



Audubon NORTH CAROLINA

Build a Tower for Chimney Swifts

Thank you for your interest in helping the Chimney Swift – Audubon North Carolina’s Bird-Friendly Communities Bird of the Year for 2016. Chimney Swifts (*Chaetura pelagica*) are in steep decline, and building a nesting tower to replace chimneys that are disappearing quickly in North Carolina due to capping or removal is an important way to help this special bird.

Tower Design

The tower design and style that we recommend is published in a book titled *Chimney Swift Towers – New Habitat for America’s Mysterious Birds* by Paul D. Kyle and Georgean Z. Kyle. The book can be found here: chimneyswifts.org or purchased from an online bookseller. **We recommend the kiosk-style tower, which is 12 feet tall, free-standing, and designed for nesting and small numbers of roosting birds, on page 50.**

A few modifications have been made to this design to better align with local conditions (clay soil, lack of fire ants throughout much of NC) and reduce costs to **around \$600 a tower** depending on materials. These modifications (tried and true from the Audubon Society of Western Pennsylvania) are as follows:

1. **Kiosk roof framing** – It is unnecessary to separate the roof framing from the tower structure as shown in the book. Rather, attach the short kiosk roof rafters directly to the tower structure using a wall plate. When framing the roof structure, simply cut four 2”x6” boards $\frac{1}{2}$ ” longer than the overall width of the tower (if your tower’s exterior dimension is 18”, then cut four boards 18 $\frac{1}{2}$ ” with a 45-degree miter extending beyond this measurement). Using these four boards, build a square. This square forms a wall plate which can be affixed to the tower and to which the roof rafters can be secured.
2. **Tower posts** – It is unnecessary to use angle iron for the four tower posts as illustrated in the book. Instead use four 4”x4”x8’ pressure-treated (ground contact) posts. These posts provide superior rigidity and provide simpler footing options (addressed below). Affix the posts 36” into the bottom tower section using 3” wood screws. These posts will be mounted on the inside of the tower section. Note: this will leave 60” of post protruding from the bottom of the tower section. 36” of the remaining post will be dug into the ground as the footing and the final 24” of post will provide the tower height needed above the ground.
3. **Post footings** – Using concrete or any other aggregate material to surround the posts in the ground may cause the wood to rot in clay soil. Instead, dig footings to a depth of 36” to ensure proper footing below frost level. Simply dig properly and tamp earth backfill firmly.

Material Specifications for Chimney Swift Towers

- For framing lumber, use #2 Pressure-treated Pine grade or better.
- Cedar construction may be used to substitute for pressure-treated lumber.
- All posts should be of ground contact grade.
- Interior tower sheathing should be T1-11 with grooves facing inward and on a horizontal axis (the birds use these horizontal grooves to affix their nests).
- Use ¾" rigid insulation or reflective insulation on the tower.
- 25-year asphalt shingles with associated paper or a comparable metal standing seam roof should be applied to the kiosk roof sheathing.
- Install aluminum flashing at the headwall (where kiosk roof meets exterior tower wall). Flashing should be under the siding material and over the shingles.
- Exterior tower sheathing may be of vinyl siding, exterior grade plywood (painted), exterior grade T&G (painted/pressure treated), or other approved weather-proof material.
- Treat the entrance "flue" of the tower with paint or stain to protect the wood. We recommend that you select a color similar to that of the kiosk roof material. Most chimney flues are made of concrete or terra cotta, so gray or brown are good selections.
- Secure the educational panels to two of the four kiosk panels using one-way (vandal-proof) screws. Write to swift@audubon.org to obtain the printer-ready file for educational panels.

Site Selection

Because Chimney Swifts are unable to perch – their only options are to fly or cling to a vertical surface – they need clearance over the tower so they can spiral down from above. As a general rule, towers should not be installed adjacent to tall buildings or powerlines and should be 25 feet or more from surrounding trees.

Tips for Pre-fabrication

Chimney Swift Towers are relatively easy to build and a few sections can even be pre-fabricated and transported to the site. The tower sections are most easily constructed on a level concrete floor, such as a basement or garage floor. This type of environment enables you to stand the sections vertically to ensure even assembly (T1-11 may be sold in tongue and groove fashion – keep a close eye on how you assemble the tower sections so the ends fit into one another!).

Likewise, the roof section of the kiosk can be most easily pre-fabricated in a similar environment. The level floor ensures things go together evenly and squarely. The roof sheathing can be tricky to cut properly (each side will have two angles to think about), so having the roof framing preassembled aids in this step.

Much of the lumber can be pre-cut prior to transporting to the site as well. Think through each step and determine how you may be able to make things easier once you arrive at the site.

For more information, email swift@audubon.org.

Register your new Chimney Swift tower at nc.audubon.org/chimney-swift

