



Facilities Services AutoCAD Standards Manual

March , 2006

New Drawings

Anytime that a new project needs setting up, it is your responsibility to fill out a **Project Request Form** and give to CADD Manager. If for any reason you do not possess this form, please request a copy. **You may not start new drawings on your own.** This helps to alleviate not only system variable problems, but also discrepancies with sizes/styles of fonts, dimensioning, plotting and project hardcopies.

This is also very helpful when multiple people work on a project. You do not need to spend valuable time wallowing in the depths of an incorrect (and unfamiliar) drawing, so having this drawing set up prior to work being generated will create efficient use of time.

You will notice that there are 2 types of Request Forms in the front of your binder. One is for in-house work while the other is for work to be sent to a consultant. This will help define the scope of work more effectively, and thus, get the project set up faster.

If there are questions or concerns with this, please bring to the attention of CADD Manager.

New Drawings for Schematic Design

Whenever you need a new drawing set up to do an initial design for a client (without a PPA number), you may go to H:\CADD\Master Borders\Schematic Drawing and do a SaveAs. This will give you a clean slate to work on while enabling you to dimension and add other elements that meet office standards. This is the only time you will start a project from scratch.

If you are creating a presentation, you can use the presentation drawing at H:\CADD\Master Borders\24x36 Presentation Border. This will enable you to do work on your layout without obstructing standards.

If you have any questions, please see CADD Manager.

Standard AutoCAD Naming Conventions

Project Sheets:

06-0000\06-0021\Arch
06-0021_A1

Xref files:

06-0000/06-0021\Xref
06-0021_Border

Details:

06-0000/06-0021\Xref
Gas Header
Wall Elevation
East Elevation

Utility Maps:

Steam
Grid A
A6_Steam

Campus Base Maps:

Campus Base Map
Gas Base Map
Lighting Base Map, etc.

If you are unsure of location and/or naming of files, please ask.

Where to Put Notes

While working on a project, you will need to add notes. These general notes should be drawn directly on the drawing sheet (paperspace), not in model space or in the xref. This is only for general notes, not leader callouts. If you have problems with this or need more clarification, please let CADD Manager know.

All callouts with leaders shall reside in model space, by selecting the appropriate text style for the desired scale (Model 96 - Archd for 1/8" scale, Model 48 - Archd for 1/4" scale, etc.).

Where to Draw Details and Scaling Viewports

When you begin working on a project and you have details that need to be drawn, the following procedures apply. Details are to be drawn in a pre-defined blank drawing and xreffed into the main drawing sheet (such as A1, etc.). Each detail shall be an individual drawing (you will find these in the Xref folder). Please do not draw details in model space of the sheet drawing (A1, etc.). Once this is drawn, you will need to import it to your drawing. Below is protocol for achieving this.

Once these objects have been xreffed into the drawing, you make a viewport and scale according to desired size in the layout (paperspace). You do this by the MV command, setting the viewport active and then scaling. Once the box of the viewport is made, you double click inside the box. Type in z, enter. The scale factor needed should be typed in as the inverse of the desired scale with the letters xp typed after it. This is what you would see at the drawing prompt.

