AUTODESK UNIVERSITY

AR15406

Revit: Your Drawing Management Marvel—Get a Grip on BIM Management Through the National CAD Standard

Ron Allen
AECOM BIM Manager/Revit Architecture & Design / Certified Revit Professional

Matthew Anderle
AECOM, BIM Director (B+P Americas)

Learning Objectives

- Learn how to leverage and manage through the NCS for file/folder organization
- Learn an archival process and management of CAD/BIM data useable with standard file folders
- Discover View Types and the NCS for view/level/template organization
- Learn how to export and manage content to 2D CAD

(*This document Revision 1.)

Description

This is an effective, structured management system based on the National CAD Standard (NCS) Uniform Drawing System (UDS). This management system emphasizes for Revit software and overlaps AutoCAD software, managing anything from simple distributed model setups (each discipline in a file) to fully integrated (all-in-one) models on A360 Collaboration for Revit cloud service. It is commonly part of the organizational section of a Building Information Modeling (BIM) execution plan. This approach limits added parameters to the Revit software models, and it compartmentalizes liability to each discipline in a way that minimizes confusion and enables each discipline to more directly and fully manage their own content. This session features Revit and A360. AIA Approved

Your AU Expert(s)

Ron Allen

Ron Allen is an Arc IV/ BIM Manager with AECOM through the B+P (Buildings and Places) in the Greenwood/Denver Office.

Ron's career has been constantly evolving and refining process and production with emerging technologies. Beginning with BASIC programming and electronics as a hobby in 1984, the pursuit of technology and its uses turned to formal study at Mississippi State University. At MSU he integrated several aspects of his education which included Computer science (UNIX on VAX systems and SCI Indigo systems, programming ANSI C, PASCAL, COBOL), and Art which included Wave front 3D animation and modeling, Alias, Alias Up Front, Matador and video

production, B&W Photography & music. The most prominent education was Architectural studies, it was then he began using Soft Desk (AutoCAD Architecture's predecessor) and AutoCAD. By 1998 he had Bachelors in Architecture with undeclared minors in Art and Computer Science.

His professional career started in Architecture in 1998. In 2006 he started using Revit which changed everything. Since 2006 he has worked production and BIM management on several projects across many Architectural Business lines from interiors, through residential, production housing, commercial, low/mid/high rise, hospitality, medical, military, industrial, themed, and transit.

In his current position at AECOM and an Arc IV/BIM Manager he is continuing the integration and exploration of new and useful technologies including Databases, LIDAR, UAVs, Photogrammetry, IOT, Electronics, VR, AR, Model manager, Model compare, the A360 Suite including Autodesk Navis, C4R, BIM 360 Glue, Docs.

Matthew Anderle

Matthew Anderle is the Building Information Modeling (BIM) director for the Buildings+Places business line of AECOM, with focus on the Americas. He is a BIM and technology evangelist with over 16 years of experience establishing global BIM workflows and standards around content, training, interoperability, and BIM consultation as a service. His experience spans over multiple market sectors with emphasis on large healthcare facilities, data centers, aviation, government projects, and residential. Anderle serves AECOM as a leader in the advanced and efficient implementation of BIM processes for a variety of project types. He manages and directs large project teams on interoffice BIM collaboration workflows, enabling continental offices to work as one entity.

File / folder structure & data flow management

This is a modular system used throughout the file/sheet/view naming in Revit to manage data established At the beginning of each project. File Naming conventions typically follow the National Cad Standards 4.0 nomenclature.

Base Files

- Once set Avoid renaming on central locations on file servers.
- C4R (Collaboration for Revit) simplifies this process and allows renaming on C4R without penalty.
- These are the files in the folder organized by project number, phase (if used), discipline, and type and User identifiers.

TABLE 1 BASE FILES NAMING CONVENTIONS

						"BASE" file naming (Holds plans and annotations) [0-20 CHAR PROJ CODE]
						(opt)(if used add dash) 3 digit phase or building or sub context identifier
						(use dash)2 digit discipline code
						2 digit (FILE) TYPE
						Level or User Defined ID
						File extension- (DWG, RVT, SKP, DGN, etc.)
9999999	-XXX	-AE	3D	01	.DWG	

These are reiterated in the VIEW NAMING CONVENTIONS document in Revit as well as the AEC NCS CAD STANDARD_ERDC-ITL-TR-09-2

Sheet Files

TABLE 2 SHEET FILES NAMING CONVENTION

						0-20 CHAR PROJ CODE- (set.generated at export)
						(opt)(if used add dash) 3 digit phase or building or sub context identifier
						2 digit discipline code
						SHEET NUMBER
						(opt) USER DEFINED
						File extension- (DWG, RVT, SKP, DGN, etc.)
9999999	**-XXX**	**-AE**	**101**	**-2015-06-16**	**.DWG**	**"SHEET" file naming (Holds plans and annotations)**

maintaining Current and previous versions

Current files are kept in the top-level folder. These are 'live' files and are constantly updated. Snapshots are saved in RECORD subfolders with yyyy-mm-dd-hhmmap style dated folders as 'snapshots' along with other snapshots kept for Navis/Glue/etc.

TABLE 3 PROCESS FOR MAINTAINING CURRENT AND PREVIOUS VERSIONS

P:\<12345678>\ ↙12345678Project						Job Folder
	7.0\ ↙7.0_CAD_GIS shortcut					CAD Subfolder
		08-00-A \ ↙08-00-A - ARCHITECTURE PROJECT MODELING	(*from (*from NCS MATRIX) **Active LIVE files here**)			DISCIPLINE SUB-FOLDER *NCS SEQUENCE
			RECORD \	(** No files this folder**)		RECORD Subfolder
				YYYY-MM-DD-HHMMa-DESCR\ "2015-06-16-1751p-DESCRIPTION"\	Subfolders of files	Dated + Noted Subfolders
					A-FP-01-DWG A-101a.DWG AE101-SHEET.PDF	Example Files

- USE ONLY "A-Z" and "0-9" and "-" in file/folder names- no spaces! "↙" symbol indicates shortcut to folder with HUMAN names on the server to shorten file-path-lengths, no spaces, only dashes.
- Simplified version assuming base disciplines only:
- Each abbreviated folder (e.g. 08-00A) has a corresponding long-name shortcut (e.g. 08-00A- Architectural General) which prevents file path issues. Additional shortcuts named differently to the same folder without affecting file path or adding any noticeable file size to the project as a whole.

PROCESS for maintaining Current and previous versions (ABBREVIATED FOLDER STRUCTURE- local server side)

TABLE 4 PROCESS FOR MAINTAINING CURRENT AND PREVIOUS VERSION IN PROPOSED ABBREVIATED FOLDER STRUCTURE:

P:\<12345678 >\ ↙12345678Project					Job Folder
	08-00-A-ADMN \ ↙08-00-ADMNistration ARCHITECTURE 08-00-A \ ↙08-00-A PROJECT MODELING ARCHITECTURE	(*from NCS Matrix) **Active LIVE files here** Architectural MODELING folder			Special Administration subfolder NCS MATRIX) DISCIPLINE SUB-FOLDER NCS MATRIX)
		RECORD \		No files this folder	RECORD Subfolder
	ǂ 08-01-AS\ ǂ ↙08-01-AS-ARCH SITE SUBFOLDER	ǂ 08-01-AS\ ǂ ↙08-01-AS-ARCH SITE SUBFOLDER	YYYY-MM-DD-HHMMa-DESCR\ "2015-06-16-1751p-DESCRIPTION"\	Subfolders of files	Dated + Noted Subfolders
				A-FP-01-DWG A-101a.DWG AE101-SHEET.PDF	Example Files
	ǂ FOLDER/SHORTCUT CAN BE AT TOP LEVEL OR TUCKED UNDER				

- ǂ folder/shortcut can be at top level (preferred) or 'tucked-under' the major discipline group if the top-level folders are becoming excessive. Typically separated by managing-discipline by company/location. (e.g. if architects in one location are managing the site plan and Architects in another group are managing the building these would go in separate top-levels folders. If one architect was managing them both the 08-01-AS typically under the 08-00-A folder.
- USE ONLY "A-Z" and "0-9" and "-" in file/folder names- no spaces! "↙" symbol indicates shortcut to folder with HUMAN names on the server to shorten file-path-lengths, no spaces, only dashes.
- Simplified version assuming base disciplines only: Each abbreviated folder (e.g. 08-00A) has a corresponding long-name shortcut (e.g. 08-00-A- Architectural General) which prevents file path issues. Additional shortcuts named differently to the same folder without affecting file path or adding any noticeable file size to the project as a whole.
- Modeling and Management folders: 08-00-A for project modeling (CAD, Revit, Sketchup, "Live" files required for discipline's model/CAD) and 08-00-A-ADMN for project management (Proposals, contracts, email history, etc.)
- Folder structure in conjunction with corresponding (segregated discipline approach) to models allows for relative paths to fixed-path (relative and absolute)

An archival process for management of CAD/BIM data

RECEIVING new files (for each discipline folder)

- The RECORD acts as a transmission record.
- Files are placed in the subfolder corresponding to the discipline.
- Upon receiving new files place the ***unzipped*** files in the \RECORD subfolder in an YYYY-MM-DD [] subfolder based on the date and time files were made available (e.g. If sitting on FTP or mail site this is the day they were **posted/accessible** to download NOT the date of the download.)
- Include any emails, notifications or texts in the folder as a \RECORD .

