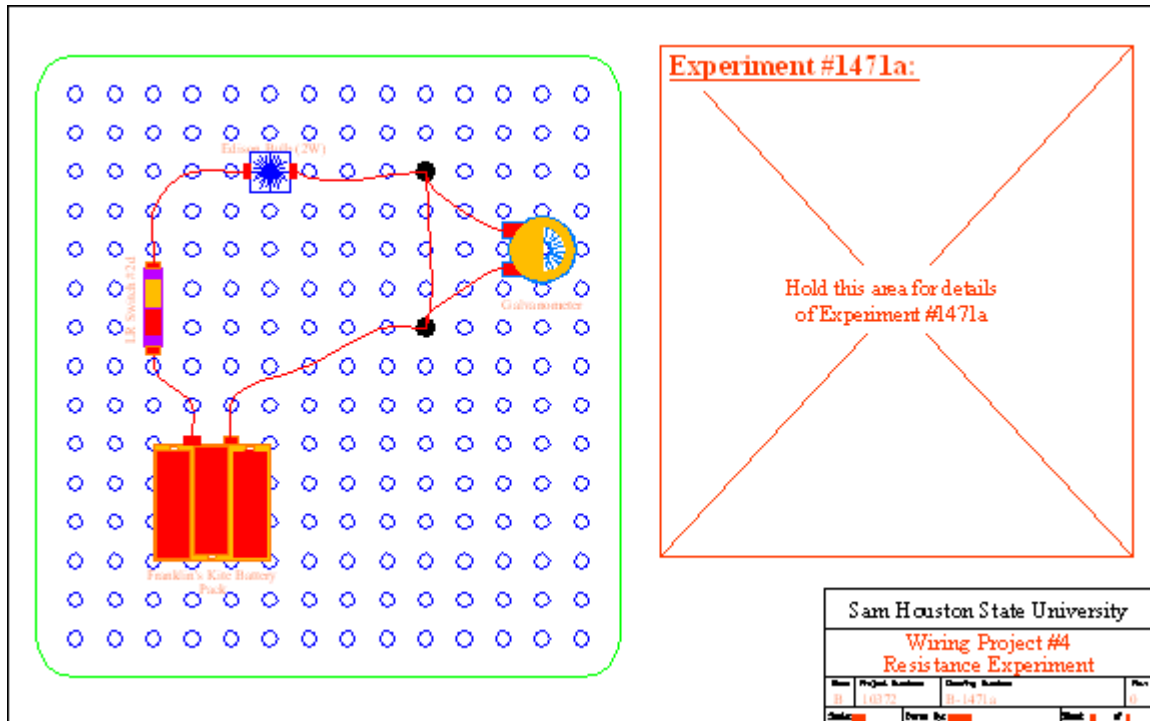


**AutoCAD 2010: One Step at a Time**  
**Lesson 27: Externally Referenced DWGs, PDFs, DWFs, and DGNs**

**10R27**

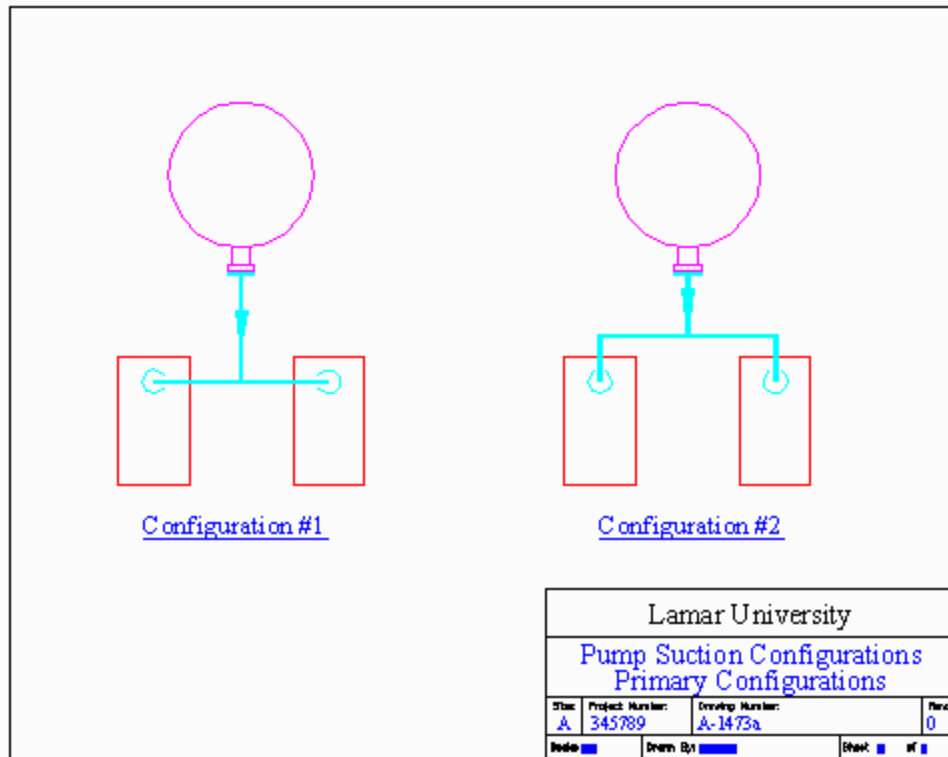
**Exercises**

1. Using Xrefs and DWFs whenever possible, create the drawing below.
  - 1.1. Use the following references (included in the C:\Steps\Lesson27 folder):
    - 1.1.1. *Title block*
    - 1.1.2. *Battery*
    - 1.1.3. *Lamp*
    - 1.1.4. *Galvanometer*
    - 1.1.5. *MyBoard* (you created this in Exercise 27.1.1.1) or *Board*
    - 1.1.6. *title info* (insert this as a block to use the attributes)
  - 1.2. Create layers as needed (you'll need a wire and a text layer)
