



ILLINOIS STATE UNIVERSITY

Illinois' first public university

CAD Standards Manual

*CAD Requirements for Facility Documentation
and Construction Drawings*

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INTRODUCTION

The purpose of this CAD Standards manual is to provide specifications for creating and distributing AutoCAD drawings for Illinois State University. These guidelines enable the successful guarantee of the elimination of discrepancies between departmental drawings throughout Illinois State University. These requirements must be followed and used by all A/E firms working with Illinois State University on any kind of project. All submitted CAD drawings that fail to conform to these standards will be returned for resubmission.

A signed copy of the CAD Standard checklist must be submitted [found on page 2] by the vendor (architect, engineer, contractor, etc.) when delivering CAD drawings to Illinois State University during any phase of the project. When this checklist is signed and submitted, the vendor (architect, engineer, contractor, etc.) is declaring that all CAD drawings conform to the standards presented in this document.

Illinois State University can provide a template drawing containing these standards.

CAD STANDARD CHECKLIST

CAD drawings delivered for an Illinois State University project must be accompanied by a submission of the following checklist. When a checklist has been signed and submitted, the vendor (architect, engineer, contractor, etc.) is assuring that all materials adhere to the standards and guidelines.

FILE FORMAT AND SETUP

- Electronic File Format
- Drawing Organization
- Layout/Plotting Settings
- Scale and Units
- Fonts and Text Styles
- Blocks
- Dimension Settings
- Border/Title Blocks
- Policy on Model Space and Paper Space
- Policy on Xrefs

LAYERING

- General Rules about Uses
- Attributes (Colors, Lineweights, Linetypes)
- All Layers must be in the ISU Layer List

DRAWING FILE/SEQUENCE NUMBER STANDARD

- Drawing File No. Assignment Procedure

DESIGN PHASE, SET & AGENDA PROCESS (Fill in circle that applies to this submission)

- | | |
|---|---|
| <input type="radio"/> Design Phase 2 (Schematic Design) | <input type="radio"/> Addenda #1 |
| <input type="radio"/> Design Phase 3 (Design Development) | <input type="radio"/> Addenda #2 |
| <input type="radio"/> Design Phase 4A (50% Contract Docs) | <input type="radio"/> Conforming Set |
| <input type="radio"/> Design Phase 4B (100 % Contract Docs) | <input type="radio"/> As-built/Record Set |
| <input type="radio"/> Bid Set | <input type="radio"/> Other _____ |

Project Name: _____

Firm: _____

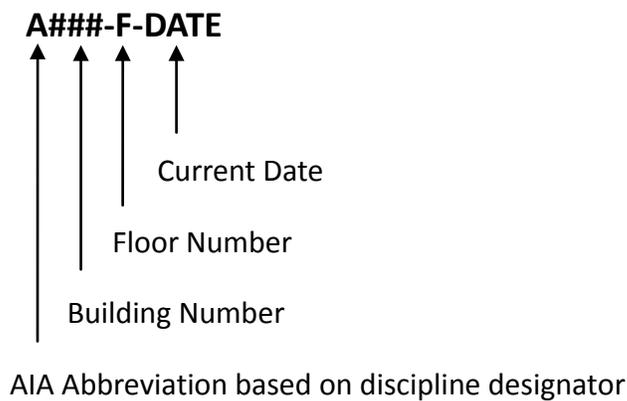
Project Manager: _____

Phone Number: _____

Date: _____

DRAWING FILE NAMING STANDARD

File organization is necessary in managing CAD drawings and distinguishing which drawing is the most current. To assure successful file sharing, accessibility and compatibility of all drawings, file names will consist of both letters and numbers in a particular format. The specified file naming convention shall be followed in preparing CAD drawings for Illinois State University. The drawing type abbreviation will be chosen based on AIA abbreviations for building disciplines [Chart 1.0].



A	Architectural
C	Civil
E	Electrical
F	Fire Protection
G	General
H	Hazardous Materials
IF	Interiors/Furniture
L	Landscape
M	Mechanical
P	Plumbing
Q	Equipment
R	Resource
S	Structural
T	Telecommunications
X	Other
Z	Contractor/Shop Drawings

Discipline Codes

Chart 1.0

Example - **A385-1-08.30.2010**

DRAWING ORGANIZATION

FILE FORMAT AND SETUP

This section's purpose is to standardize the typical drawing and how it is structured.

1. The Sheet drawings shall contain all annotation, text, schedules, notes, markers (detail, elevation, section etc.), and drawing titles. All dimensioning shall be in model space.
2. Polylines (command: **Pline**) on the layer **A-AREA** should be traced around every room using a single continuous closed polyline. Next, using the text style **STANDARD**, use the command: DTEXT to insert the area of the room. To find the area, use the command: AREA. Then type OBJECT. Then select the polyline of the room.
 - (a) EXAMPLE OF PLINED AREA: 690 sq. ft
3. All drawings must be purged completely at final completion of the drawing to remove all unused blocks, dimension styles, layers, line types, plot styles, text styles, multi-line styles, etc.



- (a) This is to reduce the memory size of the drawing for simple storage.
- 4. Fill in title block of the layout used for plotting
 - (a) If no plotting took place and the drawing was just updated, update the **8.5X11 paper** layout title block.
 - (b) If the title block includes a revision block, update the revision section if the drawing has been updated.
- 5. Policy on Xrefs
 - (a) Illinois State University does not currently use or enforce the use of Xref's. This policy is subject to change.



CAD DRAWING PRODUCTION

SCALING CHART

DRAWING SCALE [Paper=Real]		SCALE FAC- TOR	Decimal Equivalent	LTSCALE	1/16" Plot	3/32" Plot	1/8" Plot	3/16" Plot	1/4" Plot	3/8" Plot	1/2" Plot
IN	DEC.				0.06	0.09	0.13	0.19	0.25	0.38	0.50
Architectural		(inches)									
3"=1'-0"	3.000	4	0.2500	2	0.25	0.375	0.5	0.75	1	1.5	2
1-1/2"=1'-0"	1.500	8	0.1250	4	0.5	0.75	1	1.5	2	3	4
1"=1'-0"	1.000	12	0.0833	6	0.75	1.125	1.5	2.25	3	4.5	6
3/4"=1'-0"	0.750	16	0.0625	8	1	1.5	2	3	4	6	8
1/2"=1'-0"	0.500	24	0.0417	12	1.5	2.25	3	4.5	6	9	12
3/8"=1'-0"	0.375	32	0.0313	16	2	3	4	6	8	12	16
1/4"=1'-0"	0.250	48	0.0208	24	3	4.5	6	9	12	18	24
3/16"=1'-0"	0.188	64	0.0156	32	4	6	8	12	16	24	32
1/8"=1'-0"	0.125	96	0.0104	48	6	9	12	18	24	36	48
3/32"=1'-0"	0.094	128	0.0078	64	8	12	16	24	32	48	64
1/16"=1'-0"	0.063	192	0.0052	96	12	18	24	36	48	72	96
Civil											
1"=10'-0"	10	120	0.0083	60	7.5	11.25	15	22.5	30	45	60
1"=15'-0"	15	180	0.0056	90	11.25	16.88	22.5	33.75	45	67.5	90
1"=20'-0"	20	240	0.0042	120	15	22.5	30	45	60	90	120
1"=30'-0"	30	360	0.0028	180	22.5	33.75	45	67.5	90	135	180
1"=40'-0"	40	480	0.0021	240	30	45	60	90	120	180	240
1"=50'-0"	50	600	0.0017	300	37.5	56.25	75	112.5	150	225	300
1"=60'-0"	60	720	0.0014	360	45	67.5	90	135	180	270	360
1"=100'-0"	100	1200	0.0008	600	75	112.5	150	225	300	450	600

1. Scaling

(a) LTSCALE = 50% OF THE SCALE FACTOR. i.e. 1:1 drawings- set LTSCALE @ 0.5,
but ¼" = 1'-0" @ 24

Chart 2.0

(b) Usually all layouts are set with PSLTSCALE = 0 [OFF], allowing dashed line to be controlled solely by LTSCALE.

