



**US Army Corps
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Engineer Research and
Development Center

*The CAD/BIM Technology Center
for Facilities, Infrastructure, and Environment*

US ARMY CORPS OF ENGINEERS BUILDING INFORMATION MODELING TEMPLATES FOR REVIT

Templates based on the 2020 Autodesk Revit Software

Master Guide : Architectural Template v4.3

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1 Overview

The intent of this guide for the Revit ARCH Template is to provide a framework to facilitate design using Revit Building Information Modeling (BIM) software. This template was developed based on Revit 2020.

This guide is NOT intended to be a Revit tutorial, but rather assumes the user has a sufficient level of proficiency to comprehend the template descriptions outlined in this guide.

Questions and comments may be submitted to the [USACE Revit Template Team](#).

2 Browser and View Organization

The default browser schema in the template (View Purpose_USACE) is organized by:

- Discipline
- then "ViewPurpose_USACE"
- then Family and Type
- Sorted by View Name

There are no pre-defined sub-disciplines in the ARCH template.

A full list of View browser schemas for the ARCH template is in the following table:

Table 1 Browser View Schema

Browser View Schema	Grouping	Filter
all	Group by: • Family and Type Sort by: • View name (Ascending)	<None>
Discipline_USACE	Group by: • Discipline • Family and Type Sort by: • View Name (Ascending)	<None>
Not on Sheets_USACE	Group by: • Family and Type Sort by: • View Name (Ascending)	Filter by: Sheet Name = <None>

Phase_USACE	Group by: - Phase - Family and Type Sort by: - View Name (Ascending)	<None>
Type/Discipline_USACE	Group by: - Family and Type - Discipline Sort by: - View Name	<None>
View Purpose_USACE	Group by: - Discipline - ViewPurpose_USACE - Family and Type Sort by: - View Name	<None>

Table 2 Schedule Sorting Schema

Browser Schedule Schema	Grouping	Filter
all	Sort by: View Name (Ascending)	<None>
Plotted Schedule_USACE	Group by: - PlottedSchedule_USACE Sort by: - View Name (Ascending)	<None>
Schedule Purpose_USACE	Group by: - ViewPurpose_USACE Sort by: - View Name (Ascending)	<None>

Table 3 Sheet Sorting Schema

Browser Sheet Schema	Grouping	Filter
all	Sort by: Sheet Number	<None>
Sheet Prefix_USACE	Group by: - Sheet Number (1st Character) Sort by: - Sheet Number	<None>
Sheet Publish Order	Group by: - PublishOrder_USACE Sort by: - Sheet Number (1st Character) - Sheet Number	

3 View Purpose

In previous versions of the template, the “View Purpose” parameter was used to separate the purposes of the views and make the creation of sheets easier. These view purposes are Working Views (where the main modeling is done), Documentation Views (where the views are set up and annotated for placement on sheets for the official model Documents), Presentation Views (for required or accessory presentation purposes), Coordination and Analysis views (for coordinating between the different disciplines on BIM project) and Export views (for exporting data to other BIM and CAD platforms). Each view that is created will have the “ViewPurpose_USACE” parameter under the “Other” group of parameters to hold this value.

Standard View Purposes:

Table 4 Standard View Purposes

View Purpose Classification	View Type/View Name Extension
1 Working	_WRK
2 Analysis	_ANL
3 Documentation	_DOC
4 Presentation	_PRS
5 Export	_EXP

As stated above, the “View Purpose” parameters is a legacy parameter from earlier versions and is included with the 4.3 version of the ARCH

template, renamed to "View_Purpose_USACE", along with the corresponding "View Purpose_USACE" browser sorting schema to accommodate legacy workflows and standards. New in this template is the use of view templates and view types, which, while referencing and leveraging the view purpose classifications, do not need to use the "ViewPurpose_USACE" parameter value. Either the "all" or "View Purpose_USACE" project browser schemas may be used to group views by purpose – one uses the new view types and the other uses the legacy "ViewPurpose_USACE" parameter.

4 View Templates and View Types

View templates store preset values for selected view properties. Properties stored in a view template can either be applied to a view but remain editable after application, or views can be made dependent on a view template. When a view is dependent on a template, properties that are stored in the template cannot be edited in the view. Changes to a template upon which views are dependent will update all dependent views to those changes.

The "ViewPurpose_USACE" property, among several others, is automatically applied to a view when it is made dependent on a template or when a template's properties are applied to the view.

New to the USACE_Revit2020_Template_ARCH_v4.3.rte template is the use of view types to further automate the application of view template properties or the making of views to be dependent on templates, depending upon the purpose of the view. When a working view is created that does not get plotted or exported for use in other applications, placing it on a view type will apply a template's properties. When a view is created that will ultimately be plotted or potentially exported for use in other applications, it is made dependent on a view template. In all cases, placing a view on a view type will also perform the same purpose as the legacy "ViewPurpose_USACE" property, because the view type will indicate the purpose of the view, and is used for sorting and grouping in the project browser.

Note: Due to limitations in Revit, 3D views and drafting views cannot have a specific view type assigned to them at the time of creation; the view must be manually placed on the correct type after creation, for proper sorting in the project browser, and the view template must manually have

its properties either applied to the view, or the view made dependent on the template.

View Templates included in the ARCH project template:

- 3D Views
 - Export to Civil Engineering_EXP_USACE
 - 3D_WRK_USACE
 - 3D_Presentation_PRS_USACE
 - 3D_Coordination_USACE
 - 3D_Navisworks Clash Detection_EXP_USACE
 - 3D_Navisworks Quantity Takeoff_EXP_USACE
- Ceiling Plans
 - Ceiling Plan_WRK_USACE
 - Ceiling Plan_DOC_USACE
- Floor, Area and Site Plans
 - Floor Plan_WRK_USACE
 - Area Plan_WRK_USACE
 - Site Plan Project North_WRK_USACE
 - Site Plan True North_WRK_USACE
 - Site Plan Project North_DOC_USACE
 - Site Plan True North_DOC_USACE
 - Key Plan_WRK_USACE
 - Air Barrier Plan_WRK_USACE
 - Floor Plan_DOC_USACE
 - Roof Plan_WRK_USACE
 - Roof Plan_DOC_USACE
 - Enlarged Floor Plan_WRK_USACE
 - Floor Plan_Coordination_ANL_USACE
 - Life Safety Plan_WRK_USACE
 - Life Safety Plan_DOC_USACE
- Elevations
 - Exterior Elevation_WRK_USACE
 - Interior Elevation_WRK_USACE
 - Enlarged Exterior Elevation_DOC_USACE
 - Exterior Elevation_DOC_USACE
 - Interior Elevation_DOC_USACE
- Sections
 - Building Section_WRK_USACE
 - Wall Section_WRK_USACE
 - Building Section_DOC_USACE
 - Wall Section_DOC_USACE
- Detail Views
 - Detail Plan_WRK_USACE
 - Detail Section_WRK_USACE
 - Detail Plan_DOC_USACE
 - Detail Section_DOC_USACE

- Drafting Views
 - Drafting View_WRK_USACE
 - Drafting View_DOC_USACE
- Schedules
 - Schedule_USACE

Table 5 : View Types

View Type	View Template	Template Status
Ceiling Plans_WRK_USACE	Ceiling Plans_WRK_USACE	Applied
Ceiling Plans_DOC_USACE	Ceiling Plan_DOC_USACE	Dependent
Floor Plans_WRK_USACE	Floor Plans_WRK_USACE	Applied
Air Barrier Plans_WRK_USACE	Air Barrier Plan_WRK_USACE	Applied
Floor Plans_DOC_USACE	Floor Plan_DOC_USACE	Dependent
Enlarged Floor Plans_DOC_USACE	Enlarged Floor Plan_DOC_USACE	Dependent
Floor Plans_EXP_USACE	Floor Plan_EXP_USACE	Dependent
Roof Plans_DOC_USACE	Roof Plan_DOC_USACE	Dependent
Roof Plans_WRK_USACE	Roof Plan_WRK_USACE	Applied
Enlarged Floor Plans_WRK_USACE	Enlarged Floor Plan_WRK_USACE	Applied
Floor Plans_Coordination_ANL_USACE	Floor Plan_Coordination_ANL_USACE	Dependent
Life Safety Plans_DOC_USACE	Life Safety Plan_DOC_USACE	Dependent
Life Safety Plans_WRK_USACE	Life Safety Plan_WRK_USACE	Applied
Detail Plan_WRK_USACE	Detail Plan_WRK_USACE	Applied
Detail Plan_DOC_USACE	Detail Plan_DOC_USACE	Dependent
Site Plans Project North_WRK_USACE	Site Plans Project North_WRK_USACE	Applied
Site Plans True North_WRK_USACE	Site Plans True North_WRK_USACE	Applied
Site Plans Project North_DOC_USACE	Site Plans Project North_DOC_USACE	Dependent
Site Plans True North_DOC_USACE	Site Plans True North_DOC_USACE	Dependent
Key Plans_WRK_USACE	Key Plans_WRK_USACE	Applied
Exterior Elevations_WRK_USACE	Exterior Elevations_WRK_USACE	Applied
Interior Elevations_WRK_USACE	Interior Elevations_WRK_USACE	Applied
Enlarged Exterior Elevations_DOC_USACE	Enlarged Exterior Elevation_DOC_USACE	Dependent
Exterior Elevations_DOC_USACE	Exterior Elevations_DOC_USACE	Dependent
Interior Elevations_DOC_USACE	Interior Elevation_DOC_USACE	Dependent
Building Sections_WRK_USACE	Building Sections_WRK_USACE	Applied
Wall Sections_WRK_USACE	Wall Sections_WRK_USACE	Applied
Full Building Sections_DOC_USACE	Building Section_DOC_USACE	Dependent
Partial Building Sections_DOC_USACE	Building Section_DOC_USACE	Dependent
Wall Sections_DOC_USACE	Wall Section_DOC_USACE	Dependent
Detail Sections_WRK_USACE	Detail Section_WRK_USACE	Applied
Detail Sections_DOC_USACE	Detail Section_DOC_USACE	Dependent

