

Conowingo Models



Cutterfish Bay Lighthouse

O Scale



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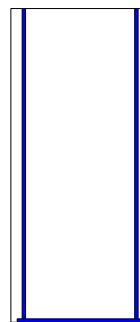
Thank you for purchasing this kit!

Cutterfish Bay Lighthouse is completely fictional. It is based on what we believe to be a freelanced lighthouse that we purchased from an estate. The original was mainly paper on foam. Cutterfish don't exist.

The weathervane is based on a photo of a real weathervane. We believe the fish is completely fictional. We decided that the top fins looked like they might be very sharp and could cut prey like a serrated knife. Thus, the name "cutterfish".

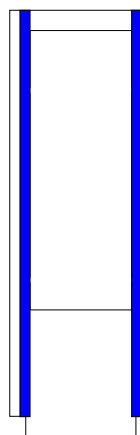
As with all of our products, we strongly recommend you download the file called "General Instructions Help" from our website. This is more of a guide to help with different techniques and recommended products to a successful build. Additionally, as we get feedback from modelers, we update instructions to make them easier to understand and/or possibly present a different technique. Check the website before building.

BRACING



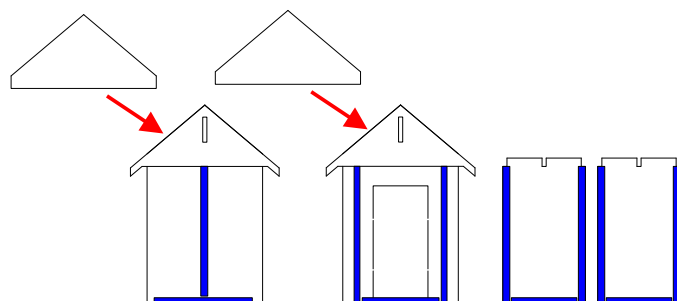
- 1. Fit, cut and glue the 1/8-inch bracing to the four tower walls as shown above. Ensure you get a good amount of glue. Be careful to avoid the corners as shown above. Otherwise, the walls won't fit together correctly.

- 2. Apply weights evenly to the bracing.



- 3. Gather the lantern room walls (8 of them).
- 4. Fit, cut and glue the 1/16-inch bracing to the lantern room walls as shown above. You want for the bracing to be nearest the windows, not the outer edges. If they aren't you will need to trim and/or move the bracing later so it fits.

- 5. Apply weights evenly to the bracing



- 6. Locate the pieces of the entryway shown above.
- 7. Glue the three pieces of the end walls together as shown above on the left. The triangular-like shape goes between the end walls and the inside piece with the rafter tails on them.
- 8. Fit, cut and glue the 1/8-inch bracing to the entryway walls as shown above.
- 9. Apply weights evenly to the bracing
- 10. Locate the four sets of railing for the widow's watch.



- C. If you want to paint the red stripe as we did paint the tower white. Once the white is thoroughly dry, mask off the white area nearest the area you want to paint red. Ensure that the tape is good and solid on the edge where you want the red. Then, paint the area red. Do not remove the tape until it is completely dry.

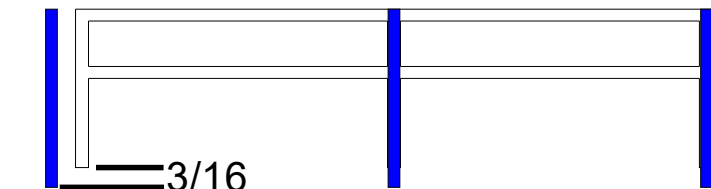
- D. For the roof we initially used a grimy black mixture and a slimy green overcoat. However, not being happy with it, we mixed Apple Barrel 21481 Key West with some Craft Smart Lime Green to come up with a patina color, which we watered down and applied to the weathervane, roof and lantern room doors as a final step.

- 1. Stain the following items DRIFTWOOD or similar
 - 2 – Rafter tails on the end walls of the entryway
 - 1 – Rafter tails on the entryway middle piece
 - 4 – Widow's watch railings

- 2. Paint the following items WHITE
 - 4 – Tower walls
 - 4 – Entryway walls
 - 8 – Lantern room interior (optional)

- 3. Paint the following items RED
 - 1 – Door
 - 2 – 1/16-inch stripwood
 - 5 – 1/8-inch stripwood
 - 8 – 3/16-inch stripwood
 - 1 – Octagon-shaped trim piece
 - 4 – Widow's watch railings

- 4. Paint the following items GRIMY BLACK
 - 8 – Windows
 - 3 – 3/32-inch stripwood
 - 1 – Hatch
 - 1 – Base of the lens (flat black)



- 11. Fit, cut and glue the 1/16-inch bracing to the four railings as shown above. (Left brace left off for clarity.) Be sure to leave the bracing at least 3/16-inch longer on the bottom. This is so that the bottom of the bracing will match up with the trim around the widow's watch. Provided it's longer than 3/16, you're in good shape and we'll trim it later.

