is housed at a year round facility where over 90,000 visitors come to learn the history and story of the Fire Island Lighthouse complete with its First Order Lens.
- The US Coast Guard will be looking to display the lens where it will be well protected, yet visible. Gayle Fuller, the US Coast Guard curator, was aware of the FI Lighthouse Preservation Society and their interest in the First Order Lens. Although she did not know the NPS wanted to put the Lens in the Patchogue Visitors Center,
- A perfect example of the FILPS plan has already been accomplished at the Ponce De Leon Inlet Lighthouse in Florida with great success. The building contains a First Order Fresnel Lens with a visitor gallery, special windows and shutters that close at night.
- The FILPS has an excellent reputation for not just maintaining and operating a lighthouse structure but also for being able to raise funds to develop and continue operations of a lighthouse for the past 20+ years.
- The NPS Superintendent of the Historic Preservation Training Center announced that the Director of the NPS, Gayle Norton, has emphasized the policy of promoting the privatization of lighthouses in the United States.
- It would be timely to announce the Preservation Society plans to continue working on the project to bringing the First Order Lens to its home at the Fire Island Lighthouse.

**AMERICAN LIGHTHOUSE  
COORDINATING COMMITTEE**

**POSITION STATEMENT**

**THE FUTURE OF HISTORIC OPTICS IN U.S. LIGHTHOUSES**

**American Lighthouse Coordinating Committee (ALCC):** The ALCC was established in 1997 by individuals concerned with the preservation of America's historic lighthouses, and comprises professionals from a broad cross-section of disciplines who represent the growing lighthouse community in the United States.

## **INTRODUCTION**

The ALCC recognizes the high historic and cultural value of Fresnel lenses to American maritime history and patrimony. Historic optics are one of the most defining characteristics of an established lighthouse. Removal of historic optics from lighthouses reduces the historic context of the optic and distorts the relationship of that optic to the light station from which it has been removed. Therefore, the ALCC believes that a priority should be given to retaining all historic optics in their historic context whenever possible. Further, the ALCC believes that it is in the best interest of the public for the federal government to retain ownership and be ultimately responsible for these historic optics. However, we also feel the federal government should make historic optics and related artifacts available to museums, historical societies, and other non-profit organizations which have the ability to maintain the lens and associated artifacts in optimum condition and in a secure and safe environment. Once a loan based on careful analysis of the entity's ability to properly maintain the historic optic has been established, a permanent loan to the entity should be granted.

## **POSITION I**

### **Removal of Historic Lighthouse Optics Currently in Use as Aids to Navigation**

The American Lighthouse Coordinating Committee maintains that all historic optics currently in use in a lighthouse serving as an aid to navigation should remain in situ unless it can be documented that the historic optic or a portion of the lens is at risk of irreparable damage or total loss. The United States Coast Guard should show cause, in writing, to the respective State Historic Preservation Officer through the Section 106 Review process stating why the historic optic is at risk and relocation is required. The 106 Review should include but not be limited to:

1. A brief narrative description of the optic and its history at that site.
2. Photographic documentation of the optic, and a detailed narrative of the condition which merits consideration for its removal.
3. A cost analysis with documented and supported estimates of costs for:
  - a. Retaining the historic optic in place.

- b. Returning it as an active aid to navigation.
- c. Stabilizing to use the optic in place without returning it to use as an aid to navigation.
- d. Replacement system to be used as an active aid to navigation.
- e. Removal, transfer and storage of the historic optic.
- f. Restoring, insuring and exhibiting the historic optic.

Recognized and knowledgeable authorities on lenses and / or rotation mechanism repair and maintenance shall provide the cost analysis.

The American Lighthouse Coordinating Committee recognizes that under some circumstances an historic optic may not be suited for conversion to "solarized" or more advanced technology. Our preference in such cases would be to keep the historic optic in place and install a more modern and/or replacement optic in another location on the light tower. The historic optic could be de-activated so as not to adversely effect the performance of the modern optic. There have been cases where such replacement optics have been installed on a tower or pole near the existing light station. At some point in time, the status of the aid to navigation may change, which could result in the removal of the modern optic and the return to function of the historic optic as a private aid to navigation. A decision to remove an historic optic should not under any circumstances be based solely on economic concerns. The replacement tower or pole should be installed in a location and in such a manner as to not impact the view of the historic tower and which is acceptable to the State Historic Preservation Officer.

