3D Signpost - Geometry

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Geometry

For users of ANSYS 15.0, please check this link for procedures for turning on the Auto Constraint feature before creating sketches in DesignModeler.

For this problem, we are going to import the geometry into ANSYS, which was designed using the ANSYS Design Modeler.

Click here to download the geometry file for the SOLID SIGNPOST.
Click here to download the geometry file for the HOLLOW SIGNPOST.

The video below shows the steps necessary to upload the provided geometry into the ANSYS project.

A post diameter of 1.12 ft will be used throughout the rest of this tutorial. 1.75 ft was a random value chosen to demonstrate how to change the post diameter within the Design Modeler.

The reason for applying "massless steel" to the sign is a result of the problem specification. The uniformly distributed load WZ1 represents the weight of the sign body.

Note: It is more correct to treat the weight of the sign as a body force by applying the acceleration of gravity to all bodies. However, a uniformly distributed load WZ1 was applied for closer agreement between analytical calculations and the FEA model.

Note: To prevent a "pivot warning" message from appearing in the numerical solution, change the thickness of the WX2_ApplicationSurface to 1e-3. Thus, **disregard 1e-30 and replace with 1e-3**.

Go to Step 3: Mesh

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