

University of Texas Facilities Services  
Project Management & Construction Services

Facilities Design Services  
A/E/C CADD Standard Manual

**Project Management & Construction Services**  
**1301 E. Dean Keeton Street**  
**Austin, Texas 78722**

**Revised: 2/28/08**

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## Preface

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The “A/E/C CADD Standard Manual” has been developed by Project Management & Construction Services for facilities, infrastructure and outside contractors to eliminate redundant Computer Aided Design and Drafting (CADD) standardization efforts within the Facilities Services Department of the University of Texas. This manual is part of an initiative to consolidate existing CADD drafting standards that address the entire life cycle of facilities within the University of Texas.

# 1 Introduction

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## **Scope**

This manual provides guidance and procedures for preparing Computer-Aided Design and Drafting (CADD) products within the Facilities Services Department.

## **Purpose**

The purpose of this manual is to set a basic CADD standard to ensure consistent electronic products within Project Management & Construction Services. These consistent products are part of a comprehensive installation life-cycle management strategy. This manual sets a CADD standard specifically for the architectural, engineering and construction disciplines of facilities development projects.

The immediate benefits of CADD standards are many: consistent CADD products for customers; uniform requirements for A and E products; sharing of products and expertise; and collection, manipulation, and exchange of database information.

## **Future Technologies**

The CADD standard will be modified to incorporate future technologies that improve the quality of the life-cycle of a building from construction through maintenance and ultimately to demolition. These improvements would result from reductions in expense and delivery time, enhanced communications, and an increase in discipline proficiency.

## **Target Systems**

All CADD documents are drawn in latest version of AutoCAD.

## **Additions/Revisions**

The standard is intended to be neither static nor all-inclusive and thus will be updated and enhanced as appropriate. Suggestions for improvements are encouraged and should be sent to:

**e-mail contact:** [Chris.Happel@austin.utexas.edu](mailto:Chris.Happel@austin.utexas.edu)

## 2 Drawing File Organization

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### **Design Cube**

#### **Available Drawing Area**

AutoCAD's approach to a drawing area is an infinite range in each positive and negative axis (x, y, z).

#### **File Accuracy (units)**

CADD systems allow the designer to work in "real world" units. In AutoCAD, the basic drawing unit for any file is the distance between two fixed Cartesian coordinates. For example, the distance between coordinates (1, 1, 1) and (1, 1, 2) is one drawing unit.

A drawing unit can correspond to any measurement (e.g., inch, foot, and mile). AutoCAD users may enter the "Units" display option to set the desired drawing units.

#### **Drawing Units/Working Units Recommendations**

Recommendations for working units in AutoCAD design files are the architectural (feet and inches) or Engineering (feet and tenths) as provided in the "Units" command screen.

### **Origin**

Positioned within every electronic drawing file is an origin. The "origin" of an AutoCAD drawing file is important because it serves as the point of reference from which all other elements are located. Origins are typically defined in a drawing file by the Cartesian coordinate system of x, y and z.

The benefit of standardizing the location of the origin of a drawing is most notable in the use of reference files.

### **Model Files and Sheet Files**

Two distinct types of CADD files are addressed in this standard: model files and sheet files.

A model file contains the physical components of a building (e.g., columns. Walls, windows, ductwork, piping, etc.) Model files are drawn at full scale and typically represent plans, elevations, sections, etc.

A sheet file is synonymous with a plotted CADD drawing file. A sheet file is a selected view or portion of the model file(s) within a border sheet. Sheet files are usually plotted at a particular scale, since the border sheet is scaled up to fit around the full scale model files. In other words, a sheet file is a "ready-to-plot" CADD file.

