

# KING GEORGE III'S NAVAL YARD AT HALIFAX

by John Green

In 1988, Michael Oddy, Dr. Derek Davis, André Benard, and Philip Eisnor formed a team to build a 1:300 scale diorama of the Halifax Naval Yard as it appeared shortly after *HMS Shannon* captured *USS Chesapeake* on 1 June 1813 (Figure 1). This project was to be a gift from the Ship Modelers' Guild of Halifax, Nova Scotia, to the Maritime Museum of the Atlantic (MMA).

From 1988 through 1991, the team researched its subject. The National Maritime Museum at Greenwich, England, sent copies of property layouts, historical documents, photographs of buildings, and names of ships. Much of the same data was available through Canadian sources and was gradually added to the collection.

The Halifax Public Library and Public Archives of Nova Scotia and Ontario sent property descriptions, photos of structures, and information about yard activities. The Halifax newspaper *Chronicle-Herald* provided details of various yard activities and photos of structures. More data came from the Canadian National Defense Headquarters, Cana-

dian Naval History Museum, and the Admiralty House in Halifax (the Maritime Command Museum). Reference books are listed in *Works Cited*.

Research is ongoing because many discrepancies in sources necessitate rechecking everything. The data, a goodly portion secondary research, fills 26 file folders so far.

## The King's Yard

Halifax property records and Canadian military documents indicate that in 1758, Joseph Goreham sold two acres at Goreham's Point to the navy for its naval yard. The following February, Governor Lawrence granted an additional seven acres of adjacent land. In 1759, an Order in Council formally established the King's Naval Yard (Gurney-Smith 6). By 1813, it extended more than 2,700 feet (815m) along the shoreline of Halifax Harbor. The distance from the water's edge to the stone retaining wall along the westerly property line was 1,050 feet (317m). Today, the facility is called HMC (Her Majesty's Canadian) Dockyard.

