

In an office setting you might want to save the downloaded plumbing fixture drawings to a “Plumbing Fixtures” folder on your hard drive for convenient access in the future.

You will need to have access to the Internet for the next several steps...

1. Open your Internet Browser; this book uses **MS Internet Explorer**.

Next you will be instructed to browse to a major plumbing manufacturer’s website.

2. Browse to the **Kohler** website by entering the URL **www.kohler.com** and then press **Enter...** or *click Go*. Or *go directly to:* <http://www.us.kohler.com/index.jsp>

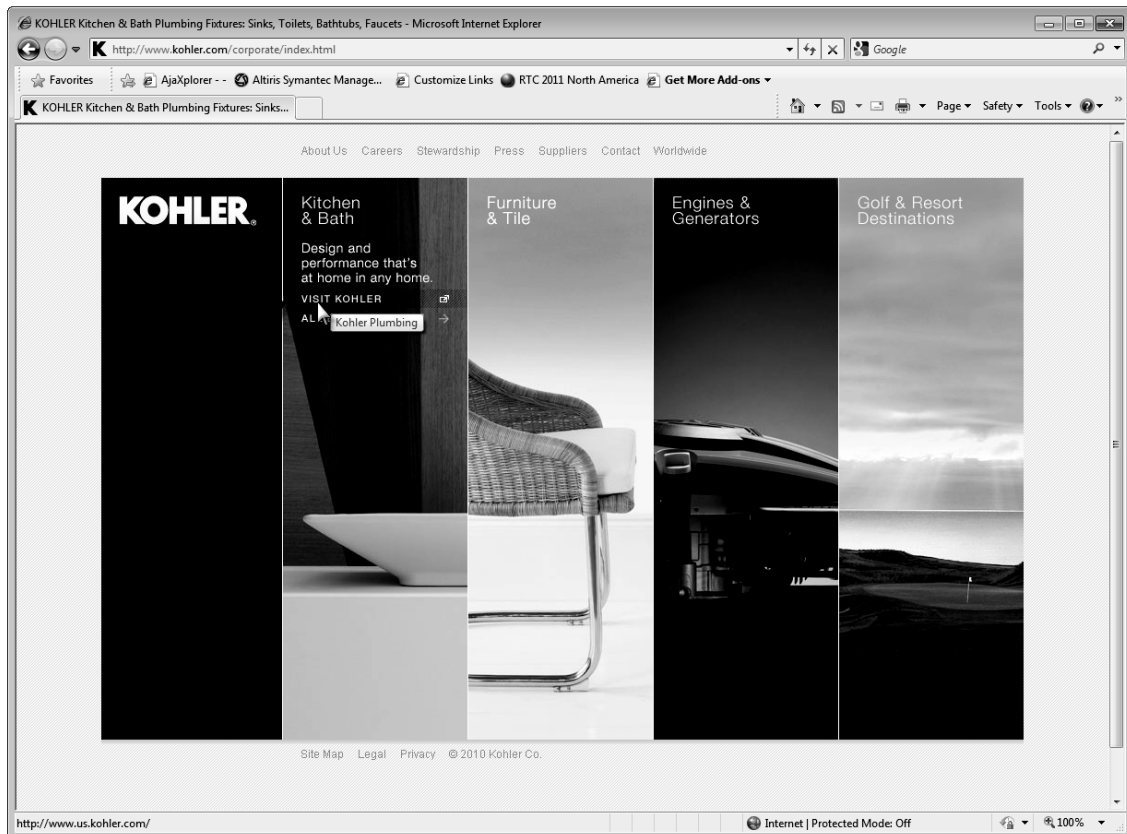


FIGURE 4-1.1 Website: www.kohler.com

***FYI:** As you should be well aware, websites can change at any given moment. Companies often update their websites as new content becomes available or a fresh new look is desired. Even the model numbers change from time to time. So if the screen shots shown here are different than what you see on your screen you will have to interpret the steps based on what you see; you will likely still have access to the same content.*

3. Click on **Kitchen and Bath** and then click in the textbox next to *Search* at the top of the webpage; type **K-4325-0** and press **Enter**.

