Cadd Procedure #1 (Titleblocks)

Document Date: **August 4, 2000** **By: Luis C. Gutierrez**

Project: **Cadd Standards Committee**

Following is a proposed office standard for **1:1** titleblocks in paper space, with all floor plans, sections and elevations x-referenced in model space:

Step 1

Create the equivalent of a pre-printed vellum titleblock at one-to-one scale in paper space. (i.e. 24" x 36" for "D-size", 30" x 42" for "E-size, 36" x 48" for "F-size", etc.)

A box using the "dots" line-type in color 8 (thin) should surround the tiltleblock. Draw box to actual size with the lower-left corner at **" 0,0 "** and with the AutoCad "LTSCALE" setting (which controls the look of dashed and dotted lines on the finished plot.) set to 0.5.

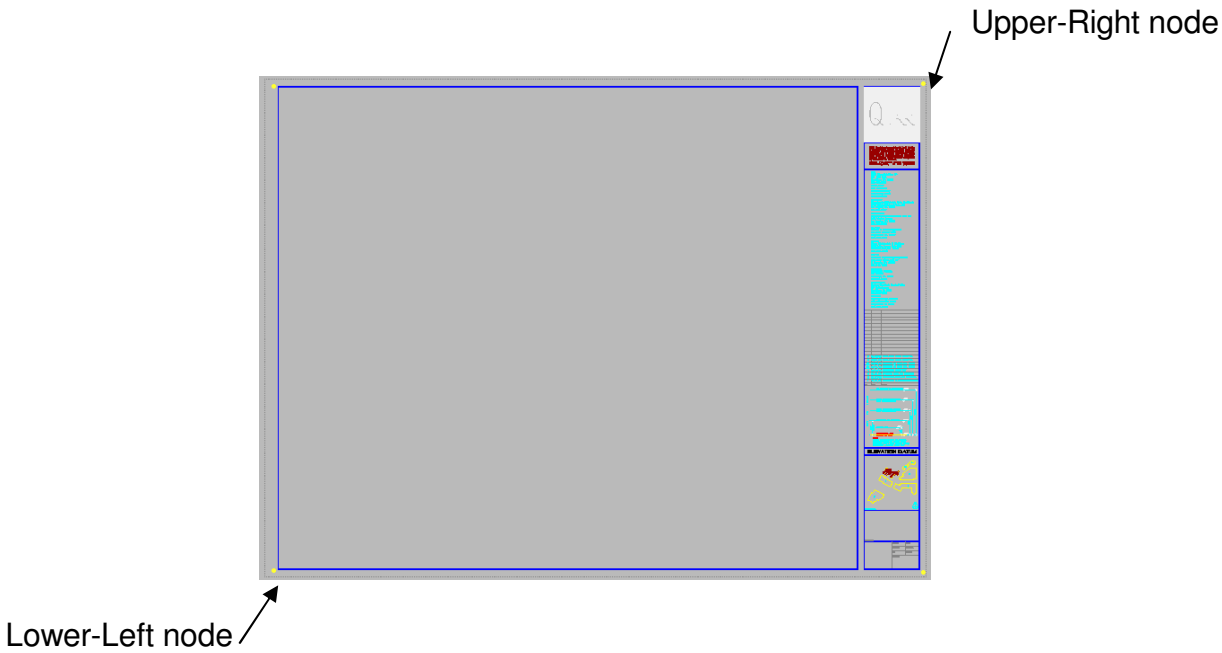
Sample Titleblock
(LTSCALE in Paper Space set at 0.5)

All graphic information that would appear on a pre-printed vellum should be placed on one layer only. *Different colors, line weights and p-lines can be used on the same layer*. Color-by-layer is only used for drawing information where a project consultant may want to use half-tone background colors. Sheet-specific information goes on a separate layer.

(cont'd)

Step 2

Make sure that the proper "limit nodes" are shown on this titleblock. These are drawn on the same layer as the Master Titleblock with AutoCad's "Point Style" in single dot setting.