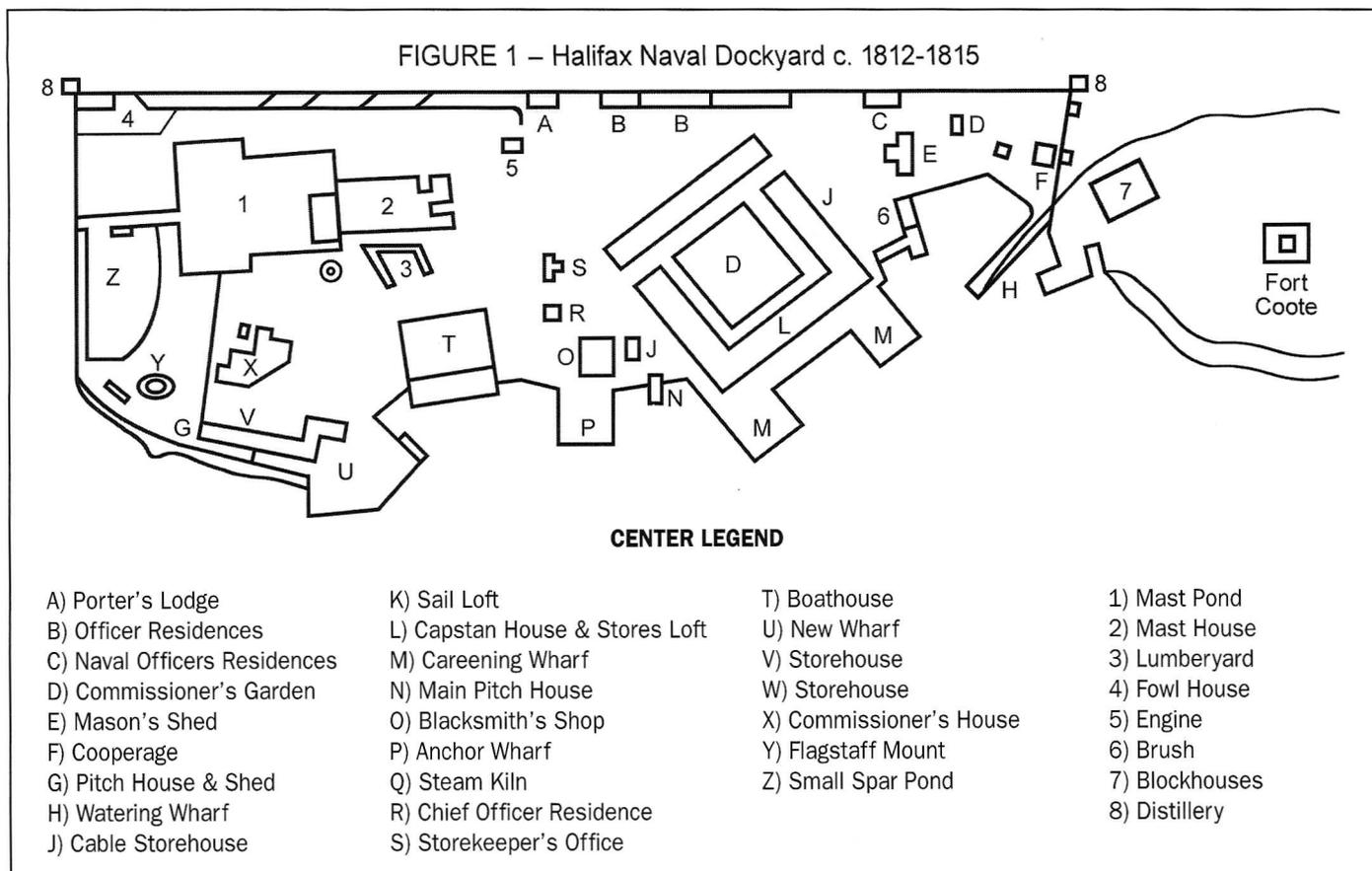


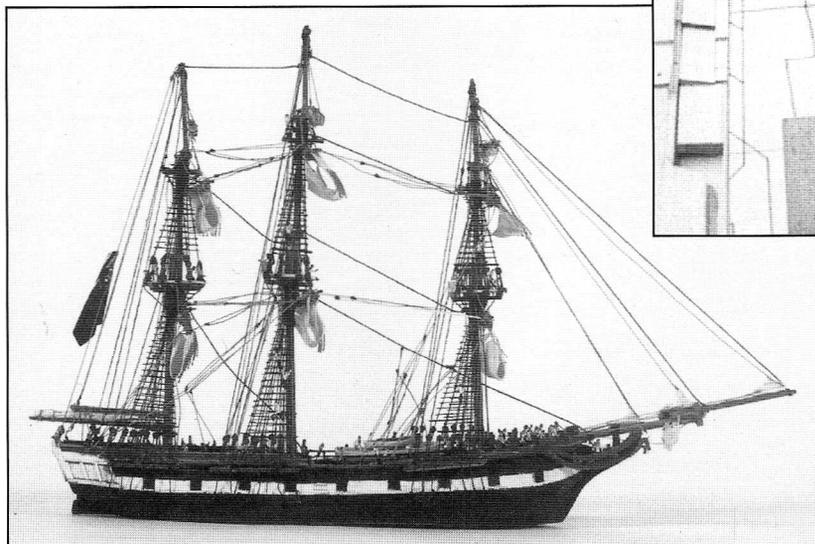
Figure 1 – The author's drawing of the King's Yard from a drawing by Philip Eisnor.

Based on their research, Eisnor prepared a 1:300 (1' = 300') scale drawing of the yard, producing a 3' by 9' (91 by 274cm) display base (Figure 2). Work on the diorama began in 1991. Benard passed away early the next year, and later, personal considerations removed Davis and Eisnor. Oddy, who had devoted 822 hours at that point, elected to complete the project on his own. He modeled part-time until retiring in 2000, then dedicated himself more fully to the task.

Oddy is building the diorama in one of the MMA's model repair shops. To date, the scale naval yard has 21 structures including buildings, wharves, sheer legs, ships and their crews, equipment and workers to use it, a sawpit and slipway, dozens of animals and carts, and townspeople.

While photographic records exist, the images of structures often present only one or two views, making it difficult to reproduce an accurate model. Besides asking many questions, Oddy studied the one remaining example of the yard's architectural style – the Admiralty House. It provided details about construction methods and how doors, windows, and trim were designed and installed. Then National Defense sources found floor plans of various structures that proved helpful. Much additional data was added as the project progressed.

Presently, Oddy is waiting for the National Maritime Museum in Greenwich, England, to send plans of the remaining two ships, *Shannon* and *Chesapeake*. An additional 13 components are on the building schedule. So far, the project has taken an estimated 5,000 hours, and Oddy anticipates another two years to complete it. The diorama's magnitude precludes describing all the elements in full detail. Instead, some are featured and others introduced through photographs.



### 36-Gun Frigate *HMS Tenedos*

Based on information in Robert Gardiner's *Frigates of the Napoleonic Wars* (20, 25-26, 30, 42, 58, 95-96), Oddy carved a solid basswood waterline hull for *HMS Tenedos*. Gardiner says that the full-sized vessel was 150' long, 155' high at the main, and 40' 4" beam at the widest point, making the model 6" long on deck, 6.2" high at the main, and 1.61" beam. It is the largest model built for the display to date (Figure 3). After darkening the edges of the basswood deck planks with a soft lead pencil, he affixed them with LePage's white water-based glue, the only adhesive ever used on the diorama. Masts and spars were fabricated from pine or occasionally basswood. Using a needle, Oddy shaped and built up deadeyes from more glue. He cut lanyards from Coates cotton-wrapped polyester T-1 gauge black thread. These were affixed and painted flat black, since the paint used on the deadeyes had leached into the thread and Oddy wanted the coloring to be consistent. He then glued the deadeye assemblies to the chainplates. All the standing rigging, shrouds, and rat-

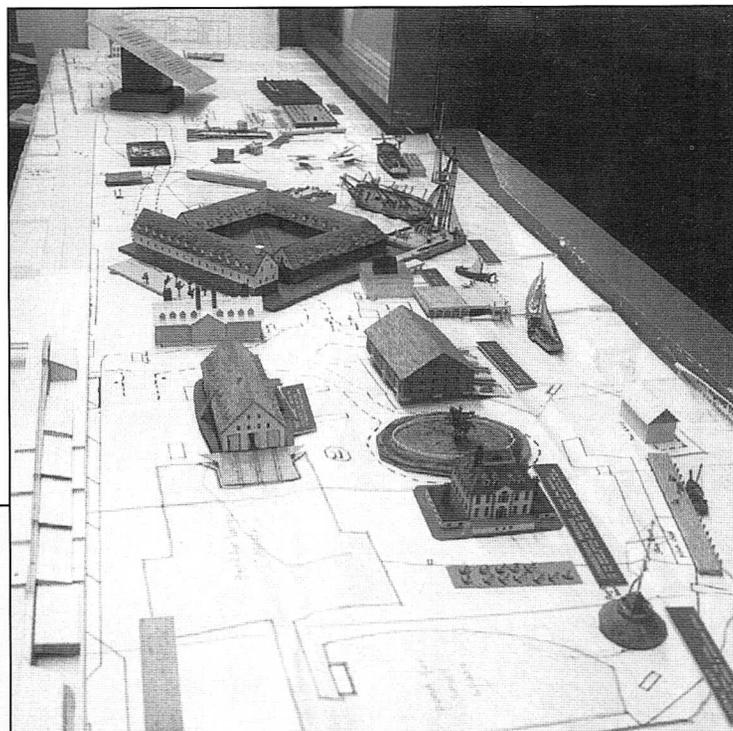


Figure 2 – (above) The display base, shown here in the museum's Model Shop, is 3' by 9' (91 by 274cm). The naval yard's west wall is to the left.