  - 1.3. Save the drawing as *MyCircuit1d* in the C:\Steps\Lesson27 folder.

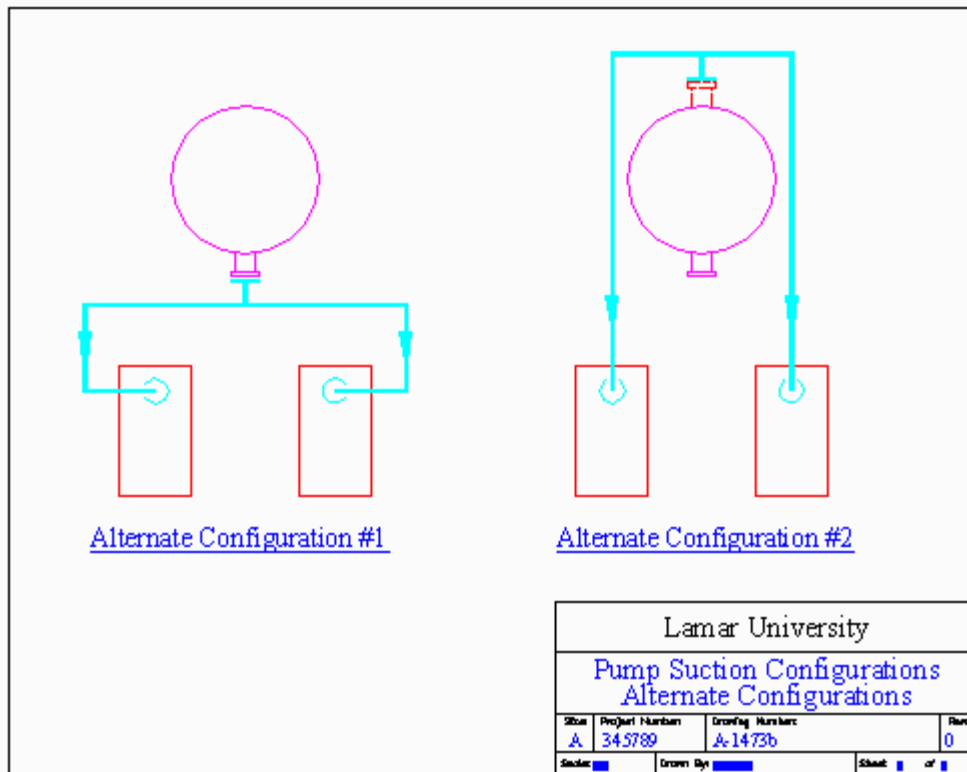


MyCircuit1d.dwg

2. Create the following two drawings, using Xrefs and DWFs whenever possible.
  - 2.1. Use the following references (included in the C:\Steps\Lesson27 folder):
    - 2.1.1. *Title block-a*
    - 2.1.2. Other drawings you might wish to create
    - 2.1.3. *title info* (insert this as a block to use the attributes)
  - 2.2. Create layers as needed (you'll need a pipe and a text layer)
  - 2.3. Save the drawings as *Pump Config 1* and *Pump Config 2* in the C:\Steps\Lesson27 folder.



