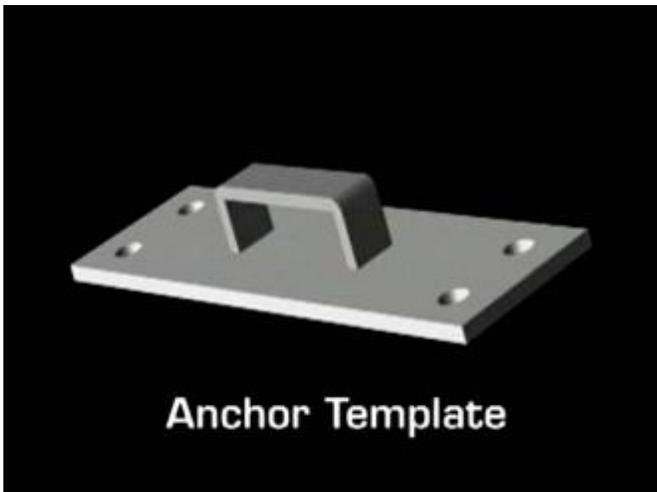


# BREAK-SAFE<sup>®</sup> Installation Guide

**FOUNDATION:** The foundation is the most important part of the installation; A template fabricated according to TRANSPPO<sup>®</sup> standards is crucial to a successful Break-Safe installation.



1. Fabricate a STEEL template. Transpo will provide a PDF dimensioned drawing for reference.

- Recommended template: 3/8" min steel plate
- Acceptable template: 2"x8" solid wood (No more than 2 installations per template).
- **Plywood is NOT acceptable:** the holes need to be perfectly round and plywood becomes ragged when cut. Plywood does **NOT** support the weight of the anchors. When the plywood bows, the anchors will not be in proper alignment.

*Each footing needs to have its own template. After the foundation is cured the template is removed, and reused.*

\*Template drawing available upon request



2. Attach 4 female anchors to template.

Make sure that each anchor washer is snug against the bottom of the template.

Use a 1" threaded bolt provided by others, to attach the anchors to the template.



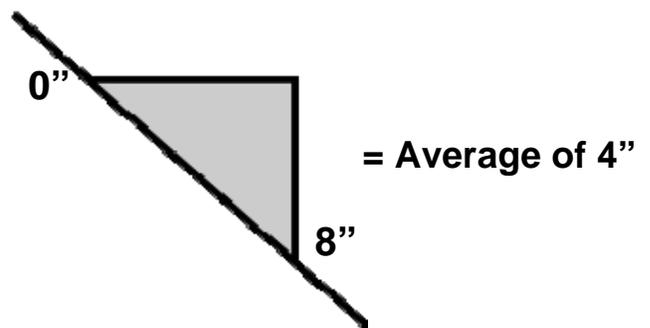
3. Auger the hole for the foundation and position reinforcing.



4. It is important to square and level the anchors that are attached to the template.

- The weight of the template should be supported during the curing of the concrete so that it will not settle into concrete prior to cure.

**Foundation Height above ground surface should NOT exceed 4 inches.**



The foundation must be in compliance with AASHTO standard specification, which requires the foundation (plus the broken stub of the couplings) be no higher than 4" above ground level. If sign is on a slope, then the **average height** should be no higher than 4 inches.



5. Allow the concrete to cure completely before removing template.

## **BRACKETS AND HINGE PLATE ASSEMBLY**



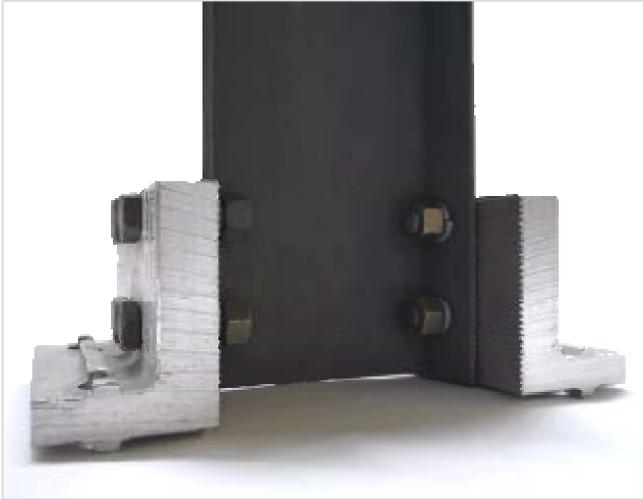
6. Drill holes for hinges & brackets into the flanges of the post section as shown in the Break-Safe Design Book page. (Your steel post supplier can also do this for you.)



7. For hinge assembly, place the upper and lower post sections together on a flat level surface. Place the hinge plates on the outer surface of the post and install and tighten bolts.

Ensure that the upper and lower post sections are aligned and tighten bolts using the turn of the nut method. (snug plus 1/2 turn).

There is no measured torque required with Break-Safe.



8. Place the brackets squarely on the outer surface of the post flanges and secure with bolts, washers and nuts.

Tighten all bolts using turn of the nut method (sung plus 1/2 turn).

Follow the instructions included in the Break-Safe box for proper size and sequence of the bolts.

## COUPLING INSTALLATION



9. Thread 4 couplings into the anchors.

10. All couplings have 2 sets of wrench flats: an upper and lower. Use the lower wrench flats to tighten the couplings into the anchors as tightly as possible using an open end box wrench

The couplings must be seated squarely.



11. Suspend the post assembly above the post foundation and insert the special bolts through the holes in the bracket and thread them snugly into the couplings.

Check each post for alignment.

If the post is not plum, insert leveling shims provided with the break-safe assembly kit between the couplings and the anchors. (No more than 2 shims under any one coupling).



**12. Tighten the special bolts while holding the coupling by the upper wrench flats.**

Use an additional wrench on the upper wrench flat to prevent an induced torque stress across the necked portion of the coupling.

Transpo does NOT recommend the use of impact wrenches to tighten special bolts.



**13. After all of the posts are secured in place, attach the sign panel assembly to the post in accordance with the sign manufacturer's recommendations.**

**14. Congratulations on successfully installing Break-Safe.**