Command: z

ZOOM

Specify corner of window, enter a scale factor (nX or nXP), or

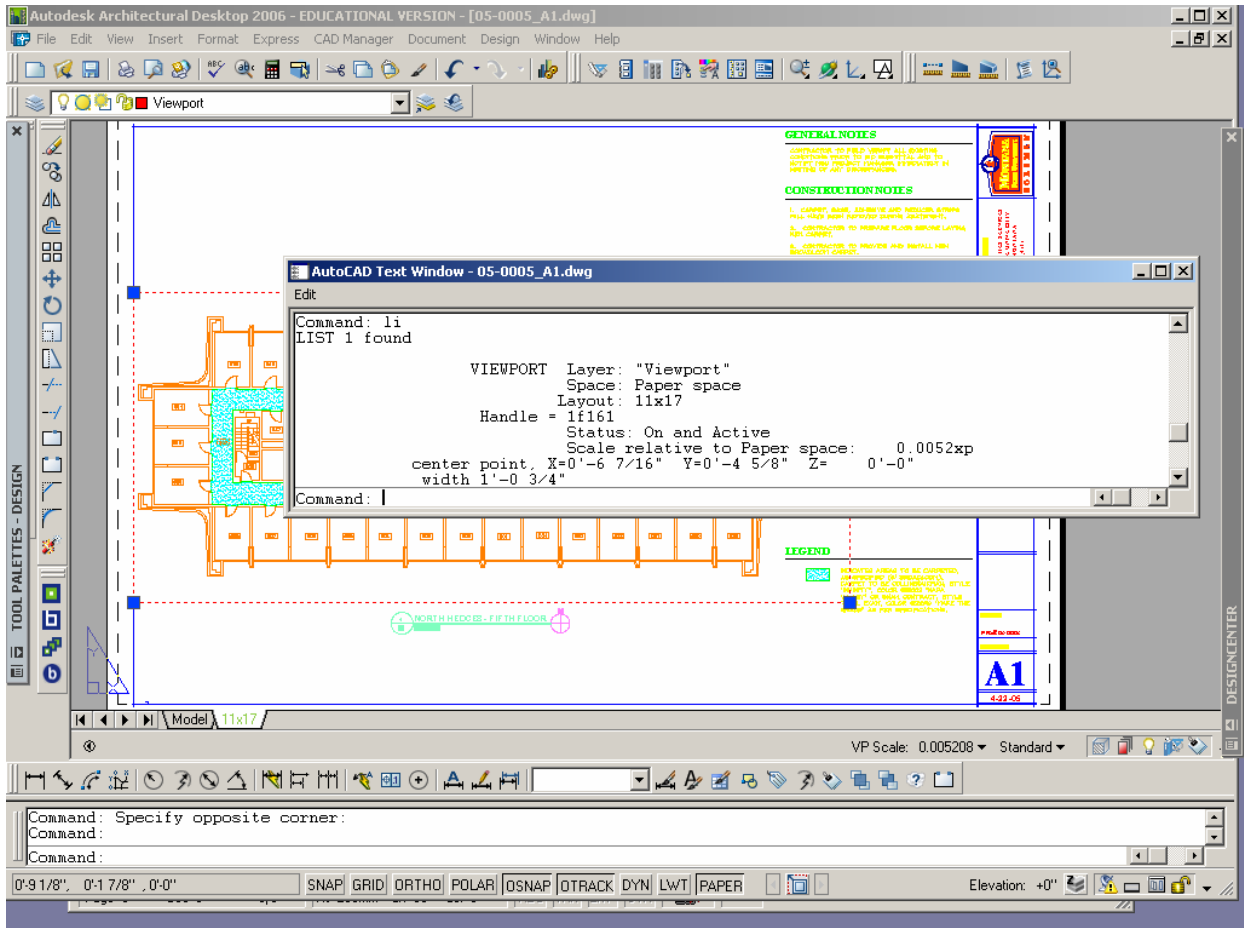
[All/Center/Dynamic/Extents/Previous/Scale/Window] <real time>: 1/48xp

This drawing is now scaled to $\frac{1}{4}'' = 1'-0''$.

The scale factor has been enlarged for visual clarity.

If you do not know what the viewport scale is (if it does not show up on the screen), you will need to make sure that this layer is on. Highlight the viewport, and do a list. The number that shows up will be the scale of your viewport. See figure for conversion.

If you are still unclear about this process, please ask.



Dimscale	Full Scale	Drawing Scale (1)
1200	1" = 100'-0"	.0008333
720	1" = 60'-0"	.001389
600	1" = 50'-0"	.001666
480	1" = 40'-0"	.002084
360	1" = 30'-0"	.002778
240	1" = 20'-0"	.004167
192	1/16" = 1'-0"	.005208
128	3/32" = 1'-0"	.007813
96	1/8" = 1'-0"	.010417
64	3/16" = 1'-0"	.015625
48	1/4" = 1'-0"	.020833
32	3/8" = 1'-0"	.03125
24	1/2" = 1'-0"	.041666
16	3/4" = 1'-0"	.0625
12	1" = 1'-0"	.08333
8	1 1/2" = 1'-0"	.0125
4	3" = 1'-0"	.25

What Layers to Use

After you begin working on a project, you may need to change layers when adding certain entities that are not located on the ADT toolbars. Below is a list of the most common layers and corresponding info that is to be put on these layers.

