LACCD CAD STANDARDS
Revision 4.1

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1. Introduction

1.1 LACCD Project CAD Standards

This CAD Standard shall be used for all companies working on the LACCD project.

> **At various points in this manual you may see references to the National CAD Standard (NCS) or the AIA guidelines. We have endeavored to comply with those guidelines as much as was deemed practicable.**

THE INSTRUCTIONS, STANDARDS AND GUIDELINES CONTAINED IN THIS LACCD CAD STANDARDS Revision 4.1 ARE FOR USE BY CONSULTANTS AND CONTRACTORS RETAINED BY THE LOS ANGELES COMMUNITY COLLEGE DISTRICT FOR LOS ANGELES COMMUNITY COLLEGE DISTRICT PROJECTS AND MAY NOT BE SUITABLE IN THIS, OR ANY MODIFIED, FORM FOR USE ON ANY OTHER PROJECTS OR FOR ANY OTHER PURPOSES AND ANY SUCH USE OR MODIFICATION IS AT THE SOLE RISK OF THE USER.

1.2 Revision History

Initial Issue – September, 2001
Revision 1 – September, 2003
Revision 2 – September, 2004
Revision 3 – June, 2009
Revision 3.1 – June, 2010
Revision 4.1 – Feb, 2020

1.3 Software Guidelines

1.1. Software Guidelines

At time of publication this manual was based on the following software versions and capabilities.

AutoCAD 2020 or later
Autodesk Revit 2020 or later
Autodesk MEP 2020 or later
Autodesk Civil 3D 2020 or later
Bentley CONNECT 10.00.04.17

2. Drawing Requirements

2.1 General
In order to maintain consistency across projects and campuses all project teams shall utilize the LACCD templates for execution of Drawing Documentation. The templates are based upon LACCD CAD Standards to provide consistent symbols, text styles, title blocks, and annotation across projects. These templates have been developed in BIM Authoring tools for the purpose of sheet development and extraction as part of milestone submittals. For this purpose, LACCD BIM standards shall reference these standards as noted.

2.2 Open Platform and Software Specific Requirements

While the LACCD CAD and BIM Standards have been written to accommodate various types of software. However, in some instances software specific work flow requires additional information and and requires additional explanation in this document. These sections have been italicized, prefaced, and assigned a color designation as follows:

Revit Users – *Green Text*

Autodesk MEP, Civil 3D – Blue Text

Microstation Users – *Purple Text*

2.3 Project Templates

LACCD Templates can be found on the Build-LACCD Website.

Project Templates include standard title blocks, annotation symbols, text styles, and modeling components for use on LACCD Projects. Templates are revised as content becomes updated, project teams should download the latest template just prior to commencing work. periodically

Campus Codes

Campus Codes (Table 1) shall be used to organize all projects by a consultant at a particular college. Folders consist of the 3-character Campus code, and shall be placed directly below the LACCD Project Directory as shown above. Campus Name can follow campus code if desired:

b. Project Number

Prior to commencing work, project teams shall be assigned an LACCD Project Number by the College Project Manager. This number shall be used for organizing the project files, and should include the common name on the file name project.

- (Example: Mission College CPM assigns the **East Complex** a project number of 04M-418.Therefore project folder shall be named **04M-418 East Complex**)

Campus Codes Table 1	
Campus	**CODE**
LA City College	01C
East LA College	02E
LA Harbor College	03H
LA Mission College	04M
Pierce College	05P
LA Southwest College	06S
LA Trade-Technical College	07T
LA Valley College	08V
West LA College	09W
District Wide	10D
South Gate (ELAC Satellite)	22G
VDK (LACC Satellite)	21N

c. Discipline Folders

Each discipline shall be assigned a folder corresponding to a Discipline Designator as listed in Table 2. All project files received and referenced from each discipline shall be

organized in this folder. As a project progresses, the contents within these discipline folders will expand, and each deliverable should be clearly organized in its own folder.

d. BIM Folder - BIM Files shall be sorted by model files and sheet files.

Model Files - Original files from other disciplines should be linked from their discipline folder location and relative path to models. Model file names shall follow file naming convention outlined in Section 3.1 Model file Naming of this document

Sheet Files - PDF and dwg (dgn) formats of the most current sheets shall be maintained in this folder and organized with sheet file naming outlined in File Naming Section 3.2 Sheet Naming and Numbering of this document.

Discipline Designators Table 2	
Discipline (in alphabetical order)	**Designator**
Architectural	**A**
Geotechnical	**B**
Civil	**C**
Process	**D**
Electrical	**E**
Fire Protection	**F**
General	**G**
Hazardous Materials	**H**
Interiors	**I**
Landscape	**L**
Mechanical	**M**
Facilities / Operations	**O**
Plumbing	**P**
Equipment/Specialty Design	**Q**
Structural	**S**
Telecommunication	**T**
Security	**TY**
Survey/Mapping	**V**
Civil Works	**W**
Other Disciplines	**X**
Contractor/ Shop Drawings	**Z**

Revit Users - Revit does not have individual sheet files, record dwg and pdf files therefore they shall be exported to the sheet folder at each project milestone or submittal

e. Support Files - Standard items needed for the project, such as a specific pen table, unique symbols, or applications (lisp, script, etc.), logos and graphics.

f. Other Folders- Renderings, analyses, LEED, etc., will have their own folders which will be populated as the project progresses.

3. File Naming Guidelines

Two distinct types of CAD 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 can be generated directly from the BIM. A **sheet file** is synonymous with a plotted CAD drawing file, and refers to a selected view or portion of referenced model file(s) within a border sheet.

NOTE: Some BIM Authoring software, such as Revit, organize sheets within a single model file and need to be managed differently. In these instances, variations to the standard shall be noted and explained in this section.

3.1 Model File Naming
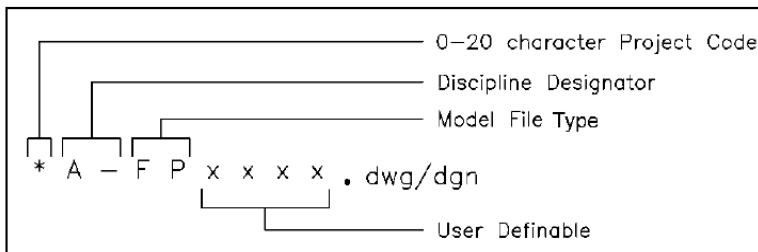
Source –AEC CAD Standards 6.0

Project Code – This shall be the LACCD assigned project code (i.e. **04M418**)

Discipline Designator (Ref. Table 2)– Prefix corresponding to team member discipline

Model File Type – For programs such as **AutoCAD MEP** and **Bentley BIM** that require models to be created using several files, model file types listed in Table 4 shall be used. For multiple floors, assign a user defined variable corresponding to each floor.

- **Example:** "**04M418-A-FP01**" would correspond to Architect's First Floor Plan for project 04M418.

Model File Name Format

Level 1 Discipline Designator and Placeholder (Hyphen)

Level 2 Discipline Designator

Type of Model

Optional Prefix

User-Defined Model Type Modifiers

File Name Extension

Legend -

A = alphabetical character
N = numerical character
U = user-defined character
O = optional character (user-defined)
EXT = file name extension

Δ

Example

Model File Name for a floor plan

Source –AEC CAD Standards 6.0

During project collaboration, coordination by floor needs to occur and be tracked by date. In this instance, Project Teams shall use similar naming convention noted above with a User Defined Variable of the date (month-date-year)

- **Example: "04M418-A-FP01-051509"**

*For **Revit** based models in which the entire model is a single file, Model File Type shall be replaced with a suffix of "bldg" for building. If there are multiple buildings, assign a letter to "bldg" and include in suffix:*

- **Example: "04M418-A-BldgA"**

Model File Types

Discipline	File Designator	Description	Notes:
AE Civil:			
	BP	Boring Plan	
	CD	Civil Demolition	
	CG	Civil Grading	
	CI	Civil Improvements	
	CN	Civil Nodes	
	CP	Civil Paving	
	CS	Civil Site	
	CT	Civil Transportation	
	CU	Civil Utilities	
	DD	Storm Drain Detail	
	DF	Fencing Detail	
	DM	Miscellaneous Detail	
	DP	Demolition Plan	
	DR	Railroad Detail	
	DS	Sanitary Sewer Detail	
	DV	Paving Detail	
	DW	Water Detail	
	ET	Existing Topo	
	ER	Eco-restoration plan	
	FC	Flood control plan	
	GP	Grading Plan	
	HM	Hydrology Map	
	JP	Jointing Plan	
	PC	Parcel Plan	
	PD	Storm Drain Profile	
	PR	Profile	
	PM	Miscellaneous Profile	
	PP	Plan And Profile	
	PR	Road Profile	
	PS	Sanitary Sewer Profile	
	PU	Utility Plan And Profile	
	PV	Paving Plan	
	PW	Water Profile	
	RW	Right Of Way Plan	
	SB	Building Section	
	SM	Miscellaneous Section	
	SP	Site Plan	
	SR	Road Section	

	SS	Site Section	
	ST	Striping Plan	
	SV	Survey And Mapping Plan	
	TP	Transportation Site Plan	
	UP	Existing Utilities Plan	