## Templates

All CADD files will use Project Management & Construction Services standard templates when beginning a drawing as follows:

a_cover.dwt	A Cover Sheet
a_format.dwt	A Format Sheet
b_cover.dwt	B Cover Sheet
b_format.dwt	B Format Sheet
d_cover.dwt	D Cover Sheet
d_format.dwt	D Format Sheet
d_tas_fomat.dwt	D TAS Format Sheet
e_format.dwt	E Format Sheet
elec.dwt	Electrical Drawing
elev.dwt	Elevation Drawing
mech_plan.dwt	Mechanical Drawing
mezz.dwt	Mezzanine Plan
plan.dwt	Architecture Plan
rcp.dwt	Reflected Ceiling Plan
RD_Template.dwt	Record Drawings
roof.dwt	Roof Plans
sect.dwt	Drawing Sections

When starting a new drawing, the appropriate template file will be opened and saved down in the correct folder under the correct drawing file name. All templates will be provided on the UT web site for download. Templates provide appropriate layers according to discipline, color, line types, weights and etc.

They can also be found on the server:

\\Flint\project\_delivery\AE\_Drafting\AutoCAD\templates

## Electronic Drawing File Naming Conventions

Naming conventions for electronic drawing files allow CADD users to determine somewhat the contents of a drawing without actually displaying the file. They also provide a convenient and clear structure for organizing drawing files within project directories.

Project files will be composed of 12 alpha/numerical characters and the default .dwg extension automatically added by AutoCAD. All characters will be lowercase. Make sure that the alpha character Q is not used for the numerical 0 and the dash is not used for the underscore.

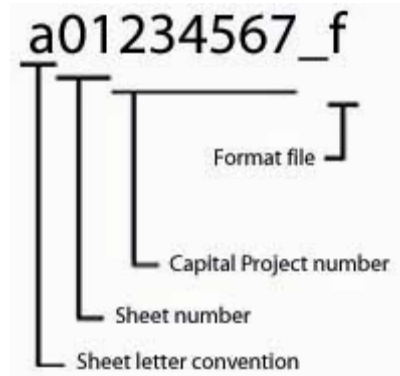
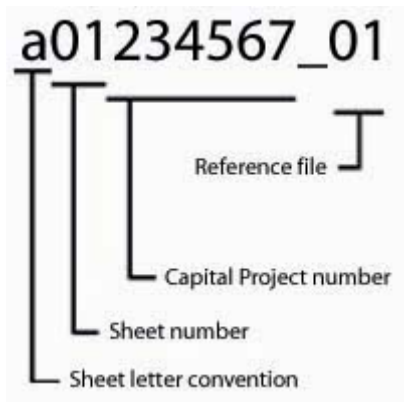
**Naming nomenclature description**

1 is sheet letter convention (see below)	<b>a</b>
2-3 is sheet number	<b>01</b>
4-9 is the Capital Project number	<b>234567</b>
underscore	<b>_</b>
10-11 is format file name or reference file name on format sheet.	<b>f</b> <b>01</b>

**Sheet letter convention**

<b>i</b>	index/cover sheet
<b>a</b>	Architectural drawings
<b>f</b>	Furniture drawings
<b>s</b>	Structural drawings
<b>m</b>	Mechanical drawings
<b>e</b>	Electrical drawings
<b>c</b>	Civil drawings
<b>tas</b>	ADA
<b>d</b>	Signage drawings

Examples:



### 3 Graphic Concepts

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#### Presentation Graphics

##### Color and Line Weight

Table 1 –Color to Line Weight Mapping

<b>Color</b>	<b>Alternate Shades</b>	<b>Templates</b>	<b>Heavy</b>	<b>Light</b>
RED	13, 22	.010"	.010"	.005"
YELLOW	*52	.013"	.013"	.007"
GREEN	*82	.016"	.016"	.009"
CYAN		.024"	.024"	.014"
BLUE	172	.007"	.007"	.004"
MAGENTA		+ Varies	.010"	.005"
WHITE		.020"	.020"	.012"
GRAY	*253	.004"	.004"	.002"
LT. GRAY		.010"	.010"	.005"
ORANGE		.018"	.018"	.012"
DK CYAN		.042"	.042"	.024"

+ See section 2

Line weights are set by color and colors are set by layer. Line weights built into layers in our templates correspond to the “Heavy” color/line weight mapping, except for color 6 which has more than one line weight in the template (where color tables specify line weights, there can only be one weight per color). Refer to section 2 for details on color 6.

