



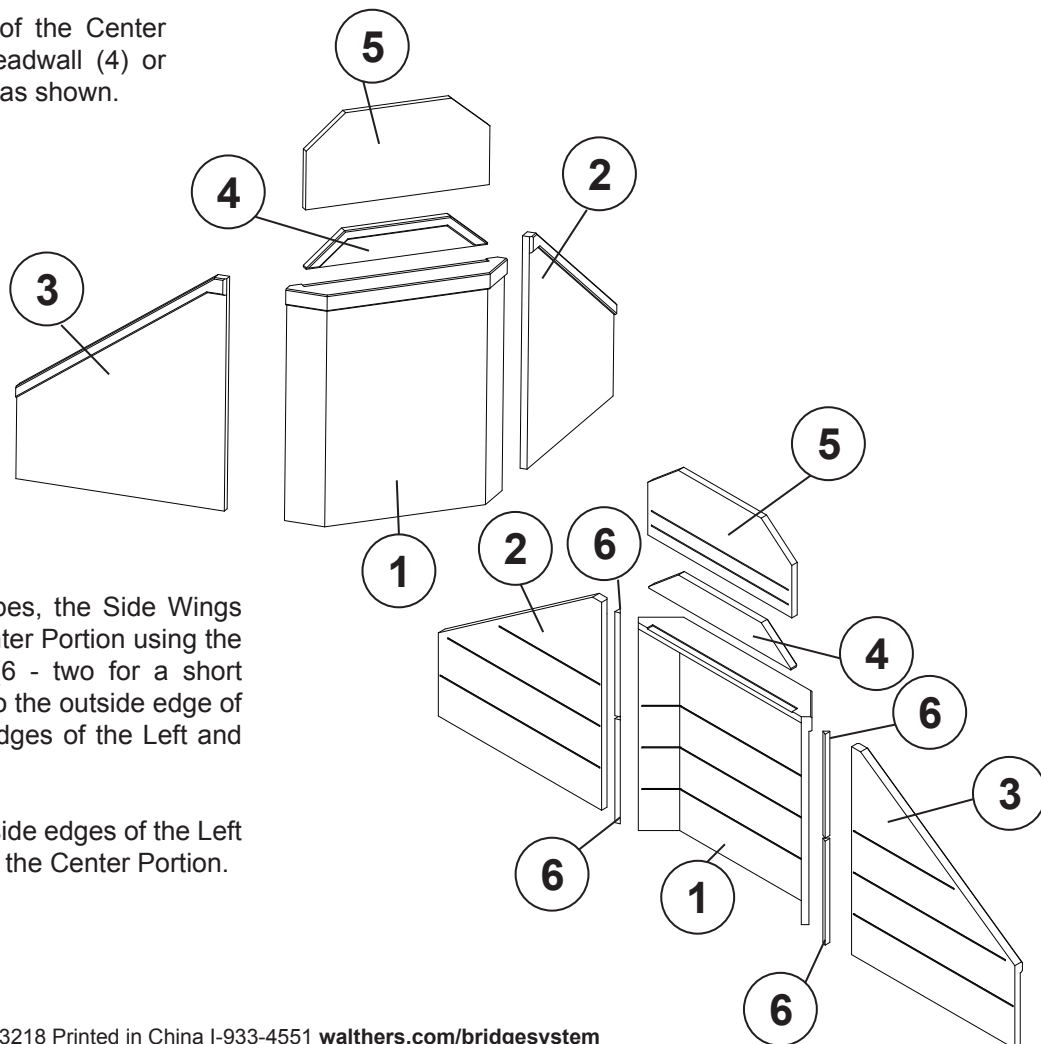
HO Structure Kit SINGLE TRACK RAILROAD BRIDGE CONCRETE ABUTMENTS 933-4551

Thanks for purchasing this Cornerstone® kit. Please read the instructions and study the drawings before starting construction. All parts are styrene, so use compatible glue and paint to finish your model. As part of the Cornerstone Engineered Bridge System, walters.com/bridgesystem, your new model can easily be used with other Cornerstone bridges and accessories to create a custom structure for your railroad.

Unlike most buildings that can rest on a foundation, bridges require very specialized support structures. On many, both ends rest on large substructures known as abutments (longer spans require additional mid-point supports known as piers), which are the first part of a new bridge to be designed and built. A typical abutment consists of three major parts, the center portion, which holds the bridge itself, the headwall mounted on the center portion to hold the graded profile of the right-of-way above the abutment, and side wings, which slope downward and sometimes angle backward. Together, the assembly forms a retaining wall, holding the earth fill used in the approaches more securely, and keeping it from pushing on the abutment. In turn, the abutments not only support the weight of the bridge, but also transmit vibration, pushing (compression) and pulling (tension) forces exerted by moving trains back into the ground. Poured concrete became the material of choice from the 1920s on for new abutment construction, as it was long lasting and could be easily and quickly handled at the site. Typical of wing abutments, one of the most common styles used in railroad bridge construction, your new model makes it easy to add this important detail to your layout. Designed especially for use with single-track bridges from the Cornerstone Engineered Bridge System, this kit can also be adapted to similar bridge models, each sold separately. For a longer span, matching Single-Track Railroad Bridge Concrete Piers (#933-4550) are available separately. For more ideas and information on the Cornerstone Engineered Bridge System please visit walters.com/bridgesystem. For additional products to complete your scene, see your participating hobby dealer, check out the latest Walthers Model Railroad Reference Book or visit us online at walters.com.

BEFORE STARTING CONSTRUCTION: Molded cut lines are provided on the Center Portion (1), the Right (2) and Left (3) Side Wings and the Large Headwall (5) to build shorter Abutments if desired. Be sure to make your cuts at the same line. We suggest test-fitting the abutments as subassemblies directly on your layout to determine final placement of all parts. Be sure the finished abutments (and piers if used, sold separately) are level and correctly aligned before attaching them to your layout.

1) Note the inset area at the rear of the Center Portion (1); use either the Short Headwall (4) or Large Headwall (5) and glue in place as shown.



2) PLEASE NOTE: Like the prototypes, the Side Wings may be installed parallel with the Center Portion using the Spacers as shown. Glue Spacers (6 - two for a short assembly, four for a full-size model) to the outside edge of the Center Portion. Glue the inside edges of the Left and Right Side Wings to the Spacers.

3) For an angled version, Glue the inside edges of the Left and Right Side Wings to the edges of the Center Portion.