Figure 3 – (left) The 36-gun frigate *Tenedos* at 1:300 scale is 6" long on deck, 6.2" high at the main, and 1.61" beam. It is the largest model built for the display to date. Photo by Derek Harrison. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada. M2005.40.1W.

Photos by Mike Oddy unless otherwise indicated.

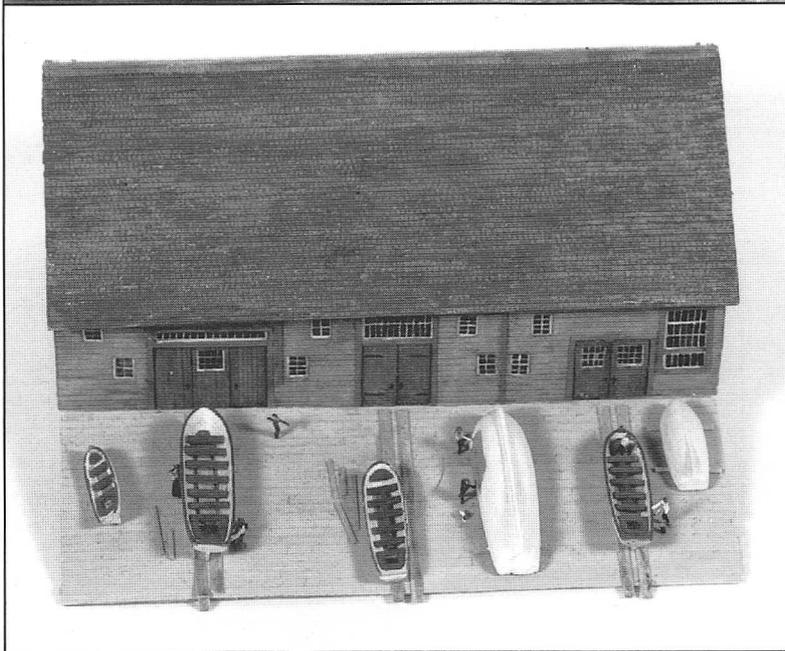
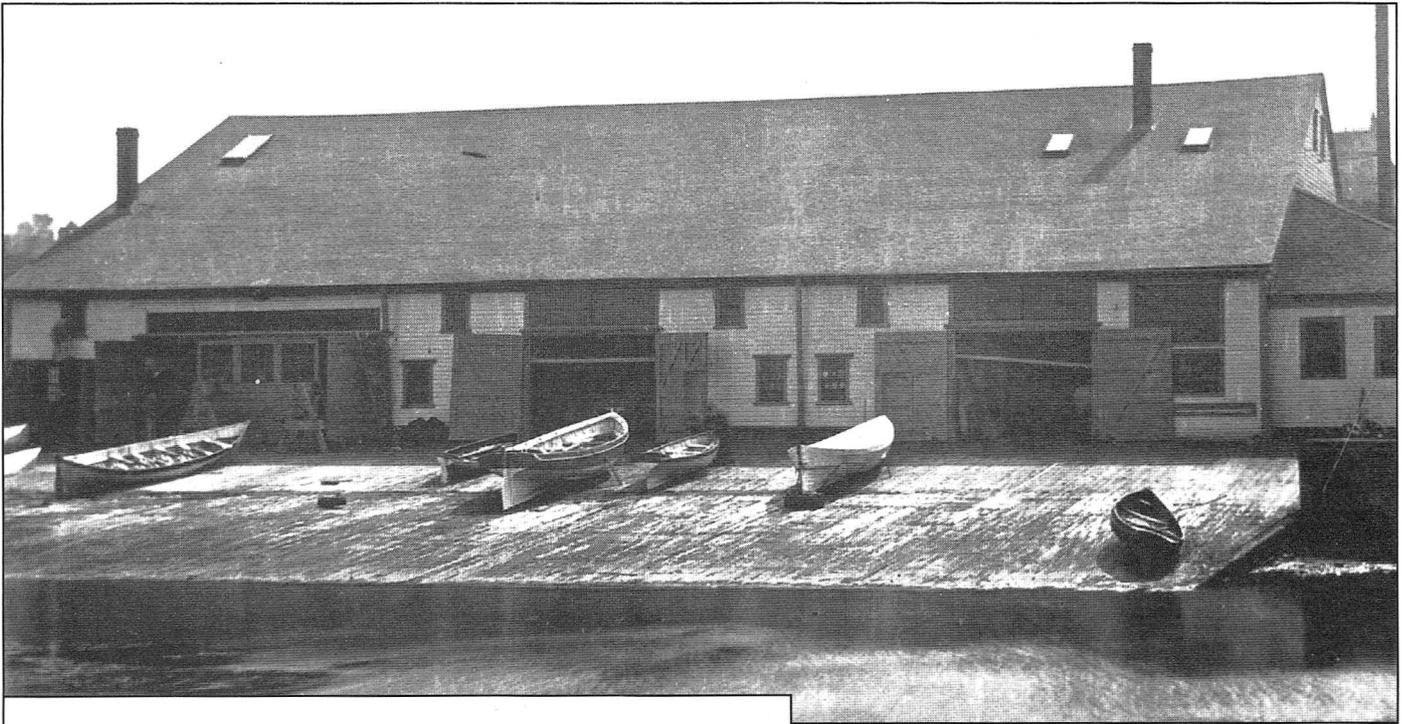


Figure 4 – (left) Boathouse. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada. M2005.40.2W.