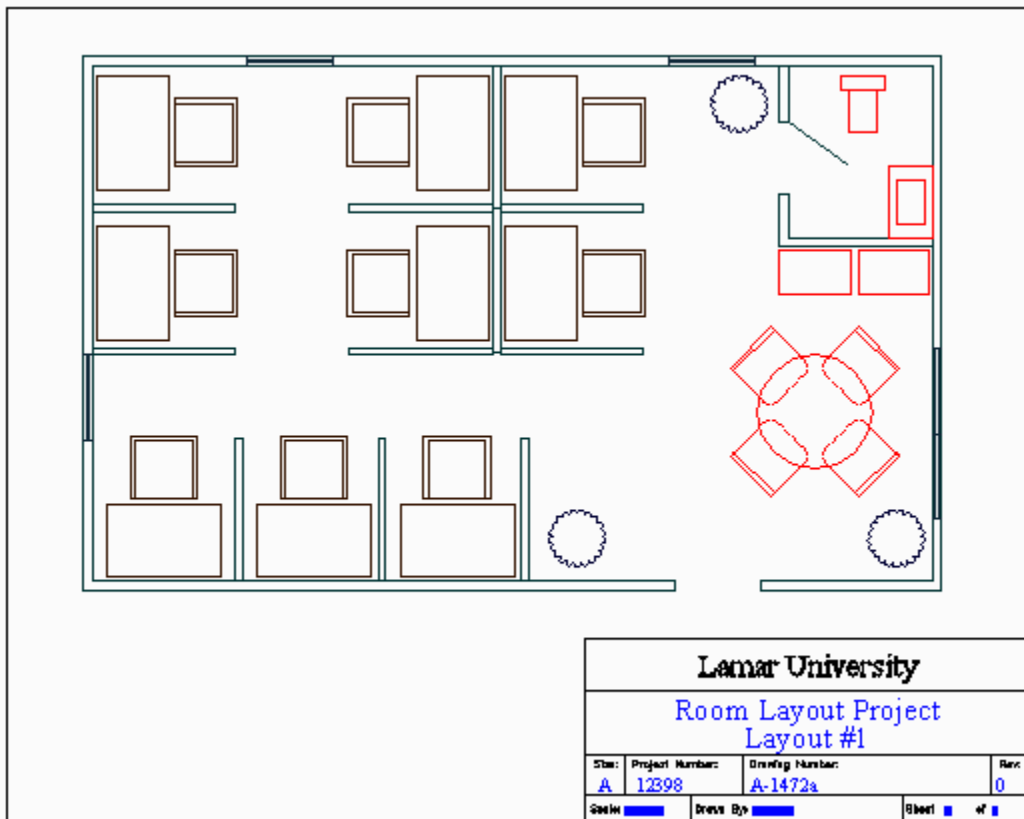
Pump Config 1



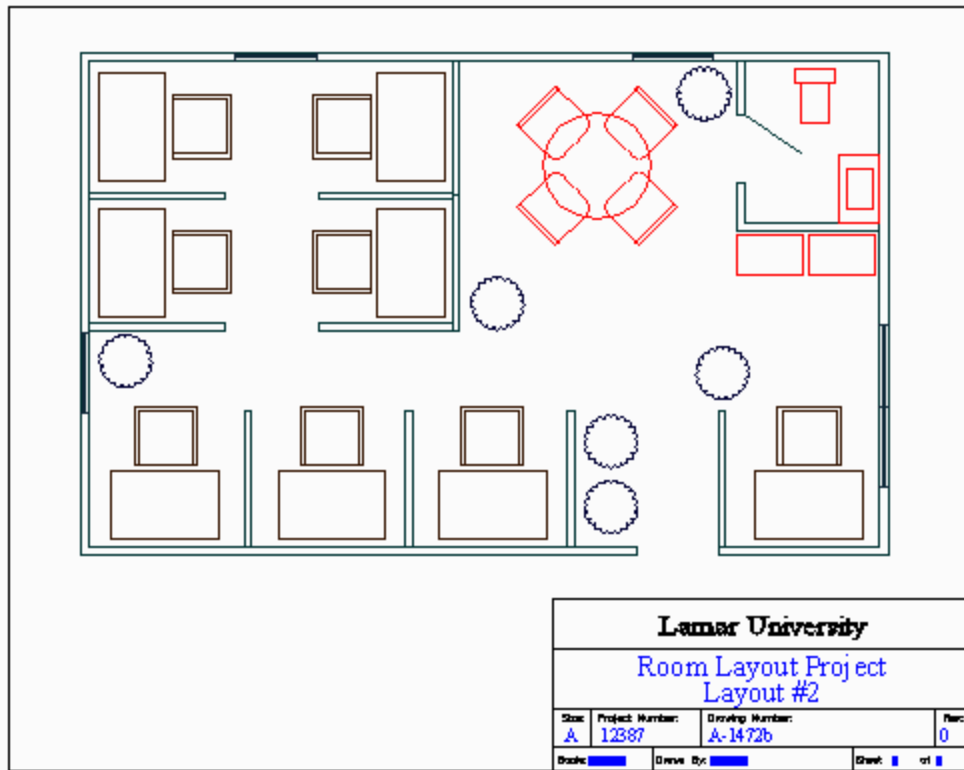
Pump Config 2

3. Create the following two drawings, using Xrefs or DWFs whenever possible.
  - 3.1. Use the following references (included in the C:\Steps\Lesson27 folder):
 

3.1.1. <i>Title block-a</i> (you'll need to scale it for 1/4"=1'-0" drawing on an 11"x8 1/2" sheet of paper)	3.1.5. <i>Table&amp;chairs</i>
3.1.2. <i>Desk&amp;chair</i>	3.1.6. <i>Vending machine</i>
3.1.3. <i>Plant</i>	3.1.7. <i>Wall panel</i>
3.1.4. <i>Room</i>	3.1.8. <i>title info</i> (Insert this as a block to use the attributes. You'll need to scale it as well.)
  - 3.2. Create layers as needed
  - 3.3. Save the drawings as *floor plan layout1* and *floor plan layout2* in the C:\Steps\Lesson27 folder.



Floor Plan Layout1