Colors listed in the “Shades” column are alternate shades of the major AutoCAD colors and are used to help distinguish objects by type; refer to the “color Usage” chart below. Shades of major colors generally have the same line weight as the major colors.

Our standard color tables are stored on your local computer:

C:\Documents and Settings\your.name\Application Data\Autodesk\AutoCAD 2008\R17.1\enu\PlotStyles

They can also be found on the server:

\\Flint\project\_delivery\AE\_Drafting\AutoCAD\plotting

## Color Tables

no lineweights – black pen.ctb	Use to plot drawings based on our templates; no line weights specified
24x36-heavy.ctb	Applies “heavy” line weights, primarily for larger format sheets
11x17-light.ctb	Applies “light” line weights, primarily for 11x17 format sheets
11x17-xtralight.ctb	Applies all pen 0 line weights, primarily for 11x17 format sheet
8x11-heavy.ctb	Applies “heavy” line weights with a lighter title block for plotting smaller format sheets
650c – color – parking map.ctb	Applies “heavy” line weights in color

For drawings created outside of UT, you may need to get the color table from the consultant

Note: Colors currently remain unassigned to any particular layer but are used as indicators of particular elements and are assigned as so. Refer to the layer tables for color assignments.

## Format Sheets

All format sheets are started with the appropriate template. Then all completed drawings are loaded onto the format at the correct scale.

Table 2 –Color Usage

<b>Color #</b>	<b>Color Name</b>	<b>Relative Weight</b>	<b>Used for</b>
1	RED	Light pen	Many things
2	YELLOW	Light medium pen	Many things
3	GREEN	Medium pen	Misc. graphics, annotation symbols
4	CYAN	Dark pen	Exterior walls primarily
5	BLUE	Very light pen	Many things
6	MAGENTA	May vary (see note)	Plumbing fixtures, structural columns, glass & fire protection devices
7	WHITE	Very heavy pen	Interior full height walls
8	GRAY	Lightest pen	Demolition line work, hatch patterns, column grid lines
9	LT GRAY	Light pen	Existing construction, plots half tone
11	ORANGE	Heavy pen	Mechanical and electrical equipment
13	RED	Light pen	Casework, & casework above
22	RED	Light pen	*not assigned
52	YELLOW	Light medium pen	*not assigned
82	GREEN	Medium pen	Title block borders only
142	DK CYAN	Heaviest pen	Fixed furniture, & anything not in contract
172	BLUE	Very light pen	*not assigned
253	LT GRAY	Light pen	

## Drawing Scales

Table 3 – Architectural and Scale Factors and Font Heights

<b>Drawing Scale</b>	<b>Factor</b>	<b>1/Factor*</b>	<b>Plotting Size</b>	<b>Size in Drawing</b>
1/32" = 1'- 0"	384	.00260417	3/32"	36"
1/16" = 1'- 0"	192	.00520833	3/32"	18"
3/32" = 1'- 0"	128	.0078125	3/32"	12"
1/8" = 1'- 0"	96	.01041667	3/32"	9"
3/16" = 1'- 0"	64	.015625	3/32"	6"
1/4" = 1'- 0"	48	.02083333	3/32"	4.5"
3/8" = 1'- 0"	32	.03125	3/32"	3"
1/2" = 1'- 0"	24	.04166667	3/32"	2.25"
3/4" = 1'- 0"	16	.0625	3/32"	1.5"
1" = 1'- 0"	12	.08333333	3/32"	1.125"
1-1/2" = 1'- 0"	8	.125	3/32"	.75"
3" = 1'- 0"	4	.25	3/32"	.375"