Figure 5 – (above) The south side of the Boathouse and slipway c. 1890. Naval Historical Library, Director of Works, London. Courtesy Canadian Department of National Defense and Maritime Command Museum, Nova Scotia, Canada. DA 034-NHL-4-8.

lines were the same black thread; the running rigging was tan. Oddy added blocks of glue in the rigging as required.

Sails – furlled, partly furlled, and set – were cut from 20-pound (0.005") Hammer Mill bond paper, then given two thin coats of white latex paint to hide the paper's shiny smooth finish. The effect produced a more canvas-like appearance. The sails were hand-stitched to their yards. Stern, gallery, and trailboard decorations were simulated with glue through which Oddy manipulated a sewing needle to "carve" scrolls and ornamentation.

Using 24- and 28-gauge Nicole soft brass wire, he created armatures for small animals and the 6.1mm ( $\frac{15}{64}$ "

tall figures. Wheels, spokes, tool handles, and miscellaneous fixtures were 34-gauge wire. Armed with a  $5\frac{3}{32}$ " long 0.0345" diameter needle, a  $3\frac{1}{2}$ " long 0.0425" needle, and last a  $2\frac{5}{8}$ " long 0.0645" needle, he built up and shaped bodies with layers of glue before hand-painting their features. Oddy worked originally with acrylic and water-based paints, but switched to Testor's enamel diluted with 30 percent thinner. The

other paints, even when thinned, did not flow as well and remained too thick to look in scale. His detailed figures appear quite lifelike when viewed closely.

### Naval Yard Buildings

The Boathouse (Figures 4-5), Mast House, Commissioner's residence (Figures 6-7), Hospital, Capstan House, and Sail Loft were built in the same manner. Oddy began with a clear pine or basswood block, then added 0.0197" (0.5mm) thick birch veneer roof sheathing. He cut 1" (25mm) long strips of 0.005" thick bond paper slotted halfway through to simulate roof tiles. Glue applied under the strips with a needle gave tiles their

three-dimensional appearance. Each strip took one hour to produce.

Oddy covered the sides of each block with 0.012" thick cardstock followed by a second 0.010" thick layer with all the doors, windows, and other openings cut out. He used #11, #12, #17, and #20 X-Acto blades to cut door frames and panels, mullions and rails, decorative trim, and hinges from 0.005" thick bond paper. Clapboards or shingles were scored using a straightedge and a 2<sup>13</sup>/<sub>16</sub>" long sewing needle 0.079" in diameter with the tip rounded so as not to penetrate the material. If portraying open doors and windows, he cut penetrations in the solid block to simulate a hollow structure, then added features such as rugs. After gluing both cardstock layers to the block, he hand-painted the structures. When viewed from three feet away (one meter), the affect is realistic.

Walls and stone buildings were fabricated from cardstock and wood, too. Model railroad trees,

Figure 6 – (right) Commissioner's residence. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada. M2005.40.4W.

Figure 7 – (below) Front view of the Commissioner's house and barn c. 1890s. Naval Historical Library, London. Courtesy Canadian Department of National Defense and Maritime Command Museum, Nova Scotia, Canada. DA-034-NHL-3-8.

bushes, grass, and other landscaping effects, when reduced to scale, added greatly to the diorama's overall appearance. More such work remains.

Oddy modeled the Bosun's residence in the throes of construction. Carpenters have erected the floor and ceiling joists, wall studs, window and door frames, and roof rafters, and are working in the framed section. The house has a central brick chimney fashioned from wood, and fireplace openings cut out at every level. Oddy set the building on a stone-faced foundation with a stairway descending to the door in the basement wall.

In another part of the diorama, Oddy modeled an un-



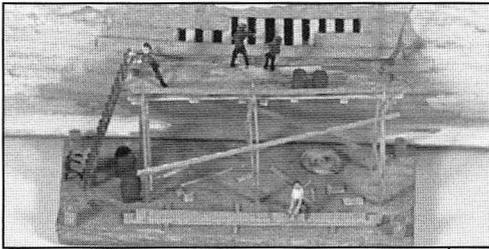


Figure 8 – (below) An unnamed ship heeled over at the Careening Wharf near the Capstan House and sheer legs. Workmen are repairing the hull and scraping off barnacles. The Sail Loft is behind the Capstan House. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada. M2005.40.5W.