- Make the directory and subfolders READ ONLY.
- Replace the files under the DISCIPLINE level with the updated files and inform Teammates of updated files.

Uploading Files for transmittal (in YOUR discipline folder)

- Upon TRANSMITTING updated files place the (zipped) files in a subfolder under \RECORD dated with the current date and time files were made available(If sitting on FTP or mail site this is the day they were posted NOT uploaded)
- Include any emails, notifications or texts in the folder as a \RECORD
- Make the directory and subfolders READ ONLY.
- Files in the discipline folder continue to develop without changing names - xref paths are unaffected.
- Upload files and transmittals as needed to inform all team members of availability.

Uploading Files for *GROUP* MILESTONE/DELIVERY/SNAPSHOT (in A DATED-NAMED FOLDER)

- Transmittals for ***an entire or group*** project delivery (e.g. milestones, snap-shots, deliverables) are deposited as files (not ZIPS) in dated folders under the "2nd tier" AECOM folders (e.g.):
  - 7.0_CAD_GIS\ [yyyy-mm-dd-hhmmap-description]
  - 8-0-Design\8.07-PDF\[yyyy-mm-dd-hhmmap-description]
- As dated folders and descriptions [yyyy-mm-dd-hhmmap-description-destination].
- Once created add any transmittals or other information.
- (ZIP) and upload contents to file share site, BlueBeam Studio session, etc.
- Send email TO: intended recipients and CC: team members that files are delivered.
- Include any emails, notifications of upload/transmittal, additional notifications or texts in the folder as a \RECORD
- Make the directory and subfolders READ ONLY.
- Files in the discipline folder continue to develop without changing names - xref paths are unaffected.

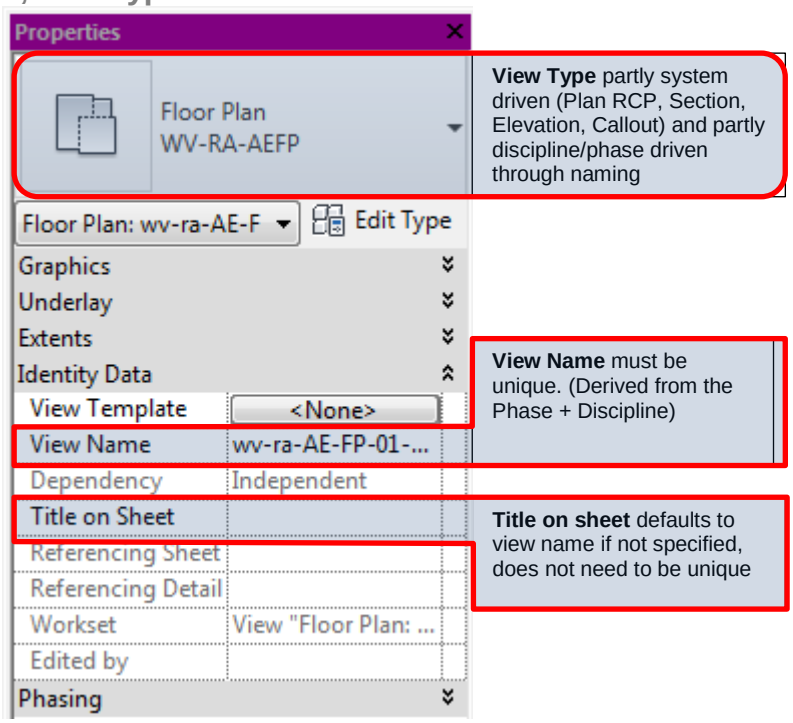
Note ALL FILES ARE STORED IN DATED SUBFOLDERS BY THE DATE THEY WERE MADE AVAILABLE- NOT THE DATE OF UP/DOWNLOAD. This is for legal reasons for part of an official \RECORD . For dates when multiple files come in use "YYYY-MM-DD-HHMMa/p" format where HH is 24-hour clock style and a/p is redundant but used. Use **dashes only to group digits.

NCS for view/level/template organization

View Templates, working views, view types

VIEW TYPES - are identified by the system and other parameters which are useful for filtering. These typically include PLANS, SECTIONS, ELEVATIONS, INTERIOR ELEVATIONS, CALLOUT, DETAIL VIEWS, etc. These are augmented to separate view types for organization further by specifying discipline information and phasing. View types must be uniquely named.

VIEW NAMES - are used by Revit as references for callouts and must be unique. In phasing there may be several views of the same area from different disciplines. For each discipline * Phase there must be a unique ID.



Title on sheet is what appears in the view title beneath the view (e.g. "PLAN"). If no title is set, it defaults to the View Name.

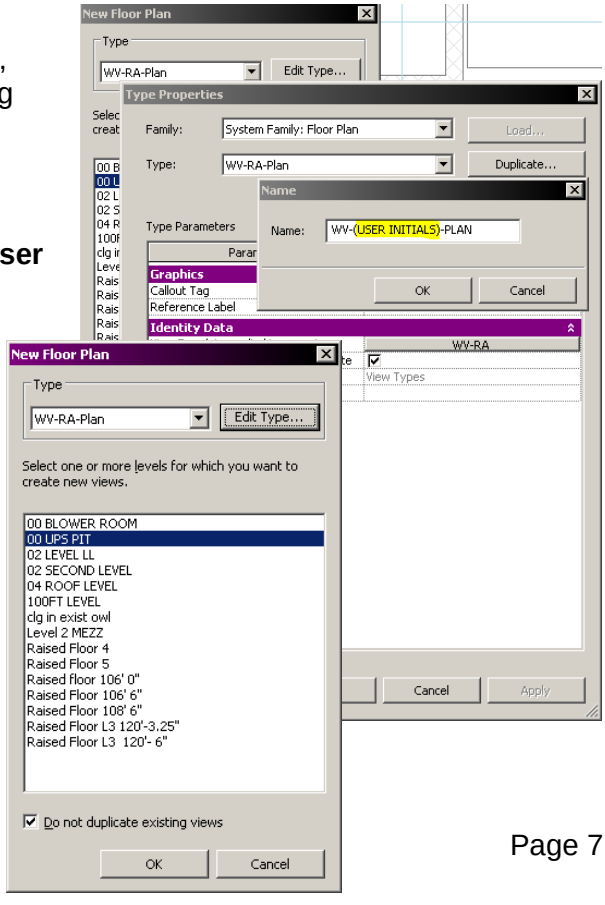
creating view_types

View types are partly system driven (plan, section, elevation, callout) but are also useful for identifying and filtering other disciplines, working views[WV-XX](-USER FLOOR PLAN), phases, etc.

Working View_Type Example

Before creating a unique user view to work in, a **user *view type*** should be created:

- Go to the /view\ tab and select a type- this example use the PLAN view type to start creating a new view.
- Select the [Edit Type…] Button →
- Duplicate an existing type
- Prefix the new type with: WV-(User initials)-(Match view-type name: e.g. AEFP) to create "WV-RA-AEFP"
- Click OK
- ←Only the views the user has NOT created will be visible.

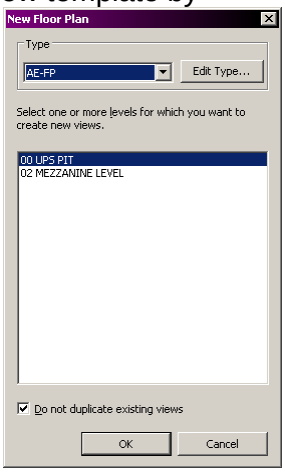


- These views can be grouped and filtered per user for working views.

Discipline views follow this same modular recipe- except they use the discipline code from the NCS MATRIX (e.g. "AEFP" for arch floor plans.)

Creating views from view types example

View type "AE-FP" creates "AE-FPxx" named views, applying an AE-FP View template by default.



- To create a new General architectural floor plan- start with /View\[create]>Plan View>Floor Plan
- In the type select AE-FP
- [X] Do not duplicate views (Is Checked)
- Select a view. Note: If a level is not in the list then a view of that type has already been created. If you need a duplicate or a new view associated with that level- either duplicate an existing view, or uncheck []do not duplicate existing views and create a new view
- **Rename the view to match the standard** (e.g. "OWL-AE-FP00-UPS PIT" * Must be unique) and add an appropriate View Title (e.g. "FLOOR PLAN")

View Naming - (TYPICALLY has corresponding view template with the first four to ten characters the same same)

Examples:

View Name (Unique)	View Title	View Type	View Template
AEFP01	PLAN FIRST	AEFP	AEFP
ADFP01	PLAN DEMO FIRST	ADFP	ADFP
WV-RA-AEFP01	(N/A)	WV-RA-AEFP	AEFP *to start or* WV-RA-AEFP
AESC-001	SECTION 001	AESC	AESC
KEY.[key schedule name/id*]	KEY.[key schedule name/id*]	KEY*	KEY*
001-ADFP01-048XP-DEMO	FLOOR PLAN FIST DEMO	ADFP	ADFP

*Key schedules are special as they drive other schedule information and do not typically appear on sheets.