- Click directly on the toilet image (the one without the bedpan lugs) (Figure 4-1.2).

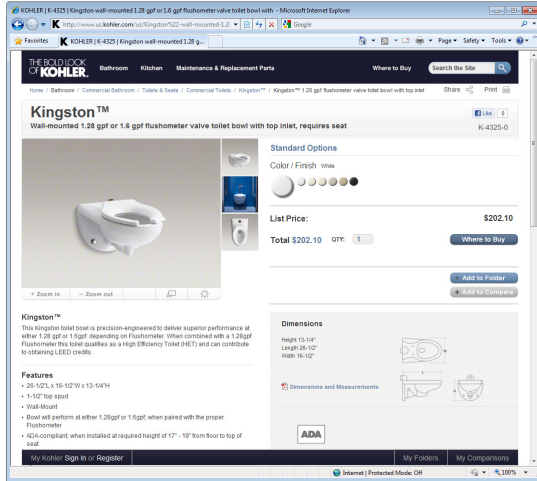


FIGURE 4-1.2 Website: www.kohler.com; search results

Take a minute to review the features of this toilet fixture.

- Near the center-right of the page, click **For Installers and Designers**.

The previous step reveals specific design and installation information for the toilet (Figure 4-1.3).

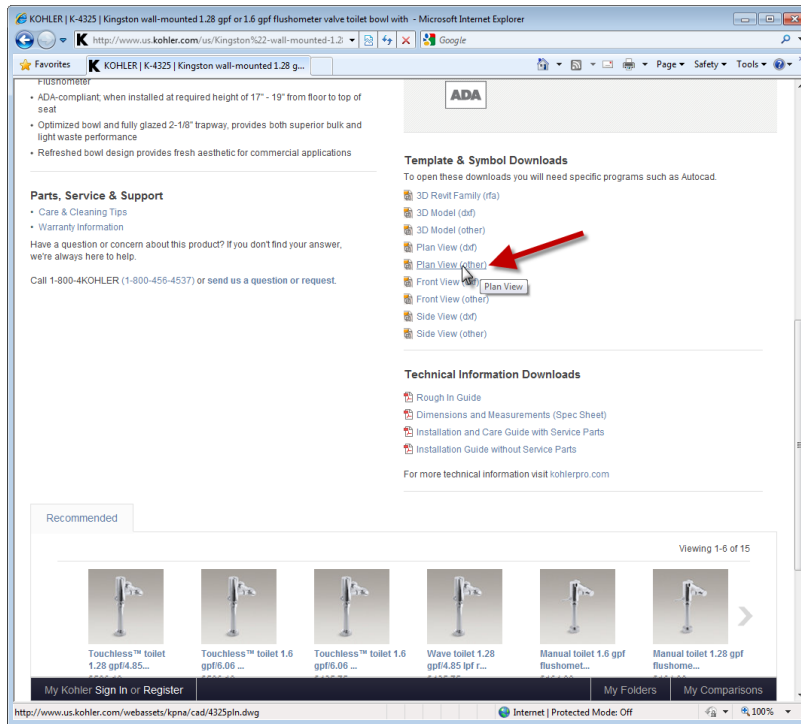


FIGURE 4-1.3 Website: www.kohler.com; downloading CAD Files

The next link you are instructed to click will allow you to save a CAD file of this fixture to your hard drive. If in a classroom setting, your instructor may direct you to save these files to a different location.

- Under **Template & Symbol for Downloads**, right-click **DWG** next to *2D Plan View* and then select **Save Target As...** from the pop-up menu.

Make sure you selected DWG CAD Files and not DXF CAD Files. The former is the native AutoCAD file format and the latter is a file format conceived by Autodesk to allow designers to share CAD information between AutoCAD and other CAD programs not written by Autodesk. The DWG file format is more readily inserted into your current drawing than DXF (**D**rawing **eX**change **F**ormat).