Discipline	File Designator	Description	Notes:
ARCHITECTURAL & INTERIORS:			
	3D	Isometric/3D	
	AC	Area Calc./Occupancy Plan	
	AD	Architectural Demolition	Optional
	AE	Architectural Elements	
	AF	Architectural Finishes	
	AG	Architectural Graphics	
	AI	Architectural Interiors	
	AS	Architectural Site	
	BR	Border	
	CP	Reflected Ceiling Plan	Optional
	DP	Demolition Plan	
	DT	Detail	
	EL	Elevation	
	EP	Enlarged Plan	
	FE	Fire Egress Plan	Optional
	FI	Finish And Material Plan	Optional
	FP	Floor Plan	
	FU	Furniture Plan	
	GN	General Notes	
	GP	Geometry Plan	
	GR	Grid Layout	
	IE	Interior Elevation	
	ID	Interior Demolition	
	IF	Interior Furnishings	
	IS	Interior Specialties	Optional
	LA	Legend And Abbreviations	
	LP	Landscape Planting	Optional
	LR	Landscape Relocation	
	MP	Master Layout Plan	Optional
	PC	Power & Communication Plan	
	QP	Equipment Plan	
	RP	Roof Plan	
	SC	Section	
	SH	Schedule	
	SP	Site Plan	
	SS	Specialty Systems	Optional
	VC	Vertical Circulation Plan	Optional
	WS	Wall Section	
	XD	Existing/Demolition Plan	
	XE	Enlarged Elevation	

	XP	Existing Plan	
	XR	Existing Reflected Ceiling	
	XS	Enlarged Section	

Discipline	File Designator	Description	Notes
A/E STRUCTURAL:			
	BF	Basement Foundation Plans	
	CL	Column Plans	
	FF	Floor Framing Plans	
	FM	Mezzanine Floor Plans	
	FP	Foundation Plan	
	GD	Column Grids	
	PF	Pile Foundation Plans	
	RF	Roof Framing Plan	
	WS	Wall Sections	
	XE	Enlarged Floor Plan	
	XL	Enlarged Floor Plan	
	XS	Enlarged Section	

Discipline	File Designator	Description	Notes:
ELECTRICAL:			
	CE	Communication Enlarged Plan	
	CM	Communications Plan	
	CV	Cover Sheets	
	DG	Diagrams	
	DP	Demolition Plan	
	DT	Detail	
	ED	Electrical Demolition	
	EL	Electrical Lighting	
	ET	Electrical Telecommunications	
	EU	Electrical Utilities Plan	
	EY	Electrical Auxiliary Systems	
	FA	Fire Alarm Plan	
	FD	Feeder Plan	
	FE	Fire Alarm Enlarged Plan	
	FX	Fire Protection Suppression	
	GR	Grounding Plan	
	KP	Key Plans	
	LA	Legend And Abbreviations	
	LE	Lighting Enlarged Plan	
	LP	Lighting Plan	
	PA	Public Address Plan	
	PE	Power Enlarged Plan	
	PW	Power Distribution Plan	
	QP	Equipment Plan	
	SC	Section	
	SH	Schedules	
	SS	Special Systems Plan	
	UG	Underground Plan	
	XD	Existing/Demolition Plan	

Discipline	File Designator	Description	Notes:
PLUMBING:			
	CV	Cover Sheets	
	DG	Diagrams	
	DT	Detail	
	EL	Elevation	
	KP	Key Plans	
	LA	Legend And Abbreviations	
	PD	Plumbing Demolition	
	PL	Plumbing Plan	
	PP	Plumbing Piping	
	PQ	Plumbing Equipment	
	SC	Section	
	SH	Schedules	
	XP	Existing Plan	

Discipline	File Designator	Description	Notes:
MECHANICAL:			
	CV	Cover Sheets	
	DG	Diagrams	
	DT	Detail	
	EL	Elevation	
	FP	Fire Protection Plan	
	KP	Key Plans	
	LA	Legend And Abbreviations	
	MD	Demolition Plan	
	MH	Mechanical HVAC	
	MI	Mechanical Instrumentation	
	MP	Mechanical Piping	
	QP	Equipment Plan	
	SC	Section	
	SH	Schedules	
	XP	Existing Plan	

3.2   Sheet Files and Sheet Naming and Numbering
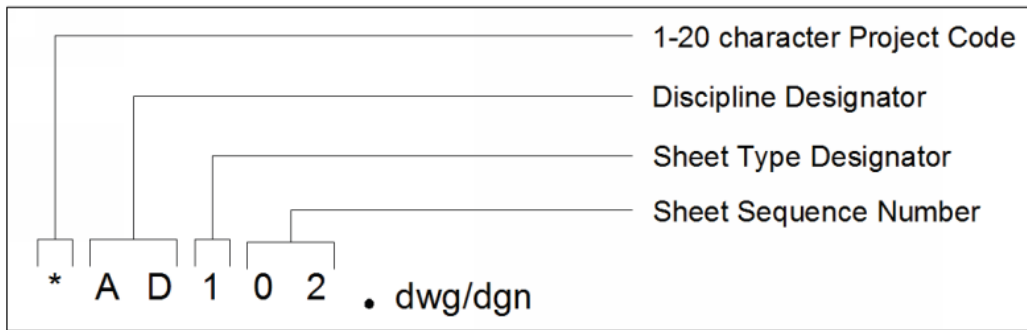
Source –AEC CAD Standards 6.0

Discipline Designator Name Format

Level 1 Discipline Designator

Level 2 Discipline Designator

Discipline Character

Modifier Character

A = alphabetical character
N = numerical character

Sheet ID Name Format

Discipline Designator

Sheet Type Designator

Sheet Sequence Number

A = alphabetical character
N = numerical character

Example

Sheet File Name containing the first floor plan of a building

Source –NCS CAD Standards 6.0

3.3 Discipline Designators

Discipline Designators shall follow same convention as Model File Naming except that no hyphen after the discipline designator shall be used.

Sheet Type Designator Sequence reflect the sequential order for major groupings of sheet types as defined byTable 3. For floor plans, sheet numbers shall coincide with the corresponding level. (i.e. 01 – first floor to 09 – 9th floor, for basement levels, use "B"suffix,

Discipline Designator by Sheet Set Order Table 3	
Discipline (in order of sheet sequence)	**Designator**
General	G
Hazardous Materials	H
Survey/Mapping	V
Geotechnical	B
Civil	C
Landscape	L
Structural	S
Architectural	A
Interiors	I
Equipment/Specialty Design	Q
Fire Protection	F
Plumbing	P
Process	D
Mechanical	M
Electrical	E
Distributed Energy	W
Telecommunication	T
Resource	R
Security	TY
Other Disciplines	X
Contractor/ Shop Drawings	Z
Facilities / Operations	O

Examples:

A201.dwg *(A201)*=	Architectural First Floor Plan Sheet A201
A201b.dwg *(A201b)*=	Architectural Basement Level 1A201b
C412.dwg *(C412)*=	Civil Construction Phasing – Second Sheet C412
S203.dwg *(S203)*=	Structural Framing Plan – Third Floor Sheet S203
M401.dwg *(M401)*=	Mechanical HVAC Air Flow Diagram Sheet M401
E113.dwg *(E113)*=	Electrical Single Line Diagram – Third Sheet E113

- Project Team does not need to include project code for sheet files. However, if Project Team elects to do so, naming needs to be consistent and include project code across all trades.

AutoCAD MEP (Microstation) – Each sheet shall have its own file, and its own layout in Paper Space
(Sheet Models)

Illustration of a Typical drawing set:

G — General	
H — Hazardous Materials	
V — Survey/Mapping	
B — Geotechnical	
C — Civil	
L — Landscape	
S — Structural	
A — Architectural	
I — Interiors	
Q — Equipment	
F — Fire Protection	
P — Plumbing	
D — Process	
M — Mechanical	
E — Electrical	
W — Distributed Energy	
T — Telecommunications	
R — Resource	
X — Other Disciplines	
Z — Contractor/Shop Drawings	
O — Operations	
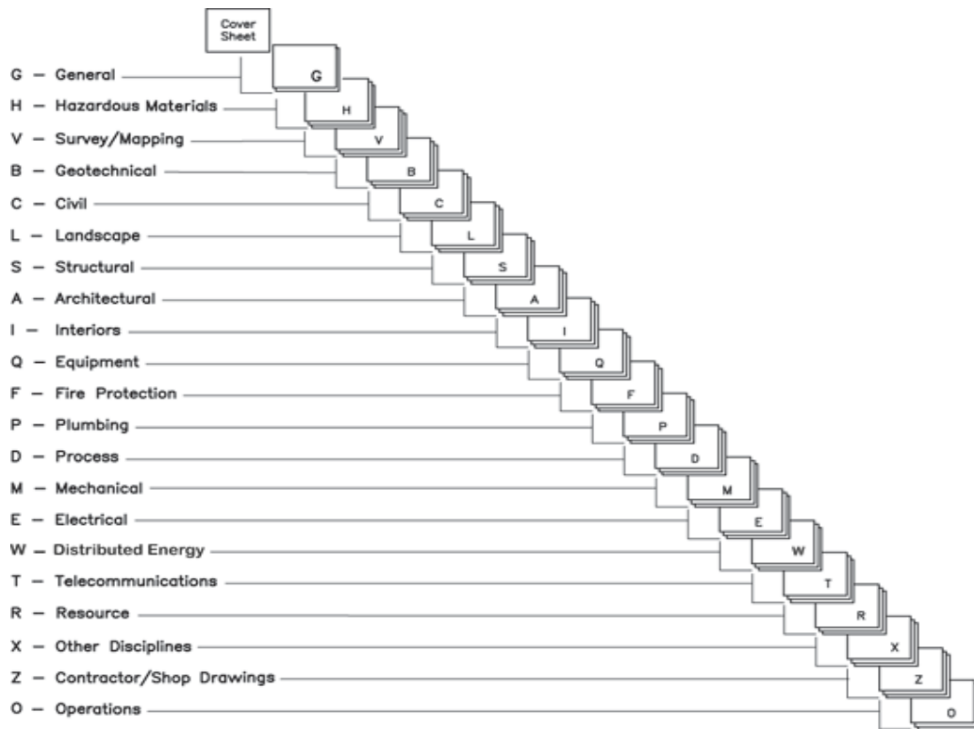
Source –NCS CAD Standards 6.0