Floor Plan Layout2

4. Open the *cutting table* file in the C:\Steps\Lesson27 folder. Create the 11"x17" layout shown on the next page.
  - 4.1. Xref the *ANSI B* title block from AutoCAD's template folder.
  - 4.2. Create appropriate layers, text styles, linetypes, etc.
  - 4.3. Use the *title info* attributed block in the C:\Steps\Lesson27 folder to fill in the title block information.

REVIEWS		DESCRIPTION	DATE	APPROVED
ZONE	REV			

**Notes:**

1. All stock to be 1x2 White Pine except where noted.
2. Top rails to be 1x4 White Pine.
3. Use Buncher Block laminate to cover top.
4. All connections to be dowel/reinforced bunt type joints.
5. Finish to be Clear Lacquer.

**Top View**  
1"=1'-0"

**Front View**  
1"=1'-0"

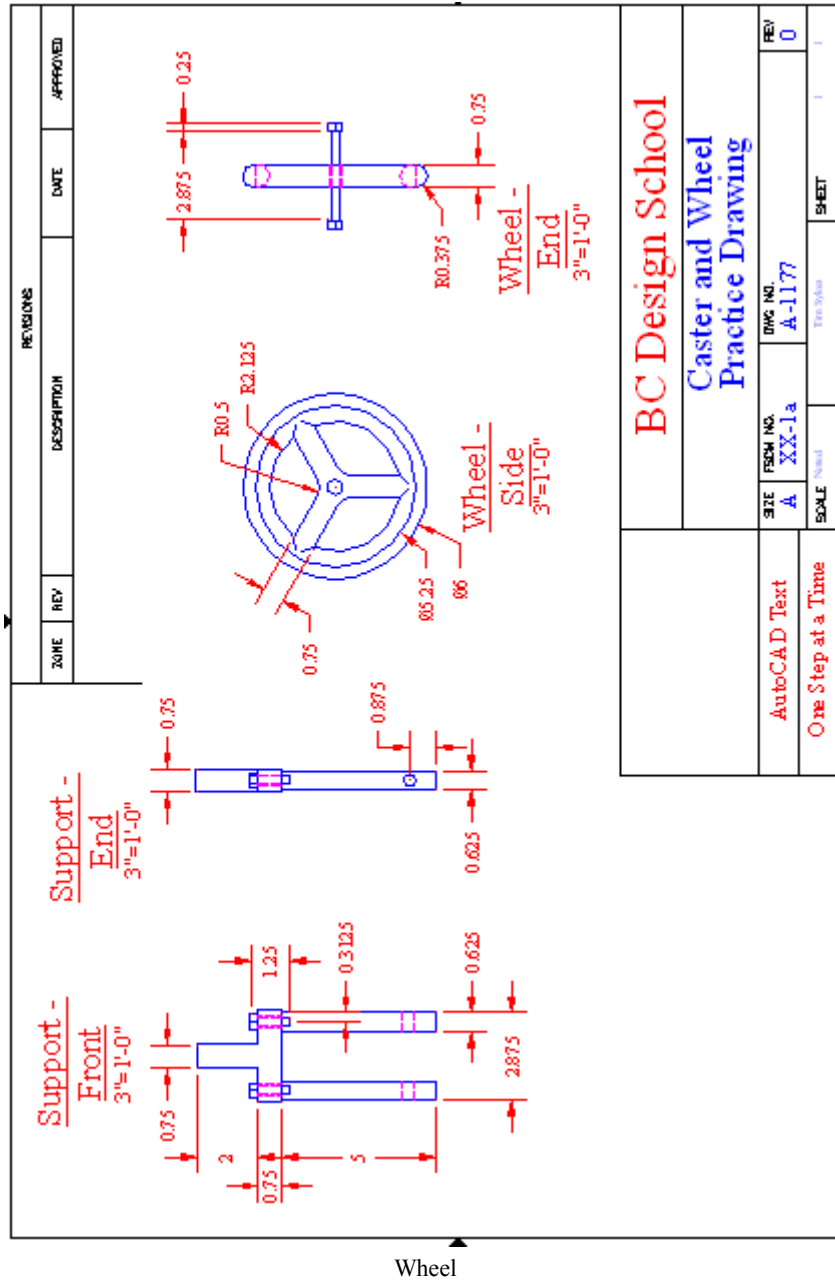
**Side View**  
1"=1'-0"