- Click **Save** in the *File Download* dialog box (Figure 4-1.4a).

***FYI:** You may not get this prompt; if not, skip to the next step...*

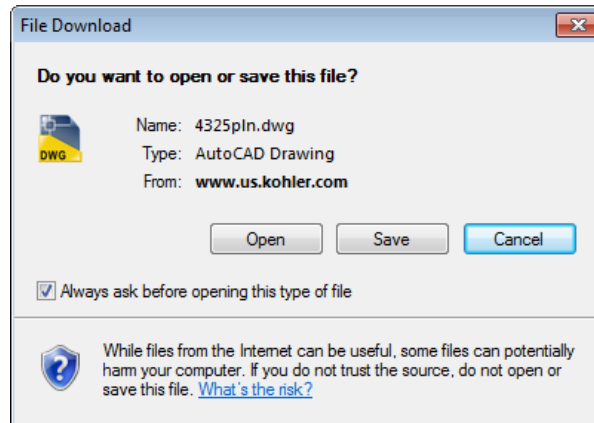


FIGURE 4-1.4A Saving a file from the Internet

- Browse to your **Documents** folder (Vista or Windows 7) or **My Documents** folder (Windows XP) and click **Save**; see Figure 4-1.4b.

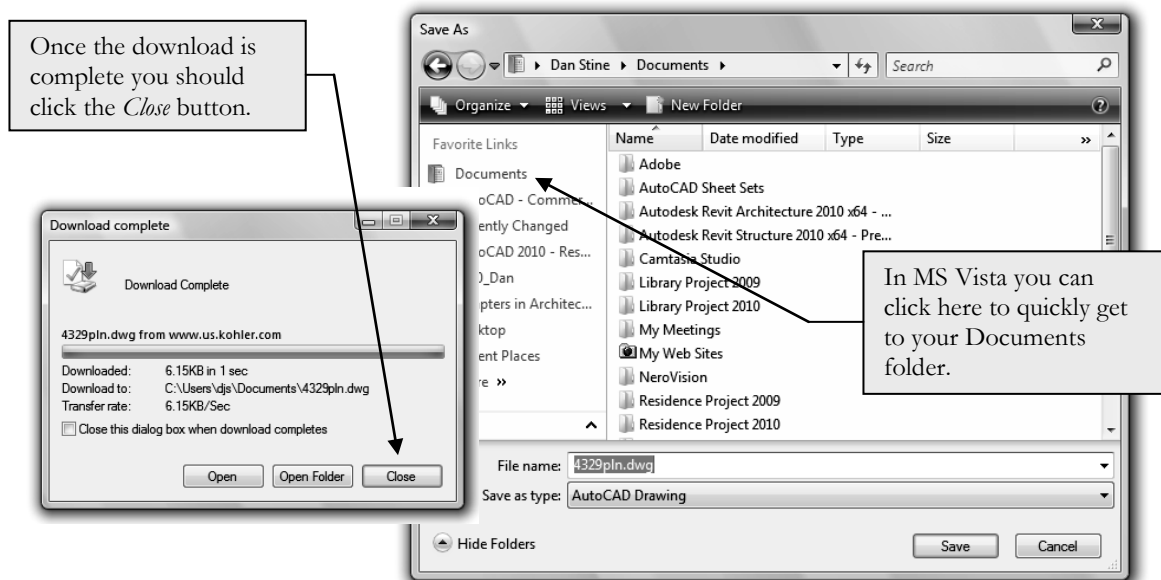


FIGURE 4-1.4B Saving a file from the Internet

You now have a copy of the toilet fixture on your hard drive and it is ready to be placed in your floor plan!

The file you just downloaded is named 4325pln.dwg (unless you renamed it in the previous step); the name is the model number plus the view (pln for plan view in this case). If you open the file directly you will notice the origin has been conveniently located at the back/center of the fixture and all lines are on Layer zero. Having all lines on Layer zero is preferred; this way all lines in the *Block* will take on the properties of the *Layer* the *Block* is placed on.