Drafting Views_WRK_USACE	Drafting Views_WRK_USACE	Apply after Creation
Drafting Views_DOC_USACE	Drafting View_DOC_USACE	Dependent

5 View Naming

Naming of views is to follow the standard set in the template and is divided into categories by: [Floor Level]_[View Type]_[Region]_[Function]_View Purpose

- **Floor Number** (Only used for plan views)
- **View Type** (Required)
- **Region** (Optional – user defined – indicates the area of the building)
- **Function** – (Optional – user defined – indicates the specific function of the view when it is not obvious)
- **View Purpose** (Required – must be one of the five view purposes listed above)

Examples:

- Example A: **02_FP_EAST_DOC**
 - 2nd Floor Plan – East region – 3 Documentation view purpose
- Example B: **EL_EAST_WRK**
 - Elevation – East – 1 Working view purpose
- Example C: **03_FP_WEST_LIFE SAFETY_WRK**
 - 3rd floor Life Safety Plan – West region – 1 Working view purpose

6 Working Views

This set of views (with the “WRK” suffix) are for the main design and layout of the building. These views are not intended for the final documents and are used to support the modeling process (although a View Purpose may be changed to a Documentation – “DOC” view). As views are created they should be placed on the appropriate view type. Doing so will ensure that the proper view template is applied or assigned. Working views will have a working view template applied, however they will not be made dependent on the template, to enable ease of view modification for facilitation of modeling. The “ViewPurpose_USACE” parameter will also automatically be assigned to “1 – Working”.

Note: While a view can be renamed to become a Documentation view by changing the suffix to “DOC”, it should be placed on the appropriate documentation view type and have the appropriate view template assigned to it to ensure proper view properties and correct assignment of the “ViewPurpose_USACE” parameter. View templates are NOT

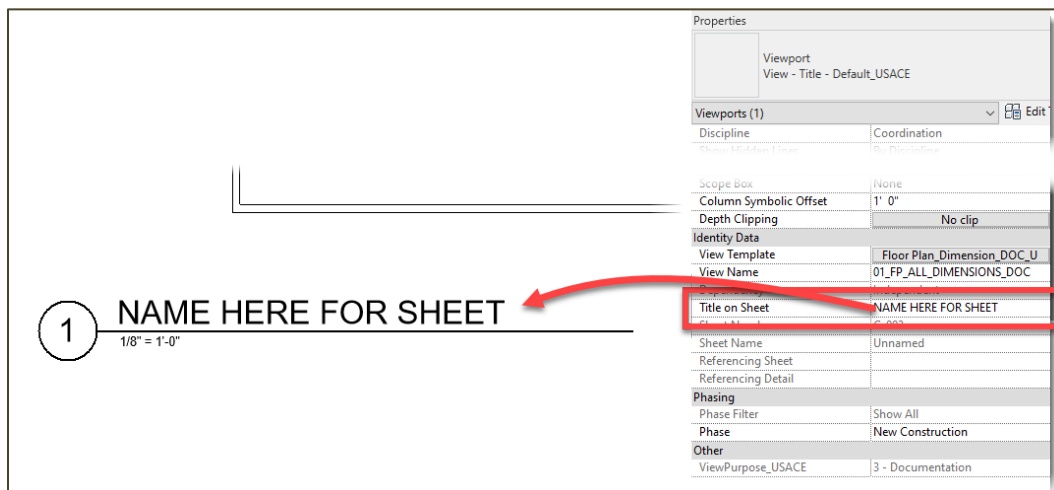
*automatically assigned when changing a view from one type to the other
– only when initially creating a view on a given type.*

7 Documentation Views

These views are finished and intended to be placed on sheets.
Documentation views may have scope boxes for larger projects.
Appropriate visibility and/or filter settings are applied to display only relevant categories and objects. Documentation views, by default, are dependent on view templates. If view properties need adjustment for specific project needs, the view template should be modified to ensure consistency – adjusting the view template will cause all views that are dependent on the template to update accordingly.

To maintain view naming standards for Documentation views that have been added to sheets, utilize the “Title on Sheet” view property to provide an appropriate view title on the sheet.

Table 6 : "Title on Sheet" property



8 View Filters

View filters are used to group elements in Revit based on specific criteria (category, property values, etc.) and are frequently used to further control visibility at a level not provided for in the standard Visibility/Graphics overrides settings at the category level.

The ARCH template includes three custom filters that control the visibility of view callout symbols:

- Plotted_USACE
- Presentation_USACE
- Working_USACE

These are intended to group sections, elevations and callouts belonging to view types ending in “DOC”, “PRS” or “WRK” to allow them to be suppressed in cases where their display would not be appropriate. For example, callout tags for working elevations (“WRK”) should not be displayed in a documentation plan view (“DOC”). The view templates controlling documentation plan view settings include turning off all the elevation and section callouts belonging to the “WorkIng_USACE” filter group while allowing those belonging to the “Plotted_USACE” filter group to be displayed.

There are also filters to control the visibility of model elements. The following filters are used to group elements with specific "Fire Rating" properties, primarily for display purposes.

- 0 Hr Smoke Wall_USACE
- 1 Hr Smoke Wall_USACE
- 1 Hr Smoke Wall_USACE
- 2 Hr Fire Smoke Wall_USACE
- 2 Hr Fire Wall_USACE
- 3 Hr Fire Wall_USACE
- 4 Hr Fire Wall_USACE
- Fire Rated Wall (less than 1 hr)_USACE

The following filter is used to identify the Egress Path element in plan views.

- Egress Path_USACE

9 Schedules

USACE Schedules are dependent on a view template, “Schedules_USACE”, which controls their appearance on sheets, whose settings are shown below.

Table 7 : Schedule Properties

The screenshot shows the 'Schedule Properties' dialog box with the 'Appearance' tab selected. The 'Graphics' section contains the following options: 'Grid lines' with a checked checkbox and a dropdown menu set to 'Thin Lines'; 'Outline' with a checked checkbox and a dropdown menu set to 'Wide Lines'; an unchecked checkbox for 'Grid in headers/footers/spacers'; and an unchecked checkbox for 'Blank row before data'. The 'Text' section contains the following options: a checked checkbox for 'Show Title'; a checked checkbox for 'Show Headers'; 'Title text' with a dropdown menu set to 'Schedule Title 3/16"_USAC'; 'Header text' with a dropdown menu set to 'Schedule Header 1/8"_USA'; and 'Body text' with a dropdown menu set to 'Default 3/32"_USACE'. At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.

Some schedules are intended for use on plotted sheets, while others are intended as working schedules or for project management purposes and are not to be placed on plotted sheets. Non-plotted schedules will be prefixed with “Z-” and will be named in sentence case. Plotted schedules will be named with all capitalized letters. Schedules that are plotted should have the “PlottedSchedule_USACE” parameter checked on in the view properties for the schedule. Schedules that are not plotted should have checked off.

There are twelve schedules provided with the ARCH template. The following plotted or Documentation schedules are included:

- **SHEET LIST**
 - This is a schedule intended for plotting and will include all sheets whose “Appears in Sheet List” property is turned on. It uses hidden fields for sorting and grouping of sheets. These fields are exposed for editing in the working “Z-Sheet Information List” schedule, which is described below.
 - *This schedule should not be edited directly* – instead use the “Z-Sheet Information List” schedule to make any changes. These will be reflected in the “SHEET LIST” schedule as well.

Table 8 : Sheet List Schedule

<SHEET LIST>	
A	B
SHEET NUMBER	SHEET TITLE

- DOOR SCHEDULE**

- This is a standard Door Schedule, based on NCS guidelines.

Table 9 : Door Schedule

<DOOR SCHEDULE>														
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
DOOR NO.	TYPE	SIZE			FINISH	UNDER CUT	FIRE RATING	TYPE	MATERIAL	FRAME			HARDWARE	COMMENTS
		WIDTH	HEIGHT	THICKNESS						HEAD	JAMB	SILL		

- FINISH SCHEDULE**

- This is a standard Room Finish Schedule, based on NCS guidelines.

