

External Consultant BIM User Manual

Revisions

DATE	REV #	COMMENT	AUTHOR
13 October 2017	2		Ben McKay
29 June 2022	3	Update to include Autodesk Construction Cloud	Anthony Zandvliet

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1 INTRODUCTION

The purpose of this document is to provide drawing procedures that must be adhered to by consultants involved with any development being undertaken by Wiley.

The procedures are aimed at providing:

- A consistent set of working drawing documentation
- Efficient transfer of information
- Efficient means of document control of drawings

Wiley are committed to providing our clients with the best service possible and therefore, consultants working on behalf of Wiley are required to abide by instructions given. All consultants shall comply with the drafting standards stated in this manual, during the initial contract acceptance meeting, or during the first design meeting.

2 BIM SOFTWARE OVERVIEW

Wiley strives to be construction industry leaders for innovation and technology and have embraced BIM (Building Information Modelling) as the future of building documentation and delivery.

BIM requires a commitment from all disciplines collaborating to form one smart building model. BIM helps ensure that project information remains accessible continuously throughout the different project phases of design, procurement, construction and operation, while providing design efficiency, accuracy, co-ordination and data reliability.

Wiley produced drawings using a combination of 2D & 3D softwares.

Revit Architecture, Revit Structure, Revit MEP are the preferred documentation software. Revit version will be agreed by the project team at the BIM start up meeting. Consultants not using this software should advise Wiley, so an appropriate format can be agreed on.

Autodesk Collaboration Cloud. Wiley uses the (ACC) to save, store and collaborate the Revit models.

Any changes in software or version upgrades must be communicated to the BIM team prior to the change or upgrade.

3 FILE NAMING CONVENTIONS

3.1.1 (Model) Revit File Naming

01-ARCH.RVT {bldg no., discipline}

3.1.2 (Model) Sheet Naming

01A001 – SITE PLAN {bldg no., discipline, series, drg no. drg name}

3.1.3 PDF (Drawing Sheets)

01A001-\$_W01234 “drawing name” {bldg no., discipline, series, drg no. drg name}

3.1.4 (Model) Revit File Naming / Saving Location on the AutoDesk Construction Cloud