SHEET TYPE DESIGNATORS

0	**General** (symbols legend, notes, etc.)
1	**Plans** (horizontal views and combination Plan & Profile)
2	**Elevations and Profiles** (vertical views)
3	**Sections** (sectional views, wall sections)
4	**Large-Scale Views** (Scaled up reproductions of plans, elevations, Δ or sections that are not details)
5	**Details**
6	**Schedules and Diagrams**
7	**User Defined** (for types that do not fall in other categories, including typical detail sheets)
8	**User Defined** (for types that do not fall in other categories)
9	**3D Representations** (isometrics, perspectives, photographs)

Source –NCS CAD Standards 6.0

Sheet Type and Sequencing:

General			
Discipline Designator	Sheet Type Designator	Sheet Sequence Number	Description
G	0	01	Cover Sheet
G	0	02	Drawing Index, Vicinity Map, Symbols and Abbreviations
G	0	03	General Notes
G	0	04	Title 24 Accessiblity Requirements
G	0	05	Energy Compliance Data
G	0	06	Code Analysis

Civil			
Discipline Designator	Sheet Type Designator	Sheet Sequence Number	Description
General			
C	0	01	Legend and Abbeviations
Demolition and Borings			
C	1	02	General Notes
C	1	03	Existing Topo Survey
C	1	01	Demolition Plan
C	1	02	Boring Plan
Plans			
C	2	00	Overall Plan
C	2	01	Site Plan
C	2	11	Striping Plan
C	2	21	Traffic Plan
C	2	31	R/W Plan
Hydrology			
C	3	00	Overall Plan
C	3	01	Grading Plan
C	3	02	Hydrology Map
C	3	03	Erosion and Sedimentation Plan
Utilities			
C	4	00	Overall Utility Plan
C	4	01	Site Utility Plan
C	4	11	Construction Staging
Sitework			
C	5	01	Jointing Plan
C	5	11	Parcel Plan
Plan and Profile			
C	6	01	Plan and Profile
C	6	11	Utility Plan and Profile
Cross Sections			
C	7	01	Cross Section - Misc
C	7	11	Cross Section - Bldg
C	7	21	Cross Section - Road
C	7	31	Cross Section - Site
Profiles			
C	8	01	Profile - Misc
C	8	11	Profile - Road
C	8	21	Profile - Storm Drain
C	8	31	Profile - Sanitary Sewer
C	8	41	Profile - Water
Details			
C	9	01	Details
C	9	02	Details
C	9	03	Details

Discipline Designator	Sheet Type Designator	Sheet Sequence Number	Description
Architectural			
General			
A	0	01	Symbols and Abbreviations
A	0	02	General Notes
Site and Reference Plans			
A	1	01	Existing Plan
A	1	11	Site Plan
A	1	21	Demolition Plan
A	1	31	Life Safety / Exiting Plans
A	1	41	Geometry Plans
A	1	51	Temporary Work
A	1	61	Phasing Plans
Plans			
A	2	00	Overall Plan
A	2	01	Floor Plans
A	2	11	Reflected Ceiling Plans
A	2	21	Furniture Plans
A	2	31	Equipment Layout
A	2	41	Finishes Plans
Exterior Elevations and Building Sections			
A	3	01	Building Elevations
A	3	11	Building Sections
Wall Sections and Details			
A	4	01	Wall Sections
A	4	11	Wall Details
A	4	01	Enlarged Plans
Enlarged Plans and Interior Elevations			
A	5	11	Interior Elevations
A	5	21	Restroom Toilet Plans
A	5	31	Toilet Accessories
A	5	41	ADA Requirements and Detials
Vertical Circulation			
A	6	01	Sections
A	6	11	Details
A	6	21	Enlarged Stair Plans
A	6	31	Enlarged Elevator Plans
A	6	41	Enlarged Ramp Plans

Schedules			
A	7	01	Door
A	7	11	Window
A	7	21	Louver
A	7	31	Finishes
A	7	41	Partition Types
A	7	51	Casework
A	7	61	Materials
Details			
A	8	01	Details - Exterior
A	8	11	Details - Interior
A	8	21	Details - Casework
A	8	31	Details - Misc
Miscellaneous			
A	9	01	Signage Plans
A	9	11	Signage Schedules
A	9	21	Signage Details

Discipline Designator	Sheet Type Designator	Sheet Sequence Number	Description
Structural			
General			
S	0	01	Legend and Abbreviations
S	0	02	General Notes
Typical Details and Demolition			
S	1	01	Typical Details
S	1	11	Demolition Plans
S	1	21	Geometry Plans
Plans			
S	2	00	Foundation Plans
S	2	01	Framing Plans
Elevations			
S	3	01	Framing Elevations
S	3	11	Wall Elevations
S	**3**	21	Elevator Plans and Sections
S	**3**	31	Escalator Plans and Sections
Sections			
S	4	01	Building Sections
S	4	11	Wall Sections
S	4	01	Partial Building Sections
Schedules			
S	5	01	Footings
S	5	11	Columns
S	5	21	Beams
S	5	31	Shear Walls
S	5	41	Misc
Details			
S	6	01	Details
S	6	11	Details

Mechanical

Discipline Designator	Sheet Type Designator	Sheet Sequence Number	Description
General			
M	0	01	Legend and Abbreviations
M	0	02	General Notes
Site and Reference Plans			
M	1	01	HVAC Site Plans
M	1	11	Demolition Plan
Plans			
M	2	01	HVAC Floor Plans
Enlarged Plans and Sections			
M	3	01	Mechanical Room Plans
M	3	11	HVAC Sections
Diagrams and Risers			
M	4	01	Air Flow Diagram
M	4	11	Water Flow Diagram
Schedules			
M	5	11	Equipment Schedules
M	5	21	Equipment Schedules
M	5	31	Equipment Schedules
Controls			
M	6	01	Control Diagram
M	6	11	Control I/O Summary
M	6	21	Sequence of Operations
Details			
M	7	01	Details
M	7	11	Details

Discipline Designator	Sheet Type Designator	Sheet Sequence Number	Description
Electrical			
General			
E	0	01	Legend and Abbreviations
E	0	02	General Notes
Site Plans and Diagrams			
E	1	01	Electrical Site plan
E	1	11	Power Plans
E	1	21	Lighting Plans
E	1	31	Communication Plans
E	1	41	Single Line Diagram
E	1	51	Fire Alarm Diagram
Plans			
E	2	11	Demolition Power Plans
E	2	21	Demolition Lighting Plans
E	2	31	Power Plans
E	2	41	Lighting Plans
E	2	51	Communications Layout
E	2	61	Security Plans
E	2	71	Fire Alarm Plans
E	2	81	Lightning Protection Plan
Enlarged Plans			
E	3	01	Electrical Room Plans
E	3	11	Enlarged Plans
Schedules			
E	4	01	Equipment Schedules
E	4	11	Panel Schedules
E	4	21	Light Fixture / Feeder Schedules
Enlarged Plans and Interior Elevations			
E	5	11	Details

Plumbing			
Discipline Designator	Sheet Type Designator	Sheet Sequence Number	Description
General			
P	0	01	Legend and Abbreviations
P	0	02	General Notes
Site and Reference Plans			
P	1	01	Plumbing Site Plan
P	1	21	Demolition Plan
Plans			
P	2	01	Plumbing Floor Plans
Enlarged Plans			
P	3	11	Toliet Plans
P	3	21	Enlarged Mechanical Plans
P	3	31	Enlarged Misc Plans
Diagrams and Risers			
P	4	01	Sections
P	4	11	Details
P	4	21	Enlarged Stair Plans
P	4	31	Enlarged Elevator Plans
P	4	41	Enlarged Ramp Plans
Schedules			
P	5	01	Plumbing Fixture Schedules
Details			
P	6	01	Details - Exterior
P	6	11	Details - Interior
P	6	21	Details - Misc

Other Disciplines		
* (reference Discipline Designator Table)		
Discipline Designator	Sheet Type Designator	Description
	0	General (Symbols, Legends, Abbreviations, etc.)
	1	Plans (horizontal views)
	2	Elevations (vertical views)
	3	Sections
	4	Enlarged Views
	5	Details
	6	Schedules and Diagrams
	7	User Defined
	8	User Defined
	9	User Defined

4. Border And Title Block

Sheet Sizes

Below is a list of the approved sheet sizes:

Sheet Sizes	Imperial (inches)
D1 (ANSI)	22 x 34 (City of LA Requirements)
E1 (Arch.)	30 x 42 (Standard)
E (Arch)	36 x 48 (Pre-Approval required)

The standard sheet size will be 30" x 42", and shall be included in the LACCD project templates. If it is determined by the project team that 30 x 42" sheet size is not adequate to meet the building configuration, a 36 x 48 sheet size may be used, but shall require pre-approval by the Program Manager (Build LACCD). 22 x 34 size sheets shall only be as required by City of Los Angeles Department of Public Works.