Table 10 : Finish Schedule

<FINISH SCHEDULE>														
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
ROOM NO.	ROOM NAME	FLOOR	WALL FINISH				SOUTH	WEST	NORTH	EAST	BASE FINISH		SOUTH	WEST
			NORTH	EAST	FINISH	FINISH					FLOOR	CEILING		

- SIGNAGE SCHEDULE**

- This is a schedule of Specialty Equipment elements that represent signage.

Table 11 : Signage Schedule

<SIGNAGE SCHEDULE>														
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
FAMILY AND TYPE	LEVEL	MARK	SIGN NUMBER	SIGN TEXT	MOUNTING TYPE	SIGN HEIGHT	SIGN LENGTH	OMNICLASS NUM	OMNICLASS TITL	KEYNOTE	SIGN TYPE	SYMBOL TYPE	BRAILLE	COMMENTS

- WINDOW SCHEDULE**

- Plotted Window Schedule

Table 12 : Window Schedule

<WINDOW SCHEDULE>														
A	B	C	D	E	F	G	H	I	J	K	L	M	N	
COUNT	MARK	R.O.		TYPE	FRAME		GLAZING		HEAD	DETAILS		HEAD HEIGHT	REMARKS (SEE NOTES BELOW)	
		WIDTH	HEIGHT		FINISH	MATERIAL	TYPE	THICKNESS		JAMB	SILL			

The following non-plotted schedules are included:

1. Z-Sheet Information List

- This is a working schedule to facilitate the creation of the plotted “SHEET LIST” schedule. It includes three fields to control sorting and grouping in the “SHEET LIST” schedule:
 - Sheet Discipline
 - Discipline Group
 - Publish Order

Table 13 : Z-Sheet Information List

Sheet Information List								
A	B	C	D	E	F	G	H	I
SHEET NUMBER	SHEET TITLE	SHEET DISCIPLINE	DISCIPLINE GROUP	PUBLISH ORDER	DESIGNED BY	DRAWN BY	CHECKED BY	SUBMITTED BY

2. Z-View List

- Shows all views in the project with critical view settings for project management purposes. This can be used to simply review the project views or to make changes where necessary.

Table 14 : Z-View List

View List									
A	B	C	D	E	F	G	H	I	J
View Name	View Template	Discipline	Phase	Scale Value	1:	Detail Level	Associated Level	Sheet Number	Sheet Name
									Title on Sheet

Note: The View List will also group views by View Family, then by View Type.

3. Z-Classification Data

- Shows Omniclass data for Doors and Windows

Table 15 : Z-Classification Data

Classification Data							
A	B	C	D	E	F	G	H
Family	Family and Type	OmniClass Number	OmniClass Title	Assembly Code	Assembly Description	Category	Description

4. Z-Door List

- Internal schedule showing additional door information not shown in the plotted schedule.

Table 16 : Z-Door List

Door List																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Level	Family and Type	Type	Type Mark	Mark	Keynote	Fire Rating	OmniClass Number	OmniClass Title	UL Number	Under Cut	Actual Egress Load	Assembly Description	Assembly Name	Construction Type	Finish	Function	Operation

Note: Editing data in this schedule may affect the plotted DOOR SCHEDULE also

5. Z-Egress Route Distances

- Internal schedule for calculating egress paths for Life Safety purposes

Table 17 : Z-Egress Route Distances

Egress Route Distances	
A	B
Family and Type	Total Egress Path Length

6. Z-Interior Signage Schedule

- Internal schedule for editing and viewing Signage information

Table 18 : Z-Interior Signage Schedule

Interior Signage Schedule															
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Family and Type	Level	Mark	Sign Number	Sign Text	Mounting Height A/F	Sign Height	Sign Length	Mounting Type	OmniClass Number	OmniClass Title	Keynote	Sign Type	Symbol Type	Braille	Comments

Note: Editing data in this schedule may affect the plotted SIGNAGE SCHEDULE also

7. Z-Wall Schedule

- Internal schedule to facilitate review and modification of wall fire rating and assembly information.

Table 19 : Z-Wall Schedule

Wall Schedule						
A	B	C	D	E	F	G
Family and Type	Fire Rating	Assembly Code	Assembly Description	Fire Test #	Type	Type Mark

10 NCS – A/E/C CAD Symbols

Symbol families have been loaded and are in compliance with the current release of the National CAD Standards version 6.0. Refer to Appendix “A” for examples of the symbols used in the project.

11 Annotation/Dimensions

USACE text types are included with the template that are based upon the National CAD Standards version 6.0. Only USACE standard fonts are included in the template. Fonts that do not include the “_USACE” suffix are not USACE standard or approved and should not be used.

Specific text types included are:

8. Default 3/32”_USACE
9. Label 1/8”_USACE
10. Schedule Header 1/8”_USACE
11. Schedule Title 3/16”_USACE
12. Sub-Title 3/16”_USACE
13. Title 1/4”_USACE
14. Title Bold 1/4”_USACE

As with text, NCS 6.0 compliant dimension types are provided with the template, all suffixed with “_USACE” to indicate that they are approved for use. Only USACE standard dimension types are included in the template.

Specific dimension types included are:

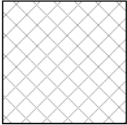
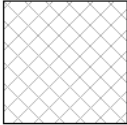
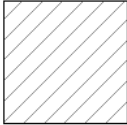
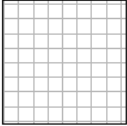
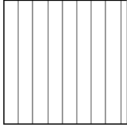
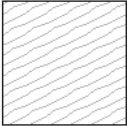
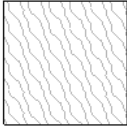
- Linear Dimensions
 - Continuous_USACE
 - Baseline_USACE
- Angular Dimensions
 - Arrow Line-Leader_USACE
- Radial Dimensions
 - Horizontal_USACE
 - Rotated_USACE
- Diameter Dimensions
 - Horizontal_USACE
 - Rotated_USACE
- Spot Elevations
 - Beam Elevation (Project)_USACE
 - Beam Elevation (Relative)_USACE
 - No Symbol (Project)_USACE
 - No Symbol (Relative)_USACE
 - Target (Project)_USACE
 - Target (Relative)_USACE
- Spot Coordinates
 - Horizontal_USACE
 - Horizontal (w-Elevations)_USACE

- Spot Slopes
 - Spot Slope_USACE

12 Filled Region Types

The following pre-defined Filled Region types are provided in the ARCH template.

Table 20 : Filled Region Types

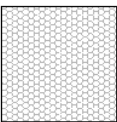
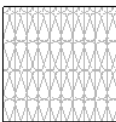
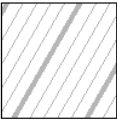
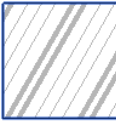
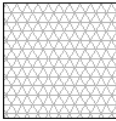
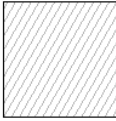
	DIAGONAL CROSSHATCH		DIAGONAL CROSSHATCH TRANSPARENT		DIAGONAL UP
	DIAGONAL DOWN		DIAGONAL DOWN TRANSPARENT		HORIZONTAL LINES
	ORTHO CROSSHATCH		SOLID BLACK		VERTICAL LINES
	WOOD 1		WOOD 2		

13 Fill Patterns

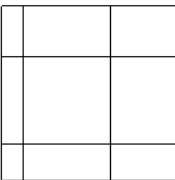
The Following Fill Patterns are also included in the ARCH template, in addition to the patterns provided from the default template provided with Revit out of the box and can be used to create additional Filled Region types as needed.

Table 21 : Fill Patterns

DRAFTING FILL PATTERNS

	EIFS_USACE		FIBERGLASS SEMI-RIGID_USACE		FIRE (1-HR)_USACE
	FIRE (2-HR)_USACE		FIRE (3-HR)_USACE		FIRE (4-HR)_USACE
	FIRE AND SMOKE (1-HR)_USACE		FIRE AND SMOKE (2-HR)_USACE		NET3_USACE
	SHAFT (1-HR)_USACE		SHAFT (2-HR)_USACE		SMOKE (0 HR)_USACE
	STONE_USACE				

MODEL FILL PATTERNS

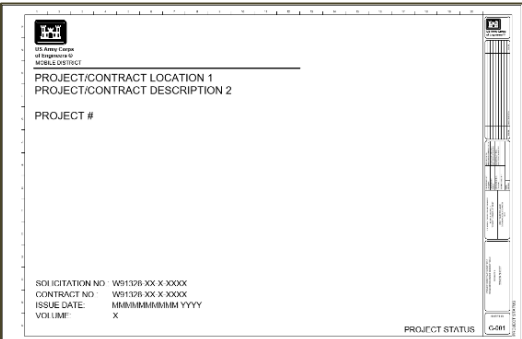
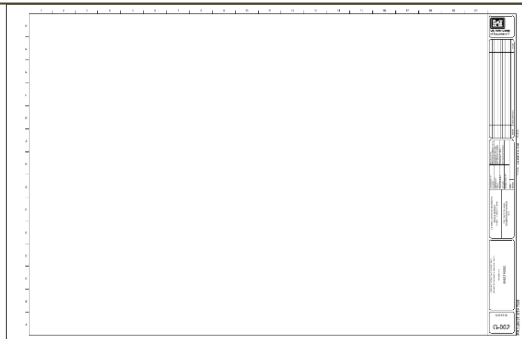
	CEILING 12X12_USACE
---	---------------------

14 Title block/Border Types

There are two title block families loaded into the template.

