## CHAPTER 38 EXERCISES

1. W10x15 Solid Model

Open the **W10X15** drawing. Use the *Region* command to transform the I-beam section into one entity. Next, *Extrude* the region 5' in the Z direction. Change the *Vpoint* with the *Rotate* option to **270°** in the XY plane and 30° from the XY plane. *Rotate3D* the object **90°** about the **X** axis to achieve the drawing as shown in Figure CE38-1. *SaveAs* **CE38EX1**.

Figure CE38-1
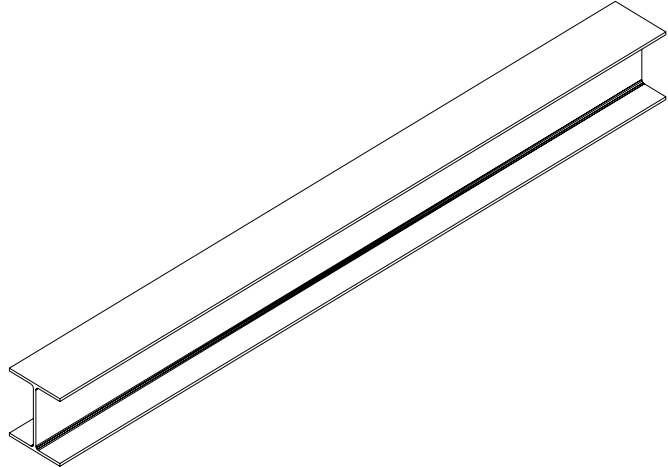
2. W6x15 Solid Model

Open the W6X15 drawing. Follow the same procedure for transforming the drawing as in Exercise 1 above. However, you will also need to *Rotate3D* the beam **90°** about the **Z** axis (Fig. CE38-2). *SaveAs* **CE38EX2**.

Figure CE38-2

3. **TS10x10x1/2**   **Figure CE38-3** —

Begin a *New* drawing. Draw a 10″x10″ *Rectangle*. *Offset* it ½″ to the inside. *Fillet* the outer square with 1/8″ fillets and the inner square with ½″ fillets. Use the *Region* command to transform each of these squares. Then, *Subtract* the inner region from the outer region. Finally, *Extrude* the resulting region 5′ along the Z axis. Use *3Dorbit* to generate a view as shown in Figure CE38-3.   *SaveAs* **CE38EX3**.

4. **Assembly of Steel Framing Members.**

    Continue working on the exercise above. Draw a 10″x10″x1″ plate on top of the column using the *Box* command. *Insert* the **CE38EX1** and **CE38EX2** drawings. Create 3 *Viewports* on the screen (in model space) to facilitate working in three dimensions. Set different *Vpoints* for each of the *Vports*. Use the *Move* command with 3-dimensional coordinates to align the steel members as shown in Figure CE38-4. *SaveAs* **3DSTEEL**.

Figure CE38-4