3.1.5 (Model) Sheet Naming

01A001 – SITE PLAN {bldg no., discipline, series, drg no. drg name}

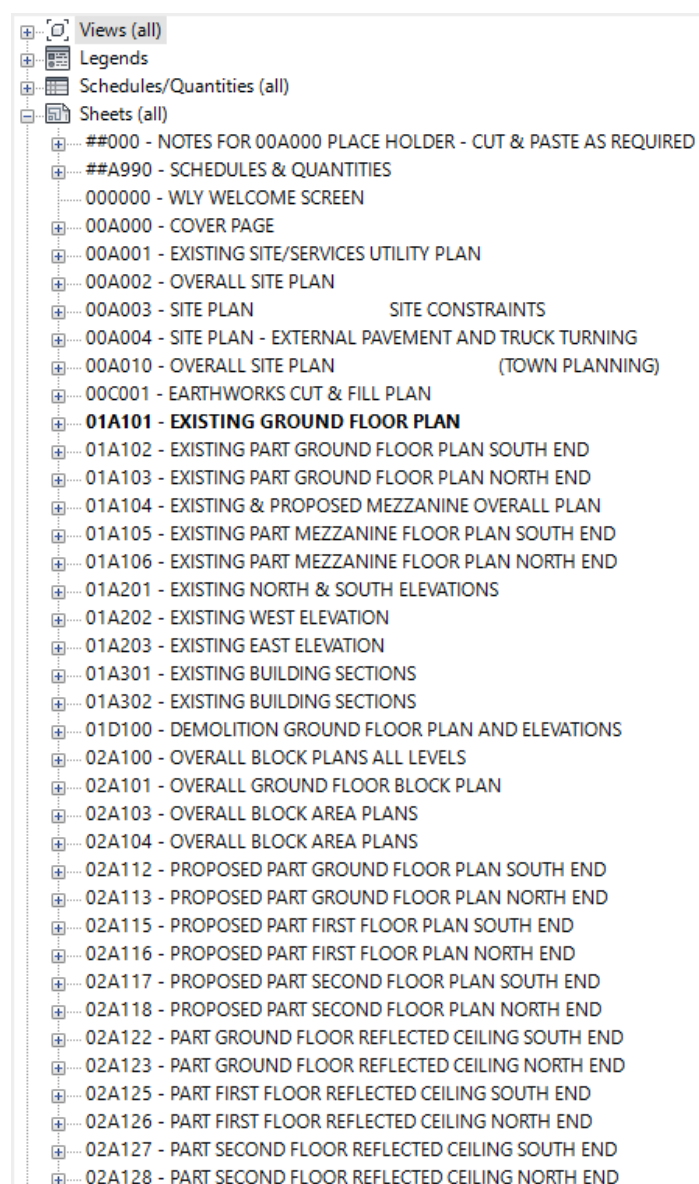


Figure 1 - Sheet naming (typical) within Revit

3.1.6 PDF (Drawing Sheets)

01A001-\$_W01234 “drawing name” {bldg no., discipline, series, drg no. drg name}

Consultants shall use this naming convention for all drawings using Wiley title sheets. The consultants’ project and drawing number shall appear in the space allocated for the consultants above the amendment column in the title sheet.

Consultant			
Project No.		Drawing No.	Rev No.
Date	Issue	Amendment	Init

Figure 2 - Consultant title block

Properties

WLY - TITLEBLOCK
A1

Title Blocks (1) Edit Type

Construction

1.PRELIMINARY	<input type="checkbox"/>
2.NOT FOR CONSTRUCTION	<input type="checkbox"/>
3.APPROVED FOR CONSTRUCTION	<input type="checkbox"/>
4.AS CONSTRUCTED	<input type="checkbox"/>

Graphics

ORIGINAL IN COLOUR	<input type="checkbox"/>
UNDER REVISION	<input type="checkbox"/>
CONSULTANTS LOGO	<input checked="" type="checkbox"/>

Scale 1 : 500

Identity Data

Drawing Status	NOT ISSUED
Sheet Name	OVERALL SITE PLAN
Sheet Number	##A001
Date/Time Stamp	10/14/13
Sheet Issue Date	dd/mm/yyyy
Drawn By	Author
Checked By	Checker
Designed By	Designer
Approved By	Approver
Sheet Width	841.3
Sheet Height	594.0

Other

Status	0
RV	<input type="checkbox"/>
PS	<input type="checkbox"/>
NFC	<input type="checkbox"/>
FC	<input type="checkbox"/>
AC	<input type="checkbox"/>
S	<input checked="" type="checkbox"/>
File Path	

Figure 3 - Consultant's logo tick box

Transmittals issued to Wiley shall use the Wiley naming convention for ease of identification, however the consultant may also include their own naming convention for tracking their drawings internally.

3.2 Building number

01A001-\$_W01234 = Building Number - 01

Projects with multiple buildings on the same site are to have unique numbers assigned to each building and noted on the Site Plan. A project with only 1 building will still be given a building number of 01. The Building Number is the two characters at the start of the drawing name. This number represents the building number of drawing e.g. Building 01, Building 02 etc.

3.3 Drawing type

01A001-\$_W01234 = Drawing Type - Architectural

Drawing type describes the type of drawing by its discipline. The Drawing type is one character, A-Z, which is the third number in the drawing name. This number represents the discipline of drawing e.g. Architectural, fire, equipment etc

Table 1 - Drawing type

A	Architectural	Architectural Drawings
B	Building services	Building services
C	Civil	Generally used by consultants or by Wiley if Civil drawing
D	Demolition	Demolition Drawings
E	Electrical	Electrical drawings
F	Fire	Fire drawings
H	Hydraulics	Hydraulics drawings
G	Governance	Governance drawings (DA drawings)
K	sKetch	Architectural preliminary sketches
M	Mechanical	Generally used by consultants or by Wiley if Mechanical drawing
P	Process sketch	Process preliminary sketches and options
Q	eQipment	Equipment Drawings
R	Refrigeration	Refrigeration drawings
S	Structural	Generally used by consultants or by Wiley if Structural drawing
T	Temporary buildings	Temporary Building Drawings
V	SurVey	Survey Drawings
X	as eXisting	Existing Drawings

3.4 Drawing series

01A**1**01-\$_W01234 = Drawing Series - Plans

The drawings for a project are separated up into specific series to allow for easy identification to represent different types of drawings. Refer to the table below for a full list of these drawing types. It is important therefore that a type of drawing is numbered into the correct series.