- **StartupScreen_Border_USACE** – for use with the starting view. *This should not be used for anything else.*
- **ANSI D_USACE** – includes two types:
 - **Cover** – for use as a cover sheet
 - **Border** – for use with standard plotted sheets.

Table 22 : Border Types

 The cover sheet title block includes a logo in the top left, followed by the text "PROJECT/CONTRACT LOCATION 1" and "PROJECT/CONTRACT DESCRIPTION 2". Below this is a large area for "PROJECT #". At the bottom left, there are fields for "SOLICITATION NO: W01326 XX X 3000X", "CONTRACT NO: W01326 XX X 3000X", "ISSUE DATE: MINIMUMMINIMUM YYYYY", and "VOL UME: X". At the bottom right, there is a "PROJECT STATUS" field and a "G&H" logo.	 The border sheet title block is a simple rectangular frame with a small logo in the top right corner.
ANSI D_USACE (Cover)	ANSI D_USACE (Border)

Refer to Appendix B for more details on Title blocks and Borders.

15 Pre-Defined Sheets

There are Several pre-defined sheets in the ARCH template:

- **0 – Starting View_USACE** – not a plotted sheet. Used as the Revit startup view with critical information about the current project and various USACE standards. Uses the StartupScreen_Border_USACE title block.
- **G-001 – Cover Sheet** – uses the ANSI D_USACE (Cover) title block.
- **0.1 - Change Request** - not a plotted sheet. Used for submitting comments, questions, and template change requests to the USACE template team. For instructions, see Appendix F.

The following sheets use the ANSI D_USACE (Border) title block.

- G-002 – Sheet Index
- A-101 - FIRST FLOOR PLAN
- A-102 - SECOND FLOOR PLAN
- A-104 - ROOF PLAN
- A-105 - FIRST FLOOR REFLECTED CEILING PLAN
- A-106 - SECOND FLOOR REFLECTED CEILING PLAN
- A-201 - NORTH AND SOUTH ELEVATIONS
- A-202 - EAST AND WEST ELEVATIONS
- A-203 - ENLARGED EXTERIOR ELEVATIONS
- A-204 - ENLARGED EXTERIOR ELEVATIONS
- A-301 - BUILDING CROSS SECTION
- A-302 - BUILDING LONGITUDINAL SECTION
- A-310 - WALL SECTIONS
- A-400 - ENLARGED CORE PLANS
- A-401 - ENLARGED UNIT PLANS
- A-510 - ROOF DETAILS
- A-520 - CEILING DETAILS
- A-530 - WALL DETAILS
- A-540 - COLUMN DETAILS
- A-601 - PARTITION TYPES
- A-602 - SOUND ISOLATION DETAILS
- A-603 - DOOR SCHEDULE AND DETAILS
- A-604 - DOOR DETAILS
- A-605 - WINDOW TYPES
- A-606 - WINDOW DETAILS
- A-801 - PERSPECTIVE VIEWS

16 Starting View

The startup view is a sheet set up to allow users/managers to review/edit project information as well as to refer to additional standards information (browser organization, view naming, sheet naming, sheet disciplines and publish order, etc.) Project information in the startup view is linked to the data in the “Project Information” dialog which is accessible from the “Manage” tab of the ribbon. This information will also populate critical fields in the plot sheets.

Table 23 : Starting View

 US Army Corps of Engineers REVIT STARTING VIEW Read Me Template Version: Architectural Template v4.3	SHEET PUBLISH ORDER <table border="1"> <thead> <tr> <th>Discipline</th> <th>Discipline Group</th> <th>Publish Order</th> </tr> </thead> <tbody> <tr><td>General</td><td>1</td><td>10</td></tr> <tr><td>Hazardous Materials</td><td>2</td><td>20</td></tr> <tr><td>Survey/Mapping</td><td>3</td><td>30</td></tr> <tr><td>Geotechnical</td><td>4</td><td>40</td></tr> <tr><td>Civil</td><td>5</td><td>50</td></tr> <tr><td>Landscape</td><td>6</td><td>60</td></tr> <tr><td>Structural</td><td>7</td><td>70</td></tr> <tr><td>Architectural</td><td>8</td><td>80</td></tr> <tr><td>Interiors</td><td>9</td><td>90</td></tr> <tr><td>Equipment</td><td>11</td><td>110</td></tr> <tr><td>Fire Protection</td><td>12</td><td>120</td></tr> <tr><td>Plumbing</td><td>13</td><td>130</td></tr> <tr><td>Process</td><td>14</td><td>140</td></tr> <tr><td>Mechanical</td><td>15</td><td>150</td></tr> <tr><td>Electrical</td><td>16</td><td>160</td></tr> <tr><td>Telecommunications</td><td>17</td><td>170</td></tr> <tr><td>Resource</td><td>18</td><td>180</td></tr> <tr><td>Other Disciplines</td><td>19</td><td>190</td></tr> <tr><td>Contractor/Shop Drawings</td><td>20</td><td>200</td></tr> <tr><td>Operations</td><td>21</td><td>210</td></tr> </tbody> </table>	Discipline	Discipline Group	Publish Order	General	1	10	Hazardous Materials	2	20	Survey/Mapping	3	30	Geotechnical	4	40	Civil	5	50	Landscape	6	60	Structural	7	70	Architectural	8	80	Interiors	9	90	Equipment	11	110	Fire Protection	12	120	Plumbing	13	130	Process	14	140	Mechanical	15	150	Electrical	16	160	Telecommunications	17	170	Resource	18	180	Other Disciplines	19	190	Contractor/Shop Drawings	20	200	Operations	21	210
Discipline	Discipline Group	Publish Order																																																														
General	1	10																																																														
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Geotechnical	4	40																																																														
Civil	5	50																																																														
Landscape	6	60																																																														
Structural	7	70																																																														
Architectural	8	80																																																														
Interiors	9	90																																																														
Equipment	11	110																																																														
Fire Protection	12	120																																																														
Plumbing	13	130																																																														
Process	14	140																																																														
Mechanical	15	150																																																														
Electrical	16	160																																																														
Telecommunications	17	170																																																														
Resource	18	180																																																														
Other Disciplines	19	190																																																														
Contractor/Shop Drawings	20	200																																																														
Operations	21	210																																																														
TEMPLATE INFORMATION: Browser Organization: Browser organization is sorted by view purpose. The view purposes are 1 Working (WRK), 2 Analysis (ANL), 3 Documentation (DOC), 4 Presentation (PRS), 5 Export (EXP). The abbreviation shown enclosed in parenthesis is to be appended to the view name as appropriate. With new created views a purpose is needed to keep views organized. Please select the appropriate purpose for each of your views (See template guides for further definitions on view purpose). View Naming: Naming of views is to follow the standard set in the template and is divided into categories. View Name Examples: <table border="1"> <thead> <tr> <th>Level</th> <th>View Type</th> <th>Function</th> <th>Region</th> <th>View Purpose</th> </tr> </thead> <tbody> <tr> <td>02_</td> <td>FP_FLOOR PLAN_</td> <td>DIMENSIONS_</td> <td></td> <td>DOC</td> </tr> <tr> <td></td> <td>EL_EAST</td> <td></td> <td></td> <td>WRK</td> </tr> <tr> <td>03_</td> <td>MP_MECHANICAL PLAN_</td> <td>HW PIPING_</td> <td>West_</td> <td>PRS</td> </tr> </tbody> </table> Working Schedules: Working Schedules are schedules that are to be used for analyzing model information but are not intended to be put on a sheet. To separate these working schedules the letter Z is to precede the schedule name so that it filters to the bottom in the schedule list in your project browser. Schedule Name Examples: Z-Working Door Schedule Z-Working Structural Framing Schedule Sheet Naming and Organization: Typical naming standards still apply following AEC CAD and NCS Standards. Sheet Examples: S-101 - ROOF FRAMING PLAN M-101 - MECHANICAL PIPING PLAN For More Information: USACE CAD/BIM Technology Center USACE Starting View - Version 4.3	Level	View Type	Function	Region	View Purpose	02_	FP_FLOOR PLAN_	DIMENSIONS_		DOC		EL_EAST			WRK	03_	MP_MECHANICAL PLAN_	HW PIPING_	West_	PRS	PROJECT INFORMATION: USACE District: _____ Project Number: _____ Issue Date: _____ Project Name: _____ Contractor Name and ID Number: _____ Project Address: _____ Contractor Address: _____ Contract Number: _____ Solicit Number: _____ File Number: _____ TEMPLATE NOTES Building ID: This parameter information (BldgID_USACE) is included on a sheet for situations that involve multiple buildings (Building: Building 1, Building 2, ...). This value is a sheet parameter that will be appear when the value is filled out in the sheet properties. View Purpose: This classification (ViewPurpose_USACE) is a parameter assigned to the view category and allows views to be organized in a way to group them and make them quickly accessible. Having all views with a single purpose makes it more difficult to find views that are used on sheets, views used for creating Navisworks exports, or for presentation views for clients. New views are automatically assigned the view purpose that is assigned to their view type, as defined by the view template that is used by that view. Sheet Naming: We have included the NCS standard sheet type abbreviation for model view names as part of the standing view naming. These are recommended (refer to template manual for more information): - FP - Floor Plan - CP - Ceiling Plan - EP - Enlarged Plan - EL - Elevation - SP - Site Plan - QP - Equipment Plan																																											
Level	View Type	Function	Region	View Purpose																																																												
02_	FP_FLOOR PLAN_	DIMENSIONS_		DOC																																																												
	EL_EAST			WRK																																																												
03_	MP_MECHANICAL PLAN_	HW PIPING_	West_	PRS																																																												