4.1   Title Block Information

Standard Title Blocks shall be located on the right hand column of the sheet. They will include the following:

AGENCY APPROVAL

Agency Approval - Department of the State Architect (DSA) Approval Stamp.

CLIENT

CLIENT INFORMATION - This includes LACCD Logo, Campus Name, and Address.

Los Angeles Community College District

Campus Name
Campus Address

*Revit Users - Project Template has a titleblock with each campus address pre-loaded. To select the appropriate title block, go to any **sheet view**, and click on the title block. At the "Type Selector", select the appropriate campus, and assign the template to all sheets. The extra sheet templates can then be purged.*

LACCD PROJECT NAME

BUILDER
LACCD Project Name

LACCD PROJECT NAME – This is the common project name agreed upon by the CPM and Project Team (i.e. East Complex)

LACCD PROJECT NUMBER

01C-000

LACCD PROJECT NUMBER – This is the same project number assigned by the CPM, and utilized for folder structure (i.e. 04M-418)

**BUILDER NAME
BUILDER ADDRESS**

BUILDER– This is Name and Address for General Contractor (Builder)

DESIGN CONSULTANT

DESIGNER NAME
DESIGNER ADDRESS

DESIGN CONSULTANT – This is the Name and Address of Design Consultant executing the drawings on this sheet.

Note: Company logos for project team using text shall be converted to line work so that additional fonts do not need to be included in the title sheet upon export.

REGISTRATION STAMP

REGISTRATION STAMP – Stamp of the Engineer or Architect of Record
Sheet Margins - The right margin must be of a ½" width to accept the use of embossed stamp.   Top and Bottom to be ½". Left side margin to be 1.5".

ISSUE

MM.DD.YY XXXXXXX
MARK DATE   DESCRIPTION

ISSUE BLOCK -   Area for revision Listing. For milestone submittals, teams must include Date and Description. For revision during construction issued as part of a Bulletin or Request for Information, Revision deltas shall be included

DESIGNER PROJ. NO. 000000
DRAWN BY:
CHECKED BY:
SCALE:

Additional Title Block Items for AutoCAD / Microstation Users:
-When referenced, the insert point for the titleblock/border file is 0,0,0 in Paper Space.
-Titleblock text entities will be placed on the G-ANNO layer.
-Typical layers for the titleblock will be G-TTLB, and G-ANNO,
-Matchlines will be placed in model files (Design Models), so other disciplines can reference the same matchlines

KEY PLAN

The **key plan** will be located in a space above the Sheet Information

SHEET TITLE

SHEET INFORMATION – Sheet Title corresponds to view name(s) referenced on this sheet. **Sheet number** corresponds to name of sheet view or file.

SHEET NUMBER

N

North arrow and scale(s) will be placed in the lower right hand area of the drawing area just left of the Sheet number.
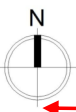
5. Standard Units

5.1 Model Precisions

All files must comply with the following units

Architectural & Engineering Standard Units:

5.2   Sheet Precision

Dimensional Precision for Plans, Sections, and Elevation Sheets
Scale of drawing: 1/8" – 1/2" = 1'-0"

Dimensional Precision for Details, Casework, and other large scale drawings
Scale of drawing: 1 1/2" - 3" = 1'-0"

Dimensional Precision for all angles
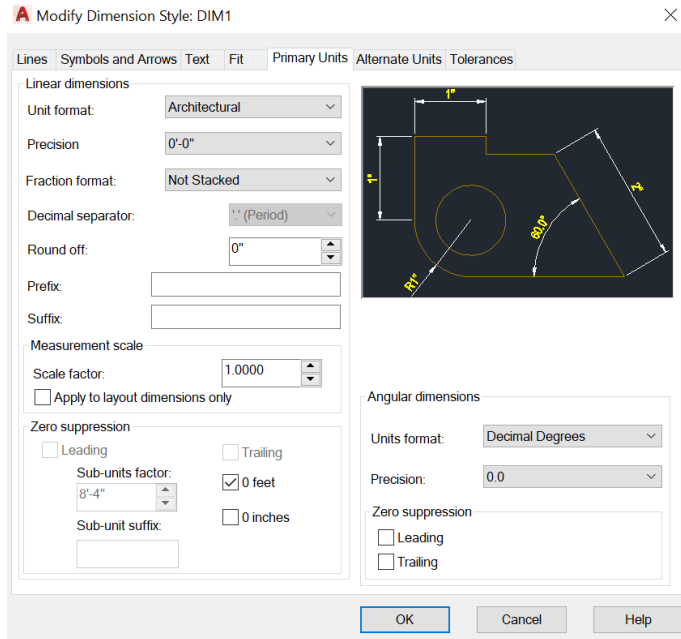
6. LTSCALE Settings

LTSCALE will always be set to 1 (one) in Paper Space. This ensures that all AutoCAD linetypes will display the same on all drawings. Model Space *LTSCALE* may be changed to reproduce the look of Paper Space plots. LTSCALE in Model Space is equal to the "Dimscale". Linetype definitions are outlined in the Layer List in the Appendix of this document. Most linetypes will be used in the "half" mode (DASHED2, PHANTOM2, HIDDEN2, etc.) A complete Acad.lin file is included with the project templates.

 For example:

Model Space LTSCALE for Architectural Units	
Drawing Plot Scale	LTSCALE
Full Size	1
3" = 1'-0"	4
1 1/2" = 1'-0"	8
1" = 1'-0"	12
3/4" = 1'-0"	16
1/2" = 1'-0"	24
3/8" = 1'-0"	32
1/4" = 1'-0"	48
3/16" = 1'-0"	64

PSLTSCALE shall be enabled (PSLTSCALE=1)

Model Space LTSCALE for Architectural Units	
1/8" = 1'-0"	96
3/32" = 1'-0"	128
1/16" = 1'-0"	192
1/32" = 1'-0"	384

Model Space LTSCALE for Decimal Units	
1" = 10'	10
1" = 20'	20
1" = 40'	40
1" = 50'	50
1" = 100'	100
1" = 200'	200
1" = 400'	400
1" = 500'	500

Note:
LTSCALE will always be set to 1 (one) in Paper Space. Model space LTSCALE is changed to reproduce the look of Paper Space plots.

Please refer to the Standard Layer List in the Appendix of this document for proper Linetypes.

7. Model Files/XREFS

Whenever possible, reference files will be placed using the OVERLAY method to minimize the impact of circular reference on your files. When an X-ref must be nested, the use of an "Attach" x-ref is acceptable.

Image files (png, gif, tif, bmp) must be placed in the folder of the files to which they are referenced. Unless otherwise noted, Image files shall be attached to Sheet files in the Sheet folder.

Reference files shall be added on a specific layer and the prefix for that layer shall be "$xref-filename". Also, "$nref-" shall be used when attaching nested reference files to model files.One level of nesting is approved.

Reference files will be added to all drawings using relative paths. Relative paths do not include the drive letter and reflect the location of the reference file as it relates to the file you are on.

No hard coded paths will be allowed.

```
Example:
Hard Coded:   Q:/LACCD/04M/04M-418/BIM/MODEL/04M-418A-FP01.dwg
Relative:     ../MODEL/XAFP01.dwg
```

Revise the Model File for any modifications. This file will then display those changes on all affected Sheet Files thru the XREFing process (Overlay)

Created to distribute your Model file information to others. Files must be Overlaid.

Overlay Model files to Sheet files. Revise the Sheet Files for any modifications to Schedules, Diagrams, Details, Etc.

Model File

Architectural Sheet File

Electrical Sheet File

Mechanical Sheet File

Plumbing Sheet File
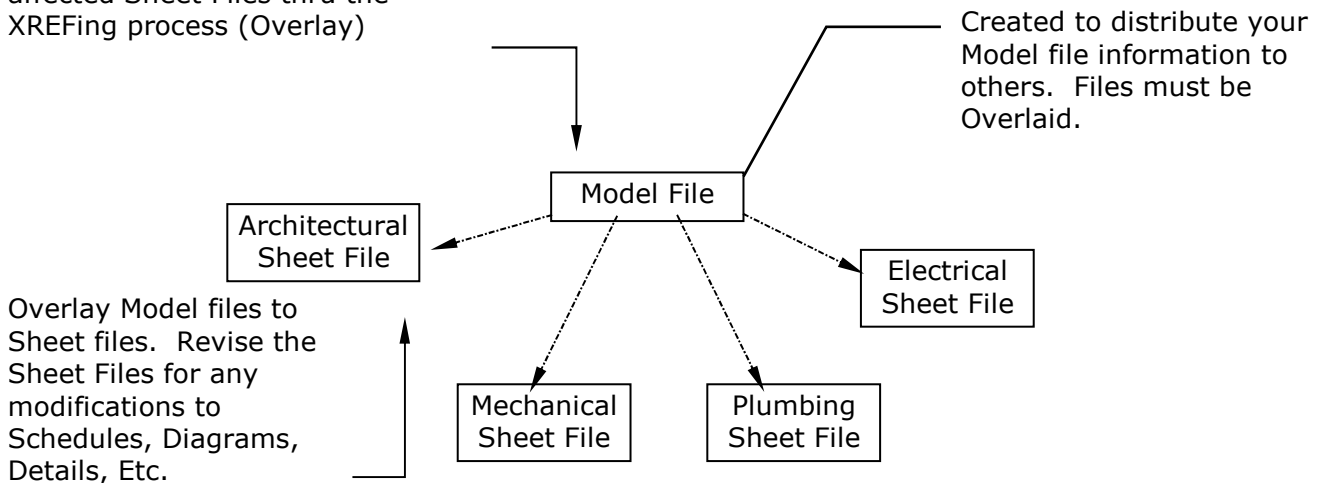
AutoCAD Users: A lsp routine called "XRP" may help to achieve relative paths. It has been included in the Standard Template for your use.