The Drawing Series is one character, 0 – 9, which is the fourth number in the drawing name. This number represents the type of drawing e.g. site plans, floor plans etc.

The drawings for a project are separated up into specific series to allow for easy identification. These series represent different types of drawings i.e. 100 = Plans

Table 2 – Drawing series

000	Cover Sheet	= Cover Sheet
001 – 099	Site and Siteworks	= Locality, Siteworks, Bulk Earthworks, Site details etc.
100 – 199	Plans	= 1:200, 1:100, 1:50
200 – 299	Elevations	= External
300 – 399	Sections	= 1:100, 1:50
400 – 499	Part Sections	= 1:25
500 – 599	Construction Details	= 1:10, 1:5 Plans/Sections
600 – 699	Trade Specific	= Stairs, Guardrails, Conc. coves etc.
700 – 799	Detailed areas	= Amenities Plans/Elevations etc., Joinery Detailing
800 – 899	Spare	= Design Managers to assign drawings to this category if needed
900 – 999	Schedules	= door, window, louvers including elevations & specific details

3.5 Drawing No.

00A00**1**-\$_W01234 = Drawing Sheet Number - 01

The drawing number is often pre-planned by the Design Manager before the project starts. The drawing number is often sequentially numbered but can also be split into groups of 10, 20 etc. to differentiate drawing inside a “Drawing Series”. The Drawing Number is comprised of two characters. They are the fifth and sixth numbers in the drawing name. The first drawing number of the series starts at 01 not 00. For example: 101, 201, 301etc.

3.6 Revision / Issue

00A001-**1**\$_W01234 = Revision - 1

All initial drawing files shall have the extension of \$ which indicates a drawing has not been issued. All following Revisions will be numeric and increase sequentially.

4 PROJECT NUMBER

00A001-1_ **W01234** = Project Number – W01234

All project numbers are to be generated by Wiley. All project numbers are unique, to separate them from other projects. Please contact Wiley to request the job number of your project.

5 REVIT

5.1 Project Start-up

To build an integrated BIM model, a great deal of importance is placed on communication and collaboration between the disciplines involved in a project. Before modelling starts, a meeting between Wiley and all consultants is essential to discuss coordination between disciplines for an effective BIM model. In this meeting a BIM Execution Plan will be set. A BIM Execution Plan is to provide a framework for Wiley consultants, architects, engineers, surveyors, contractors and owners can reference to deploy Building Information Modelling (BIM) processes and best practices throughout the project life cycle.

5.2 Platform

Revit Architecture, Revit Structure and Revit MEP and AutoDesk Construction Cloud is the documentation and collaboration software. Revit version is to be agreed by the project team at the BIM start up meeting. Consultants not using this software should advise Wiley, so an appropriate format can be agreed on. All consultants not using Revit will supply file types compatible with Revit if the data is to be used in the Building Model. It is not mandatory that shop drawings be submitted with compatible software, unless the shop drawings will be incorporated into the Revit Model

Any changes in software or version upgrades must be communicated to the project team prior to the change or upgrade.

5.3 Coordination conflicts / model ownership

As lead consultants, Wiley will own the main Architectural model. Consultants will provide their 3D information to be linked into the main Architectural model. If conflicts are found in any of the project files, promptly notify the authors so they can correct the problem. No modifications shall be carried out to either Wiley or Consultants models without prior agreement.

5.4 Project/shared coordinates

Wiley, and their consultants, will use Shared Coordinates to share their models accurately. These coordinates will be set and controlled by Wiley and all consultants will “acquire” them from a designated Revit model Wiley have set out, unless otherwise stated. Once this has been set, this cannot be moved.

5.5 Grids

Grids will be set out and controlled by Wiley and shall not be altered by the consultant. The letters I, O and the number 0 shall not be used to avoid confusion.

5.6 Consultant revit template

A consultant Revit Template will be supplied by request at project start-up to consultants using Revit. This will contain Wiley Revit standards that can be brought into a consultant's drawing model by "Transferring project standards" inside Revit.