In addition to the fields in the startup view title block itself, there are two additional “hidden” fields that are accessible by selecting the title block itself and editing the title block properties. After selecting the title block, in the Properties Palette under “Other” are two properties:

- **Email Contact** – selecting this will launch the default email client with an email addressed to the USACE Revit Template Team.
- **USACE Revit Template Contact** – Selecting this will launch a web browser and navigate to the CAD-BIM Technology Center’s home page.

Table 24 : Email Link

Other	
Email Contact	mailto:USACE-Revit-Template-Team@erdc.dren.mil?subject=USA...
USACE Revit Template Contact	https://cadbimcenter.erd.dren.mil/revit%20templates
File Path	

17 Levels

The following levels have been defined in the template:

Table 25 : Levels (Floors)

Level Name	Elevation from Project Datum	Building Story (Y/N)
00 LEVEL TOF	-3'-0"	No
01 LEVEL FF	0'-0"	Yes
02 LEVEL	12'-0"	Yes
03 LEVEL ROOF	24'-0"	Yes

Levels should be moved up or down as required to accommodate individual project needs.

18 Pre-loaded Families

Annotation Families

The following pre-loaded annotation families have been pre-loaded into the ARCH template:

Table 26 : Preloaded Annotation Families

Family Name	Source	NCS 6 Compliant
ANSI D_USACE	USACE	Yes
Callout Head_USACE	USACE	Yes
Centerline_USACE	USACE	Yes
Egress Path Tag_USACE	USACE	N/A
Elevation Mark Exterior_USACE	USACE	Yes
Elevation Mark Interior_USACE	USACE	Yes
Elevation Mark Pointer Exterior_USACE	USACE	Yes
Elevation Mark Pointer Interior_USACE	USACE	Yes
Exit Sign Symbol_USACE	USACE	N/A
FFE-Casework Tag_USACE	USACE	Yes

FFE-Furniture System Tag_USACE	USACE	Yes
FFE-Generic Model Element Tag_USACE	USACE	Yes
FFE-Specialty Equipment Tag_USACE	USACE	Yes
Fire Smoke Symbol_USACE	USACE	N/A
Graphic Scales_USACE	USACE	Yes
Grid Head – Circle_USACE	USACE	Yes
Keynote Tag_USACE	USACE	Yes
Level Head – Circle_USACE	USACE	Yes
Material Tag_USACE	USACE	No
North Arrow_USACE	USACE	Yes
Plumbing Fixture Tag_USACE	USACE	Yes
Revision Tag_USACE	USACE	Yes
Room Tag_USACE	USACE	Yes
Room Occupancy Classification Tag_USACE	USACE	No
Section Head – no arrow_USACE	USACE	Yes
Section Head_USACE	USACE	Yes
Section Tail – Filled_USACE	USACE	Yes
Sign Interior Tag_USACE	USACE	No
Space Tag_USACE	USACE	Yes
Spot Elevation – Target Filled_USACE	USACE	Yes
Stair ID_Tag_USACE	USACE	N/A
Stair Landing Tag_USACE	USACE	N/A
Stair Run Tag_USACE	USACE	N/A
Stair Support Tag_USACE	USACE	N/A
Stair Tag_USACE	USACE	N/A
StartupScreen_Border_USACE	USACE	N/A
View Reference_USACE	USACE	Yes
View Title_USACE	USACE	Yes
Wall Tag - Square_USACE	USACE	N/A
Window Tag_USACE	USACE	Yes

Detail Items

The following Detail Item families have been preloaded into the ARCH template in addition to the standard Out of the Box preloaded families:

Table 27 : Preloaded Detail Item Families

Family Name	Source	Type Definitions
KeyPlan_Areas_USACE	USACE	KeyPlan_Areas

Doors

The following Out of the Box Door families have been preloaded into the ARCH template in place of the door family that is typically found in the Out of the Box architectural template:

Table 28 : Preloaded Door Families

Family Name	Source	Type Definitions
Door-Curtain-Wall-Single-Glass	Revit Imperial Library	Door-Curtain-Wall-Single-Glass
Door-Double-Flush_Panel	Revit Imperial Library	68" x 80"
	Revit Imperial Library	68" x 82"
	Revit Imperial Library	68" x 84"
	Revit Imperial Library	72" x 78"
	Revit Imperial Library	72" x 80"
	Revit Imperial Library	72" x 82"
	Revit Imperial Library	72" x 84"
Door-Single-Panel	Revit Imperial Library	30" x 80"
		30" x 84"
		32" x 84"
		34" x 80"
		34" x 84"
		36" x 80"
		36" x 84"

Generic Models

The following Generic Model families have been preloaded into the ARCH template in addition to those that are typically found in the Out of the Box architectural template:

Table 29 : Preloaded Generic Model Families

Family Name	Source	Type Definitions
Egress Path_GenModel_USACE	USACE	CP
Door-Double-Flush_Panel	USACE	CP 2
	USACE	CP 3

Specialty Equipment

The following Specialty Equipment families have been preloaded into the ARCH template:

Table 30 : Preloaded Specialty Equipment Families

Family Name	Source	Type Definitions
Sign Interior_USACE	USACE	Sign - 6" x 6"
		Sign - 6" x 12"
		Sign - 6" x 18"
		Sign - 12"x 12"
		Sign - 12" x 18"

19 Model System Family Types

Ramps

The following model System Family Types have been created in the ARCH Template in place of or in addition to the default types that are found in the Out of the Box architectural template:

Table 31 : Model System Family Types

Family Name	Type Definitions
Ramp	Ramp_USACE
Pad	Pad_USACE
Basic Wall	Generic-1-Hr Fire/Smoke_USACE
	Generic-1-Hr Smoke Resistive 6" _USACE
	Generic-3-hr Fire Wall 6" _USACE
	Generic-4-hr Fire Wall 6" _USACE
	Interior - Mtl Stud 5-1/2in_Gyp 2-Side-1Hr_USACE
	Interior - Mtl Stud 6-1/8in Gyp 2-Side-2Hr_USACE
	Interior - Mtl Stud 6-1/8in_Gyp 2-Side-2Hr Smoke_USACE

20 References

The location for downloading the templates is <https://cadbim.usace.army.mil/BIM>. Links to documentation, Q&A and a review form is also available on this site.