This coincides with the name used for exporting the view to CAD or Micro station or other formats and coincides with the NCS format. Typically 2 to 4 characters max for organization and groupings; Here is the breakdown:

	(OPTIONAL) WORK PHASE - Only for multiple packages in model. E.g. Office building tenant fit outs, MCAs) see APPENDIX CONSTRUCTION PACKAGES / CONCURRENT CONSTRUCTION / PHASING	
Discipline	**Description (*SHORT LIST, see index for more complete listing)**	
G-	G General All or any portion of subjects included in Level 2	
H-	H Hazardous Materials All or any portion of subjects included in Level 2	
V-	V Survey/Mapping All or any portion of subjects included in Level 2	
S-	S Structural All or any portion of subjects included in Level 2	
SD	SD Structural Demolition Protection and removal	
SS	SS Structural Site	
SB	SB Structural Substructure Foundations, piers, slabs, and retaining walls	
SF	SF Structural Framing Floors and roofs	
SJ	<OPEN-User Defined>	
SK	SK Structural Calculations(To be retained- not necessarily for sheets)	
A-	A Architectural All or any portion of subjects included in Level 2	
AE	AE Architectural Elements General Architectural	
AD	AD Architectural Demolition Protection and removal	
Q-	Q Equipment All or any portion of subjects included in Level 2	
F-	F Fire Protection All or any portion of subjects included in Level 2	
FA	FA Fire Detection and Alarm	
FX	FX Active Fire Suppression (SPRINKLERS) Fire extinguishing systems and equipment	
P-	P Plumbing All or any portion of subjects included in Level 2	
PD	PD Plumbing Demolition Protection, termination, and removal.	
M-	M Mechanical All or any portion of subjects included in Level 2	
MS	MS Mechanical Site Utility tunnels and piping between facilities	
MD	MD Mechanical Demolition Protection, termination, and removal	
MH	MH Mechanical HVAC Ductwork, air devices, and equipment	
MP	MP Mechanical Piping Chilled and heating water, steam	
MI	MI Mechanical Instrumentation and controls	
E-	E Electrical All or any portion of subjects included in Level 2	
ES	ES Electrical Site Utility tunnels, site lighting	
ED	ED Electrical Demolition Protection, termination, and removal	
EP	EP Electrical Power	
EL	EL Electrical Lighting	
EI	EI Electrical Instrumentation Controls, relays, instrumentation, and measurement devices.	
ET	ET Electrical Telecommunications Telephone, network, voice and data cables	
EY	EY Electrical Auxiliary Systems Alarms, nurse call, security, CCTV, PA, music, clock, and program	
XV(xx)-(ud)	Working View PREFIX- per user (never placed on sheets) -W-(2 or 3 character initials)-(user defined)	
ID	**2- character view type reflects view type**	**Description**
*	Indicates a "master" or "Starter" template	*Non-NCS/Extended
3D	Isometric/3D	
CP	CEILING PLAN	*Non-NCS/Extended
DG	Diagrams	
DP	DEMOLITION PLAN	
DT	Detail	
LG	LEGEND	*Non-NCS/Extended based on Revit view types
EL	Elevation	
~~EP (X)~~	~~Enlarged Plan (Opt.Scale e.g. 048x=1/4"/ft or 016x=3/4"/ft)~~	~~*Non-NCS/Extended (Forgoe if using/specifying scale factors in opt.3)~~
FP	Floor Plan	
RP	ROOF PLAN	*Non-NCS/Extended
QP	Equipment Plan	
SC	Section	
SH	Schedules	
SP	Site Plan	
~~XP~~	~~Existing Plan~~	NCS (Not use) - use phasing instead
	(Use two digit floor reference.)	
	Extended VIEW TYPE MODIFIER (Not normally used):*Non-NCS/Extended- (4 characters)	
	-ADMN	Add –ADMN- for administrative versions of the views
	-REF-	Added –REFerence for views to be kept in set, but are not intended for
	-{other}	Other designators like GRID for gridline, or PROF for profile, etc.
	Optional Scale: 3 digit zero padded scale factor followed by XP(scale factor=plotted units/scale units e.g. 1/4"ft=48xp)	
	Optional Phase; E. G. -DEMO, -NEWW; May be redundant with 2-digit discipline (AD-(DEMO)) NOT INCLUDING a PHASE *explicitly* excludes the use of phasing from the view	
XXX-AE (FP) (00) () (-000XP) (-Phase)		

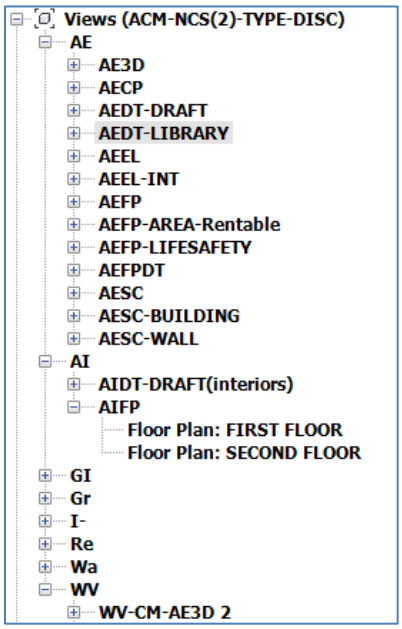
Templates (e.g. WV-(User ID)) are created and associated with the view types for color coding or filtering each new view.Working Views WV-(users initials)

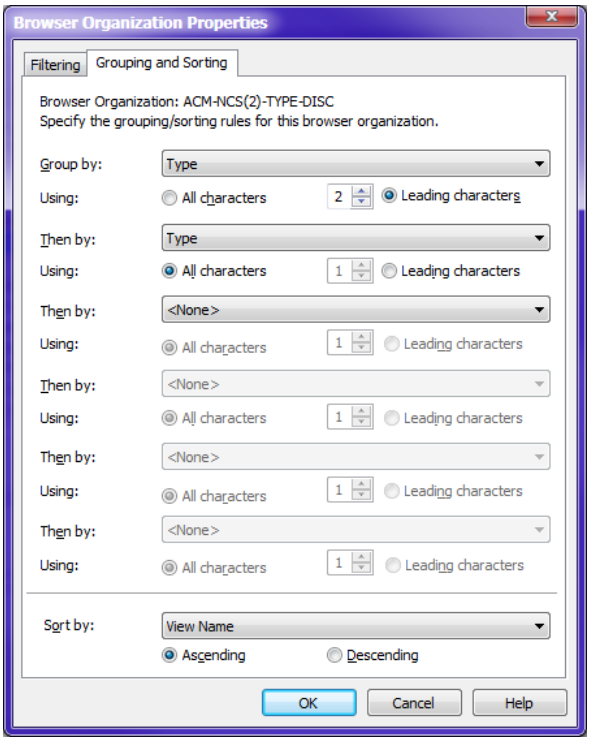
- WV-RA-AEFP =Working View- Ron Allen Architectural Floor plan. Working view names are prefixed with WV-(USERS INITIALS)-(User identification)
- WV for Working View
- (User initials) - preferably 2 character initials, 3 acceptable
- (User identification) - remaining text for the user to identify the view- ***typically a copy of a plan view or the default view-name*** prefixed with WV-(INITIALS)-[Original generated name]
- **WV's should *NEVER* be placed on sheets** (without changing the view type and renaming from WV-RA-AE-FP to "AE-FP")
- **Please do not use other users working views or templates!**; you may duplicate with detailing but rename and re-associate it with the correct view type and rename it after copying.
- WV's prevent users from clashing and working in the same views which cause ownership issues in workshare files ("XYZ user has ownership of element")
- WV's can also have WV-(XX)- Templates associated with them as well. (e.g. "WV-RA-AEFP")

To make disseminating information user-centric the default view type (plans, sections, elevations, sections, etc.), each user has their corresponding view types which are duplicated properties of existing types from the template. See below for examples.