- 12. Apply weight as necessary.

PAINTING

Below we're describing how we painted the lighthouse. Variations are strongly encouraged!

There are 3D printed parts mentioned below. We recommend that you cut them out utilizing photos of each piece. These photos are throughout the instructions. The build supports are included on most items to better protect them during transportation.

Before proceeding with painting there are three things that we'd recommend you consider. Reference the numbered steps for painting.

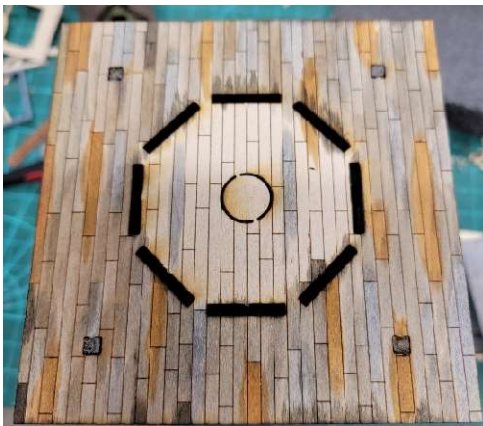
- A. If you choose to duplicate what we've done with the weathering, you'll want to use driftwood stain on the items in red (except the door) and white.
- B. You may want to skip ahead and assemble the lantern room roof prior to painting.

- 5. Paint the following items GRIMY BLACK/ COPPER/ PATENA
 - 4 – Weathervane pieces
 - 1 – Lantern room roof
 - 8 – Lantern room exterior walls

- 6. Paint the following item CONCRETE
 - 1 – Base (Ensure you get the sides.)



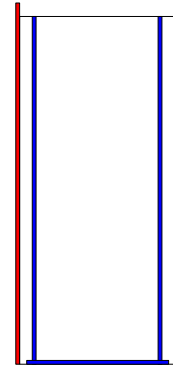
- 7. Quickly spray paint the tarpaper roofing as shown above using three shades of black/grey. You want variations in the coloring.



- 8. For the widow's watch, we stained the floor using a combination of several stains. The final stain of diluted Concrete stain brought everything together and made it look more natural.

ASSEMBLY

- 1. The four tower walls are identical. These walls must fit together perfectly, otherwise you'll end up with gaps in odd places. Take two tower walls and put them face down.

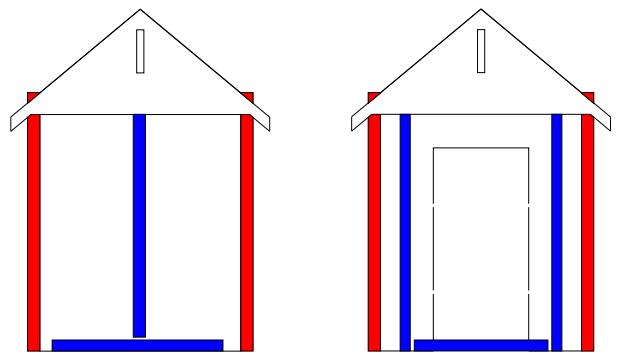


- 2. Take 2 pieces of 1/8-inch stripwood and glue one to each of the long sides. You will do this for 2 tower walls. (4 pieces of stripwood, 2 walls total) as shown above in RED.

- Ensure the stripwood is even with the bottom of the tower walls. The 1/8-inch stripwood will stick up at the top.

- Rubber bands or large clamps can be used to hold the corner braces in place.

- The stripwood will eventually go into the holes of the widow's watch floor, so you might want to test fit it.



- 3. Take the two end walls and put them exterior side down.

- 4. Add 1/8 x 1/8 stripwood corner bracing as shown above. There should be a little bit of overhang on top.

- We recommend waiting until the glue is dry before cutting the bracing even with the roofline.

TOWER ASSEMBLY

- 1. Assemble the walls, two at a time by gluing one of the preassembled walls from step 2 in the ASSEMBLY section and one side wall together at a 90' angle.
 - Ensure they are together in a way that each wall will get a piece of 1/8 stripwood.
 - We recommend a slower drying glue that will allow you time to work and adjust. You will end up with 2 Ls.
- 2. Once you're happy with the shape of the walls and they have gelled together sufficiently, glue all four together.
 - It may help to get a large rubber band to help form the shape.
- 3. Insert the top of the four pieces of 1/8 stripwood through the holes in the Widow's watch and brace. The top of the walls should snugly fit to the bottom of the Widow's watch.