(c) DIMSCALE = SCALE FACTOR - Do NOT key this in at the command prompt. Set on the FIT page of the dimension style setup.



- (d) BHATCH = Various scales. Scaled patterns such as ANSI13 for brick hatching should use the SCALE FACTOR, but other patterns such as AR-BRSTD are real size and should never be scaled.
- (e) Scales & Units - All CAD drawings should be drawn at full scale in architectural units, such that 1 dwg unit = 1 inch.

UNITS

1. Units (command "UNITS")
 - (a) Length
 - (i) Type: Architectural
 - (ii) Precision: 0'-0 1/32"
 - (b) Angle
 - (i) Type: Decimal Degrees
 - (ii) Precision: 0.00
 - (iii) Clockwise: OFF
 - (c) Insertion Scale
 - (i) Units to scale inserted content: Inches
 - (d) Lighting
 - ii. PATT - Texture & hatch pattern
 - iii. PART - Partition
 - iv. ELEV - Elevations
 - v. SECT - Sections
 - vi. DETL - Details

TEXT STYLES

Style name - **STYLUS BT**

1. Font
 - (a) Font Name: Stylus BT
 - (b) Font Style: Roman
2. Size
 - (a) Height: 0'-0"
3. Effects
 - (a) Width Factor: 1.00000
 - (b) Oblique Angle: 0.00

Style name - **CALIBRI**

1. Font
 - (a) Font Name: Calibri
 - (b) Font Style: Roman
2. Size
 - (a) Height: 0'-0"
3. Effects
 - (a) Width Factor: 1.00000
 - (b) Oblique Angle: 0.00



Style name - ARIAL

1. Font

(a) Font Name: Arial

(b) Font Style: Roman

2. Size

(a) Height: 0'-0"

3. Effects

(a) Width Factor: 1.00000

(b) Oblique Angle: 0.00

FONT STYLES & TEXTS

LAYOUT TEXT FONTS & SIZES						
Drafting Components	Text Style	8.5x11	11x17	ARCH C	ARCH D	ARCH E
Notes, Dimensions, General Drafting, etc.	Stylus BT	1/8"	3/32"	3/32"	3/32"	3/32"
Drawing Titles (Plan, Elev., Sect., etc...)	Stylus BT	1/8"	1/8"	5/16"	5/16"	5/16"
Title Block- Drawing Name, Project Name	Arial	1/8"	1/8"	3/16"	1/4"	7/16"
Title Block-Building Name	Arial	3/32"	None	None	None	None
Title Block- Lower Fields (Scale, Date, Drawn By, Revision Notes)	Stylus BT	1/8"	3/32"	1/8"	3/16"	3/8"
Title Block- Sheet Numbers, Building Numbers	Calibri	1/4"	1/4"	3/8"	1/2"	1"

Chart 3.0



MULTILEADER STYLE

1. Multileader Style name - ISU

(a) Leader Format

(i) General

1. Type: Spline
2. Color: By Layer
3. Linetype: By Layer
4. Lineweight: By Layer

(ii) Arrowhead

1. Symbol: Closed Filled
2. Size: 1/8"

(iii) Leader Break

1. Break Size: 1/4"

(b) Leader Structure

(i) Constraints

1. Maximum leader points: 2
2. First segment angle: OFF
3. Second segment angle: OFF

(ii) Scale

1. Specify scale: 1.00000
2. *NOTE - to change scale, or make leader larger on the drawing, use properties (command "MO") and enter appropriate scale found in scaling chart 2.0

(c) Content

(i) Multileader Type: Mtext

(ii) Text option

1. Text style: Stylus BT
 - a. Text angle: Keep horizontal
2. Text color: By Layer
3. Text height: 3/32"

(iii) Leader connection

1. Left attachment: Middle of top line
2. Right attachment: Middle of top line
3. Landing gap: 3/32"



DIMENSION SETTINGS

All dimensioning should be performed on the layer **G-ANNO-DIMS** in model space.

1. Dimension Lines

- (a) Color = BY LAYER
- (b) Linetype = BY LAYER
- (c) Lineweight = BY LAYER
- (d) Extend = 1/16"
- (e) Baseline Spacing = 3/8"
- (f) Suppress 1 & 2 = OFF

2. Extension Lines

- (a) Color = BY LAYER
- (b) Linetype Ext #1&2 = BY LAYER
- (c) Lineweight = BY LAYER
- (d) Suppress = OFF
- (e) Extend beyond dim lines = 1/16"
- (f) Offset from origin = 1/16"
- (g) Fixed length extension lines = OFF

3. Symbols and Arrows

- (a) Arrowhead
 - (i) First & Second = Architectural Tick
 - (ii) Leader = Right Angle
 - (iii) Arrow Size = 1/16"
- (b) Arc Length Symbol
 - (i) Preceding dimension text = ON
- (c) Center Marks
 - (i) Mark = ON
 - (ii) Size = 3/32"
- (d) Radius Dimension Jog
 - (i) Jog Angle = 315°
- (e) Dimension Break
 - (i) Break Size: 1/8"

4. Text

- (a) Text Appearance
 - (i) Text Style = Stylus BT
 - (ii) Text Color = BY LAYER
 - (iii) Fill Color = None
 - (iv) Text Height = 3/32"
 - (v) Fraction Height Scale = 1.00
 - (vi) Draw frame around text = None
- (b) Text Placement
 - (i) Vertical = Centered
 - (ii) Horizontal = Centered
 - (iii) Offset from Dimension Line = 1/16"
- (c) Text Alignment
 - (i) Aligned with Dimension Line = ON

5. Fit

- (a) Fit Options = Either text or arrows (best fit)
- (b) Text Placement = Over dimension line Leader, with leader
- (c) Scale for Dim Features = Use overall scale of: 1.00
- (d) Fine Tuning = Draw dim line between ext lines



6. Primary Units

- (a) Linear Dimensions
 - (i) Unit Format = Architectural
 - (ii) Precision = 1/16"
 - (iii) Fraction Format = Diagonal
 - (iv) Decimal separator Round Off = OFF
- (b) Measurement Scale
 - (i) Scale Factor = 1
- (c) Zero Suppression
 - (i) 0 Feet = ON
 - (ii) 0 Inches = OFF
- (d) Angular Dimensions
 - (i) Units Format = Decimal Degrees
 - 1. Precision = 0
- (e) Zero Suppression
 - (i) Leading = OFF
 - (ii) Trailing = OFF

BLOCKS

Illinois State University is currently not enforcing the use of any particular blocks or block libraries. However, Illinois State University requires that the following general rules be employed when handling block entities:

1. All entities within a block must be created on layer 0.
 - (a) This allows the symbol/block to be a “chameleon”, and inherit the properties of its parent layer.
2. Hidden line dashes, if any, should have a set linetype that bypasses layer control.
3. All door and window symbols within a floor plan drawing **MUST** be “blocks”. **NO INDIVIDUAL PIECES** are allowed. If you must create a new block you may explode a current block, adjust accordingly, and then **BLOCK** the symbol with a name seen in Chart 1.0.
4. Block naming conventions are based on INCH sizes. (for example, 36RH means 3’-0” right hand door and 30DH means a 2’-6” double hung window.
5. A symbol that has text or attributes, unless otherwise noted, should be inserted on the layer **G-ANNO-TEXT**.
6. Drawing entities translated into AutoCAD blocks from non-AutoCAD systems must revert to layer 0 when exploded within AutoCAD.