Where possible, the State Historic Preservation Officer or a designated representative should be permitted to inspect the lens and its location to determine on-site conditions as they relate to retention or removal of the historic optic. If it is determined by the State Historic Preservation Officer that continued use of the historic optic in its existing location places the optic in danger of damage or destruction, then the lens should be removed. In this case, the historic optic should be located in a safe and secure exhibit on the site of the lighthouse of origin or, that not being possible or prudent, made available to local museums, historical facilities and/or non-profit organizations which can demonstrate the ability, both technically and financially, to properly transfer, repair, exhibit, insure and maintain the historic optic.

Potential repositories should be notified of the availability of an historic optic and should be given a reasonable amount of time to request transfer of the historic optic and provide for its care and exhibition to the public. In addition, the State Historic Preservation Officer shall be notified and be provided a reasonable amount of time to respond prior to any transfer of the historic optic to another site. Transfer to regional or national museums shall only take place once the State Historic Preservation Officer has stated in writing that no local willing and capable or on-site museum, historical facility and /or non-profit organization, can be located within the area or state to assume responsibility for the historic optic.

It is understood by the ALCC that there are some situations in which it is in the best interest of the safety of the historic optic that they be removed from their historic setting and/or context. Examples might be remote offshore lights that have had an ongoing incidence of vandalism or locations which are exposed to extreme and threatening environmental conditions such as coastal erosion, storms, or other documented hazards.

## **POSITION II**

### **Removal of Historic Lighthouse Optics Currently Not In Use as Aids to Navigation**

The American Lighthouse Coordinating Committee maintains that all historic optics currently not in use but still located in the lantern of the lighthouse for which they were designed, and assigned, should remain "in situ" unless it can be documented that this will place the optic at risk of loss or irreparable damage. The United States Coast Guard should show cause, in writing, to the respective State Historic Preservation Officer through the Section 106 Review process why the historic optic is at risk and is requested to be relocated. The 106 review should include, but not be limited to the same criteria cited in Position I.

Where possible the State Historic Preservation Officer or a designated representative should be permitted to inspect the lens and its location to determine on site conditions as they relate to retention or removal of the historic optic. If it is determined by the State Historic Preservation Officer that keeping the historic optic in its existing location places it in danger of damage or destruction, then the lens should be removed. If removal is necessary, the historic optic should be located in a safe and secure exhibit on the site of the lighthouse of origin or, that not being possible or prudent, made available to local museums, historical facilities and/or non-profit organizations which can demonstrate the ability, both technically and financially, to properly transfer, repair, exhibit and maintain the historic optic.

Potential repositories should be notified of the availability of an historic optic and should be given a reasonable amount of time to request transfer of the historic optic and provide for its care and exhibition to the public. In addition, the State Historic Preservation Officer shall be notified and be provided a reasonable amount of time to respond prior to any transfer of the historic optic to another site. Transfer to regional or national museums shall only take place once the State Historic Preservation Officer has stated in writing that no willing and capable local or on site museum, historical facility and/or non-profit organization, can be located within the state to assume responsibility for the historic optic.

### **POSITION III**

#### **Removal of In-Situ Historic Lighthouse Optics Based on Economic Concerns**

The American Lighthouse Coordinating Committee maintains that no historic optic currently in place in a lighthouse should be removed based solely on economic concerns of the United States Coast Guard. Any consideration of removing an historic optic from its existing location in a lighthouse—whether it is currently in use as an active aid to navigation or not—must be stated in writing to the respective State Historic Preservation Officer through the Section 106 Review process. The 106 Review should include, but not be limited to the same criteria cited in Position I.

The United States Coast Guard shall publicly notify state and local communities concerning plans to remove the historic optic due to economic concerns. Furthermore, the United States Coast Guard shall provide adequate time for state and local communities to hold public hearings, solicit public input, seek and provide independent consultants to review the request and raise funds to retain the historic optic in situ. It is the opinion of the ALCC that many local groups and entities would be willing to form partnerships with the United States Coast Guard in order to make possible the safe, continued operation of the historic optic in situ.

### **POSITION IV**

#### **Maintenance of In-Situ Historic Lighthouse Optics by Coast Guard Personnel**

The American Lighthouse Coordinating Committee believes that there are currently well trained Coast Guard personnel who could be assigned to inspect, document, assess, maintain, stabilize, restore and safeguard historic optics and their mechanisms currently located in lighthouses. These trained Coast Guard personnel are currently providing a high level of skill, concern, knowledge, appreciation, and expertise necessary for the protection and continued function of historic optics and their related mechanisms. These Coast Guard personnel have in the past trained, and could continue to train in the future, Coast Guard Auxiliary personnel to assume many preventive maintenance responsibilities. This is a cost efficient means for the Coast Guard to monitor the condition of historic optics and help ensure they are properly maintained.

