



AUTOCAD DRAFTING MANUAL

Level 3 Audio Visual

5/12/2017

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1. INTRODUCTION

The following manual is a guide for drafting in accordance with L3AV's cad standards. This manual will give basic instructions for most of the tasks that a build engineer will encounter.

Reading and understanding the L3AV AutoCAD standards is a prerequisite for this guide.

This manual, being a living document, is not a comprehensive guide to all the features in AutoCAD. Sections and amendments may be added periodically by the CAD Manager. If a topic is not clearly covered, inform the CAD Manager via email. If there is suggestion to amend or add material, inform the CAD Manager via email and the suggestion will be taken under consideration.

See the CAD Manager if there are any questions about how to perform any of the tasks outlined in this manual. There is an example drawing set which is attached to the end of this pdf which should be referred to.

2. PROJECT FOLDER

2.1. OVERVIEW

2.1.1. This section will the cover contents, structure and setup process of the typical project folder.

2.2. LOCATION

2.2.1. The location for the standard drawing set template is:

2.2.2. C:\Dropbox (Level 3 Audio Visual)\ENG\PROJ_TEMPLATES\01. L3AV\0000-TEMPLATE_PROJ_FOLDER

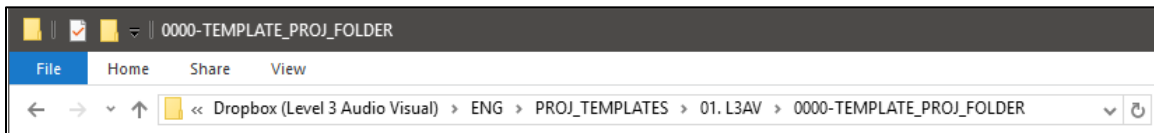


Figure 1

2.3. FOLDER SETUP

- 2.3.1. Copy the “0000-TEMPLATE_PROJ_FOLDER” folder.
- 2.3.2. Navigate to: C:\Dropbox (Level 3 Audio Visual)\ENG\PROJECTS-ACTIVE and paste the folder.
- 2.3.3. The project folder shall be named to match the corresponding NetSuite opportunity and/or project.
- 2.3.4. Proper nomenclature rules:
 - 2.3.4.1. All caps
 - 2.3.4.2. Separate different sections of the title with hyphens (-)
 - 2.3.4.3. Replace blank spaces with underscores (_)
 - 2.3.4.4. Proper structure for folder name:
 - 2.3.4.4.1. Project number
 - 2.3.4.4.2. Project name
 - 2.3.4.4.3. State abbreviation
 - 2.3.4.4.4. Engineer initials

2.4. PROJECT FOLDER STRUCTURE

- 2.4.1. 0000-TEMPLATE_PROJ_FOLDER
 - 2.4.1.1. DRAWINGS
 - 2.4.1.1.1. _OLD
 - 2.4.1.1.2. TA0 – All TA0 series drawings are placed here
 - 2.4.1.1.2.1. _OLD
 - 2.4.1.1.2.2. MASTER MODEL SPACE
 - 2.4.1.2. TA1 – All TA1 series drawings are placed here
 - 2.4.1.2.1. _OLD
 - 2.4.1.2.2. MASTER MODEL SPACE
 - 2.4.1.3. TA2 – All TA2 series drawings are placed here
 - 2.4.1.3.1. _OLD
 - 2.4.1.3.2. MASTER MODEL SPACE
 - 2.4.1.4. TA3 – All TA3 series drawings are placed here
 - 2.4.1.4.1. _OLD
 - 2.4.1.4.2. MASTER MODEL SPACE
 - 2.4.1.5. TA4 – All TA4 series drawings are placed here
 - 2.4.1.5.1. _OLD

- 2.4.1.5.2. MASTER MODEL SPACE
- 2.4.1.6. TA5 – All TA5 series drawings are placed here
 - 2.4.1.6.1. _OLD
 - 2.4.1.6.2. MASTER MODEL SPACE
- 2.4.1.7. TA6 – All TA6 series drawings are placed here
 - 2.4.1.7.1. _OLD
 - 2.4.1.7.2. MASTER MODEL SPACE
- 2.4.1.8. TA7 – All TA7 series drawings are placed here
 - 2.4.1.8.1. _OLD
 - 2.4.1.8.2. MASTER MODEL SPACE
- 2.4.1.9. TA8 – All TA8 series drawings are placed here
 - 2.4.1.9.1. _OLD
 - 2.4.1.9.2. MASTER MODEL SPACE
- 2.4.1.10. TA9 – All TA9 series drawings are placed here
 - 2.4.1.10.1. _OLD
 - 2.4.1.10.2. MASTER MODEL SPACE
- 2.4.2. INTERNAL
 - 2.4.2.1. _OLD
 - 2.4.2.2. XXXX-PROJECT_NAME-DCS.XLSX – DRAWING COMPLETION SUMMARY
 - 2.4.2.3. XXXX-PROJECT_NAME-RFC.XLSX – REQUEST FOR CHANGE
 - 2.4.2.4. XXXX-PROJECT_NAME-NAQ.DOCX – NOTES & QUESTIONS
- 2.4.3. PLOT_PREVIEW
 - 2.4.3.1. _OLD
- 2.4.4. RECEIVED
 - 2.4.4.1. ARCHITECTURALS
 - 2.4.4.1.1. _OLD
 - 2.4.4.2. FROM_CLIENT
 - 2.4.4.2.1. _OLD
- 2.4.5. XREFS
 - 2.4.5.1. AAA-LOGOS – FOLDER FOR CLIENT LOGOS
 - 2.4.5.2. TA-XREF-TTLB-36X24.DWG – ARCH SIZE “D” TITLE BLOCK
- 2.4.6. 0000-L3AV_DRAWING_SET.DST – TEMPLATE SHEET SET FILE

2.5. INTERNAL DOCUMENTATION

2.5.1. Overview

2.5.1.1. There are three documents that are in the “INTERNAL” folder. These documents help keep the projects revisions and notes organized as well as provide a way to track the progress of the drawing set.

2.5.2. RFC

2.5.2.1. The RFC (request for change) form is a simple spreadsheet that the build engineer should use to track requests for changes to the drawing set.

2.5.2.2. The form gives the engineer a place to number the request as well as brief description and the date it was requested. This allows the build engineer to reference the RFC on the drawing set when a revision issue is required.

2.5.3. DCS

2.5.3.1. The DCS (drawing completion summary) form is a spreadsheet that is designed to give an accurate representation of the progress of the drawing set. This form is still in the beta stage.

2.5.3.2. The basic concept for this document is to determine what the “weight” of each room or room type is. This is determined by the cost of the room. The cost of a room generally reflects in some way the complexity of the design of the room. When a room is more complex, the longer it will take to draft.

2.5.4. NAQ

2.5.4.1. The NAQ (notes and questions) document is a simple text document that is designed for the engineer to capture their questions about a project as well as record the answers to those questions along with other general notes about the project.

2.5.5. The Sheet Set File

2.5.5.1. Once the folder has been renamed step into the template project folder:

2.5.5.2. Rename the “0000-L3AV_DRAWING_SET.DST” file with the matching folder name that was just created.

2.5.5.3. Proper structure for file name:

2.5.5.3.1. Project number

2.5.5.3.2. Project name

2.5.5.3.3. Once the file has been renamed, double-click it to open it in AutoCAD.

3. SHEET SET MANAGER

3.1. OVERVIEW

3.1.1. Sheet Set Manager is a project management tool that organizes and automates many aspects of the drawing set. The best way to think of Sheet Set Manager is to imagine it as a database where all the project meta data is stored. Everything from the client name to sheet titles to elevation callouts will be handled by Sheet Set Manager. This is all done using fields and sheet set properties.

3.1.2. Another function of Sheet Set Manager is how it handles the drawings themselves. The best practice for Sheet Set Manager is to have a “Master” model space drawing for all model space drafting and then defining views in that model space. Then new sheets are made to represent all layouts that the drawing set requires. There shall be only one layout per sheet. Sheet Set Manager will then allow you to place the named views from the Master Model Space onto any sheet.

3.2. MAIN FUNCTIONS

3.2.1. Sheet Set properties

3.2.1.1. Overview

3.2.1.1.1. Sheet Set properties contain the data that AutoCAD uses to populate fields in drawing files across the entire Sheet Set.

3.2.1.1.2. To view and edit Sheet Set properties the following criteria must be met:

3.2.1.1.2.1. AutoCAD must be open

3.2.1.1.2.2. A drawing must be open

3.2.1.1.2.2.1. Any drawing file will do.

3.2.1.1.2.3. The Sheet Set Manager window must be open.

3.2.1.1.2.3.1. Select the View tab in the Ribbon

3.2.1.1.2.3.2. Under the “Palettes” group, select Sheet Set Manager.

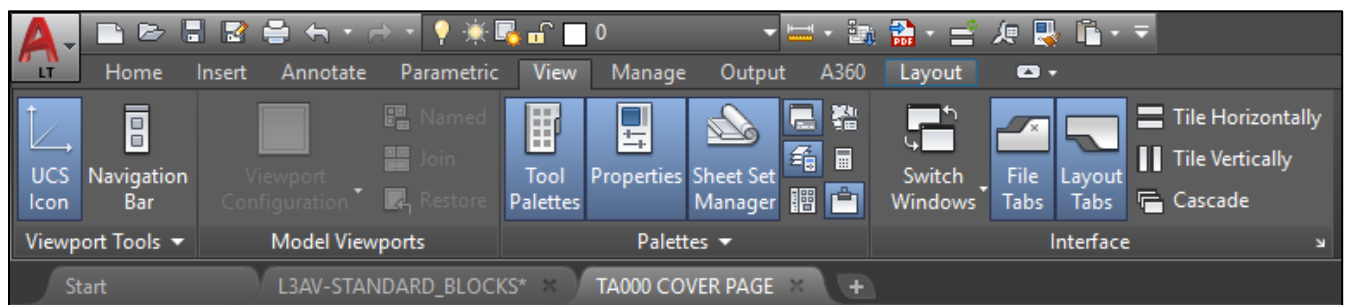


Figure 2

3.2.1.1.2.3.3. This can also be done by pressing CTRL+4 or typing SSM into the command line.

3.2.1.1.3. When the Sheet Set Manager window is open, right-click on the project name and select the “Properties” option.

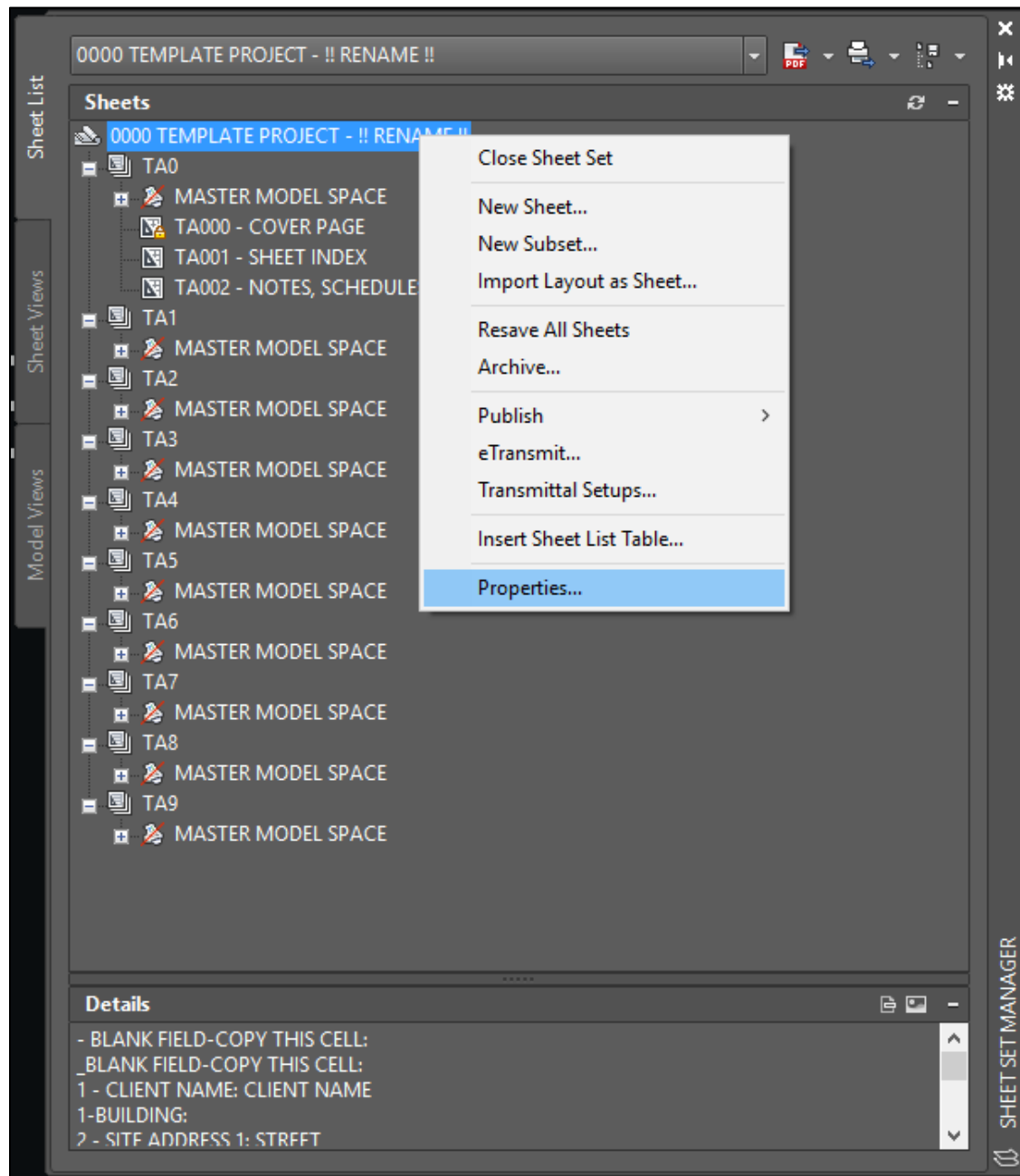


Figure 3

3.2.1.2. List of properties and functions

3.2.1.2.1. Sub-Section = Sheet Set

3.2.1.2.1.1. Name

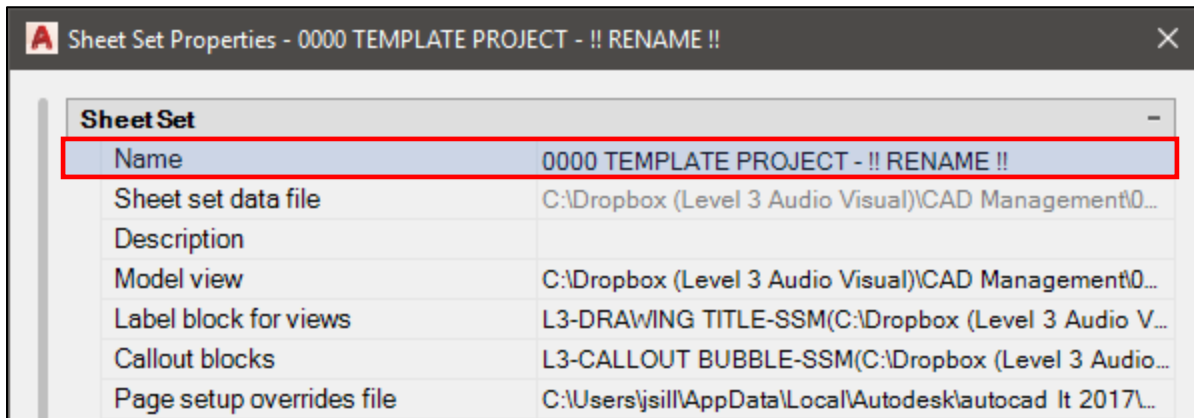


Figure 4

3.2.1.2.1.1.1. This property shall be renamed to match the project folder minus the state and engineer initials.

3.2.1.2.2. Sub-Section = Project Control

3.2.1.2.2.1. Project number

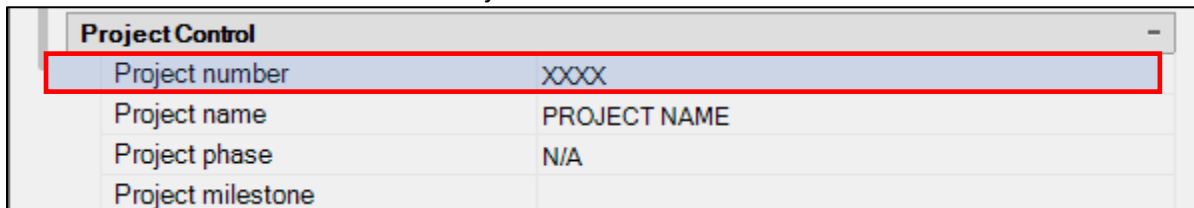


Figure 5

3.2.1.2.2.1.1. This property shall be filled out with the current project's number.

3.2.1.2.2.2. Project Name

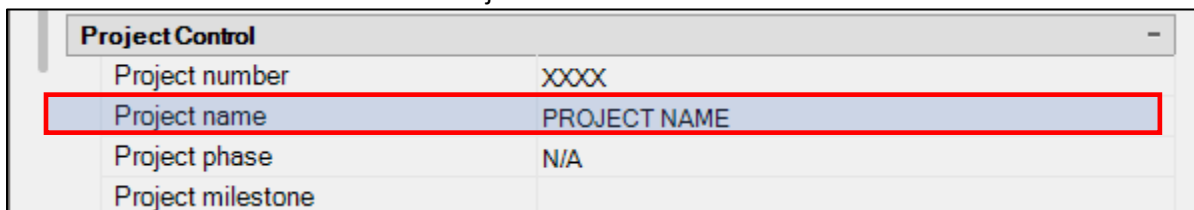


Figure 6

3.2.1.2.2.2.1. This property shall be renamed to match the project name as it is defined in NetSuite.

3.2.1.2.3. Sub-Section: Sheet Set Custom Properties

3.2.1.2.3.1. _BLANK FIELD-COPY THIS CELL

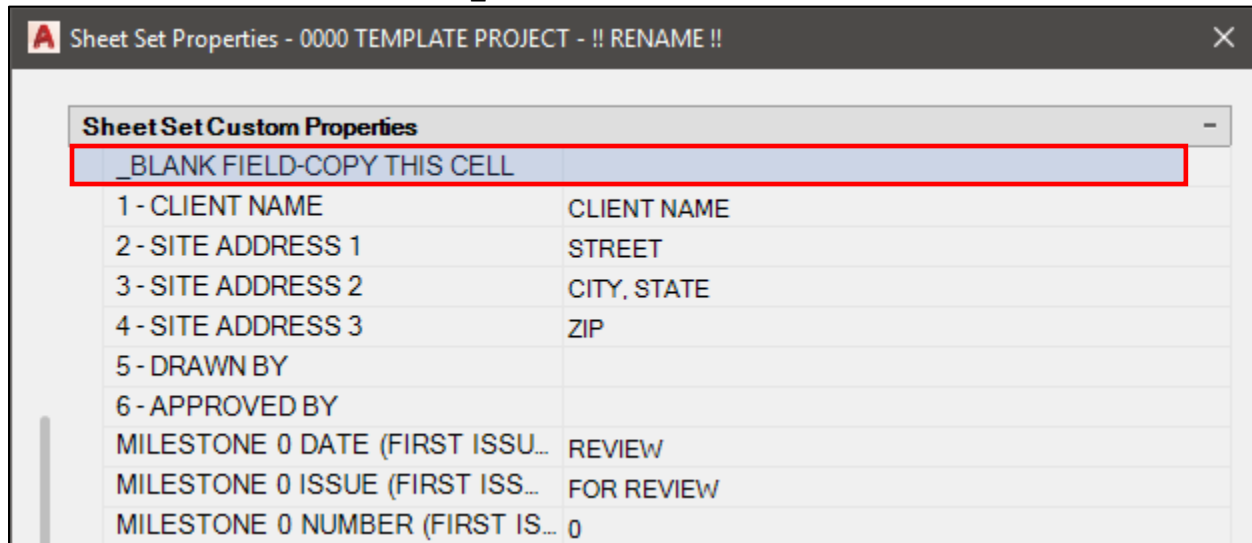
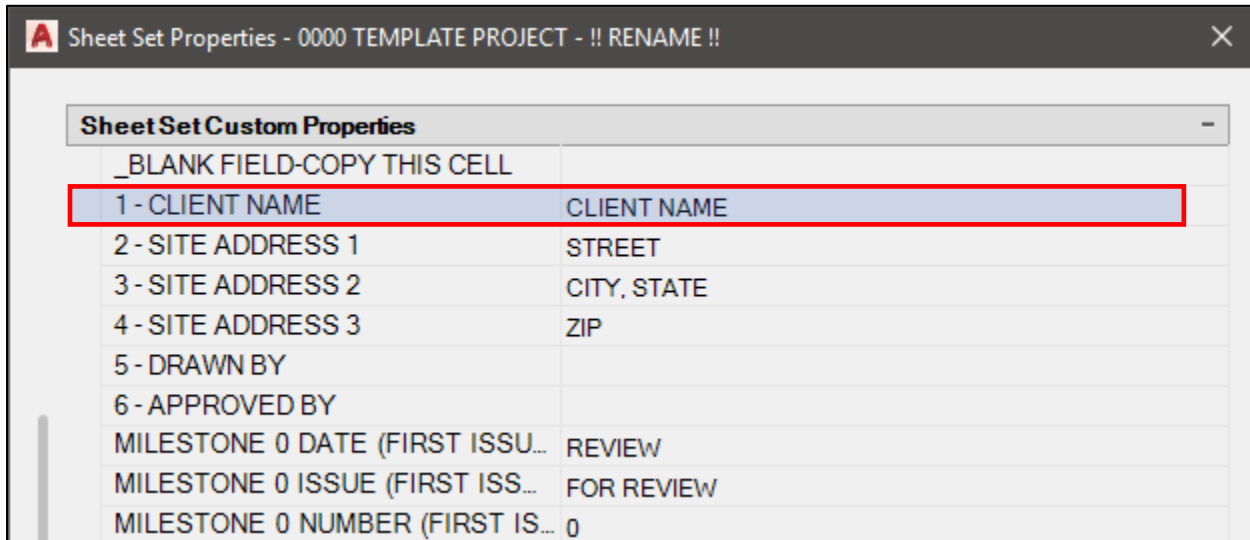


Figure 7

3.2.1.2.3.1.1. This cell contains an actual blank character as opposed to an empty space. Sheet Set Manager doesn't handle empty properties well. When a property is left empty, even a blank space, the field that correlates to the property will be populated with four (4) hyphens (----). This can break the formatting of some fields plus the hyphens will plot. This is not acceptable. Copy this cell using CTRL+C and then paste into the cell that needs to be left blank by pressing CTRL+V. Alternately, you can type in ALT+0160. This is the blank character alt code.

3.2.1.2.3.2. 1-CLIENT NAME



The screenshot shows the 'Sheet Set Properties - 0000 TEMPLATE PROJECT - !! RENAME !!' dialog box. The 'Sheet Set Custom Properties' section is expanded, showing a list of properties. The property '1 - CLIENT NAME' is highlighted with a red box, and its value is 'CLIENT NAME'.

Sheet Set Custom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

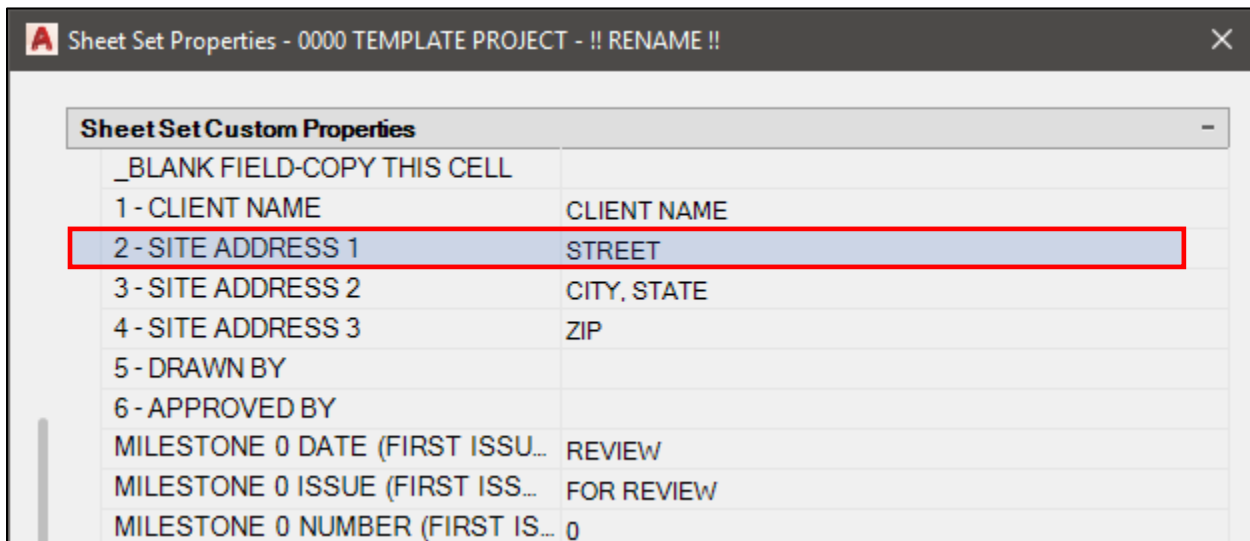
Figure 8

3.2.1.2.3.2.1. This property should be filled out with the client name as it appears in NetSuite.

3.2.1.2.3.2.2. This cell shall be left blank (using the BLANK FIELD cell) when using a corporate logo.

3.2.1.2.3.2.3. Corporate logos are covered in chapter 8.

3.2.1.2.3.3. 2-SITE ADDRESS 1



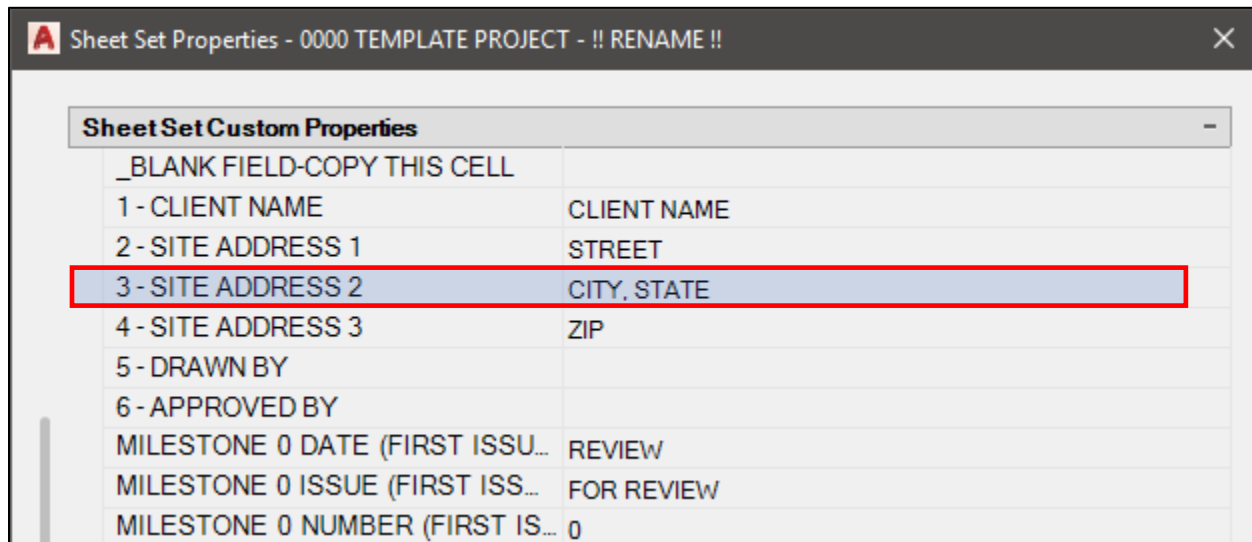
The screenshot shows the 'Sheet Set Properties - 0000 TEMPLATE PROJECT - !! RENAME !!' dialog box. The 'Sheet Set Custom Properties' section is expanded, showing a list of properties. The property '2 - SITE ADDRESS 1' is highlighted with a red box, and its value is 'STREET'.

Sheet Set Custom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 9

3.2.1.2.3.3.1. This field shall be filled out with the STREET portion of the site address.

3.2.1.2.3.4. 3-SITE ADDRESS 2

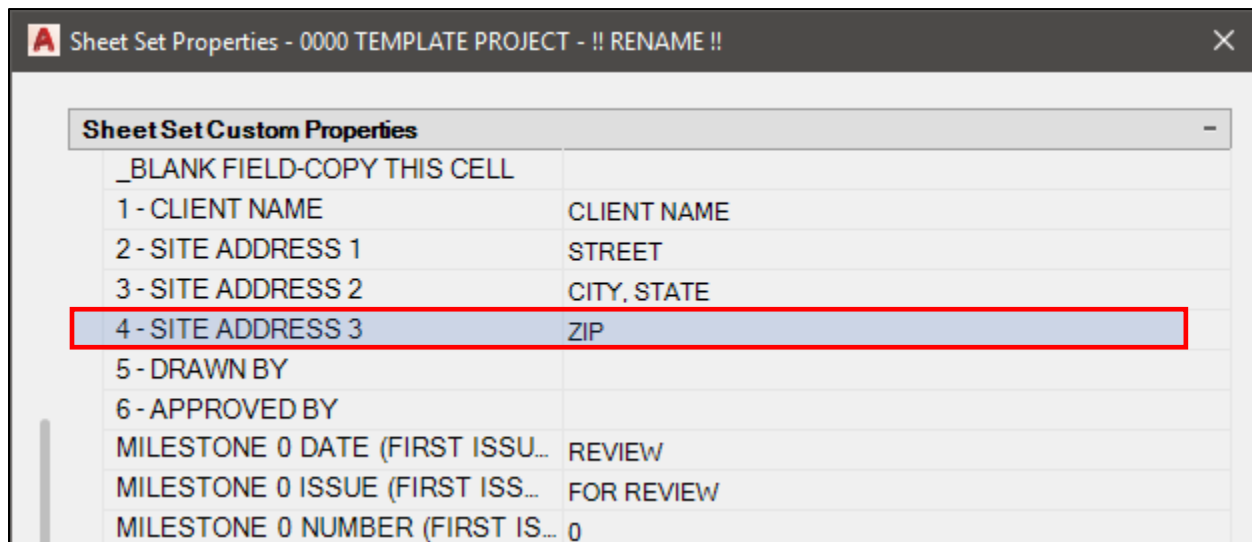


SheetSetCustom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 10

3.2.1.2.3.4.1. This field shall be filled out with the CITY, STATE information of the site address.

3.2.1.2.3.5. 4-SITE ADDRESS 3

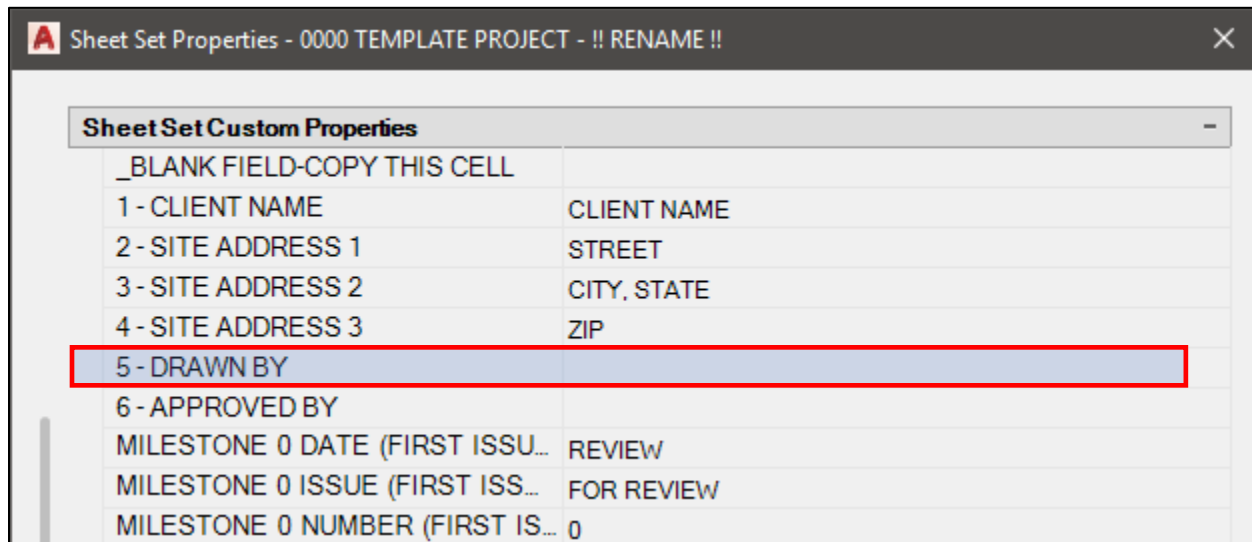


SheetSetCustom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 11

3.2.1.2.3.5.1. This field shall be filled out with the ZIP of the site address.

3.2.1.2.3.6. 5-DRAWN BY

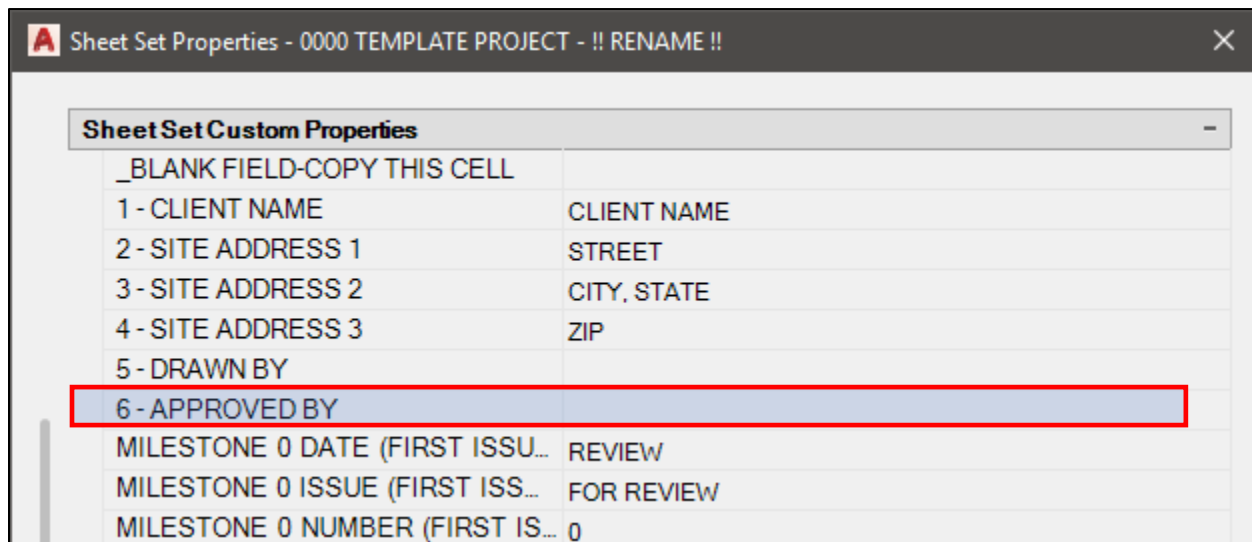


SheetSetCustom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 12

3.2.1.2.3.6.1. This field shall be filled out with the Lead Build Engineer's first initial and last name.

3.2.1.2.3.7. 6-APPROVED BY

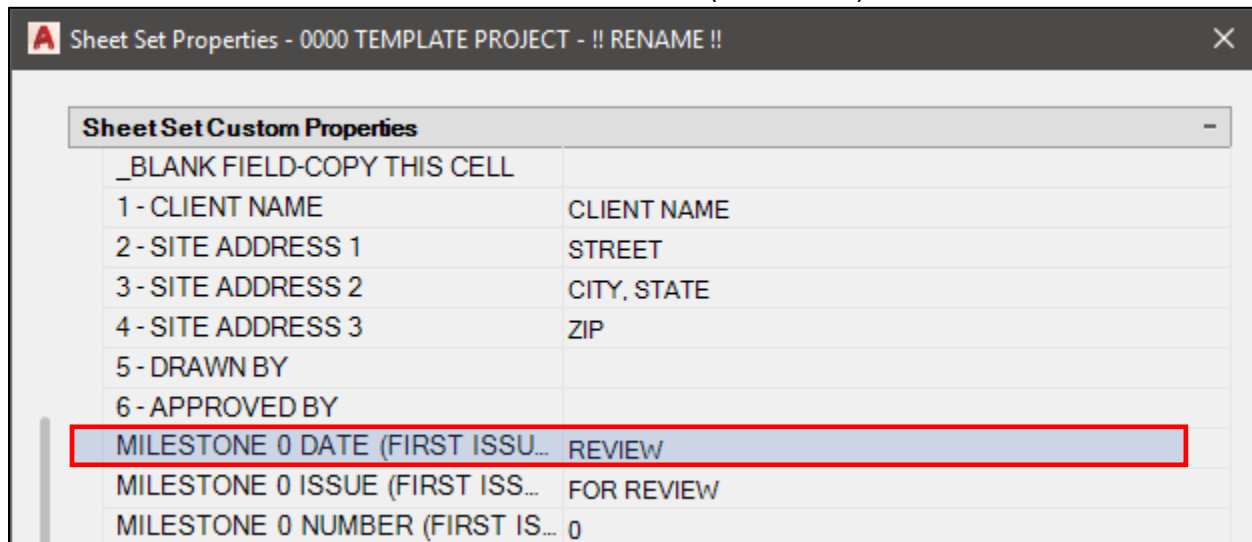


SheetSetCustom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 13

3.2.1.2.3.7.1. This field shall be filled out with the Reviewing Engineer's first initial and last name.

3.2.1.2.3.8. MILESTONE 0 DATE (FIRST ISSUE)



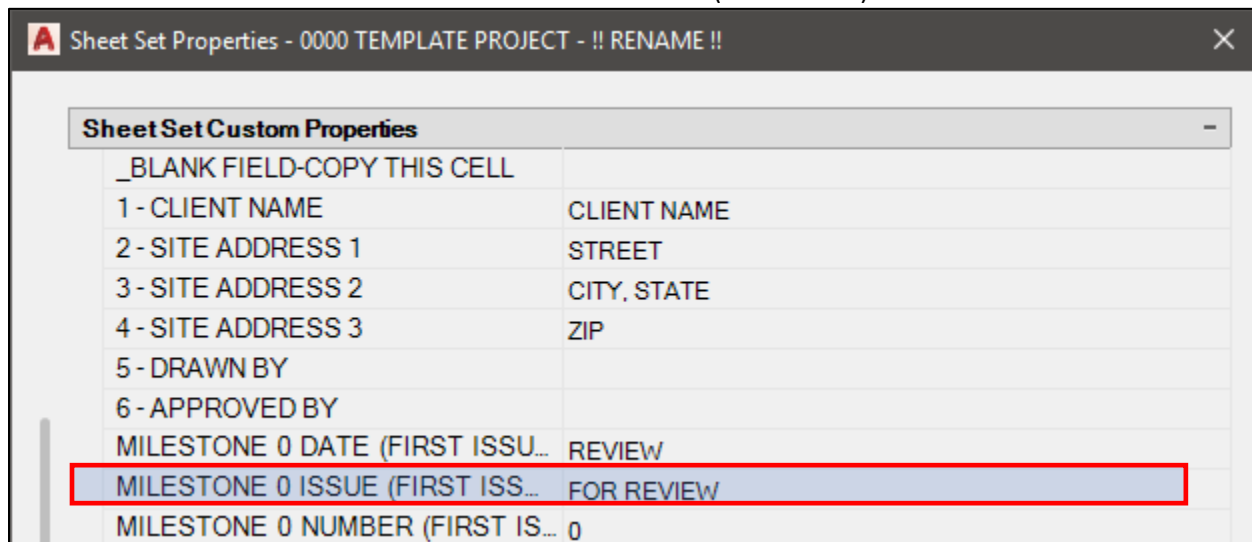
Sheet Set Properties - 0000 TEMPLATE PROJECT - !! RENAME !!