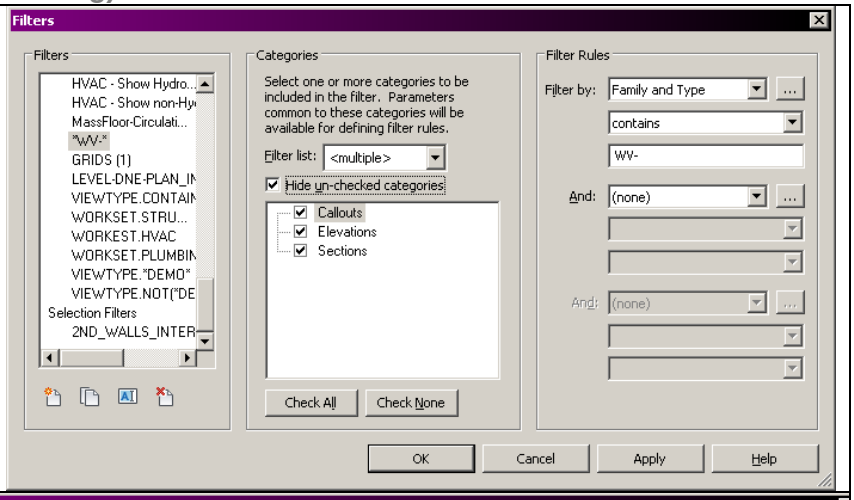
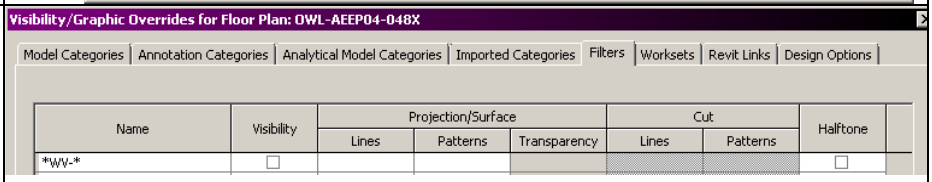
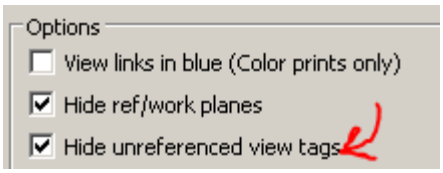
Browser Organization

Browser organization based on type so the view types stack corresponding to their letters in the project browser. Leaving the index numbers off makes this shorter and more universal.





Filtering out views (working, Drafting)

Working views can be isolated using a filter. The filter looks something like this:	
By adding a filter to a view, properties/ Filters and unchecking the visibility for the filter:	
Working views can be hidden from views on sheets. This is controlled from the Print>settings [Setup …]> Options where [+]Hide unreferenced view tags is checked in the properties. NOTE: Views not placed on sheets should not print, by default.	

view hierarchy established to filter out unwanted views/scales from larger scale views

Color fills represent annotation types shown on corresponding plans. Cross discipline annotations filtered out and shown on corresponding discipline views only (e.g. AE views show AE annotations, AD views show AD annotations, QM views show QM annotations.

Plan type / General comments	Site/OVERALL 1/40" OR LARGER (Civil reference) (Generally 1/40" or 1/20" and larger)	Building/ Arch Site & OVERALL 1/16", 1/20", 1/32", 1/40", 1/60", 1/64"	Partial (DEPENDENT/SHARED VIEWS) 1/8"-1/4" Overall massing dims, annotations not in callouts	Enlarged 1/4", 1/2" 3/4" Dims to grids, doors, windows, features(framing), annotations for doors, windows, callouts	Detail 1" TO 12"=1/FT	Detail Callout/ Link to generic drafting view (Use annotation tool and select view to point to)
PLAN.SITE.OVERALL	**SP-					
PLAN.SITE.CALLOUTS Site plan callouts to specific buildings, features, etc	**SP-EL					
PLAN.SITTE (LOCAL BUILDING)) (Overall building reference plan, typically roof plan or plans by levels + mezzanines)		ASSP-				
PLAN.OVERALL plans (1/32"-1/16")		AEFP-	AEFP-*-0000xp For export of intact view (parent)			
ELEVATION.OVERALL(exterior) elevations		AEEL-	AEEL-*-0000xp For export of intact view (parent)			
SECTION.OVERALL (end to end or edge to edge and top to bottom of entire building)		AESC-	AESC-*-0000xp For export of intact view (parent)			
Enlarged(partial)plans			AEFP-*-0000xp			
SECTIONS.WALL (SPECIAL PARTIALS- immadiate wall context, interior always to the LEFT!, annos to the right!)		On overalls OR Partials OR Both	On on overalls OR Partials OR Both	AESC-DT-WALL-*-0000xp		
ELEVATION.INTERIOR (INTERIOR ELEVATIONS)(Limit floor to floor, wall to wall i.e. room)			Only in callouts if available (Change hide at scales coarser than if in a callout - from that callout-matching callout scale.)	AEEL-INTR-*-0000xp		
ELEVATION.INTERIOR (INTERIOR ELEVATIONS)(Limit floor to floor, wall to wall i.e. room)				INEL-INTR-*-0000xp		
PLAN CALLOUTS(Enlarged) callouts / sections) 1/4",1/2",3/4"			Typically only called out from partials	AEFP-DT-*-0000xp	AEFP-DT-*-0000xp	
SECTION.PARTIAL Partial Sections, entire vertical building sections, but not the entire longitudinal or latitudinal extent of the building			Typically only called out from partials	AEDT-SC-*-0000xp	AESC-DT-*-0000xp	
Details/CALLOUTS(1"=1'-0" or finer detail) (reference to generic)						AEDT-FP plan AEDT-CP ceiling plan AEDT-SC section

Sheet Organization (3 or more disciplines) using refined plan types and designators

Two Digit Sheet sequence Designators for typical plan types (preferred)

Table 5 Sheet numbering and designators

					Optional-for Construction prefix for buildings with multiple packages or phased releases within the same project/structure. See "construction descriptors" for this project.
					Two Digit discipline designator; e.g. AE, G-, GI -- use "Discipline Designators" master list
					2-digit SHEET TYPE DESIGNATOR / **TYPICAL SINGLE DIGIT PLAN TYPES DESIGNATOR DESCRIPTION (e.g. AE11x)**
					00 General (symbols legend, notes, etc.)
					10 Plans (horizontal views)
					15 REFLECTED CEILING PLANS
					18 ROOF PLANS
					20 Elevations (vertical views)
					30 Sections (building sections)
					31 wall sections
					32 wall sections
					40 Enlarged plans
					41 Large-Scale Views (plans, elevations, stair sections, or sections that are not details)
					46 Enlarged interior elevations (Specialized corridors, entry/reception/etc.)
					48 Enlarged interior elevations (Specialized corridors, entry/reception/etc.)
					50 Details
					60 Schedules and Diagrams
					61 door schedules
					62 WINDOW, DOOR TYPES, STOREFRONT, CURTAIN WALL, HOLLOW METAL DETAILS
					70 wall partition sheets
					80 User Defined (for types that do not fall in other categories)
					90 3D Representations (isometrics, perspectives, photographs)
					Floor level #(where applicable), or **sequential number**. (note use Two or three digits for large multistory projects >9 floors)
					Subdivided view identifier ("match line" views) where applicable to split (parent/dependent views). **Note:** Subdivided plans typically indicated with the addition of a trailing letter or Dot and letter, e.g. "AE100A, AE100B, AE100C" or "AE100.A, AE100.B, AE100.C"
XXX-	**AE**	**10**	**0**	**A**	**Sheet Number "XXX-AE-100A"**

Sheet Naming step by step example

*Table 6 - Organizing steps for sheet numbering WITH CONSTRUCTION PACKAGES(**Sheet numbers MUST be unique in a project)*

Step#	Description	Step#
1	Find 2-digit discipline prefix in the (TABLE 7 US NCS4.0/APPENDIX A UDS-01-29 APX.A - DISCIPLINE DESIGNATORS) that corresponds to the sheet in the table; Use the information for the Next Steps:	1
2	From the table- Copy the value from the **PROJ.SHEET.NCS_REF** column into the **PROJ.SHEET.NCS_REF** shared parameter value from sheet.	2
3	From the Table- Copy the value from the **PROJ.SHEET.NCS_DISCIPLINE column into the PROJ.SHEET.NCS_DISCIPLINE** shared parameter value from sheet	3
4(opt)	Add construction prefix (If applicable of multiple construction packages in the same model)	4(opt)
5	Set the first TWO characters of the SHEET NUMBER to "SHEET PREFIX" value from [INDEX SEQUENCE]	5
6	Set the next character in the SHEET NUMBER from the PLAN TYPE from the [PLAN TYPE] sheet e.g.. 01-09 = Plans e.g.. 50-59 = RCPs	6
7	Add sequence to number, following architectural sequence *5th digit indicates floor/level in plan/RCP orientations	7
8	Indicate enlarged region if part of a match line drawing set for enlarged (break line) plans either a letter A-Z OR a dot and a number-**	8

Note: Subdivided plans typically indicated with the addition of a trailing letter or Dot and letter, e.g. "AE100A, AE100B, AE100C" or "AE100-A, AE100-B, AE100-C" for clarity of dependent/'continued' views.

Appendix Construction Packages / CONCURRENT construction / phasing

Construction packages act as a prefix to organize entire sets of drawings. Each construction package is given a prefix to segregate and organize the package. This prefix becomes a part of the sheet title and view naming for organizing and export.

E.G. "OWL-" "BCN-" 01-" etc.