Table 4 – Engineering and Scale Factors and Font Heights

<b>Drawing Scale</b>	<b>Factor</b>	<b>1/Factor*</b>	<b>Plotting Size</b>	<b>Size in Drawing</b>
1" = 10'	120	.008333333	3/32"	11.25"
1" = 20'	240	.004166666	3/32"	22.5"
1" = 30'	360	.002777777	3/32"	33.75"
1" = 40'	480	.002083333	3/32"	45"
1" = 50'	600	.001666666	3/32"	56.25"
1" = 60'	720	.001388888	3/32"	67.5"
1" = 80'	960	.001041666	3/32"	90"
1" = 100'	1200	.000833333	3/32"	112.5"

Table 5 – Metric and Scale Factors and Font Heights

<b>Drawing Scale</b>	<b>Factor</b>	<b>1/Factor*</b>	<b>Plotting Size</b>	<b>Size in Drawing</b>
1:2	2	.5	2.5mm	5mm
1:5	5	.2	2.5mm	10.5mm
1:10	10	.1	2.5mm	25mm
1:20	20	.05	2.5mm	50mm
1:50	50	.02	2.5mm	125mm
1:100	100	.01	2.5mm	250mm
1:200	200	.005	2.5mm	500mm
1:500	500	.002	2.5mm	1250mm
1:1000	1000	.001	2.5mm	2500mm

Table 6 – More About Metric -  
 1" = 25.4mm  
 1 meter = 1000mm = 39.37 inches

<b>Metric</b>	<b>Comparable To</b>					
1:2	6" = 1'	(1:2)				
1:5	3" = 1'	(1:4)				
1:10	1-1/2" = 1'	(1:6)	1" = 1'	(1:12)		
1:20	3/4" = 1'	(1:16)	1/2" = 1'	(1:24)		
1:50	1/4" = 1'	(1:48)	3/16" = 1'	(1:64)		
1:100	1/8" = 1'	(1:96)	1" = 10'	(1:120)	3/32" = 1'	(1:125)
1:200	1/16" = 1'	(1:192)	1" = 20'	(1:240)		
1:500	1" = 40'	(1:480)	1" = 50'	(1:600)	1/32" = 1'	(1:384)
1:1000	1" = 80'	(1:960)	1" = 100'	(1:1200)		

- \* 600 mm is the basic planning unit for architectural design.
- \* Standard width of gypsum board is 1200 mm.
- \* 400 mm is the standard stud spacing dimension.
- \* Doors will be 900 by 1200 mm, but door thickness will remain the same.
- \* 600 by 600 mm is the preferred masonry module.
- \* Metric modular brick measures 90 by 57 by 190 mm.
- \* Metric modular block measures 190 by 190 by 390 mm.
- \* “Isa” versions of line types and hatch patterns are scaled 25.4 times (i.e. scaled to metric)

## **Dimensioning**

All drawing dimensions must be field verified for accuracy.

## 4 Layer Assignments

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### Layer Standards

Layer Standards are based on the A.I.A. layer system. The *Template File* name is in {}. Note that template files are available for most drawing types. We have a copy of the A.I.A. Layer guideline manual for your use.

#### D Cover Sheet {d\_cover.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
coversh24x36bor_new rev	2	Revision box text
coversh24x36bor_new ttl	142	
coversh24x36bor_new  ttl -text	2	Titleblock text
DEFPOINTS	7	
main_campus address numbers	7	Campus map address numbers
main_campus bldg names	7	Campus map building names
main_campus buildings	7	Campus map buildings
main_campus creek	5	Campus map creek
main_campus curb_street	250	Campus map curb street
main_campus D no plot	41	
main_campus parking lot numbers	7	Campus map parking lot #'s
main_campus scale	7	Campus map scale
main_campus sidewalk_fields	250	Campus map sidewalks
main_campus street names	7	Campus map street names
main_campus xref	250	
rev	2	Revisions
seal	7	Professional Seals
symb	3	
ttl	142	
ttl-text	2	Text
xref	7	

D Format Sheet {d\_format.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
Defpoints	7	
patt	5	Patterns
rev	2	Revisions
seal	7	Professional Seals
sheet24x36bor ttl	142	
sheet24x36bor ttl-text	2	Titleblock text
symp	3	
ttl	142	
ttl-text	2	Text
xref	7	