Sheet Set Custom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 14

3.2.1.2.3.8.1. This property shall be left at “FOR REVIEW” until the drawing has been approved to be published. Then this shall be filled out with the publish date in this format – MM/DD/YYYY

3.2.1.2.3.9. MILESTONE 0 ISSUE (FIRST ISSUE)



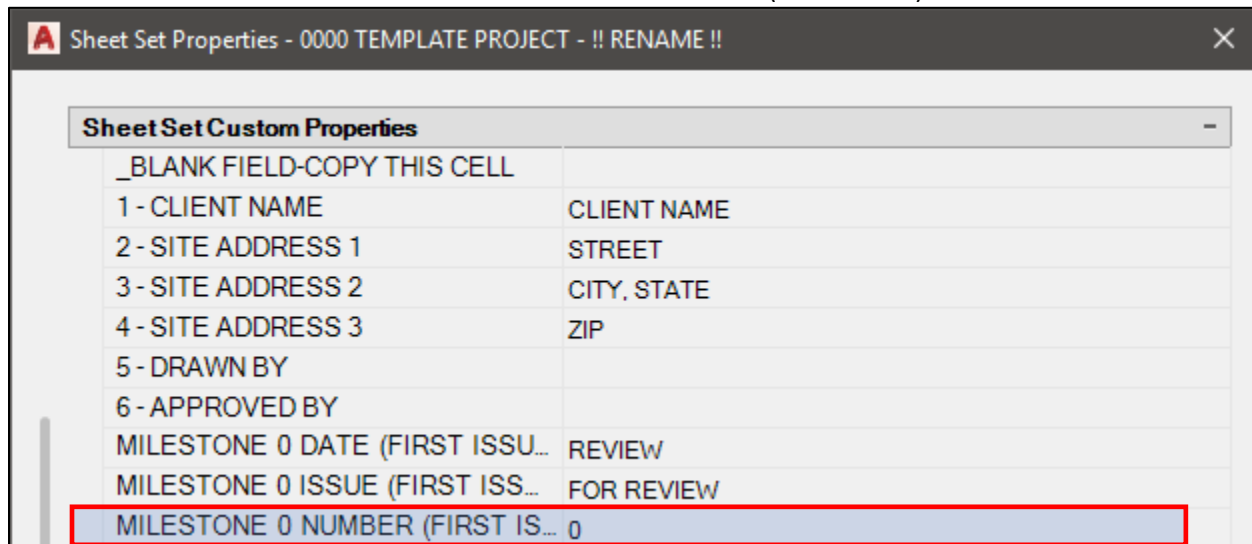
Sheet Set Properties - 0000 TEMPLATE PROJECT - !! RENAME !!

Sheet Set Custom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 15

3.2.1.2.3.9.1. This field shall be left at “FOR REVIEW” until the drawing has been approved to be published. Then this shall be filled out with either “FOR CONSTRUCTION” or “FOR AV BID” or “FOR DESIGN REVIEW” depending on the project.

3.2.1.2.3.10. MILESTONE 0 NUMBER (FIRST ISSUE)



Sheet Set Custom Properties	
_BLANK FIELD-COPY THIS CELL	
1 - CLIENT NAME	CLIENT NAME
2 - SITE ADDRESS 1	STREET
3 - SITE ADDRESS 2	CITY, STATE
4 - SITE ADDRESS 3	ZIP
5 - DRAWN BY	
6 - APPROVED BY	
MILESTONE 0 DATE (FIRST ISSU...	REVIEW
MILESTONE 0 ISSUE (FIRST ISS...	FOR REVIEW
MILESTONE 0 NUMBER (FIRST IS...	0

Figure 16

3.2.1.2.3.10.1. This shall be left at “0” and shall not be changed. The first issue will always start at 0.

3.2.1.2.3.11. MILESTONES (General)

3.2.1.2.3.11.1. All other milestones follow the same principles:

3.2.1.2.3.11.2. The MILESTONE DATE is the date the revised drawing is published

3.2.1.2.3.11.3. The MILESTONE ISSUE is the description of the issue

3.2.1.2.3.11.4. The MILESTONE NUMBER is the number of the milestone.

3.2.2. Sheet properties

3.2.2.1. Overview

3.2.2.1.1. Sheet properties contain the data that AutoCAD uses to populate fields that exist in the specified sheet only.

3.2.2.1.2. With the Sheet Set Manager window open, right-click on a sheet that is in the "Sheet List" tab and select the "Properties" option.

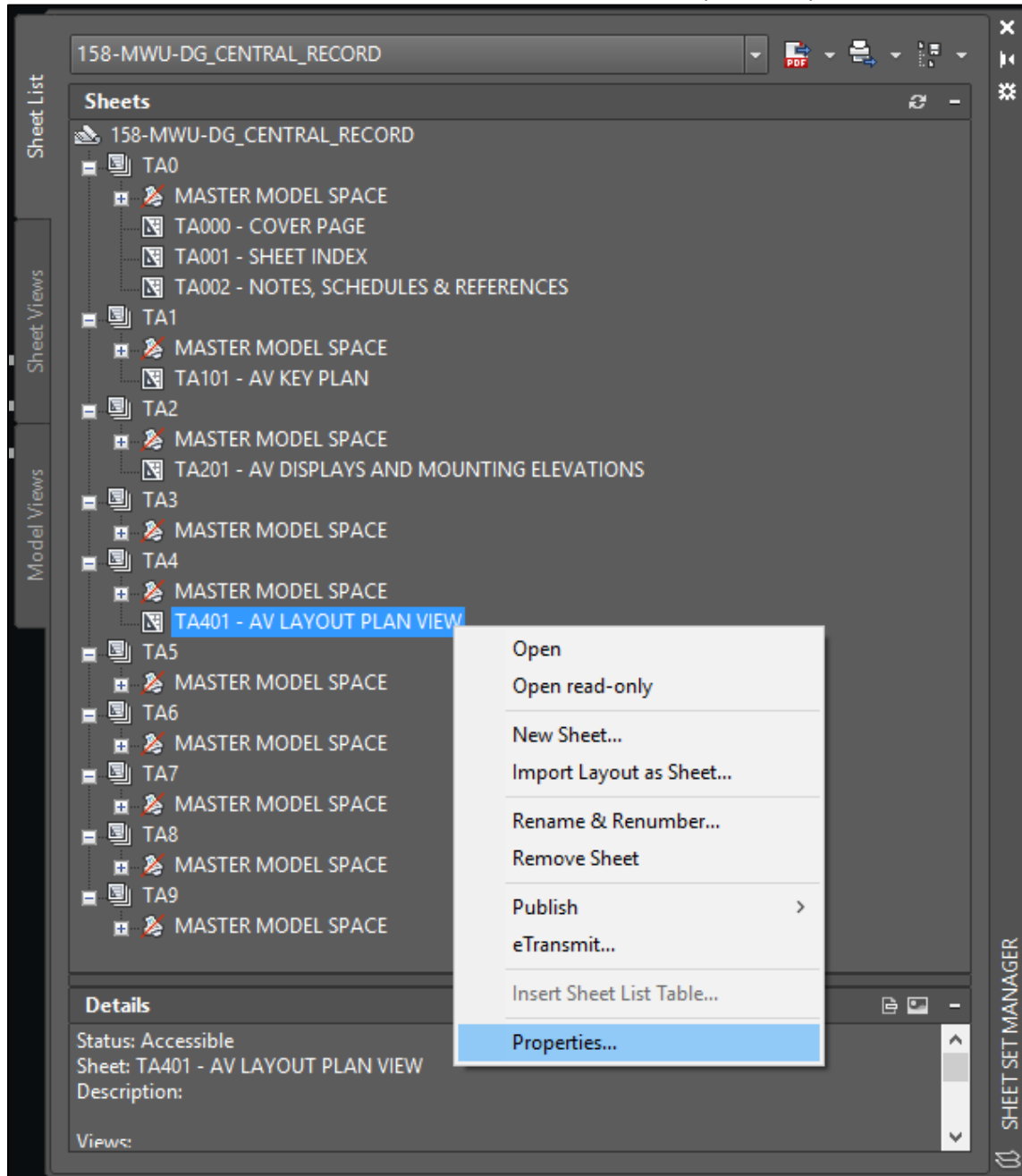


Figure 17

3.2.2.2. Properties and Functions

3.2.2.2.1. Building

Sheet Custom Properties	
- BLANK FIELD-COPY THIS CE...	
1-BUILDING	AUDITORIUM
2-FLOOR	0
3-ROOM	034
-HYPHEN-DO NOT EDIT	-

Figure 18

3.2.2.2.1.1. This property should be filled out with the install site's building name or number that is relevant to that sheet.

3.2.2.2.2. Floor

Sheet Custom Properties	
- BLANK FIELD-COPY THIS CE...	
1-BUILDING	AUDITORIUM
2-FLOOR	0
3-ROOM	034
-HYPHEN-DO NOT EDIT	-

Figure 19

3.2.2.2.2.1. This property should be filled out with the floor number that is relevant to that sheet.

3.2.2.2.3. Room

Sheet Custom Properties	
- BLANK FIELD-COPY THIS CE...	
1-BUILDING	AUDITORIUM
2-FLOOR	0
3-ROOM	034
-HYPHEN-DO NOT EDIT	-

Figure 20

3.2.2.2.3.1. This property shall be filled out with the room number that is relevant to that sheet.

3.2.3. Sheet List tab

3.2.3.1. Overview

3.2.3.1.1. The Sheet List tab in the Sheet Set Manager window is the collection of all the sheets that are in the sheet set. This includes all subsets as well as sheets that are set to publish and not to publish. The sheet list tab is the main to navigate a drawing set.

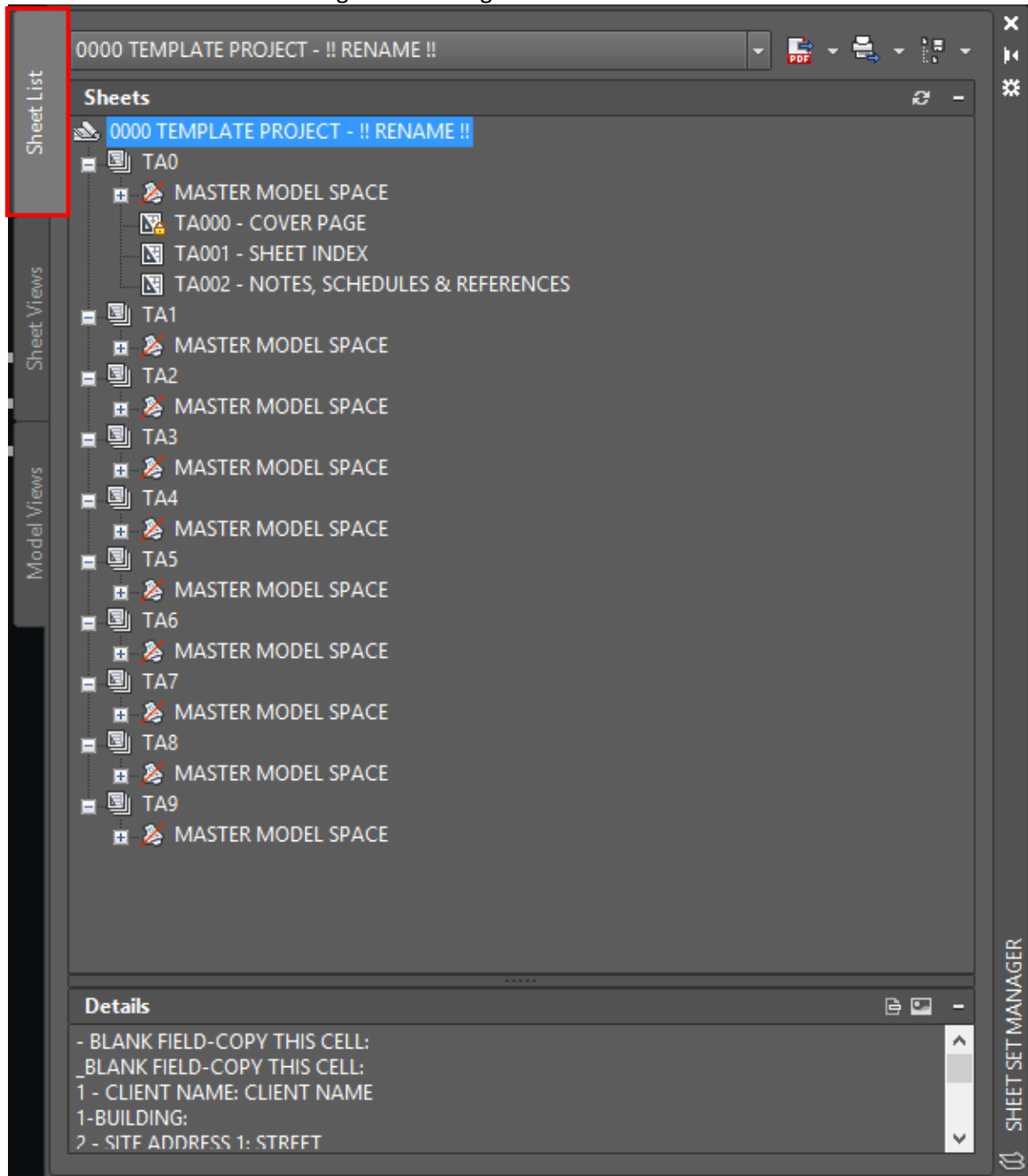


Figure 21

3.2.3.2. Subsets

3.2.3.2.1. Subsets are how sheets are organized in the sheet set.

3.2.3.2.2. The main subsets correspond to the main disciplines.

3.2.3.2.2.1. TA0 – General, Schedules, Indexes

3.2.3.2.2.2. TA1 – Key Plans, Overall Plans & Sectional Plans

3.2.3.2.2.3. TA2 – Elevations & Sections

3.2.3.2.2.4. TA3 – Conduit Riser Diagrams

3.2.3.2.2.5. TA4 – Enlargements

3.2.3.2.2.6. TA5 - Details

3.2.3.2.2.7. TA6 – Schematics and Line Diagrams

3.2.3.2.2.8. TA7 – Equipment Rack Elevations, Power Requirements & Heat Loads

3.2.3.2.2.9. TA8 – System Notes, EDID Plans, DSP Notes, Programming Notes

3.2.3.2.2.10. TA9 – Isometrics and Perspectives

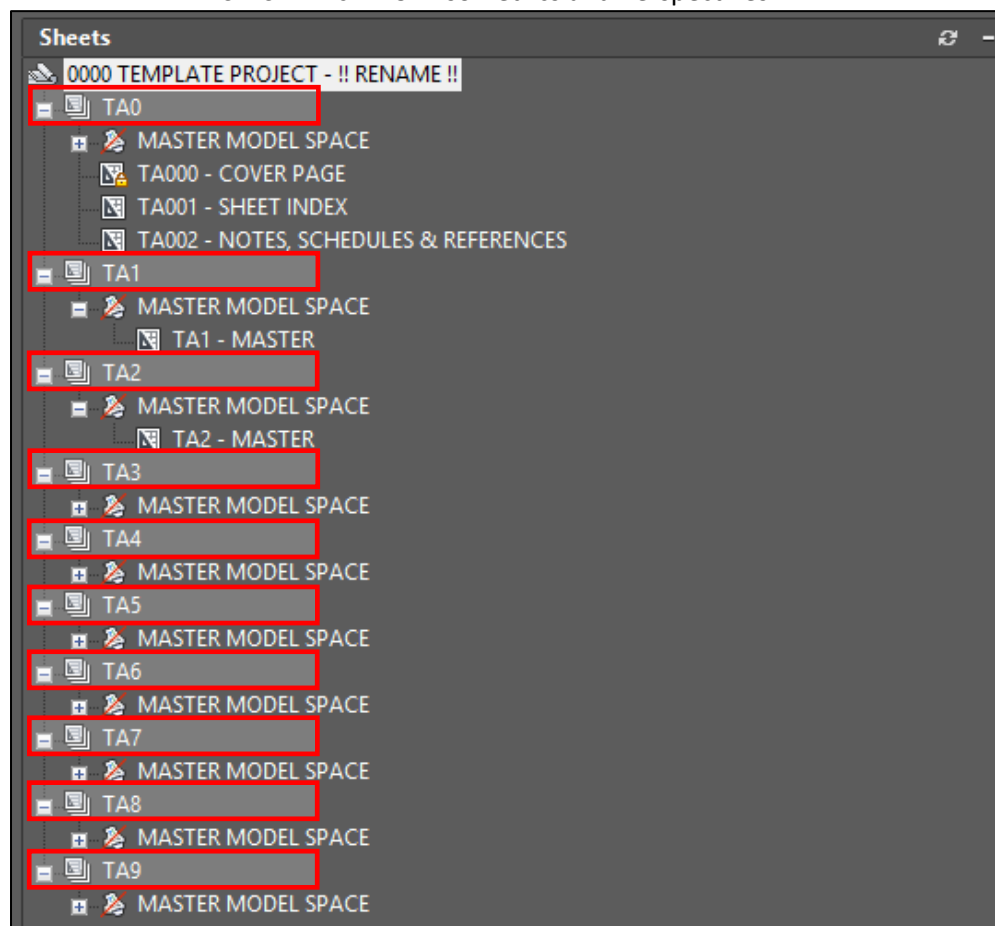


Figure 22

3.2.3.2.3. Within each main subset there is a secondary subset called MASTER MODEL SPACE.

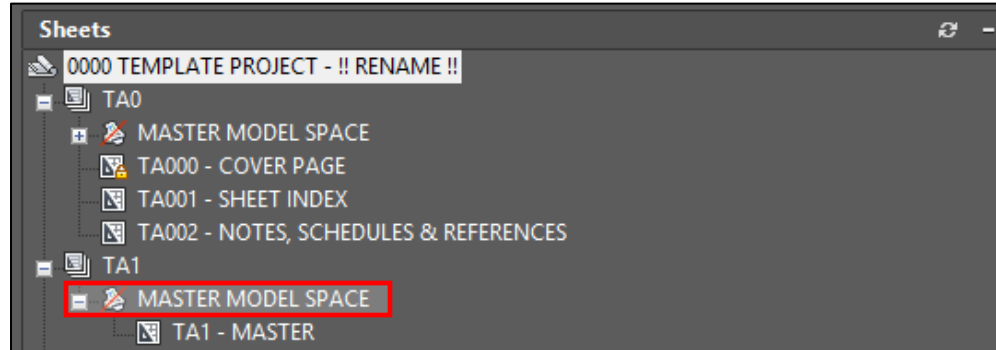


Figure 23

3.2.3.2.3.1. The MASTER MODEL SPACE subset is where all model space drawings reside.

3.2.3.2.3.2. This is setup this way due to how Sheet Set manger handles model space drawings and layout drawings.

3.2.3.2.3.3. There can be multiple MASTER MODEL SPACE drawings in one MASTER MODEL SPACE subset. This is preferable with large drawing sets. An example of this would be to have a MASTER MODEL SPACE drawing for each floor of a project.

3.2.3.3. Creating a new sheet

3.2.3.3.1. To create a new sheet:

3.2.3.3.1.1. Right-click on the subset that the new sheet will be placed in and select the “New Sheet” option.

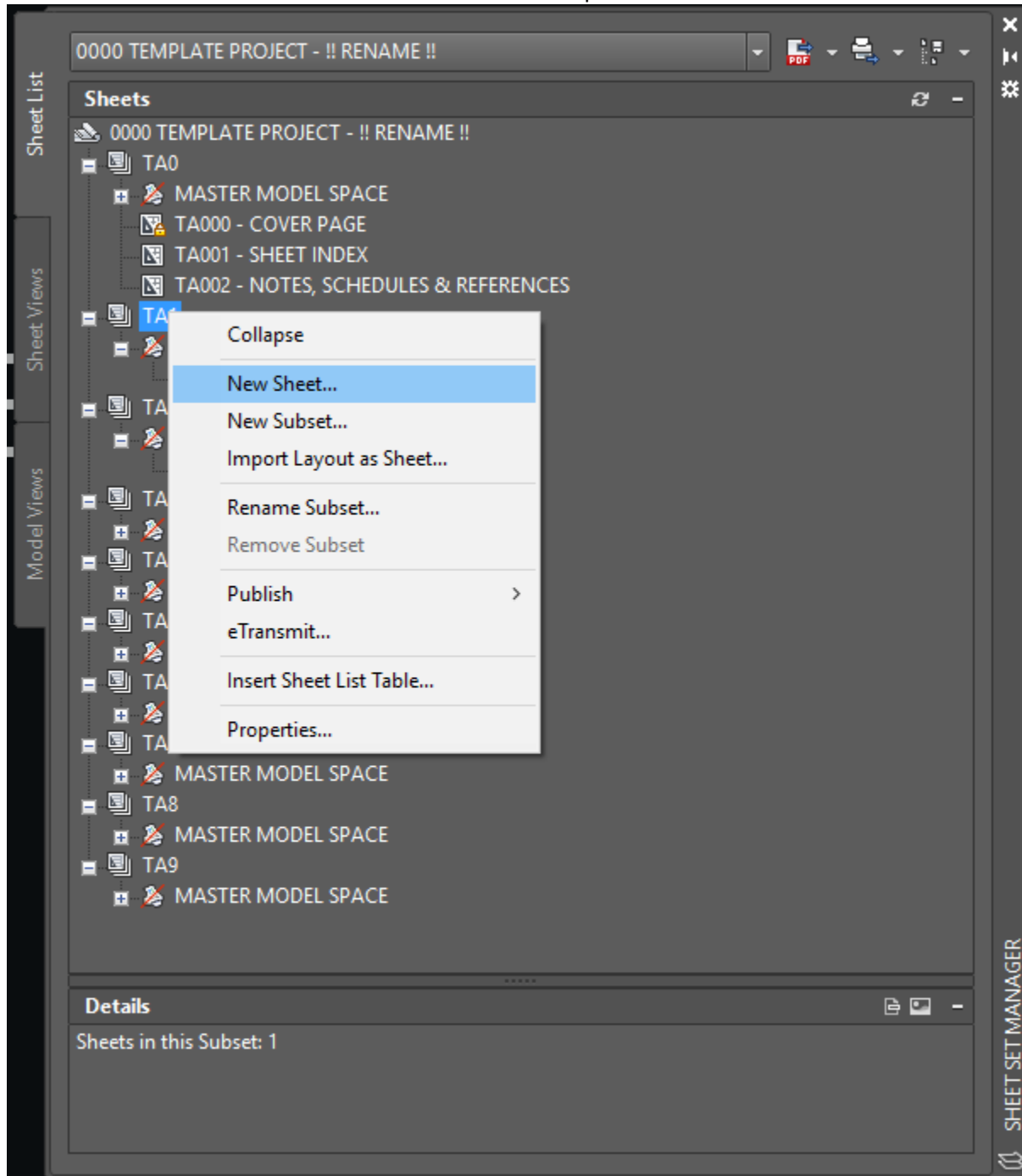


Figure 24

3.2.3.3.1.1.1. (This is very important as once the sheet is made this file location is where Sheet Set manager will always look for that file. While sheets can be moved around in the Sheet List Tab it is not acceptable to move them between subsets.)

3.2.3.3.1.2. Then you will be prompted to number and then name the sheet.

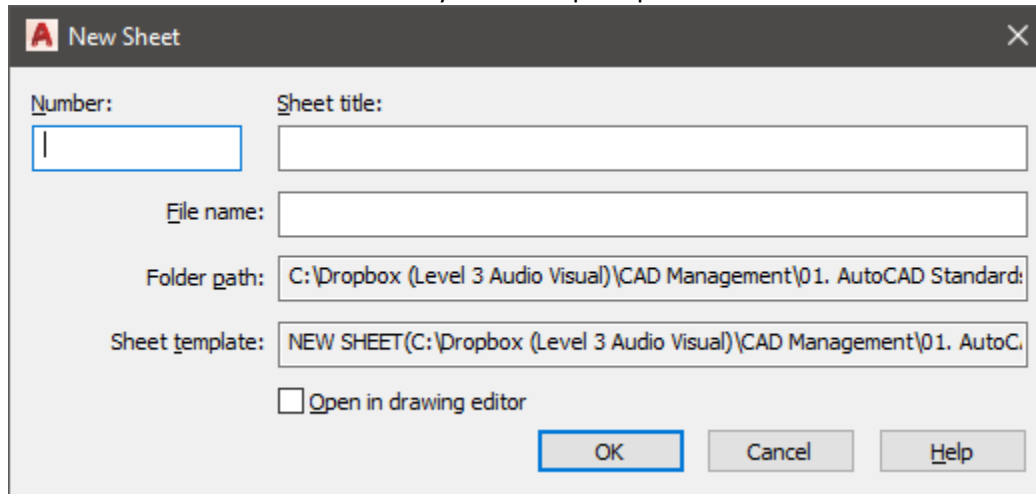


Figure 25

3.2.4. Sheet Views tab

3.2.4.1. Overview

3.2.4.1.1. The Sheet View Tab lists all the sheets that have Model Views placed on them. Skip to the Model View Tab section for more information. The Sheet View tab is very important in the process of using Sheet Set Manager. It is where you go to place linked & managed cross referencing symbols on your drawings

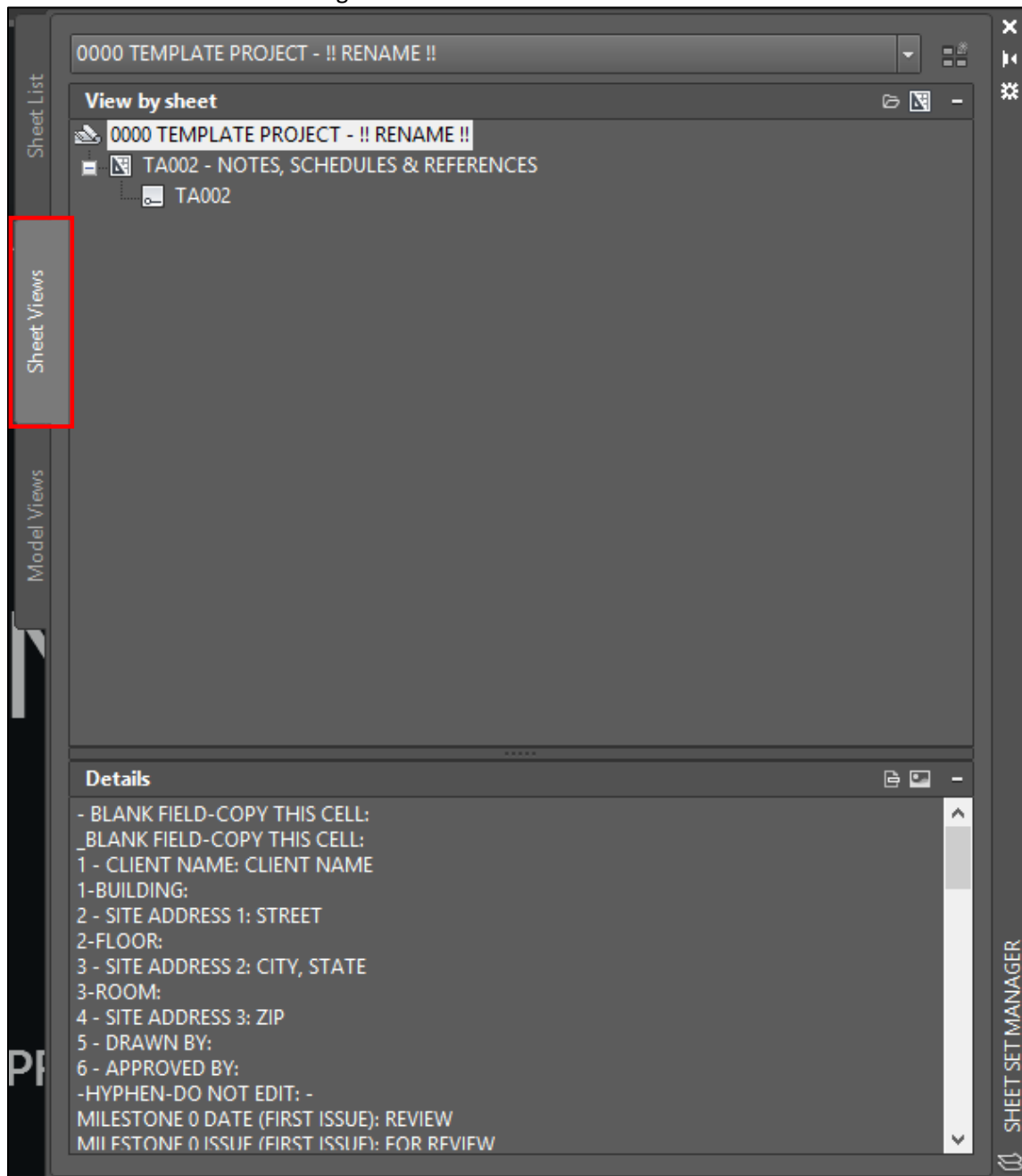


Figure 26

3.2.4.1.2. The sheets may be viewed in one of two ways. Category View or Sheet View.

3.2.4.1.2.1. Category view

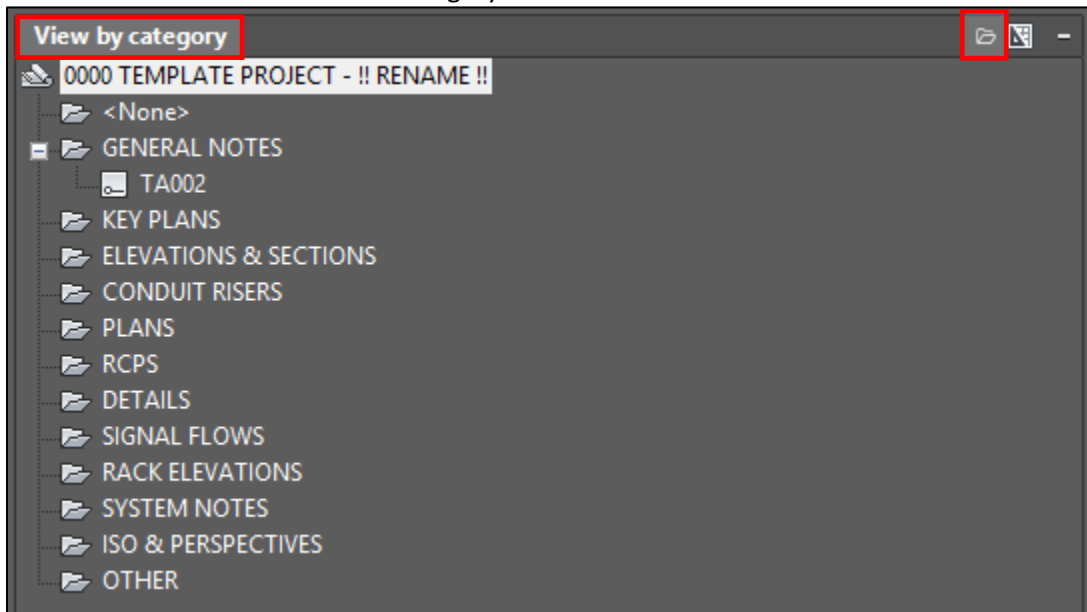


Figure 27

3.2.4.1.2.1.1. Category view lets you organize all the placed model views in terms of categories. This can be helpful for very large drawing sets.

3.2.4.1.2.2. Sheet view

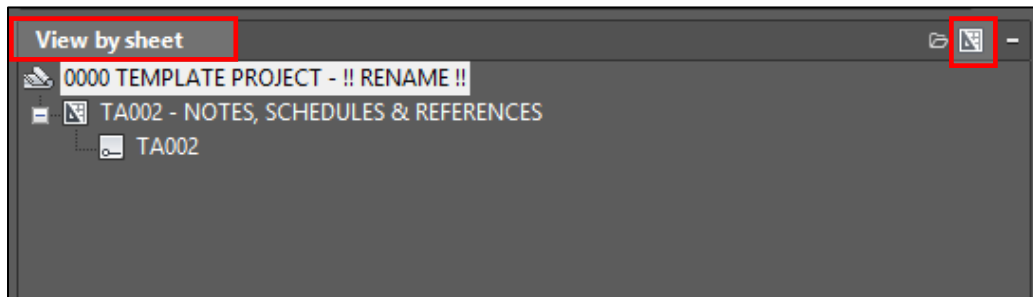


Figure 28

3.2.4.1.2.2.1. Sheet view lists all the sheets that have views on them and which view is on which sheet.

3.2.4.2. Renaming & renumbering

3.2.4.2.1. For View Title blocks and other Cross-Referencing symbols to work properly, the placed view must be renamed and renumbered.

3.2.4.2.2. If a view is not renamed it will default to the name given to the view in the Master Model Space drawing. Most times, this is not desired.

3.2.4.2.3. Views that have been placed onto layouts will also need to be “renumbered”. This term is a little mislead because the placed views will default to not having any number attached to them. The number is critical for View Title blocks as well as for any cross-referencing symbol that points to a specific view on any given page.

3.2.4.2.4. To rename & renumber, simply right-click on a view name and select the “Rename & Renumber” option.

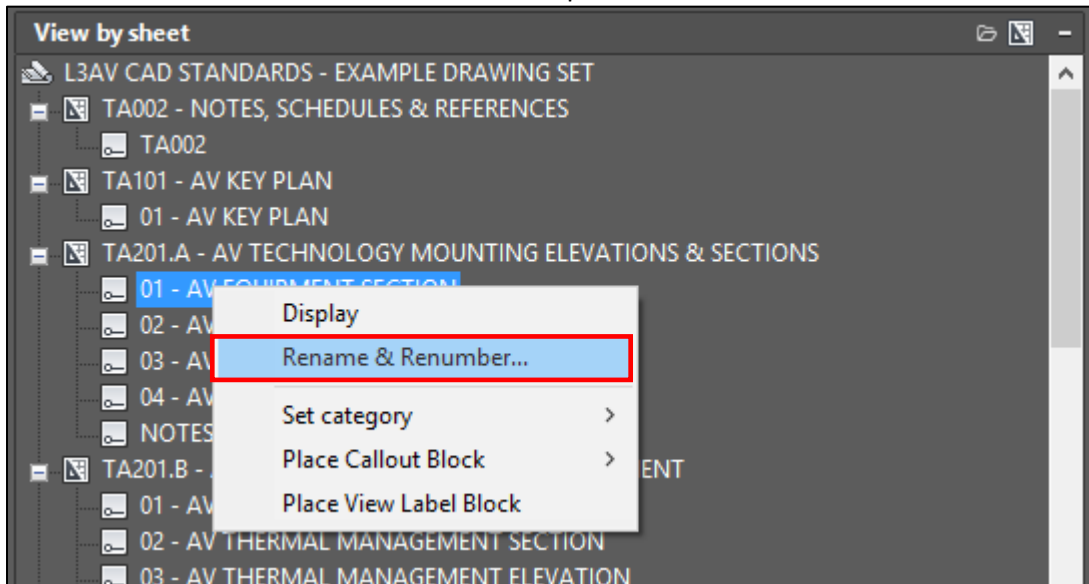


Figure 29

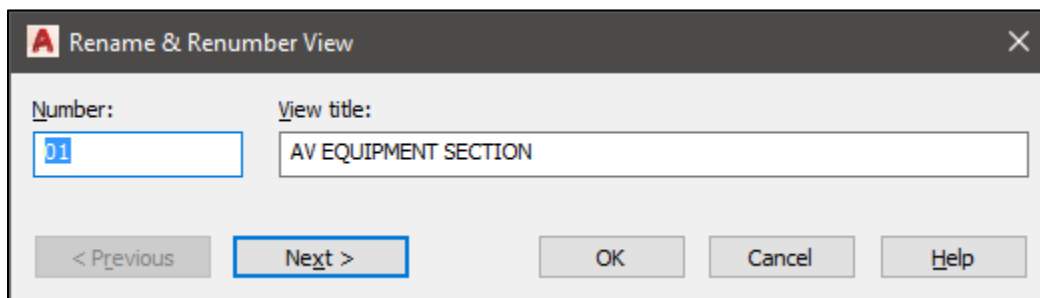


Figure 30

3.2.4.3. Placing cross-referencing symbols

3.2.4.3.1. To place a cross-referencing symbol, simply right-click on a placed view and hover over the “Place Callout Block” option. This will reveal a list of callouts blocks that can be placed.