Sample Titleblock

(All plots are sent to "LIMITS" at 1:1 scale, standard)

The established "Plot Limits" are device-dependent and are usually defined for the office production or high-speed plotter by the Cadd Director. These settings are usually made to accommodate any automatic information, such as plot date, drawing file path, etc. that may appear at the lower-left corner of each plot. Batch Plotting requires the use of limits.

Step 3

Save the finished "Titleblock Master" in the project's "Xref sub-directory" with a standard filename such as "**TBE-mstr.dwg**" for 30" x 42" paper, "**TBF-mstr.dwg**" for 36" x 48", etc.

Next, create a "Sheet-specific Text Block" which will be used as a template on all sheets used on the project. All titleblock masters are x-referenced in, but sheet-specific text blocks are *inserted*. A name such as "**TBE-text.dwg**" should be used to match the text block to the titleblock size to which it belongs. This block is inserted at 0,0 then exploded and edited for each indiviual sheet as needed to maintain consistency.

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The only drawings to appear on the Main Project Directory are the numbered drawings for the project. *For each finished paper sheet, there must be a corresponding electronic file.* This is the only way that revisions can be clouded and noted on each individual sheet.

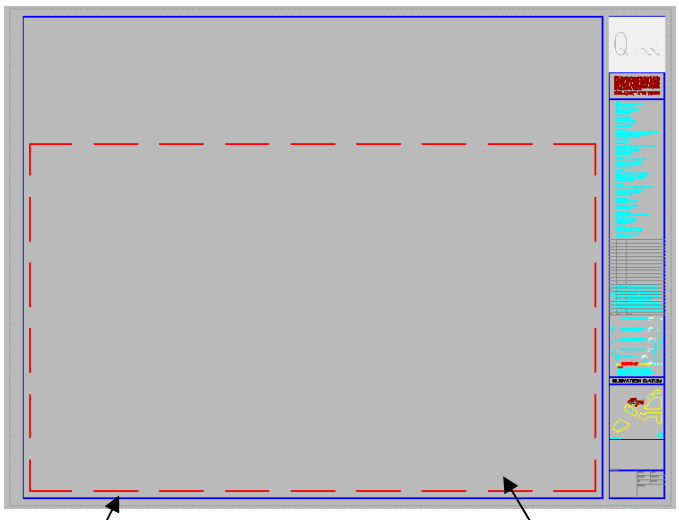
If named properly, all of the sheets in the main project directory will list alphabetically in the same order as they appear in the **Sheet Title Index**. This means that the first file to appear in the directory must be the project's cover sheet – just like in a set of blueprints.

Step 4

Using AutoCad's start menu or the ***"New drawing"*** command, begin a drawing with a proper name, as outlined above. Set "viewres" to <3600>, "coords" to <2>, "units" to <4> architectural, fractions to <64>, angles to <1> decimal degrees, fractional places to <3>, and leave both direction for angle <0.000> at 3:00 o'clock and measure clockwise at <N>.

Next, use AutoCad's toggle command **"Tilemode"** to go into paper space to "attach" the titleblock master as an x-reference; then, insert the text block, explode it and edit all sheet-specific information for that particular sheet. (Sheet numbers matching file names.)

Finally, use AutoCad's make viewport ***"Mview"*** command, to setup the drawing's main viewport (or multiple viewports), as needed:



Sample Titleblock

(Viewports are placed in a separate layer and frozen)

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There are three Standard Layers that must be used on each and every drawing:

1) "**_limit-nodes**" in yellow, 2) "**_ms-margins**" in blue, and 3) "**_ps-viewports**" in

These layer names start with the underscore symbol on purpose, so they will list first and right at the top, when listed in the AutoCad layers dialog box