8. Setting The Origin

At the beginning of a project, a reference origin must be established by the project team and tied to the nearest campus monument. In most instances, the lower left corner of a building will be set to the origin (0,0,0) and shall reference the designated monument. *(The Permanent control monument is set to the State Plane Coordinate System, Zone 5 NAD 84, and NAVD 88.)*

Once the location of the building has been tied to campus monument and verified in the civil site plan, the location of the building in the architectural model shall take precedence over all other trades, and the defined origin shall not be moved. In the event that the lower left corner of the building changes location or shape, reference lines (or planes) should be drawn and noted at the original project origin to maintain a visual recognition of this origin.
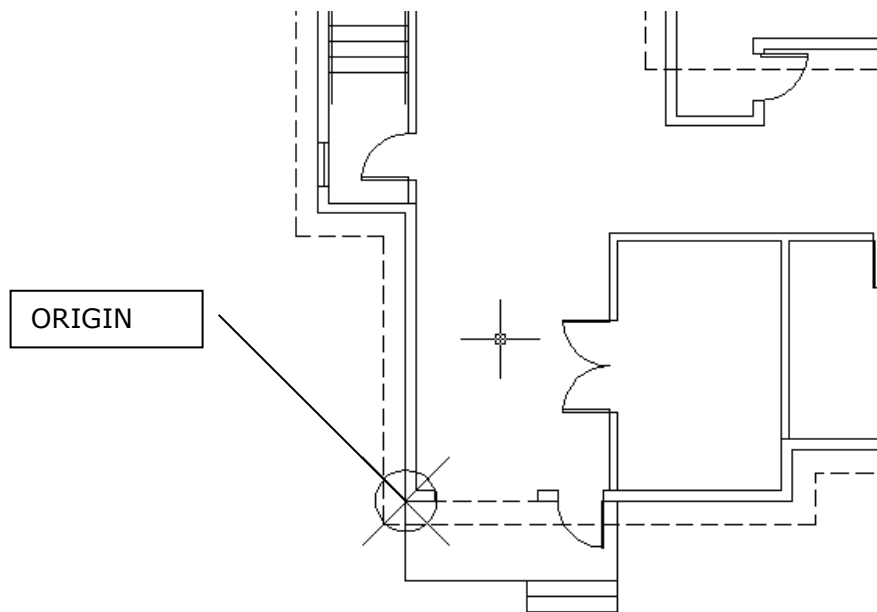
AutoCAD MEP, Civil 3D Users:

The AutoCAD system Variable "Base" must be set to 0,0,0

All Xrefs shall be Overlayed at 0,0,0 in Model Space

In general, all model xrefs files, except for the border file, shall be attached in model space.

"Ucsicon" to be set to the "ON" setting.

9. Date Stamping

Standard sheet borders include a date stamp at the left hand margin, and at a minimum, shall track the following information:

Date/Time of plotted sheet
Sheet File Name
Username

*AutoCAD / **Microstation** **Users:** The layer for the datestamp is G-TTLB-DATE.*
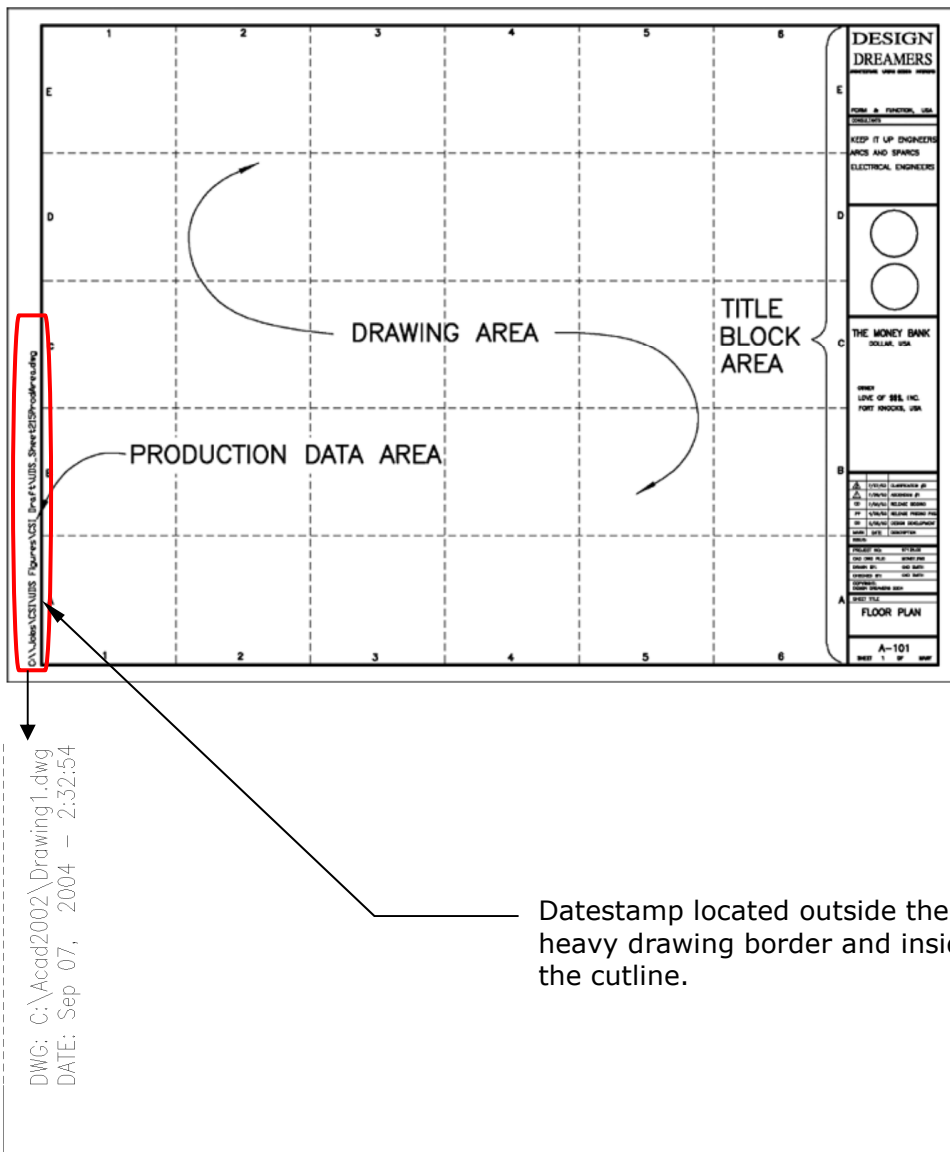
Datestamp located outside the heavy drawing border and inside the cutline.

10. Revision Tracking

Clouds will be drawn to encompass the area of the revised work. The clouds shall be drawn with the annotation tools provided by Authoring Tool.

Each revision will be identified by means of a revision indicator symbol rendered with an annotation triangle or delta with a number attribute identifying the revision in consecutive manner. The revision indicator symbol shall be provided. The revision symbol shall be placed touching the cloud, inside the cloud or next to the cloud and connected to it by means of a small leader or arc.

The format for the revision note shall be a revision symbol with the number of the revision, a numerical date of issue and a brief descriptive note of the revised work.

As revisions are superseded, the old revision clouds shall be rendered invisible by freezing the layer(s) they are drawn in. All revision symbols (triangles) shall remain visible as a permanent historical record of revised work in the sheet.

Additional Info for AutoCAD / Microstation Users

All revision symbols and clouds shall be drawn in Paper Space in the sheet (plotting) file. No revision symbols or clouds shall be drawn in the working files or in Model Space.

Each revision cloud will be drawn on an individual layer. There will be a layer for each revision issued. The layer name for the cloud shall be G-ANNO-REVC-R#, where # stands for the corresponding revision number as listed in the Issue Block.

Each revision symbol will be drawn in its corresponding layer. There will be a layer for each revision issued. The layer name for the revision symbol shall be G-ANNO-REVS-R#, where # stands for the corresponding revision number as listed in the Issue Block.

The revision note that is placed in the Issue Block shall be drawn in a separate layer. The proposed layer name for the revision text shall be G-ANNO-TTLB. All revision notes in the Issue Block shall be drawn in this layer.

11. Layer Naming Guidelines

The NCS & AIA CAD Layer Guidelines are to be used on all projects as they apply. The Appendix of this Manual has layer names defined more specifically to each discipline.