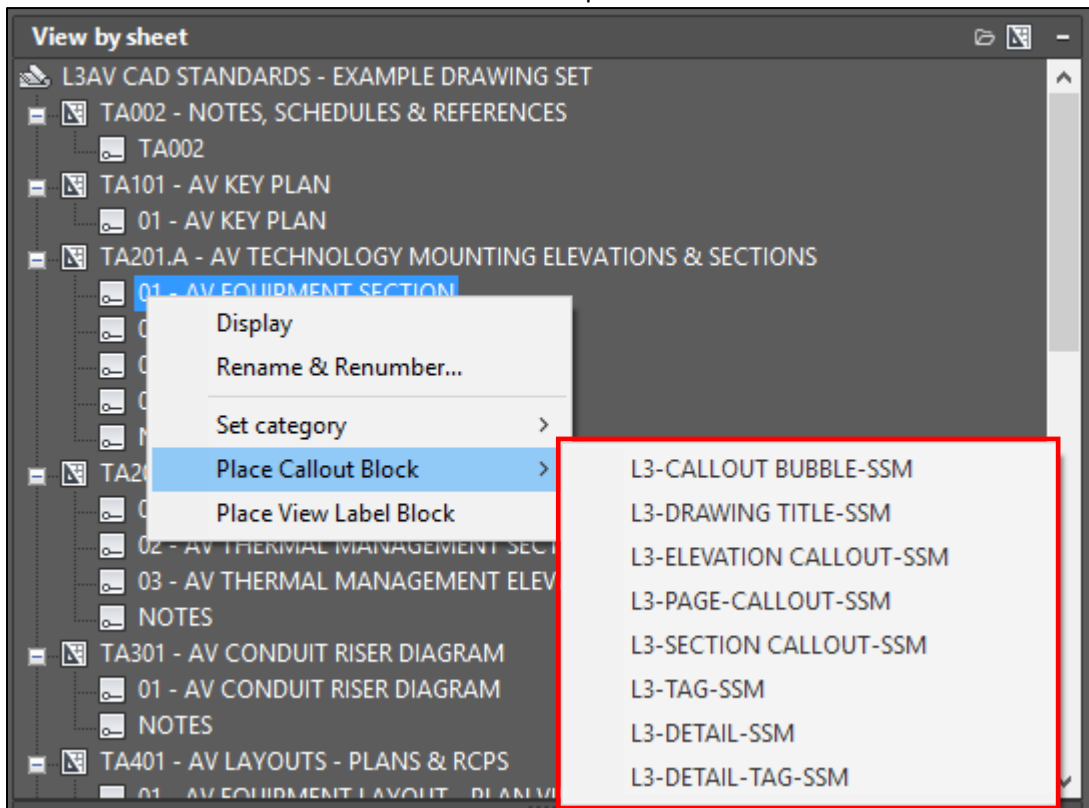


Figure 31

3.2.4.3.2. The information in the block will be completely managed by Sheet Set Manager. If a page is renumbered, all symbols that cross referenced to that page will update automatically.

3.2.4.3.3. When the drawing is published to PDF, all symbols have embedded hyperlinks in them so that a drawing set can be navigated quickly and efficiently.

3.2.5. Model view tab

3.2.5.1. Overview

3.2.5.1.1. The Model View Tab lists all the drawings that are in the MASTER MODEL SPACE subsets. A drawing can be expanded to reveal all the saved named views in that drawing. It is here that model views can be placed on sheets.

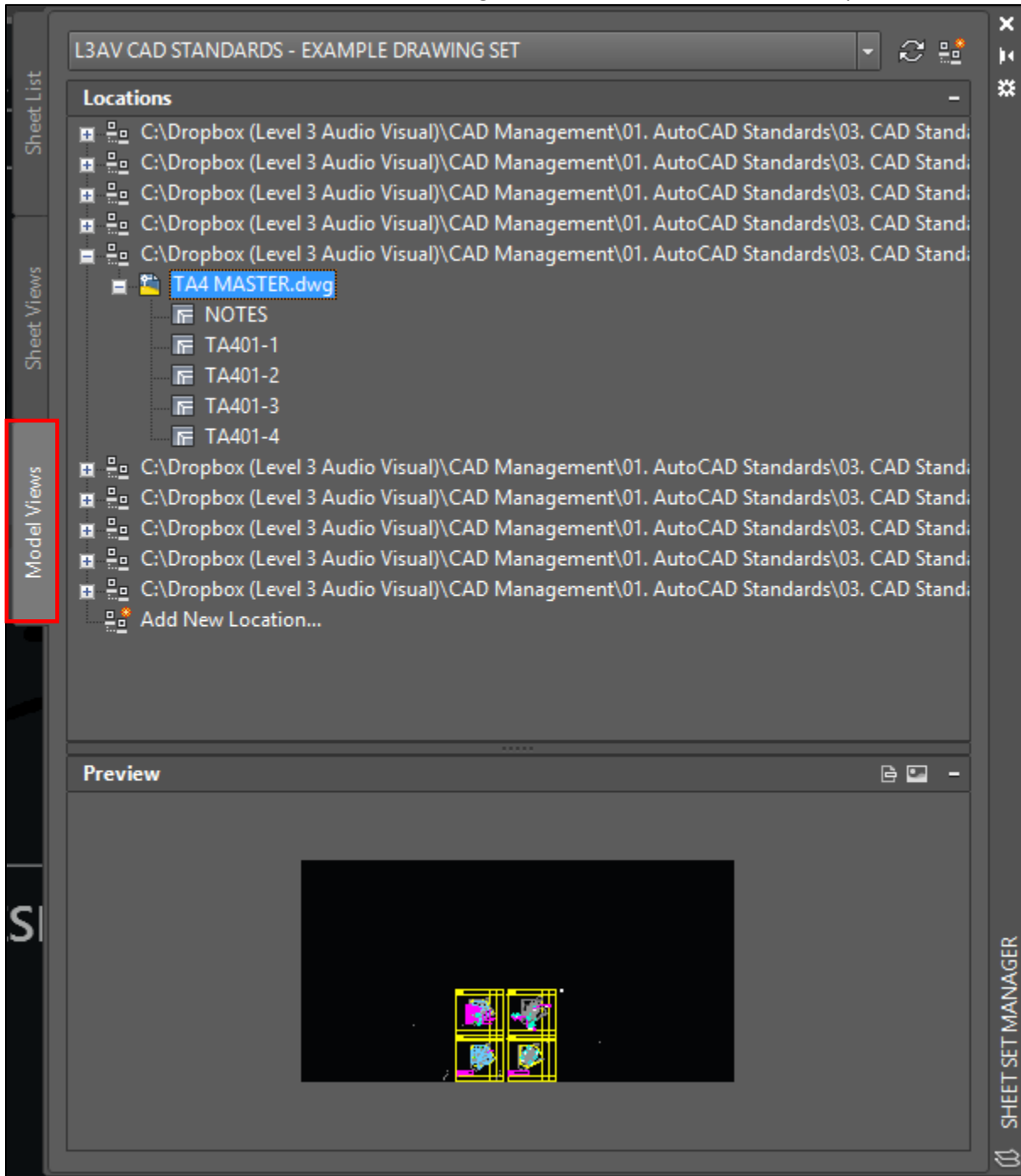


Figure 32

3.2.5.2. Creating model views

3.2.5.2.1. To create a named view the first step is to make sure the model space scale is set appropriately for the view that is going to be defined.

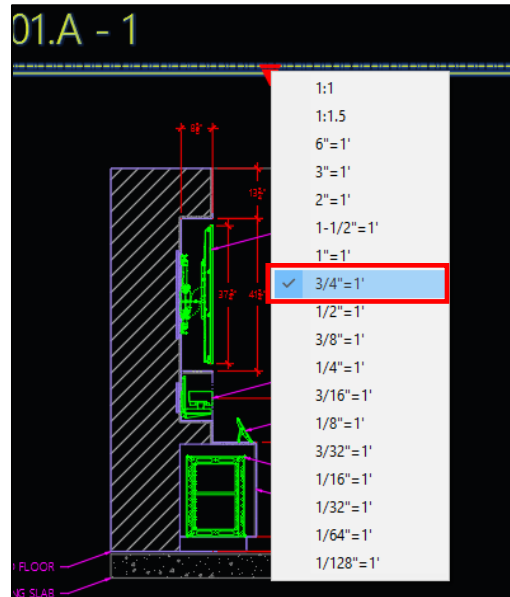


Figure 33

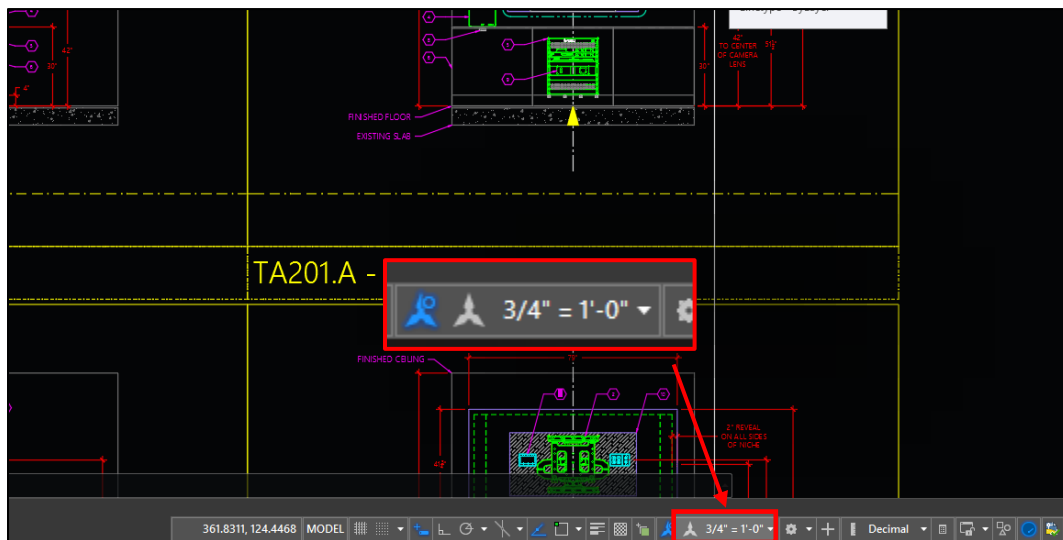


Figure 34

3.2.5.2.2. Once the model space scale has been set, type “VIEW” into the command line. This will bring up the named views dialogue window.

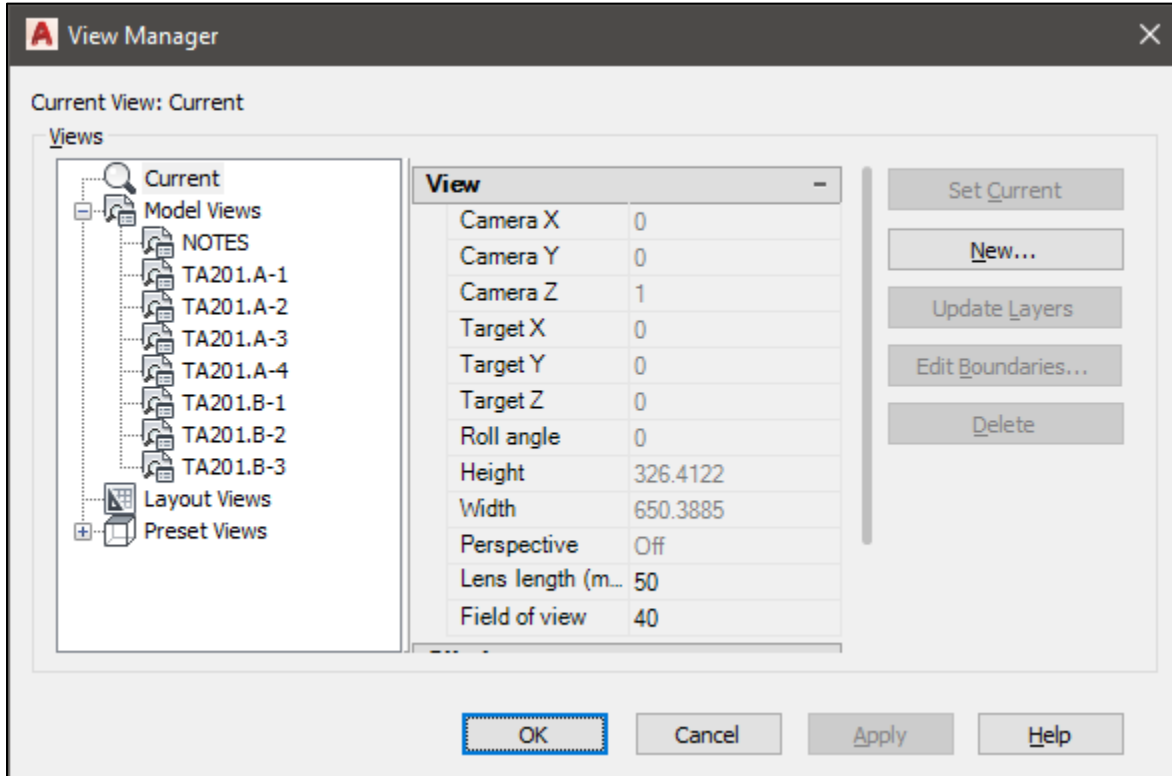


Figure 35

3.2.5.2.3. Once the dialogue window is opened, follow these steps:

3.2.5.2.3.1. Click the “New” button.

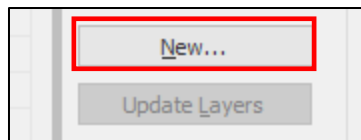


Figure 36

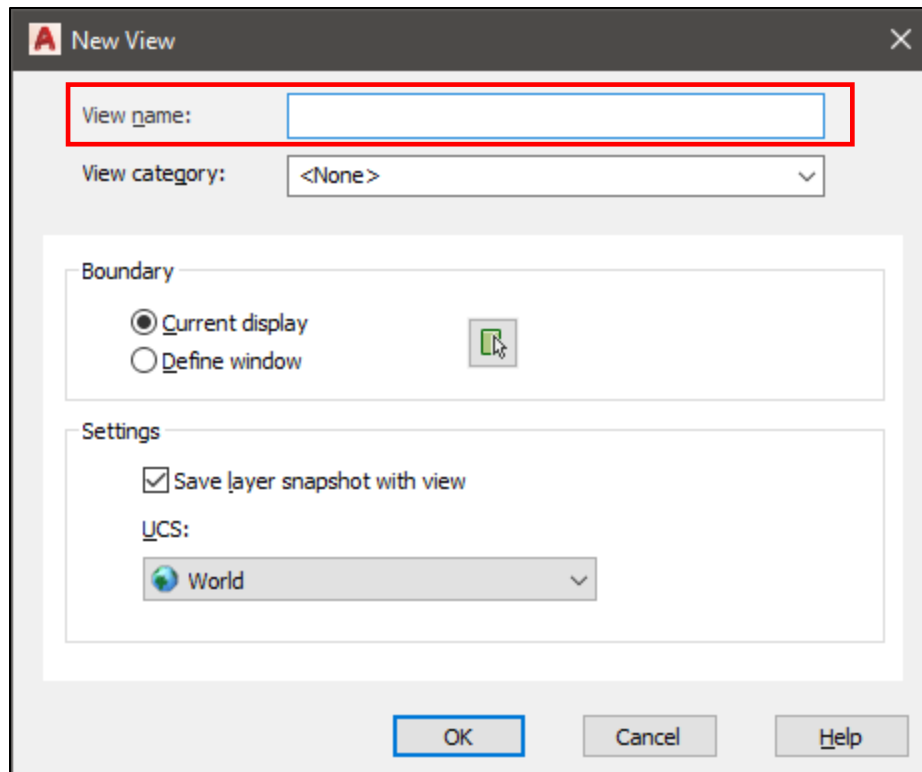


Figure 37

3.2.5.2.3.2. Type in a name for the view that is about to be defined.



3.2.5.2.3.3. Press this button

3.2.5.2.3.4. Select the top left corner of the boundary block that is being used for the view and then select the bottom right corner.

3.2.5.2.3.5. Hit enter.

3.2.5.2.3.6. Click "OK"

3.2.5.2.3.7. Click "OK" again.

3.2.5.2.3.8. The view has been defined

3.2.5.3. Placing model views

3.2.5.3.1. Once a model view has been defined, it will be available to be placed from the Model View Tab.

3.2.5.3.2. First, open the sheet that the view will be placed on using the Sheet List Tab

3.2.5.3.3. Open the model view tab and find the Master model space drawing that has the view that is needed.

3.2.5.3.4. Expand the drawing and locate the view that is to be placed.

3.2.5.3.5. Right-click the view and select the “Place sheet” option

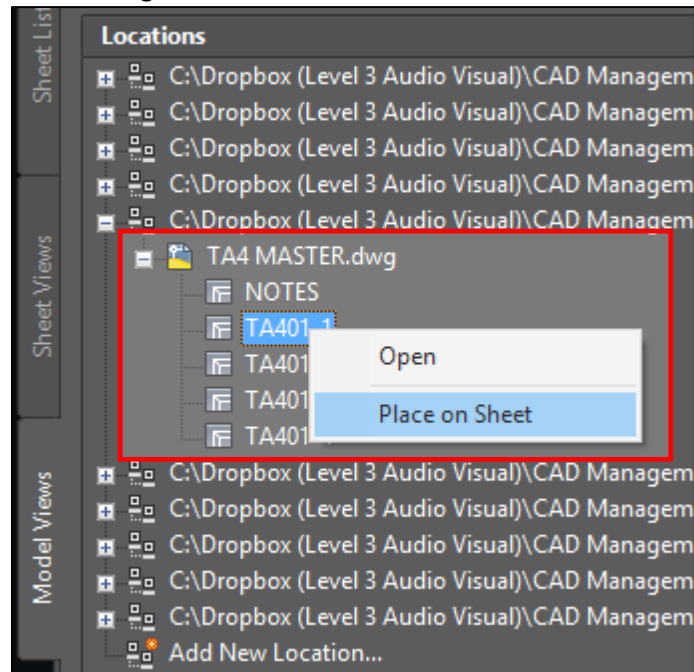


Figure 38

3.2.5.3.6. Depending on the size of the Master Model Space drawing, AutoCAD may take a little time loading the view. Once the view is loaded, it will be able to be placed anywhere on the sheet

3.2.5.3.7. When the view is placed, it will automatically place a view title block that has been filled out with name of the view as well as the scale that it is in. Refer to section 3.4 on how to edit the name and number of the view title block.

3.2.6. Sheet index

AUDIOVISUAL SHEET INDEX														
SHEET SERIES	INCLUDES		DATE	ISSUE										
TA000	COVER PAGE, DRAWING INDEX, RESPONSIBILITIES MATRIX, SYMBOL LEGEND		05/09/2017	FOR CONSTRUCTION										
TA100	KEY PLANS		05/10/2017	RFC-01										
TA200	ELEVATIONS AND SECTIONS		05/11/2017	RFC-02										
TA300	RISER DIAGRAMS		06/30/2017	AS BUILT										
TA400	FACILITY PLANS & RCPS													
TA500	DETAILS													
TA600	SIGNAL FLOWS, SCHEMATICS & TERMINATION SCHEDULES													
TA700	EQUIPMENT RACK DETAILS													
TA800	SYSTEM NOTES, EDID PLANS, DSP NOTES, PROGRAMMING NOTES													
TA900	ISOMETRICS & PERSPECTIVES													
<input checked="" type="checkbox"/> ISSUED <input type="checkbox"/> REVISION <input type="checkbox"/> PROGRESS <input type="checkbox"/> NOT ISSUED <input type="checkbox"/> NOT USED														
SHEET NUMBER	SHEET TITLE	ROOM/AREA	0	1	2	3								
TA000	COVER PAGE	-	●			●								
TA001	SHEET INDEX	-	●			●								
TA002	NOTES, SCHEDULES & REFERENCES	-	●			●								
TA101	AV KEY PLAN	39TH FLOOR	●			●								
TA201.A	AV TECHNOLOGY MOUNTING ELEVATIONS & SECTIONS	3906	●	▲	▲	●								
TA201.B	AV SIGHTLINES & THERMAL MANAGEMENT	3906	●	▲	▲	●								
TA301	AV CONDUIT RISER DIAGRAM	3906	●			●								
TA401	AV LAYOUTS - PLANS & RCPS	3906	●	▲		●								
TA501	AV EQUIPMENT & MOUNTING DETAILS	3906	●			●								
TA601	AV SIGNAL FLOWS	3906	●			●								
TA701.A	AV RACK ELEVATIONS	3906	●	▲		●								
TA701.B	AV POWER & HEAT DISTRIBUTION	3906	●			●								
TA801.A	EDID TABLE - SOURCES	3906	●			●								
TA801.B	EDID TABLE - SINKS	3906	●			●								

Figure 39

3.2.6.1. Overview

3.2.6.1.1. The sheet index is managed mainly by Sheet Set Manager. Sheet Set Manager will auto-populate the sheet numbers, titles & room location into the sheet index. The engineer will have to manually manage the issuing symbols for each sheet.

3.2.6.2. Updating the sheet index

3.2.6.2.1. The quickest way to update the sheet index is to run the Update Data Links macro in the L3AV tool palette.

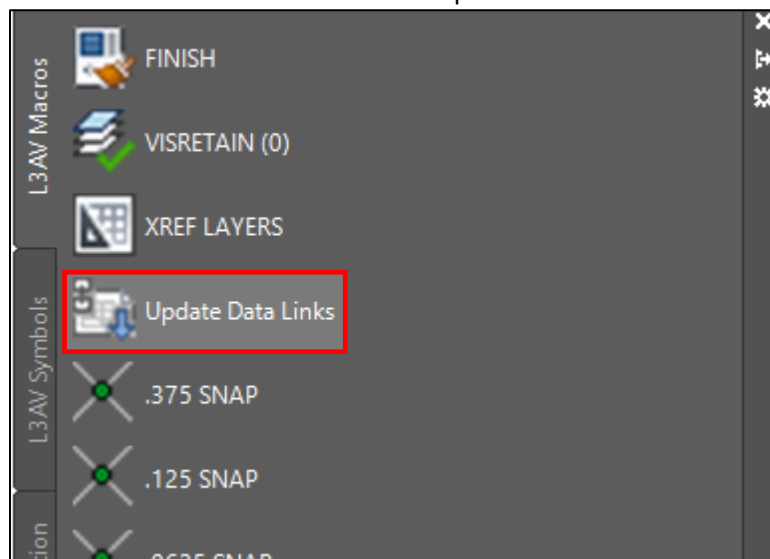


Figure 40

3.2.6.2.2. Please refer to the AutoCAD setup guide for installing the L3AV Tool Palettes.

3.2.6.2.3. The secondary way to update the sheet index is to follow these steps:

3.2.6.2.3.1. Do a right-to-left selection over the table

[illegible]

3.2.6.2.3.2. Right-click and select “Update Table Data Links”

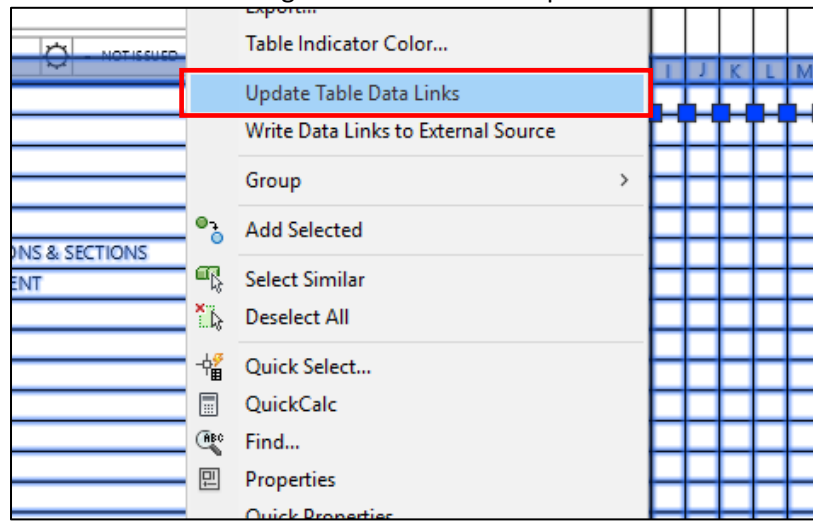


Figure 41

3.2.6.3. Saved sheet selections

3.2.6.3.1. A feature of having Sheet Set Manager manage the sheet index table is that certain selections of sheets can be saved and the sheet index can be configured to reflect only those saved sheet selections

3.2.6.3.2. Saving a Sheet Selection

3.2.6.3.2.1. Select the sheets that are desired to only appear in the sheet index.

3.2.6.3.2.2. Right-click and select the option “Save Sheet Selection”

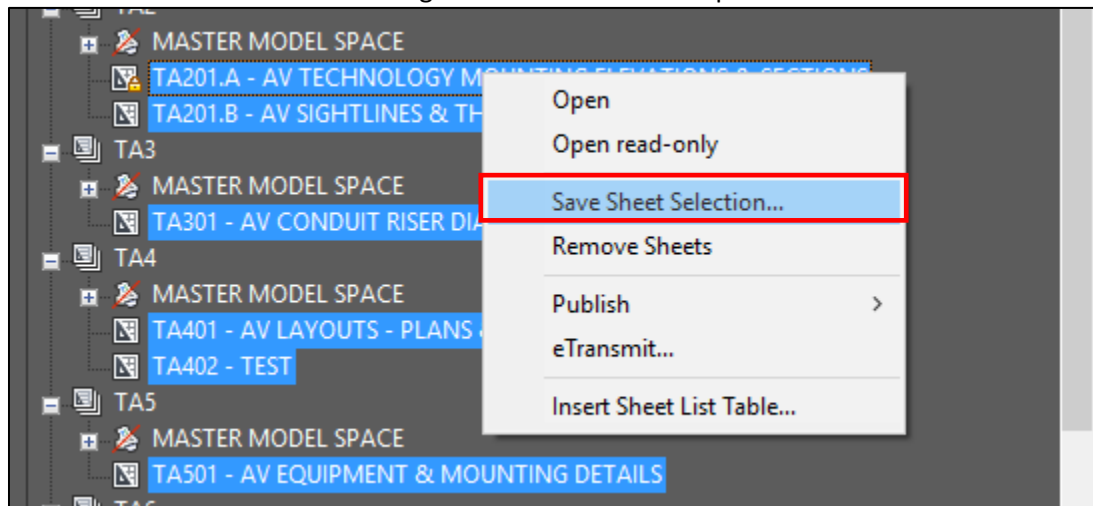


Figure 42

3.2.6.3.2.3. Give the selection a name and hit OK.

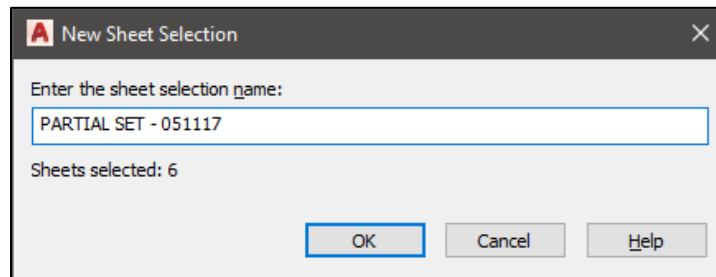


Figure 43

3.2.6.3.2.4. Go to the sheet index and select a single cell in the table.

	AV RACK ELEVATIONS	
	AV POWER & HEAT DISTRUBUTION	
	EDID TABLE - SOURCES	

Figure 44

3.2.6.3.2.5. Right-click and hover over the option "Sheet List Table"

3.2.6.3.2.6. Select the "Edit Sheet List Table Settings" option

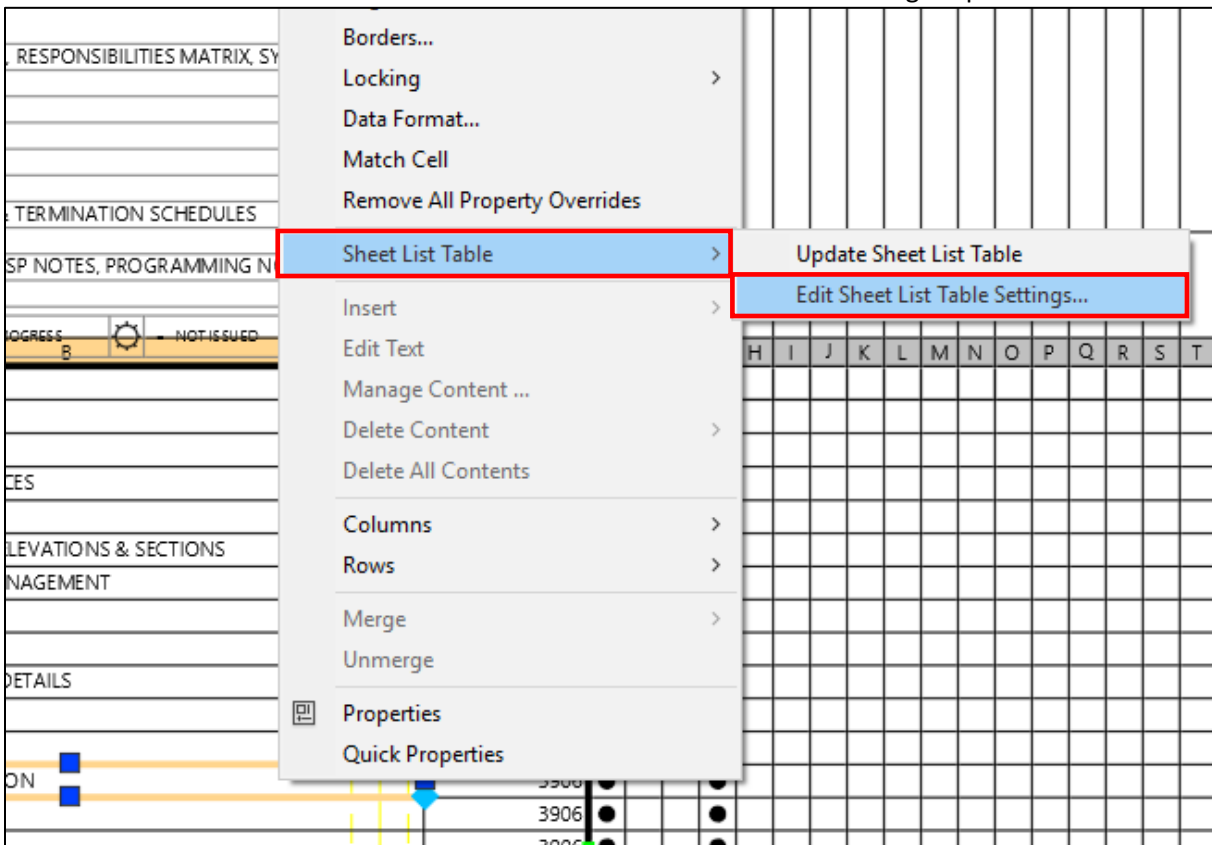


Figure 45

3.2.6.3.2.7. Select the “subsets and sheets” tab

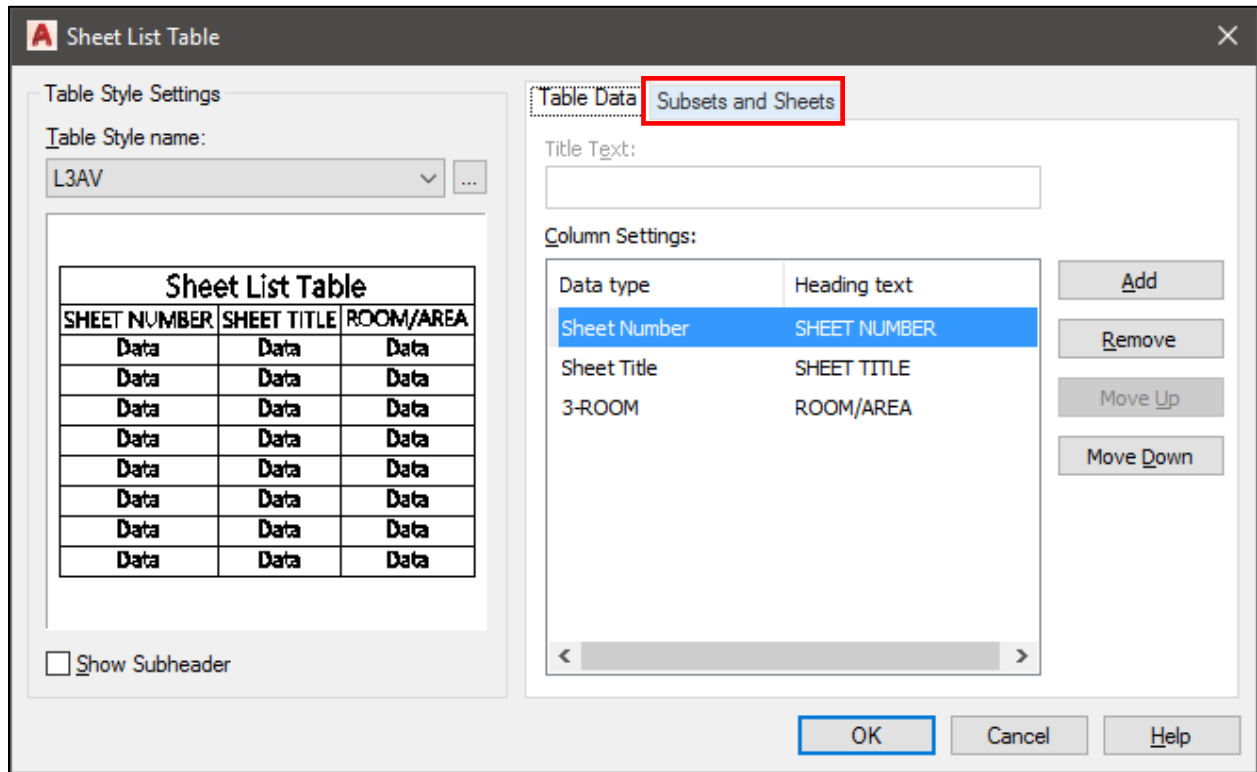


Figure 46

3.2.6.3.2.8. Use the dropdown to find the newly created sheet selection

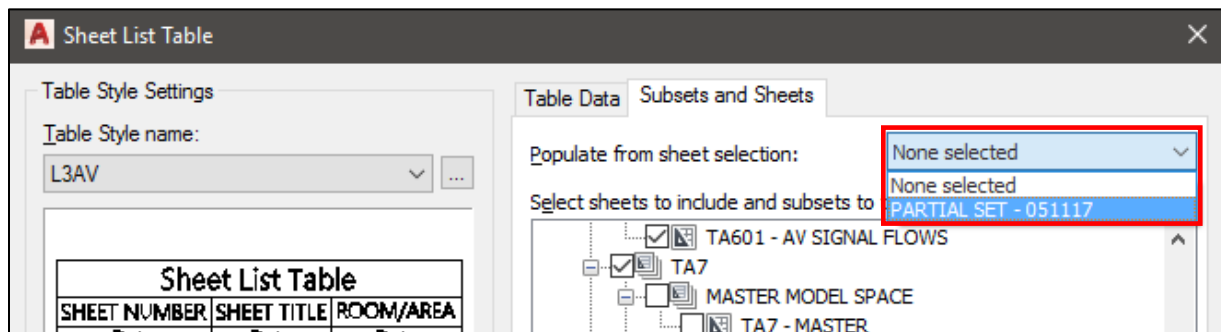


Figure 47

3.2.6.3.2.9. The Sheet Index will now only reflect that sheet selection

3.2.7. Publishing

3.2.7.1. Overview

3.2.7.1.1. Sheet Set Manager handles publishing much more efficiently than the traditional way of do AutoCAD drawings. There are no .dsd files to create!

3.2.7.1.2. The first step in publishing is to resave all sheets.

3.2.7.2. Resaving all sheets

3.2.7.2.1. Select the project title

3.2.7.2.2. Right-click and select the “Resave all sheets” option

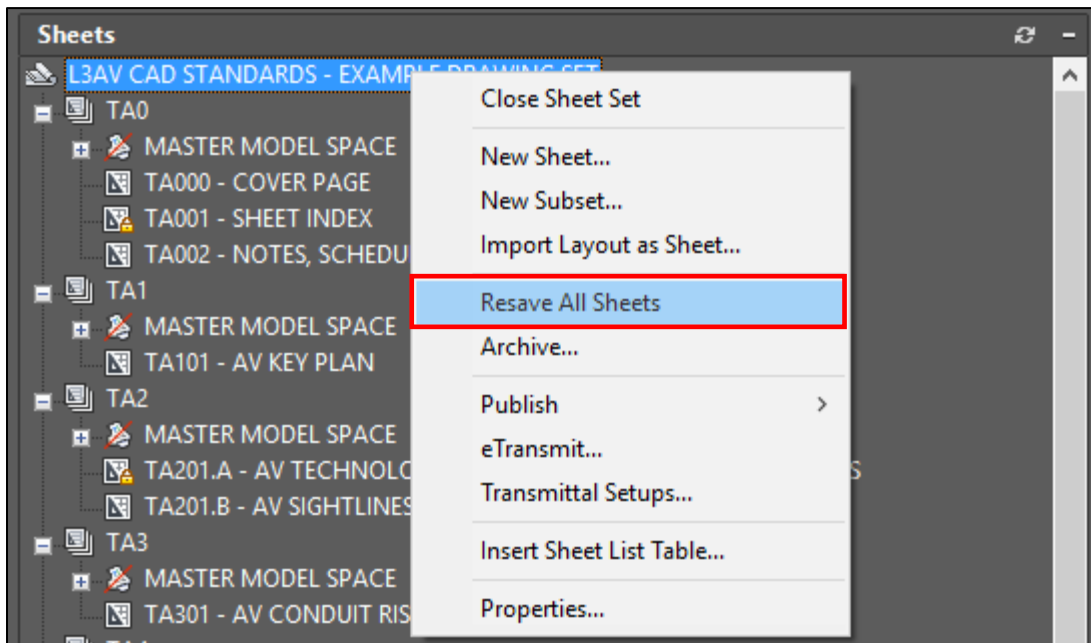


Figure 48

3.2.7.2.3. AutoCAD will go through and resave all the sheets in the sheet set

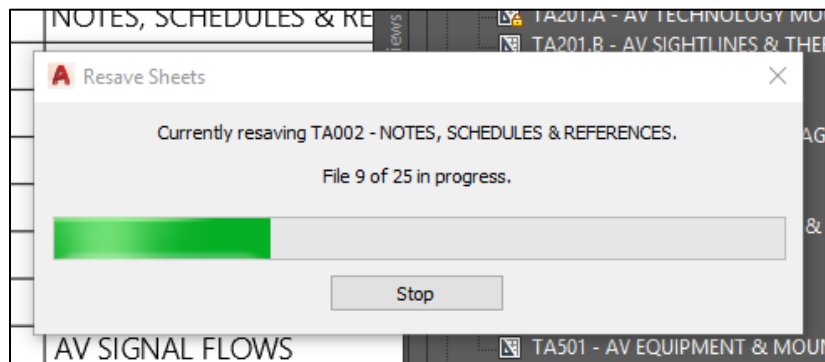


Figure 49

3.2.7.2.4. This ensures that all fields have been updated and reflect the current property state of the Sheet Set.

3.2.7.2.5. A message box will appear stating that some of the sheets couldn't be saved. This is normal and can be ignored.