Electrical Plan {elec.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
Defpoints	7	
e - lts	3	Light fixtures
e - lts - demo	7	Lighting demolition
e - lts - misc	3	
e - lts - nts	3	Lighting notes
e - lts - swch	3	Lighting switches
e - lts - wiring	3	Lighting wiring
e - pwr	3	Power outlets, phone/data outlets
e - pwr- demo	7	Power demolition
e - pwr - misc	3	
e - pwr- nts	3	Power notes
e - pwr - swch	3	Power switches
e - pwr - wiring	3	Power wiring
f - prt - dvcs	3	Fire alarm devices
f - prt - misc	3	
f - prt - nts	3	Fire alarm notes
f - prt - wiring	3	Fire alarm wiring
xref	7	

Elevation Plan {elev.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a- elev - demo	5	Demolition
a- elev - dims	2	Dimensions
a- elev - exst	11	Exisitng
a- elev - grid	9	Grid
a- elev - hid	5	Hidden
a- elev - otln1	1	
a- elev - otln2	2	
a- elev - otln3	3	
a- elev - otln4	4	
a- elev - otln5	5	
a- elev - otln8	8	
a- elev - patt	8	Patterns
a- elev - symb	3	Symbols
a- elev - text	2	Text
a - rev	2	Revisions
Defpoints	7	
no-plot	7	
xref	7	

Mechanical Plan {mech\_plan.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a - area	3	Area calculations
a - door	2	Doors
a - door - iden	3	Doors identification text
a - eqpm	13	Equip. in contract; appliances, shop equip, copiers, etc
a - eqpm - nich	172	
a - flor - ada	5	ADA clearances (hidden2)
a - flor - case	22	Casework, millwork
a - flor - case - ab	22	Wall mounted casework above (hidden2)
a - flor - cmpt	8	Computer flooring
a - flor - core	1	Stairs, elevators, handrails
a - flor - demo	8	Demolition
a - flor - dims	2	Steps, ramps, handrails, pits and depressions
a - flor - exst	11	Existing
a - flor - levl	1	Overhead items (hidden2)
a - flor - misc	1	
a - flor - ovhd	5	Overhead
a - flor - patt	8	Patterns
A - Flor - Pfix	140	
a - flor - rtyp	1	Room Type
a - flor - rmnam	2	Room name
a - flor - rmnum	3	Room number
a - flor - spcl	22	Toilet, room accessories, display cases, fex/fha
a - flor - symb	3	
a - flor - text	2	Text
a - furn	5	Furniture
a - furn - fix	172	Fixed furniture, lockers
a - glaz	6	Window (int/ext), glazed walls and partitions
a - glaz - iden	3	Window identification text
a - glaz - sill	5	Window sills
a - rev	2	Revisions
a - wall - extr	4	Exterior walls
a - wall - full	7	Partition walls, shaft walls, walls to structure
a - wall - patt	8	Wall patterns
a - wall - prht	5	Partial Height Walls, toilet partitions
Defpoints	7	

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
e - pwr	13	Electrical power
m - air - dev	1	Mechanical air devices
m - cntl	2	
m - duct	1	Mechanical ducts
m - eqpm	6	Mechanical equipment
m - lab - duct	1	Mechanical lab ducts
m - lab - eqpm	6	Mechanical lab equipment
m - lab - pipe	1	Mechanical lab pipe
m - p - demo	1	Mechanical plumbing demolition
m - p - dims	2	Mechanical plumbing dimensions
m - p - dims4	2	
m - p - dims5	2	
m - p - exst - demo	6	Mechanical plumbing demolition
m - p - exst - remain	102	Mechanical plumbing existing to remain
m - p - match - ln	4	Mechanical plumbing match line
m - p - misc	1	
m - p - notes	4	Mechanical plumbing notes
m - p - patt	2	Mechanical plumbing patterns
m - p - pipe	6	Mechanical plumbing pipes
m - p - symb	1	Mechanical plumbing special symbols
m - p - text	4	Mechanical plumbing text
m - pipe	1	Mechanical plumbing
m - room - nam	2	Mechanical room names
m - room - num	2	Mechanical room numbers
no - plot	7	
p - eqpm	6	Plumbing equipment
p - fixt - demo	6	Plumbing fixtures demolition
p - fixt - new	5	New piping fixtures
p - fixt - remain	3	Plumbing fixtures to remain
p - lab - eqpm	6	Plumbing lab equipment
p - lab - pipe - aflr	1	
p - lab - pipe - bflr	1	
p - pipe - aflr	1	
p - pipe - bflr	1	
s - cols	6	Structural columns
s - grid	9	Column grid & identification bubbles (center2)
s - slab - edge	5	Edge of slab
s - slab - join	5	Slab control joints and expansion joints
xref	7	