- 4. Set aside to dry.

ENTRYWAY ASSEMBLY

- 1. Assemble the entryway walls similarly to how we build the tower walls.



- 2. Using a slow drying glue, attach the side walls to the front wall so that the bracing fits against the forward wall and the notch will fit under the rafter tails.

- 3. Add the ridge beam and center support as shown above, so that the rafters fit the notches.
- 4. Glue the rear wall on the same way as in the previous two steps.
- 5. Ensure the entryway assembly sits flat and is square.

WINDOWS AND DOOR



- 1. Before gluing the acetate for the windows into place, you may want to consider adding damage to the glass as shown above. This is purely optional.
- 2. You may choose to remove the muntins with a hobby knife. The choice is yours.
- 3. Cut out the acetate for the windows and door
- 4. Use a hobby knife or needle to "throw a rock", score broken glass or cut out sections of glass. Or a combination thereof if you choose.
- 5. Glue the acetate to the backside of each window and door using a clear-drying glue.
- 6. Optionally, you could use scotch tape or spray a coat of clear flat to obscure the windows. This building probably doesn't need it, but we'll throw that option out there.

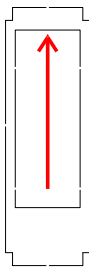
LANTERN ROOM ASSEMBLY



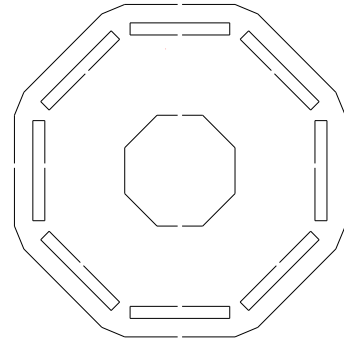
- 1. Carefully cut the lens from its build supports if you have not done so already.
- 2. If you choose to add lighting, now would be a great time to do that.



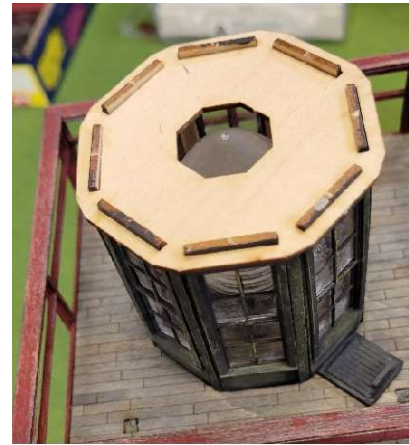
- 3. Glue the lens to the center of the lantern room floor.



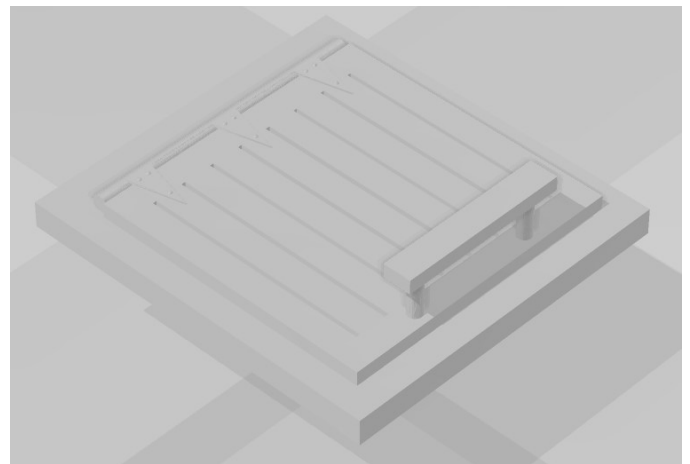
- 4. Carefully insert the lantern room walls into the slots of the window's watch floor. Note the orientation of the window opening above. Don't glue them in until all are in place. You may need to slide each wall from side to side a little bit to get each wall to fit.



- 5. Take the piece shown above and insert the top tab on each wall into the respective slot, working your way from the rear to the front. At first it will appear to not fit, but it does. Ensure the piece above sits firmly on the walls.



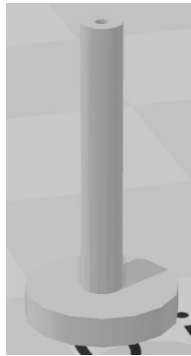
- 6. Add glue to the area where the tabs and slots connect.