The base nine colors (i.e. 1-9) should be used for each discipline's base layer names. (ex. 'A-wall' would be color 3 if a 0.020" weight was used) other colors can be used as the disciplines define their layers.

The format of layer names must follow the one-four-four-four standard; no layer name can exceed this convention. The preferred method is to use just one character for the discipline designator.

The last character in the layer name, called the status field, will be modified to allow for scale factor designations in the layer name (i.e. ¼" will be 0048, ½" will be 0024; ex. A-anno-text-0048 is a ¼" text layer). This field code will be used for all scale-specific layer names.

Specific layer names will define settings for weight, color, and line type. Line type will be defined only ByLayer.

Revit Users – While Revit does not use a layering standard for its work environment, LACCD does require some deliverables and file exchanges to be in an interoperable format such as dwg or dgn. When exporting to these file types, Model users shall Export to CAD Formats using the Export Lineweight files provided by LACCD in their standard template.

For Plan views, use the file named "exportlineweights-LACCD_PLAN.txt" as your standards setting

For Sections, Elevations, and Details, use the file named "exportlineweights-LACCD_SEC-ELEV-DET.txt"

NOTE: With Revit's current technology, a copy of this file will need to be placed on each Revit user's workstation. In standard installations, the location for these types of standard files shall be:

C:\Program Files\Revit Architecture 2020\Data

11.1 Creating Additional Layers

The creation of additional layers must be approved by BUILD LACCD prior to use. All layers created must follow the same concept utilized for the existing layers. A list of approved layers can be found in the appendix. The 1-4-4-4-1 format shown in the AIA guideline shall be followed.

A	-	W	A	L	L	-	F	U	L	L	-	D	E	M	O	-	M

- The **first place** is a **Discipline Designator** letter. By default, it is **one character** long. Two characters may be used if the designator calls for it. **When creating new Layer Names – please refer to the Basic Discipline Designators.**

- The **second place** is the **Major Group**. It is **four characters** long preceded by a dash. No more – no less. It identifies the major building systems and components.

- The **third and fourth** place is a **Minor Group** field modifier preceded by a dash. You may use one or both of these fields at your discretion when creating a new layer name. This field delineates further the Major Group. Both fields are also **four characters** long.

   These modifiers may also be directly tied to the standard pen table. The modifier shall begin with the letters LW (for Line Weight) or SC (for Screened) and end with two digits designating the color associated with the desired plotted pen weight or the percentage of screening. The color designators shall be 01 thorough 09 to encompass the first nine colors of the AutoCAD palette of colors. An example of this modifier is LW01 to designate a plotted line weight determined by Color 1 (Red).

- The **fifth place** is a **Modifier** used to describe the **Status Field Code** as it relates to the items on that layer.

Status Field Codes	
A	Abandoned
D	Existing to demolish
E	Existing to Remain
F	Future Work
M	Items to be Moved
N	New work
T	Temporary Work
X	Not in Contract
1 - 9	Phase Number 1,2,3 etc.

12. Pen Table

For software applications that utilize layering systems, refer to the Appendix for the Layer Name Tables that detail the specific colors and linetypes assigned to each layer.

For CAD based applications, full size drawings shall use the plot style "**LACCD_R3**", outlined below for reference and included with the Standard Templates available on the website. Half size sheets and smaller should use the plot style **"LACCD_R3-half".**

Revit Users – Lineweights have been created in the project template to match these line widths with regard to plotting consistency as much as possible. In Revit, lineweights scale automatically depending on the view scale, the line widths from this table may vary slightly. When importing CAD files for reference, Import Lineweight settings should be imported using the settings called "importlineweights-dwg-LACCD.txt". This file can be found in the LACCD Project Template, and should be placed in the following location on each Revit User's workstation prior to importing files:

C:\Program Files\Revit Architecture 2020\Data

Line Width (in inches)	Pen Width	Color number	Exceptions	Shading Percentage	BASE COLOR
0.007"	.18mm	xx0 (ex. 10, 20, 30, 40, 190)		black	
0.010"	.25mm	xx1 (ex. 1, 21, 31, 41,181)	add '# 7' White	black	RED / WHITE
0.014"	.35mm	xx2 (ex. 2, 22, 32, 42, 192)		black	YELLOW
0.020"	.50mm	xx3 (ex. 3, 23, 33, 43, 193)		black	GREEN
0.028"	.70mm	xx4 (ex. 4, 24, 34, 44, 194)		black	CYAN
0.039"	1.00mm	xx5 (ex. 15, 25, 35, 45, 195)		black	BLUE
0.004"	.10mm	xx6 (ex. 6, 26, 36, 46, 196)	add '# 9' Lt. Gray	black	MAGENTA / LT. GRAY
0.028"	.70mm	xx7 (ex. 17, 27, 37, 47, 197)	except '# 7' White	35%	
0.014"	.35mm	xx8 (ex. 8, 28, 38 ,48, 198)		50%	GRAY
0.024"	.60mm	xx9 (ex. 19, 29, 39, 49, 199)	except '# 9' Lt. Gray	black	

SHADING	Pen Width	15%	30%	50%	70%	85%
0.007"	.18mm	240	230	220	210	200
0.010"	.25mm	241	231	221	211	201
0.014"	.35mm	242	232	222	212	202
0.020"	.50mm	243	233	223	213	203
0.028"	.70mm	244	234	224	214	204
0.039"	1.00mm	245	235	225	215	205
0.004"	.10mm	246	236	226	216	206
0.028"	.70mm	247	237	227	217	207
0.014"	.35mm	248	238	228	218	208
0.024"	.60mm	249	239	229	219	209

0.010"	.25mm	250	85%
0.014"	.35mm	251	70%
0.020"	.50mm	252	50%
0.028"	.70mm	253	30%
0.039"	1.00mm	254	15%
0.014"	0.35mm	255	white

13. Fonts

Revit Users: Standard Text styles have been pre-loaded in the LACCD Standard Template and symbols, and shall be utilized as outlined in this section.

Style names and Standards for all text shall be as follows:

Usage	Text Height	Color No.	Pen Width	Style Name (Font)
General Text and Notations	1/8"	7	.010	ARIAL (.85 width)
Special Text	1/8"	7	.010	ARIAL (.85 width)
Matchline Text	3/16"	7	.010	ARIAL (.85 width)
Notation Titles & General Titles included with Graphics, Details, Plans, Sections, Elevations, Etc.	1/4"	2 (Forced)	.014	ARIAL (.85 width)
Drawing Name and Title Block Notes	1/8"	2 (Forced)	.014	ARIAL BOLD (1.0 width)
Sheet Numbers	1/4"	2 (Forced)	.014	ARIAL BOLD (1.0 width)

For sheets, the Standard Text size for general annotation shall be 1/8". All annotation and titles shall be UPPERCASE.

Text color/pen widths for each text height will be determined based on Standard Pen Table and Layer Names etc.

Custom fonts can be used for logos and signage details provided they are converted to linework created from the text elements. The intent here is to insure that all parties receiving electronic files need not load a

14. Dimension Settings

Dimension line terminators shall be Closed Filled Arrowheads for all Dimensions and Leaders. Dimension line terminator size shall be set to 1/8" long.

Dimension text shall be Arial font with a plotted height of 1/8" for drawings of all scales. Standard Dimension styles have been pre-loaded into Project Template and include the overall scale factor.

Include the "Overall Scale Factor" (ex. Dim48, Dim120, etc.).

A sample Dimension Style variables list is in the Appendix of this document as an example of an Architectural Dimension Style and an Engineering Dimension Style.

Dimension Style Names	
Drawing Plot Scale	DimStyle
Full Size	Dim1
3" = 1'-0"	Dim4
1 1/2" = 1'-0"	Dim8
1" = 1'-0"	Dim12
3/4" = 1'-0"	Dim16
1/2" = 1'-0"	Dim24
3/8" = 1'-0"	Dim32
1/4" = 1'-0"	Dim48
3/16" = 1'-0"	Dim64
1/8" = 1'-0"	Dim96
3/32" = 1'-0"	Dim128
1/16" = 1'-0"	Dim192
1/32" = 1'-0"	Dim384

Decimal Units	
1" = 10'	Dim10
1" = 20'	Dim20
1" = 40'	Dim40
1" = 50'	Dim50
1" = 100'	Dim100
1" = 200'	Dim200
1" = 400'	Dim400
1" = 500'	Dim500

Example Scale of Arch drawing: 1/8" = 1'-0"

AutoCAD / (Microstation) Users - All Dimensions shall be placed in Model Space (Design Model) of the Sheet.

Revit Users – Dimensions can be placed directly in views so long as they can be exported to a dwg using correct text size, scale, and layers.

15. Standard Annotation And Model Objects

Consultants must comply with the use of LACCD Standard Annotation and Symbols as provided in the LACCD project templates. Project team shall not change assigned block names, font styles, line work, *(and layers for AutoCAD and Microstation Users).*

*Revit Users – Standard Symbols are included in the project template under **Annotation Symbols** **Families***

ADT symbols may be used as-is.

Please see the Appendix for Approved Drafting Symbols.

16. Viewports

(AutoCAD / Microstation Users only)

Views and Viewports in AutoCAD and Microstation are not constrained to follow the AIA standard. The Layer Name will be $VPORT. This nomenclature keeps the layer at the top of the layer list, and could be accessed or ignored easily.