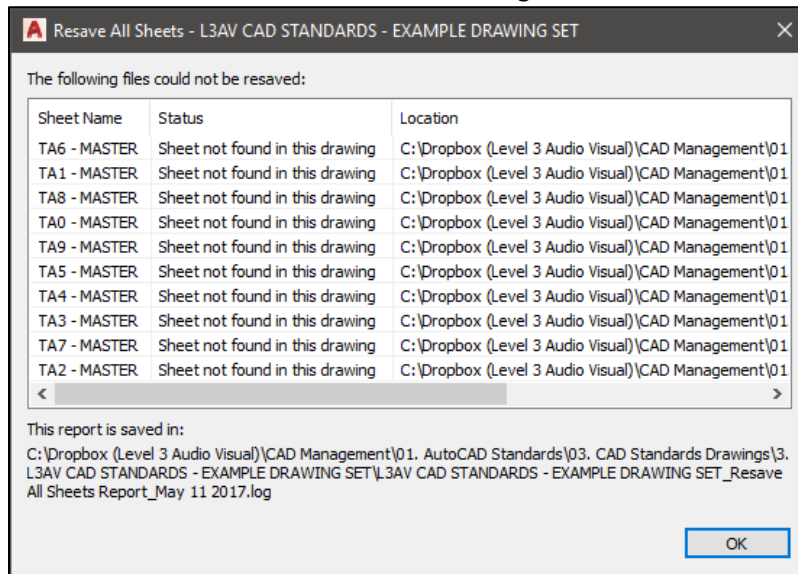


Figure 50

3.2.7.3. Publishing the entire sheet set

3.2.7.3.1. Once the Sheet Set has been resaved, select the Sheet Set Title and then press the PDF icon.

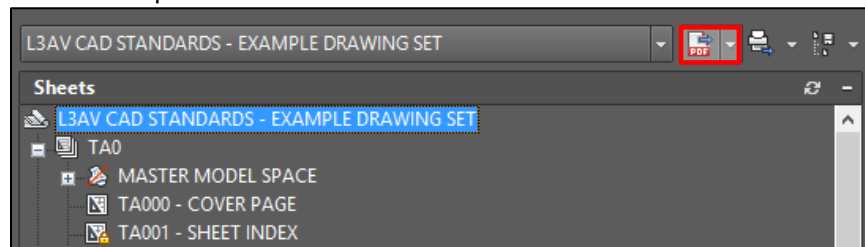


Figure 51

3.2.7.3.2. Navigate to PLOT_PREVIEW folder of the project and name the file appropriately and click Select.

3.2.7.3.3. The drawing will now publish in the background and other work may be done.

3.2.7.4. Publishing a portion of the sheet set

3.2.7.4.1. To publish only a portion of the Sheet Set follow all the steps in 3.7.2 & 3.7.3.

3.2.7.4.2. The only difference is instead of selecting the Sheet Set Title, select the sheets that are desired to be published.

3.2.8. Electronic transmittals

3.2.8.1. Overview

3.2.8.1.1. Sheet Set Manager allows for a sheet set to be prepared and packaged for electronic transmittal (E-Transmit). This feature has several functions that set it apart from just zipping the project folder. Those functions include:

3.2.8.1.1.1. Including all XREFS

3.2.8.1.1.2. Gathering all orphaned links

3.2.8.1.1.3. Gathering all used fonts in the drawing set.

3.2.8.1.1.4. Preparing the sheet set for e-transmittal

3.2.8.2. Re-save all sheets

3.2.8.2.1. Right-click on the Sheet Set Title and select the “eTransmit” option.

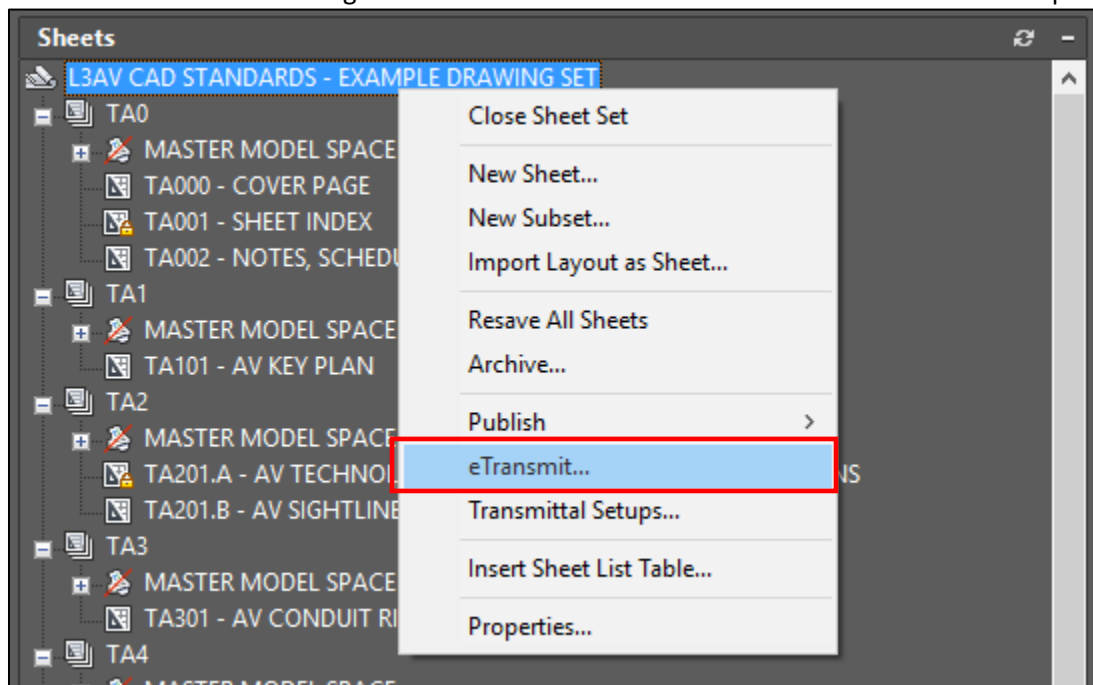


Figure 52

3.2.8.2.2. AutoCAD will work on compiling all the files.

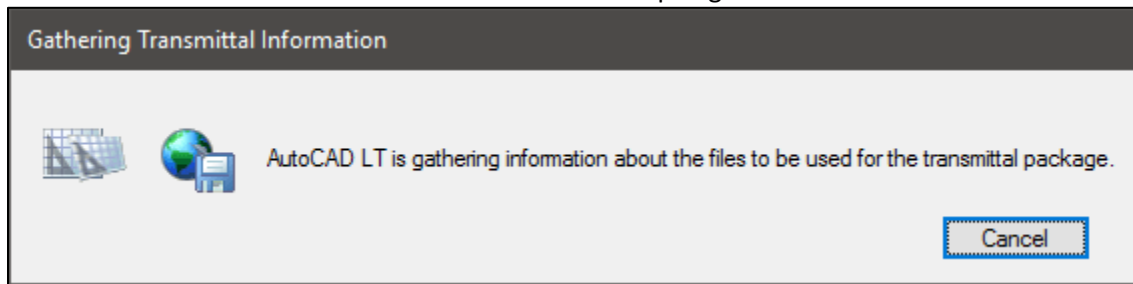


Figure 53

3.2.8.2.3. Depending on the size of the drawing set and all used XREFS this process may take several minutes.

3.2.8.2.4. Select the L3AV-TRANSMITTAL setup and select OK.

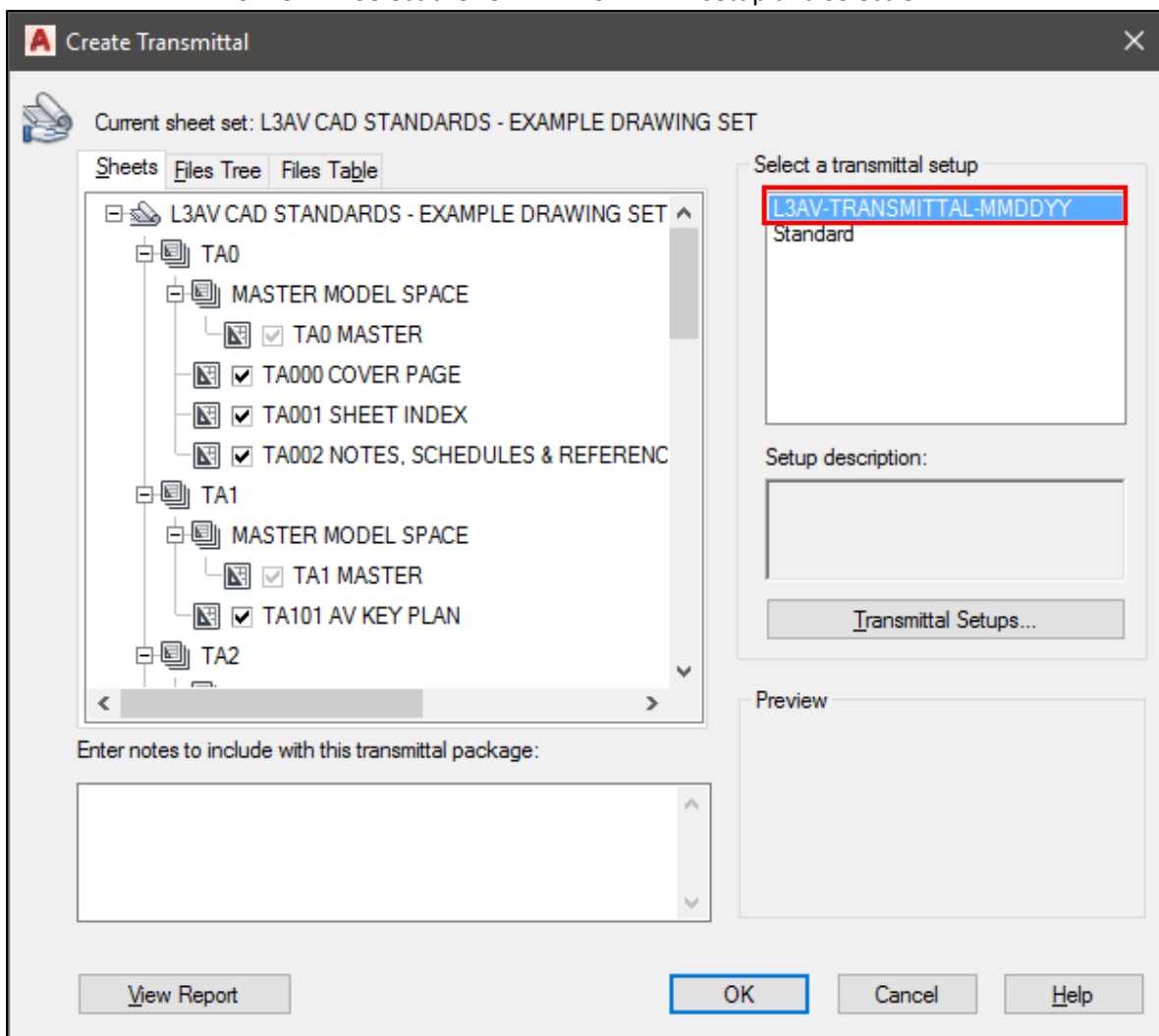


Figure 54

4. DRAWING COORDINATE SYSTEM

4.1. OVERVIEW

4.1.1. The drawing coordinate system is how the drawing area on the layout is organized.

4.2. DRAWING LAYOUT

4.2.1. L3AV currently uses Architectural D as the sheet size.

4.2.2. Currently, the drawing area can be divided up into 16 sections.

4.2.3. These sections shall be used to organized the layout.

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

CLIENT NAME: _____

PROJECT NAME: _____

PROJECT NO.: _____

STREET: _____

CITY/STATE: _____

ZIP: _____

ISSUED FOR: _____

PROJECT NO.: 3000

SCALE: N/A

DRAWN BY: _____

APPROVED BY: _____

BUILDING: _____

FLOOR: _____

ROOM: _____

DRAWING COORDINATE SYSTEM

SHEET TITLE: _____

TA003

SHEET NUMBER: _____

Figure 55

4.3. VIEWPORTS

4.3.1. A viewport is an object that AutoCAD uses to show geometry that is in model space on a layout.

4.4. VIEWPORT BOUNDARY BLOCKS

4.4.1. There are currently 7 boundary blocks that are in the “L3AV Drawing Elements” tool palette.

4.4.1.1. Full Page

4.4.1.2. 1/2 page Horizontal

4.4.1.3. 1/2 page Vertical

4.4.1.4. 1/4 page

4.4.1.5. 1/8 page double wide – horizontal

4.4.1.6. 1/8 page double tall – vertical

4.4.1.7. 1/16 page

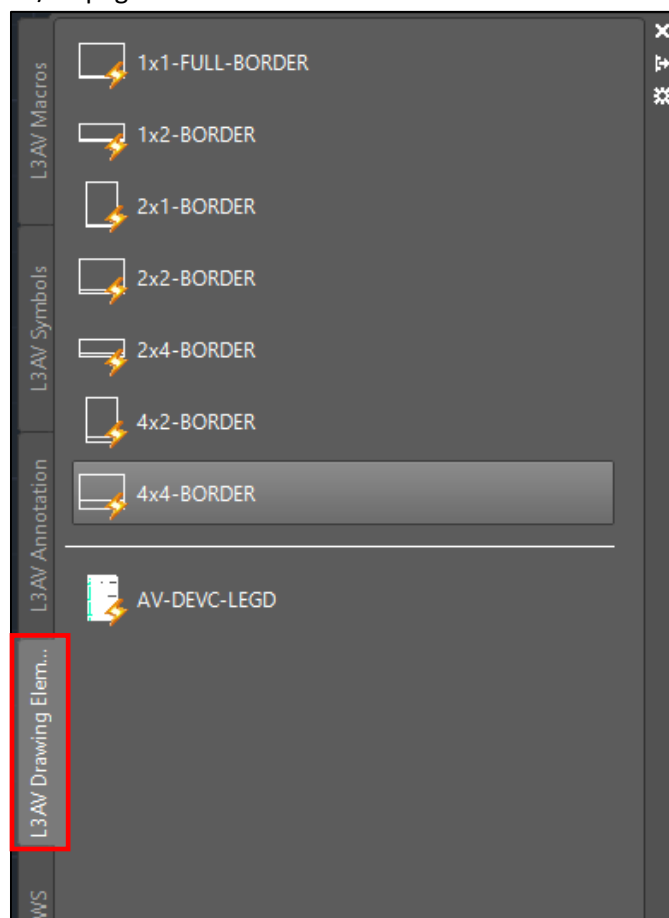


Figure 56

4.4.2. These blocks have two main dynamic functions:

4.4.3. Setting the scale

4.4.3.1. Changing the scale of the block will adjust its size. This will help in determining the scale that the drawing needs to be in.

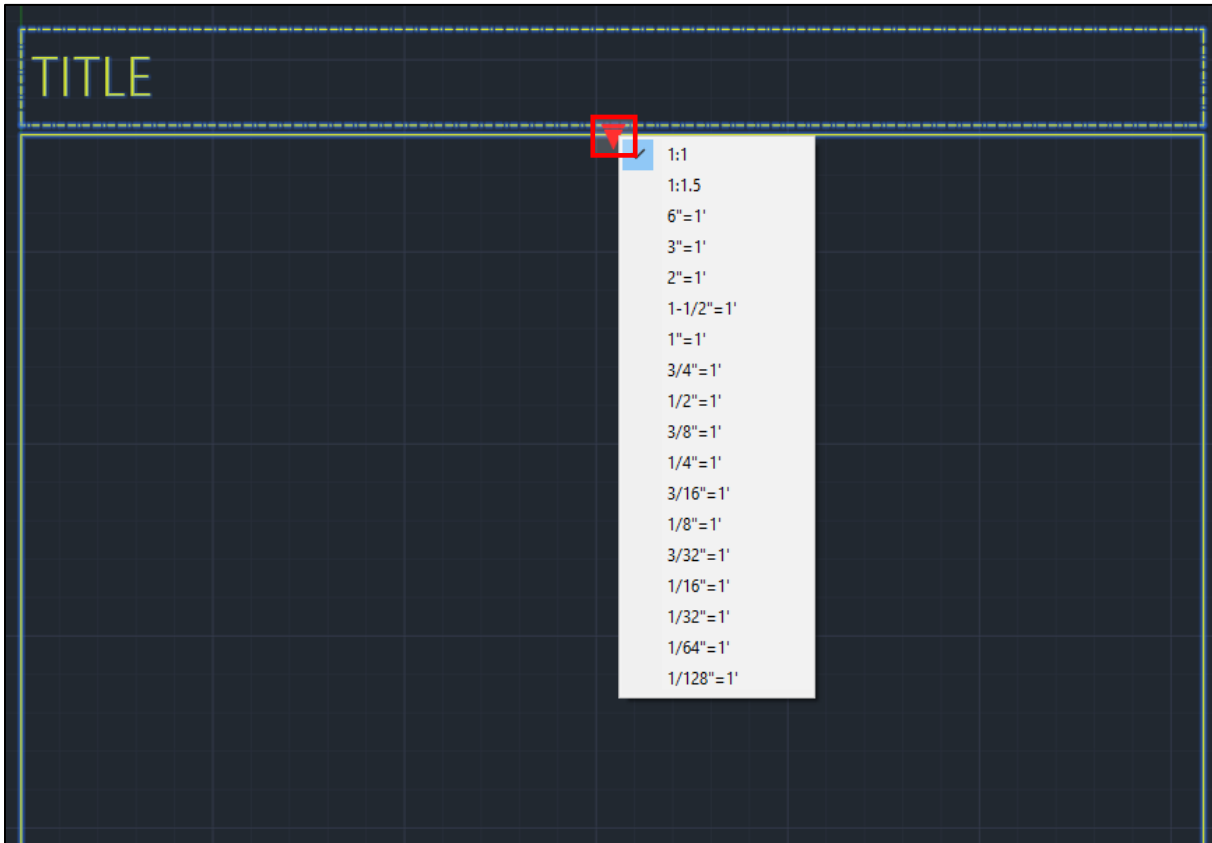


Figure 57

4.4.4. Turning the title border on/off

4.4.4.1. The title border shows the limits the drawing has when a view title block is going to be utilized. If a view title block is not going to be used (not typical) this border may be turned off.

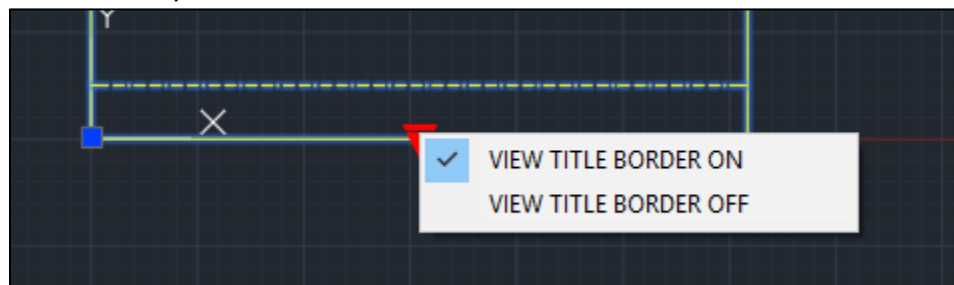


Figure 58

5. SHEET NUMBERS

5.1. OVERVIEW

5.1.1. Sheet numbers are designed to not only make sheets easier to find but they also have many descriptive functions. Please refer to the L3AV AutoCAD Standards document for more information about the structure of sheet numbers.

5.1.2. To renumber a sheet, follow these steps:

5.1.2.1. Make sure the desired sheet is not open.

5.1.2.2. In the Sheet List tab of Sheet Set Manager, right click on the sheet that is to be renumbered.

5.1.2.3. Select the “rename and Renumber” option.

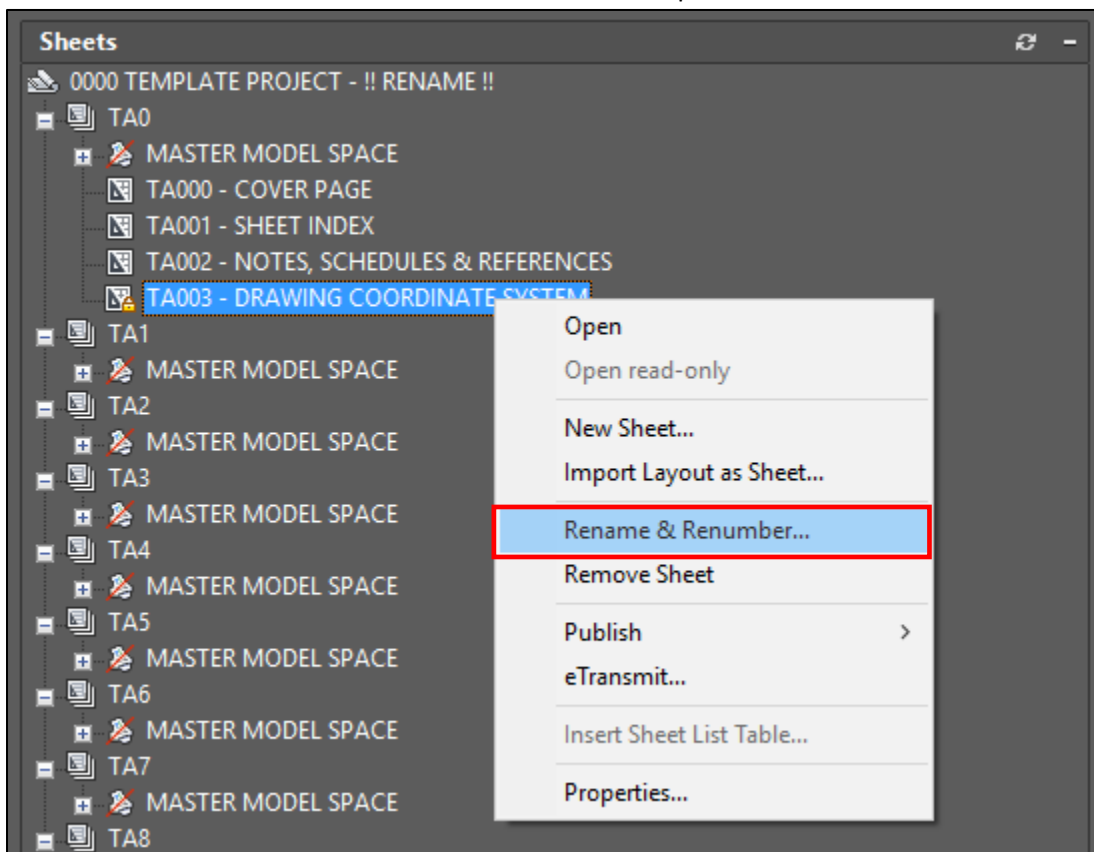


Figure 59

5.1.2.4. Renumber the sheet and click OK

6. SHEET NAMING

6.1. OVERVIEW

6.1.1. Sheet names are designed provide a concise description about the contents of the sheet.
Please refer to the L3AV AutoCAD Standards document for more information about the structure of sheet names.

6.1.2. To rename a sheet, follow these steps:

6.1.2.1. Make sure the desired sheet is not open.

6.1.2.2. In the Sheet List tab of Sheet Set Manager, right click on the sheet that is to be renumbered.

6.1.2.3. Select the “Rename and Renumber” option.

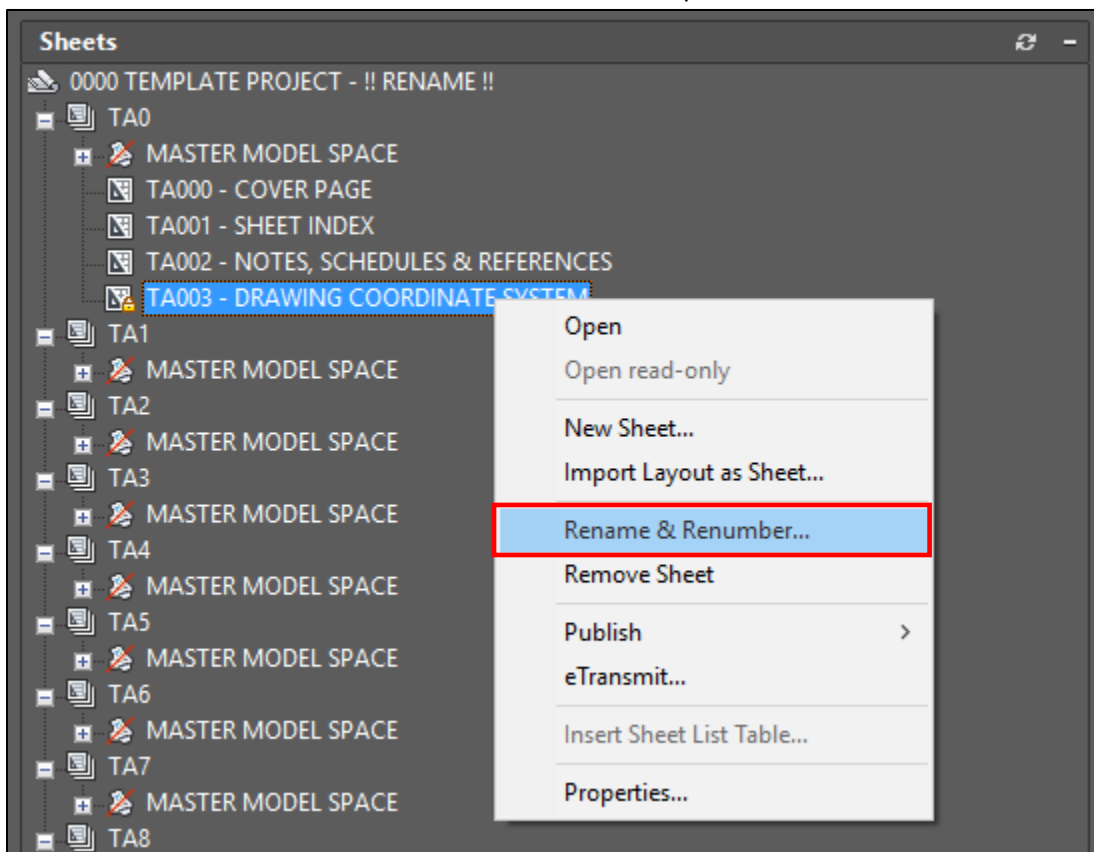


Figure 60

6.1.2.4. Rename the sheet and click OK.

7. CORPORATE LOGOS

7.1. OVERVIEW

7.1.1. Corporate logos are used instead of standard type for a client name in the title block as well as on the cover page. Most of L3AV's enterprise clients have a corporate logo.

7.2. SELECTING A LOGO

7.2.1. When starting a drawing set, the first step is to see if a corporate logo exists for the client.

7.2.2. Select the base title block XREF.

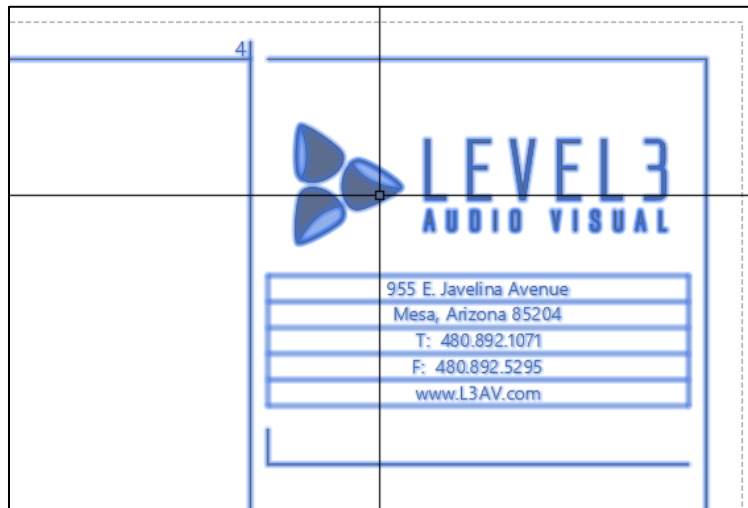


Figure 61

7.2.3. Right-click and select "Open XREF".

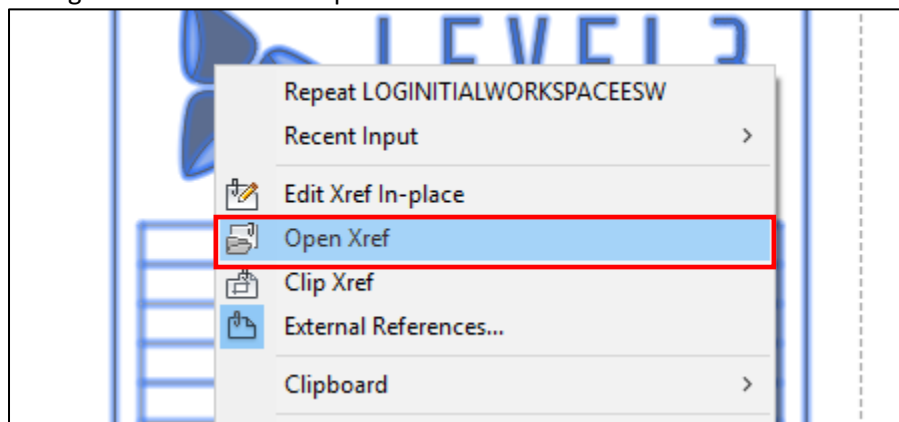


Figure 62

7.2.4. Locate the logo block. Select the yellow text that reads “DEFAULT”

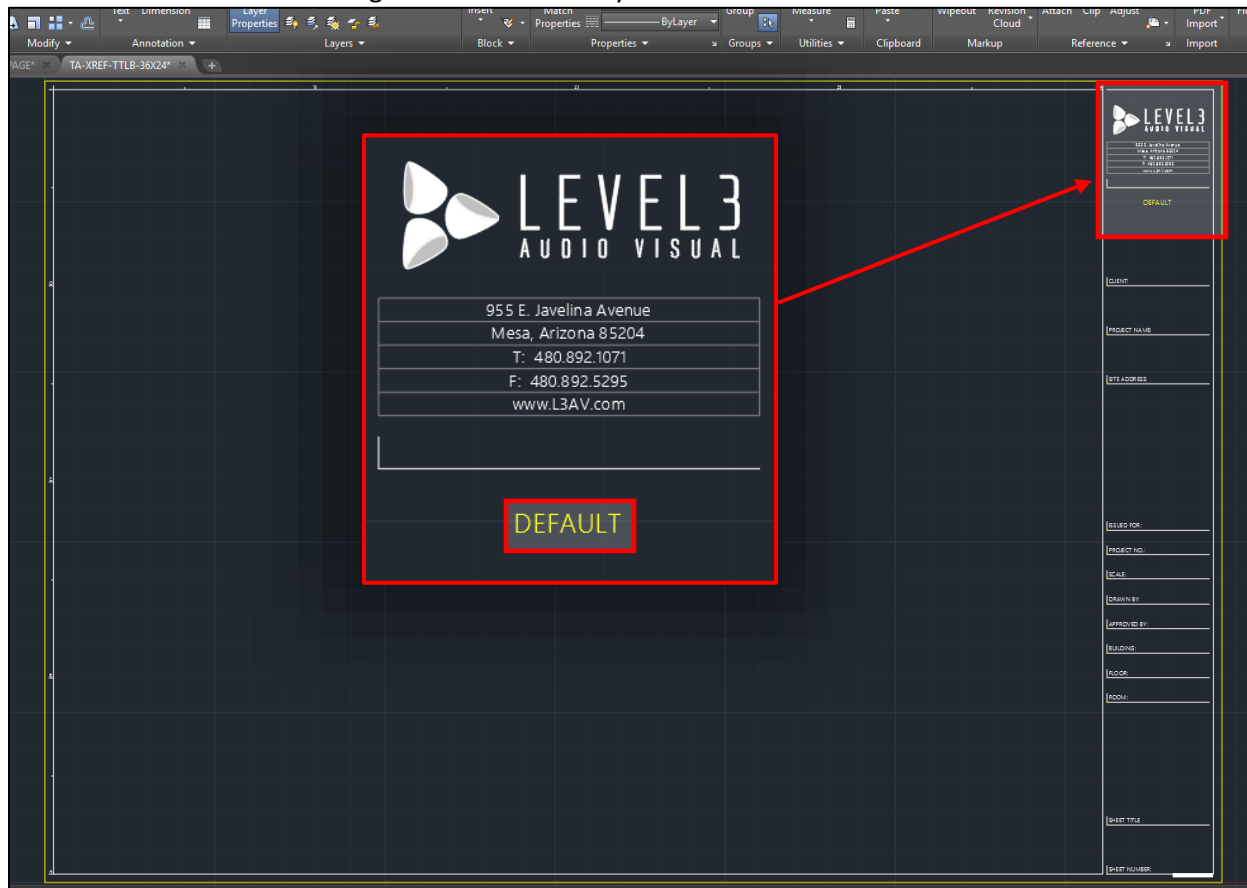


Figure 63

7.2.5. Use the dropdown and select the appropriate logo.

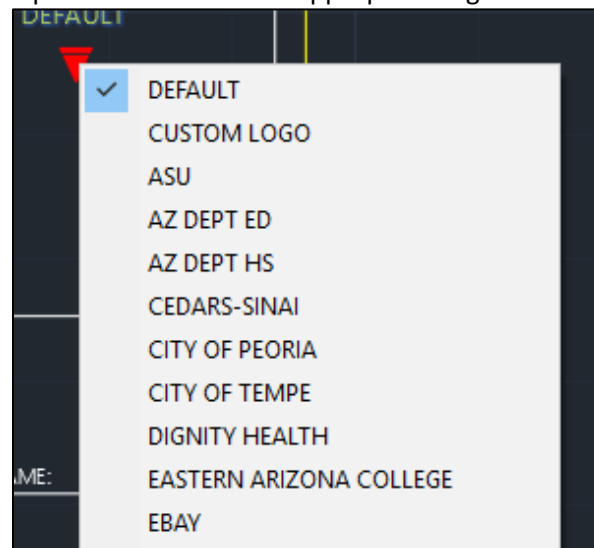


Figure 64

7.3. CLEARING UNUSED LOGOS

7.3.1. Once a logo has been selected, the unused logos shall be detached from the title block XREF.

7.3.2. Open the External References window.

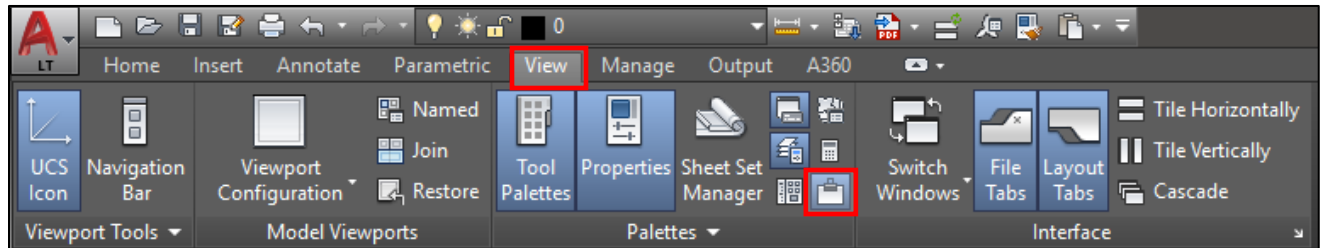


Figure 65

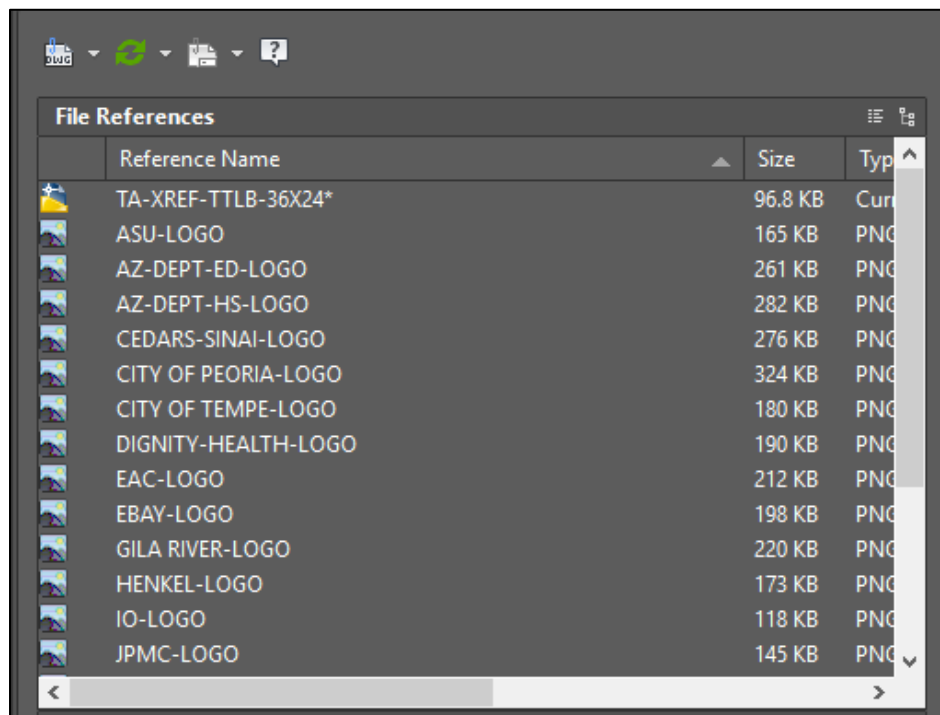


Figure 66

7.3.3. Shift + select all the logos there.

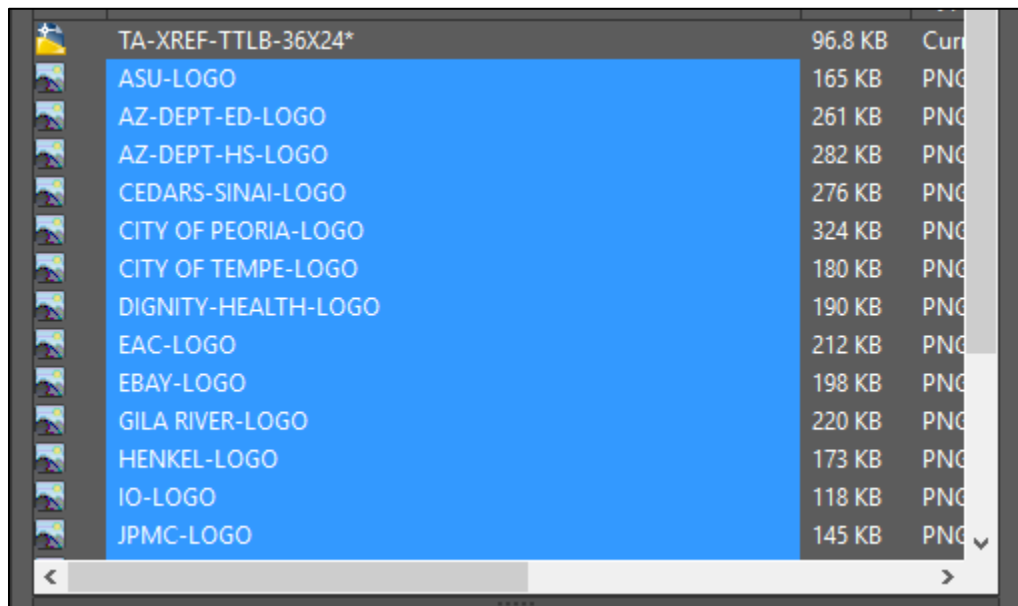


Figure 67

7.3.4. Ctrl + click on the logo that is currently being used.

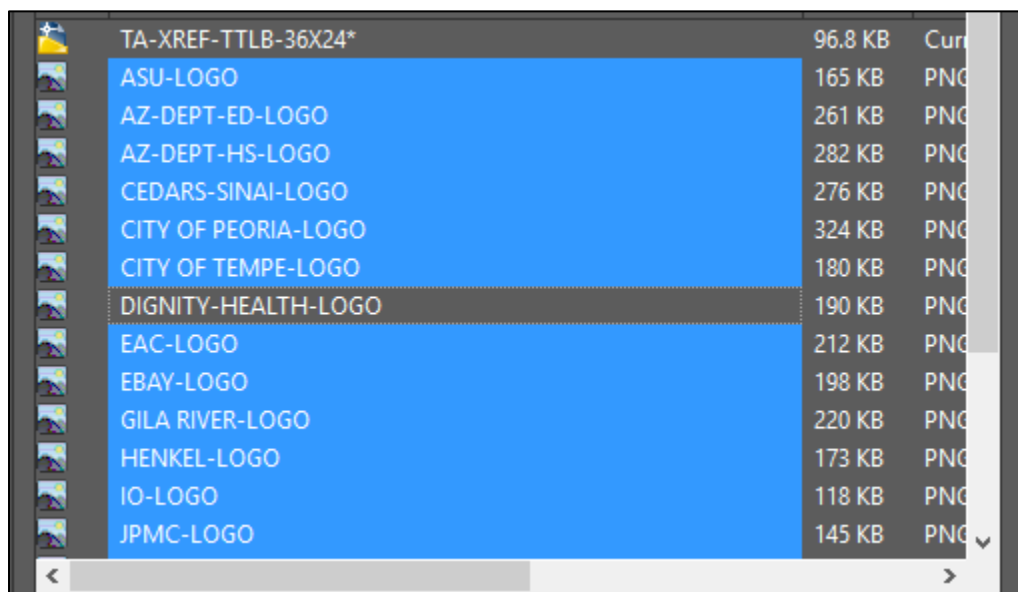


Figure 68

7.3.5. Right-click on the selected logos.

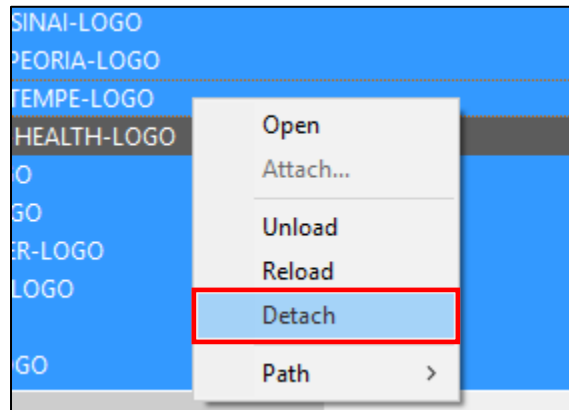


Figure 69

7.3.6. Select the “Detach” option.

7.3.7. Save the drawing and close.

8.1. OVERVIEW

[illegible]

Figure 70

8.2. KEY PROJECT STAFF

8.2.1. The key project staff are broken up into 3 separate blocks that have identical functions.

8.2.2. The 3 groups cover:

8.2.2.1. Business Representatives: Sales Executive



A rectangular block with a blue border, divided into three horizontal sections. The top section contains the name **BRAD PETERSON**. The middle section contains the phone number **(602) 432-4219**. The bottom section contains the email address **BPeterson@l3av.com**. A red square highlights a small blue triangle icon in the top right corner of the block. Below the block, the text **BUSINESS REPRESENTATION:** is followed by a horizontal line.