With an increase in United States Coast Guard divestment of lighthouse properties, maintenance and restoration responsibilities have been delegated to various nonprofit, local, state and federal government entities, reducing the financial responsibilities of the Coast Guard. Due to this circumstance, the ALCC believes that funds could be provided by the United States Coast Guard to commit trained Coast Guard personnel for the purpose of providing preventive

maintenance and repair to historic optics in situ, without unnecessary or unfair cost to the Coast Guard.

The ALCC wishes to work with the United States Coast Guard in locating and developing groups that will form a "partnership" with the Coast Guard and help to offset the cost of maintaining an historic optic in its original location in lieu of removal or replacement.

#### **POSITION V**

##### **U. S. Coast Guard Insurance Requirement for Historic Optics on Loan**

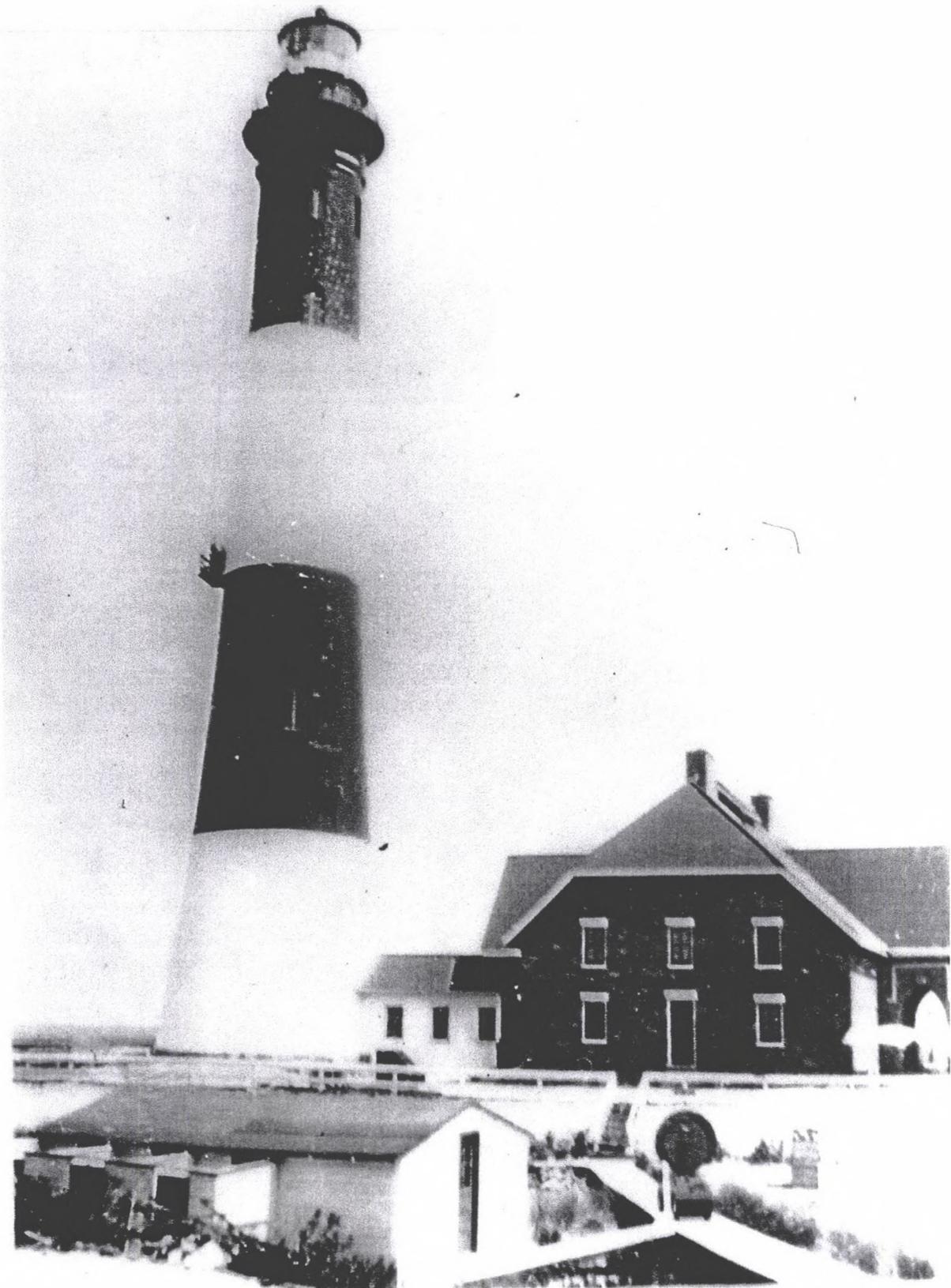
The American Lighthouse Coordinating Committee maintains that the current Coast Guard policy requirements concerning the level of insurance for historic optics on loan to non-profit organizations are fair and realistic. The former Coast Guard policy requiring that non-profit organizations provide full replacement value coverage on historic optics on loan to them recently has been modified. No historic optic, which is badly damaged or destroyed, would be replaced, as it would compromise the significant historical value intrinsic to the artifact. The American Lighthouse Coordinating Committee, and the lighthouse organizations they represent, believes that the Coast Guard's new policy regarding the percentage of repair or replacement of damaged prisms reflects present and up to date costs, and requires only up to 50% replacement of the historic optic. Entities in possession of historic optics should provide to the United States Coast Guard necessary documentation from a certified insurance carrier indicating that the historic optic on loan has been protected by reasonable and responsible measures against damage and destruction from trauma other than acts of God.