Standards included in the Wiley Consultant template are:

5.7 Title sheet Family

Wiley's title sheet Family will be supplied to contractors by Wiley to facilitate a consistent appearance within a project. This title sheet by Wiley MUST NOT be altered. The tick box inside Wiley's Title sheet family "CONSULTANT LOGO" shall be ticked and the consultant's logo and company name can be inserted into the space provided. This space also allows for the consultant's project and drawing numbers. The main title block shall contain the Wiley numbering system. (Refer to the drawing numbering section within this document). If it is arranged, at the time of acceptance of the design work, that the consultant's own title sheets are used in lieu of Wiley title sheets, then an appropriate sheet size must be used. That is, if the Wiley design work is on A1 sized sheets, then the consultant must use A1 size sheets.

Please consult the BIM systems manager at Wiley for a detailed overview of the Wiley Revit title block as it has numerous options built in when preparing a title sheet.

5.8 Style/fonts

Only "True Type" fonts are to be used in a Revit project due to "Open Type" font incompatibilities. If non-standard fonts are used, due to third party packages etc, then the required font shall be supplied to Wiley.

In Wiley Revit drawings, notations are done using the font "Calibri". All general drawing notation shall be done in lower case and use this style. The font used for this style must not be altered and if the consultant requires a different text, then a new style shall be created.

Text height must not be less than 2.5mm so text can be kept legible if printer reduction is needed.

5.9 Dimensions

Contractors are to use dimension styles supplied in the Wiley Revit Template. All dimensions to be accurate and dimensions in a model are not to be overridden.

5.10 Work sets

Consultants must as a minimum, assign levels and grids to the pre-setup work-set "shared levels and Grids". Any additional work-sets must be approved by the principal contractor. This will allow the delivery team to easily open and close linked models – levels and grids where necessary.

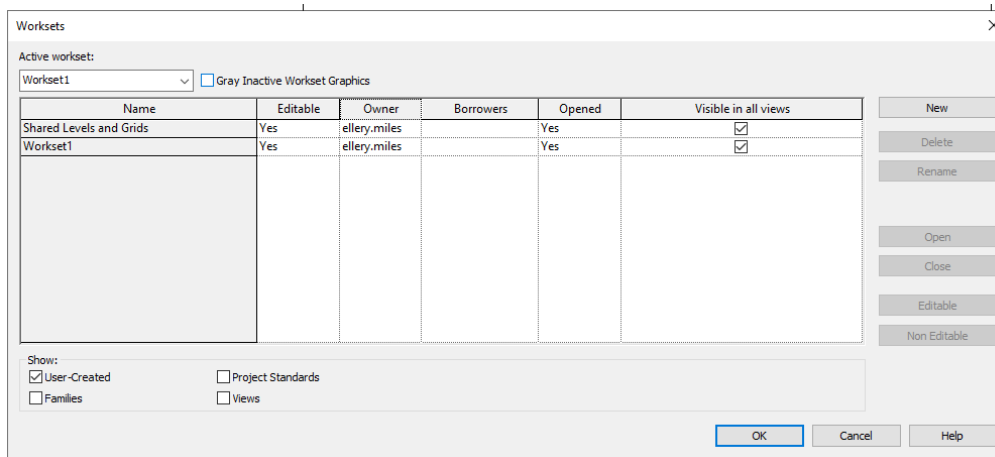


Figure 4 - Work sets

6 AUTODESK CONSTRUCTION CLOUD

6.1 Exchange of drawings (electronic) files

Autodesk Construction Cloud, cloud based collaboration software is the software Wiley uses for the, storage, exchange and collaboration of Revit files and the BIM models. Each Consultant is responsible for having an Autodesk Construction Cloud platform to host their revit model and collaborate with the Project Team.

Contact the Wiley BIM systems manager if you have any queries setting this up.

7 DESIGN DRAWINGS

7.1 Drawing index

A drawing index is to be provided as cover sheet to a set of drawings for larger projects or as requested by Wiley. A single drawing index should be inserted to the relevant size cover sheets i.e. an A1 sheet if the drawing is on A1 size sheets.

7.2 Key plans

For larger projects, generally those with multiple buildings, Site / Building Key Plans will be made available by Wiley, and is to be inserted on to the final compiled drawings in and shaded to show the respective area that the Plans / Details apply to. Therefore, the process of co-ordinating drawings and sets between consultants and to site will be more efficient. Allow to use the top right vacant area of the title sheet for standard style key plans.