Layer 0 - Blocks, xrefs

A-Dimension – all dimensions

Text – all notes

A-Leader – all leaders

Viewport – all views made with mv (make view) command

Demo – all work to be demolished

Remodel – all work to be remodeled

Existing – all floor plan data existing to remain

A-Anno Note – all title blocks

A-Cabinets - all built in floor cabinetry

A-Door – all doors

A-Walls – all walls

A-Glaz – all windows

A-Flor-Tptn – all bathroom partitions/layouts

A-Flor-Pfixt – all fixtures

Hatch – all hatching

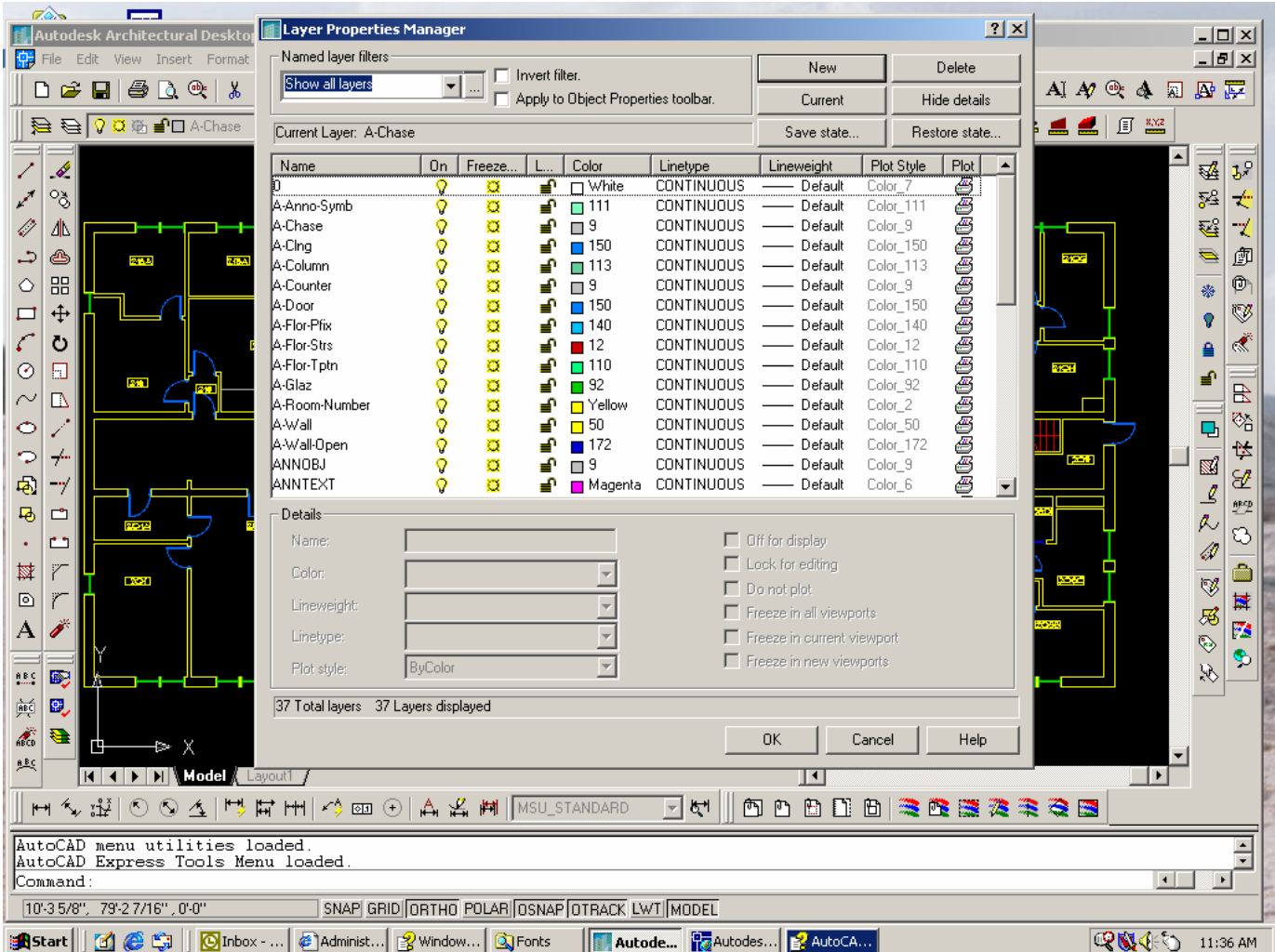
Hatch 2 – if more than one set of hatch patterns with different lineweights