National CAD Standards (NCS) <https://www.nationalcadstandard.org/ncs6/>

A/E/C Graphics Standard – Release 2.1

August 2019

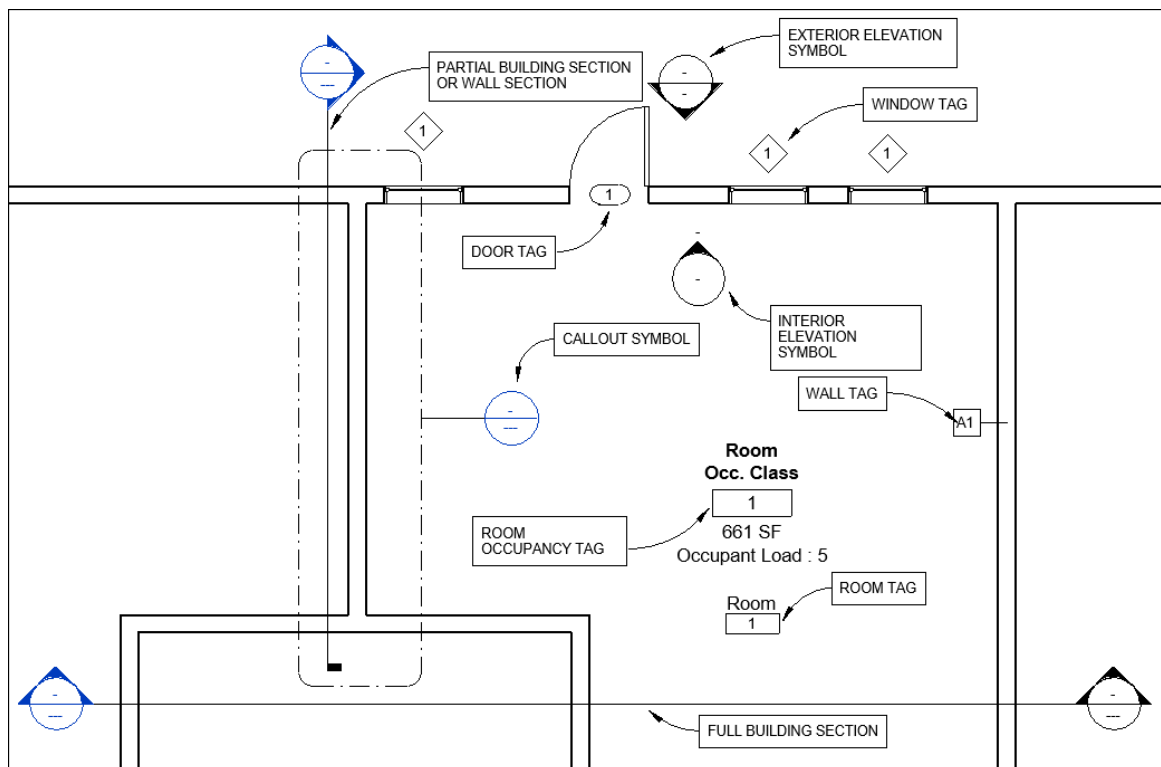
Please direct questions or comments about the templates to: [USACE Revit Template Team](#)

Appendix A: Annotation Symbols and the NCS 6.0

General Symbols

The symbols shown below are based upon the requirements of the NCS 6.1. Images are not to scale.

Table 32 : General Symbols



View Title – Viewports

The following viewport types and their associated titles are in the template:

Table 33 : Viewport Types

View – Title – Default_USACE (default viewport type)		
	Title: ¼" Other text: 3/32"	 01 FLOOR PLAN 1/8" = 1'-0"
	Title:	View Title_USACE: Default
	Show Title:	Yes
	Show Line:	Yes
View – Title – No Number or Line_USACE		
	Title: ¼" Other text: 3/32"	01 FLOOR PLAN 1/8" = 1'-0"
	Title:	View Title_USACE: No Number
	Show Title:	Yes
	Show Line:	No
View – Title – No Number_USACE		
	Title: ¼" Other text: 3/32"	01 FLOOR PLAN 1/8" = 1'-0"
	Title:	View Title_USACE: No Number
	Show Title:	Yes
	Show Line:	Yes
View – Title – No Title, Number or Line_USACE		
	Title: N/A Other text: N/A	
	Title:	<none>
	Show Title:	No
	Show Line:	No
View – Title – Reference Sheet_USACE		
	Title: ¼" Other Text: 3/32"	 01 FLOOR PLAN 1/8" = 1'-0"
	Title:	View Title_USACE: Reference Number
	Show Title:	Yes
	Show Line:	Yes

Veiw - Title - Not to Scale_USACE		
	Title: 1/4" Other Text: 3/32"	 01 FLOOR PLAN
	Title:	View Title_USACE: Not to Scale
	Show Title:	Yes
	Show Line:	Yes

Symbol Component Families

Annotation Families

- Family: Callout_Head_USACE
 - Type: 1/8" Radius
- Family: Centerline_USACE
 - Type: Centerline
- Family: Egress Path Tag_USACE
 - Type: Egress Path Tag_USACE
- Family: Elevation Mark Exterior_USACE
 - Type: Detail Number and View Name
- Family: Elevation Mark Interior_USACE
 - Type: Filled Arrow and View Name
- Family: Elevation Mark Pointer Exterior_USACE
 - Type: Detail Number
- Family: Elevation Mark Pointer Interior_USACE
 - Type: Filled Arrow
- Family: Exit Sign Symbol_USACE
 - Exit Sign Ceiling
- Family: FFE-Casework Tag_USACE
 - Boxed
 - Standard
- Family: FFE-Furniture System Tag_USACE
 - Boxed
 - Standard
- Family: FFE-Generic Model Element Tag_USACE
 - Boxed
 - Standard
- Family: FFE-Specialty Equipment Tag_USACE
 - Boxed
 - Standard
- Family: Fire Smoke Symbol_USACE
 - 1 HR Fire Rating
 - 1 HR Fire Smoke Rating
 - 2 HR Fire Rating
 - 2 HR Fire Smoke Rating
 - 3 HR Fire Rating
 - 4 HR Fire Rating

- Family: Graphic Scales_USACE
 - Type: Arch Scale 1"-1'-0" Scale
 - Type: Arch Scale 1-1/2"=1'- 0" Scale
 - Type: Arch Scale 1/2"=1'- 0" Scale
 - Type: Arch Scale 1/4"=1'- 0" Scale
 - Type: Arch Scale 1/8"=1'- 0" Scale
 - Type: Arch Scale 1/16"=1'- 0" Scale
 - Type: Arch Scale 1/32"=1'- 0" Scale
 - Type: Arch Scale 1/64"=1'- 0" Scale
 - Type: Arch Scale 3"=1'- 0" Scale
 - Type: Arch Scale 3/4"=1'- 0" Scale
 - Type: Arch Scale 3/8"=1'- 0" Scale
 - Type: Arch Scale 3/16"=1'- 0" Scale
 - Type: Arch Scale 6"=1'- 0" Scale
 - Type: Arch Scale 12"=1'- 0" Scale
 - Type: Civil Scale 1 to 1 Scale
 - Type: Civil Scale 1 to 2 Scale
 - Type: Civil Scale 1 to 5 Scale
 - Type: Civil Scale 1 to 5 Scale
 - Type: Civil Scale 1"=20' Scale
 - Type: Civil Scale 1"=30' Scale
 - Type: Civil Scale 1"=40' Scale
 - Type: Civil Scale 1"=50' Scale
 - Type: Civil Scale 1"=60' Scale
 - Type: Civil Scale 1"=80' Scale
 - Type: Civil Scale 1"=100' Scale
 - Type: Civil Scale 1"=200' Scale
 - Type: Civil Scale 1"=300' Scale
 - Type: Civil Scale 1"=400' Scale
- Family: Grid Head – Circle_USACE
 - Type: Circle 3/8"
- Family: Keynote Tag_USACE
 - Type: Keynote Number – Boxed – Large
 - Type: Keynote Number – Boxed – Small
 - Type: Keynote Number – Sheet Keynote
- Family: Level Head – Circle_USACE
 - Type: Circle
- Family: Material Tag_USACE
 - Type: Material Tag
- Family: North Arrow_USACE
 - Type: Plan North
- Family: Plumbing Fixture Tag_USACE
 - Boxed
 - Standard
- Family_Revision Tag_USACE
 - Type: Revision Tag

- Family: Room Tag_USACE
 - Type: Room No. with Area
 - Type: Room No. with Volume
 - Type: Room Tag
- Family: Room_Occupancy_Classification_Tag_USACE
 - Occupancy Classification Tag w/ Load, Area
- Family: Section Head -no arrow_USACE
 - Type: Section Head – no arrow
- Family: Section Head_USACE
 - Type: Section Head_Filled
- Family: Section Tail – Filled_USACE
 - Type: 1/16" x 1/8"
- Family: Sign Interior Tag_USACE
 - Boxed
 - Full Information
 - Sign ID
 - Sign ID and Information
- Family: Space Tag_USACE
 - Type: Space Tag
 - Type: Space Tag with Area
 - Type: Space Tag with Volume
- Family: Spot Elevation – Target Filled_USACE
 - Type: Spot Elevation – Target Filled
- Family: Stair Landing Tag_USACE
 - Stair Landing Tag
- Family: Stair Run Tag_USACE
 - Standard
 - Type Mark
- Family: Stair Support Tag_USACE
 - Stair Support Tag
- Family: Stair Tag_USACE
 - Standard
 - Type Mark
- Family: StartupScreen_Border_USACE
 - Type: Revit Starting View
- Family: View Reference_USACE
 - Type: View Reference
- Family: View Title_USACE
 - Type: Default
 - No Number
 - NTS
 - Reference Number
- Family: Wall Tag - Square_USACE
 - 1/2"
 - 1/4"
- Family: Window Tag_USACE
 - Window Tag

The ANSI D_USACE title block “Cover” and “Border” types meet the USACE A/E/C CAD Standards for 22” x 34” title blocks.