- 7. Carefully cut the hatch from its build supports if you have not done so already. **Ensure you do not cut off the handle.**
- 8. Glue the hatch into the desired location. See photo in step 6 for where we installed it.

LANTERN ROOM ROOFING

1. Locate the chip board roof. There is a side with slits in it and a flat side. The flat side is the inside.
2. Carefully bend each piece so that the triangular piece will meet in the middle.
3. Carefully bend the support tabs that are located on the right side of each triangle.
4. We did the following steps in several sessions because the glue needs time to solidify. Work only in one direction and do not skip around as the pieces will not go together otherwise.
5. Glue a support tab to the underside of a neighboring triangular piece. You may get two-three per session.



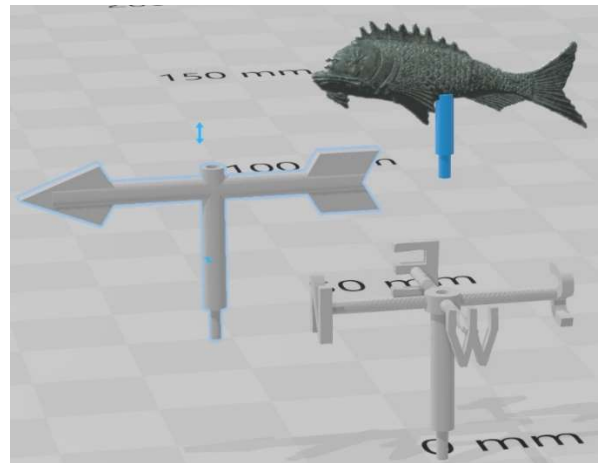
6. When you have 1-2 pieces left to glue into place, glue the weathervane base (see above) to the middle of the roof. The pieces that have already been glued together should form a circle around the base piece. It doesn't have to be perfect.
7. The last triangular piece to glue into place will be the toughest. You may decide to use CA for this step as it may require some pressure to keep things straight.



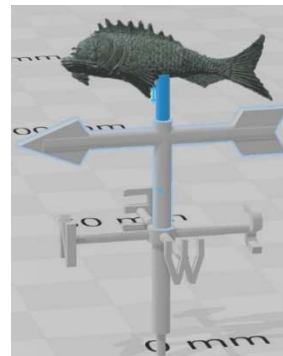
8. Fit, cut and glue into place pieces of 1/16 x 1/32 stripwood to cover where the roofing pieces come together. You want the flat side down. This is to add seams to a standing seam roof. It also hides seams well.



9. Glue into place the octagon-shaped trim piece to the underside of the roof (shown above in red), ensuring it is straight and centered. It may require some weight to fully conform to the chipboard. We apologize for the blurry photo.



10. Remove the three parts of the weathervane and very carefully cut them from the supports so they look like the examples above. We left the supports on to protect the parts during transportation.



11. ** You may choose to wait until the model is otherwise complete before doing this step. The weathervane can be brittle. The less you handle it, the better. Assemble the weathervane with the directional plugging into the base, the arrow on top of it and the fish on top of that. The arrow and fish should point in the same direction.
12. Glue the roof onto the lantern house, ensuring it is centered as shown on at the top of the page.

ENTRYWAY ROOM ROOFING

1. The included instructions are for a tarpaper roof. We also included a few pieces of 1/16 x 1/32 stripwood in the event that you wanted to add a metal roof instead. To do this, simply measure, cut and glue stripwood to both ends, the middle of the roof and the ridge as shown below.



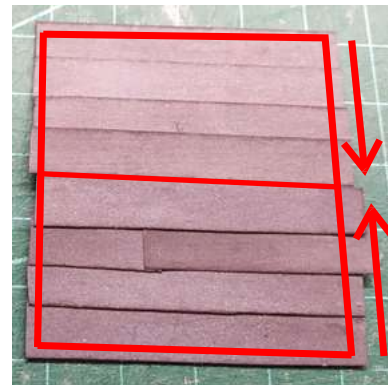
2. Locate the black construction paper carrier sheet with the cut strips on it. *****Do not remove the strips from the carrier sheet yet.**
3. You could use it the way it is to represent a brand-new roof. However, we recommend the method shown on step 6 of the Painting section.
4. The spray paint dries pretty quickly. Once the roofing is dry, cut several 3/4 inch strips from the carrier sheet. This is to simulate a 3-foot wide roll of tarpaper.