Next you will be instructed to download the other fixtures required for your floor plan. Rather than giving you step-by-step instructions you will simply be given the model numbers; you can then find and download the other fixtures using similar techniques to those just covered.

9. Download the other two views (front and side) of the toilet.
10. Using techniques previously covered, download all three views (plan, front and side), from the Kohler website, for the plumbing fixtures listed below:
 - **K-2007-0 Kingston™ wall-mount lavatory**
 - **K-5024-T Dartfield™ Urinal**
 - **K-5250 Serra™ Drinking Fountain**

When finished you should have the following files listed in your **My Documents** folder:

- | | |
|----------------|---------------|
| ● 5250sde.dwg | ● 4329sde.dwg |
| ● 5250pln.dwg | ● 4329pln.dwg |
| ● 5250frt.dwg | ● 4329frt.dwg |
| ● 5024tsde.dwg | ● 2007sde.dwg |
| ● 5024tpln.dwg | ● 2007pln.dwg |
| ● 5024tfrt.dwg | ● 2007frt.dwg |

Next you will draw a “lavatory system” from another major plumbing manufacturer called Bradley Corporation. You can also download this one from the Internet (and you will be given the URL), but the file is composed of multiple views and information, plus it is in a ZIP file, which makes for more work (as far as this tutorial is concerned).

11. *If you prefer to try the download*, browse to the following URL:
<http://www.bradleycorp.com/products/fixtures/lavsystems/ss/viewproduct.jsp?pgid=1196>
(This may change; see item “b” below.)
 - a. Click the link to download the CAD Files.
 - b. You can also search for Express Lavatory, Model SS-2N
12. In a new drawing, draw the *Lavatory System* shown in **Figure 4-1.5**; make sure the origin is at the back and centered.
 - a. Approximate all dims and arcs not specified.
 - b. Draw everything on *Layer zero*.

Exercise 4-3:

Stairs and Elevators

Introduction

In this exercise you will add the stairs and elevators. There are several things to consider when drafting and designing these components within a building. Similar to the plumbing fixtures, you will download the elevator drawings from the internet.

Adding the Passenger Elevators:

Elevators come in several models and sizes. In this tutorial you will be adding two passenger elevators and a service elevator. Selecting the model and size depends on several factors such as: expected number of passengers in a given period of time, number of floors served, budget and speed to name a few.

In this made-up library project, the passenger elevators will have high quality finishes and are intended primarily for people (i.e., the public and staff) and book carts. The service elevator is only accessible by staff and has durable finishes to withstand large items being moved in and out on a regular basis.

The following steps could aid in determining the elevator shaft size. However, this information was previously given when you drew the walls.

Again, you will need access to the Internet before proceeding with this exercise.

1. Open your Internet Browser; this book uses **MS Internet Explorer**.

Next you will be instructed to browse to a major elevator manufacturer's website.

2. Browse to the **ThyssenKrupp Elevator** website by entering the URL **www.thyssenkruppelevator.com** and then press **Enter** (Figure 4-3.1).
3. Click the **Architect Direct Pro** link near the top of the webpage.
4. Now select the **View All Models** link (i.e., a link on the far left).