LAYOUT/PLOTTING SETTINGS

All Illinois State University small scale drawings are often printed at 8.5x11 or 11x17. All drawings must be capable of being plotted clearly and legibly at those sizes. Line quality and adequate lettering size are essential to meet these requirements. By following the recommended ISU Layers List, all drawing files will be reproducible as clear and legible small scale drawings.

1. Paper sizes that include full title blocks.
 - (a) Letter - 8.5X11 paper
 - (b) Tabloid-11x17
 - (c) Arch C - 18x24
 - (d) Arch D - 24x36
 - (e) Arch E - 36x48
 - (f) Arch F - 30x42
 - (g) Other sizes are available.
2. Plot Area - Extents
3. Plot Offset - Centered
4. Plot Scale - 1:1
5. Plot Style - These are the basic plot styles and can be modified to fit specific needs.
 - (a) Monochrome.ctb - for black and white (no color)
 - (b) Acad.ctb - for colored lines
 - (iii) Scales & Units - All CAD drawings should be drawn at full scale in architectural units, such that 1 dwg unit = 1 inch.

BORDER AND TITLE BLOCKS

Illinois State University has a standard border/title block that shall be used in all "Illinois State University Drawings."

1. This does not apply to drawings created by outside sources that are submitted to Illinois State University, such as those created by architectural or design firms.
2. The border/ title block contains attributes that must be filled out properly. These attributes are a separate block from the border.
3. Revision blocks are also accompanied with the standard border/title blocks.
 - (a) If the title block includes a revision block, update the revision section if the drawing has been updated.



POLICY ON MODEL SPACE & PAPER SPACE

Illinois State University uses both Model Space and Paper Space. Each CAD file is set up to have the drawing or building model(s) in the MODEL SPACE and the title block and notes on the PAPER SPACE.

If multiple pages or title blocks at different sizes are needed, additional tabs can be created to accommodate multiple sheets.

AUTOCAD LAYER GUIDELINES

Illinois State University has adopted the AIA CAD Layer Guidelines for layer naming purposes only. The listing can be found in the Layer Manager in any AutoCAD drawing (command: **LAYER**).

AIA LAYER NAMING METHODOLOGY

1. The CAD Layer Guidelines are organized as a hierarchy. This arrangement accommodates expansion and addition of user-defined extensions to the layer list. Layer names are alpha-numeric and use easily identifiable abbreviations. This legibility is particularly important when CAD files are distributed among architects, consultants, clients, and different departments throughout campus.
 - (a) Codes, Groups, and Fields- The following section details the methodology behind the layer naming conventions and their general use. Examples of Layer names can be found at the end of this section [Sec. 2 (e)]
 - (i) **AA-AAAA-AAAA-AAAA**
 - (1) Discipline Designators
 - a. This is a two-character field that is the primary method of classification for layer names.
 - b. The discipline codes can be seen in chart 1.0.
 - (ii) AA-**AAAA**-AAAA-AAAA
 - (1) Major Group
 - a. The Major Group designation identifies the building system. This field must contain four characters. Abbreviations should comply with the guideline rules above.



(iii) AA-AAAA-~~AAAA~~-AAAA

(1) Minor Group

- a. This is an optional, four-character field for further differentiation of Major Groups. For example, **A-WALL-PART** indicates architecture, existing wall, partial height. The following modifiers are defined for use in the Minor Group field, but others could be used if necessary.
 - i. IDEN - Identification
 - ii. PATT - Texture & hatch pattern
 - iii. PART - Partition
 - iv. ELEV - Elevations
 - v. SECT - Sections
 - vi. DETL - Details

(iv) AA-AAAA-AAAA-~~AAAA~~

(1) Status Field

- a. The Status Field is an optional 1-4 character designator that differentiates new construction from remodeling and existing to remain. It is only needed when phases of work must be differentiated. The Status Field is always placed as the last field of the layer name. Defined values for these fields are listed below. [Chart 4.0].

2. Examples/Charts

(b)

STATUS FIELD VALUES	
NEW	New work
EXST	Existing to remain
DEMO	Existing to demolish
F	Future work
TEMP	Temporary work
MOVE	Items to be moved
R	Relocated items
X	Not in contract

Chart 4.0



(c)

LAYER NAMING GUIDELINES EXAMPLE	
Simple layer name with only Major Group (Minor Group and Status Field not used)	A-WALL
Layer name with Major group and Minor Group (Status Field not used)	A-WALL-FULL
Layer name with Major Group, Minor Group, and Status Field	A-WALL-FULL-DEMO
Layer name with Major Group and Status Field (Minor Group not used)	A-WALL-DEMO