Figure 71.

8.2.2.2. Project Management: Project Manager



A rectangular block with a blue border, divided into three horizontal sections. The top section contains the name **TONY ORTIZ**. The middle section contains the phone number **(480) 310-5121**. The bottom section contains the email address **TOrtiz@l3av.com**. A red square highlights a small blue triangle icon in the top right corner of the block. Below the block, the text **PROJECT MANAGEMENT:** is followed by a horizontal line.

Figure 72

8.2.2.3. Project Engineer: Engineer who is drafting the drawing set



A rectangular block with a blue border, divided into three horizontal sections. The top section contains the name **JEREMY ELSESSER**. The middle section contains the phone number **(602) 363-7127**. The bottom section contains the email address **JElsesser@l3av.com**. A red square highlights a small blue triangle icon in the top right corner of the block. Below the block, the text **PROJECT ENGINEER:** is followed by a horizontal line.

Figure 73

9. TITLE BLOCK

9.1. OVERVIEW

9.1.1. The title block contains all the project information and is almost completely controlled by Sheet Set Manager. There is only 1 section that Sheet Set Manager does not control and that is the sheet scale.

9.1.2. Please refer the L3AV AutoCAD Standards Document for more information about each section.

9.2. SHEET SCALE

9.2.1. The sheet scale section is currently handled by a dynamic block.

9.2.2. Simply select the block and use the drop down to navigate to the scale that is being used on the sheet.

9.2.3. Set to N/A when the sheet is:

9.2.3.1. General Notes

9.2.3.2. Multiple Scales

9.2.4. Set to NTS when the sheet is:

9.2.4.1. A schematic/signal flow

9.2.4.2. A riser diagram

9.2.4.3. Any non-scaled geometry

10. LAYERS

10.1. OVERVIEW

10.1.1. Layers are used to organize the different types of geometry in model space. Layers also determine other things such as plotted color and linetypes. Please refer to the L3AV AutoCAD Standards for more information about layer naming format and a list of layers.

11. SYMBOLS

11.1. OVERVIEW

11.1.1. Symbols are currently broken up into 2 categories:

11.1.1.1. Architectural/Electrical Symbols

11.1.1.2. Cross-Reference Symbols

11.1.2. Please refer to the L3AV AutoCAD Standards for more information about symbols along with a symbol legend.

11.2. HOW TO USE SYMBOLS

11.2.1. Architectural/Electrical symbols are in the L3AV Tool Palettes.

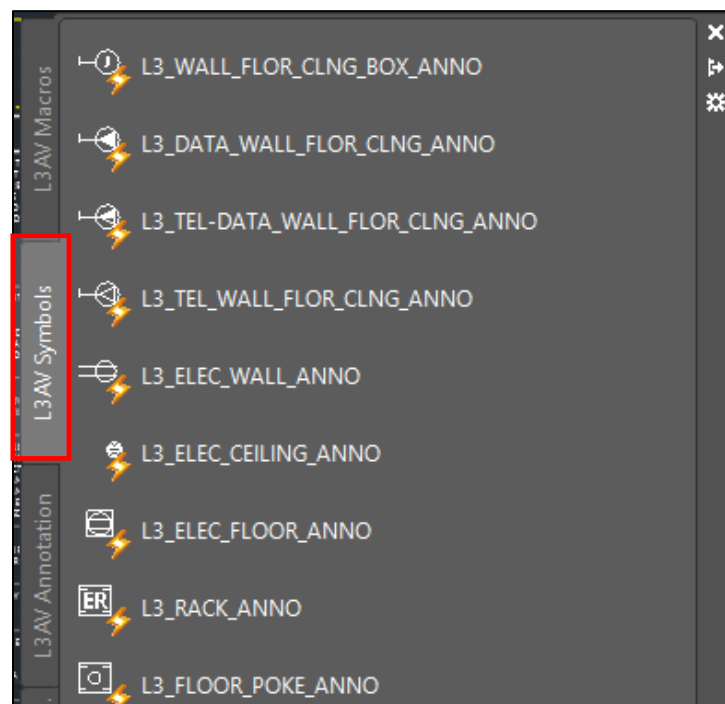


Figure 74

11.2.2. Simply drag and drop a symbol to place it into the drawing.

11.2.2.1. Make sure that the model space scale is set accordingly as that is the scale the symbol will come in with.

11.2.3. Most symbols utilize attributes so that they may be referenced to the symbol legend.

11.2.4. To use these attributes, simply double-click on the symbol and it will bring up the attribute editor window.

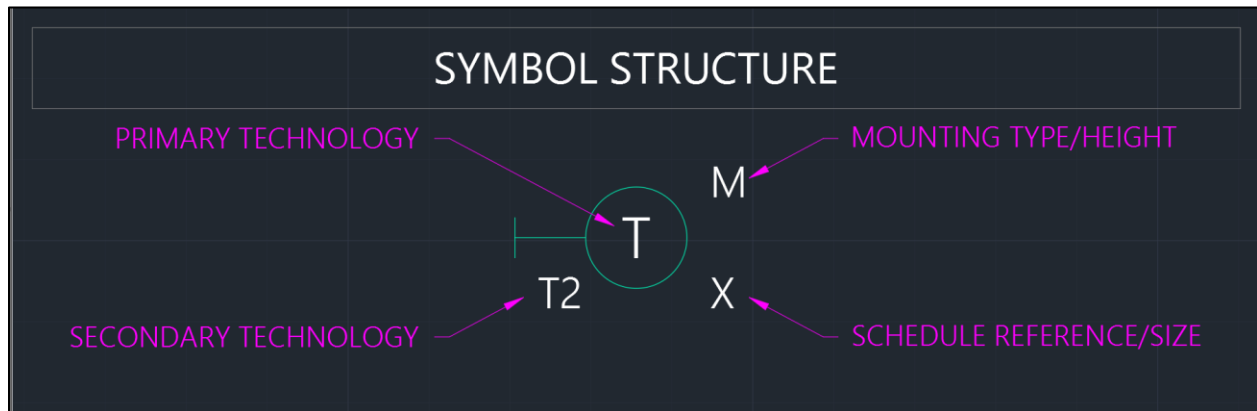


Figure 75

11.2.4.1. The first attribute is the Primary Technology attribute.

11.2.4.1.1. This is the main character that is used to designate the symbol.

11.2.4.2. The second attribute is the Mounting Type/Height attribute.

11.2.4.2.1. This designates how the device is mounted or at what height it is mounted.

11.2.4.3. The third attribute is the Schedule Reference attribute.

11.2.4.3.1. This is typically a numerical character that is used to cross-reference with the symbol schedule.

11.2.4.4. The fourth attribute is the Secondary Technology attribute.

11.2.4.4.1. This attribute is not typically used but functions as added description for the symbol.

11.3. PLACING CROSS-REFERENCING SYMBOLS

11.3.1. To place a cross-referencing symbol, simply right-click on a placed view and hover over the “Place Callout Block” option. This will reveal a list of callouts blocks that can be placed.

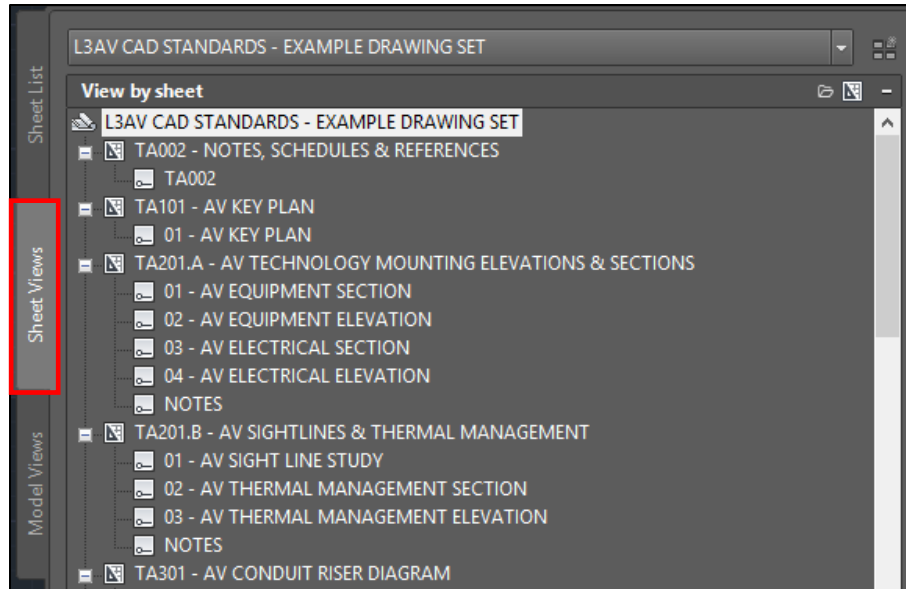


Figure 76

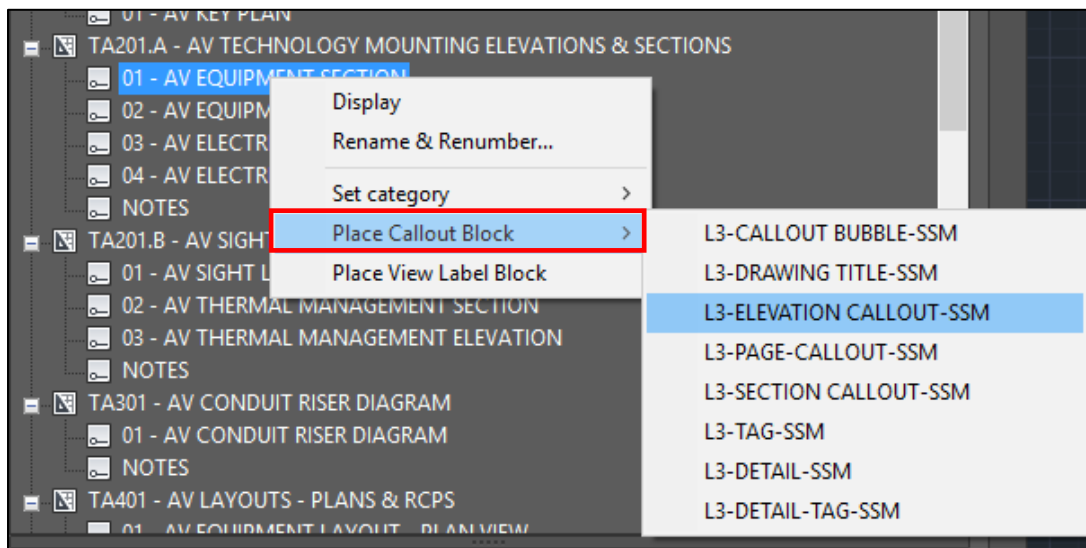


Figure 77

11.3.2. The information in the block will be completely managed by Sheet Set Manager. If a page is renumbered, all symbols that cross referenced to that page will update automatically.

11.3.3. When the drawing is published to PDF, all symbols have embedded hyperlinks in them so that a drawing set can be navigated quickly and efficiently.

12. NOTATIONS

12.1. OVERVIEW

12.1.1. Notations are tools used to provide descriptive and detailed information about a device, infrastructure requirement, installation note, revision details, etc.

12.1.2. All notations shall be annotative with a text height set to 1/8"/

12.2. LEADERS

12.2.1. There are 3 standard multi-leader styles that are currently utilized:

12.2.1.1. L3AV

12.2.1.1.1. The L3AV multi-leader style is the standard leader style.

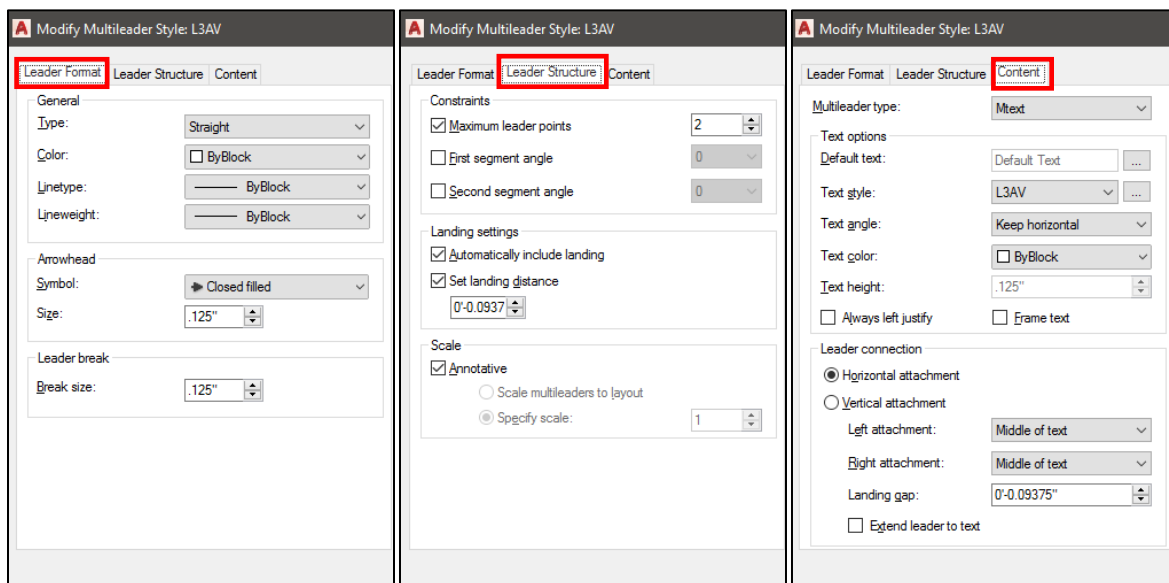


Figure 78

12.2.1.2. DELTA

12.2.1.2.1. The DELTA multi-leader style is the style that is used to call out revisions.

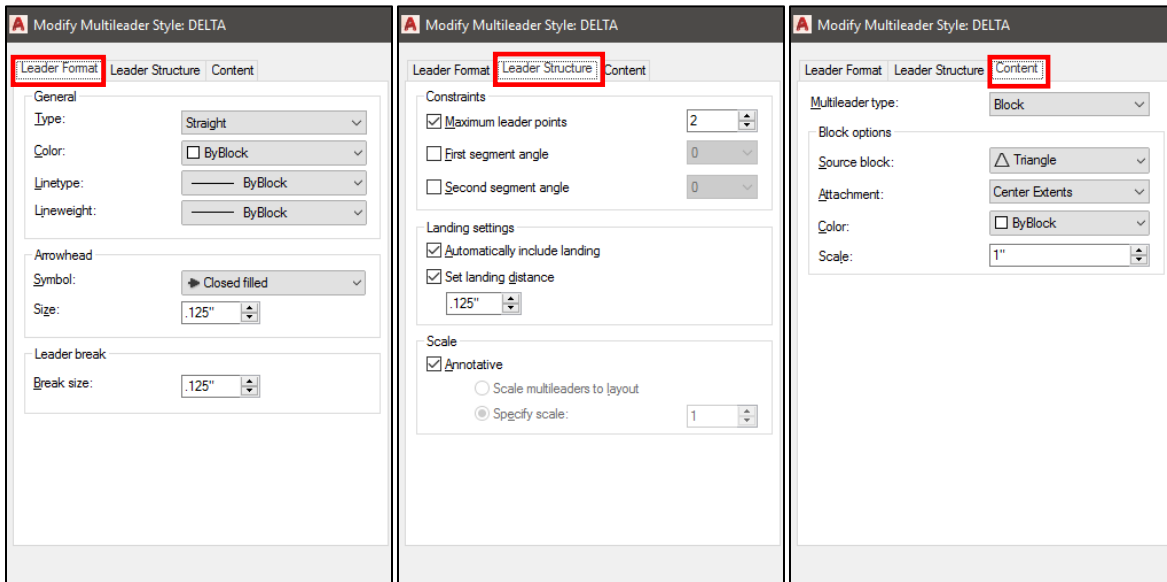


Figure 79

12.2.1.3. KEYNOTE

12.2.1.3.1. The KEYNOTE multi-leader style is the style that is used to call out sheet keynotes.

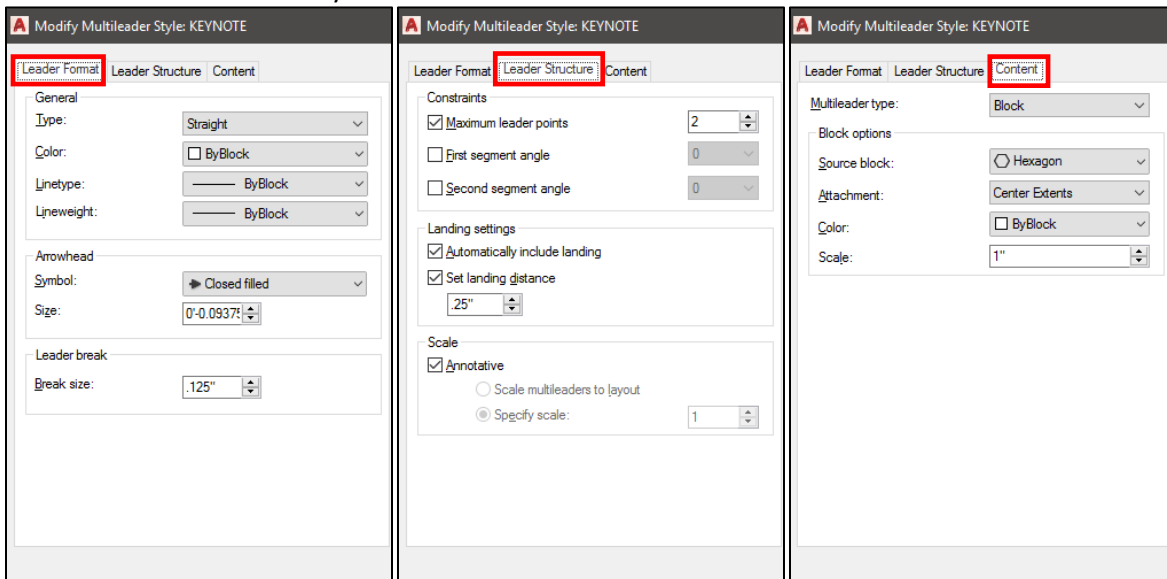
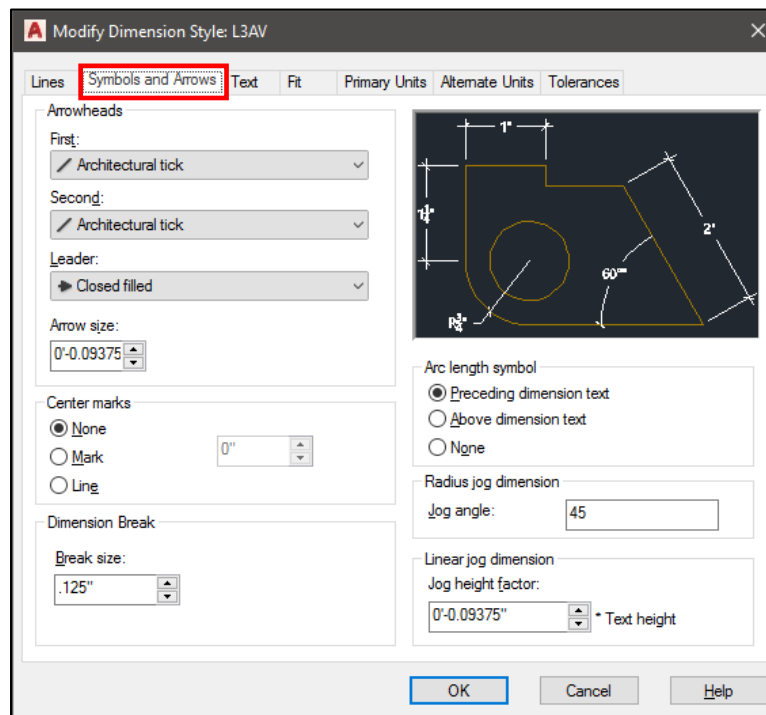
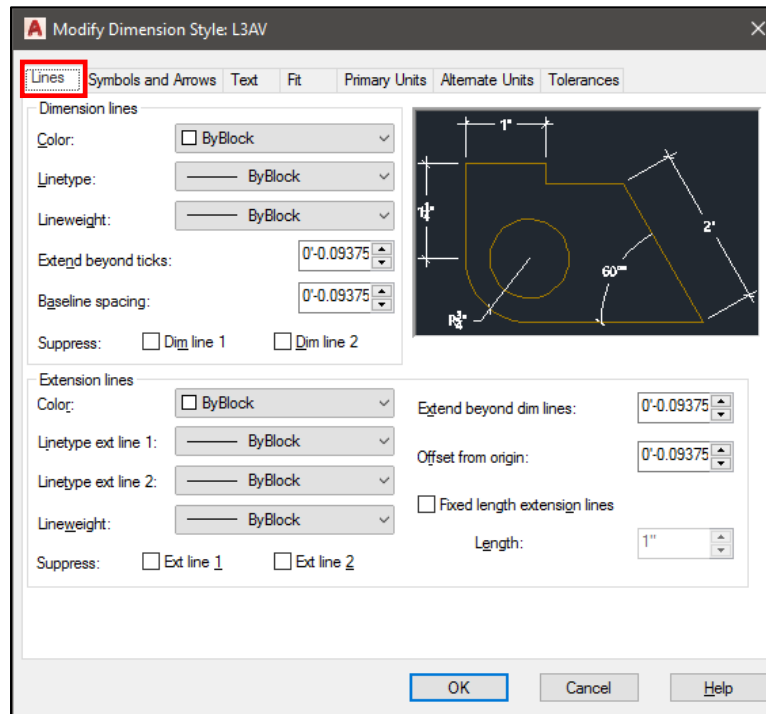
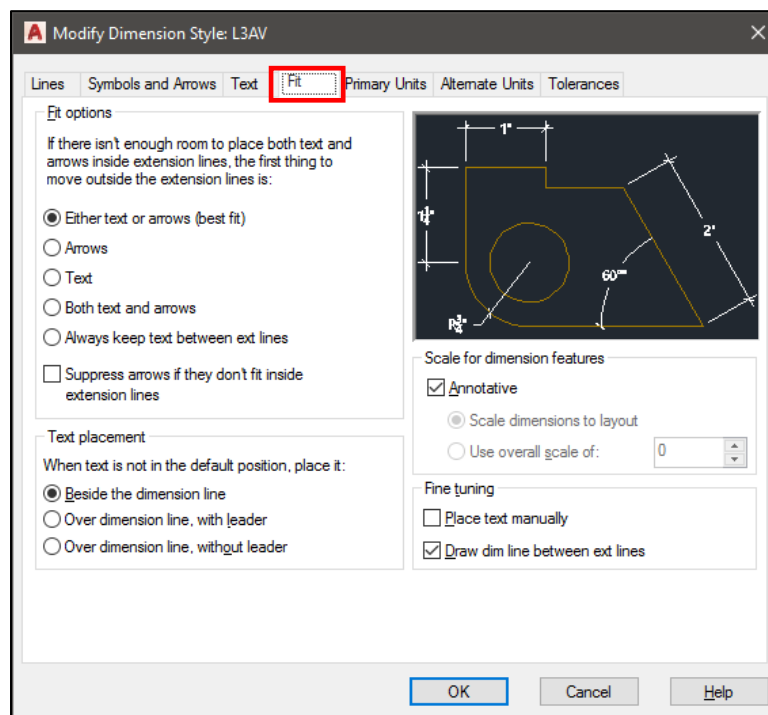
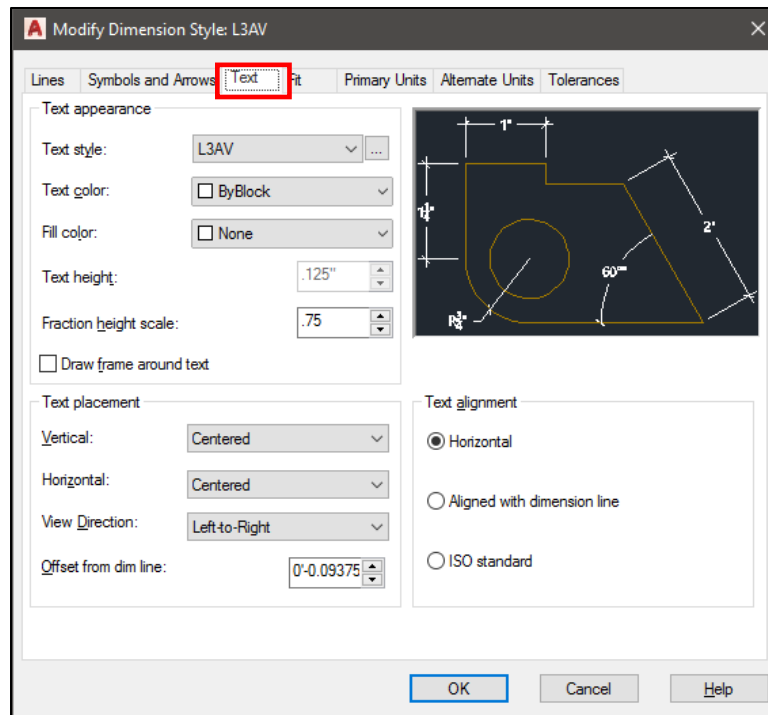


Figure 80

12.3. DIMENSIONS

12.3.1. The L3AV dim style is the standard dim style.





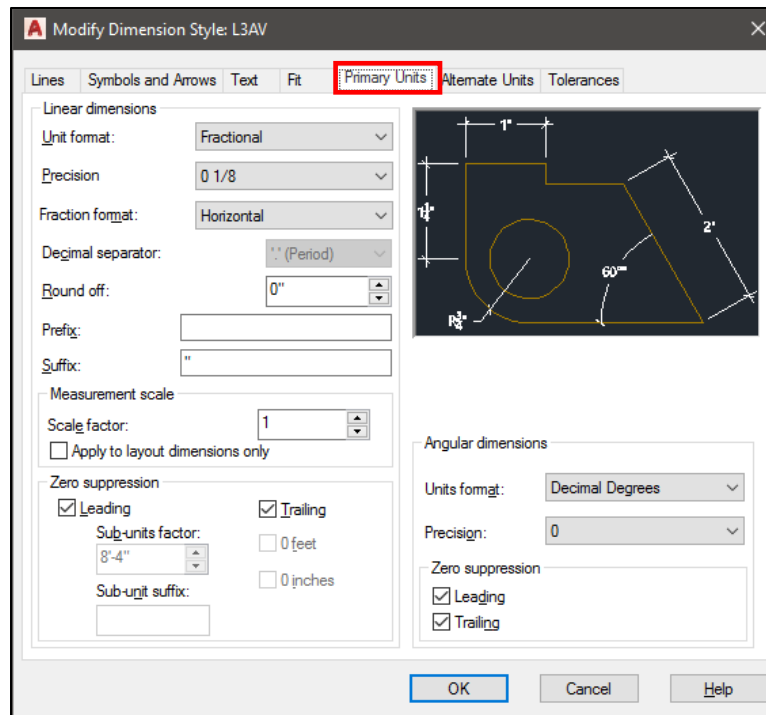


Figure 81

12.4. KEYNOTES

- 12.4.1. Keynotes identify, inform, and instruct without reference to general specifications or schedules.
- 12.4.2. The KEYNOTE multi-leader is the default style for keynotes.
- 12.4.3. Refer to TA401 of the example drawing set (attached to the end of this PDF) for an example of how keynotes are used.

12.5. GENERAL SHEET NOTES

- 12.5.1. General Sheet Notes are notes that only apply to a particular sheet on which they appear.
- 12.5.2. Refer to TA401 of the example drawing set (attached to the end of this PDF) for an example of how keynotes are used.

13. DRAFTING CONVENTIONS

13.1. OVERVIEW

13.1.1. This section shall function as a brief set of guidelines that shall be adhered to. This section may be amended by the CAD Manager. When it is amended, the CAD manager shall inform the Engineering department via email as well as the weekly department meeting.

13.2. GUIDELINES

13.2.1. Sheet Set Manager shall be used exclusively for all drawing sets.

13.2.2. Sheet Set Manager shall be used for managing the sheet index.

13.2.3. Sheet Set Manager shall be used to place all cross-reference symbols.

13.2.4. Sheet Set Manager shall be used to maintain view titles and numbers.

13.2.5. Polylines shall be used to create geometry.

13.2.6. Lines shall not be used.

13.2.7. Geometry and blocks shall be placed on the appropriate layers.

13.2.8. Sheet scale shall be set per sheet accordingly.

13.2.9. All revisions after the drawing set has been published for construction shall be documented using the RFC document.

13.2.10. All revisions shall reference either the RFC number or Change Order number.

13.2.11. All revisions shall be clouded with a delta symbol identifying the revision number it corresponds to.

13.2.12. EDID plans shall be included with every drawing set. Either as part of the signal flow drawings or as a separate sheet in the TA8 section.

13.2.13. All annotative objects shall have only one annotative scale assigned to it.

14. XREFS

14.1. OVERVIEW

14.1.1. XREFS (External References) are AutoCAD drawings that are inserted into another AutoCAD drawing to act as a proxy or reference. There are 2 main types of XREFS that L3AV uses:

14.1.1.1. TA-XREF-TTLB-36X24

14.1.1.2. Architectural Backgrounds

14.2. TA-XREF-TTLB-36X24

14.2.1. This file is the L3AV title block.

14.2.2. This file is used to manage the physical line work of the title block as well as managing corporate logos.

14.3. BACKGROUNDS

14.3.1. Backgrounds are architectural files that are received from the client with the purpose of being used for facilities drafting.