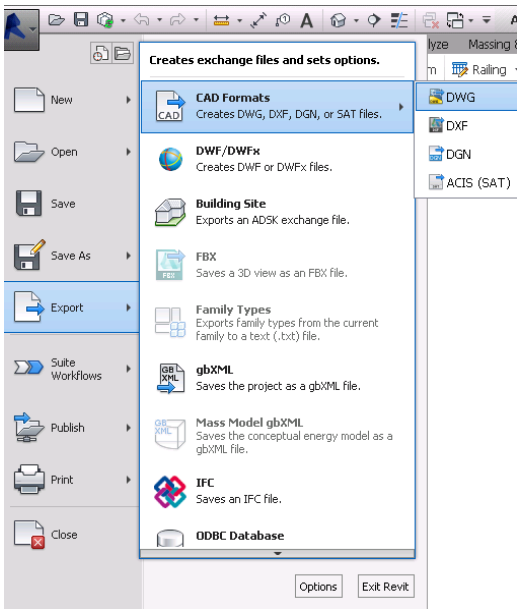
Construction packages are useful for buildings sharing multiple build outs or phases in a project. This is useful when a client owns a commercial property where tenants are renovating and demolishing interior walls in a large building- instead of duplicating and cross referencing the building among multiple tenant build outs, each build out is referenced and linked from a master set of drawings or a master model which houses the construction and phasing for the entire property. Phasing determines and maintains the order.

Similarly a building with multiple phases and build outs can be treated the same way (the CBS HVAC upgrade project as an example).

Or a project with isolated packages can be broken out into zones and linked models to isolate components from one another. Phases can be linked into a master phasing setup and sheets isolated to individual models which reference the master model.

Learn how to export and manage content to 2D CAD

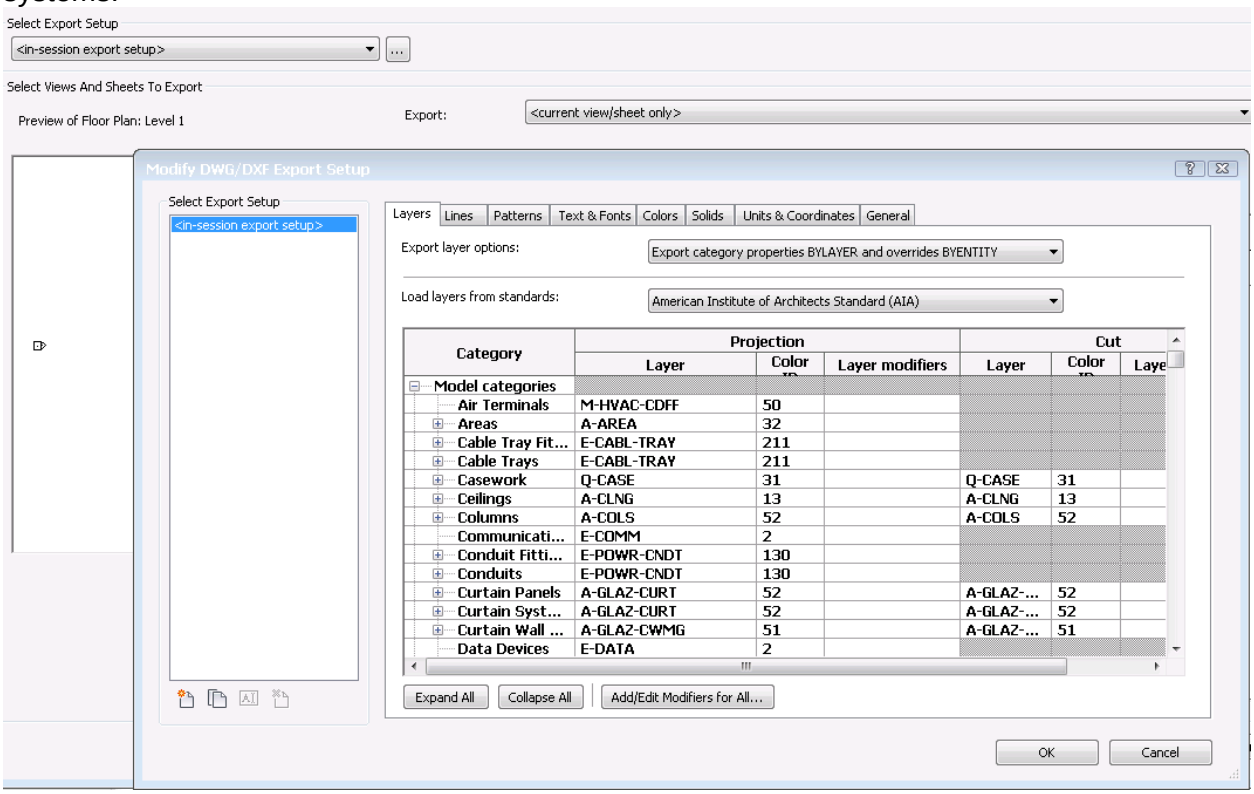
Using the methods for view naming listed; the export is made easy as Revit has set up an AIA default export for use.



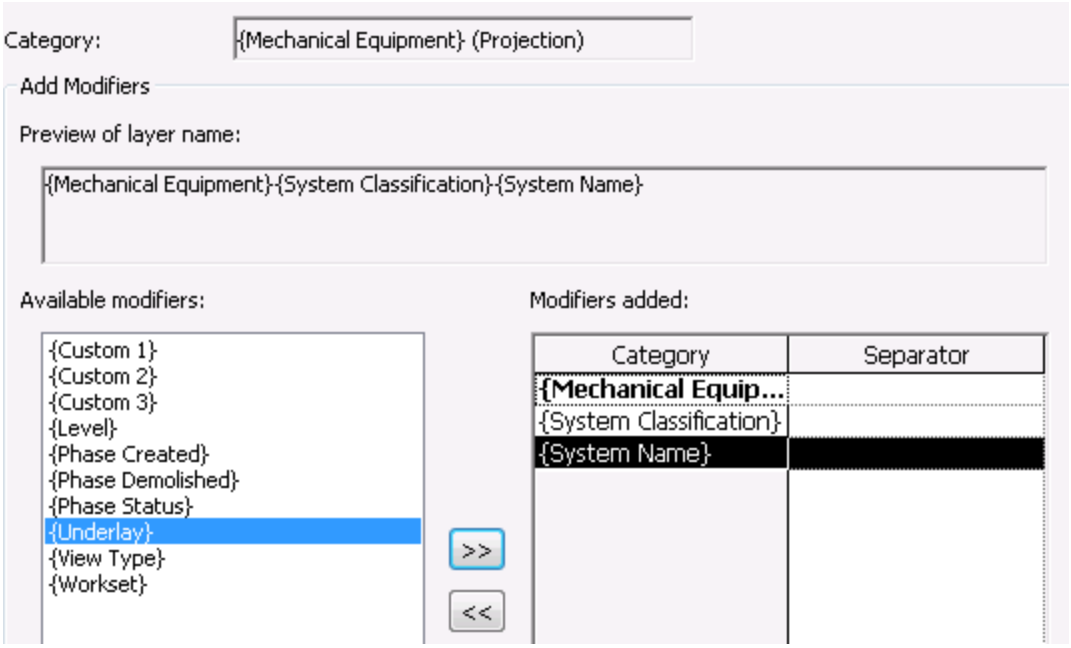
Select Revit> Export> CAD Formats

The export CAD dialog appears, Use the default AIA settings.

Special attention should be made towards the mechanical and electrical sections invlolving systems:



The systems can be accounted for but must be named carefully to correspond with the target layer naming:


Category:
{Mechanical Equipment} (Projection)
Add Modifiers
Preview of layer name:
{Mechanical Equipment}-{System Classification}-{System Name}
Available modifiers:
{Custom 1}
{Custom 2}
{Custom 3}
{Level}
{Phase Created}
{Phase Demolished}
{Phase Status}
{Underlay}
{View Type}
{Workset}
>>
<<
Modifiers added:
Category
Separator
{Mechanical Equip...
{System Classification}
{System Name}

US NCS5.0 SEQUENTIAL LIST OF DISCIPLINE DESIGNATORS

The following table has been derived from the discipline designators and the order in which they shall appear when used: level 1+level 2 **PREFIX** designators shown. If a single character is shown for the Sheet prefix, it must be followed by a dash(Example "A-") to maintain the correct spacing and sorting for the labels and sheets. Second level designators are recommended for consistency and for finder controls over filtering callouts, sections, and elevations out of views.