Chart 5.0

(d) EXAMPLE

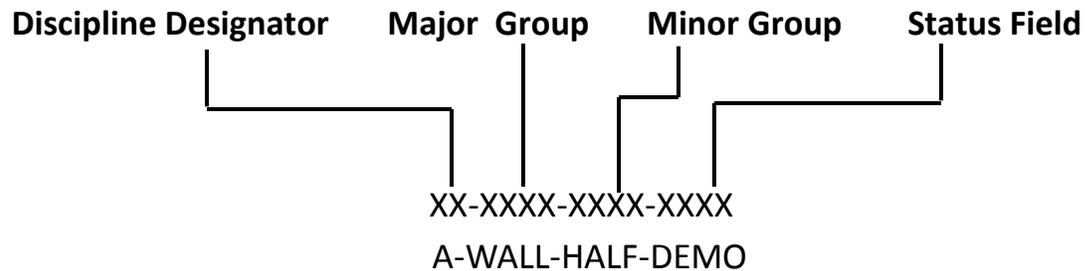


Chart 6.0



ILLINOIS STATE UNIVERSITY LAYERS

ARCHITECTURAL					
NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
A-AREA	6	CONTINUOUS	0.006	Yes	Area Square footage
A-AREA-IDEN	12	CONTINUOUS	0.010	Yes	Area Identification, room numbers
A-AREA-OCCP	3	CONTINUOUS	0.010	Yes	Occupant or employee names
A-CLNG	3	CONTINUOUS	0.002	Yes	Ceiling information
A-CLNG-ACCS	3	CONTINUOUS	0.002	Yes	Ceiling access
A-CLNG-GRID	7	CONTINUOUS	0.002	Yes	Ceiling grid
A-CLNG-OPEN	7	CONTINUOUS	0.002	Yes	Ceiling / roof penetrations
A-CLNG-PATT	4	CONTINUOUS	0.002	Yes	Ceiling Patterns
A-CLNG-SUSP	7	CONTINUOUS	0.002	Yes	Suspended elements
A-COLS	1	CONTINUOUS	0.012	Yes	Columns
A-DETL	1	CONTINUOUS	0.002	Yes	Details
A-DETL-PATT	7	CONTINUOUS	0.002	Yes	Texture and hatch patterns
A-DOOR	1	CONTINUOUS	0.002	Yes	Doors
A-DOOR-ELEV	1	CONTINUOUS	0.002	Yes	Doors : 3D views
A-DOOR-FULL	7	CONTINUOUS	0.002	Yes	Full height [to ceiling] door : swing and leaf
A-DOOR-IDEN	3	CONTINUOUS	0.002	Yes	Door number, hardware group, etc.
A-DOOR-PRHT	1	CONTINUOUS	0.002	Yes	Partial-height door : swing and leaf
A-ELEV	4	CONTINUOUS	0.002	Yes	Interior and exterior elevations
A-ELEV-CASE	7	CONTINUOUS	0.002	Yes	Wall-mounted casework
A-ELEV-FIXT	7	CONTINUOUS	0.002	Yes	Miscellaneous fixtures
A-ELEV-FNSH	7	CONTINUOUS	0.002	Yes	Finishes, woodwork, trim
A-ELEV-OTLN	1	CONTINUOUS	0.002	Yes	Building Outlines
A-ELEV-PATT	7	CONTINUOUS	0.002	Yes	Texture and hatch patterns
A-ELEV-PFIX	7	CONTINUOUS	0.002	Yes	Plumbing fixtures in elevation
A-ELEV-SIGN	3	CONTINUOUS	0.006	Yes	Signage
A-EQPM	30	CONTINUOUS	0.002	Yes	Equipment
A-EQPM-ACCS	30	CONTINUOUS	0.002	Yes	Equipment access
A-EQPM-CLNG	30	CONTINUOUS	0.002	Yes	Ceiling-mounted or suspended equipment
A-EQPM-FIXD	30	CONTINUOUS	0.002	Yes	Fixed equipment
A-EQPM-MOVE	30	CONTINUOUS	0.002	Yes	Moveable equipment
A-FLOR	2	CONTINUOUS	0.002	Yes	Floor information
A-FLOR-CASE	2	CONTINUOUS	0.002	Yes	Casework [manufactured cabinets]
A-FLOR-EVTR	4	CONTINUOUS	0.002	Yes	Elevator car and equipment
A-FLOR-FIXT	2	CONTINUOUS	0.002	Yes	Miscellaneous fixtures
A-FLOR-HRAL	7	CONTINUOUS	0.002	Yes	Stair and balcony handrails, guard rails



NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
A-FLOR-IDEN	3	CONTINUOUS	0.010	Yes	Room numbers, names, targets, etc.
A-FLOR-LEVL	7	CONTINUOUS	0.002	Yes	Level changes, ramps, pits, depressions
A-FLOR-OTLN	7	CONTINUOUS	0.002	Yes	Floor or building outline
A-FLOR-OVHD	4	CONTINUOUS	0.002	Yes	Overhead items [skylights, overhangs - usually dashed line]
A-FLOR-PATT	7	CONTINUOUS	0.002	Yes	Paving, tile, carpet patterns
A-FLOR-PFIX	7	CONTINUOUS	0.002	Yes	Plumbing fixtures
A-FLOR-RAIS	7	CONTINUOUS	0.002	Yes	Raised floors
A-FLOR-RISR	7	CONTINUOUS	0.002	Yes	Stair risers
A-FLOR-SIGN	7	CONTINUOUS	0.002	Yes	Signage
A-FLOR-SPCL	7	CONTINUOUS	0.002	Yes	Architectural specialties [toilet room accessories, display cases]
A-FLOR-STRS	13	CONTINUOUS	0.002	Yes	Stair treads, escalators, ladders
A-FLOR-TPTN	5	CONTINUOUS	0.002	Yes	Toilet partions
A-FLOR-WDWK	7	CONTINUOUS	0.002	Yes	Architectural woodwork [field-built cabinets and counters]
A-GLAZ	4	CONTINUOUS	0.002	Yes	Windows, window walls, curtain walls, glazed partitions
A-GLAZ-ELEV	4	CONTINUOUS	0.002	Yes	Glazing and mullions : elevation views
A-GLAZ-FULL	4	CONTINUOUS	0.002	Yes	Full-height glazed walls and partitions
A-GLAZ-SILL	7	CONTINUOUS	0.002	Yes	Window sills
A-GRID	7	(DASHED?)	0.002	Yes	Planning grid or column gird
A-HVAC-RDFF	2	CONTINUOUS	0.002	Yes	Return air diffusers
A-HVAC-SDFF	4	CONTINUOUS	0.002	Yes	Supply diffusers
A-LITE	5	CONTINUOUS	0.002	Yes	Light fixtures
A-REST	6	CONTINUOUS	0.002	Yes	Restrooms
A-ROOF	1	CONTINUOUS	0.010	Yes	Roof
A-ROOF-ELEV	1	CONTINUOUS	0.002	Yes	Roof surfaces : 3D views
A-ROOF-HRAL	7	CONTINUOUS	0.002	Yes	Stair handrails, nosing, guardrails
A-ROOF-PATT	7	CONTINUOUS	0.002	Yes	Roof surface patterns, hatching
A-ROOF-RISR	7	CONTINUOUS	0.002	Yes	Stair risers
A-ROOF-STRS	13	CONTINUOUS	0.002	Yes	Stair treads, ladders
A-WALL-CAB	51	CONTINUOUS	0.002	Yes	Wall cabinet
A-WALL-CRTL	2	CONTINUOUS	0.002	Yes	Counter-builtin
A-WALL-ELEV	2	CONTINUOUS	0.002	Yes	Wall surfaces : 3D views
A-WALL-EXTR	10	CONTINUOUS	0.014	Yes	Exterior walls
A-WALL-FIRE	1	CONTINUOUS	0.010	Yes	Fire wall partitions
A-WALL-FULL	2	CONTINUOUS	0.010	Yes	Full-height walls, stair and shaft walls, walls to structure
A-WALL-HEAD	1	CONTINUOUS	0.010	Yes	Door and window headers [appear on reflected ceiling plans]
A-WALL-JAMB	9	CONTINUOUS	0.002	Yes	Door and window jambs [do not appear on reflected ceiling plans]



NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
A-WALL-MOVE	4	CONTINUOUS	0.002	Yes	Moveable partitions
A-WALL-PATT	45	CONTINUOUS	0.002	Yes	Wall insulation, hatching and fill
A-WALL-PRHT	4	CONTINUOUS	0.006	Yes	Partial height walls [do not appear on reflected ceiling plans]