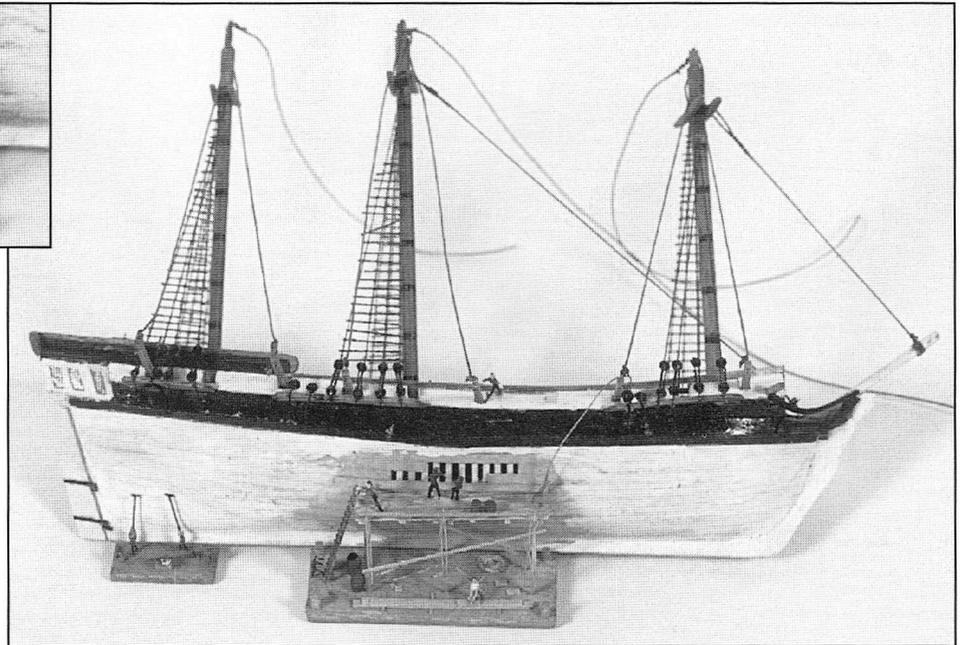


Figure 9 – (right and inset) Details of the careened unnamed ship. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada. M2005.40.5W.

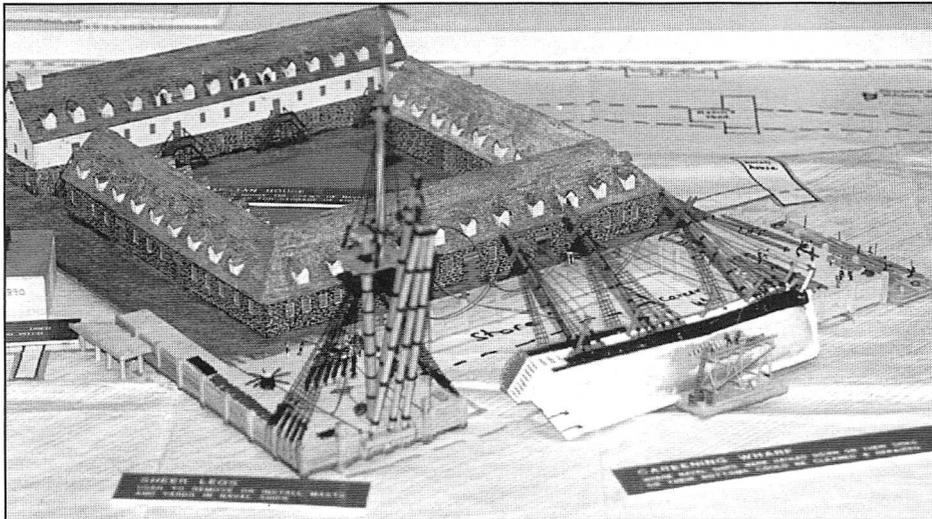
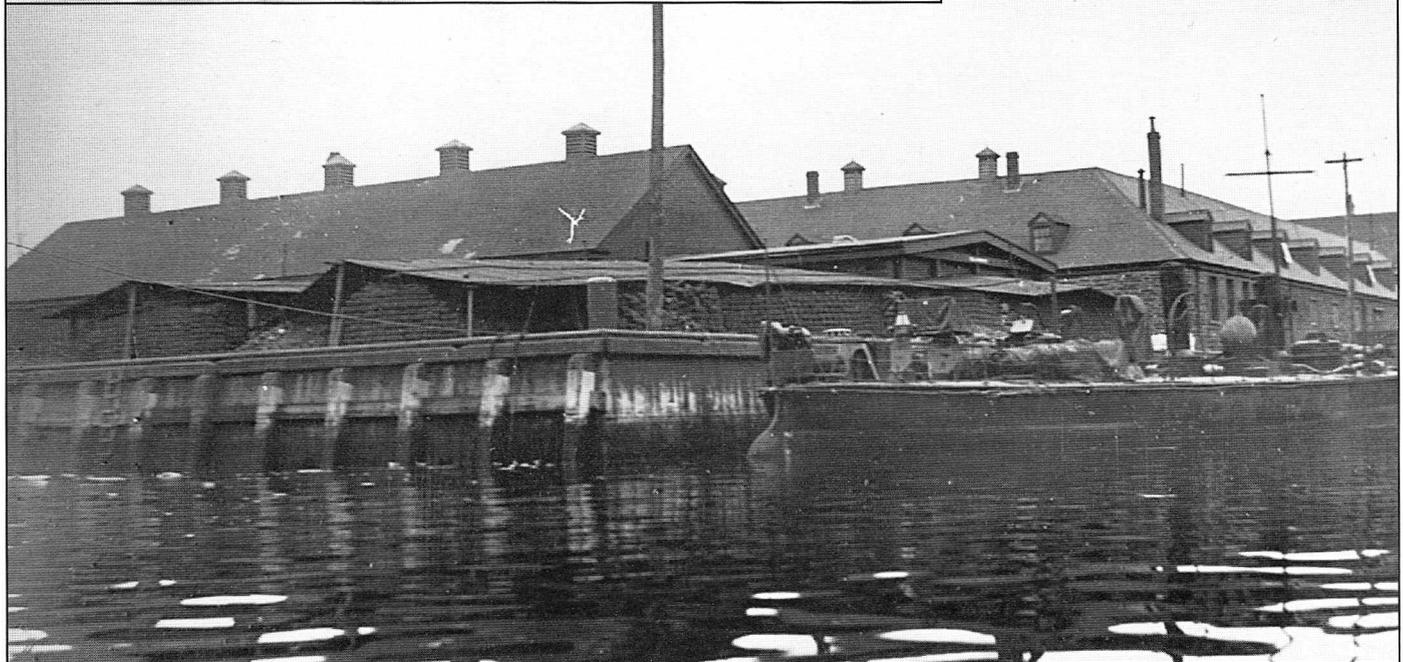