Mezzanine Plans {mezz.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a - area	3	Area calculations
a - eqpm	13	Architectural equipment
a - eqpm - nich	172	
a - flor - core	1	Core structures, elevators, stairwells
a - furn	5	Furniture
a - furn - fix	172	Fixed furniture
a - furn - nicn	172	
a - mezz - demo	8	Demolition
a - mezz - dims	2	Dimensions
a - mezz - dold	3	
a - mezz - door	2	Doors
a - mezz - exst	11	
a - mezz - glaz	5	Window, glazed walls & partitions
a - mezz - glid	3	Window Identification tags
a - mezz - glsl	5	Window sills
a - mezz - levl	1	Level changes, steps, ramps, handrails, pits & depressions
a - mezz - misc	1	
a - mezz - ovhd	5	Overhead skylights, overhangs, ceiling openings
a - mezz - rnam	2	Room names
a - mezz - rnum	3	Room numbers
a - mezz - spcl	22	
a - mezz - symb	3	
a - mezz - wall	7	Full height interior walls
a - mezz - wpat	8	Wall material hatching
a - mezz - wphd	1	Partial height walls
a - rev	2	Revisions
a - wall - extr	4	Exterior walls
Defpoints	7	
e - pwr	1	Electrical power
f - prt - dvcs	13	Fire alarm devices
m - duct	13	Mechanical Ductwork
m - eqpm	13	Mechanical equipment
no - plot	7	
p - eqpm	13	Plumbing equipment
p - fixt	1	Plumbing fixtures

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
s - cols	6	Column
s - grid	9	Grid & identification bubbles (center2)
s - slab - edge	5	Edge of slab
s - slab - join	5	Slab control joints and expansion joints
xref	7	

Paper Space D Cover Sheet {PS\_d\_cover.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
coversh24x36bor rev	2	Revision box text
coversh24x36bor ttl	142	
coversh24x36bor ttl -text	2	Titleblock text
DEFPOINTS	7	
main_campus address numbers	7	Campus map
main_campus bldg names	7	Campus map
main_campus buildings	7	Campus map
main_campus creek	5	Campus map
main_campus curb_street	250	Campus map
main_campus D no plot	41	Campus map
main_campus parking lot numbers	7	Campus map
main_campus scale	7	Campus map
main_campus sidewalk_fields	250	Campus map
main_campus street names	7	Campus map
main_campus xref	250	
rev	2	Revisions
seal	7	Professional Seals
symb	3	
ttl	142	
ttl-text	2	Text
vp	7	Viewports
xref	7	

Paper Space D Format Sheet {PS\_d\_format.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
Defpoints	7	
rev	2	Revisions
seal	7	Professional Seals
sheet24x36bor ttl	142	
sheet24x36bor ttl-text	2	Titleblock text
symb	3	
ttl	142	
ttl-text	2	Text
vp	7	Viewports
xref	7	