CIVIL

NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
C-AREA-DETN	5	CONTINUOUS	0.006	Yes	Detention area
C-BLDG	7	CONTINUOUS	0.024	Yes	ISU owned building outline or footprint
C-BLDG-IDEN	7	CONTINUOUS	0.006	Yes	Underground communication line
C-BLDG-NMBR	7	CONTINUOUS	0.006	Yes	Building numbers
C-BLDG-OFF	118	CONTINUOUS	0.002	Yes	Off-campus buildings, non-ISU buildings
C-BLDG-PATT	227	CONTINUOUS	DEFAULT	Yes	Building shading or patterns
C-COMM-UNDR	7	CONTINUOUS	0.002	Yes	Underground communication lines
C-COMM	7	CONTINUOUS	0.002	Yes	Site communication / telephone poles, boxes, towers
C-FIRE-UNDR	7	CONTINUOUS	0.002	Yes	Fire protection - underground lines
C-FIRE	7	CONTINUOUS	0.002	Yes	Fire protection - hydrants, connections
C-NGAS-UNDR	7	CONTINUOUS	0.002	Yes	Natural gas - underground lines
C-NGAS	7	CONTINUOUS	0.002	Yes	Natural gas - manholes, meters, storage tanks
C-PKNG-CARS	7	CONTINUOUS	0.002	Yes	Graphics illustrations of cars
C-PKNG-DRAN	7	CONTINUOUS	0.002	Yes	Parking lot drainage slope indications
C-PKNG-ISLD	7	CONTINUOUS	0.002	Yes	Parking islands
C-PKNG-STRP	7	CONTINUOUS	0.002	Yes	Parking lot striping, handicapped symbol
C-PKNG	7	CONTINUOUS	0.002	Yes	Parking lots
C-PKNG-OFF	8	CONTINUOUS	0.002	Yes	Off-campus parking
C-PROP-BRLN	7	CONTINUOUS	0.002	Yes	Bearings and distance labels
C-PROP-CONS	7	CONTINUOUS	0.002	Yes	Construction controls
C-PROP-ESMT	7	CONTINUOUS	0.002	Yes	Easements, right-of-way, setback lines
C-PROP	7	CONTINUOUS	0.002	Yes	Property lines, survey benchmarks
C-RAIL	7	TRACKS	0.002	Yes	Railroads
C-RECR	11	CONTINUOUS	0.006	Yes	Sports and recreation services
C-ROAD	7	CONTINUOUS	0.002	Yes	Roadways
C-ROAD-CNTR	7	CONTINUOUS	0.002	Yes	Center lines
C-ROAD-CURB	7	CONTINUOUS	0.002	Yes	Curbs
C-ROAD-IDEN	250	CONTINUOUS	0.006	Yes	Street names
C-ROAD-INTR	4	CONTINUOUS	0.002	Yes	Interstate highway
C-ROAD-TRAL	92	CONTINUOUS	0.006	Yes	Constitution Trail
C-SIDE	3	CONTINUOUS	0.006	Yes	Sidewalks, Paths, Walkways
C-SSWR-IDEN	7	CONTINUOUS	0.002	Yes	Sanitary sewer identification
C-SSWR-UNDR	7	CONTINUOUS	0.002	Yes	Sanitary sewer - underground lines
C-SSWR	7	CONTINUOUS	0.002	Yes	Sanitary sewer - manholes, pumping stations
C-STRM-UNDR	7	CONTINUOUS	0.002	Yes	Storm drainage pipe - underground
C-STRM	7	CONTINUOUS	0.002	Yes	Storm drainage catch basins, manholes
C-TOPO-BORE	7	CONTINUOUS	0.002	Yes	Test borings
C-TOPO-RTWL	7	CONTINUOUS	0.002	Yes	Retaining wall
C-TOPO-SPOT	7	CONTINUOUS	0.002	Yes	Spot elevations



NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
C-TOPO	7	CONTINUOUS	0.002	Yes	Proposed contour lines and elevations
C-TUNL	120	CONTINUOUS	0.002	Yes	Tunnels
C-TUNL-IDEN	120	CONTINUOUS	0.002	Yes	Tunnel identification
C-WATR-UNDR	7	CONTINUOUS	0.002	Yes	Domestic water - underground lines
C-WATR	7	CONTINUOUS	0.002	Yes	Domestic water - manholes, pumping stations, storage tanks



ELECTRICAL

NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
E-ALRM	4	CONTINUOUS	0.002	Yes	Miscellaneous alarm system
E-AUXL	8	CONTINUOUS	0.002	Yes	Auxiliary system
E-CLOK	7	CONTINUOUS	0.002	Yes	Clock system
E-COMM	5	CONTINUOUS	0.002	Yes	Telephone, communication outlets
E-CTRL-DEVC	4	CONTINUOUS	0.002	Yes	Control system devices
E-CTRL-WIRE	5	CONTINUOUS	0.002	Yes	Control system wiring
E-CTRL	4	CONTINUOUS	0.002	Yes	Electrical control system
E-DATA	4	CONTINUOUS	0.002	Yes	Data outlets
E-FIRE	1	CONTINUOUS	0.002	Yes	Fire alarm, fire extinguishers
E-LITE-CIRC	40	CONTINUOUS	0.002	Yes	Lighting circuits
E-LITE-CLNG	8	CONTINUOUS	0.002	Yes	Ceiling-mounted lighting
E-LITE-EMER	2	CONTINUOUS	0.002	Yes	Emergency lighting
E-LITE-EXIT	1	CONTINUOUS	0.002	Yes	Exit lighting
E-LITE-FLOR	5	CONTINUOUS	0.002	Yes	Floor-mounted lighting
E-LITE-JBOX	9	CONTINUOUS	0.002	Yes	Junction box
E-LITE-NUMB	3	CONTINUOUS	0.002	Yes	Lighting circuit numbers
E-LITE-ROOF	7	CONTINUOUS	0.002	Yes	Roof lighting
E-LITE-SITE	5	CONTINUOUS	0.002	Yes	Site lighting
E-LITE-SPCL	7	CONTINUOUS	0.002	Yes	Special lighting
E-LITE-SWCH	4	CONTINUOUS	0.002	Yes	Lighting switches
E-LITE-WALL	6	CONTINUOUS	0.002	Yes	Wall-mounted lighting
E-LITE	5	CONTINUOUS	0.002	Yes	Lighting
E-POWR-CIRC	4	CONTINUOUS	0.002	Yes	Power circuits
E-POWR-CLNG	8	CONTINUOUS	0.002	Yes	Power ceiling receptacles and devices
E-POWR-EQPM	30	CONTINUOUS	0.002	Yes	Power Equipment
E-POWR-FEED	5	CONTINUOUS	0.002	Yes	Feeders
E-POWR-JBOX	7	CONTINUOUS	0.002	Yes	Junction box
E-POWR-PANL	2	CONTINUOUS	0.002	Yes	Power panels
E-POWR-ROOF	7	CONTINUOUS	0.002	Yes	Roof power
E-POWR-SITE	2	CONTINUOUS	0.002	Yes	Site power
E-POWR-SWBD	6	CONTINUOUS	0.002	Yes	Power switchboards
E-POWR-URAC	7	CONTINUOUS	0.002	Yes	Under floor raceways
E-POWR-WALL	5	CONTINUOUS	0.002	Yes	Power wall outlets and receptacles
E-POWR	5	CONTINUOUS	0.002	Yes	Power
E-RISR	1	CONTINUOUS	0.002	Yes	riser diagram
E-SERT	7	CONTINUOUS	0.002	Yes	Security
E-SITE-LITE	4	CONTINUOUS	0.002	Yes	Site lighting
E-SITE-OVHD	4	CONTINUOUS	0.002	Yes	Overhead lines



NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
E-SITE-POLE	4	CONTINUOUS	0.002	Yes	Electric poles
E-SITE-UNDR	4	CONTINUOUS	0.002	Yes	Underground electrical lines
E-SITE	7	CONTINUOUS	0.002	Yes	Site electrical substations, poles
E-SOUN	6	CONTINUOUS	0.002	Yes	Sound/PA system
E-TVAN	7	CONTINUOUS	0.002	Yes	TV antenna system



INTERIORS/FURNITURE

NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
IF-FURN	5	CONTINUOUS	0.002	Yes	Furniture
IF-FURN -CABT	190	CONTINUOUS	1.002	Yes	Modular cabinets
IF-FURN-CHAR	7	CONTINUOUS	0.002	Yes	Chairs and other seating
IF-FURN-ELEV	7	CONTINUOUS	0.002	Yes	Furniture : 3D views
IF-FURN-FILE	3	CONTINUOUS	0.004	Yes	File cabinets
IF-FURN-FIXD	242	CONTINUOUS	0.002	Yes	Fixed furniture
IF-FURN-FREE	7	CONTINUOUS	0.002	Yes	Furniture : freestanding [desks, credenzas, etc.]
IF-FURN-IDEN	3	CONTINUOUS	0.004	Yes	Furniture identification
IF-FURN-PLNT	96	CONTINUOUS	0.002	Yes	Plants
IF-FURN-PNLS	4	CONTINUOUS	0.005	Yes	Furniture system panels
IF-FURN-POWR	7	CONTINUOUS	0.002	Yes	Furniture system : power designations
IF-FURN-STOR	7	CONTINUOUS	0.002	Yes	Furniture system storage components
IF-FURN-WKSF	230	CONTINUOUS	0.007	Yes	Furniture system work surface components



LANDSCAPE

NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
L-BUS-SHLT	5	CONTINOUS	0.002	Yes	Bus shelters
L-GOLF-FAIR	12	CONTINOUS	0.002	Yes	Golf course fairway
L-GOLF-GREN	102	CONTINOUS	0.002	Yes	Golf course green
L-GOLF-TEE	70	CONTINUOUS	0.002	Yes	Golf course tee
L-GOLF-SAND	41	CONTINOUS	0.002	Yes	Golf course sand trap
L-IRRG	5	CONTINUOUS	0.002	Yes	Irrigation system
L-IRRG-COVR	2	CONTINUOUS	0.002	Yes	Irrigation coverage
L-IRRG-EQPT	4	CONTINUOUS	0.002	Yes	Irrigation equipment
L-IRRG-PIPE	4	CONTINUOUS	0.002	Yes	Irrigation pipe
L-IRRG-SPKL	4	CONTINUOUS	0.002	Yes	Irrigation sprinklers
L-PLNT	3	CONTINUOUS	0.002	Yes	Plant and landscape materials
L-PLNT-BEDS	7	CONTINUOUS	0.002	Yes	Various landscape beds
L-PLNT-GRND	1	CONTINUOUS	0.002	Yes	Ground covers and vines
L-PLNT-PLAN	2	CONTINUOUS	0.002	Yes	Planting plants
L-PLNT-TREE	3	CONTINUOUS	0.002	Yes	Trees
L-PLNT-TURF	3	CONTINUOUS	0.002	Yes	Lawn Areas
L-RETN-WALL	3	CONTINUOUS	0.002	Yes	Retaining Walls
L-SITE	2	CONTINUOUS	0.002	Yes	Site improvements
L-SITE-BRDG	1	CONTINUOUS	0.002	Yes	Bridges
L-SITE-DECK	2	CONTINUOUS	0.002	Yes	Decks, patios, and plazas
L-SITE-DRAN	2	CONTINUOUS	0.002	yes	Landscaping drains
L-SITE-FENC	1	FENCE	0.002	Yes	Fencing
L-SITE-FURN	2	CONTINUOUS	0.002	Yes	Site furnishings
L-SITE-PLAY	1	CONTINUOUS	0.002	Yes	Play structures
L-SITE-POOL	4	CONTINUOUS	0.002	Yes	Pools and spas
L-SITE-SIGN	1	CONTINUOUS	0.002	Yes	Signs
L-SITE-SPRT	3	CONTINUOUS	0.002	Yes	Sports fields
L-SITE-STEP	2	CONTINUOUS	0.002	Yes	Steps
L-SITE-WALL	6	CONTINUOUS	0.002	Yes	Walls
L-WALK	7	CONTINUOUS	0.002	Yes	Walks and steps
L-WALK-PATT	7	CONTINUOUS	0.002	Yes	Walks and steps hatch patterns
L-WATR	4	CONTINUOUS	0.002	Yes	Water
L-WATR-LAKE	4	CONTINUOUS	0.002	Yes	Lakes
L-WATR-STRM	4	CONTINUOUS	0.002	Yes	Stream



GENERAL

NAME	COLOR	LINETYPE	LINWEIGHT	PLOT	DESCRIPTION
G-ACCS	7	CONTINUOUS	Default	Yes	Access plan
G-ANNO-DIMS	3	CONTINUOUS	Default	Yes	Dimensions
G-ANNO-GRID	117	DOTTED	Default	Yes	Gridlines
G-ANNO-KEYN	7	CONTINUOUS	Default	Yes	Key Notes
G-ANNO-LEGN	7	CONTINUOUS	Default	Yes	Legends and schedules
G-ANNO-NOTE	7	CONTINUOUS	Default	Yes	Notes
G-ANNO-NPLT	7	CONTINUOUS	Default	No	Construction lines, nonplotting information
G-ANNO-NRTH	7	CONTINUOUS	Default	Yes	North or orientaion symbol
G-ANNO-REDL	1	CONTINUOUS	0.020	Yes	Redline
G-ANNO-REVS	241	CONTINUOUS	Default	Yes	Revisions
G-ANNO-SYMB	7	CONTINUOUS	0.010	Yes	Symbols
G-ANNO-TEXT	7	CONTINUOUS	Default	Yes	Text
G-ANNO-TITL	7	CONTINUOUS	Default	Yes	Title
G-ANNO-TTLB	7	CONTINUOUS	Default	Yes	Border and title block
G-CODE	7	CONTINUOUS	Default	Yes	Code compliance plan
G-EVAC	7	CONTINUOUS	Default	Yes	Evacuation Plan
G-FIRE	7	CONTINUOUS	Default	Yes	Fire protection plan
G-PLAN	7	CONTINUOUS	Default	Yes	Floor plan : key plan
G-ANNO-RADI	4	CONTINUOUS	0.012	Yes	Distances away from campus
G-SITE	7	CONTINUOUS	Default	Yes	Site plan : key map
G-SECT	2	CONTINUOUS	Default	Yes	Section Symbols
G-SECT-LINE	2	CONTINUOUS	Default	Yes	Section lines