<b>Garage Tools University</b>	
Xref Practices Cutting Table	
SIZE: <b>B</b> FROM NO: <b>543890</b>	DATE FILED: <b>B-1511</b>
ANNO CAD Text One Step at a Time	DRAWN BY: <b> </b>
CHECKED BY: <b> </b>	REV: <b>0</b>

Cutting Table

5. Open the *Wheel* file in the C:\Steps\Lesson27 folder. Create the 8.5"x11" layout shown.
  - 5.1. Xref the *ANSI A* title block from AutoCAD's template folder.
  - 5.2. Create appropriate layers, text styles, linetypes, etc.
  - 5.3. Use the *title info* attributed block in the C:\Steps\Lesson27 folder to fill in the title block information.



<p style="text-align: center;"><b>BC Design School</b></p> <p style="text-align: center;">Caster and Wheel Practice Drawing</p>		SIZE	FSCM NO.	DWG NO.	REV
		A	XX-1a	A-1177	0
AutoCAD Text		SCALE	SHEET		
One Step at a Time					

6. Open the *table lamp* file in the C:\Steps\Lesson27 folder. Complete the 8.5"x11" layout as shown.
  - 6.1. Xref the *ANSI A* title block from AutoCAD's template folder.
  - 6.2. Create appropriate layers, text styles, linetypes, etc.
  - 6.3. Use the *title info* attributed block in the C:\Steps\Lesson27 folder to fill in the title block information.