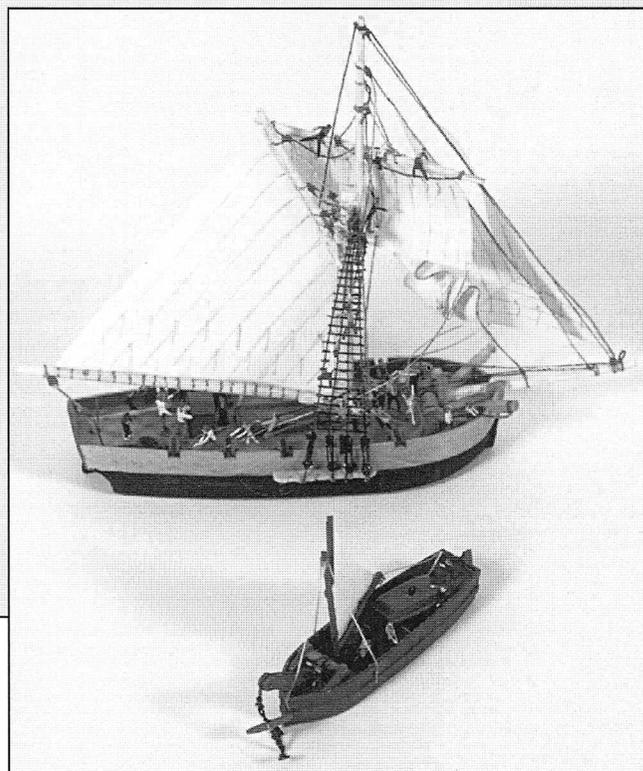
Figure 10 – (below) The Capstan House and Jetty #4 (old anchor wharf) in 1905. The Capstan House, so-named because of its proximity to the Careening Wharf, held sails and housed crews while their ships were careened. When the Sail Loft was constructed adjacent to the building, the new structure almost enclosed the commissioner's garden, giving Capstan House its U-shape. Dalhousie University Archives and special collections, Halifax, Nova Scotia, Canada. Courtesy Canadian Department of National Defense and Maritime Command Museum, Nova Scotia, Canada. 0554-54.



## FINAL DETAILS

- Dead sailors being brought ashore.
- Officers and dignitaries being ferried to the frigates.
- Crews reefing tattered sails on *Shannon* and *Chesapeake*, or untying towing lines.
- Signalmen sending messages.
- A servant hanging laundry at the Commissioner's residence.
- Workers sorting logs at spar and mast ponds.
- Logs being cut into planks and timbers in the two sawpits.
- Finished spars being lowered from the upper floor of the Mast House.
- Lumber being unloaded in the storage yard.
- A pinky being unloaded at the Victualing Dock.
- Horses being groomed in the stables.
- Logs being brought in by ox-drawn wagons.
- Ships' boats being repaired and painted.
- A ship being careened and seamen operating a large capstan.
- A small cutter under construction.
- Planks being placed in the steam box.
- Seamen and workers climbing onto roofs to watch the activities in the yard.
- Two seamen hoeing a garden in Capstan Square.
- Workers unloading sails and canvas cloths at the Sail Loft.
- A church congregation and pastor entering the yard.
- Water barrels being filled and sealed.
- Seamen using outhouses behind a building.
- A cutter racing to shore with dispatches (**Figure 11**).
- Captain Philip Broke being moved on his hospital cot to Commander Wodehouse's home.
- Lowering Captain James Lawrence's flag-draped mahogany casket over the side of *USS Chesapeake* and into a barge.

Figure 11 – A small cutter with crew and a petty auger (supply boat) the length of three Canadian pennies laid end to end. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada. M2005.40.6w-7w.



named ship heeled over at the Careening Wharf near the Capstan House and sheer legs (**Figures 8-10**). Workmen are repairing the hull and scraping off barnacles.

### Organizing the Build

The Halifax Naval Yard was a town within a town, having many repair and building facilities, residences for staff and military personnel, a firehouse and hospital, and an extensive shipbuilding complex. The team devised the following plan, which broke the work into manageable segments.

### Activity Scenes

*HMS Shannon* showing damage from the recent battle and wounded crewmen being taken off. Captain Philip Broke, who suffered a serious head injury, is being taken

to the Commissioner's house with the sister of 2nd Lieutenant Provo Wallace at his side.

*USS Chesapeake* showing battle damage and the crew disembarking.

Ships being careened, rigging and supplies on the dock, the sheer legs operating, and workers scraping barnacles, replacing planks, and installing copper sheathing.

Frames being raised on a small coastal schooner and workers sawing logs in the sawpit (**Figure 15** on page 91).

Townspople in buggies or on foot entering the yard to look at the two damaged ships, and large piles of logs being sorted and stored.