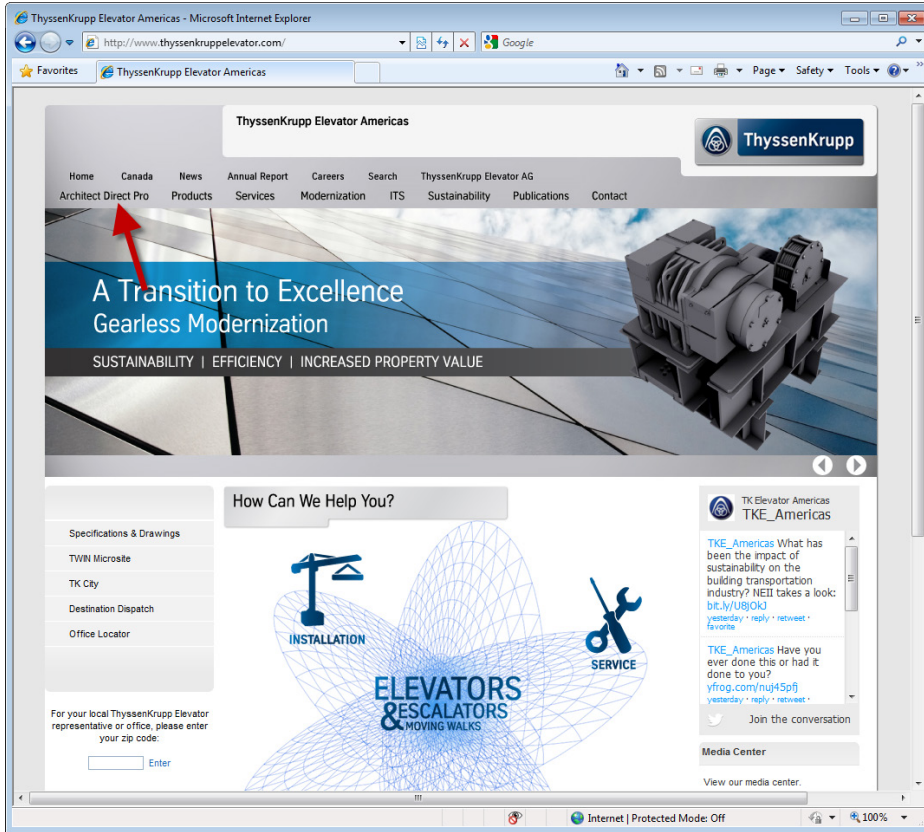


FIGURE 4-3.1 Elevator manufacturer’s website

5. Scroll down and select **Gearless – 3000 lb. Capacity** (Figure 4-3.2):

Capacity	Oilraulic		synergy Machine Room-Less						Traction
	AMEE	Conventional	Self-Supported			Building-Supported			Gearless
			85S	300R	300S	300R	300S	300E	
2100									
2500									
3000									
3500									
4000									

FIGURE 4-3.2 Elevator manufacturer’s website

6. Click the **icon** under the label *Drawings/non-seismic* (see image below):

Model:	Type:	Data:	Drawings:	TK Specs:	BIM Models:
			non-seismic seismic		
Gearless 30	Gearless				
synergy 300E MR 3000	Gearless				

Click here

7. Right-click the DWG icon next to **200, 350, 500 - Center Opening - Front - Hoistway & Machine Room View** as shown in Figure 4-3.3.

Right-click here to download the drawings

200		Front & Rear	Data Section (Structural Slab)			
200, 350, 500	Center Opening	Front	Hoistway and Machine Room (Machine Beam - Beam)			
200, 350, 500	Center Opening	Front	Hoistway and Machine Room (Machine Beam - Machine)			
200, 350, 500	Center Opening	Front	Hoistway and Machine Room (Structural Slab - Cut out)			
200, 350, 500	Center Opening	Front	Hoistway and Machine Room (Structural Slab - Machine)			
200, 350, 500	Center Opening	Front & Rear	Hoistway and Machine Room			

FIGURE 4-3.3 Elevator manufacturer’s website

8. Click the **Save Target As...** command (Figure 4-3.4) and browse to your *Documents* or *My Documents* folder.
 - a. If needed, rename the file extension from “.html” to “.DWG”.



FIGURE 4-3.4 File Download dialog

You now have an AutoCAD drawing file named **PME 30-20_50HMR PLAN I CO SINGLE-MM.dwg** saved on your computer’s hard drive. This drawing is shown in Figure 4-3.5A, and is packed with information. As you can see, details about the elevator shaft and the elevator machine room are given. In your case, this is more information than you need. So, you will open the drawing and Copy/Paste what you need into your floor plan.