- **"Seq." or Sequence** contains the Index Number of the sub-sheets in the set.
- **Prefix** denotes the discipline prefix (Two digit code or single character followed by a dash)
- **Description** contains information on the respective discipline code and what it contains
- **PROJ.SHEET.NCS_REF** is a shared parameter establishes a sheets location within the set.
- **PROJ.SHEET.NCS_DISCIPLINE** shared parameter establishes the header in the overall index for each discipline and also orders the sheets in the set by discipline.
- **Additional indexes can be created for projects with custom/typical sequences.**

NCS Matrix

TABLE 7 US NCS5.0/APPENDIX A UDS-01-29 APX.A - DISCIPLINE DESIGNATORS

INDEX 00	Prefix	HEADER	Description	PROJ.BROWSE.02.SUBHEADER (Sharedparameter)	PROJ.BROWSE.01.HEADER (Shared Parameter)	Rev.
01-00	G-	GENERAL	G General All or any portion of subjects included in Level 2	01-00-G	01-GENERAL	
01-01	G-	GENERAL	Title Sheets	01-01-G	01-GENERAL	
01-02	GI	GENERAL	GI General Information List of sheets	01-02-GI	01-GENERAL	
01-03	GI	GENERAL	GI002 symbols, symbol legend, orientation maps	01-03-GI	01-GENERAL	
01-04	GI	GENERAL	GI003 Site Location Map	01-04-GI	01-GENERAL	ǂ
01-05	GI	GENERAL	GI004Site Regulatory Summary Sheet	01-05-GI	01-GENERAL	ǂ
01-10	GI	GENERAL	GI005 Building Regulatory Summary Sheet Listing of applicable codes (titles and edition): Energy conservation, Fire, Fuel/gas, Mechanical, Plumbing, Private sewage disposal, Property maintenance, Residential, Zoning, Other	01-10-GI	01-GENERAL	ǂ
01-20	GI	GENERAL	GI0XX -Zoning drawings	01-20-GI	01-GENERAL	ǂ
01-30	GI	GENERAL	GI0xx-Use group (occupancy) classification(s)	01-30-GI	01-GENERAL	ǂ
01-40	GI	GENERAL	GI1xx - Occupant load(s)	01-40-GI	01-GENERAL	ǂ
01-41	GI	GENERAL	GI1XX- OR AE1XX Building exits per floor (arrangement; required/actual) Graphic or Text	01-41-GI	01-GENERAL	ǂ
01-42	GI	GENERAL	GI1XX- OR AE1XX Exit capacity per floor GI0xx or GI1xx Graphic or Text	01-42-GI	01-GENERAL	ǂ
01-43	F-	GENERAL	F-0xx OR GI0xx General Fire Protection Notes	01-43-F	01-GENERAL	ǂ
01-43	F-	GENERAL	F-1xx OR GI1xx Travel distance (allowable/actual) Graphic or Text	01-43-F	01-GENERAL	ǂ
01-43	F-	GENERAL	F-1xx OR GI1xx Fire Area Plans	01-43-F	01-GENERAL	ǂ
01-45	AF	GENERAL	AF0xx or GI1xx/PM or Interior finish (fire rating)classification (allowable/actual) Text	01-45-AF	01-GENERAL	ǂ
01-50	GC	GENERAL	GC General Contract Phasing, schedules, contractor staging areas, fencing, haul routes, erosion control, temporary and special requirements	01-50-GC	01-GENERAL	ǂ
01-60	GR	GENERAL	GR General Resource Photographs, soil borings	01-60-GR	01-GENERAL	
01-91	GJ	GENERAL	GJ User Defined	01-91-GJ	01-GENERAL	
01-92	GK	GENERAL	GK User Defined	01-92-GK	01-GENERAL	
01-99	--	--	NOTE: "ǂ" Indicates typical 'front sheets' required by many municipalities for code checks & quick access	01-99--	01---	ǂ
02-00	H-	HAZARDOUS	H Hazardous Materials All or any portion of subjects included in Level 2	02-00-H	02-HAZARDOUS	
02-01	HA	HAZARDOUS	HA Asbestos abatement, identification or containment	02-01-HA	02-HAZARDOUS	
02-02	HC	HAZARDOUS	HC Chemicals Toxic chemicals handling,	02-02-HC	02-HAZARDOUS	

INDEX 00	Prefix	HEADER	Description	PROJ.BROWSE.02.SUBHEADER (Sharedparameter)	PROJ.BROWSE.01.HEADER (Shared Parameter)	Rev.
			removal or storage			
02-03	HL	HAZARDOUS	HL Lead piping or paint removal	02-03-HL	02-HAZARDOUS	
02-04	HP	HAZARDOUS	HP PCB containment and removal	02-04-HP	02-HAZARDOUS	
02-05	HR	HAZARDOUS	HR Refrigerants Ozone depleting refrigerants	02-05-HR	02-HAZARDOUS	
02-91	HJ	HAZARDOUS	HJ User Defined	02-91-HJ	02-HAZARDOUS	
02-92	HK	HAZARDOUS	HK User Defined	02-92-HK	02-HAZARDOUS	
03-00	V-	SURVEY-MAPPING	V Survey/Mapping All or any portion of subjects included in Level 2	03-00-V	03-SURVEY-MAPPING	
03-01	VA	SURVEY-MAPPING	VA Aerial surveyed points and features	03-01-VA	03-SURVEY-MAPPING	
03-10	VC	Survey/Mapping Computated Points	Computated points and features	03-10-VC	03-Survey/Mapping Computated Points	2011/05/01
03-11	VF	SURVEY-MAPPING	VF Field surveyed points and features	03-11-VF	03-SURVEY-MAPPING	
03-12	VI	SURVEY-MAPPING	VI Digital Digitized points and features	03-12-VI	03-SURVEY-MAPPING	
03-13	VN	Survey/Mapping Node Points	Node points and features	03-13-VN	03-Survey/Mapping Node Points	2011/05/01
03-14	VS	Survey/Mapping Staked Points	Staked points and features	03-14-VS	03-Survey/Mapping Staked Points	2011/05/01
03-20	VU	SURVEY-MAPPING	VU Combined Utilities	03-20-VU	03-SURVEY-MAPPING	
03-91	VJ	SURVEY-MAPPING	VJ User Defined	03-91-VJ	03-SURVEY-MAPPING	
03-92	VK	SURVEY-MAPPING	VK User Defined	03-92-VK	03-SURVEY-MAPPING	
04-00	B-	GEOTECHNICAL	B Geotechnical All or any portion of subjects included in Level 2	04-00-B	04-GEOTECHNICAL	
04-91	BJ	GEOTECHNICAL	BJ User Defined	04-91-BJ	04-GEOTECHNICAL	
04-92	BK	GEOTECHNICAL	BK User Defined	04-92-BK	04-GEOTECHNICAL	
05-00	C-	CIVIL	C Civil All or any portion of subjects included in Level 2	05-00-C	05-CIVIL	
05-01	CD	CIVIL	CD Civil Demolition Structure removal and site clearing	05-01-CD	05-CIVIL	
05-02	CS	CIVIL	CS Civil Site Plats, dimension control	05-02-CS	05-CIVIL	
05-03	CG	CIVIL	CG Civil Grading Excavation, grading, drainage, erosion control	05-03-CG	05-CIVIL	
05-04	CP	CIVIL	CP Civil Paving Roads, driveways, parking lots	05-04-CP	05-CIVIL	
05-05	CI	CIVIL	CI Civil Improvements Pavers, flagstone, exterior tile, furnishings, retaining walls, and water features	05-05-CI	05-CIVIL	
05-10	CN	Civil Nodes		05-10-CN	05-Civil Nodes	5/1/2011
05-20	CT	CIVIL	CT Civil Transportation Waterways, wharves, docks, trams, railways, people movers	05-20-CT	05-CIVIL	
05-30	CU	CIVIL	CU Civil Utilities Water, sanitary sewer, storm sewer, power, communications, fiber optic, telephone, cable television, natural gas, and steam systems	05-30-CU	05-CIVIL	
05-91	CJ	CIVIL	CJ User Defined	05-91-CJ	05-CIVIL	
05-92	CK	CIVIL	CK User Defined	05-92-CK	05-CIVIL	
06-00	L-	LANDSCAPE	L Landscape All or any portion of subjects included in Level 2	06-00-L	06-LANDSCAPE	
06-01	LD	LANDSCAPE	LD Landscape Demolition, relocation, and salvage information	06-01-LD	06-LANDSCAPE	
06-02	LG	LANDSCAPE	LG Landscape Grading Proposed contours and spot grades	06-02-LG	06-LANDSCAPE	
06-03	LI	LANDSCAPE	LI Landscape Irrigation Mainlines, valves, controllers, pumps, etc.	06-03-LI	06-LANDSCAPE	
06-04	LL	LANDSCAPE	LL Landscape Lighting	06-04-LL	06-LANDSCAPE	
06-05	LP	LANDSCAPE	LP Landscape Planting Landscape Planting	06-05-LP	06-LANDSCAPE	
06-06	LR	LANDSCAPE	LR Landscape Relocation Vegetation relocation information	06-06-LR	06-LANDSCAPE	
06-07	LS	LANDSCAPE	LS Landscape Site All site hardscape and call-outs	06-07-LS	06-LANDSCAPE	
06-91	LJ	LANDSCAPE	LJ User Defined	06-91-LJ	06-LANDSCAPE	
06-92	LK	LANDSCAPE	LK User Defined	06-92-LK	06-LANDSCAPE	
07-00	S-	STRUCTURAL	S Structural All or any portion of subjects included in Level 2	07-00-S	07-STRUCTURAL	
07-01	SD	STRUCTURAL	SD Structural Demolition Protection and removal	07-01-SD	07-STRUCTURAL	
07-02	SS	STRUCTURAL	SS Structural Site	07-02-SS	07-STRUCTURAL	