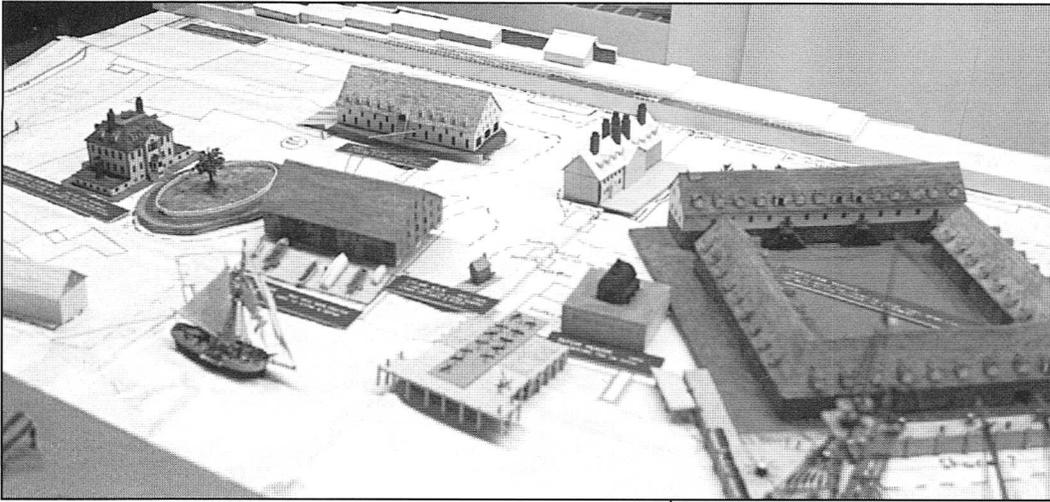


Figure 12 - (right) The sheer legs, built of substantial wood timbers, was basically a fixed crane that lifted cargo, supplies, and gear off ships. It was used with capstans to careen ships. Oddy copied a model of sheer legs at the Maritime Museum of the Atlantic for the diorama. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada. M2005.40.5w.

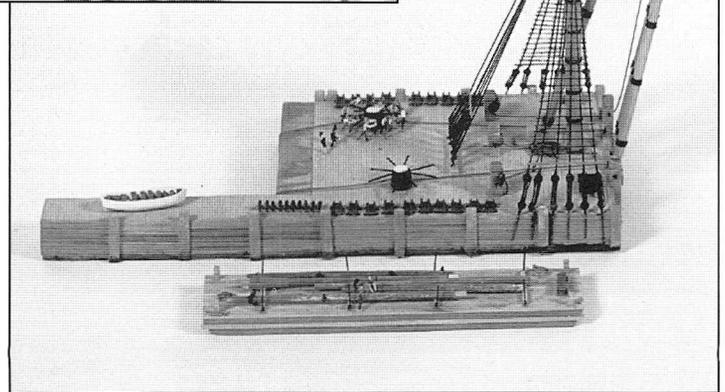
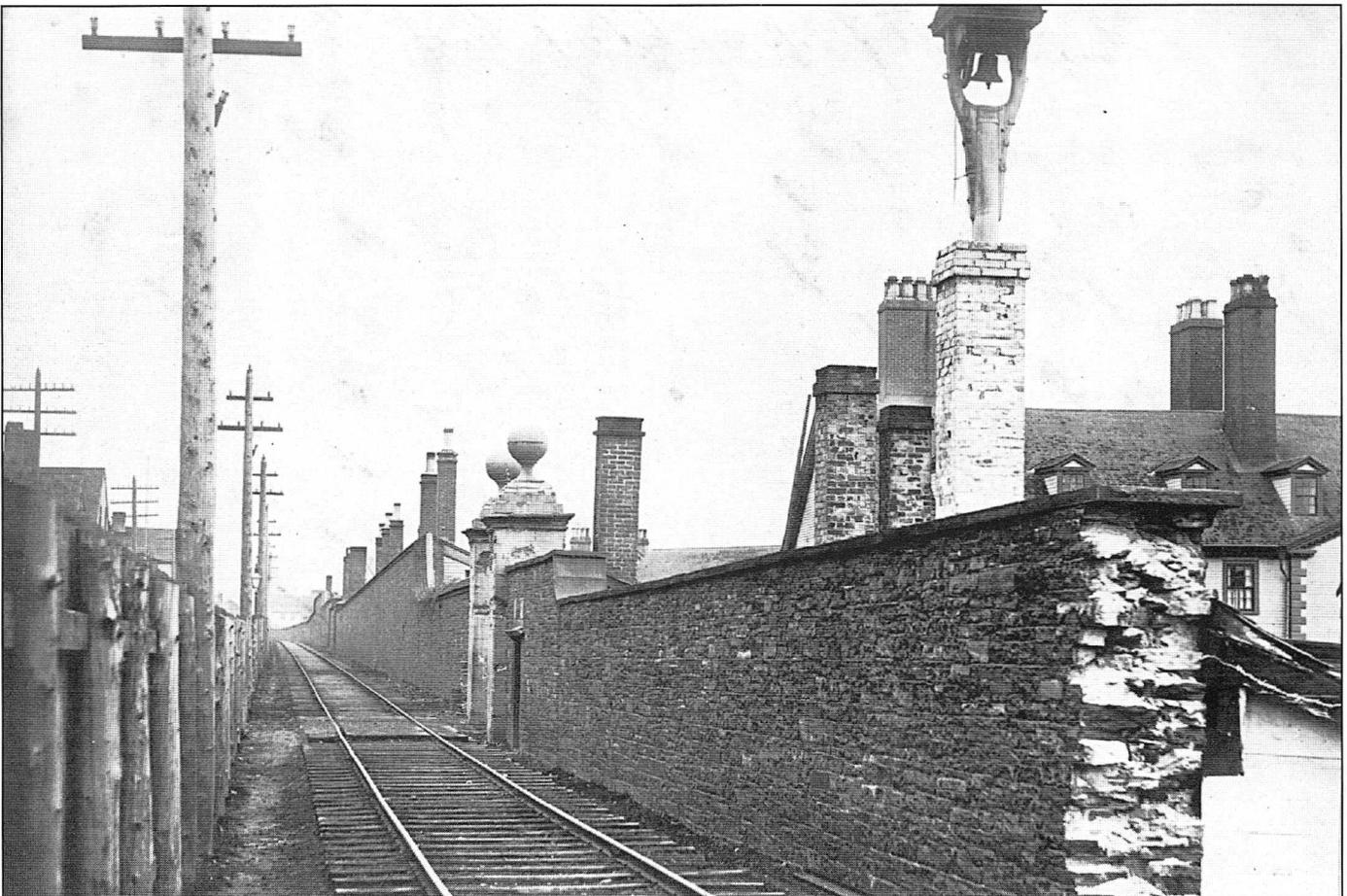