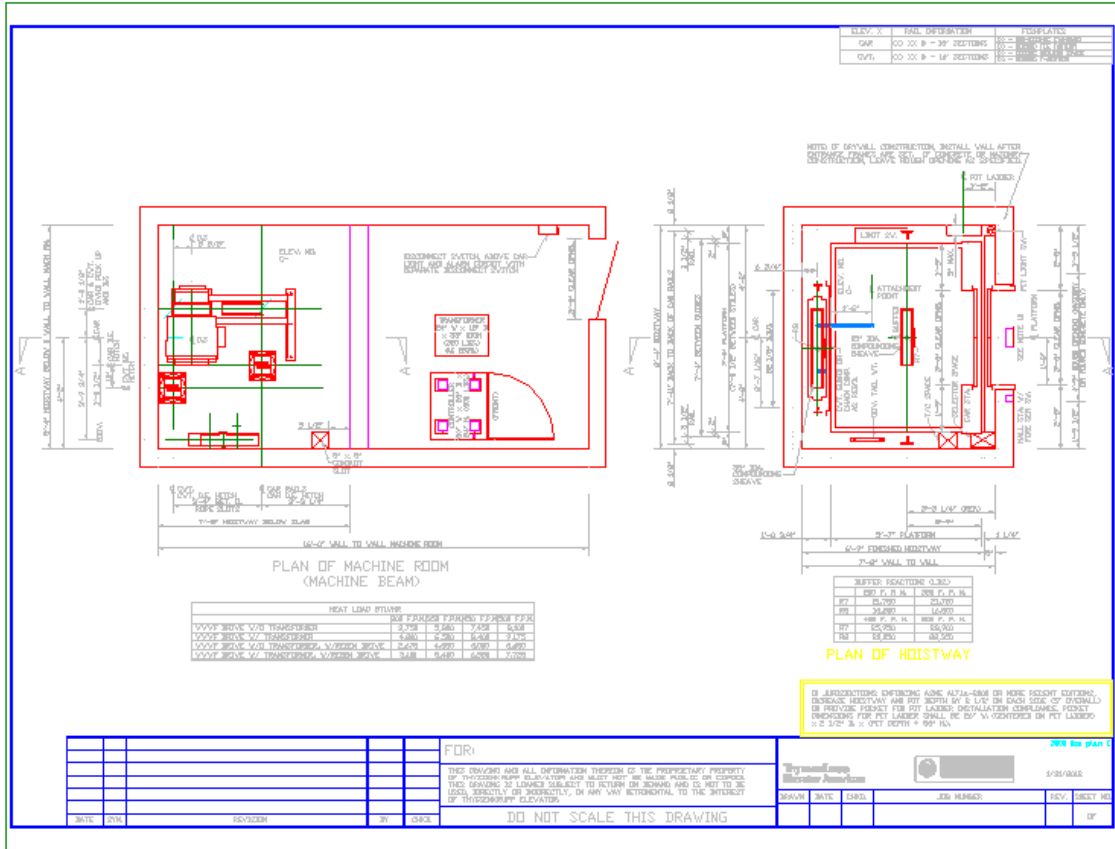


FIGURE 4-3.5A Contents of drawing file just downloaded

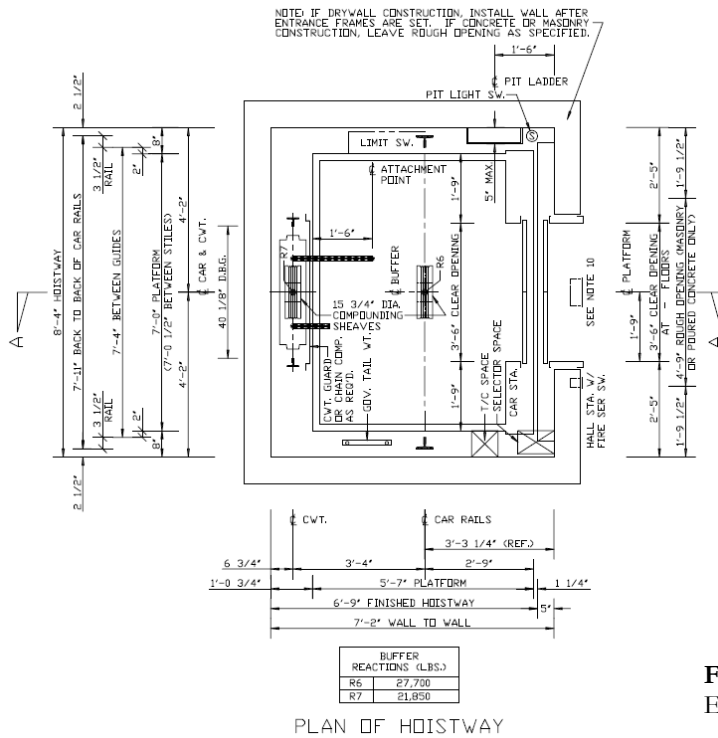


FIGURE 4-3.5B
Enlargement of elevator drawing

9. Open **PME 30-20_50HMR PLAN I CO SINGLE-MM.dwg** (i.e., the elevator drawing just downloaded).
10. **Zoom** in to the elevator shaft plan view on the right.

Layer Freeze: a useful tool:

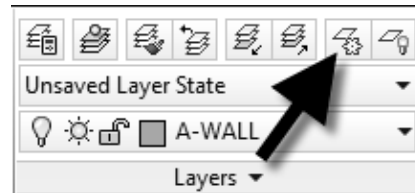
Next you will use a tool to freeze a *Layer* just by selecting objects on the screen. This will help you to select just the parts of the drawing you need.

11. Set the current *Layer* to **0** (i.e., zero).

TIP: Click the *Layer* drop-down list from the **Home** tab and scroll up to *Layer zero* and click on it; as long as nothing in the drawing is selected, this will make the selected *Layer* current.

12. From the **Layers** panel on the **Home** tab, select the **Freeze** icon (see image to right).

TIP: Explode (on the *Modify* panel) any Blocks in this drawing so you can control the *Layer* color when it is loaded into the library floor plan.



13. Click on all the text, dimensions and centerlines until the drawing looks like Figure 4-3.6.

TIP: If you click on the wrong object and a *Layer* is frozen by mistake, type **U** and press **Enter** on the keyboard. (This is not the main Undo command.)

