

Constructing the Baltimore Lighthouse proved to be one of the most difficult tasks ever undertaken in the interests of establishing an aid to navigation. It was so challenging that the Light-House Board's first \$60,000 request for the light preceded its actual commissioning by 18 years. When the Board did ask for this money in 1890 to signify the entry point of the Baltimore Channel at the Magothy River Mouth, it had some idea of what it was getting into: "On account of the impassible character of the shoal, and the liability to damage or destruction by fields of moving ice, no light-house, other than an expensive one, can be made permanent."

In 1894 Congress granted the Board's first request for funding, and the site was examined by boring deep into the ground beneath the water. The results of these tests were daunting: a "layer of soft mud extended 55 feet below the surface of the shoal." The Board concluded that while sinking a foundation through this deep mud would be "somewhat difficult" for the allotted \$60,000, it may be feasible to use a screwpile structure. In 1899, however, the failure of an experimental disk pile placed at the site made it apparent that another appropriation would be required. The Board reported "that the expense of building a light-station in the 55 feet of semifluid mud which overlays the sandy bottom" of the shoal would cost twice as much as the original request. This was due to the fact

that a heavy caisson structure would have to be employed, one capable of resisting 100 mph winds, 30,000 pounds of ice pressure per square foot and a three mph current. The Board made their new recommendation annually to Congress three times, until in 1902 the entire amount was approved.

Bidding for the job was opened in 1903; somewhat ominously, only one bid came in and that was \$80,000 over budget. This bid was rejected and Congress approved yet another \$60,000 to make the project feasible, bringing the grand total of allocated money to \$180,000. In the next round of bidding William H. Flaherty was the only participant; he and his partner Frederick Martin Lande had experience building caisson lighthouses in New York and elsewhere. By cutting back on certain material allotments, they were able to bring their bid within budget. The metal work for the lighthouse was contracted to a company in Atlanta, Georgia, and that portion of the work was completed in 1904.

By August of that year, the caisson had been completed and was ready for launch from the Lazaretto Lighthouse Depot. Before it was towed to the site in September, though, the timber and some of the iron layers for the thirty-foot diameter metal cylinder were added. A Baltimore newspaper commented that "the erecting of this big lighthouse will be one of the most difficult tasks ever undertaken by lighthouse builders."

Indeed, two days after it was towed out the caisson was filled by "heavy seas" and knocked off kilter by about seven feet. At this point, the caisson had been sunk a mere seven feet into the shoal. The contractor left the site to gather additional materials, and returned in October, when a bad storm forced the caisson to "turn over flat on its side." Flaherty left the scene once more, and this time he did not come back.

The government proceeded to sue the contractor for defaulting on the job, so the insurance company which had bonded Flaherty was forced to step in. The United States Fidelity and Guaranty Company tried to bring the caisson back to level over the next three years. First they removed over half of the 120 iron plates attached to the structure, then they built a U-shaped pier around the lighthouse grounds and brought in counterbalancing equipment. This consisted of a steam engine, air compressors, water tanks, a hoisting machine, A-frames and temporary quarters for workers. By 1907, the insurance company had righted the caisson off the horizontal; they used 80 tons of large stone, heavy weights and cables secured to the A frames and pumps to remove the mud from underneath one side to accomplish this. They then proceeded to reattach the plates and sink the caisson the required 82 feet beneath the high water mark.

The Light-House Board's 1908 report remarked that "the

righting of the caisson and the sinking of the foundation cylinder into its required position have been performed with remarkable success." The Baltimore Lighthouse was commissioned on October 1, 1908, when its fourth order lens was first lit. The largest wooden caisson lighthouse built in the United States, and the last lighthouse of any sort built in the Chesapeake Bay, it is appropriate that its construction marked the end of an era. Shortly after its crew quarters and observation deck were completed, new lighthouses were built with automation in mind and thus had no allocations for manned operations.

Upon its enormous caisson foundation and cement filled iron-plated cylinder, the Baltimore lighthouse boasts a brick, 38 foot tall, octagonal shaped structure. The top layer of iron plates flare out and compose the lower gallery deck, which is covered with a slab of cement. This deck is surrounded by three rails, the top one located at a height of 42 inches. Above the deck the brick tower is 24 feet square with corners truncated; this tower in turn is topped by mansard roof originally composed of colored slates arranged in a pattern. The lower level of the tower consists of a cellar of four rooms, used to store coal, oil and wood. A wooden's ship ladder is used to access this level, beneath which is a 3,500 gallon water cistern with two manhole covers. In the hollow metal support column running

through the structure there is a door, beyond which the weights for the fog bell mechanism could be accessed. Above the cellar the first floor provided the main living space for the keeper, including a kitchen and sitting room. The kitchen contains a hand pump which was used to bring up water from the cistern; this room also still possesses its original porcelain sink. Beaded wood paneling covered the walls, ceiling and stairwell, but owing to extensive water damage most of this has been removed.

On the second level of the tower there are two bedrooms, which share an extensive double closet. Off of the hallway a smaller storage room could be accessed. The counterclockwise stairwell ascends to the third watch room level, where the fog bell was located. This stairway converts to clockwise about two thirds of the way up to the lantern room, where an octagonal lantern is centered above the watch level. The lantern's exterior is painted black and the inside is paneled in white. The lens is a 250 mm acrylic with a red sector, currently powered by one solar panel. The lens' original pedestal is still in use. On top of the lantern a lighting spindle is mounted; a ground wire leads from the rod down to the cast iron privy hanging over the lower gallery level.

The Baltimore lighthouse enjoyed a brief period of atomic experimentation in 1964, when a 60-watt isotopic power generator

was installed. According to a local newspaper this generator was "smaller than a 55-gallon oil drum," and was reputed to be capable of supplying an uninterrupted ten-year flow of electricity without any maintenance or refueling. The generator was removed two years later, however, as the Coast Guard was concerned with "cost and environmental considerations."

Like most lighthouses, Baltimore has suffered from automation and the related condition of neglect. A 1983 Coast Guard Report, made in preparation for the extensive "Operation Spruce Up," revealed how bad the damage had become. Besides the near ubiquitous water damage, unsealed windows had led to proliferation of pigeons, bird eggs and guano "several inches thick on all decks and even the stairway. The lantern glass panes and the lens, serving as a beautiful beacon, also inevitably attracted their share of bullets. Vandals had also left their mark on the wooden door and had even tried to burn the interior of the lighthouse. Cracks in the exterior of the masonry had also appeared, along with termite damage and a cracked boiler plate.

To preserve the lighthouse, the windows were filled in with bricks, the wooden door was replaced with a steel one, acrylic panes were installed in the lantern and the access ladders were put beyond normal human reach. In 1988, the commander of the Coast Guard's lighthouse maintenance ship *Red Birch* expressed

concern for the condition of the Baltimore structure. While he acknowledged that the boat davits and the iron outhouse no longer had any utility, he still recommended painting them in the interests of "historical significance." Between 1989 and 1990, the *Red Birch's* efforts included sandblasting the caisson, caulking and painting the masonry and replacing the water-logged timbers of the lantern floor with tongue and groove boards.

Currently, the Baltimore Harbor Lighthouse has been put up for public auction by the Real Property Disposal Division of the Government. With maintenance and repair costs escalating as our nation's outdated lighthouses age, private ownership is increasingly being turned to as a means to preserve them. The current bid on the property is \$210,000, which presumably should win the auction since bidding was scheduled to end on June 22, 2006.

Resources

"Baltimore Harbor Lighthouse." 2006. General Services Administration, Real Property Disposal Division.
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Turbyville. "Baltimore Light."