Figure 13 - (above) The west wall with its various structures continues to rise behind the partially completed naval yard. The Commissioner's house and circular lawn abut the Boathouse with a small cutter in front. The long structure between the wall and Boathouse is the Mast House. Photo by Mike Oddy. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada.



## Acknowledgement

Gratitude is expressed to Marilyn Gurney-Smith, Canadian naval historian and director of the Maritime Command Museum, for her assistance and for granting permission to publish the photos and documentation in this article.

## About the Builder

Michael Oddy was born in England, but grew up in Canada, working as a financial planning officer and consultant until he retired. He has modeled since childhood, preferring 1:1,200 scale period steamers and 1:300 scale dioramas. Oddy, who also builds architectural models of modern churches and homes, has been a member of the Nautical Research Guild for many years.

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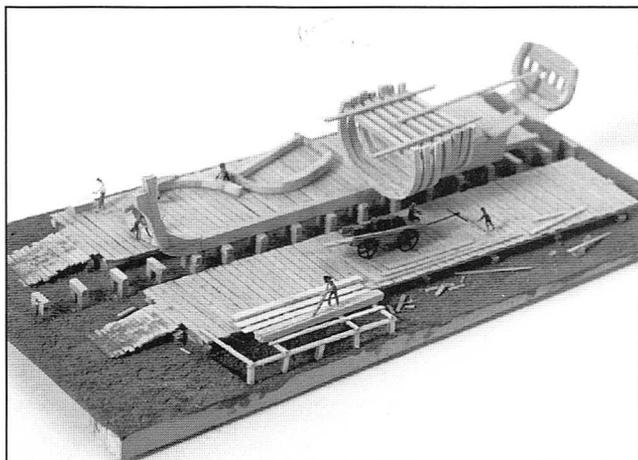


Figure 14 – (left) View of the west wall at the South Gate. The I.C. Railway line leads to Deep Water Terminus. Ken Macpherson, Public Archives of Ontario. Courtesy Canadian Department of National Defense and Maritime Command Museum, Nova Scotia, Canada.

Figure 15 – (above) Frames are being raised on a small coastal schooner on the slipway, and workers are sawing logs in the sawpit. Courtesy Maritime Museum of the Atlantic, Nova Scotia, Canada.

## MAIN FEATURES

**Commissioner's residence** – Queen Victoria's father, the Prince of Wales, lived here while a private estate was built for him overlooking Bedford Basin, a large inner harbor.

**Boathouse** – A substantial structure for small boat construction and repair.

**Sheer Legs** – Secured to a wharf next to the Careening Wharf (Figure 12).

**Capstan House** – Used for storing gear and housing crews while their ships were careened.

**Mast House** – A substantial three-story building.

**Hospital, morgue, and insane asylum** – The hospital and morgue were in a medium-sized building, but little is known about the asylum, a nearby facility.

**Official residences** – Housed the chief naval officer, master attendant, and master shipwright.

**Signal Mast** – The sending station that relayed signals from George's Island and from ships entering the harbor to the Citadel, a fortress in central Halifax atop a high hill.

**Large stone wall** – Many lean-to residences and storehouses were built into it. The wall also contained the North and South Gates (Figures 13-14).

**Cooperage** – The barrel-making facility.

**Pitch House** – Pitch was heated to boiling in large kettles and used to seal hull seams.

**Steam Kiln** – A building containing a steam box for steaming and bending planks and frames.

**Ships** – Research indicates seven ships of the line and one hulk were in Halifax Harbor during June 1813. The diorama's area limitations permitted including the 5th Rate 38-gun *HMS Shannon*, the 36-gun frigates *USS Chesapeake* and *HMS Tenedos*, the hulk *HMS Centurion*, and a number of smaller work and supply boats.

**Fort Coote** – Research is ongoing to determine if the main blockhouse and two others along the west wall existed in 1813. Built on Observatory Hill in the North Dockyard, the fort was 30 by 90 yards and had three 24-pound cannon (Gurney-Smith 8).

**Other Features** – Townspeople, horses, buggies, firehouse with hand-drawn pumper, small marine craft, lumberyard, boatswain's house, sundial, office building, victualing storehouses, and a mast with bell by the South Gate.