5. Take that strip and line it up along the corner of a scrap piece of 2 x 4 or an edge of a material you don't mind getting messed up. Above photo is not 3/4 inch, but included for demonstration purposes.
6. Take either a 400-grit sanding sponge or sandpaper and gently run it across the construction paper strip. The goal is to blend the paint colors together as shown above.



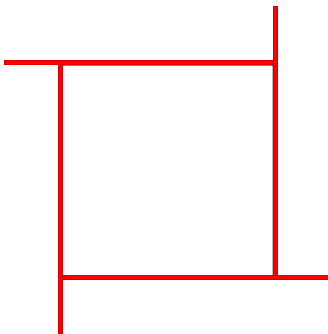
7. If you so desire, using the sanding sponge, you can dig into one of the long the edges and sides of the construction paper enough that the black comes through to show roofing damage. It's your model, your call. (Photo shows fully assembled)
8. Repeat steps 4 - 6 until all roofing strips are complete.
9. On one piece of roofing material, scratch up both long edges if you're aging the roof. This will be your roof cap. Hold this piece separate from the rest.



10. With the middle cut edge up, glue the roofing strips down in the following manner;
11. Start by adding a row of tarpaper at the bottom.
- You can add a bottom overlap. However, it may require a little bit of edge cutting and extra glue to get everything tucked into place once the roof is dry.

- Try to keep each row straight and even with the rows on the opposite side of the roof.
 - We recommend flipping the roof around and doing the bottom or next row.
 - Ensure the scraped black edge is on the down-roof side.
 - You want a slight overlap on the bottom edge and on both sides.
 - If you desire, you can cut a row short and add an overlapping piece. Left to right or right to left doesn't matter. The photo on the left shows where the tarpaper roll ended and a new one began. You may also want to use a scraped edge on the "new roll" where it overlaps the "old roll". This shows character.
12. Allowing for slight overlap, add rows until both halves are covered.
- Do not cross over the cut line in the middle. The pilot model has three rows per side.
13. Allow the roof to dry and cut the excess from the sides.
- You may choose to add some weight so that the roof dries flat. Not adding weight may add character, but you might not be happy with the results.
14. If you so desire, you can cut rounded or square patches from leftover material. They should be sanded, as in step 5. Then, glue them down.

RAILING ASSEMBLY



- 1. Glue the four pieces of 3/16 stripwood to the outside of the widow's watch deck as shown above. The stripwood should be level with the deck.
- 2. Cut the excess stripwood even to make the corners look like... corners. You may choose to wait until the glue is dry before accomplishing this step.



- 3. Take a railing assembly, center it and glue it to the widow's watch deck as shown above with the long edge hanging over the side. (Photo shown with railing pre-applied.)
- 4. Repeat for the other three sides.
- 5. Cut the excess dangling railing from the bottom.
- 6. Square off the corners using pieces of 1/16 x 1/16 stripwood, ensuring the tops and bottoms are even.
- On the pilot model, it took two cut pieces of 1/16 x 1/16 to square up each corner.
- You may need to use some wood putty to remove seams.



- 7. Add the top railing, so that you are happy with the amount of overhang. Ours is centered. We recommend each end being symmetrical, with two short top railings and two longer railings that were cut to fit.

ADDING THE ENTRYWAY

- 1. Identify the wall you wish to add the entryway to. We usually either choose the one with the least amount of weathering or perhaps a wall with something on it we'd prefer to cover up. (Weathering covers many accidents.)

- 2. Use the base piece to determine where the entryway needs to attach to the tower. It will overhang on both pieces, except for the front of the entryway. Do not glue into place yet as it will complicate the build.
- 3. Add glue to the back of the entryway. A slower drying glue works best, but it's up to you.
- 4. Ensuring that both the tower and entryway are sitting level, center the entryway against tower. You may want to use either rubber bands or clamps to ensure a tight bond between the two. Do not apply too much pressure on the walls. They will collapse.

FINISHING STEPS

- 1. Glue the base to the building, ensuring there is even overhang on all sides, except the front of the entryway.
- 2. Glue the door into place on the entryway.
- 3. Glue the roof to the entryway.
- 4. If you chose to add a tarpaper roof, glue the reserved ridge cap into place and trim the end appropriately.
- 5. Touch up paint as required.
- 6. Carefully glue weathervane into place if you have not done so already.
- 7. Add patina to the windows, roof, hatch and weathervane as desired.
- 8. Coat with weathering solutions as you desire.
- 9. Please send us photos!
If any parts are missing or the instructions are unclear, please drop us an e-mail conowingomodels@yahoo.com and we'll do our best to make it right.

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