 US Army Corps of Engineers ® DISTRICT	PROJECT # PROJECT STATUS				
SOLICITATION NO.: W91328-XX-X-XXXX CONTRACT NO.: W91328-XX-X-XXXX ISSUE DATE: MMMMMMMMMM YYYY VOLUME: X	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">  US Army Corps of Engineers ® </td> </tr> <tr> <td style="width: 50%; vertical-align: top;"> PROJECT NO. CONTRACT NO. ISSUE DATE VOLUME </td> <td style="width: 50%; vertical-align: top;"> PROJECT STATUS PROJECT DESCRIPTION </td> </tr> </table>	 US Army Corps of Engineers ®		PROJECT NO. CONTRACT NO. ISSUE DATE VOLUME	PROJECT STATUS PROJECT DESCRIPTION
 US Army Corps of Engineers ®					
PROJECT NO. CONTRACT NO. ISSUE DATE VOLUME	PROJECT STATUS PROJECT DESCRIPTION				

[illegible]

Text Box:

Most font sizes are 3/32". There is not an "Approved By:" field however there is a "Submitted By:" field. The "ISSUE DATE" field is the Project Issue Date, which is linked to the "Project Issue Date" property in the "Project Information" dialog box, accessible from the "Manage" tab of the ribbon.

Some fields in past versions of the template that might require multiple lines of text have now been converted to multiline text values. Selecting the field to edit it will bring up a dialog box for entering text and allows carriage returns.

The "Sheet Name" property of the sheet is used by the "SHEET NAME" field. This is a single-line text parameter. The "SHEET NAME" field is linked to the "SheetTitle_USACE" property of the sheet. This is a multi-line text parameter and must be edited from the Properties Palette when in the sheet view.

Building ID:

The "BldgID_USACE" sheet property is optional for use in cases where a project is to be segmented into multiple buildings (UNIT "A", UNIT "B", etc.) or separate parts ("EAST", "WEST", etc.). Each sheet may be identified with a specific Building ID label. This label is blank by default. Additionally it can be turned on and off by editing the properties of the title block on the sheet and checking its display on or off.

Revision Box:

There are only seven lines of revisions that will be visible since that will be a USACE standard requirement. The font is set at 3/32" to match the standards. For more revisions than the eight shown, Revit will keep the top 8 most current revisions in the list but will keep the previous ones in memory as part of the Project Information.

Guide Grid

There is a guide grid available for all sheets, with spacing set to 1 1/2" to match the sheet grid. It can be enabled for a sheet by setting the "Guide Grid" property of the sheet to "22x34_USACE".

Project Status

The “PROJECT STATUS” field on the title block is linked to the “Project Status” property in the Project Information dialog box.

Optional Fields

There are two optional fields and associated optional title fields that are invisible by default but that can be turned on by editing the title block border type properties. These fields are linked to the following properties in the Project Information dialog box:

- OPTION TITLE 1 – corresponds to the “AlternateInfoTitle1_USACE” property
- OPTION FIELD 1 – corresponds to the “AlternateInfo1_USACE” property
- OPTION TITLE 2 – corresponds to the “AlternateInfoTitle2_USACE” property
- OPTION FIELD 2 – corresponds to the “AlternateInfo2_USACE” property

Appendix C: Project Parameters

There are several Project and Sheet Parameters defined in the ARCH template that will apply to all disciplines. Each discipline will have additional parameters that apply only to that discipline, which will be addressed in the discipline-specific templates and associated documentation.

Many of these parameters are “Shared Parameters” and are dependent upon the existence of the Shared Parameter File:

USACE_SharedParameters_Common_v4.3.txt which should accompany the *USACE_Revit2019_Template_ARCH_v4.3.rte* template. These shared parameters allow the custom fields in the title block to be edited. In the case where the fields cannot be edited directly or don’t update when parameters in the project are edited, it is most likely because the connection to the shared parameter file has been lost or was never established. This can be addressed by first locating the file, then establishing it as the current shared parameter file using the “Shared Parameters” tool on the “Manage” tab of the ribbon.

Note: Some custom applications that are available for Revit from a variety of sources will use their own shared parameter file and will replace the default file with their own without warning. That will also cause the title block fields to become non-functional as well.

Project Parameters on Border Title Block

The mapping below shows the Revit Project Information dialog box with the location of the parameters in the list and the corresponding field in the title block of the border sheet. These project level values will be common to all sheets in the project. A change to them in one sheet will affect all sheets.

Table 36 : Title Block - Project Parameters

Parameter	Value
Title Text	
ContractNo_USACE A	W91328-XX-X-XXXX
ContractorID_USACE	ID # C
ContractorName_USACE	CONTRACTOR NAME
Filename_USACE	USACE_Revit2019_Template_BASE_v4.3.rte
FileNo_USACE	FILE NUMBER
ContractorAddress_USACE	ADDRESS
SolicitNo_USACE	W91328-XX-X-XXXX
ContractorLocation_USACE	CONTRACTOR LOCATION C
AlternateInfoTitle1_USACE	OPTION TITLE 1
AlternateInfo1_USACE D	OPTION FIELD 1
AlternateInfoTitle2_USACE	OPTION TITLE 2
AlternateInfo2_USACE	OPTION FIELD 2 E
General	
DistrictName_USACE F	DISTRICT
DistrictLocation_USACE	19 SAINT JOSEPH STREET
Other	
Project Issue Date G	MMMMMMMMMM YYYY
Project Status	PROJECT STATUS
Client Name	CLIENT NAME
Project Address	PROJECT/CONTRACT LOCATION 1
Project Name	PROJECT/CONTRACT DESCRIPTION 2
Project Number	PROJECT #
ProjectDescriptor_USACE	PROJECT/CONTRACT DESCRIPTION/IDENTI
Volume_USACE	X
ProjectCode_USACE	
ProjectLocation_USACE	
Spec#_USACE	

G	B	A	D
ISSUE DATE: MMMMMMMMMM YY	SOLICITATION NO.: W91328-XX-X-XXXX	CONTRACT NO.: W91328-XX-X-XXXX	OPTION TITLE 1 OPTION FIELD 1
DESIGNED BY: Designer	DRAWN BY: Author	CHECKED BY: Checker	SUBMITTED BY:
US ARMY CORPS OF ENGINEERS DISTRICT 19 SAINT JOSEPH STREET			OPTION TITLE 2 OPTION FIELD 2 E
CONTRACTOR NAME CONTRACTOR LOCATION ID #			SIZE: ANSI D

Sheet Parameters and Additional Project Parameters on Border Title Block

The mapping below shows Revit Sheet Properties and additional Project Properties with the location of the corresponding fields in the Border title block.

Table 37 : Title Block - Sheet Parameters

Parameter	Value
Other	
Project Issue Date	MMMMMMMMMM YYYY
Project Status	PROJECT STATUS
Client Name	CLIENT NAME
Project Address	PROJECT/CONTRACT LOCATION
Project Name	PROJECT/CONTRACT DESCRIPTION
Project Number	PROJECT #
Project/Contract Description	PROJECT/CONTRACT DESCRIPTION

Current Revision	Value
Approved By	Approver
Designed By	Designer
Checked By	Checker
Drawn By	Author
Sheet Number	G-002
Sheet Name	SHEET INDEX
Sheet Issue Date	10/05/20
PlotDate_USACE	
SheetPublishOrder_USACE	
ProductionData_USACE	
BldgID_USACE	BLDG ID
SubmittedBy_USACE	
SheetDiscipline_USACE	GENERAL
Level2Designator_USACE	
SheetTitle_USACE	SheetTitle_USACE
Appears In Sheet List	☒
Revisions on Sheet	Edit...
Other	
File Path	C:\Users\mdillon\Doc...
UserDefined_USACE	
ProjectStatusVisibility_USACE	☒
PublishOrder_USACE	10.000000
DisciplineGroup_USACE	1
PrintSheet_USACE	☒
Guide Grid	<None>

DESIGNED BY:	ISSUE DATE	SOLICITATION	CONTRACT	OPTION TITLE 1	OPTION FIELD 1	OPTION TITLE 2	OPTION FIELD 2
DESIGNER	MM/YY/YY	W91328-XX	W91328-XX				
DRAWN BY:							
CHECKED BY:							
SUBMITTED BY:							
SIZE:							
ANSI D							

PROJECT/CONTRACT LOCATION	PROJECT/CONTRACT DESCRIPTION	PROJECT #	SHEET INDEX	SheetTitle_USACE

Sheet Parameters on Both the Border and Cover Title Blocks

The mapping below shows Revit Sheet Properties that occur on both the Border title block and Cover title block:

Table 38 : Title Block - Sheet Parameters

The image shows the Revit Sheet Properties dialog box on the left and a portion of a title block on the right. The dialog box has a 'Parameters' tab with the following parameters:

- Drawn By: Author
- Sheet Number: G-001
- Sheet Name: COVER SHEET
- Sheet Issue Date: 10/05/20
- PlotDate_USACE
- SheetPublishOrder_USACE
- ProductionDate_USACE
- BldgID_USACE
- SubmittedBy_USACE
- SheetDiscipline_USACE: GENERAL
- Level2Designator_USACE
- SheetTitle_USACE
- Appears in Sheet List: ☒
- Revisions on Sheet: Edit...
- Other

The title block on the right contains the following fields:

- PROJECT/CONTRACT LOCATION
- PROJECT/CONTRACT DESCRIPTION
- PROJECT #
- COVER SHEET
- SHEET ID
- BLDG_ID
- G-001

Project Parameters on the Cover Sheet Title Block

The project parameter mappings for the cover sheet title block are shown below.