Heavy – heavy line *for details*

Medium – medium line *for details*

Light – light line *for details*

Fine – extra light line *for details*



What Colors to Use

Note: All objects brought in from the Design Center or pull down menus will automatically come in on the correct layer with the correct color. Do not change these unless you are constructing a remodel project, then follow protocol for existing, remodel and demo colors.

Layer 0 - white (color 7)
A-Dimension – color 11
Text – yellow (color 2)
A-Leader – yellow (color 2)
Viewport – color 20
Demo – green (color 3) dashed
Remodel – red (color 1)
Existing – color 9 or 11 (depending on scale of drawing)
A-Anno Note – color 213 (comes in with correct color)
A-Anno-Titl – color 233 (comes in with correct color)
A-Cabinets – color 9 or color 20
A-Door – color 150
A-Walls – color 50
A-Glaz – color 93
A-Flor-Tptn – color 110
A-Flor-Pfix – color 150
Hatch – color 30
Hatch 2 – color 20 or color 9
Heavy – green (color 3)
Medium – yellow (color 2)
Light – color 9
Fine – color 11, color 30 or color 20

My Documents Microsoft Word

Plot Style Table Editor - Plotter.ctb

General Table View Form View

Object Color	Color 1	Color 2	Color 3	Color 4	Color 5	Color 6	Color 7	Color 8
Description	Description_1	Description_2	Description_3	Description_4	Description_5	Description_6	Description_7	Description_8
Color	Black	Black	Black	Black	Black	Black	Black	Black
Enable dithering	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Convert to grayscale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use assigned pen #	1	1	3	4	5	6	7	8
Virtual pen #	1	2	3	4	5	6	7	8
Screening	100	100	100	100	100	100	100	100
Linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype
Adaptive adjustment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lineweight	0.4572 mm	0.2540 mm	0.6096 mm	0.7112 mm	0.5080 mm	0.3556 mm	0.8382 mm	0.4064 mm
Line End Style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style
Line Join Style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style
Fill Style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style

Add Style Delete Style Edit Lineweights... Save As...

Save & Close Cancel Help

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Type: AutoCAD Color-dependent Plot Style Table File Size: 5.89 KB 5.89 KB My Computer

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What Fonts to Use

When you begin working on a project and need to add notes, pull up the Text Style Manager to make sure the default font is set to **Archd**. All notes that are used will reflect this font. If in doubt about title fonts, they should be Dutch801 BdBT. This is the bold face font used on the border also. The titles will already be imported to your project sheets, so you should not have to worry about setting up a new style. Below is a visual for clarification.

GENERAL NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE (IBC), 2003 EDITION, INTERNATIONAL MECHANICAL CODE (IMC), 2003 EDITION, NATIONAL ELECTRIC CODE (NEC), 2003 EDITION, INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2003 EDITION, NFPA 2003 EDITION, UNIFORM PLUMBING CODE (UPC), 2003 EDITION, AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS AND APPLICABLE CODES.
2. ALL BUILDING ENTRANCES AND STAIRWELLS SHALL BE KEPT CLEAR OF CONSTRUCTION MATERIALS AND REMAIN OPEN TO ALLOW ACCESS AND EGRESS AT ALL TIMES.
3. DO NOT SCALE DRAWINGS. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO BEGINNING WORK. START OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.
4. INCREASES TO CONTRACT SUM OR TIME WILL NOT BE APPROVED FOR CONDITIONS OR SITUATIONS EVIDENT AT TIME OF