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a - area	3	Area calculations
a - door	2	Doors
a - door - demo	5	Door demolition
a - door - iden	3	Door identification text
a - eqpm	13	Equip. in contract; appliances, shop equip, copiers, etc
a - eqpm - nich	172	
a - flor - ada	5	ADA clearances (hidden2)
a - flor - case	22	Casework, millwork
a - flor - case - ab	22	Wall mounted casework above (hidden2)
a - flor - cmpt	8	Computer flooring
a - flor - core	1	Stairs, elevators, handrails
a - flor - demo	5	Demolition
a - flor - dims	2	Dimensions
a - flor - exst	11	Existing
a - flor - levl	1	Steps, ramps, handrails, pits and depressions
a - flor - misc	1	
a - flor - ovhd	5	Overhead items (hidden2)
a - flor - patt	8	Patterns
a - flor - rmtyp	1	Room type
a - flor - rmnam	2	Room name
a - flor - rmnum	3	Room number
a - flor - spcl	22	Toilet, room accessories, display cases, fex/fha
a - flor - symb	3	
a - flor - text	2	Text
a - furn	5	Furniture
a - furn - fix	172	Fixed furniture, lockers
a - glaz	1	Window (int/ext), glazed walls and partitions
a - glaz - iden	3	Window identification text
a - glaz - sill	5	Window sills
a - rev	2	Revisions
a - wall - demo	5	Wall demolition
a - wall - extr	4	Exterior walls
a - wall - full	7	Partition walls, shaft walls, walls to structure
a - wall - patt	8	pattern
a - wall - prht	1	Partial Height Walls, toilet partitions
Defpoints	7	

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
e - comm	242	Power fixtures
e - pwr	13	Fire safety devices
f - prt - dvcs	13	Fire alarm devices
m - duct	13	Mechanical ductwork
m - eqpm	13	Mechanical equipment
no - plot	7	
p - eqpm	13	Plumbing equipment
p - fixt	242	Water closets, lavs, floor drains, etc.
s - cols	6	Structural columns
s - grid	9	Column grid & identification bubbles (center2)
s - slab - edge	5	Edge of slab
s - slab - join	5	Slab control joints and expansion joints
xref	7	

Record Drawings {RD-Template.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a - area		Area calculations
a - door	3	Doors
a - eqpm	13	Equip. in contract; appliances, shop equip, copiers, etc
a - flor - case	22	Casework, millwork
a - flor - case - ab	22	Wall mounted casework above (hidden2)
a - flor - cmpt	8	Computer flooring
a - flor - core	1	Stairs, elevators, handrails
a - flor - levl	1	Steps, ramps, handrails, pits and depressions
a - flor - ovhd	5	Overhead items (hidden2)
a - flor - rmtype	1	Room type
a - flor - rmnam	2	Room name
a - flor - rmnum	3	Room number
a - flor - spcl	22	Toilet, room accessories, display cases, fex/fha
a - furn - fix	5	Fixed furniture, lockers
a - glaz	5	Window (int/ext), glazed walls and partitions
a - glaz - sill	1	Window sills
a - mezz	7	Mezzanine
a - roof	1	Roof
a - text	2	Text
a - wall - extr	4	Exterior walls
a - wall - full	7	Partition walls, shaft walls, walls to structure
a - wall - prht	1	Partial Height Walls, toilet partitions
e - pwr	13	Power fixtures
f - prt - dvcs	13	Fire safety devices
l - site	8	
m - eqpm	13	Mechanical equipment
p - fixt	1	Water closets, lavs, floor drains, etc.
s - cols	6	Structural columns
s - grid	9	Column grid & identification bubbles (center2)
s - slab - edge	5	Edge of slab
s - slab - join	5	Slab control joints and expansion joints
SP - GROSS	7	Space plan – gross area (building outline)
SP - SPACES	7	Space plan – air conditioned areas (offices, etc)
SP - SPACES - UN	7	Space plan – uncounted areas (chases, plumbing in wall space areas, etc)