Table 39 : Cover Sheet - Parameters

The image shows a Revit cover sheet template with the following fields:

- PROJECT/CONTRACT LOCATION
- PROJECT/CONTRACT DESCRIPTION
- PROJECT #
- Solicitation No.: W91328-XX-X-XXX
- Contract No.: W91328-XX-X-XXXX
- Issue Date: MMMMMMMMMMMM YYYY
- Volume: X

A table lists parameters and their values:

Parameter	Value
Title Text	
ContractNo_USACE	W91328-XX-X-XXXX
ContractorID_USACE	ID #
ContractorName_USACE	CONTRACTOR NAME
Filename_USACE	USACE_Revit2019_Template_BASE_v4.3.rte
FileNo_USACE	FILE NUMBER
ContractorAddress_USACE	ADDRESS
SolicitNo_USACE	W91328-XX-X-XXXX
ContractorLocation_USACE	CONTRACTOR LOCATION
AlternateInfoTitle1_USACE	OPTION TITLE 1
AlternateInfo1_USACE	OPTION FIELD 1
AlternateInfoTitle2_USACE	OPTION TITLE 2
AlternateInfo2_USACE	OPTION FIELD 2
General	
DistrictName_USACE	DISTRICT
DistrictLocation_USACE	19 SAINT JOSEPH STREET
Other	
Project Issue Date	MMMMMMMMMM YYYY
Project Status	PROJECT STATUS
Client Name	CLIENT NAME
Project Address	PROJECT/CONTRACT LOCATION
Project Name	PROJECT/CONTRACT DESCRIPTION
Project Number	PROJECT #
ProjectDescriptor_USACE	PROJECT/CONTRACT DESCRIPTION/IDENTI
Volume_USACE	X
ProjectCode_USACE	
ProjectLocation_USACE	
Spec#_USACE	

The status bar at the bottom shows PROJECT STATUS and SHEET ID G-001.

Multiline Text for Parameters

Custom parameters that may need to have multiple lines of text have been supplied as multi-line text parameters. However, some default parameters that are defined as single-line text parameters cannot be made multi-line as a default property of the parameter. To create multiple lines of text in these types of parameters, such as the “Project Name” parameter in the Project Information dialog box:

- Open Notepad and create multiline text.
- Use “hard returns” to divide lines
- Copy the text to the clipboard
- In Revit, paste the text from the clipboard into the parameter value box.
- Take care not to use more lines of text than the space available on the title block allows.

Sheet Parameters Visibility Settings

There are both Instance and Type parameter title block settings for all title blocks to set visibility of certain fields on the sheet. Type parameter changes will affect the visibility of fields on all sheets of that type. Instance parameter changes will only affect the fields on the current sheet.

Table 40 : Sheet Parameters - Visibility Settings

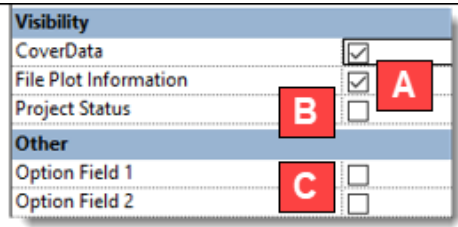
Visibility Settings: Project Level (Type Parameters)		Default Value	
File Plot Information	A	On	
Project Status	B	Off	
Option Field 1		Off	
Option Field 2	C	Off	
Visibility Settings: Sheet Level (Instance Parameter)		Default Value	
Building_ID_Visibility	D	Off	

Table 41 : Project Status, Optional Fields Parameters

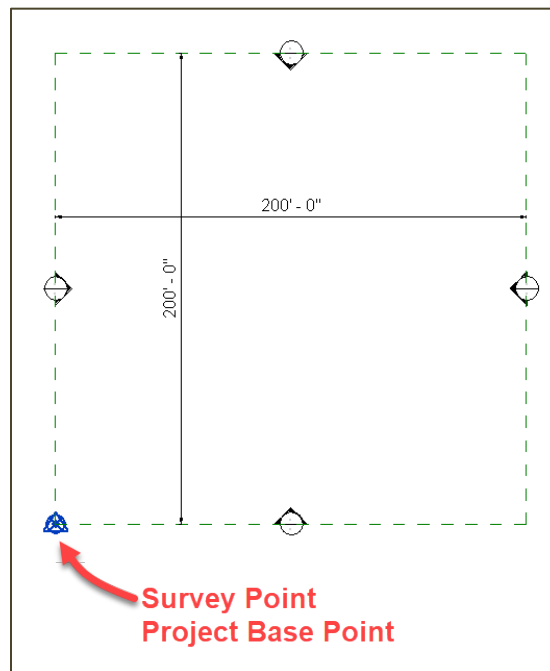
Project Status and Building_ID	Option Fields and File Plot Information																														
SHEET ID BLDG ID G-002 PROJECT STATUS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">DESIGNED BY: Designer</td> <td style="width: 20%;">ISSUE DATE: MMMMMMMMMM YYYY</td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> <tr> <td>DRAWN BY: Author</td> <td>SOLICITATION NO.: W91328-XX-X-XXXX</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CHECKED BY: Checker</td> <td>CONTRACT NO.: W91328-XX-X-XXXX</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SUBMITTED BY:</td> <td>OPTION TITLE 1 OPTION FIELD 1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SIZE: ANSI D</td> <td>OPTION TITLE 2 OPTION FIELD 2</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> Plot Date: 10/18/2020 4:55:14 PM File Path: C:\Users\mfon\Documents\Drawings	DESIGNED BY: Designer	ISSUE DATE: MMMMMMMMMM YYYY					DRAWN BY: Author	SOLICITATION NO.: W91328-XX-X-XXXX					CHECKED BY: Checker	CONTRACT NO.: W91328-XX-X-XXXX					SUBMITTED BY:	OPTION TITLE 1 OPTION FIELD 1					SIZE: ANSI D	OPTION TITLE 2 OPTION FIELD 2				
DESIGNED BY: Designer	ISSUE DATE: MMMMMMMMMM YYYY																														
DRAWN BY: Author	SOLICITATION NO.: W91328-XX-X-XXXX																														
CHECKED BY: Checker	CONTRACT NO.: W91328-XX-X-XXXX																														
SUBMITTED BY:	OPTION TITLE 1 OPTION FIELD 1																														
SIZE: ANSI D	OPTION TITLE 2 OPTION FIELD 2																														

Appendix D: Coordination of Template

The template has been set up with the elevation views placed around a 200' grid

A square starting from the Project Base Point/Survey Point has been established as the modeling space. This will provide a consistent starting environment for the models and also facilitates having the model located fully within the positive X,Y quadrant.

Table 42 : Project Location



Appendix E: Special Schedules

Z-Sheet Information Lists and Z-View List

These schedules allow review of information contained in the views (such as view scale, name, associated level, template assignment, sheet number and name, and phase, etc.) and sheets (such as sheet number and name, designer, creator and revision information. These schedules should not be plotted and are intended for internal project management use. The Z-Sheet Information list also includes exposed fields for reviewing and editing sheet disciplines, discipline group and publish order settings.

Note: In general, any schedule whose name begins with "Z-" and is in sentence case is not intended for plotting purposes.

Appendix F: Method for Submitting Comments and Change Requests

Questions and change requests to the template may be submitted using the Sheet: 0.1 - Change Request, shown below. Supply the data requested in the title block using the *Default 3/32" USACE* Text Type, print to PDF and submit to the USACE Revit Template Team following the instructions included in the title block.

Table 43 : Change Request Sheet

U.S. Army Corps of Engineers REVIT TEMPLATE CHANGE REQUEST The proponent agency ERDC	U.S. Army Corps of Engineers REVIT TEMPLATE CHANGE REQUEST The proponent agency ERDC
Complete the form below to submit questions, comments, suggestions, and recommendations for the USACE Revit Template. Your request will be sent to the technical proponent and will be reviewed with the proper personnel. PDF this page and email to "USACE-Revit-Template-Team@erdc.dren.mil"	If needed to better describe your request submit a drawing, component, graphic, bitmap, etc of the description on page one's issue and any recommendations for the USACE Revit Template. PDF this page and email to "USACE-Revit-Template-Team@erdc.dren.mil" with page one.
1. Which Revit Template Discipline Architectural	6. Drawing of issue or problem
2. Submitters Name	
3. Submitters Email	
4. Submitters District or Company	
5. Technical ☐ ☐ Non-technical (spelling or grammar)	
6. Issue or problem	7. Drawing of Proposed Solution
7. Proposed Solution:	
USACE Revit Template Change Request	USACE Revit Template Change Request
Page 1 of 2	Page 2 of 2

Appendix G: Change Notes

Version	Changes Made	Effect	Category of Change	Change Date	Purpose
4.3	Corrected problem with “Submitted By:” label in border sheet.		Title Sheet	4/17/2022	“Submitted By” allows User to complete the sheet information.