#### **POSITION VI**

It is the position of the ALCC that consideration of priority should be given for the return of historic optics to their place of origin contingent on its placement in a safe and secure environment. Furthermore, whenever possible, the historic optic should be returned to use as an aid to navigation.

#### **CONCLUSION**

The American Lighthouse Coordinating Committee and the lighthouse organizations it represents in the United States wish to establish an open and meaningful dialogue with representatives of the United States Coast Guard to address these positions and the concerns contained within.



Attachment 5  
1940 's Historic Building Placement



Attachment 6  
Historic Generator Building

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY - NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY  
RECEIVED  
DATE ENTERED

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS  
TYPE ALL ENTRIES - COMPLETE APPLICABLE SECTIONS

**1 NAME**

HISTORIC  
Fire Island Light Station  
AND/OR COMMON  
Same

**2 LOCATION**

STREET & NUMBER  
Robert Moses Causeway  
CITY, TOWN  
Bay Shore  
STATE  
New York  
 VICINITY OF  
CODE  
36  
COUNTY  
Suffolk  
CONGRESSIONAL DISTRICT  
02  
NOT FOR PUBLICATION  
CODE

**3 CLASSIFICATION**

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input checked="" type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL	<input checked="" type="checkbox"/> PARK
<input checked="" type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	<input type="checkbox"/> PUBLIC ACQUISITION	<input type="checkbox"/> ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT	<input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT	<input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY	<input type="checkbox"/> OTHER

**4 AGENCY**

REGIONAL HEADQUARTERS. (If applicable)  
National Park Service, North Atlantic Region  
STREET & NUMBER  
15 State Street  
CITY, TOWN  
Boston  
STATE  
Massachusetts  
VICINITY OF

**5 LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE,  
REGISTRY OF DEEDS, ETC. Land Acquisition Division, National Park Service, North Atlantic  
STREET & NUMBER  
15 State Street  
CITY, TOWN  
Boston,  
STATE  
Massachusetts  
Region

**6 REPRESENTATION IN EXISTING SURVEYS**

TITLE  
U.S. Coast Guard, 3d Dist., "Fire Island Station Annex"  
DATE  
18 June 1975, revised 8-7-81  
DEPOSITORY FOR  
SURVEY RECORDS National Park Service  
CITY, TOWN  
Boston  
STATE  
Massachusetts

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED      DATE _____
<input checked="" type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Fire Island Light Station is situated 5 miles east of the western end of Fire Island, a barrier island off the southern coast of Long Island. It consists of a lighthouse and an adjacent keeper's quarters sitting on a raised terrace. The lighthouse tower, completed in 1858, is a conical tower with hyperbolic curved profile becoming cylindrical near the top. The height of the tower, from foot to cornice, is 140 feet, with an additional 24 feet to enclose the watch room and the lantern. The focal plane of the light is approximately 168 feet above sea level. The diameter of the tower at its base is 32 feet; at its top, 15 feet. The cornice is of granite and was originally in the Doric order with six pilasters, now missing or covered with concrete. It supports an iron-railed projecting gallery. The tower is constructed of brick. By 1876 it was coated with a cement wash, giving it a cream color. In 1891, it was covered with asphalt paint, overpainted with white to produce four horizontal black and white stripes. The tower was coated with reinforced concrete in 1912 and painted with the same stripes. There is a hollow central column of cast iron, which originally contained the clock weights, and a spiral staircase with cast iron open-work treads. The original light was a first order revolving catadioptric system with Fresnel lens, visible for 21-23 nautical miles from 15 feet above sea level. A Funck mechanism was installed in 1869. Whale oil was used until 1867; lard oil until 1884; mineral oil (kerosene) until 1907; incandescent oil vapor until 1939; electricity thereafter. A Western Union telegraph service was installed in 1878; telephone in 1898; wireless telegraphy experiments were conducted in 1901.