14.3.2. File naming

14.3.2.1. All backgrounds in the XREF folder shall be renamed using the following nomenclature:

14.3.2.1.1. TA-XREF-XX-YYY.DWG

14.3.2.1.1.1. (XX=Floor #)

14.3.2.1.1.2. (YYY=View)

14.3.2.1.1.3. View Naming Selections-

14.3.2.1.1.3.1. PLAN= Plan View

14.3.2.1.1.3.2. RCP= Reflected Ceiling Plan

14.3.2.1.1.3.3. FURN= Furniture Layer Only

14.3.2.1.1.3.4. ELEV= Elevation View

14.3.2.1.1.3.5. SECT= Section View

14.4. CLEANING

14.4.1. The most important part of managing backgrounds is cleaning them before use in our facility drawings.

14.4.2. Items that shall be removed from backgrounds include:

14.4.2.1. All dimensions

14.4.2.2. All grid lines

14.4.2.3. All cross-reference symbols

14.4.2.4. All other notation except room numbers/names

14.4.2.5. Redundant or non/applicable geometry such as duplicated walls or windows.

14.4.2.6. The process of cleaning can be arduous depending on the drawing's complexity.

14.4.2.6.1. The first step is to run the XREF Layer macro

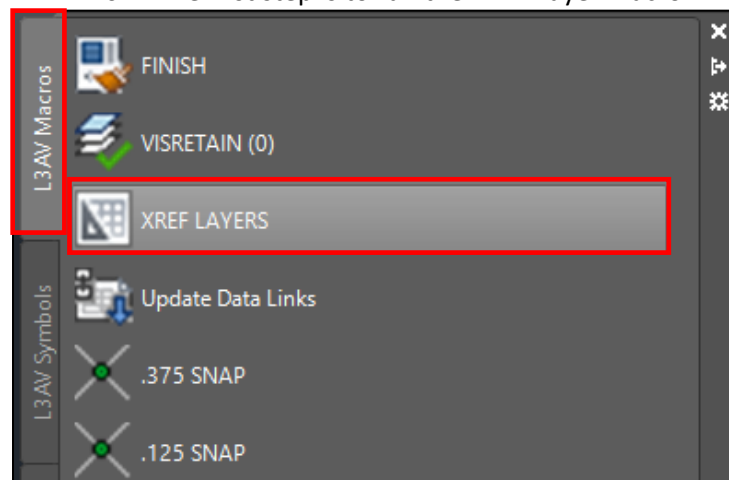


Figure 82

14.4.2.6.2. Then begin by freezing all layers that aren't needed.

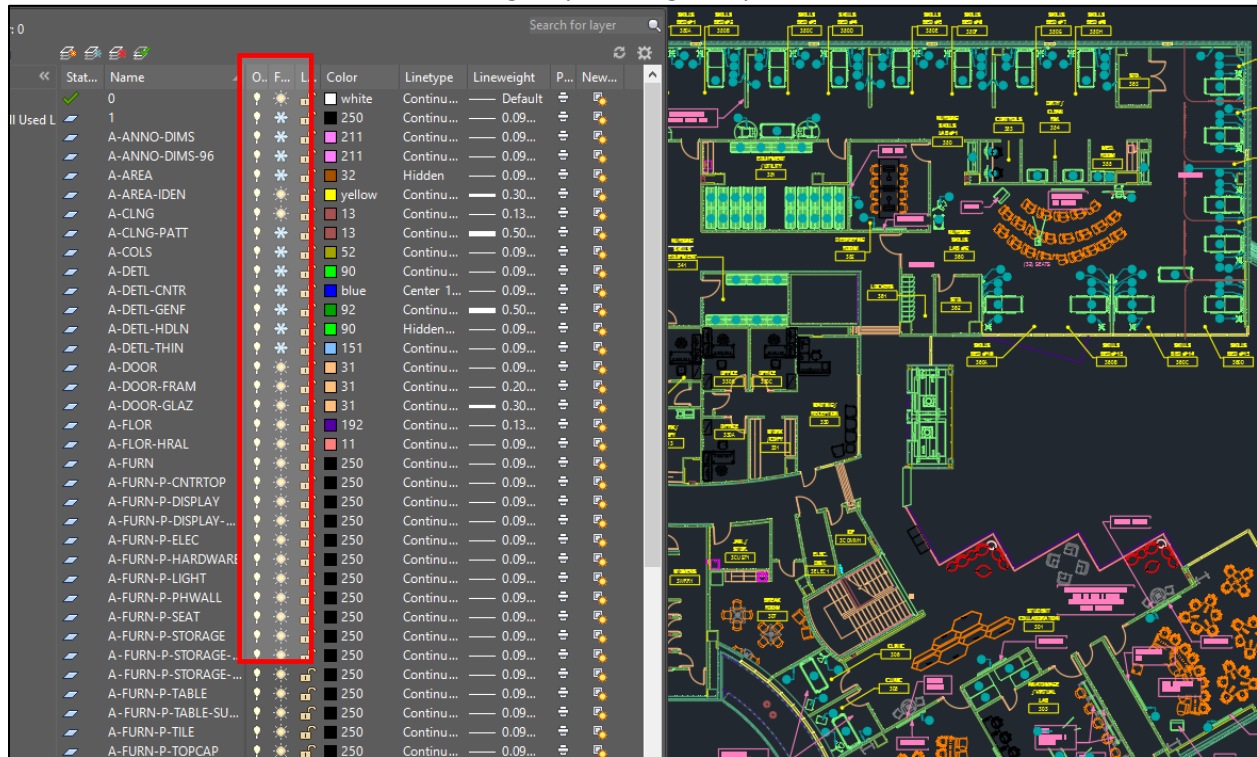


Figure 83

14.4.2.6.3. Once this is done, begin merging the remaining layers down to their applicable "TA-XREF" layers.

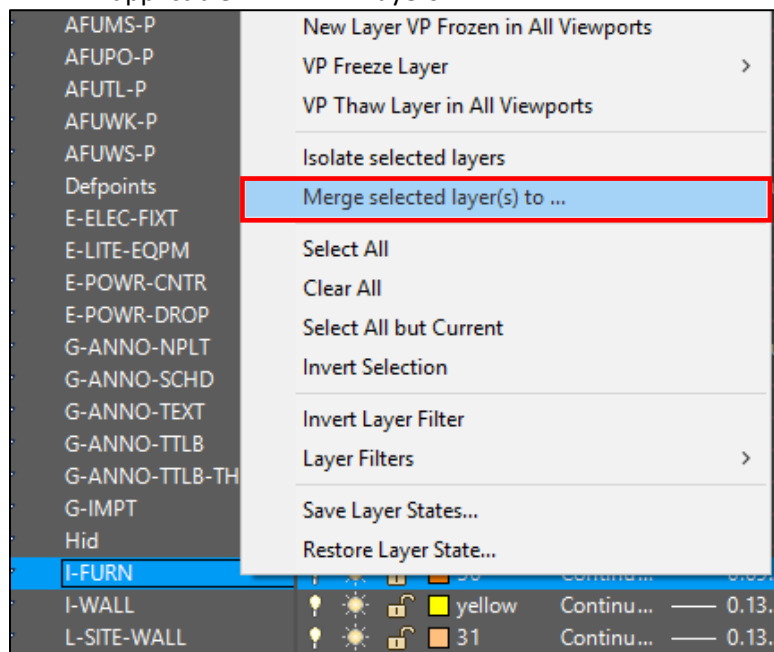


Figure 84

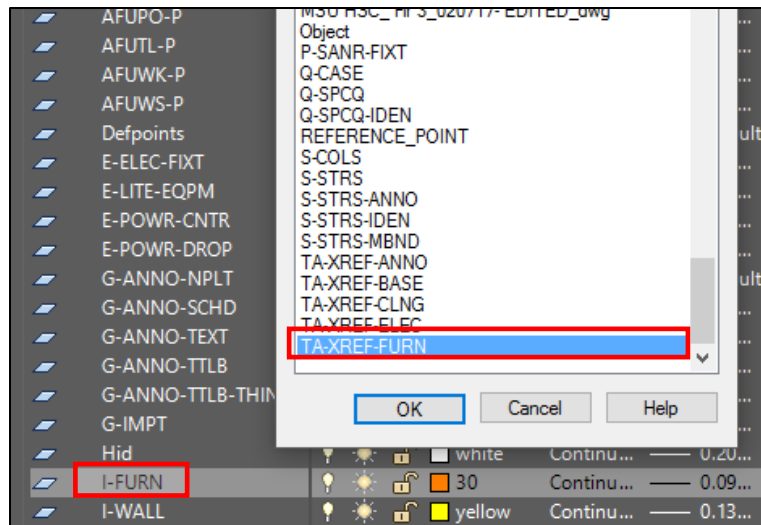


Figure 85

14.4.2.6.4. Walls, windows and all other base structure geometry should be merged to TA-XFREF-BASE

14.4.2.6.5. All furniture and other devices should be merged down to TA-XREF-FURN

14.4.2.6.6. Ceiling grids and light fixtures should be merged to TA-XREF-CLNG

14.4.2.6.7. Power & data symbols should be merged to TA-XFREF-ELEC

14.4.2.6.8. Once this process is complete delete all non TA layers by using the "LAYDEL" command and then the NAME sub-function.



Figure 86

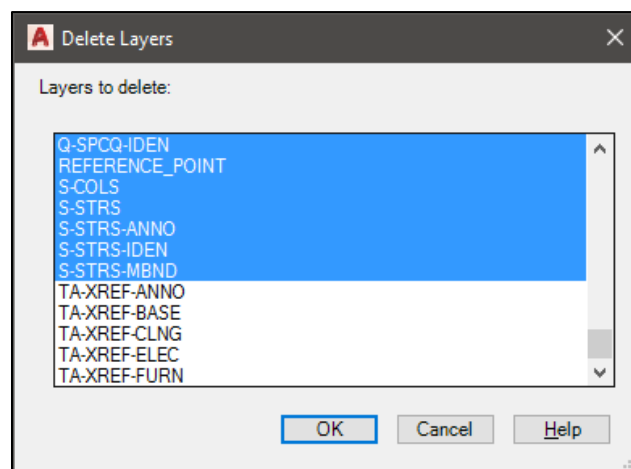


Figure 87

14.4.2.6.9. Next select the entire drawing and run the OVERKILL command.



Figure 88

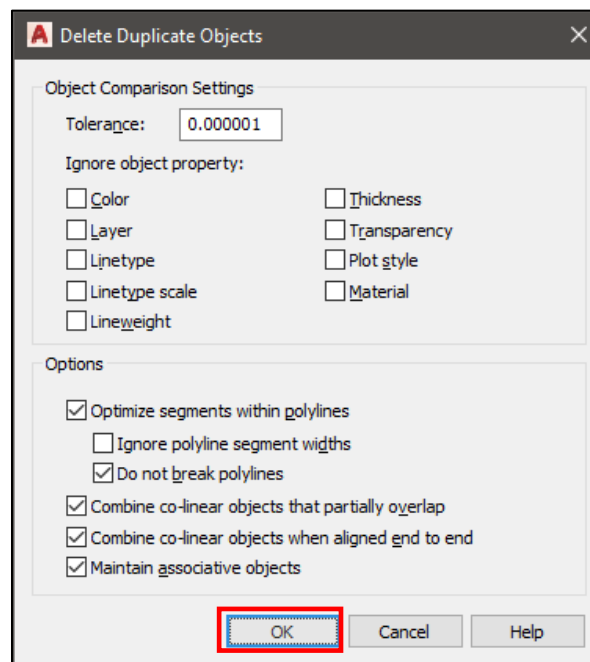


Figure 89

14.4.2.6.10. Purge all elements:

14.4.2.6.10.1. Text styles

14.4.2.6.10.2. Multileader styles

14.4.2.6.10.3. Dim Styles

14.4.2.6.10.4. Blocks

14.4.2.6.11. Lastly run the FINISH macro.

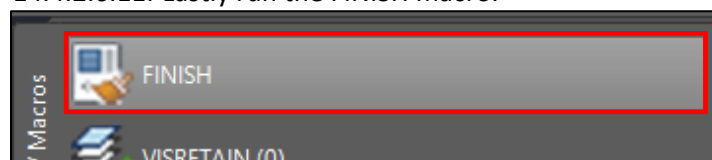


Figure 90

15. FACILITY DRAFTING BASICS

15.1. OVERVIEW

15.1.1. This section shall function as a general walkthrough for drafting facilities. This section may be amended by the CAD Manager. When it is amended, the CAD manager shall inform the Engineering department via email as well as the weekly department meeting. Refer to the example drawing set which is attached to the end of this pdf.

15.1.2. This section will cover 6 main sections:

15.1.2.1. Key Plans

15.1.2.2. Overall Plans

15.1.2.3. Sectional Plans

15.1.2.4. Elevations

15.1.2.5. Conduit Risers

15.1.2.6. Enlargements

15.2. KEY PLANS

15.2.1. Overview

15.2.1.1. Key plans are used to show the locations of a facility that are in the range of the SOW (Scope Of Work). Refer to page TA101 of the example drawing set which is attached to the end of this pdf.

15.2.1.2. This is done by drawing a closed polyline with a global width of 3 and a linetype set to DASHED2.

15.2.1.3. The outline shall be placed on the TA-ANNO layer.

15.2.1.4. All areas that are in the SOW shall be identified with a leader as well as the page callout symbol.

15.3. OVERALL PLANS

15.3.1. Overview

15.3.1.1. Overall plans are used to show equipment and electrical layouts on a large scale.

15.3.1.2. Using keynotes and utilizing architectural symbols' attributes is vital for this type of drafting.

15.3.1.3. Any rooms/areas that have complex layouts should not be included in overall plans but should rather have an enlarged view.

15.3.2. Plan View

15.3.2.1. On plan views for overall plans, equipment and electrical layouts may be combined.

15.3.2.2. Place device representations in approximate locations.

15.3.2.3. Use leaders without text to show architectural symbols.

15.3.2.4. Architectural symbols' attributes shall be used in all cases.

15.3.2.5. Use keynotes as necessary to provide information about conduit requirements, mounting requirements & other pertinent information.

15.3.3. Viewing Ranges

15.3.3.1. Viewing ranges may be used on overall plans, however, it advised to have a separate sheet for viewing ranges as the drawing will become very heavy with line work and will potentially be unreadable.

15.3.4. RCP View

15.3.4.1. On RCP views for overall plans, equipment and electrical layouts may be combined.

15.3.4.2. Place device representations in approximate locations.

15.3.4.3. Use leaders without text to show architectural symbols.

15.3.4.4. Architectural symbols' attributes shall be used in all cases.

15.3.4.5. Use keynotes as necessary to provide information about conduit requirements, mounting requirements & other pertinent information.

15.3.5. Throw Ranges

15.3.5.1. Throw ranges may be used on overall plans, however, it advised to have a separate sheet for throw ranges as the drawing will become very heavy with line work and will potentially be unreadable.

15.3.6. Speaker Coverage Ranges

15.3.6.1. Speaker coverage ranges may be used on overall plans, however, it advised to have a separate sheet for these ranges as the drawing will become very heavy with line work and will potentially be unreadable.

15.4. SECTIONAL PLANS

15.4.1. Overview

15.4.1.1. Sectional plans are nearly identical to overall plans. The main difference being that a sectional plan only shows a partial plan as opposed to the entire plan.

15.4.1.2. Sectional plans are used when site plans are too large for an overall plan.

15.4.1.3. All drafting guidelines pertaining to overall plans apply to sectional plans.

15.5. ELEVATIONS & SECTIONS

15.5.1. Overview

15.5.1.1. Elevations & Sections refer directly to the mounting locations, equipment & electrical placements of displays (primarily) and other AV equipment. Refer to page TA201.A & TA201.B of the example drawing set which is attached to the end of this pdf.

15.5.2. Equipment Elevations

15.5.2.1. For standard equipment elevations, the dynamic display block shall be used.

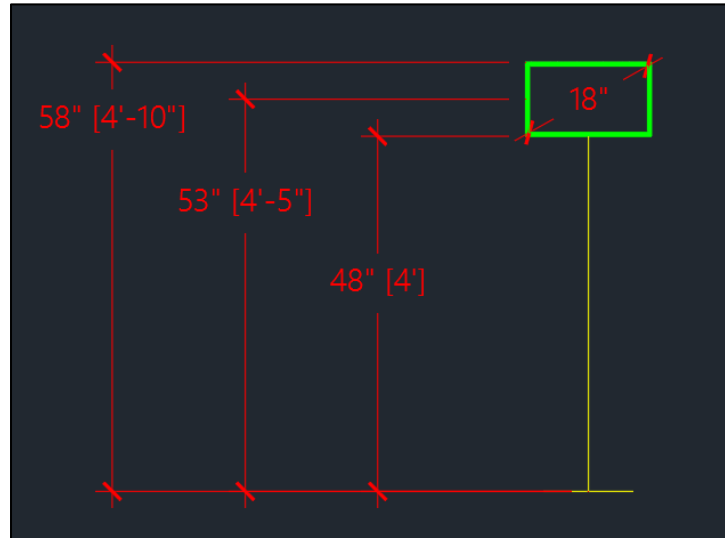


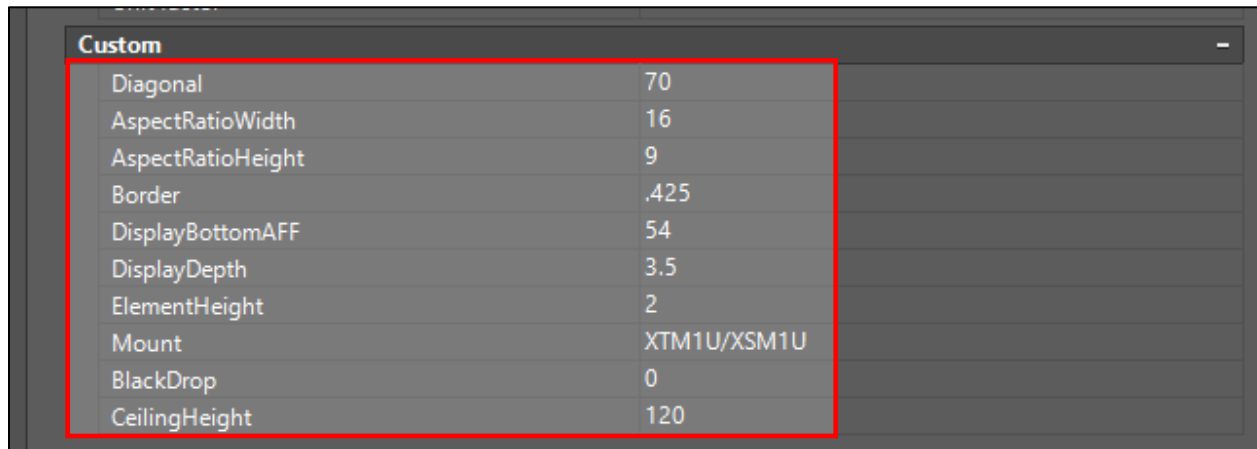
Figure 91

15.5.2.2. To use the block simply select the block and open the properties pane.

BLOCK UNIT	INCHES
Unit factor	1
Custom	-
Diagonal	18.3576
AspectRatioWidth	16
AspectRatioHeight	9
Border	.5
DisplayBottomAFF	48
DisplayDepth	1
ElementHeight	2
Mount	MTM1U/MSM1U
BlackDrop	0
CeilingHeight	108

Figure 92

15.5.2.3. Set all parameters and the block will be adjusted per the attributes and will be ready to be placed.



Diagonal	70
AspectRatioWidth	16
AspectRatioHeight	9
Border	.425
DisplayBottomAFF	54
DisplayDepth	3.5
ElementHeight	2
Mount	XTM1U/XSM1U
BlackDrop	0
CeilingHeight	120

Figure 93

15.5.2.4. Equipment elevations shall show all furniture and existing obstructions as applicable.

15.5.2.5. Non-standard elevations will need to be custom built while following the above criteria.

15.5.3. Electrical Elevations

15.5.3.1. For standard electrical elevations, the dynamic mounting block shall be used.

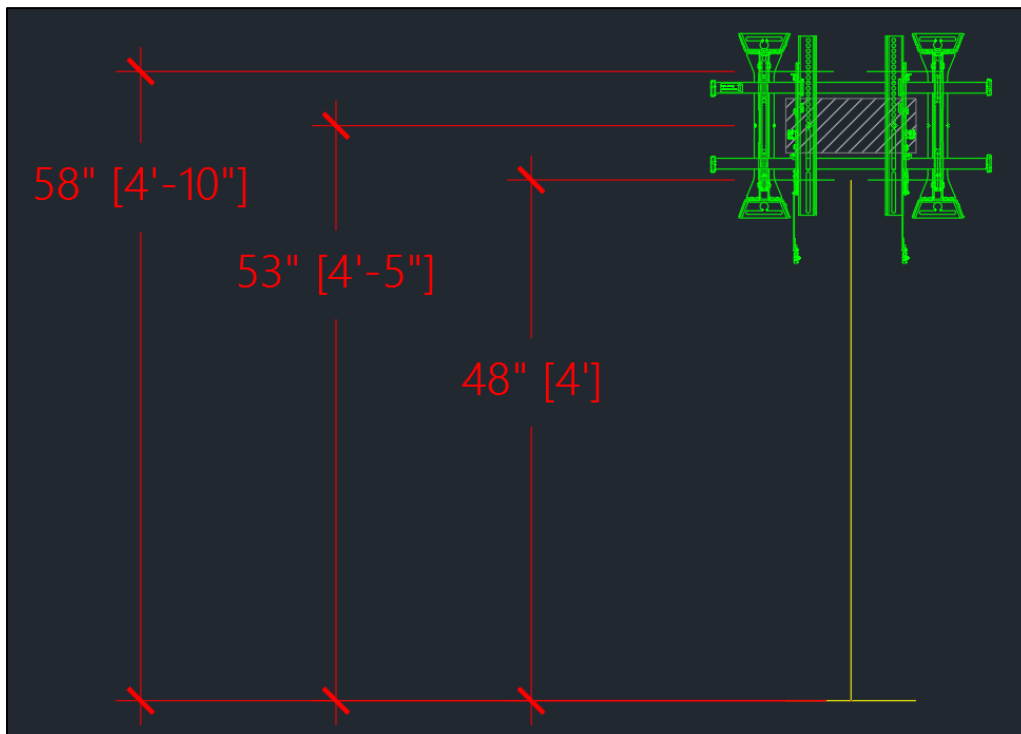


Figure 94

15.5.3.2. To use the block simply select the block and open the properties pane.

15.5.3.3. Set all parameters and the block will be adjusted per the attributes and will be ready to be placed.

15.5.3.4. Electrical boxes and other electrical equipment will need to be placed accordingly along with dimensions.

15.5.3.5. Non-standard elevations will need to be custom built while following the above criteria.

15.5.4. Mounting Sections

15.5.4.1. For standard mounting sections, the dynamic mounting section block shall be used.

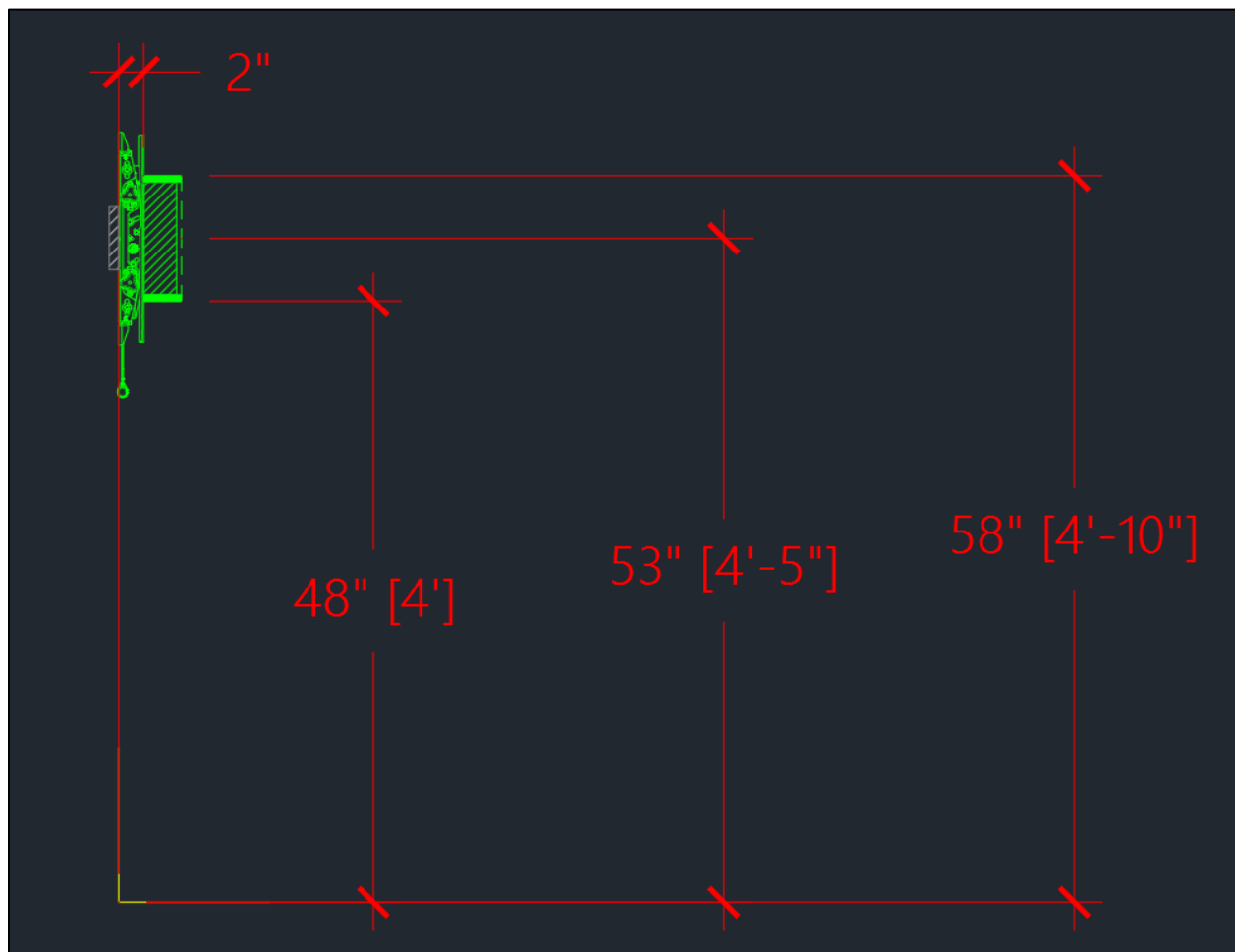


Figure 95

15.5.4.2. To use the block simply select the block and open the properties pane.

15.5.4.3. Set all parameters and the block will be adjusted per the attributes and will be ready to be placed.

15.5.4.4. Mounting sections shall show all furniture and existing obstructions as applicable.

15.5.4.5. Non-standard sections will need to be custom built while following the above criteria.

15.5.5. Viewing Range & Sight Line Sections

15.5.5.1. The dynamic viewing range & sightline block shall be used when a sight line study is required.

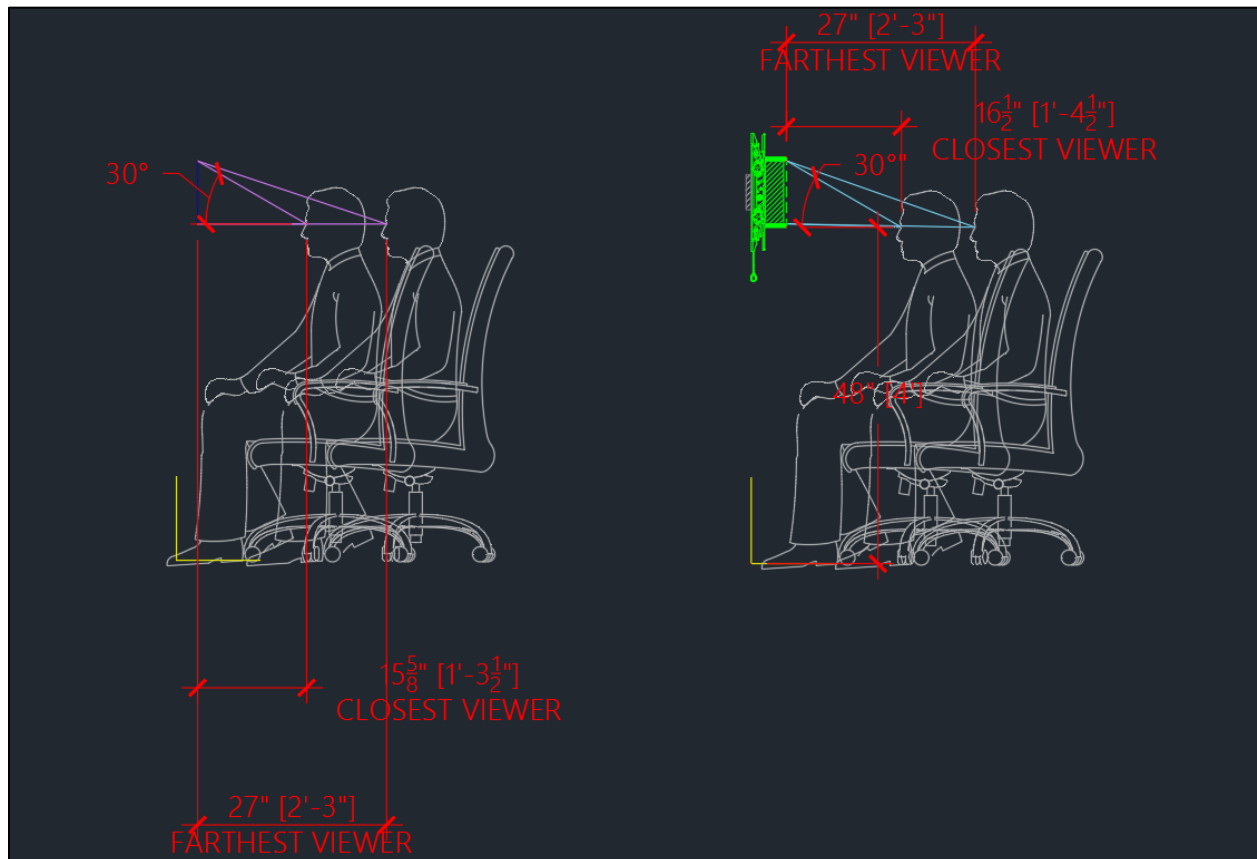


Figure 96

15.5.5.2. To use the block simply select the block and open the properties pane.

15.5.5.3. Set all parameters and the block will be adjusted per the attributes and will be ready to be placed.

15.5.5.4. Sectional viewing ranges & sight lines shall show all furniture and existing obstructions as applicable.

15.5.6. Throw Range Sections

15.5.6.1. The dynamic throw range shall be used when a ceiling mounted projector is in the design.

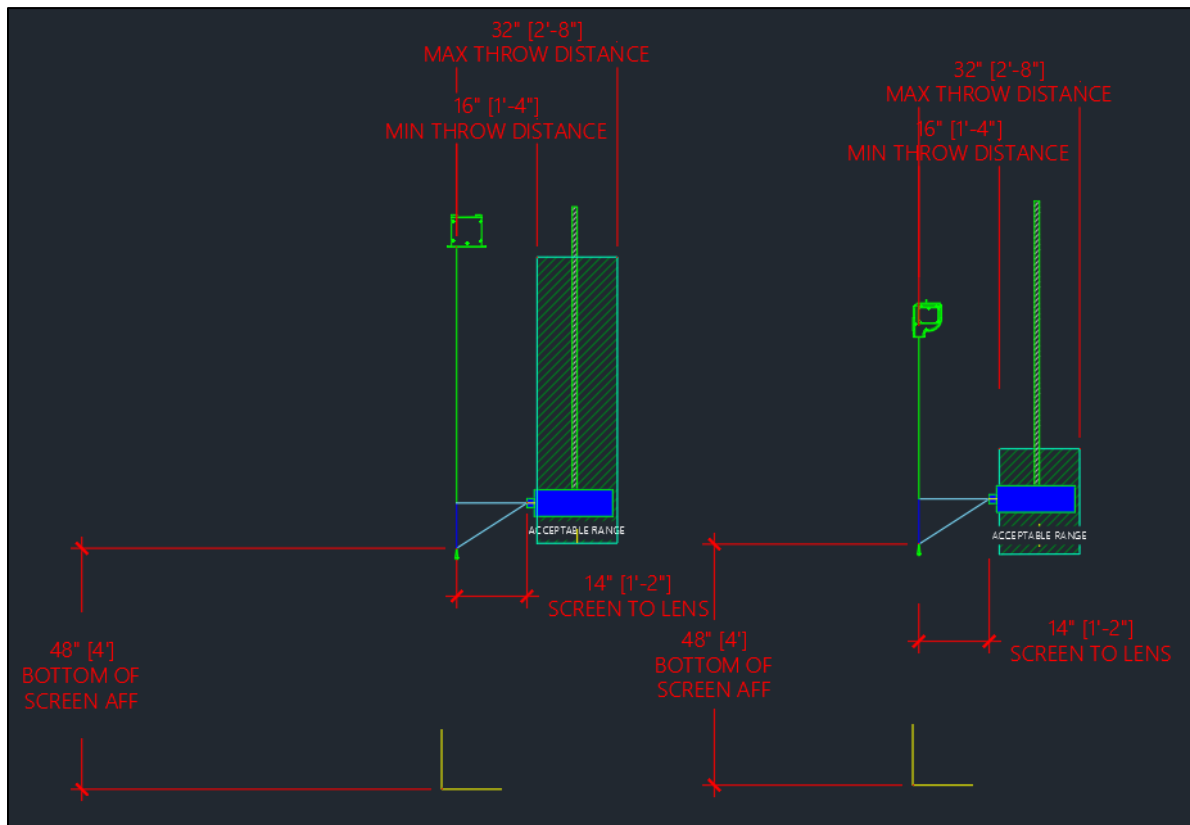


Figure 97

15.5.6.2. To use the block simply select the block and open the properties pane.

15.5.6.3. Set all parameters and the block will be adjusted per the attributes and will be ready to be placed.

15.5.6.4. Sectional throw ranges may be used in conjunction with a dynamic sight line block.

15.6. CONDUIT RISERS

15.6.1. Overview

15.6.1.1. Conduit riser diagrams are not to scale drawings of how devices are connected to their respective racks/head ends via conduit or free run cable. Refer to page TA301 of the example drawing set which is attached to the end of this pdf.

15.6.1.2. Conduit risers typically use a half page or quarter page boundary with a scale set to $1/2'' = 1'-0''$.

15.6.1.3. The basic structure of a conduit riser diagram is:

15.6.1.3.1. Solid line = conduit

15.6.1.3.2. Dashed line = free run cable

15.6.1.3.3. Architectural symbols shall be used to call out devices and equipment.

15.6.1.3.4. Pull boxes shall be represented as necessary.

15.6.1.3.5. Use leaders or keynotes (whichever is more efficient) shall be used to call out conduit sizes, device specifics & typical quantities.

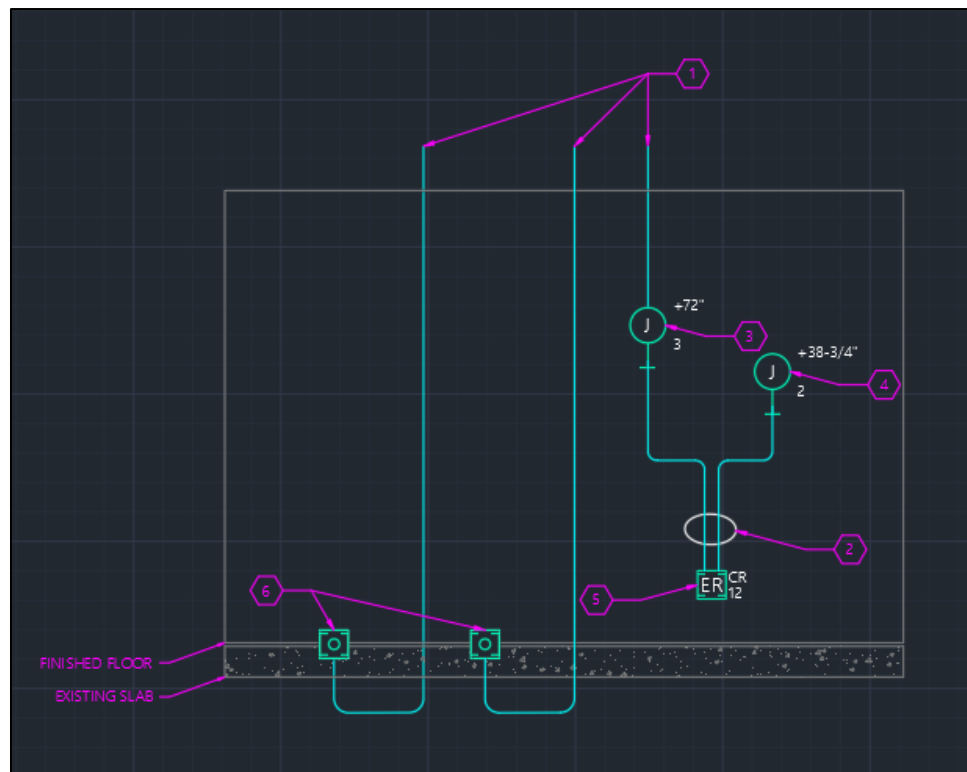


Figure 98

15.7. ENLARGEMENTS

15.7.1. Overview

15.7.1.1. Enlargements are used to show equipment and electrical layouts on a “per room” basis. These are the most common type of facility drawing. Refer to page TA401 of the example drawing set which is attached to the end of this pdf.

15.7.1.2. Enlargements shall be used when the room/location has a complex design that is too detailed for an overall plan or when the overall plan scale does not allow for adequately sized symbols and notations.

15.7.2. Plan View

15.7.2.1. On plan views for overall plans, equipment and electrical layouts may be combined.

15.7.2.2. Place device representations in approximate locations.

15.7.2.3. Use leaders without text to show architectural symbols.

15.7.2.4. Architectural symbols’ attributes shall be used in all cases.

15.7.2.5. Use keynotes as necessary to provide information about conduit requirements, mounting requirements & other pertinent information.

15.7.3. Viewing Ranges

15.7.3.1. Viewing ranges may be used on overall plans, however, it is advised to have a separate sheet for viewing ranges as the drawing will become very heavy with line work and will potentially be unreadable.

15.7.4. RCP View

15.7.4.1. On RCP views for overall plans, equipment and electrical layouts may be combined.

15.7.4.2. Place device representations in approximate locations.

15.7.4.3. Use leaders without text to show architectural symbols.

15.7.4.4. Architectural symbols’ attributes shall be used in all cases.

15.7.4.5. Use keynotes as necessary to provide information about conduit requirements, mounting requirements & other pertinent information.

15.7.5. Throw Ranges

15.7.5.1. Throw ranges may be used on overall plans, however, it advised to have a separate sheet for throw ranges as the drawing will become very heavy with line work and will potentially be unreadable.

15.7.6. Speaker Coverage Ranges

15.7.6.1. Speaker coverage ranges may be used on overall plans, however, it advised to have a separate sheet for these ranges as the drawing will become very heavy with line work and will potentially be unreadable.

16. EQUIPMENT & MOUNTING DETAILS

16.1. OVERVIEW

16.1.1. Equipment & Mounting details are used to show the detailed views (Front, Top, Bottom, Rear, Sides & Isometric) of devices that are client facing as well as all mounting equipment. Refer to page TA501 of the example drawing set which is attached to the end of this pdf.

16.1.2. Main Guidelines

16.1.2.1. All views shall be blocked separately from each other.

16.1.2.2. All blocked views shall be placed on the TA-EQPM-DEVC layer.

16.1.2.3. All views shall be labeled appropriately using the L3AV text style and placed on the TA-EQPM-ANNO layer.

16.1.2.4. The device shall have basic dimensioning added to it.

16.1.2.5. Use either 4x4 or 2X4 boundaries.

17. SIGNAL FLOW DRAFTING BASICS

17.1. OVERVIEW

17.1.1. Signal flows are the drawings used to show how all devices are interconnected with each other as well as how they are connected to other devices not included in the SOW (i.e. OFE LAN). Refer to page TA601 of the example drawing set which is attached to the end of this pdf.

17.1.2. Main Guidelines

17.1.2.1. A full page boundary set to a scale of 1:1.5 shall be used.

17.1.2.2. The grid shall be set to .375.

17.1.2.3. All blocks, cable labels, flags and room borders shall be snapped to the grid.

17.1.2.4. Signal Flow blocks shall always be built on the TA-FLOW-DEVC layer.

17.1.2.5. All text in a signal flow block shall be on the TA-FLOW-ANNO layer.

17.1.2.6. Signal flow blocks shall be inserted on the TA-FLOW-DEVC layer.

17.1.2.7. PLINES shall be used for drawing connections between devices. These shall always be on the TA-FLOW-CABL layer.

17.1.2.8. Cable label blocks shall be on the TA-FLOW-LABL layer.

17.1.2.9. On/Off page flags shall be on the TA-FLOW-FLAG layer.

17.1.2.10. Notes or other annotations shall be on the TA-FLOW-ANNO layer.

17.1.2.11. All intersecting line shall have a wire jump drawn in.

17.1.2.12. All wire jumps shall be consistent in size and direction in the drawing.

18. RACK ELEVATIONS

18.1. OVERVIEW

- 18.1.1. Rack elevation drawings depict how the completely built rack should be laid out.
- 18.1.2. All rack elevations shall reference all rear mounted and unseen equipment by use of a multileader.
- 18.1.3. A RU ruler shall be used for all rack elevations.
- 18.1.4. Rack elevations are typically set to a scale of 3" = 1'-0" and use a full page boundary.
- 18.1.5. Any credenzas or millwork shall be represented in at least a referenced manner. It is preferable to have accurate dimensions if possible.
- 18.1.6. Line up the plates with the screw holes on racks.
- 18.1.7. To use the dynamic plate/device block simply select the drop down and select the appropriate RU size and fill out appropriate information.