7.3 Legends

Allow to use the top right vacant area of the title sheet for standard style legends. Co-ordinating between key plan and legend location shall be controlled by Wiley.

7.4 Prototype

For consultants engaged on the basis that they are working directly for Wiley (no consultant name appearing on the title sheet), then a prototype drawing containing the dimension styles and settings,

shall be provided by Wiley. This prototype is to be used to retain continuity of drawings between consultants.

7.5 Revisions

Revision clouds are to be used when multiple small changes to drawings occur, to allow easy identification of changes. In AutoCAD the revision clouds should appear within paperspace of each drawing affected by changes to the “modelspace” drawing file. The amendment column of the title sheet shall include a description of the amendments. Do not use the generic term “revision”, give a brief description of the amendment eg “door numbers revised”. Revisions are to be noted in the title block, beside the drawing number. The revision/issue information is to be updated prior to re-issuing of amended drawings. As stated under the file naming convention, all drawings issued must have an identification letter.

Wiley use a line drawn through the revision letter and a note stating that the drawing is under revision to notify that the drawing is currently being amended.

8 PROCESS EQUIPMENT

Autodesk’s Revit is the preferred drawing software Wiley use to document projects. Wiley have embraced 3D modelling/BIM (Building Information Modelling) and request all suppliers and sub consultants provide (if applicable) 3D models that can be imported and documented in Revit.

9 STANDARDS

As Revit is Wiley’s main documentation software, specific standards are required for efficient and accurate integration of consultant’s equipment into the documentation model.

- File size to be kept to a minimum. As a guide 20mb is considered a large file. Please consult with Wiley if the file size exceeds this limit.
- Only the outside skin and connection points are relevant for building documentation. All other non-visible and internal components that are not critical in building set out, service connections or connections to adjoining production equipment connections are to be removed.

10 ACCEPTABLE FILE FORMATS

Wiley’s preferred file format are as follows:

- Revit *.rvt , *.rfa
- Inventor *.iam , *.ipt , *.stp , *.adsk
- (inventor files to be shrink-wrapped and checked for all critical dimensions/connection points)

Consultants not using the software above should advise Wiley so an appropriate format can be agreed on and tested.

OUR VALUES

Around here, we live by a core set of values that guide our behaviour and form the foundation of the Wiley culture. We hold these values high, above all else, especially when times are tough. They keep us focused on what is important as we continue to grow.



Healthy and Safe.

At Wiley, safety is about mind and body. Together, we actively take care of ourselves & each other and seek ways to ensure everyone in our care, is also in the safest of hands. We back each other, hold ourselves to account and drive a culture that respects all potential harm. Healthy and safe is not just a statement, it is a state of being.



Future focus.

We plan and act with the big picture in mind. We enable and challenge ourselves and our clients to lead. We are always receptive to new ideas. We embrace change and the future with enthusiasm. We take pride in our ability to creatively problem solve and find the best solutions in every situation. Our belief in continuous learning reflects a pure delight and appreciation for creative discovery and innovation that leads to elegant solutions.



Empower our people.

We actively encourage and enable our people to develop and grow to their greatest potential. We embrace individuality and provide a flexible working environment in which there is room to learn from our mistakes. We support personal development and independence yet encourage teamwork and collaboration. By recognising and celebrating our individual and collective strengths, we empower our people.



Quality first.

We take pride in what we do and we do what makes us proud. We pursue excellence in a professional way through continual improvement. We set high standards for ourselves and others. Our passion for presentation and form is the tangible way we communicate our commitment to quality.



A sense of community.

We value relationships that include, nurture, support and protect our people as families do. We actively seek life balance by working hard, having fun and celebrating openly. We care passionately about the environment and our surroundings with an eye to making a difference where we can.



Integrity in all we do.

We take responsibility for being the best version of ourselves, being on-centre and holding each other to this ideal. We keep our promises and always follow through. We tell the truth, we do not hide, use excuses or blame. We respect each other equally and act honestly with courage.



www.wiley.com.au

Contact us

1300 385 988

+61 (7) 3859 8888

connect@wiley.com.au

 **who** we are
www.wiley.com.au/culture