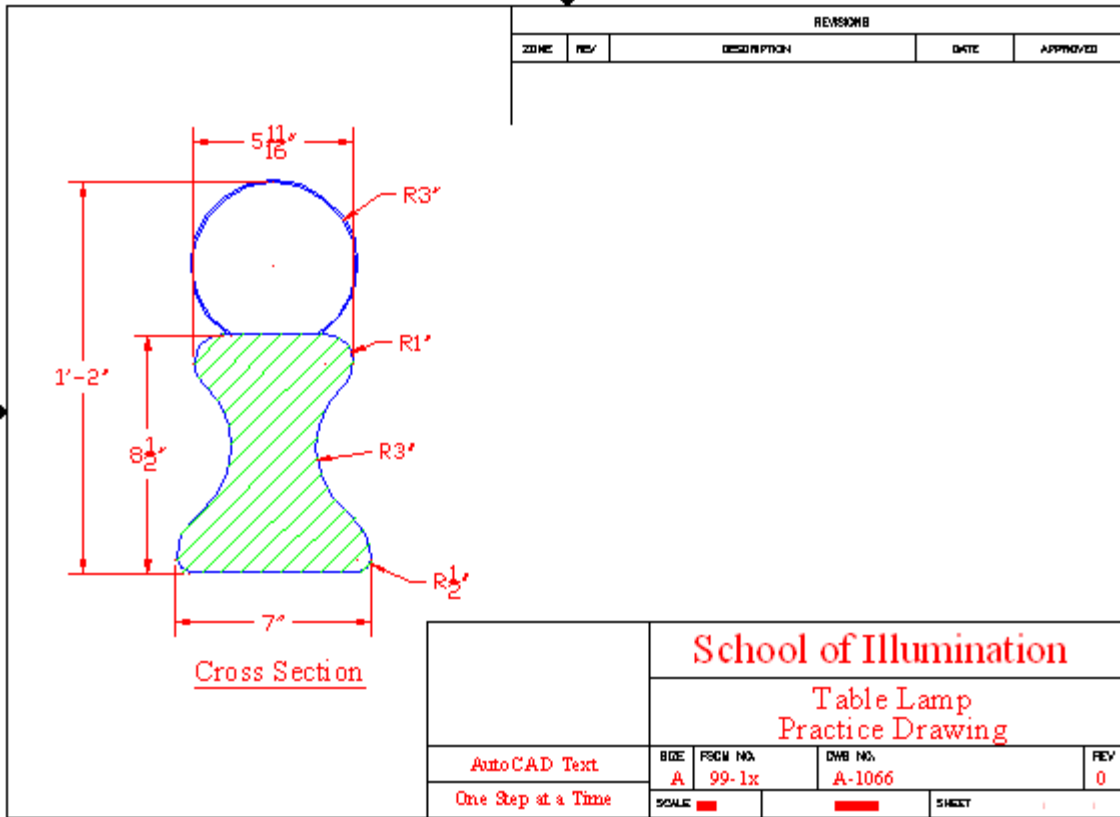
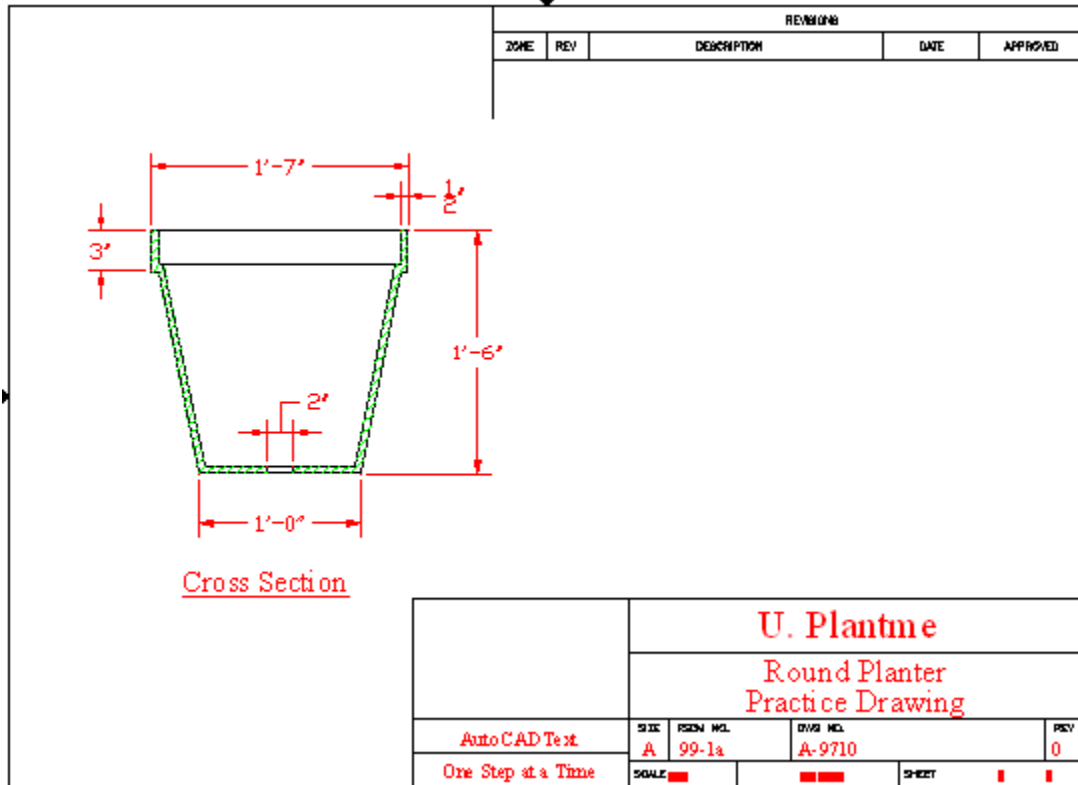


Table Lamp

7. Open the *planter* file in the C:\Steps\Lesson27 folder. Complete the 8.5"x11" layout as shown.
  - 7.1. Xref the *ANSI A* title block from AutoCAD's template folder.
  - 7.2. Create appropriate layers, text styles, linetypes, etc.
  - 7.3. Use the *title info* attributed block in the C:\Steps\Lesson27 folder to fill in the title block information.