19. POWER & HEAT LOADS

19.1. OVERVIEW

19.1.1. The power and heat loads table has three main functions:

19.1.1.1. To show the devices that require power from a power source such as a power strip, UPS, or PDU.

19.1.1.2. To show the Amperage and Wattage draws of each device as well as the totals so that circuits are not overloaded.

19.1.1.3. To show what the total BTU output of the devices in the rack is.

19.2. USING THE TABLES

19.2.1. There are two main tables.

19.2.1.1. The first table is mainly to function as the “Power Strip” table.

19.2.1.1.1. It starts out ready with 20 ports but can be reduced as needed.

19.2.1.2. The second table is mainly to function as the “PDU/UPS” table.

19.2.1.2.1. This table has less ports but has a totals section at the bottom.

19.2.2. To use the table(s) simply fill in the following device information:

19.2.2.1. Make

19.2.2.2. Model

19.2.2.3. SYS-ID

19.2.2.4. Watts

19.2.3. To use both tables together:

19.2.3.1. Fill out the “power strip” table as normal

19.2.3.2. Add the “Power Strip” as a line item to the “PDU/UPS” table

20. EDID TABLES

20.1. OVERVIEW

20.1.1. This section isn't a "how-to" for creating EDID tables but rather how to put an existing EDID table into an AutoCAD drawing.

20.1.2. EDID tables will be placed in the "TA8" section of drawing sets.

20.2. PLACING THE EDID TABLE

20.2.1. Locate the completed EDID table in the AV9000 form.

20.2.2. Select the entire area of the table in EXCEL and hit CTRL+C.

20.2.3. Open the AutoCAD drawing master model space.

20.2.4. Under the home tab, select the Paste drop down and select special. (Or type in "PASTESPEC")

20.2.5. Then select the first option, Ts.

20.2.6. Use border boxes set to a scale of 1:1.

20.2.7. Create named views like normal and place on the appropriate sheets.



J. P. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.: XXXX

SCALE: N/A

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: -

ROOM: -

COVER PAGE

SHEET TITLE

TA000

SHEET NUMBER:

2017 LEVEL 3 AUDIO VISUAL

A large, elegant handwritten signature in black ink, reading "J. P. Morgan". The signature is written in a cursive style with a prominent initial "J" and a long, sweeping underline.

PRESENTATION ROOM

BRENT STANPHILL
(602) 770-0308
BStanphill@l3av.com

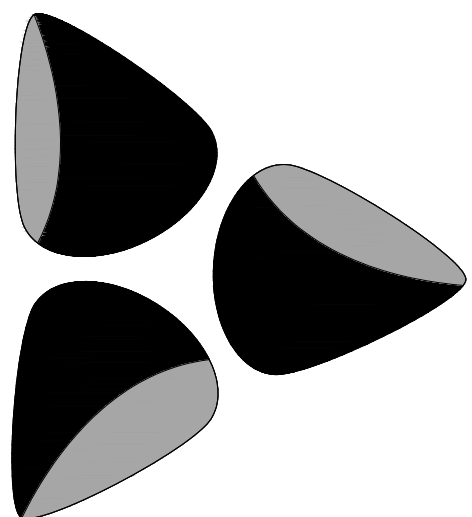
CATALIN IONITA
(602) 505-6662
Clonita@l3av.com

JOSIAH SILL
(480) 710-1131
JSill@I3av.com

BUSINESS REPRESENTATION

PROJECT MANAGEMENT:

PROJECT ENGINEER:



LEVEL 3
AUDIO VISUAL

A : 9 5 5 E . J A V E L I N A A V E N U E M E S A , A R I Z O N A 8 5 2 0 4 T : 4 8 0 . 8 9 2 . 1 0 7 1 F : 4 8 0 . 8 9 2 . 5 2 9 5 W : L 3 A V . C O M

PLOT DATE: 5/12/2017 12:40 PM

J. J. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.: XXXX

SCALE: N/A

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: -

ROOM: _____

SHEET INDEX

| SHEET TITLE

TA001

SHEET NUMBER:

AUDIOVISUAL SHEET INDEX

[illegible]

CABLE LABEL STRUCTURE

HD-1-001

CABLE TYPE DESIGNATION

PRIMARY SERIES NUMBER

SEQUENTIAL IDENTIFYING NUMBER

SIGNAL FLOW BLOCK LEGEND

MANUFACTURER

MODEL

CABLE TYPE & NUMBER

CABLE

SYSTEM I.D.

CONNECTOR TYPE

OFF PAGE FLAG

ON PAGE FLAG

LOCATION

MOUNT STYLE

CONNECTOR DESIGNATION

CRESTRON

DM-TX-201-C

RJ45

DM101

HDMI

DM-TX-01

LAN

UTP101

COMPUTER

HD15

3.5TRS

AUDIO L/R

USB-B

DCB

POWER

UNDER TABLE

SURF MOUNT

AUDIOVISUAL CABLE SPECIFICATIONS


SIGNAL	LABEL	TYPICAL USE	BRAND	PART #	RATING	DESCRIPTION
AUDIO	A	LINE LEVEL AUDIO- 1 PAIR	BELDEN	6500FE	PLENUM	(22/2) 22 AWG 1 PAIR SHIELDED
	M	MIC LEVEL AUDIO- 1 PAIR	BELDEN	6500FE	PLENUM	(22/2) 22 AWG 1 PAIR SHIELDED
	S	*SPEAKER CABLE- 16/2 TYPICAL OTHER CABLE AS NOTED ON DRAWING*	BELDEN	6200UE	PLENUM	(16/2) 16AWG 1 PAIR
			BELDEN	1307A	DIRECT BURIAL	(16/2) 16AWG 1 PAIR
			BELDEN	6202UE	PLENUM	(16/4) 16AWG 4 CONDUCTOR
			BELDEN	6000UE	PLENUM	(12/2) 12AWG 1 PAIR
			BELDEN	1392P	PLENUM	22 AWG 1 PAIR SHIELDED AND 18 AWG 1 PAIR
			CRESTRON	CRESNET	PLENUM	22 AWG 1 PAIR SHIELDED AND 18 AWG 1 PAIR
	C	SERIAL CONTROL	BELDEN	1325A	PLENUM	(22/4) 22 AWG 2 PAIR INDIVIDUALLY SHIELDED
	IR	INFRARED	BELDEN	6500FE	PLENUM	(22/2) 22 AWG 1 PAIR SHIELDED
	RLY	RELAY	BELDEN	1325A	PLENUM	(22/4) 22 AWG 2 PAIR INDIVIDUALLY SHIELDED
ANALOG VIDEO	R	RGB, RGBS, RGBHV, Yuv	BELDEN	1279P	PLENUM	RG6 5 x 25 AWG SOLID MINI HIGH RES COAX
			BELDEN	1829P	PLENUM	RG-6 18 AWG DUAL SHIELD
			BELDEN	9066.0000	DIRECT BURIAL	RG-6 18 AWG DUAL SHIELD
			BELDEN	6339Q8	PLENUM	RG-6 18 AWG QUAD SHIELD
			BELDEN	1523AP	PLENUM	RG-11 14 AWG DUAL SHIELD
DIGITAL VIDEO	HD	HDMI	VARIOUS	VARIOUS	NON-PLENUM	AS NOTED ON DRAWING
	HD	HDMI	VARIOUS	VARIOUS	PLENUM	AS NOTED ON DRAWING
	HD	DVI	VARIOUS	VARIOUS	NON-PLENUM	AS NOTED ON DRAWING
	HD	DP	VARIOUS	VARIOUS	NON-PLENUM	AS NOTED ON DRAWING
	DMC	DIGITAL MEDIA COPPER (CRESTRON)	BELDEN	1213F	PLENUM	CAT5e+ (350 MHz) , 4 PAIR F/UTP FOIL SHIELDED
			CRESTRON	DM-CBL-8G-P	PLENUM	DIGITAL MEDIA 8G
	DMF	DIGITAL MEDIA FIBER (CRESTRON)	BELDEN	89E014	PLENUM	MULTIMODE 50/125 x4
			CRESTRON	CRESFIBER8G-P	PLENUM	MULTIMODE 50/125 x4
	DXC	DXLINK COPPER (AMX)	BELDEN	10GX63F	PLENUM	CAT6A 23 AWG 4 PAIR F/UTP (625MHz)
	DTC	DTP COPPER (XTP DTP 24P)	EXTRON	22-235-03	PLENUM	24 AWG 4 PAIR SF/UTP (475 MHz)
	XTC	XTP COPPER (XTP DTP 24P)	EXTRON	22-235-03	PLENUM	24 AWG 4 PAIR SF/UTP (475 MHz)
FIBER	SMF	SINGLE MODE FIBER	VARIOUS	VARIOUS	NON-PLENUM	AS NOTED ON DRAWING
	MMF	MULTI MODE FIBER	VARIOUS	VARIOUS	NON-PLENUM	AS NOTED ON DRAWING
CAT CABLE	AVB	AUDIO VIDEO BRIDGING	BELDEN	2413.0000	PLENUM	CAT6 (350 MHz) 23 AWG 4 PAIR UTP
	DN	DANTE	BELDEN	2413.0000	PLENUM	CAT6 (350 MHz) 23 AWG 4 PAIR UTP
	N	DATA NETWORK, ICsNET, BIAMP RED, VoIP	BELDEN	2413.0000	PLENUM	CAT6 (350 MHz) 23 AWG 4 PAIR UTP
	UTP	UNSHIELDED TWISTED PAIR	BELDEN	2413.0000	PLENUM	CAT6 (350 MHz) 23 AWG 4 PAIR UTP
	STP	HDBASE-T, DIG VIDEO EXTENDERS, DATA	BELDEN	2413.0000	PLENUM	CAT6 (350 MHz) 23 AWG 4 PAIR UTP
COAX	ANT	WIRELESS ANTENNAS	LIBERTY	RG58-CMP-WHT	PLENUM	RG-58/U 20 AWG SOLID
			BELDEN	1829P	PLENUM	RG-6 18 AWG DUAL SHIELD
			BELDEN	9066.0000	DIRECT BURIAL	RG-6 18 AWG DUAL SHIELD
			BELDEN	1523AP	PLENUM	RG-11 14 AWG DUAL SHIELD
			BELDEN	1855P	PLENUM	23 AWG SDI COAX MINI RG59
			BELDEN	1855A	NON-PLENUM	23 AWG SDI COAX MINI RG59
			BELDEN	1695A	PLENUM	18 AWG SDI COAX RG6
MISC	USB	UNIVERSAL SERIAL BUS	VARIOUS	VARIOUS	NON-PLENUM	AS NOTED ON DRAWING
	HDC	POLYCOM ANALOG CAM/ CTRL/ PWR CABLE	POLYCOM	VARIOUS	NON-PLENUM	AS NOTED ON DRAWING
			POLYCOM	2457-17625-001	NON-PLENUM	1394b STYLE- 12 INCHES
	OBM	POLYCOM SOUNDSTRUCTURE LINK CABLE	POLYCOM	2200-43229-001	NON-PLENUM	1394b STYLE- UP TO 40'

FIBER OPTIC CONNECTORS

NAME	DESCRIPTION
FC	FIBER OPTIC CONNECTOR, FC STYLE
LC-D	SMALL FORM FACTOR FIBER OPTIC CONNECTOR, LC DUPLEX STYLE
LC-S	SMALL FORM FACTOR FIBER OPTIC CONNECTOR, LC SIMPLEX STYLE
SC-D	FIBER OPTIC CONNECTOR, SC DUPLEX STYLE
SC-S	FIBER OPTIC CONNECTOR, SC SIMPLEX STYLE
ST	FIBER OPTIC CONNECTOR, ST STYLE
TL	FIBER OPTIC CONNECTOR, TOSLINK STYLE (DIGITAL AUDIO)

POWER CONNECTORS

NAME	DESCRIPTION
1-15R	NEMA 2-WIRE, 120 V, 15 A - POLARIZED STRAIGHT BLADE
5-15R	NEMA 3-WIRE GROUNDED, 120 V, 15 A - POLARIZED STRAIGHT BLADE
5-20R	NEMA 3-WIRE GROUNDED, 120 V, 20 A - POLARIZED STRAIGHT BLADE
L5-15R	NEMA 2-WIRE, GROUNDED, 120 V, 15 A - TWIST LOCK
L5-20R	NEMA 3-WIRE, GROUNDED, 120 V, 20 A - TWIST LOCK
L5-30R	NEMA 3-WIRE, GROUNDED, 120 V, 30 A - TWIST LOCK
C14	IEC 60320 C14 DEVICE INLET, 10A (C13 FEMALE CONNECTOR)
C18	IEC 60320 C18 DEVICE INLET, 10A (C17 FEMALE CONNECTOR)
C6	IEC 60320 C6 DEVICE INLET, 2.5A - (C5 FEMALE CONNECTOR)
C8	IEC 6032



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J.P. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

NO.:	DATE	DESCRIPTION
0	05/09/2017	FOR CONSTRUCTION
1	05/10/2017	RFC-01
2	05/11/2017	RFC-02
3	06/30/2017	AS BUILT

ISSUED FOR:

PROJECT NO.:

XXXX

SCALE:

N/A

DRAWN BY:

J. SILL

APPROVED BY:

J. PILZNER

BUILDING:

PRIVATE BANK

FLOOR:

-

ROOM:

-

NOTES,
SCHEDULES &
REFERENCES

SHEET TITLE

TA002

SHEET NUMBER:



J. P. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.: XXXX

SCALE: 1/16"=1'

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: 39

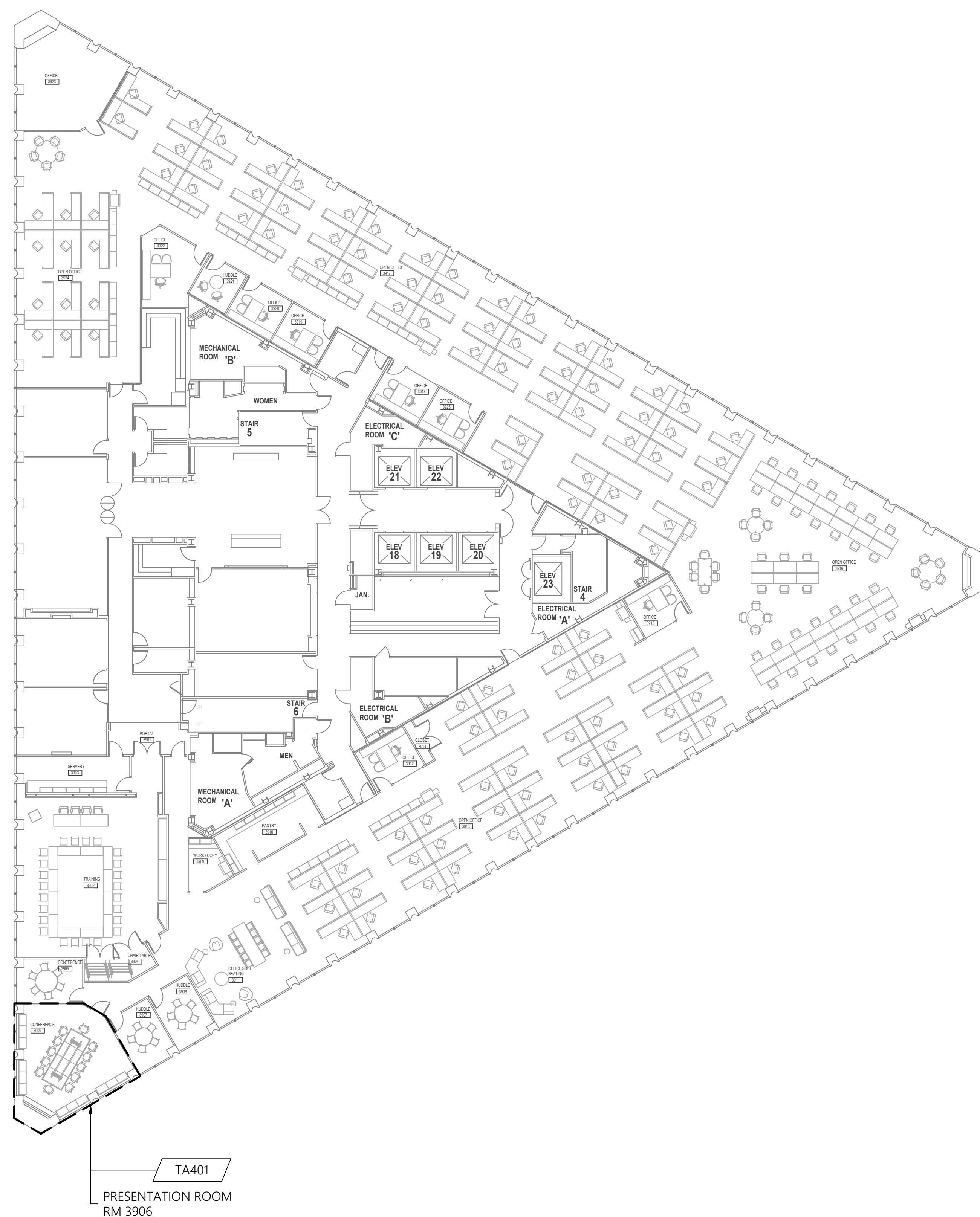
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AV KEY PLAN

SHEET TITLE

TA101

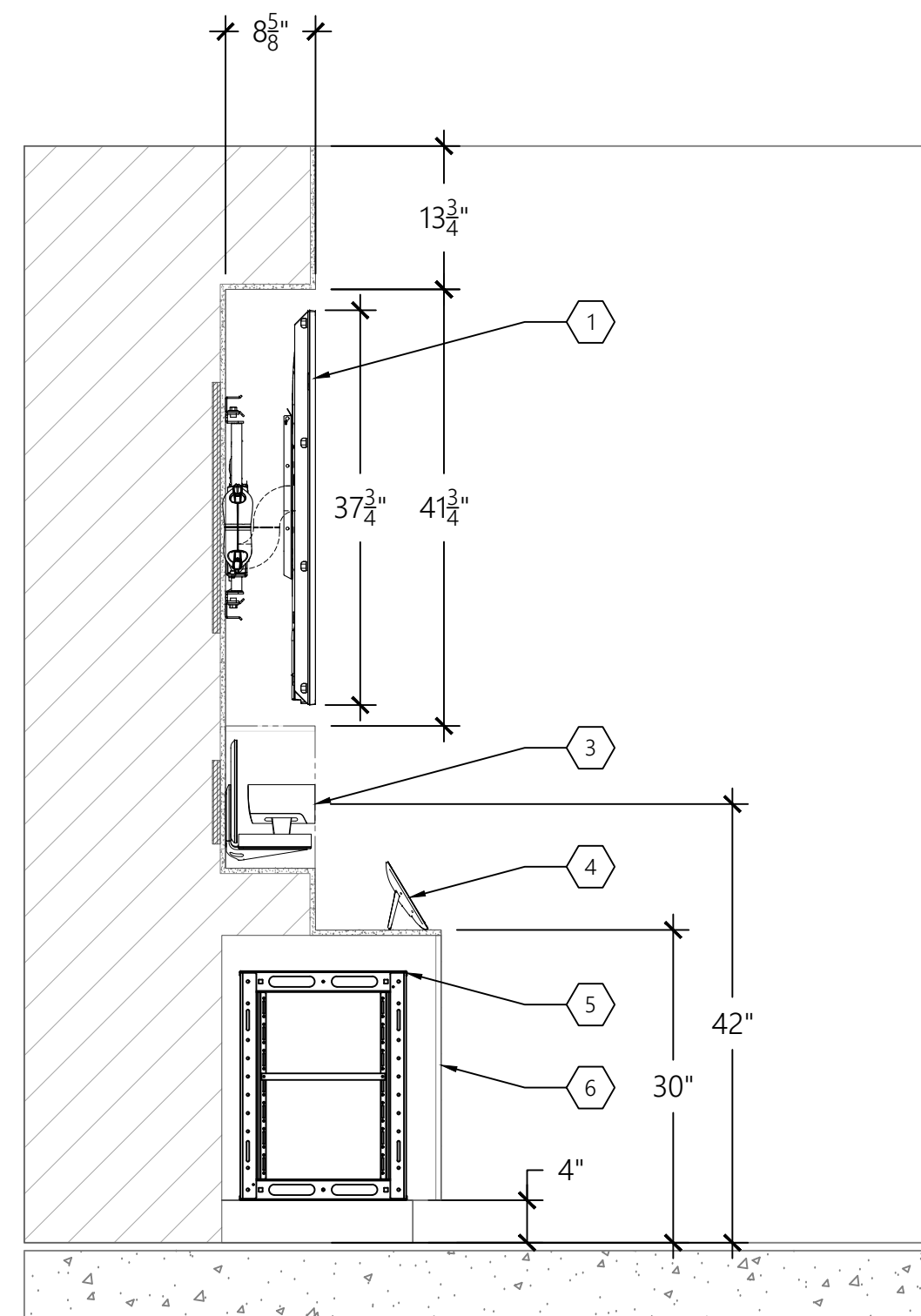
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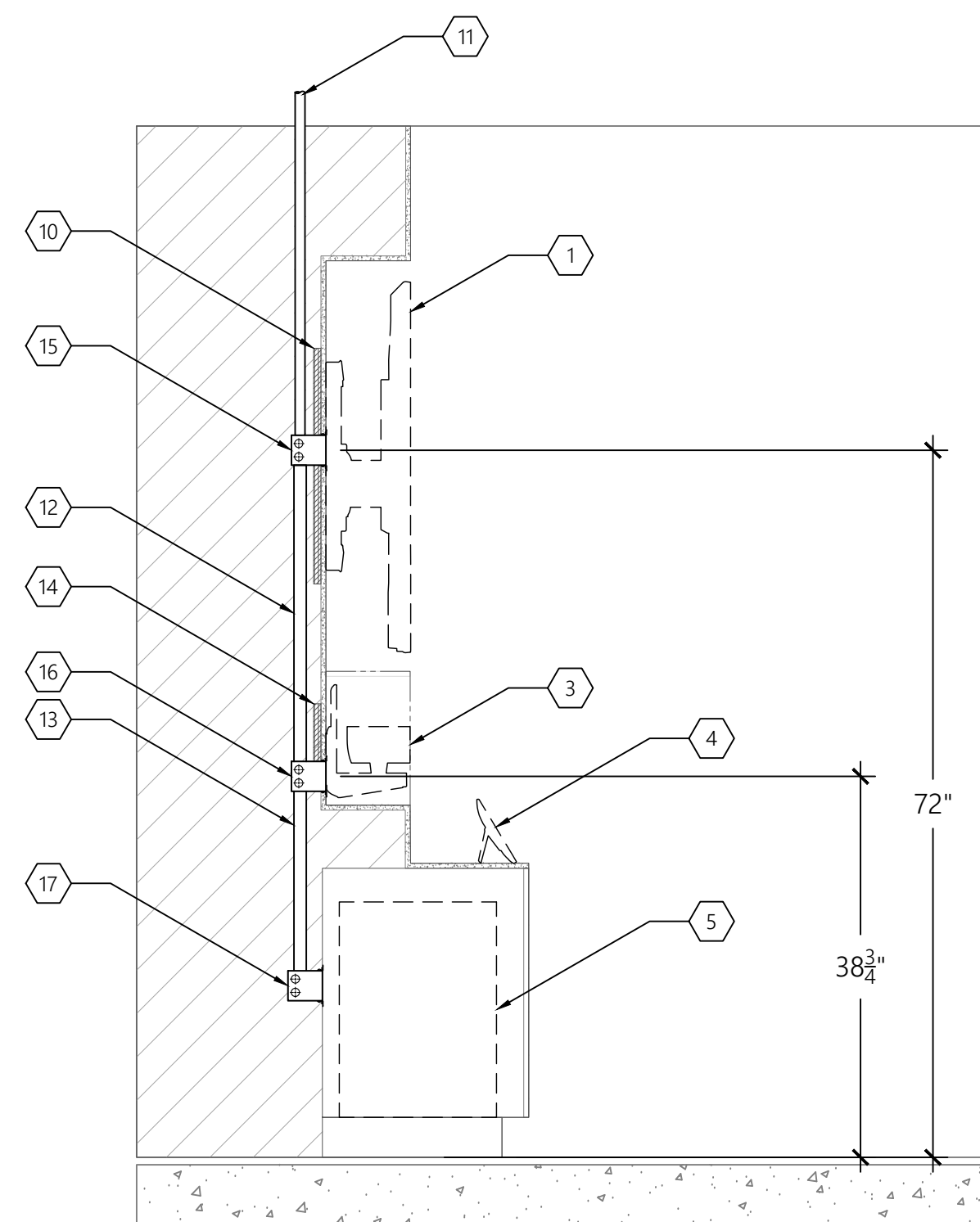
01

AV KEY PLAN

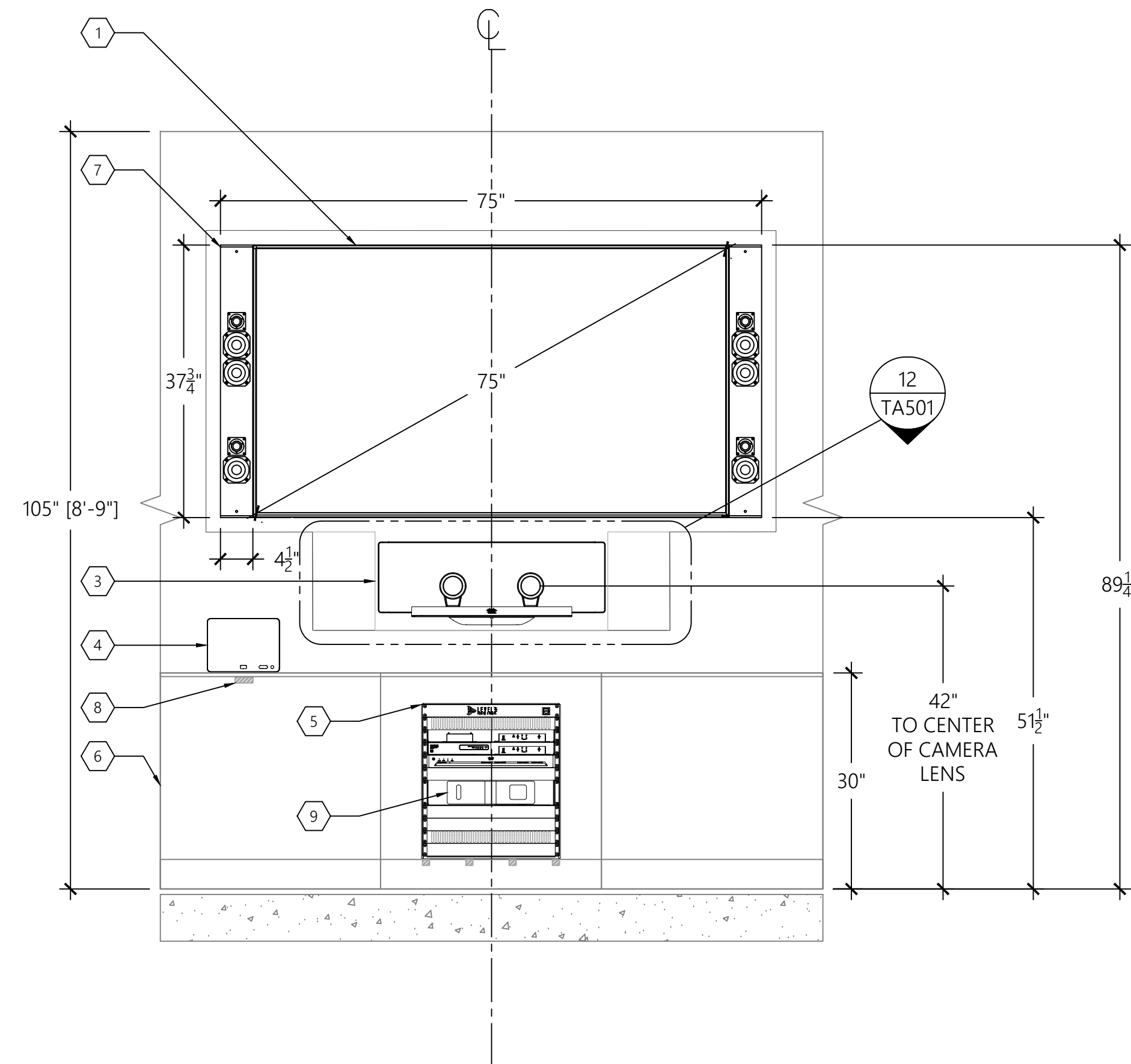
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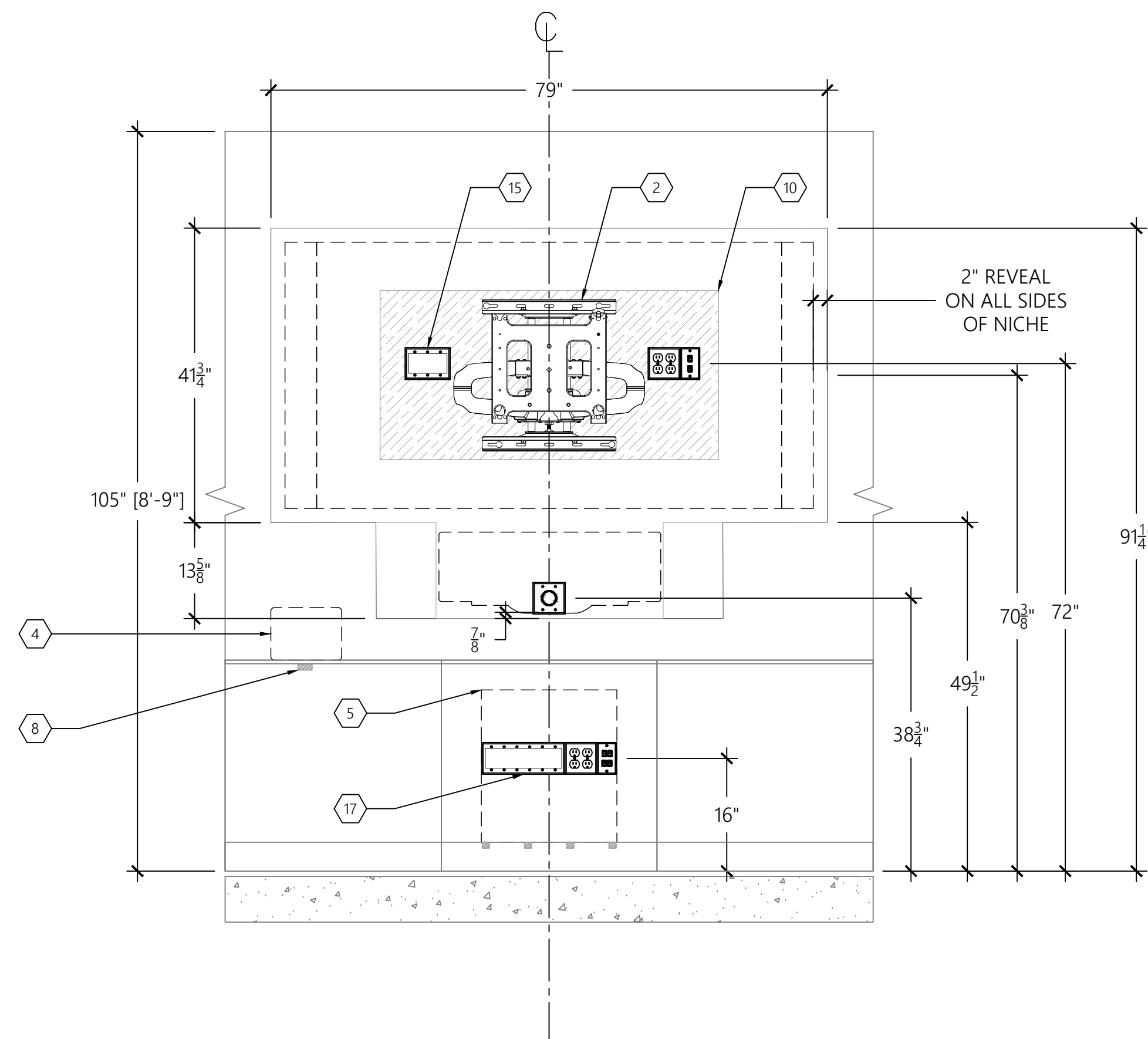
01 AV EQUIPMENT SECTION
PRESENTATION ROOM - RM 3906
Scale: 3/4" = 1'-0"



03 AV ELECTRICAL SECTION
PRESENTATION ROOM - RM 3906
Scale: 3/4" = 1'-0"



02 / AV EQUIPMENT ELEVATION
PRESENTATION ROOM - RM 3906
Scale: 3/4" = 1'-0"



04 / AV ELECTRICAL ELEVATION
PRESENTATION ROOM - RM 3906
Scale: 3/4" = 1'-0"

GENERAL NOTES

- A. ALL POWER, DATA TO BE PROVIDED BY OTHERS.
- B. VIDEO CONFERENCING LIGHTING SHOULD BE 55 FC AT 45° AND DIRECTED TO CAMERA.
- C. THE AV SYSTEM SHOULD RECEIVE A SINGLE PHASE FEED THAT IS PROPERLY GROUNDED.

SHEET KEYNOTES

1. SAMSUNG DM75E DISPLAY W/ CHIEF PDRUB MOUNT.
2. CHIEF PDRUB MOUNT.
3. CISCO SPEAKER TRACK 60.
4. CISCO TOUCH 10 ALTERNATE LOCATION.
5. MIDDLE ATLANTIC CFR 12-16 CREDENZA RACK.
6. EXISTING CREDENZA MAKE/MODEL TBD. REFERENCE ONLY. FIELD VERIFY EXACT DIMENSIONS.
7. LEON PrUT SPEAKERS. TYP. OF 2.
8. PASS THRU GROMMET FOR TOUCH PANEL REQUIRED.
9. OFE VDI TERMINAL.
10. GC TO PROVIDE PROPER BACKING TO SUPPORT DISPLAY WEIGHT.
11. 1-1/4" CONDUIT STUBBED TO ACCESSIBLE CEILING/SPACE.
12. 1-1/4" CONDUIT FROM RACK TO DISPLAY.
13. 1-1/4" CONDUIT FROM RACK TO SPEAKERTRACK SYSTEM.
14. GC TO PROVIDE PROPER BACKING TO SUPPORT SPEAKERTRACK 60 SYSTEM.
15. 3 GANG J-BOX FOR AV MOUNTED AT 72" AFF.
16. 2 GANG J-BOX FOR AV MOUNTED AT 39" AFF.
17. 6 GANG J-BOX FOR AV MOUNTED IN CREDENZA AT ~16" AFF.
18. MIDDLE ATLANTIC CAB-COOL 2.