Reflected Ceiling Plans {rcp.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a - cIng - demo	5	Ceiling demolition
a - cIng - dims	2	Ceiling dimensions
a - cIng - dohd	2	Door headers, furr-down
a - cIng - exst	11	Existing ceiling
a - cIng - grid	1	Ceiling grid
a - cIng - misc	1	
a - cIng - open	22	
a - cIng - patt	8	Ceiling patterns
a - cIng - rnam	2	Room names
a - cIng - rnum	3	Room numbers
a - cIng - symb	3	Ceiling & roof penetrations
a - cIng - text	2	Ceiling text
a - rev	2	Revisions
Defpoints	7	
e - lts	4	Ceiling mounted lights, exit & emergency lights
f - prt - dvcs	1	Ceiling mounted smoke detectors
m - air - dvcs	4	Diffusers, grilles, registers, dampers
m - duct	13	Mechanical ductwork
no-plot	7	
xref	7	

Roof Plan {roof.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a - door	2	Doors
a - door - iden	3	Doors identification text
a - glaz	5	Window (int/ext), glazed walls and partitions
a - glaz - iden	3	Window identification text
a - glaz - sill	5	Window sills
a - rev	2	Revisions
a - roof - core	1	
a - roof - demo	8	Demolition
a - roof - dims	2	Dimensions
a - roof - eqpm	13	Existing
a - roof - exst	11	Grid
a - roof - lev1	1	Hidden
a - roof - misc	1	
a - roof - otl	4	
a - roof - patt	8	Patterns
a - roof - rldr	1	
a - roof - rtyp	1	Room type
a - roof - rmnam	2	Room name
a - roof - rmnum	3	Room number
a - roof - symb	3	Symbols
a - roof - text	2	Text
a - wall - extr	4	Exterior walls
a - wall - full	7	Partition walls, shaft walls, walls to structure
a - wall - patt	8	Wall patterns
a - wall - prht	5	Partial Height Walls, toilet partitions
Defpoints	7	
e - pwr	1	Electrical
m - duct	13	Mechanical duct work
m - eqpm	13	Mechanical equipment
no-plot	7	
xref	7	

Section Plan {elev.dwt}

<b>Layer Name</b>	<b>Color</b>	<b>Contents</b>
a – rev	2	Revisions
a – sect – demo	8	Demolition
a – sect – dims	2	Dimensions
a – sect – exst	11	Existing
a – sect – grid	9	Grid
a – sect – hid	5	Hidden
a – sect – otln1	1	
a – sect – otln2	2	
a – sect – otln3	3	
a – sect – otln4	4	
a – sect – otln5	5	
a – sect – otln8	8	
a – sect – patt	5	Patterns
a – sect – symb	3	Symbols
a – sect – text	2	Text
Defpoints	7	
no-plot	7	
xref	7	

## 5 Submittal Requirements for Contract Award

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### **Graphic Format**

All design work provided under this contract and delivered to Project Management & Construction Services will be “compatible” with AutoCAD 2008 CADD files. All files will use template files provided by Project Management & Construction Services which will supply the appropriate standards within. These templates will be provided on the UT web site for download.

The term “compatible” means that data contained within the electronic files can be accessed directly by the target CADD system (AutoCAD 2008) without translation, preprocessing of the digital data, or post processing of the digital data. It is the responsibility of the contractor to ensure this level of compatibility.

### **Delivery Media and Format**

The contract ward submittals from a contractor will consist of electronic digital copies of all files prepared in accordance with the A/E Standard. These files will be submitted on CD's.

### **Format Sheets**

All format sheets are started with the appropriate template. All completed drawings are loaded onto the format at the correct scale.

### **Dimensioning**

All drawing dimensions ‘must’ be field verified.

## Appendix A: AutoCAD Standard Line Weights

AutoCAD Standard Lineweights		ISO
mm	inch	
0.00		
0.05	.002	
0.09	.003	
0.13	.005	
0.15	.006	
0.18	.007	X
0.20	.008	
0.25	.010	X
0.30	.012	
0.35	.014	X
0.40	.016	
0.50	.020	X
0.53	.021	
0.60	.024	
0.70	.028	X
0.80	.031	
0.90	.035	X
1.00	.039	
1.06	.042	
1.20	.047	X
1.40	.056	
1.58	.062	
2.00	.078	X
2.11	.083	

## Appendix B: AutoCAD Color Table

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