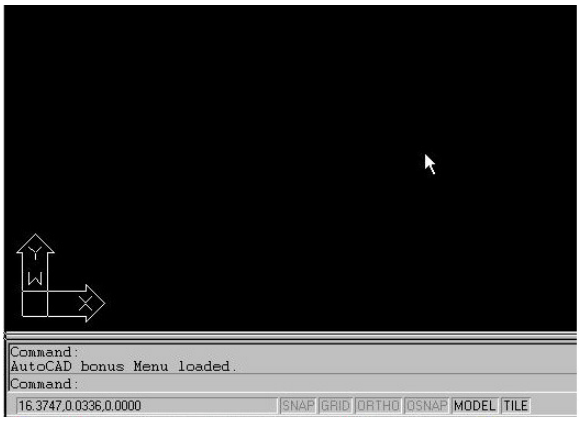
L I M I T N O D E S is a separate layer which contains four (4) dots on it, defining the maximum drawing extents for a particular plotter. Because each consultant on a project may use a different plotter, it is important to isolate these limit nodes on their own layer.

M O D E L S P A C E M A R G I N S are basically rectangles drawn in "model space" as a guide for the user to see how much of the drawing will show through in the viewport. The actual size of each rectangle will vary, depending on the viewport scale setting used.

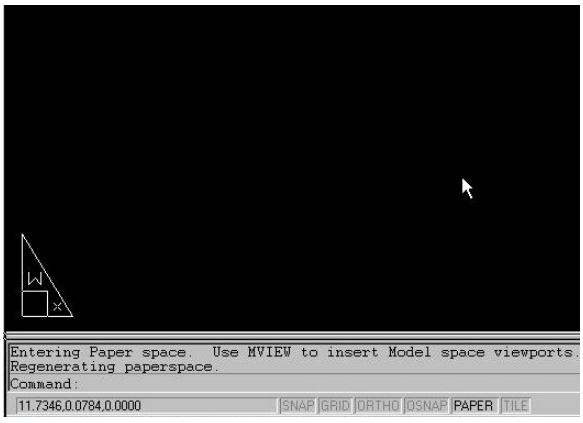
P A P E R S P A C E V I E W P O R T S are clear window openings in "paper space" which look into model space below. The amount of drawing area visible is determined by the zoom factor and therefore controls the "scale" of each viewport in the finished plot.

Step 5

The last step is attaching a plan, section or elevation "base x-ref drawing" in model space. After using the AutoCad toggle command **"Tilemode"** to go into model space, attach the selected base drawing from the "Xref" sub-directory into the model space margin set up to the scale desired. (See "Model Space Procedures" for info on setting up margins.)



(Model Space TILEMODE = 1 w/ icon above)



(Paper Space TILEMODE = 0 w/ icon above)