INDEX 00	Prefix	HEADER	Description	PROJ.BROWSE.02.SUBHEADER (Sharedparameter)	PROJ.BROWSE.01.HEADER (Shared Parameter)	Rev.
07-03	SB	STRUCTURAL	SB Structural Substructure Foundations, piers, slabs, and retaining walls	07-03-SB	07-STRUCTURAL	
07-04	SF	STRUCTURAL	SF Structural Framing Floors and roofs	07-04-SF	07-STRUCTURAL	
07-91	SJ	STRUCTURAL	SJ-(User Defined) coordination views	07-91-SJ	07-STRUCTURAL	
07-92	SK	STRUCTURAL	SK- (user defined) Structural calculations to remain (not necessarily for sheets)	07-92-SK	07-STRUCTURAL	2016/08/04
07-95	SX	STRUCTURAL	SX- (user defined) Structural exports(proposed 2016-08-30-/tentative)	07-95-SX	07-STRUCTURAL	2016/08/30
08-00	A-	ARCHITECTURAL	A Architectural All or any portion of subjects included in Level 2	08-00-A	08-ARCHITECTURAL	
08-01	AS	ARCHITECTURAL	AS Architectural Site	08-01-AS	08-ARCHITECTURAL	
08-02	AD	ARCHITECTURAL	AD Architectural Demolition Protection and removal	08-02-AD	08-ARCHITECTURAL	
08-03	AE	ARCHITECTURAL	AE Architectural Elements General Architectural	08-03-AE	08-ARCHITECTURAL	
08-04	AI	ARCHITECTURAL	AI Architectural 09-INTERIORS	08-04-AI	08-ARCHITECTURAL	
08-05	AF	ARCHITECTURAL	AF Architectural Finishes	08-05-AF	08-ARCHITECTURAL	
08-06	AG	ARCHITECTURAL	AG Architectural Graphics	08-06-AG	08-ARCHITECTURAL	
08-91	AJ	ARCHITECTURAL	AJ User Defined	08-91-AJ	08-ARCHITECTURAL	
08-92	AK	ARCHITECTURAL	AK User Defined	08-92-AK	08-ARCHITECTURAL	
09-00	I-	INTERIORS	I 09-INTERIORS All or any portion of subjects included in Level 2	09-00-I	09-INTERIORS	
09-01	ID	INTERIORS	ID Interior Demolition	09-01-ID	09-INTERIORS	
09-02	IN	INTERIORS	IN Interior Design	09-02-IN	09-INTERIORS	
09-03	IF	INTERIORS	IF Interior Furnishings	09-03-IF	09-INTERIORS	
09-04	IG	INTERIORS	IG Interior Graphics Murals and visuals	09-04-IG	09-INTERIORS	
09-91	IJ	INTERIORS	IJ User Defined	09-91-IJ	09-INTERIORS	
09-92	IK	INTERIORS	IK User Defined	09-92-IK	09-INTERIORS	
10-00	Q-	EQUIPMENT	Q Equipment All or any portion of subjects included in Level 2	10-00-Q	10-EQUIPMENT	
10-01	QA	EQUIPMENT	QA Athletic Equipment Gymnasium, exercise, aquatic, and recreational	10-01-QA	10-EQUIPMENT	
10-02	QB	EQUIPMENT	QB Bank Equipment Vaults, teller units, ATMs, drive-through	10-02-QB	10-EQUIPMENT	
10-03	QC	EQUIPMENT	QC Dry Cleaning Equipment Washers, dryers, ironing, and dry cleaning	10-03-QC	10-EQUIPMENT	
10-04	QD	EQUIPMENT	QD Detention Equipment Prisons and jails	10-04-QD	10-EQUIPMENT	
10-05	QE	EQUIPMENT	QE Educational Equipment Chalkboards, library	10-05-QE	10-EQUIPMENT	
10-06	QF	EQUIPMENT	QF Food Service Equipment Kitchen, bar, service, storage, and processing	10-06-QF	10-EQUIPMENT	
10-07	QH	EQUIPMENT	QH Hospital Equipment Medical, exam, and treatment	10-07-QH	10-EQUIPMENT	
10-08	QL	EQUIPMENT	QL Laboratory Equipment Science labs, planetariums, observatories	10-08-QL	10-EQUIPMENT	
10-09	QM	EQUIPMENT	QM Maintenance Equipment Housekeeping, window washing, and vehicle servicing	10-09-QM	10-EQUIPMENT	
10-10	QP	EQUIPMENT	QP Parking Lot Equipment Gates, ticket and card access	10-10-QP	10-EQUIPMENT	
10-11	QR	EQUIPMENT	QR Retail Equipment Display, vending, and cash register	10-11-QR	10-EQUIPMENT	
10-12	QS	EQUIPMENT	QS Site Equipment Bicycle racks, benches, playgrounds	10-12-QS	10-EQUIPMENT	
10-13	QT	EQUIPMENT	QT Theatrical Equipment Stage, movie, rigging systems	10-13-QT	10-EQUIPMENT	
10-14	QV	EQUIPMENT	QV Video/Photographic Equipment Television, darkroom, and studio	10-14-QV	10-EQUIPMENT	
10-15	QY	EQUIPMENT	QY Security Equipment Access control and monitoring, surveillance	10-15-QY	10-EQUIPMENT	
10-91	QJ	EQUIPMENT	QJ User Defined	10-91-QJ	10-EQUIPMENT	
10-92	QK	EQUIPMENT	QK User Defined	10-92-QK	10-EQUIPMENT	
11-00	F-	FIRE-PROTECTION	F Fire Protection All or any portion of subjects included in Level 2	11-00-F	11-FIRE-PROTECTION	
11-01	FA	FIRE-PROTECTION	FA Fire Detection and Alarm	11-01-FA	11-FIRE-PROTECTION	
11-02	FX	FIRE-PROTECTION	FX Active Fire Suppression (SPRINKLERS) Fire extinguishing systems and equipment	11-02-FX	11-FIRE-PROTECTION	
11-91	FJ	FIRE-PROTECTION	FJ User Defined	11-91-FJ	11-FIRE-PROTECTION	
11-92	FK	FIRE-PROTECTION	FK User Defined	11-92-FK	11-FIRE-PROTECTION	
12-00	P-	PLUMBING	P Plumbing All or any portion of subjects included in Level 2	12-00-P	12-PLUMBING	

INDEX 00	Prefix	HEADER	Description	PROJ.BROWSE.02.SUBHEADER (Sharedparameter)	PROJ.BROWSE.01.HEADER (Shared Parameter)	Rev.
12-01	PS	PLUMBING	PS Plumbing Site Extension and connections to Civil Utilities	12-01-PS	12-PLUMBING	
12-02	PD	PLUMBING	PD Plumbing Demolition Protection, termination, and removal.	12-02-PD	12-PLUMBING	
12-03	PP	PLUMBING	PP Plumbing Piping, valves and insulation	12-03-PP	12-PLUMBING	
12-04	PQ	PLUMBING	PQ Plumbing Equipment Pumps and tanks	12-04-PQ	12-PLUMBING	
12-05	PL	PLUMBING	PL Plumbing Domestic water, sanitary and storm drainage, fixtures	12-05-PL	12-PLUMBING	
12-91	PJ	PLUMBING	PJ User Defined	12-91-PJ	12-PLUMBING	
12-92	PK	PLUMBING	PK User Defined	12-92-PK	12-PLUMBING	
13-00	D-	PROCESS	D Process All or any portion of subjects included in Level 2	13-00-D	13-PROCESS	
13-01	DS	PROCESS	DS Process Site Extension and connection to civil utilities	13-01-DS	13-PROCESS	
13-02	DD	PROCESS	DD Process Demolition Protection, termination and removal	13-02-DD	13-PROCESS	
13-03	DL	PROCESS	DL Process Liquids Liquid process systems	13-03-DL	13-PROCESS	
13-04	DG	PROCESS	DG Process Gases Gaseous process systems	13-04-DG	13-PROCESS	
13-05	DP	PROCESS	DP Process Piping, valves, insulation, tanks, pumps, etc.	13-05-DP	13-PROCESS	
13-06	DQ	PROCESS	DQ Process Equipment Systems and equipment for thermal, electrical, materials handling, assembly and manufacturing, nuclear, power generation, chemical, refrigeration, and industrial processes	13-06-DQ	13-PROCESS	
13-07	DE	PROCESS	DE Process Electrical exclusively associated with a process and not the facility	13-07-DE	13-PROCESS	
13-08	DI	PROCESS	DI Process Instrumentation, measurement, archivers, devices and controllers (electrical and mechanical)	13-08-DI	13-PROCESS	
13-09	DW	PROCESS	DW Process Waters Piping, valves, system components, equipment	13-09-DW	13-PROCESS	
13-10	DC	PROCESS	DC Process Chemicals Piping, valves, system components, equipment	13-10-DC	13-PROCESS	
13-11	DA	PROCESS	DA Process Airs Piping, valves, system components, equipment	13-11-DA	13-PROCESS	
13-12	DX	PROCESS	DX Process Exhaust Ducting, piping, valves, system components, equipment	13-12-DX	13-PROCESS	
13-13	DR	PROCESS	DR Process Drains and Reclaims Piping, valves, system components, equipment	13-13-DR	13-PROCESS	
13-14	DM	PROCESS	DM Process HPM Gases Piping, valves, system components, equipment	13-14-DM	13-PROCESS	
13-15	DY	PROCESS	DY Process Slurry Piping, valves, system components, equipment	13-15-DY	13-PROCESS	
13-16	DO	PROCESS	DO Process Oil Piping, valves, system components, equipment	13-16-DO	13-PROCESS	
13-17	DV	PROCESS	DV Process Vacuum Piping, valves, system components, equipment	13-17-DV	13-PROCESS	
13-91	DJ	PROCESS	DJ User Defined	13-91-DJ	13-PROCESS	
13-92	DK	PROCESS	DK User Defined	13-92-DK	13-PROCESS	
14-00	M-	MECHANICAL	M Mechanical All or any portion of subjects included in Level 2	14-00-M	14-MECHANICAL	
14-01	MS	MECHANICAL	MS Mechanical Site Utility tunnels and piping between facilities	14-01-MS	14-MECHANICAL	
14-02	MD	MECHANICAL	MD Mechanical Demolition Protection, termination, and removal	14-02-MD	14-MECHANICAL	
14-03	MH	MECHANICAL	MH Mechanical HVAC Ductwork, air devices, and equipment	14-03-MH	14-MECHANICAL	
14-04	MP	MECHANICAL	MP Mechanical Piping Chilled and heating water, steam	14-04-MP	14-MECHANICAL	
14-05	MI	MECHANICAL	MI Mechanical Instrumentation and controls	14-05-MI	14-MECHANICAL	
14-91	MJ	MECHANICAL	MJ User Defined	14-91-MJ	14-MECHANICAL	
14-92	MK	MECHANICAL	MK User Defined	14-92-MK	14-MECHANICAL	
15-00	I-	INSTRUMENTATION	Instrumentation and controls (Power for controls & motorized valves, lover voltage 24VDC)	15-00-I	15-INSTRUMENTATION	2016/05/24
16-00	E-	ELECTRICAL	E Electrical All or any portion of subjects included in Level 2	16-00-E	16-ELECTRICAL	
16-01	ES	ELECTRICAL	ES Electrical Site Utility tunnels, site lighting	16-01-ES	16-ELECTRICAL	
16-02	ED	ELECTRICAL	ED Electrical Demolition Protection,	16-02-ED	16-ELECTRICAL	