17. Detail Layout

Detail sheets shall be composed by using the standard drafting sheet divided into standard modules defined by a layout grid as recommended above. The modular grid shall be rendered visible in the sheet and in the final plot. Each detail will be bounded by a visible grid.

Wherever possible, details shall be directly associated with the 3D model, and 2D linework added to a live view as necessary to articulate detail intent.

The sequence for inserting the detail onto the detail sheet shall be beginning at the lower right-hand corner of the drawing area adjacent to the title block and then proceeding from bottom to top and across the sheet from right to left.

The numbering of the details shall be done with a numerical series corresponding to their placement in the grid (e.g.: the first detail on the page is number 1 – then next is number 2)

Detail Sheets shall be divided into Grid areas and grid lines will be plotted out.

Details larger than one module may be inserted in the sheet by encompassing as many contiguous drawing modules as required by the size of the detail. Only full drawing modules shall be used. No fractional portions of modules shall be allowed. The numbering of the resulting detail shall be sequential from the lower right-hand corner of the sheet detail.

The details shall be identified individually in the detail sheet by means of detail title blocks provided by the standard palette of drafting symbols.

17.1 Typical Detail Sheets

1		
SHT NO.	REF. AX—YYY	SCALE: 1 1/2" = 1'-0"
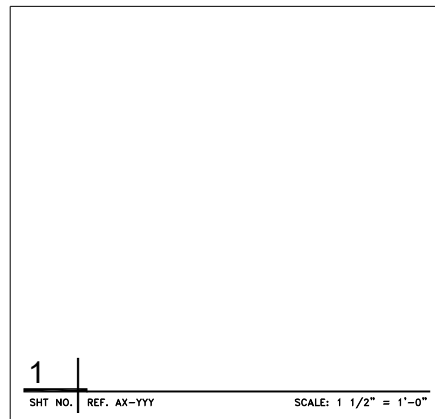
Typical Detail Sheet Layout (Sections and Elevations are similar)
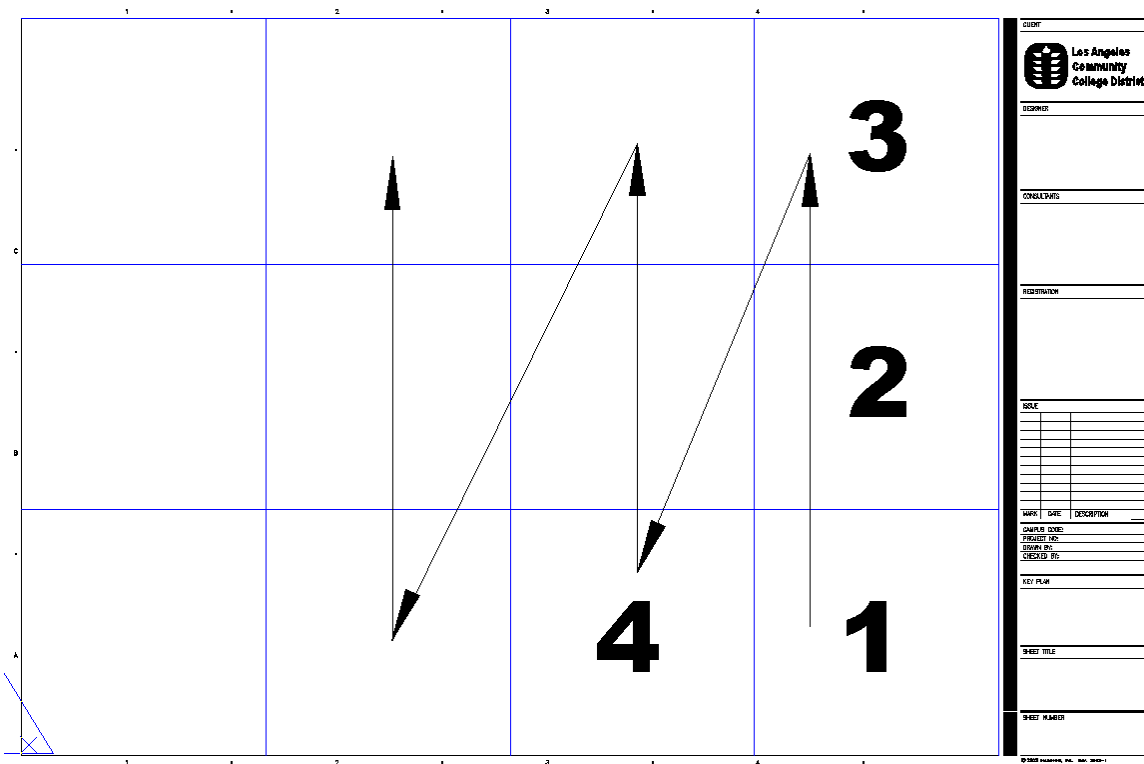
18. Plans, Elevation and Sections

Plans are designated "1" "2" "3", etc.

Elevations are designated "1" "2" "3" and so on

Sections and Wall Sections are designated "A" "B" "C" and so on.

Plans, Elevations, and Sections are placed on the sheets starting in the lower right corner and move up. Then move to the left and return to the bottom of the page and go up.
Wall Sections are placed on sheets in a similar manner. However, due to their vertical nature shall be numbered from right to left.
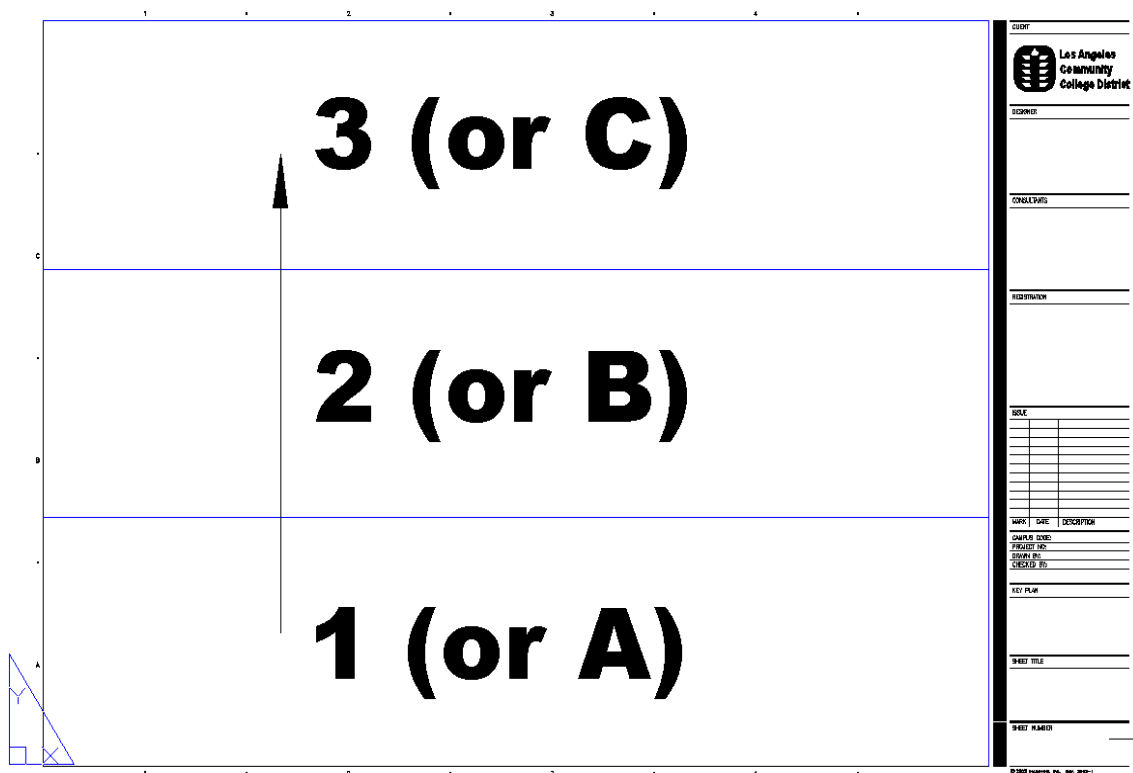
19. Plotting

Plotting must be standardized in order to achieve a consistent look and feel. This process incorporates the pen table, standard symbols, title blocks, and placement of views in the sheet layout.

AutoCAD / Microstation Users: Plot files shall be generated using the standard LACCD pen styles (LACCD_R4.ctb) Each plotted sheet shall be generated in its own file, shall reference live model views, and shall not include more than a single layout unless approved by the CPM.

PDF Files - In addition to dwg files, full size PDF sheet files will be issued for milestone submittals.   The PDF Filename must be consistent with the Sheet File name.

20. Deliverables

While various types of deliverables and file formats have been described in these standards, Project Teams shall provide deliverables as described and outlined in the contractual agreements between the District (LACCD) and the Design Build team.

21. Appendix

21.1 Full Size Printable Definition

21.2 LACCD Standards Layers

The AIA CAD Layer Guidelines is a component of the United States National CAD Standard®.