MECHANICAL

NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
M-CHIM	1	CONTINUOUS	0.002	Yes	Prefabricated chimneys
M-CMPA-CEQP	9	CONTINUOUS	0.002	Yes	Compressed air equipment
M-CMPA-CPIP	9	CONTINUOUS	0.002	Yes	Compressed air piping
M-CMPA-PEQP	30	CONTINUOUS	0.002	Yes	Process air equipment
M-CMPA-PPIP	6	CONTINUOUS	0.002	Yes	Process air piping
M-CMPA	9	CONTINUOUS	0.002	Yes	Compressed air systems
M-CONT-THER	6	CONTINUOUS	0.002	Yes	Thermostats
M-CONT-WIRE	4	CONTINUOUS	0.002	Yes	Low voltage wiring
M-CONT	5	CONTINUOUS	0.002	Yes	Controls and instrumentation
M-CWTR-EQPM	30	CONTINUOUS	0.002	Yes	Chilled water equipment
M-CWTR-PIPE	3	CONTINUOUS	0.002	Yes	Chilled water piping
M-CWTR	5	CONTINUOUS	0.002	Yes	Chilled water systems
M-DUST-DUCT	7	CONTINUOUS	0.002	Yes	Dust and fume ductwork
M-DUST-EQPM	7	CONTINUOUS	0.002	Yes	Dust and fume collection equipment
M-DUST	7	CONTINUOUS	0.002	Yes	Dust and fume collection system
M-ELHT-EQPM	7	CONTINUOUS	0.002	Yes	Electric heat equipment
M-ENER-EQPM	7	CONTINUOUS	0.002	Yes	Energy management equipment
M-ENER-WIRE	7	CONTINUOUS	0.002	Yes	Energy management wiring
M-ENER	7	CONTINUOUS	0.002	Yes	Energy management system
M-EXHS-DUCT	4	CONTINUOUS	0.002	Yes	Exhaust system ductwork
M-EXHS-EQPM	30	CONTINUOUS	0.002	Yes	Exhaust system equipment
M-EXHS-RFEQ	5	CONTINUOUS	0.002	Yes	Rooftop exhaust equipment
M-EXHS	4	CONTINUOUS	0.002	Yes	Exhaust system
M-FUEL-GGEP	4	CONTINUOUS	0.002	Yes	Fuel gas general piping
M-FUEL-GPRP	9	CONTINUOUS	0.002	Yes	Fuel gas process piping
M-FUEL-OGEP	6	CONTINUOUS	0.002	Yes	Fuel oil general piping
M-FUEL-OPRP	5	CONTINUOUS	0.002	Yes	Fuel oil process piping
M-FUEL	52	CONTINUOUS	0.002	Yes	Fuel system piping
M-FUME-EQPM	5	CONTINUOUS	0.002	Yes	Fume hoods
M-FUME-EXHS	5	CONTINUOUS	0.002	Yes	Fume hood exhaust system
M-HOTW-EQPM	30	CONTINUOUS	0.002	Yes	Hot water equipment
M-HOTW-PIPE	2	CONTINUOUS	0.002	Yes	Hot water piping
M-HOTW	1	CONTINUOUS	0.002	Yes	Hot water heating system
M-HVAC-CDFF	5	CONTINUOUS	0.002	Yes	HVAC ceiling diffusers
M-HVAC-DUCT	4	CONTINUOUS	0.002	Yes	HVAC ductwork
M-HVAC-EQPM	30	CONTINUOUS	0.002	Yes	HVAC equipment
M-HVAC-PATT	7	CONTINUOUS	0.002	Yes	HVAC hatching and patterns
M-HVAC-ODFF	5	CONTINUOUS	0.002	Yes	HVAC other diffusers



NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
M-HVAC-RDFF	5	CONTINUOUS	0.002	Yes	Return air diffusers
M-HVAC-SDFF	7	CONTINUOUS	0.002	Yes	Supply diffusers
M-HVAC	5	CONTINUOUS	0.002	Yes	HVAC system
M-LGAS-EQPM	30	CONTINUOUS	0.002	Yes	Laboratory gas equipment
M-LGAS-PIPE	4	CONTINUOUS	0.002	Yes	Laboratory gas piping
M-LGAS	4	CONTINUOUS	0.002	Yes	Laboratory gas systems
M-MACH	7	CONTINUOUS	0.002	Yes	Machine shop equipment
M-MDGS-EQPM	7	CONTINUOUS	0.002	Yes	Medical gas equipment
M-MDGS-PIPE	7	CONTINUOUS	0.002	Yes	Medical gas piping
M-MDGS	7	CONTINUOUS	0.002	Yes	Medical gas systems
M-NGAS-EQPM	30	CONTINUOUS	0.002	Yes	Natural gas equipment
M-NGAS-PIPE	9	CONTINUOUS	0.002	Yes	Natural gas piping
M-PROC-EQPM	30	CONTINUOUS	0.002	Yes	Process equipment
M-PROC-PIPE	5	CONTINUOUS	0.002	Yes	Process piping
M-PROC	2	CONTINUOUS	0.002	Yes	Process systems
M-REFG-EQPM	30	CONTINUOUS	0.002	Yes	Refrigeration equipment
M-REFG-PIPE	7	CONTINUOUS	0.002	Yes	Refrigeration piping
M-REFG	5	CONTINUOUS	0.002	Yes	Refrigeration systems
M-SPCL-EQPM	30	CONTINUOUS	0.002	Yes	Special systems equipment
M-SPCL-PIPE	7	CONTINUOUS	0.002	Yes	Special systems piping
M-SPCL	7	CONTINUOUS	0.002	Yes	Special systems
M-STEM-CONP	5	CONTINUOUS	0.002	Yes	Steam systems condensate piping
M-STEM-EQPM	30	CONTINUOUS	0.002	Yes	Steam systems equipment
M-STEM-HPIP	7	CONTINUOUS	0.002	Yes	High pressure steam piping
M-STEM-LPIP	4	CONTINUOUS	0.002	Yes	Low pressure steam piping
M-STEM-MPIP	9	CONTINUOUS	0.002	Yes	Medium pressure steam piping
M-STEM	1	CONTINUOUS	0.002	Yes	Steam systems



PLUMBING					
NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
P-ACID-PIPE	7	CONTINUOUS	0.002	Yes	Acid, alkaline, oil waste pipe
P-ACID	7	CONTINUOUS	0.002	Yes	Acid, alkaline, oil waste systems
P-DOMW-CPIP	7	CONTINUOUS	0.002	Yes	Domestic cold water pipe
P-DOMW-EQPM	30	CONTINUOUS	0.002	Yes	Domestic hot and cold water equipment
P-DOMW-HPIP	7	CONTINUOUS	0.002	Yes	Domestic hot water pipe
P-DOMW-RISR	7	CONTINUOUS	0.002	Yes	Domestic hot and cold water risers
P-DOMW	7	CONTINUOUS	0.002	Yes	Domestic hot and cold water system
P-EQPM	30	CONTINUOUS	0.002	Yes	Plumbing miscellaneous equipment
P-FIXT	7	CONTINUOUS	0.002	Yes	Plumbing fixtures
P-JNTR-SINK	4	CONTINUOUS	0.002	Yes	Janitorial sinks
P-SANR-EQPM	7	CONTINUOUS	0.002	Yes	Sanitary equipment
P-SANR-FIXT	7	CONTINUOUS	0.002	Yes	Sanitary Plumbing Fixtures
P-SANR-FLDR	7	CONTINUOUS	0.002	Yes	Floor drains
P-SANR-PIPE	7	CONTINUOUS	0.002	Yes	Sanitary piping
P-SANR-RISR	7	CONTINUOUS	0.002	Yes	Sanitary risers
P-SANR	7	CONTINUOUS	0.002	Yes	Sanitary drainage
P-STRM-PIPE	7	CONTINUOUS	0.002	Yes	Storm drain piping
P-STRM-RFDR	7	CONTINUOUS	0.002	Yes	Roof drains
P-STRM-RISR	7	CONTINUOUS	0.002	Yes	Storm drain risers
P-STRM	7	CONTINUOUS	0.002	Yes	Storm drainage system