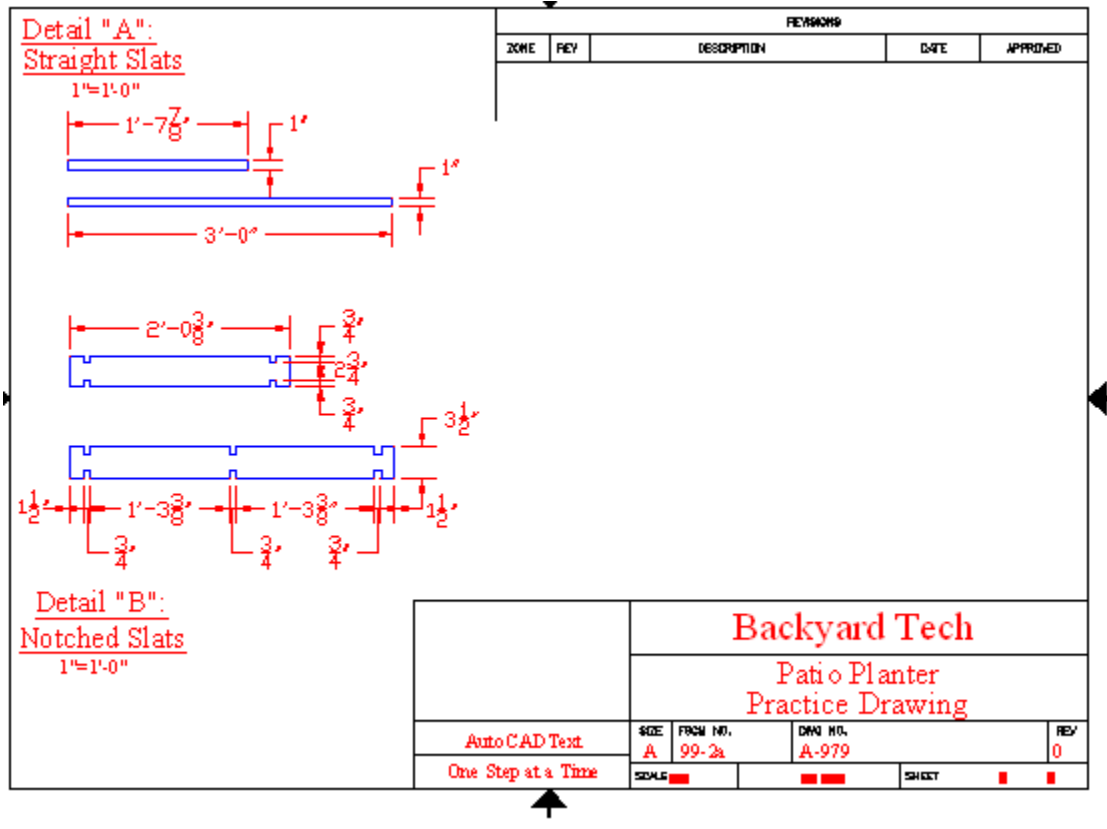
Round Planter

8. Open the *patio planter* file in the C:\Steps\Lesson27 folder. Complete the 8.5"x11" layout as shown.

8.1. Xref the *ANSI A* title block from AutoCAD's template folder.

8.2. Create appropriate layers, text styles, linetypes, etc.

8.3. Use the *title info* attributed block in the C:\Steps\Lesson27 folder to fill in the title block information.



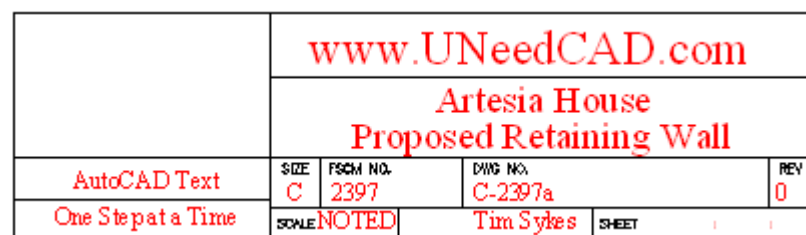
Patio Planter

9. Open the *OnArtesia* file in the C:\Steps\Lesson27 folder. Complete the 17"x23" layout as shown on the next page.

9.1. Xref the *ANSI C* title block from AutoCAD's template folder.

9.2. Create appropriate layers, text styles, linetypes, etc.

9.3. Use the *title info* attributed block in the C:\Steps\Lesson27 folder to fill in the title block information. Use the information in the detail to help you.