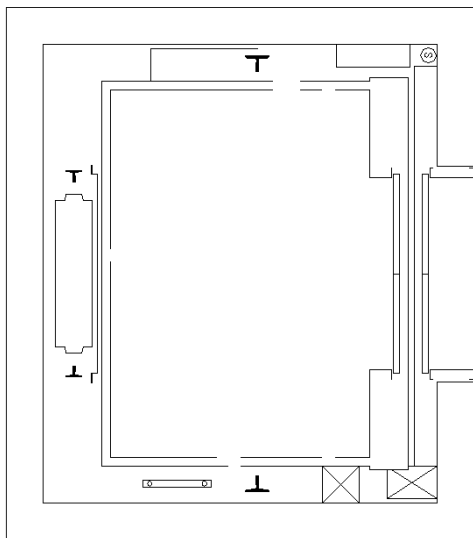


FIGURE 4-3.6 Elevator drawing

The elevator drawing is almost ready to be copied to the clipboard and pasted into your floor plan.

Before you copy the drawing to the clipboard, you will fix the broken lines (they were trimmed to accommodate notes and dimensions – which are now frozen).

Also, all the visible linework is currently on a *Layer* named “Object” which does not conform to your office standards; you will fix this too.

Adding the Service Elevator:

This elevator is near the loading dock area (west side of the building) and is only accessible by the library staff. It is rated for a higher capacity than the passenger cars (3000lbs. vs. 5000lbs.). The cab size is also larger to make it easier to move objects in and out.

You will be given minimal information with the expectation that you use the knowledge previously learned to locate and insert the drawing data.

30. Place the service elevator per **Figure 4-3.12**, *plus*:
 - a. Use the same mfr: **ThyssenKrupp Elevator**
 - b. *Type of application*: **Gearless**
 - c. *Capacity*: **5000**
 - d. *Model*: **synergy 300E MR 5000 (non-seismic)**
 - e. Note the door orientation.