ROSKIE LOBBY RENOVATION

MONTANA STATE UNIVERSITY - BOZEMAN

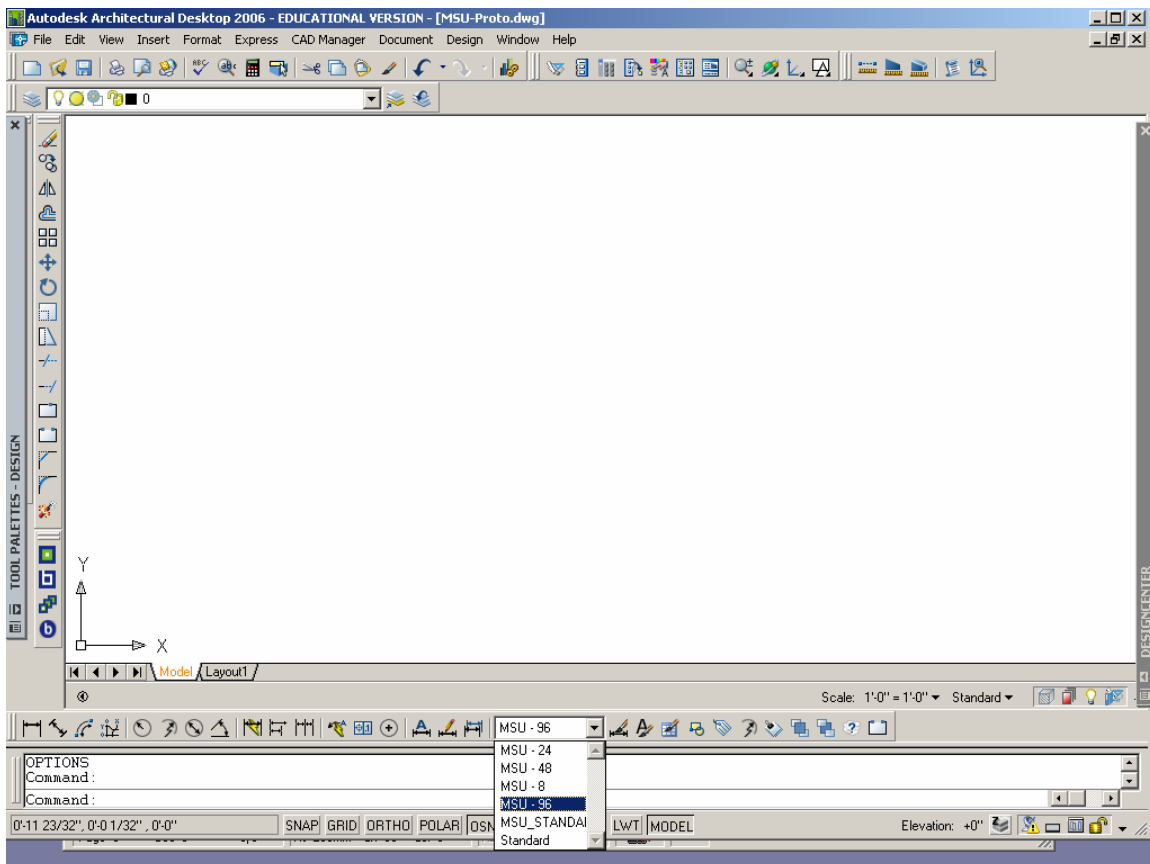
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If in doubt, or need further clarification, please let CADD Manager know.

What Dimension Style to Use

When your project is set up and you need to dimension objects within it, select one of the predefined, scaled dimension styles. There will be several to choose from, but choose the scale you need (MSU – 96 for 1/8”, etc.). You can reference the Dimstyle toolbar below for clarity. All standard fonts, colors, leaders and dimension styles are already set. **You may not change these settings.** These settings are set for model space. Dimensions shall reside in **model space** on the floor plan. These are the standard settings for all projects that Architectural Services designs. If you have questions or problems using this tool, please ask CADD Manager.



**STANDARD AUTOCAD
SYMBOLS**