INDEX 00	Prefix	HEADER	Description	PROJ.BROWSE.02.SUBHEADER (Sharedparameter)	PROJ.BROWSE.01.HEADER (Shared Parameter)	Rev.
			termination, and removal			
16-03	EP	ELECTRICAL	EP Electrical Power	16-03-EP	16-ELECTRICAL	
16-04	EL	ELECTRICAL	EL Electrical Lighting	16-04-EL	16-ELECTRICAL	
16-05	EI	ELECTRICAL	EI Electrical Instrumentation Controls, relays, instrumentation, and measurement devices.	16-05-EI	16-ELECTRICAL	
16-06	ET	ELECTRICAL	ET Electrical Telecommunications Telephone, network, voice and data cables	16-06-ET	16-ELECTRICAL	
16-07	EY	ELECTRICAL	EY Electrical Auxiliary Systems Alarms, nurse call, security, CCTV, PA, music, clock, and program	16-07-EY	16-ELECTRICAL	
16-91	EJ	ELECTRICAL	EJ User Defined	16-91-EJ	16-ELECTRICAL	
16-92	EK	ELECTRICAL	EK User Defined	16-92-EK	16-ELECTRICAL	
17-00	W-	Distributed Energy	All or any portion of subjects included in Level 2	17-00-W	17-Distributed Energy	2011/05/01
17-01	WC	Distributed Energy Civil		17-01-WC	17-Distributed Energy Civil	2011/05/01
17-02	WD	Distributed Energy Demolition		17-02-WD	17-Distributed Energy Demolition	2011/05/01
17-03	WI	Distributed Energy Interconnection		17-03-WI	17-Distributed Energy Interconnection	2011/05/01
17-04	WP	Distributed Energy Power		17-04-WP	17-Distributed Energy Power	2011/05/01
17-05	WS	Distributed Energy Structural		17-05-WS	17-Distributed Energy Structural	2011/05/01
17-06	WT	Distributed Energy Telecommunications		17-06-WT	17-Distributed Energy Telecommunications	2011/05/01
17-07	WY	Distributed Energy Auxiliary Systems		17-07-WY	17-Distributed Energy Auxiliary Systems	2011/05/01
17-91	WJ	Distributed Energy Auxiliary Systems	User Defined	17-91-WJ	17-Distributed Energy Auxiliary Systems	2011/05/01
17-92	WK	Distributed Energy Auxiliary Systems	User Defined	17-92-WK	17-Distributed Energy Auxiliary Systems	2011/05/01
18-00	T-	TELECOMMUNICATION	T Telecommunications All or any portion of subjects included in Level 2	18-00-T	18-TELECOMMUNICATION	
18-01	TA	TELECOMMUNICATION	TA Audio Visual Cable, music, and CCTV systems	18-01-TA	18-TELECOMMUNICATION	
18-02	TC	TELECOMMUNICATION	TC Clock and Program Time generators and bell program systems	18-02-TC	18-TELECOMMUNICATION	
18-03	TI	TELECOMMUNICATION	TI Intercom and public address systems	18-03-TI	18-TELECOMMUNICATION	
18-04	TM	TELECOMMUNICATION	TM Monitoring and alarm systems	18-04-TM	18-TELECOMMUNICATION	
18-05	TN	TELECOMMUNICATION	TN Data Networks Network cabling and equipment	18-05-TN	18-TELECOMMUNICATION	
18-06	TT	TELECOMMUNICATION	TT Telephone systems, wiring, and equipment	18-06-TT	18-TELECOMMUNICATION	
18-07	TY	TELECOMMUNICATION	TY Security Access control and alarm systems	18-07-TY	18-TELECOMMUNICATION	
18-91	TJ	TELECOMMUNICATION	TJ User Defined	18-91-TJ	18-TELECOMMUNICATION	
18-92	TK	TELECOMMUNICATION	TK User Defined	18-92-TK	18-TELECOMMUNICATION	
19-00	R-	RESOURCE	R Resource Data furnished without warrant as to accuracy	19-00-R	19-RESOURCE	
19-01	RC	RESOURCE	RC Resource Civil Surveyor's information and existing civil drawings	19-01-RC	19-RESOURCE	
19-07	RA	RESOURCE	RA Resource Architectural Existing facility architectural drawings	19-07-RA	19-RESOURCE	
19-08	RS	RESOURCE	RS Resource Structural Existing facility structural drawings	19-08-RS	19-RESOURCE	
19-14	RM	RESOURCE	RM Resource Mechanical Existing facility mechanical drawings	19-14-RM	19-RESOURCE	
19-16	RE	RESOURCE	RE Resource Electrical Existing facility electrical drawings	19-16-RE	19-RESOURCE	
19-20	RR	RESOURCE	Real Estate Drawings	19-20-RR	19-RESOURCE	5/1/2011 non-standard

INDEX 00	Prefix	HEADER	Description	PROJ.BROWSE.02.SUBHEADER (Sharedparameter)	PROJ.BROWSE.01.HEADER (Shared Parameter)	Rev.
						order
19-91	RJ	RESOURCE	RJ User Defined	19-91-RJ	19-RESOURCE	
19-92	RK	RESOURCE	RK User Defined	19-92-RK	19-RESOURCE	
20-00	X-	OTHER	X Other Disciplines All or any portion of subjects included in Level 2	20-00-X	20-OTHER	
20-91	XJ	OTHER	XJ User Defined	20-91-XJ	20-OTHER	
20-92	XK	OTHER	XK User Defined	20-92-XK	20-OTHER	
20-95	XV	OTHER	XV (USER DEFINED- TENTATIVE WORKING VIEWS)	20-95-XV	20-OTHER	2016/ 08/30
21-00	Z-	SHOP-DRAWINGS-CONTRACTOR	Z Contractor /Shop Drawings All or any portion of subjects included in Level 2	21-00-Z	21-SHOP-DRAWINGS-CONTRACTOR	
21-91	ZJ	SHOP-DRAWINGS-CONTRACTOR	ZJ User Defined	21-91-ZJ	21-SHOP-DRAWINGS-CONTRACTOR	
21-92	ZK	SHOP-DRAWINGS-CONTRACTOR	ZK User Defined	21-92-ZK	21-SHOP-DRAWINGS-CONTRACTOR	
22-00	O-	OPERATIONS	O Operations All or any portion of subjects included in Level 2	22-00-O	22-OPERATIONS	
22-91	OJ	OPERATIONS	OJ User Defined	22-91-OJ	22-OPERATIONS	
22-92	OK	OPERATIONS	OK User Defined	22-92-OK	22-OPERATIONS	
23-00	YE	ESTIMATING	ESTIMATING	23-00-YE	23-ESTIMATING	2016/ 08/22