STRUCTURAL					
NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
S-ABLT	2	CONTINUOUS	0.002	Yes	Anchor bolts
S-BEAM	10	CONTINUOUS	0.012	Yes	Beams
S-COLS	9	CONTINUOUS	0.012	Yes	Columns
S-DECK	7	CONTINUOUS	0.012	Yes	Structural floor deck
S-FNDN-PILE	9	CONTINUOUS	0.012	Yes	Piles, drilled piers
S-FNDN-RBAR	11	CONTINUOUS	0.002	Yes	Foundation reinforcing
S-FNDN	9	CONTINUOUS	0.012	Yes	Foundation
S-GRID-DIMS	7	CONTINUOUS	0.002	Yes	Column grid dimensions
S-GRID-EXTR	7	CONTINUOUS	0.002	Yes	Column grid outside building
S-GRID-IDEN	7	CONTINUOUS	0.002	Yes	Column grid tags
S-GRID-INTR	7	CONTINUOUS	0.002	Yes	Column grid inside building
S-GRID	7	CONTINUOUS	0.002	Yes	Column grid
S-JOIS	10	CONTINUOUS	0.012	Yes	Joists
S-METL	7	CONTINUOUS	0.002	Yes	Miscellaneous metal
S-SLAB-EDGE	7	CONTINUOUS	0.012	Yes	Edge of slab
S-SLAB-JOIN	7	CONTINUOUS	0.002	Yes	Slab control joints
S-SLAB-RBAR	7	CONTINUOUS	0.002	Yes	Slab reinforcing
S-SLAB	7	CONTINUOUS	0.002	Yes	Slab
S-WALL	1	CONTINUOUS	0.012	Yes	Structural bearing or shear walls



TELECOMMUNICATIONS					
NAME	COLOR	LINETYPE	LINEWEIGHT	PLOT	DESCRIPTION
T-CABL	4	CONTINUOUS	0.002	Yes	Cable plan
T-DIAG	5	CONTINUOUS	0.002	Yes	Diagram
T-EQPM	30	CONTINUOUS	0.002	Yes	Equipment plan
T-JACK	4	CONTINUOUS	0.002	Yes	Data / telephone jacks



GLOSSARY

Word	Command	Definition
Annotation	None	Texts or symbols often used for notes or general comments.
Attribute	None	Elements in a title or revision block (such as project name, date, scale, firm name, etc.) that can be modified.
Block	block, b, bmake, bmod, cadblockdialog	Defines a group of objects as a single-named object or entity, creates symbols.
Bhatch (Hatch)	bh, bhatch, h	Applies associative hatch patterns to objects with boundaries specified.
Chameleon	None	Entity that is on the 0 layer and is able to transform to another layer.
Discipline	None	Primary method of classification for layer names. This is often an abbreviation of the skill discipline needed for the layer. (See Chart 1.0 to reference)
Extents	None	Option used when plotting that allows the plot area to consume the whole page.
Explode	xplode, x, xp	Explodes complex objects into simpler objects.
Layer	Layer	Use layers to control the visibility of objects and to assign properties such as color and linetype. Objects on a layer normally assume the properties of that layer. However, you can override any layer property of an object.
Ltscale	ltscale, lts	Sets the global scale factor of lifestyles. Ltscale is <i>always 50% of the scale factor. (Can be found in Chart 2.0)</i>



COMMON LAYERS Quick Reference

NAME	COLOR	LINEWEIGHT	PLOT	DESCRIPTION
G-ANNO-NRTH	7	Default	Yes	North or orientation symbol
A-AREA	6	0.004	Yes	Area square footage
A-AREA-IDEN	12	0.01	Yes	Area identification, room numbers
A-DOOR	1	0.002	Yes	Doors
A-FLOR-EVTR	4	0.002	Yes	Elevator car and equipment
A-FLOR-STRS	13	0.002	Yes	Stair treads, escalators, ladders
A-FURN-FIXD	242	0.002	Yes	Fixed furniture
A-GLAZ	4	0.002	Yes	Windows, window walls, curtain walls, glazed partitions
A-GLAZ-SILL	7	0.002	Yes	Window sills
A-WALL-CAB	51	0.002	Yes	Wall cabinet
A-WALL-CRTL	2	0.002	Yes	Counter-built in
A-WALL-EXTR	10	0.014	Yes	Exterior walls
A-WALL-FULL	2	0.01	Yes	Full-height walls, stair and shaft walls, walls to structure
A-WALL-JAMB	9	0.002	Yes	Door and window jambs
A-WALL-MOVE	4	0.002	Yes	Moveable partitions
G-ANNO-NOTE	7	Default	Yes	Notes
G-ANNO-NPLT	7	Default	No	Construction lines, non-plotting information
G-ANNO-TEXT	7	Default	Yes	Text
G-ANNO-TITL	7	Default	Yes	Title
G-ANNO-TTLB	7	Default	Yes	Border and title block
P-FIXT	7	0.002	Yes	Plumbing fixtures
P-JNTR-SINK	4	0.002	Yes	Janitorial sinks
S-FNDN	9	0.012	Yes	Foundation



Multileader	mleader	Multileader is a pointing device that incorporates texts to describe a portion of the drawing. A multileader object typically consists of an arrowhead, a horizontal landing, a leader line or curve, and either a multiline text object or a block.
Model Space	mspace, ms	Space where your drawing exists. Command switches the drawing from paper space to model space.
Multileader Style	mleaderstyle	Changes the settings for multileaders.
Mview	mview, mv	Creates and manipulates overlapping viewports.
Paper Space	pspace, ps	Space where layouts can be imported to and altered based on printing preferences. Mviews are able to be created in order to plot what is in model space. Command switched from model space to paper space in layout mode.
Polyline	pline, pl	Draws complex 2D lines made of straight and curved sections of constant and variable width; treated as a single object. (short for Poly Line)
Plot	plot, print, dwfout	Creates hard copies of drawings or files.
Pstscale	psltscale	Usually all layouts are set with PSLTSCALE=0 [OFF], allowing dashed lines to be controlled solely by LTSCALE.
Properties	ch, mo, pr, props, ddchprop, ddmodify	Opens and closes the Properties palette for examining and modifying the properties of selected objects.
Purge	purge, pu	Removed unused, named objects from drawing: blocks, dimension styles, layers, linetypes, plot styles, shapes, text styles, table styles, etc.
Style	st, ddstyle	Creates and modifies text styles, which define the properties of fonts.



Template	None	A dwt file that contains preset preferences and standards and used when starting a drawing from scratch. It can only be saved as a .dwt file.
Units	units, un, ddunits	Controls the display and format of coordinates and angles, as well as the orientation of angles.
XREF (External Reference)	xref, xr	A reference to another external .dwt file that you can make act as though it is part of your drawing. When something is updated on the XREF, it is updated on the other .dwg that it is referenced to.



REFERENCES

- AIA National CAD Standards
- DSC CAD Standards, 2007
- Grabowski, Ralph. The Illustrated AutoCAD 2009 Quick Reference. New York: Cengage Learning. 2009.
- Rutgers CAD Standard Guideline, 2008



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