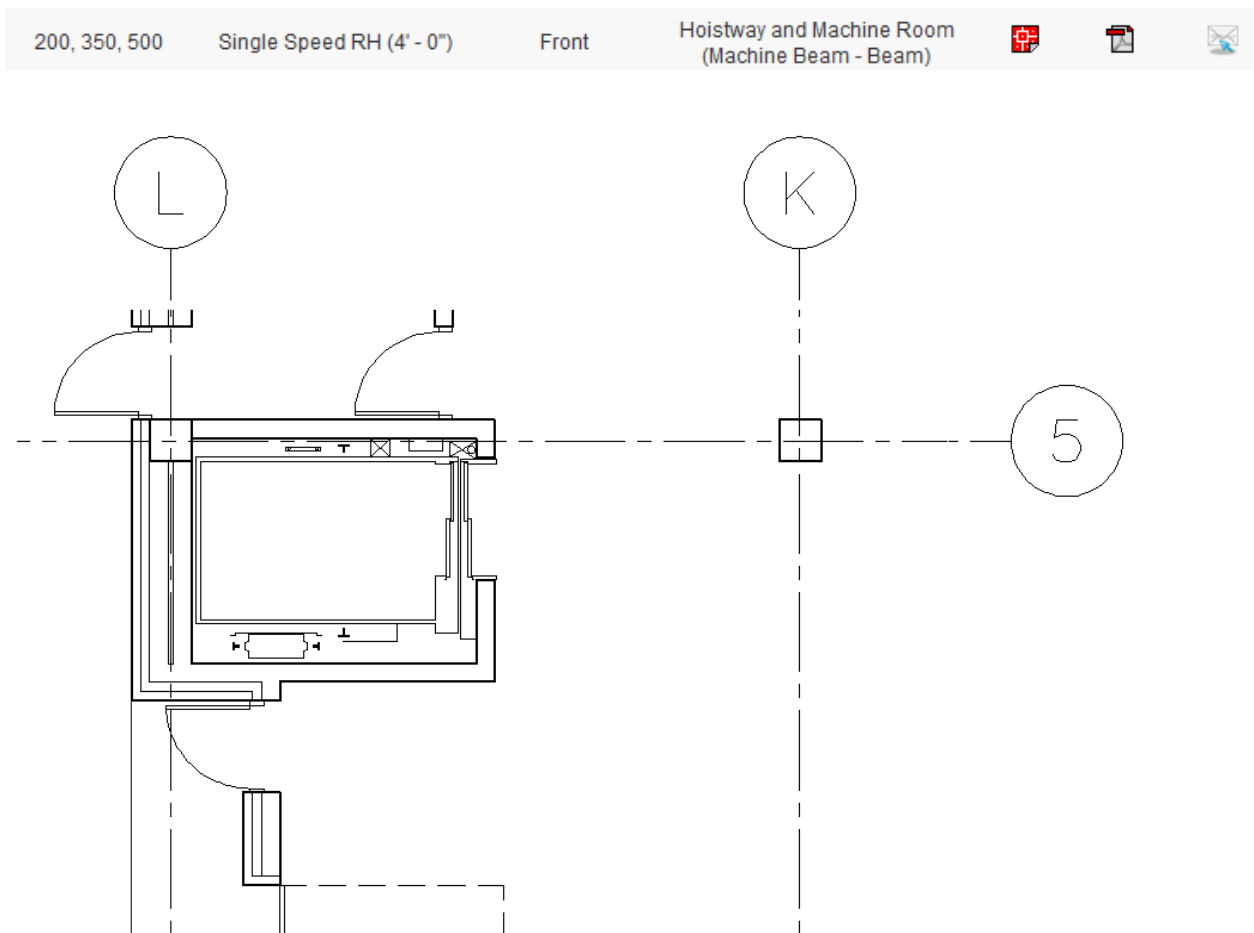


FIGURE 4-3.12 Service elevator added to plan