

The Open Dual Spire®

Cable-Stayed Suspension Series

by Gordon Cable-Stay



Assembly Instructions



- CS15N
- CS15DN
- CS30N
- CS30DN
- CS30H
- CS30DH

The CS Open Dual Spire® Series Suspension Bridge

Introduction

The CS Series bridges employ an open dual spire which remains the signature shape of all GCS tower-based bridges. The CS Open Spire design allows the suspension to spread outward, away from the bridge deck. This design prevents the suspension from interfering with the decks dynamic load.

In the real world, the CS15 would have stood about 80 feet tall with a span of 200 feet. This bridge uses eight support cables, each of which would be approximately 12 inches in diameter. Each cable would have consisted of smaller cables that would have then been connected to the pre-stressed concrete bridge deck.

Use two or more additional CS15s to span over 30 inches or 400 feet, or place the larger CS30 between two CS15s - a 60 inch, or 800 foot span, for a beautifully integrated look. Use the CS15 extension pier for more height.

Currently, GCS is designing its bridges for use with Atlas Flex track, or you may place Kato track over the inset area.

Both modern and retro, we hope the GCS Open Spire® Cable-Stayed Suspension Bridge will be a key feature on your layout.

Assembly Instructions

What You Will Need

- super glue
- sandpaper 220
- spray paint

Prep the Parts

Inspect the tower and deck, and sand any rough or sharp edges.

Connecting the Deck to the Tower

1. Temporarily attach the deck to the tower, making sure it fit is not too tight.
2. After removing the deck from the tower, place a small amount of glue on the top support side of the tower.
3. Attach the deck to the tower and place the bridge on a flat surface.

Support each end of the deck using any material that will equal the height of the tower support, making sure the deck is completely level.

Note regarding steel and brass wires.

You may leave the wires unpainted. However, they can become tarnished if they are not oiled periodically; depending on the humidity level in your area. Some users prefer this aged look.

You may wish to paint the steel wires a color other than the bridge color. If so, find a small piece of wood, drill 8 small holes 1/8 inch deep and place each wire into the holes and paint. Otherwise, install the wire cables (see page 4) and then paint the entire bridge. You may also use a clearcoat finish if desired.

Painting the Bridge

There are a few traditional colors that we think look good such as: Concrete Gray (light primer gray), Bridge Green or Lake Blue. Most hardware stores carry many colors; whatever color you choose, you may want to avoid gloss colors. Two or three light coats are all that is required, but be sure to let the paint dry between coats.

Connecting the Steel Cables

1. Push each wire about a 1/8th of an inch into its corresponding hole on the tower.
Looking at the bridge deck wire support holes, be sure the end of each wire is fully seated.
Carefully adjust the angle and depth of each wire as needed.
Be sure each wire is as straight as possible.
Be sure wires are not pushing down on the deck.
2. Now, remove one wire from the tower.
Place a small amount of glue on the end of this wire.
For best results, lightly sand tips of each wire – no more than 1/8th of an inch and repeat step number one.
3. Carefully place a small amount of glue into the deck holes so that the end of each wire is sufficiently coated.
For best results, use two applications. Allow time for drying between applications.

Laying the Track

1. If necessary, carefully remove (cut with small wire cutters) two or three ties from both ends of the Atlas Flex track(s).
Save these ties as you can place them back between the rails, from where they were originally removed - after the bridge is installed.
2. With the track upside down, apply a small amount of glue to the bottom of the ties every four inches or so.
3. Then carefully place and center the track onto the deck.

Congratulation, your new bridge is ready to go!