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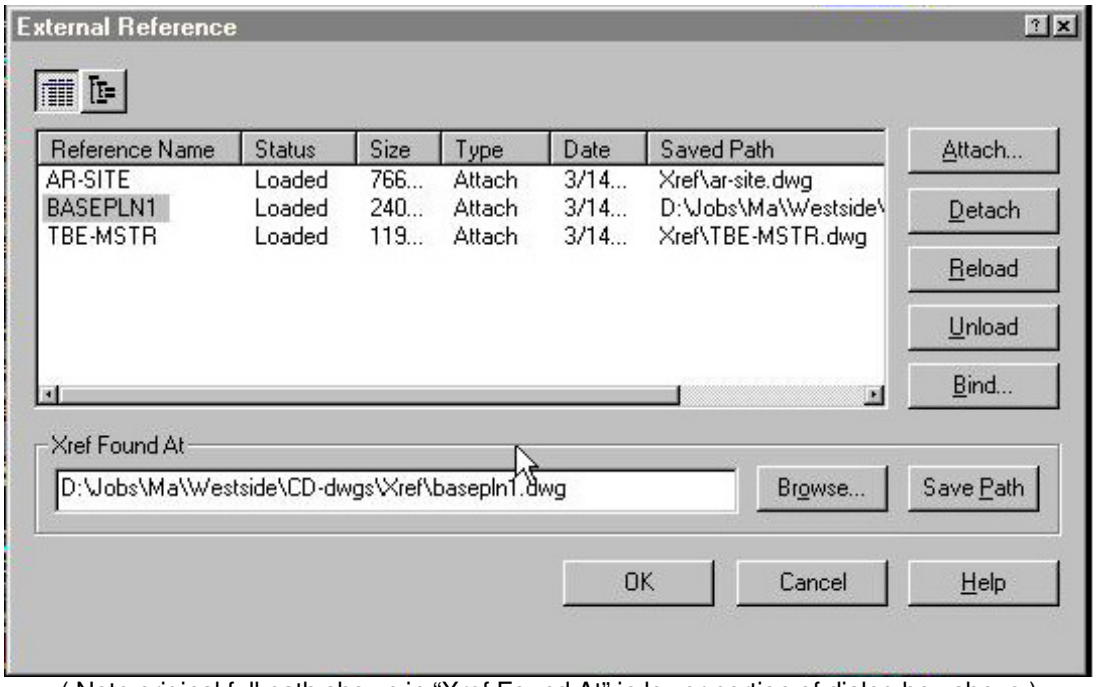
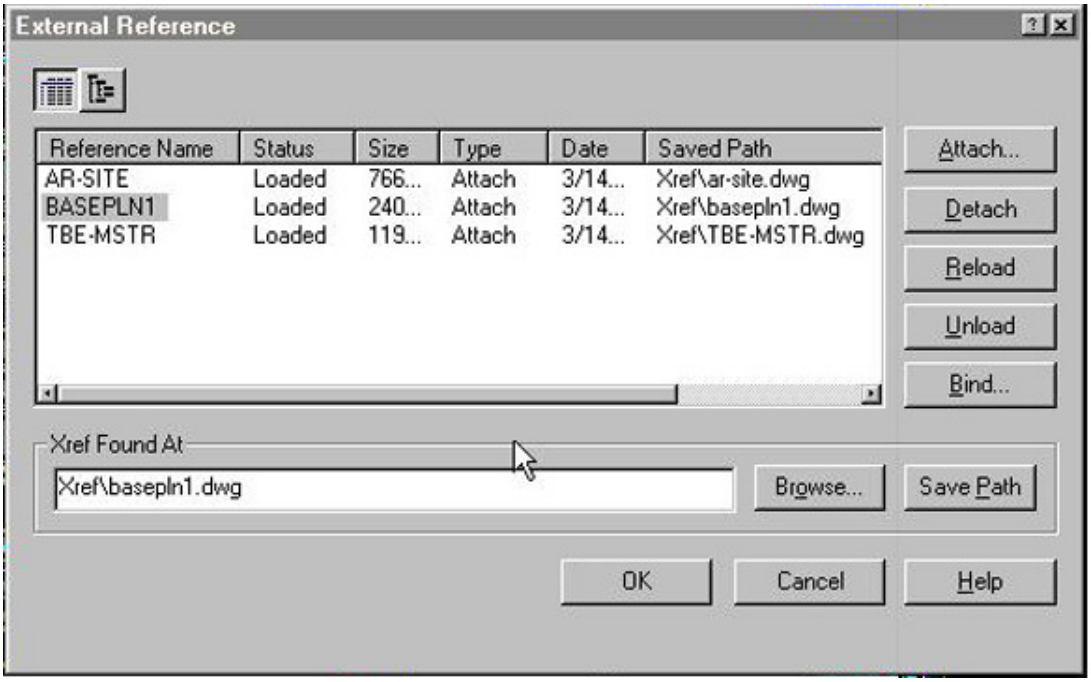
IMPORTANT Do not forget to “clip all paths” in the “Xref Dialog Box” as illustrated below:



(Note original full path shown in “Xref Found At” in lower portion of dialog box above)



(Note “clipped path” modified in “Xref Found At” and saved with “Save Path” above)

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