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J. P. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.:	XXXX
--------------	------

SCALE: $3/4"=1'$

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING:	PRIVATE BANK
-----------	--------------

FLOOR:	39
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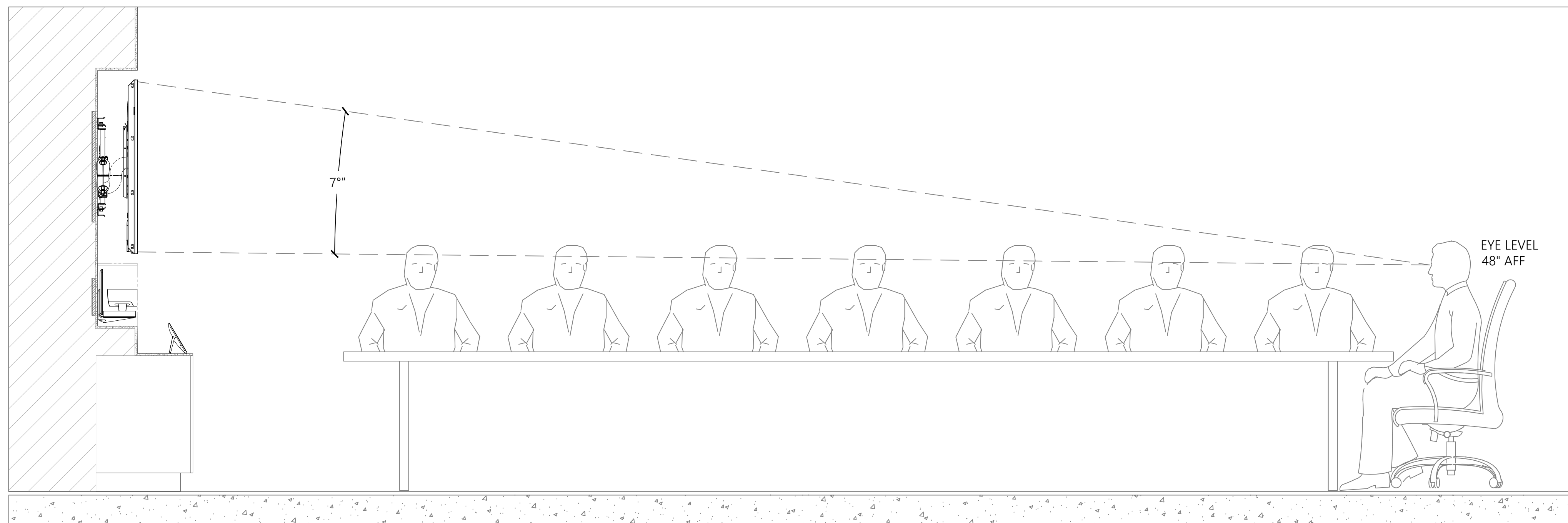
ROOM:	3906
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AV TECHNOLOGY MOUNTING ELEVATIONS & SECTIONS

SHEET TITLE

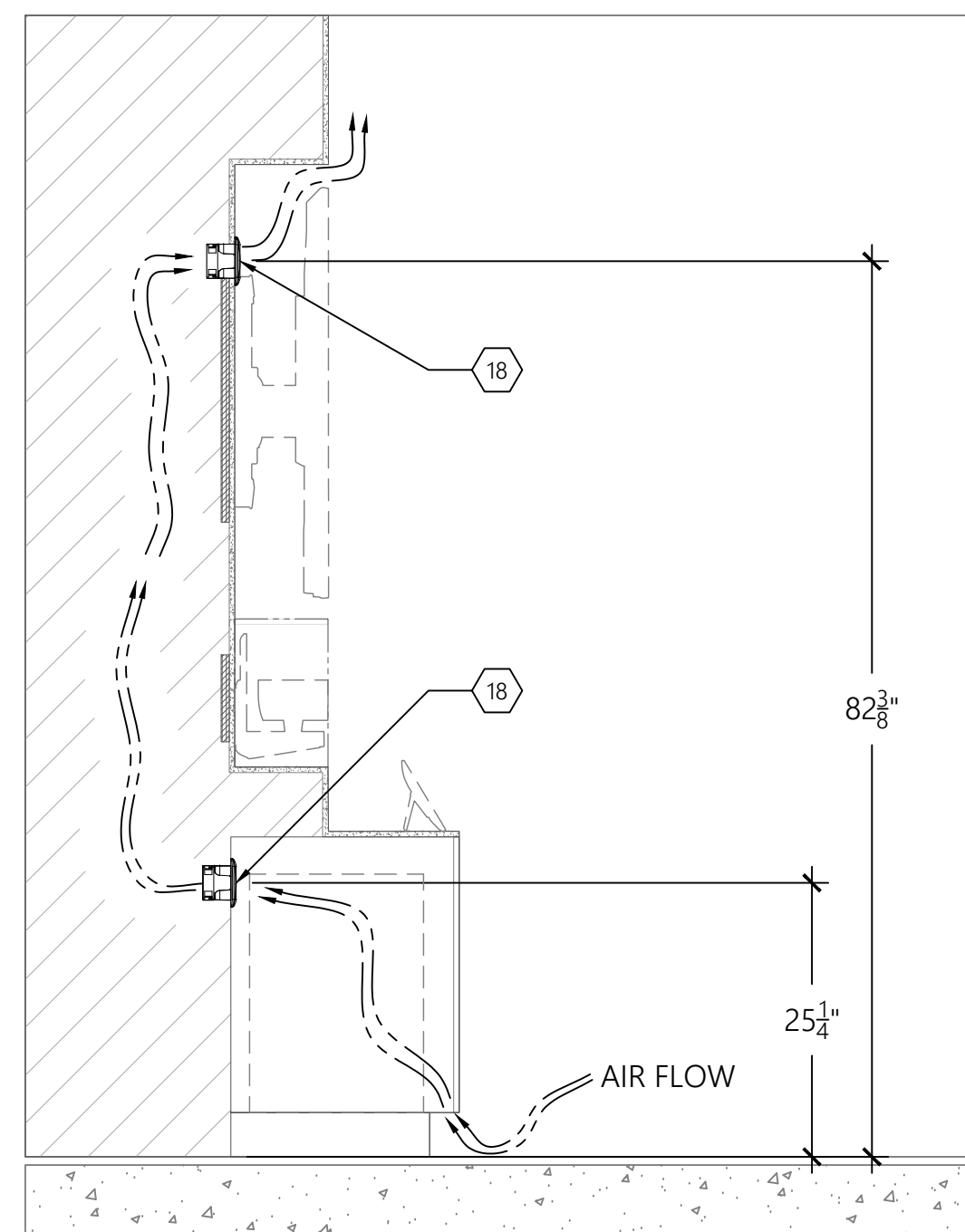
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SHEET NUMBER:



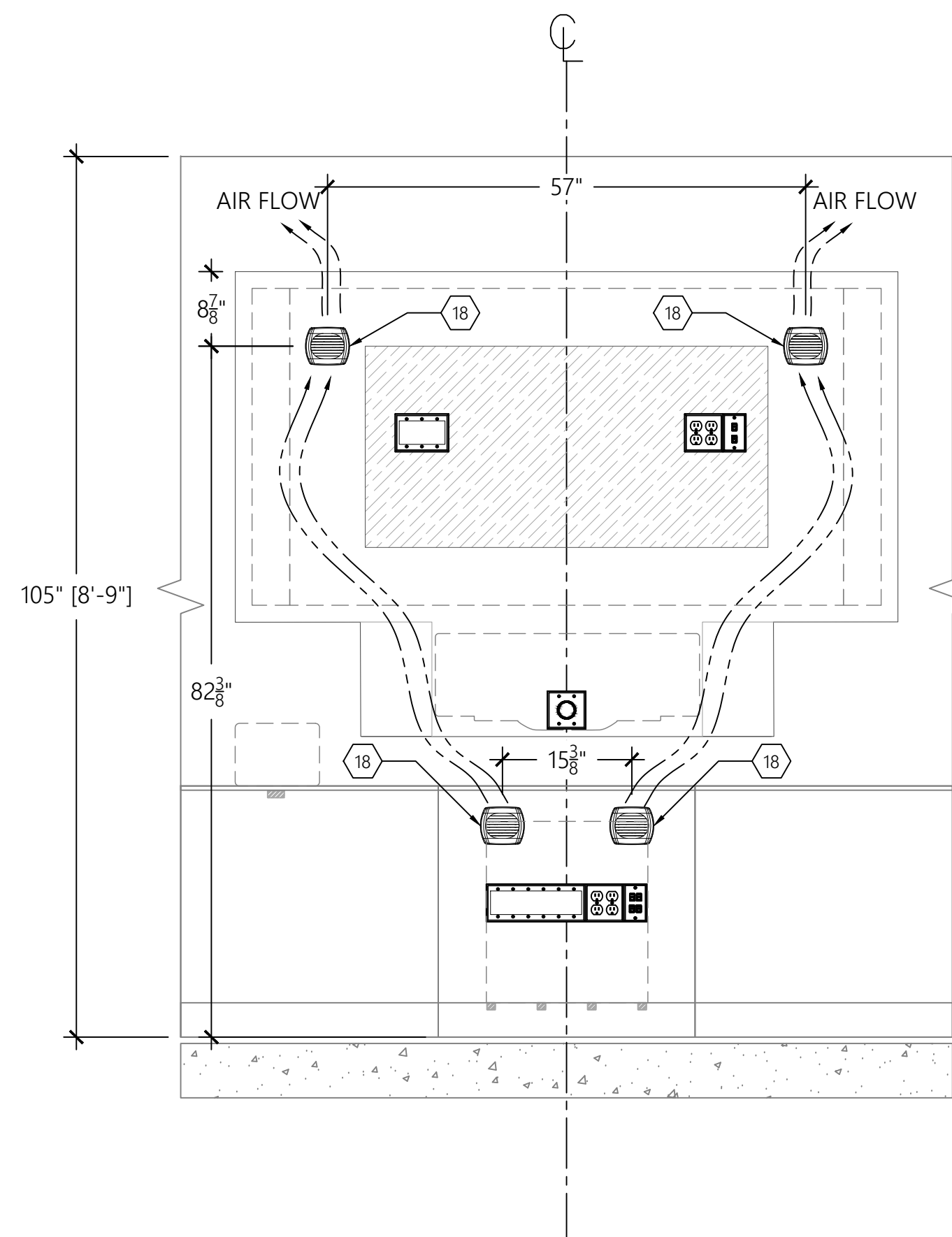
01 / AV SIGHT LINE STUDY

PRESENTATION ROOM - RM 3906
Scale: 3/4" = 1'-0"



03 / AV THERMAL MANAGEMENT SECTION

PRESENTATION ROOM - RM 3906
Scale: 3/4" = 1'-0"



03 / AV THERMAL MANAGEMENT ELEVATION

PRESENTATION ROOM - RM 3906
Scale: 3/4" = 1'-0"

GENERAL NOTES

- A. ALL POWER, DATA TO BE PROVIDED BY OTHERS.
- B. VIDEO CONFERENCING LIGHTING SHOULD BE 55 FC AT 45° AND DIRECTED TO CAMERA.
- C. THE AV SYSTEM SHOULD RECEIVE A SINGLE PHASE FEED THAT IS PROPERLY GROUNDED.

SHEET KEYNOTES

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2. CHIEF PDRUB MOUNT.
3. CISCO SPEAKER TRACK 60.
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J. P. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

| SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.:	XXXX
--------------	------

SCALE: $3/4"=1'$

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: 39

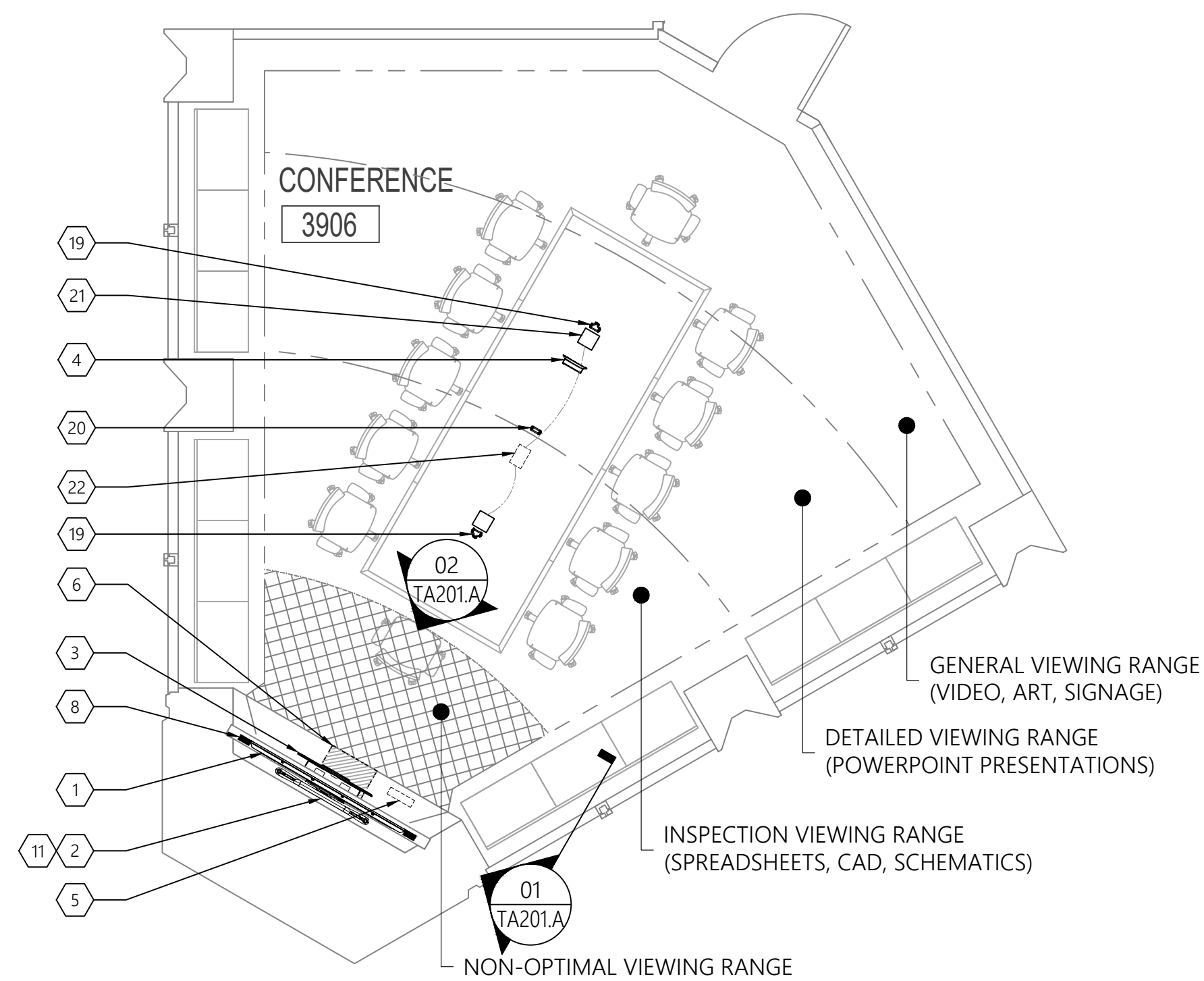
ROOM: 3906

AV SIGHTLINES & THERMAL MANAGEMENT

SHEET TITLE

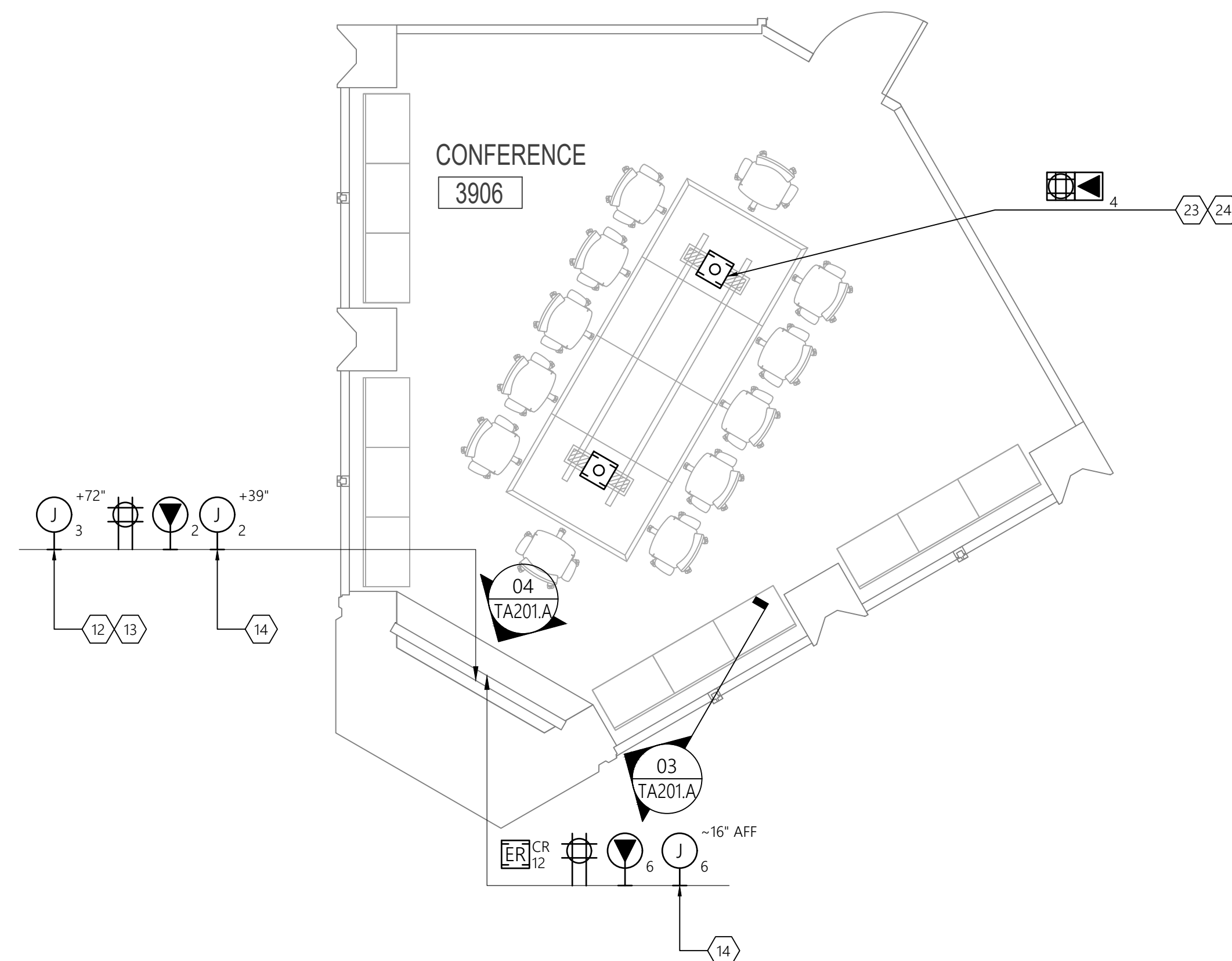
TA201.B

SHEET NUMBER:



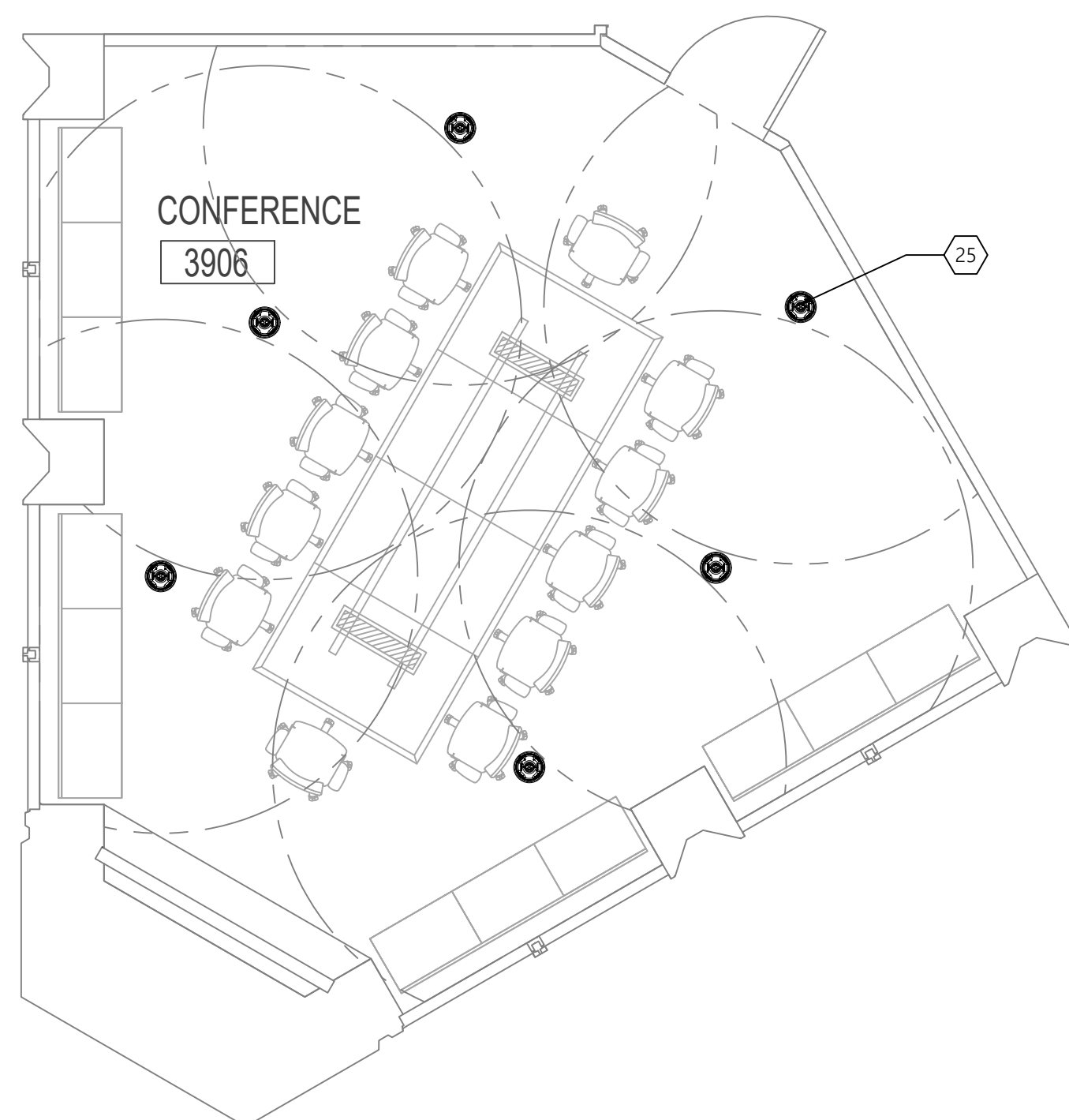
01 / AV EQUIPMENT LAYOUT - PLAN VIEW

PRESENTATION ROOM - RM 3906
Scale: 1/4" = 1'-0"



03 / AV ELECTRICAL LAYOUT - PLAN VIEW

PRESENTATION ROOM - RM 3906
Scale: 1/4" = 1'-0"

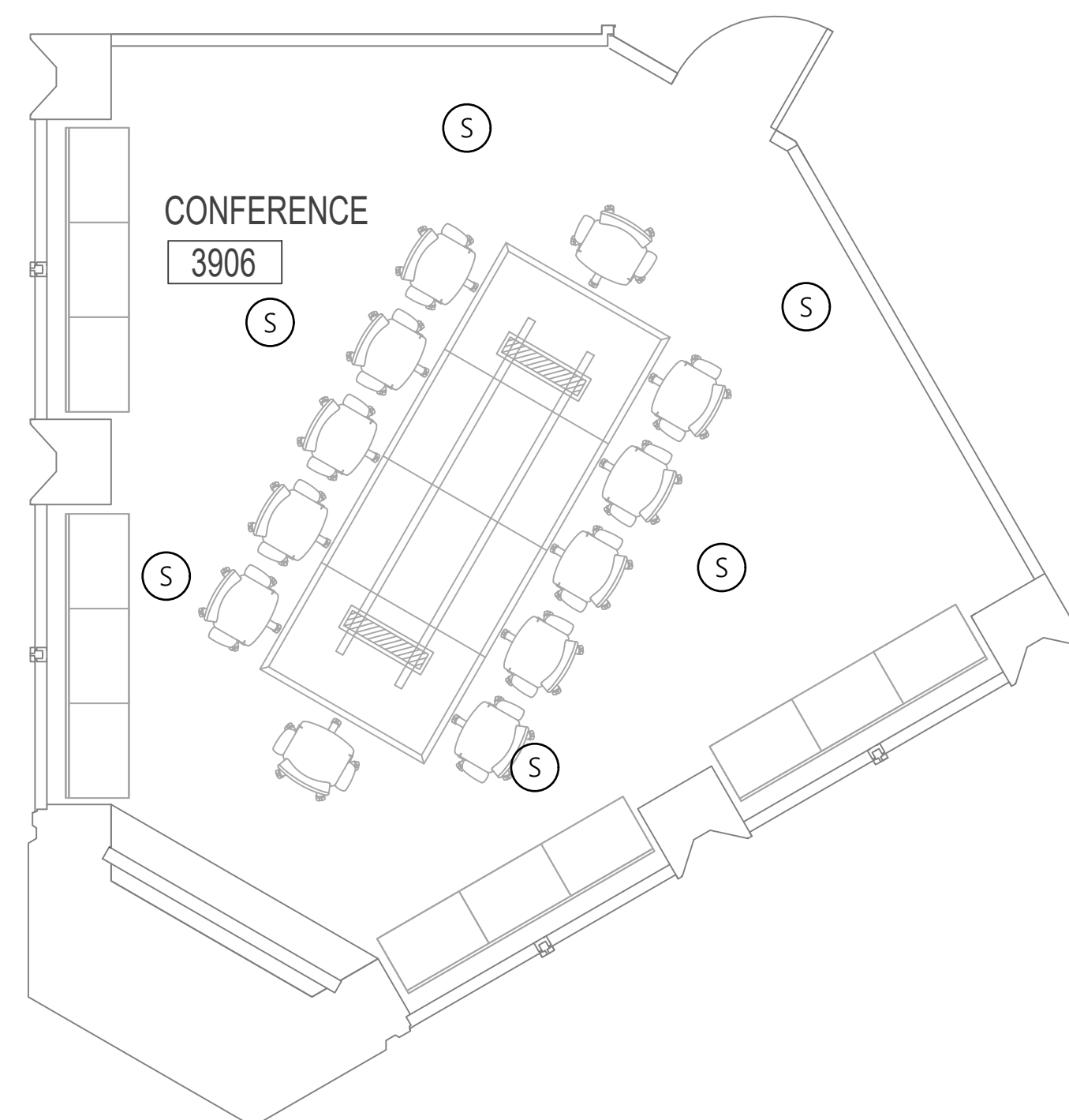


SPEAKER COVERAGE PATTERN BASED OFF OF:

- 8'-9" CEILING HEIGHT
- 48" LISTENER HEIGHT
- 110° CONICAL PATTERN FROM SPEAKER

03 / AV EQUIPMENT LAYOUT - RCP VIEW

PRESENTATION ROOM - RM 3906
Scale: 1/4" = 1'-0"



SPEAKER LOAD VALUES:

- EXPECTED LOAD OF 56Ω
- 90 TOTAL WATTS TAPPED
- 2x 60W CHANNELS BRIDGED FOR 120W TOTAL AMPLIFICATION.

04 / AV ELECTRICAL LAYOUT - RCP VIEW

PRESENTATION ROOM - RM 3906
Scale: 1/4" = 1'-0"

GENERAL NOTES

- A. ALL POWER, DATA TO BE PROVIDED BY OTHERS.
- B. VIDEO CONFERENCING LIGHTING SHOULD BE 55 FC AT 45° AND DIRECTED TO CAMERA.
- C. THE AV SYSTEM SHOULD RECEIVE A SINGLE PHASE FEED THAT IS PROPERLY GROUNDED.

SHEET KEYNOTES

1. SAMSUNG DM75E DISPLAY.
2. CHIEF PDRUB MOUNT.
3. CISCO SPEAKER TRACK 60.
4. CISCOS TOUCH 10 PRIMARY LOCATION.
5. CISCO TOUCH 10 ALTERNATE LOCATION.
6. MIDDLE ATLANTIC CFR 12-16 CREDENZA RACK.
7. EXISTING CREDENZA MAKE/MODEL TBD. REFERENCE ONLY. FIELD VERIFY EXACT DIMENSIONS.
8. LEON PrUT SPEAKERS. TYP. OF 2.
9. PASS THRU GROMMET FOR TOUCH PANEL REQUIRED.
10. OFE VDI TERMINAL.
11. GC TO PROVIDE PROPER BACKING TO SUPPORT DISPLAY WEIGHT.
12. 1-1/4" CONDUIT STUBBED TO ACCESSIBLE CEILING/SPACE.
13. 1-1/4" CONDUIT FROM RACK TO DISPLAY.
14. 1-1/4" CONDUIT FROM RACK TO SPEAKERTRACK SYSTEM.
15. GC TO PROVIDE PROPER BACKING TO SUPPORT SPEAKERTRACK 60 SYSTEM.
16. 3 GANG J-BOX FOR AV MOUNTED AT 72" AFF.
17. 2 GANG J-BOX FOR AV MOUNTED AT 39" AFF.
18. 6 GANG J-BOX FOR AV MOUNTED IN CREDENZA AT ~16" AFF.
19. CLOCK AUDIO CS3-RF TRI-ELEMENT MICROPHONE.
20. CLOCK AUDIO CS2-RF BI-ELEMENT MICROPHONE.
21. PASS-THRU FOR AV CABLES. LOCATION TBD. TYP. OF 2.
22. CRESTRON TRANSMITTER MOUNTED UNDER TABLE.
23. EXISTING CONDUIT POKE-THRU(S). FIELD VERIFY MAKE, MODEL & LOCATION(S). POWER AND DATA TO BE VERIFIED IN FIELD.
24. CONDUIT STUBS FOR POWER, DATA & AV TO BE LOCATED IN TABLE LEG(S).
25. EXISTING EXTRON SI 26CT 8" CEILING SPEAKER. TYP. OF 6.

[illegible]

ISSUED FOR:

PROJECT NO.:	XXXX
--------------	------

SCALE: 1/4"=1'

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: 39

ROOM:	3906
-------	------

AV LAYOUTS - PLANS & RCPS

SHEET TITLE

TA401

SHEET NUMBER:



955 E. Javelina Avenue
Mesa, Arizona 85204
T: 480.892.1071
F: 480.892.5295
www.L3AV.com

J. J. Morgan

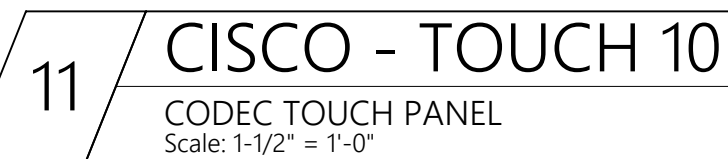
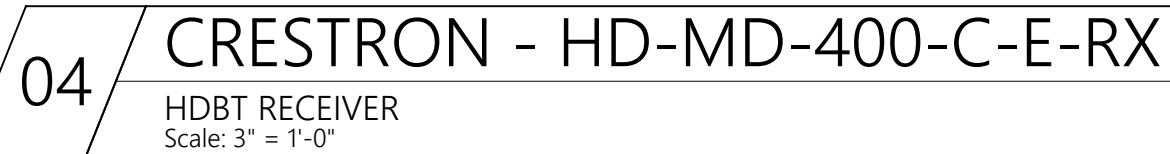
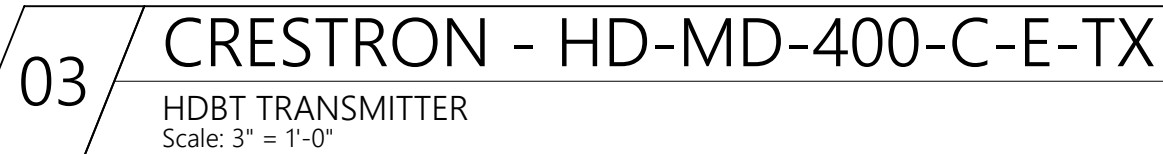
CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:



CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.:	XXXX
--------------	------

SCALE: N/A

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: 39

ROOM: 3906

AV EQUIPMENT & MOUNTING DETAILS

SHEET TITLE

TA501

SHEET NUMBER:



J. P. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.: XXXX

SCALE: 3"=1

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: 39

ROOM: 3906

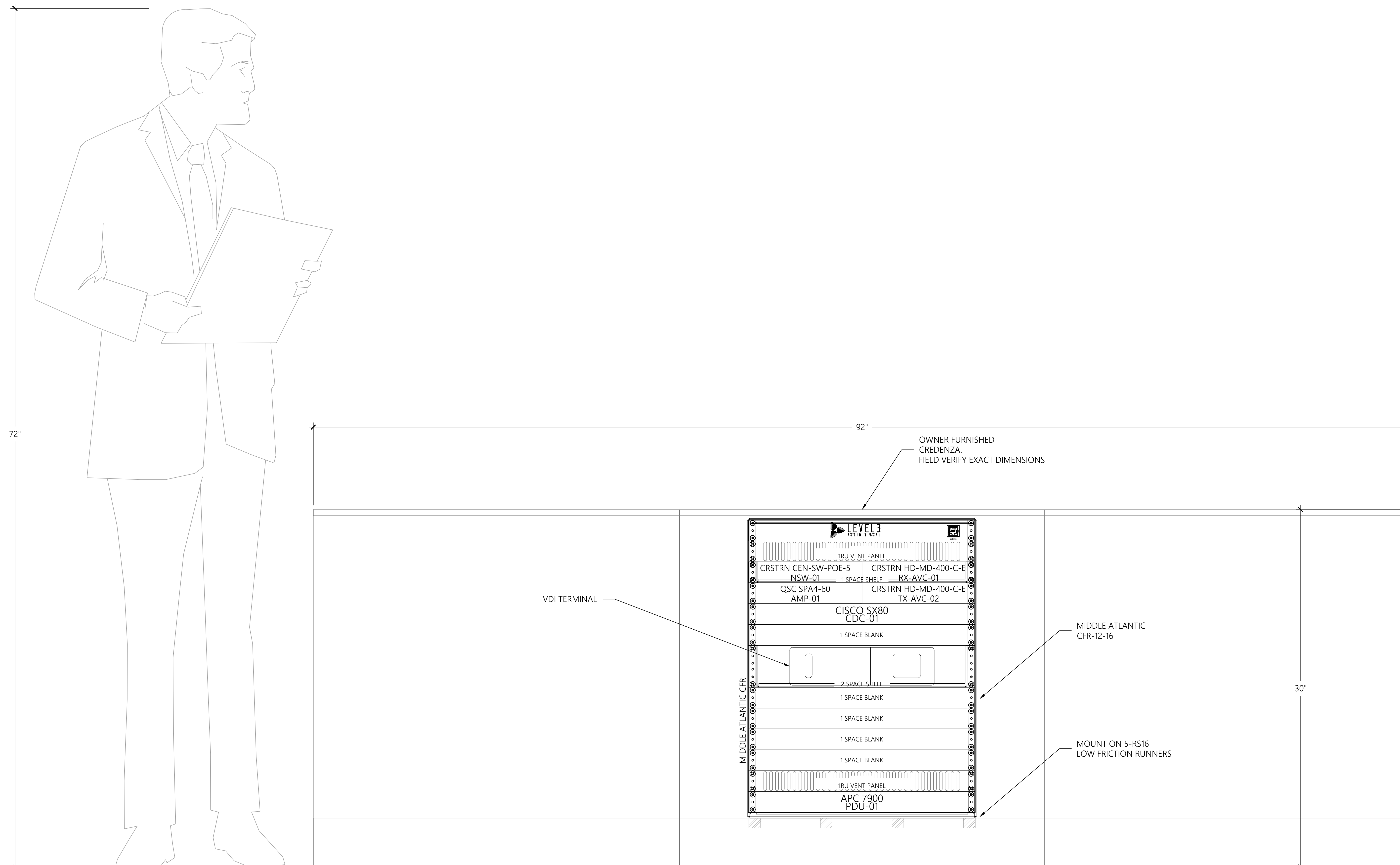
AV RACK ELEVATIONS

SHEET TITLE

TA701.A

SHEET NUMBER:

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01

AV EQUIPMENT RACK ELEVATION

PRESENTATION ROOM - RM 3906
Scale: 3" = 1'-0"

GENERAL NOTES

- A. ALL POWER, DATA TO BE PROVIDED BY OTHERS.
- B. THE AV SYSTEM SHOULD RECEIVE A SINGLE PHASE FEED THAT IS PROPERLY GROUNDED.



955 E. Javelina Avenue
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J. P. Morgan

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.: XXXX

SCALE: N/A

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: 39

ROOM: 3906

AV POWER & HEAT DISTRUBUTION

SHEET TITLE

TA701.B

SHEET NUMBER:

APC	7900	PDU-01	CONNECT TO 20A I5-20 RECEPTACLE
-----	------	--------	---------------------------------

	PLUG	MAKE	MODEL	SYS-ID	AMPS	WATTS	BTU	NOTES
1	5-15R	OFE	VDI TERMINAL	PC-01	5 A	600 W	2046 BTU	
2	5-15R	CRESTRON	CEN-SW-POE-5	NSW-01	.22 A	26 W	89 BTU	
3	5-15R	CRESTRON	HD-MD-400-C-E-TX	TX-AVC-02	.11 A	13 W	44 BTU	
4	5-15R	CRESTRON	HD-MD-400-C-E-RX	RX-AVC-01	.11 A	13 W	44 BTU	
5	5-15R	QSC	SPA4-60	AMP-01	2.08 A	250 W	853 BTU	
6	5-15R	CISCO	SX80	CDC-01	1.42 A	170 W	580 BTU	
7	5-15R				0 A	0 W	0 BTU	
8	5-15R				0 A	0 W	0 BTU	

TOTALS:	8.93 A	1072 W	3656 BTU
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TOTAL AMP LOAD:	8.93 A
CIRCUIT CAPACITY USED:	35.7%
TOTAL HEAT OUTPUT:	3656 BTU/hr

01

AV POWER & HEAT DISTRIBUTION

PRESENTATION ROOM - RM 3906

CLIENT:

PRESENTATION ROOM

PROJECT NAME:

2029 CENTURY PARK EAST
LOS ANGELES, CA
90067

SITE ADDRESS:

[illegible]

ISSUED FOR:

PROJECT NO.: XXXX

SCALE: N/A

DRAWN BY: J. SILL

APPROVED BY: J. PILZNER

BUILDING: PRIVATE BANK

FLOOR: 39

ROOM: 3906

EDID TABLE – SOURCES

SHEET TITLE

TA801.A

SHEET NUMBER:

EDID Plan	Presentation Room	SOURCES										
Date of Last Entry:			4/5/2017									
Data Entered by:			J. SILL									
Source	HDCP-Compliant	Connector Type	Presented EDID From:	Preferred Resolution	Aspect Ratio	Audio format requested/required	Additional Resolution supported?	Sink supports custom/adjustable EDID?	Sink supports Input Scaling?	Forced Resolution Option/Output Scaling Supported?	Format Conversion and Adapters Considered?	Notes
OFE LAPTOP	NO	HDMI	"HDbT TRANSMITTER - TX-AVC-01"	1280x720@60	16:9 OR 16:10	2.0	YES	Yes	NO	No	NA	
OFE VDI TERMINAL	UNKNOWN	DISPLAYPORT	SX80 CODEC - CDC-01	1280x720@60	16:9 OR 16:10	2.0	YES	YES	NO	YES	DISPLAYPORT TO DVI CABLE	
PRECISION 60 - CAM-01	NO	HDMI	SX80 CODEC - CDC-01	1920x1080@60	16:9	NA	NO	YES	NO	YES	NA	
PRECISION 60 - CAM-02	NO	HDMI	SX80 CODEC - CDC-01	1920x1080@60	16:9	NA	NO	YES	NO	YES	NA	
SX80 CODEC - CDC-01	NO	HDMI	"HDbT TRANSMITTER - TX-AVC-02"	1280x720@60	16:9	2.0	"Yes: 1920x1200@60 1920x1080@60 1600x1200@60 1280x720@60 1280x768@60 1280x800@60 1024x768@60 800x600@60 640x480@60 1080P @ 60 -SECONDARY 1080P @ 59.9 1080@30 720@60 720@59.9"	YES	NO	NO	NA	
HDbT RECEIVER - RX-AVC-01	YES	HDMI	SX80 CODEC - CDC-01	1280x720@60	16:9	2.0	"Yes: 1920x1200@60 1920x1080@60 1600x1200@60 1280x720@60 1280x768@60 1280x800@60 1024x768@60 800x600@60 640x480@60 1080P @ 60 -SECONDARY 1080P @ 59.9 1080@30 720@60 720@59.9"	YES	NO	YES	NA	
HDbT RECEIVER - RX-AVC-02	YES	HDMI	SAMSUNG DM75E - FPD-01	1080p@60	16:9	2.0	"Yes: 1920x1200@60 1920x1080@60 1600x1200@60 1280x720@60 1280x768@60 1280x800@60 1024x768@60 800x600@60 640x480@60 1080P @ 60 -SECONDARY 1080P @ 59.9 1080@30 720@60 720@59.9"	NO	NO	YES	NA	

01

EDID TABLE - SOURCES

PRESENTATION ROOM - RM 3906