Discipline Designators

Designator	Description
A	Architectural
AD	Architectural Demolition
AE	Architectural Elements
AF	Architectural Finishes
AG	Architectural Graphics
AI	Architectural Interiors
AJ	User Defined
AK	User Defined
AS	Architectural Site
B	Geotechnical
BJ	User Defined
BK	User Defined
C	Civil
CD	Civil Demolition
CG	Civil Grading
CI	Civil Improvements
CJ	User Defined
CK	User Defined
CN	Civil Nodes
CP	Civil Paving
CS	Civil Site
CT	Civil Transportation
CU	Civil Utilities
D	Process
DA	Process Airs
DC	Process Chemicals
DD	Process Demolition
DE	Process Electrical

DG	Process Gases
DI	Process Instrumentation
DJ	User Defined
DK	User Defined
DL	Process Liquids
DM	Process HPM Gases
DO	Process Oils
DP	Process Piping
DQ	Process Equipment
DR	Process Drains and Reclaims
DS	Process Site
DV	Process Vacuum
DW	Process Waters
DX	Process Exhaust
DY	Process Slurry
E	Electrical
ED	Electrical Demolition
EI	Electrical Instrumentation
EJ	User Defined
EK	User Defined
EL	Electrical Lighting
EP	Electrical Power
ES	Electrical Site
ET	Electrical Telecommunications
EY	Electrical Auxiliary Systems
F	Fire Protection
FA	Fire Detection and Alarm
FJ	User Defined
FK	User Defined
FX	Fire Suppression
G	General
GC	General Contractual
GI	General Informational
GJ	User Defined
GK	User Defined
GR	General Resource
H	Hazardous Materials
HA	Hazardous Materials Asbestos
HC	Hazardous Materials Chemicals
HJ	User Defined
HK	User Defined
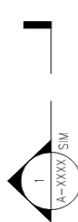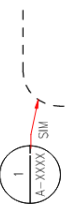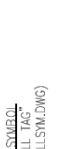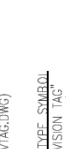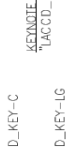
HL	Hazardous Materials Lead
HP	Hazardous Materials PCB
HR	Hazardous Materials Refrigerants
I	Interior
ID	Interior Demolition
IF	Interior Furnishings
IG	Interior Graphics
IJ	User Defined
IK	User Defined
IN	Interior Design
L	Landscape
LD	Landscape Demolition
LG	Landscape Grading
LI	Landscape Irrigation
LJ	User Defined
LK	User Defined
LL	Landscape Lighting
LP	Landscape Planting
LR	Landscape Relocation
LS	Landscape Site
M	Mechanical
MD	Mechanical Demolition
MH	Mechanical HVAC
MI	Mechanical Instrumentation
MJ	User Defined
MK	User Defined
MP	Mechanical Piping
MS	Mechanical Site
O	Operations
OJ	User Defined
OK	User Defined
P	Plumbing
PD	Plumbing Demolition
PJ	User Defined
PK	User Defined
PL	Plumbing Fixtures
PP	Plumbing Piping
PQ	Plumbing Equipment
PS	Plumbing Site
Q	Equipment
QA	Equipment Athletic

QB	Equipment Bank	
QC	Equipment Dry Cleaning	
QD	Equipment Detention	
QE	Equipment Educational	
QF	Equipment Food service	
QH	Equipment Hospital	
QJ	User Defined	
QK	User Defined	
QL	Equipment Laboratory	
QM	Equipment Maintenance	
QP	Equipment Parking Lot	
QR	Equipment Retail	
QS	Equipment Site	
QT	Equipment Theatrical	
QV	Equipment Video / Photographic	
QY	Equipment Security	
R	Resource	
RA	Resource Architectural	
RC	Resource Civil	
RE	Resource Electrical	
RJ	User Defined	
RK	User Defined	
RM	Resource Mechanical	
RR	Resource Real Estate	
RS	Resource Structural	
S	Structural	
SB	Structural Substructure	
SD	Structural Demolition	
SF	Structural Framing	
SJ	User Defined	
SK	User Defined	
SS	Structural Site	
T	Telecommunications	
TA	Telecommunications Audio Visual	
TC	Telecommunications Clock and Program	
TI	Telecommunications Intercom	
TJ	User Defined	
TK	User Defined	
TM	Telecommunications Monitoring	
TN	Telecommunications Data Networks	
TT	Telecommunications Telephone	

TY	Telecommunications Security	
V	Survey / Mapping	
VA	Survey / Mapping Aerial	
VB	Survey / Mapping Boundary	
VC	Survey / Mapping Computated Points	
VF	Survey / Mapping Field	
VI	Survey / Mapping Digital	
VN	Survey / Mapping Node Points	
VS	Survey / Mapping Staked Points	
VJ	User Defined	
VK	User Defined	
VL	Survey / Mapping Land	
VU	Survey / Mapping Combined Utilities	
W	Distributed Energy	
WC	Distributed Energy Civil	
WD	Distributed Energy Demolition	
WI	Distributed Energy Interconnection	
WJ	User Defined	
WK	User Defined	
WP	Distributed Energy Power	
WS	Distributed Energy Structural	
WT	Distributed Energy Telecommunications	
WY	Distributed Energy Auxiliary Systems	
X	Other Disciplines	
XJ	User Defined	
XK	User Defined	
Z	Contractor/Shop Drawings	
ZJ	User Defined	
ZK	User Defined	

21.1 Drafting Symbols

LACCD Standard Symbol Legend

NOTE: Refer to National Cad Standard V6 for more symbols

SECTION
"LACCD_SECTION_HEAD"
(LACCD_SECSUB.DWG)

DETAIL CALLOUT (Typical)
"LACCD_CALLOUT"
(LACCD_DETBUB.DWG)

DETAIL CALLOUT (Small Conditions)
"LACCD_CALLOUT"
(LACCD_DETSYM.DWG)

NORTH ARROW
"LACCD_NORTH_ARROW"
(LACCD_NORTH.DWG)

EXTERIOR ELEVATION
"LACCD_ELEV"
(LACCD_ELEV.DWG)

INTERIOR ELEVATION
"LACCD_INT_ELEV"
(LACCD_INT_ELEV.DWG)

INTERIOR ELEVATION (MULTIPLE)
(LACCD_MULTI-ELEV.DWG)

A-XXXX /SIM
1   A-XXXX   SIM
A-XXXX   SIM
1
PLAN NORTH
A301
A501
1A
2A
A501
4A
3A

WALL TYPE SYMBOL
"LACCD_WALL_TAG"
(LACCD_WALLSYM.DWG)

WINDOW TYPE SYMBOL
"LACCD_WINDOW_TAG"
(LACCD_WINTSYM.DWG)

DOOR TYPE SYMBOL
"LACCD_DOOR_TAG"
(LACCD_DOORTSYM.DWG)

LEVEL SYMBOL
"LACCD_LEVEL_HEAD"
(LACCD_LEVEL.DWG)

CENTERLINE MARK
"LACCD_CENTERLINE"
(LACCD_CENTERLINE.DWG)

COLUMN GRID SYMBOL
"LACCD_COLBUB_HEAD"
(LACCD_COLBUB.DWG)

REVISION SYMBOL
"LACCD_REVISION_TAG"
(LACCD_REVTAG.DWG)

FURNITURE TYPE SYMBOL
"LACCD_REVISION_TAG"
(LACCD_REVTAG.DWG)

A000
XX
@-XXX@
Name / Elevation
℄
0
00
XX

KEYNOTE SYMBOLS
"LACCD_KEYNOTE"

LACCD_KEY-C
LACCD_KEY-LG
XX
XXXXX

MATCH LINE
PHANTOM LINE (1/16" THICK)

MATCH LINE
REF.

ROOM IDENTIFIER
"LACCD_ROOM_TAG"
(LACCD_ROOMTAG.DWG)

ROOM NAME
101
150 SF
Room Number
SQ. FT. or Volume

DEVICE IDENTIFIER
"LACCD_DEVICE_SYMBOL"
(LACCD_DEVICESYM.DWG)

xx

DRAWING TITLE
"LACCD_VIEW_TITLE"
(LACCD_VIEW_TITLE.DWG)

1 | View Name
SHEET NO. | SCALE: 1/8" = 1'-0"
REF: A-XXX

21.2 Sheet Borders

AGENCY APPROVAL

REGISTRATION STAMP

SUBJECT:

DATE: DRAWN BY:

SCALE:

CONSULTANT: Consultant Name

PROJ. NO:

SHEET REF:

Los Angeles Community College District
Campus Name
Campus Address

PROJECT TITLE

LACCD PROJ. NO.

AGENCY APPROVAL

CLIENT

Los Angeles Community College District

PROJECT

Project Name
College Name
Address

LACCD PROJECT NUMBER

CONSULTANT

Consultant Name
Address

REGISTRATION STAMP

SUBJECT:

PROJ NO.
DRAWN BY:
DATE:
SCALE:
SHEET REF:

AGENCY APPROVAL

CLIENT

Los Angeles
Community College
District

Campus Name
Campus Address

LACCD PROJECT NAME

LACCD Project Name

LACCD PROJECT NUMBER

01C-000

BUILDER

BUILDER NAME
BUILDER ADDRESS

DESIGN CONSULTANT

DESIGNER NAME
DESIGNER ADDRESS

REGISTRATION STAMP

ISSUE

MARK	DATE	DESCRIPTION
	MM/DD/YY	XXXXXXXX

DESIGNER PROJ. NO. 000000

DRAWN BY:
CHECKED BY:
SCALE:

KEY PLAN

SHEET TITLE

SHEET NUMBER

LACCD CAD Standards – Revision 4.1

LACCD CAD Standards – Revision 4.1

LACCD CAD Standards – Revision 4.1

21.3   Printable Layer Guidelines