The adjacent Keeper's residence, which also contained the oil storage rooms, was completed in 1859. It was originally connected to the tower by a covered passage, now missing. The two-story building now contains thirteen rooms divided into two apartments, plus full attic and basement. It is faced with rough coursed granite. The terrace on which both structures sit is approximately 15 feet high and faced with stone, the stone coming from the first Fire Island lighthouse and keeper's house (1826). Parts of the south and east walls of the terrace were replaced in 1901. The terrace measures 148 feet north to south, by 97 feet east to west. There is a small metal shed on the northeast corner of the terrace.

PERIOD

AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW

<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input checked="" type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input checked="" type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input checked="" type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1858-59

BUILDER/ARCHITECT J.T.Morton, construction supv

STATEMENT OF SIGNIFICANCE

The current Fire Island lighthouse was completed in 1858 to replace the first Fire Island light, which had been put into service in 1826 and whose foundation is about 200 yards southwest of the current station. In 1826, the light was at the western tip of Fire Island, adjacent to Fire Island Inlet, which connects the Atlantic Ocean with Great South Bay. Littoral drift causes Fire Island to "migrate" westward at the rate of about one mile every 25 or 30 years, so that now the site of the lighthouse is five miles east of the current inlet.

The Federal government took jurisdiction over lighthouses on August 7, 1789, in one of the earliest assertions of federal power over the powers of the separate states. The first Fire Island light was constructed during a wave of lighthouse building in the 1820's and 30's; and the second, during a wave of building and renovation in the 1850's. The ultimate goal was to make the Atlantic coast a lighted highway of commerce, and the Fire Island lights filled the gap between the Montauk Point Light to the east and the Sandy Hook Light to the west. As New York emerged as the most important American port in the transatlantic trade, the Fire Island light emerged as the most important light station on the East Coast, since it was the first landfall for ships approaching New York harbor on the Atlantic routes. A shoal about a mile off-shore was the cause of numerous shipwrecks. Thus the second Fire Island light was 80 feet taller and had a more powerful light than its predecessor and than the neighboring lights to the east and west. Its finely proportioned curved profile and its original Doric details gave it architectural distinction.

Fire Island Light Station also served important non-navigational functions in the nineteenth century, with the keeper and his assistants serving as "mayors" of Fire Island, assisting baymen, and serving as inn-keepers to rich urbanites seeking primitive recreational experiences away from the city. The Fire Island Light Station was decommissioned by the Coast Guard in 1974.

NATIONAL ARCHIVES and RECORD SERVICE, RECORD GROUP 29.  
 Francis Ross Holland, Jr., America's Lighthouses, Their Illustrated History since 1716 (Brattleboro, Vt., 1972).  
 Henry Bang, The Fire Island Lighthouse (to be published, 1981).

**10 GEOGRAPHICAL DATA**

ACREAGE OF NOMINATED PROPERTY 1/3

UTM REFERENCES

A	1, 8	650 62, 5	4, 49, 92 25	B			
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C				D			

VERBAL BOUNDARY DESCRIPTION

The nominated structures occupy a site measuring approx. 148 by 97 feet and sit in a tract of 90 acres bounded on the north by Great South Bay, on the south by the Atlantic Ocean, on the west by Robert Moses State Park, and on the east by Robert Moses State Park-East Unit.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

**11 FORM PREPARED BY**

NAME / TITLE

Steven Kesselman, Historian

ORGANIZATION

Fire Island National Seashore

DATE

April 17, 1981

STREET & NUMBER

120 Laurel Street

TELEPHONE

(516) 289-4810

CITY OR TOWN

Patchogue

STATE

New York

**12 CERTIFICATION OF NOMINATION**

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES \_\_\_\_\_ NO \_\_\_\_\_ NONE \_\_\_\_\_

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is \_\_\_\_\_ National \_\_\_\_\_ State \_\_\_\_\_ Local.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

KEEPER OF THE NATIONAL REGISTER



## Attachment 8

First Order Fresnel Lens Building  
Ponce De Leon Inlet Lighthouse