Title Block Detail



Please write your answers on a separate sheet of paper.

1. Xref stands for \_\_\_\_\_ drawing.
2. (T or F) You cannot access attribute information from a referenced drawing.
3. (T or F) The primary drawing automatically reloads the referenced drawing whenever the primary drawing is accessed.
4. Use the Xref command to access the \_\_\_\_\_.

List and explain the six statuses that may apply to a referenced drawing:

- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
11. If you can't see references that should be attached to a drawing that you have referenced (nested references), the nested references might be \_\_\_\_\_ on the drawing you have referenced.
12. (T or F) The Saved Path column of the External References palette tells you where the reference was found.
13. If a copy of the referenced drawing exists both in the Saved Path location and the folder in which the current drawing resides, which will AutoCAD use?

Use the (14) button on the External References palette or the (15) command to attach a new reference to your drawing.

- 14.
- 15.
16. (T or F) If a referenced drawing (ref "A") has a reference to another drawing (ref "B") that you do not wish to include in your primary drawing, you should detach the second reference (ref "B").
17. Which of the following layers has been bound to my drawing:
  - a) board|slots
  - b) board\$0\$slots
18. We refer to layers, blocks, text styles, dimension styles, and linetypes of a referenced drawing as \_\_\_\_\_.
19. When I bind by insertion a reference called MyBoard, it becomes a block. What is the name of the block?
20. (T or F) To use a referenced layer, simply make it current.
21. Use the \_\_\_\_\_ command to modify the view of a referenced drawing.

22. If the Clipdepth option returns this statement on the command line: *Xref must contain a clip boundary before specifying a clipdepth.*, what does it mean?
23. (T or F) You can define a clipping boundary using an existing circle or polygon.
24. To see a clipping boundary even if it isn't a polyline, set the \_\_\_\_\_ system variable to 1.
25. Use the \_\_\_\_\_ command to permanently attach only one or two dependent symbols from a referenced drawing to the primary drawing.
26. Use the \_\_\_\_\_ of the Xref palette to change a referenced drawing from attach to overlay.
27. How does binding references affect the size of the primary drawing?
28. Use the \_\_\_\_\_ command to examine the properties of the current drawing.
29. To bind a nested reference, bind \_\_\_\_\_.
30. (T or F) You may attach an externally referenced drawing by entering the XAttach command or by using the Attach button in the External References palette.
31. (T or F) The user can use the External References palette to set the layer on which the Xref will reside.
32. (T or F) Xrefs can be permanently bound to the primary drawing.
33. (T or F) Use the erase command to remove clipping planes from a referenced drawing.
34. To complete a Refedit procedure, the user should
  - a) enter Refclose
  - b) save or discard the changes
  - c) both of the above
35. (T or F) To remove referenced objects from the editing session use the REFClose command.
36. (T or F) It isn't necessary to know the size of the drawing file before a reference is bound.
37. (T or F) When binding Xrefs there is little difference between Bind Bind Type and Insert Bind Type dependent symbols.
38. (T or F) There is no difference between dwg files and dwf files when it comes to Xrefs.
39. A DGN file is created by (AutoCAD, MicroStation).
40. (T or F) Attach a word document with the DOCAttach command.
41. (T or F) You can use the External Reference Palette to attach images to a drawing.
42. (T or F) The Options dialog box is the best place to experiment with your AutoCAD setup.
43. (T or F) Unlike a DWF, you can make changes to a referenced DGN file from within the primary AutoCAD drawing.

## Answers

- |   |                         |
|---|-------------------------|
| 1. Externally Referenced  | 25. Xbind               |
| 2. F  | 26. Details section     |
| 3. T  | 27. Increases it        |
| 4. External References palette  | 28. Dwgprops            |
| 5 – 10 [These begin on p. 638]  | 29. Its primary drawing |
| 11. Overlain  | 30. T                   |
| 12. F   | 31. F                   |
| 13. The one in the Saved Path location  | 32. T                   |
| 14. Attach dwg  | 33. F                   |
| 15. XAttach   | 34. c                   |
| 16. F   | 35. F                   |
| 17. b   | 36. T                   |
| 18. Dependent Symbols   | 37. F                   |
| 19. MyBoard   | 38. F                   |
| 20. F   | 39. Microstation        |
| 21. Xclip   | 40. F                   |
| 22. You must have a 2-dimensional boundary<br>defined before using the Clipdepth option | 41. T                   |
| 23. T   | 42. F                   |
| 24. XClipFrame  | 43. F                   |