

Mapping Behavior when Revit Dimensions are exported to AutoCAD Dimensions

Revit Dimension Parameter	Mapped to the DWG Dimension Style Property	Comments
Aligned Dimension	Rotated Dimension	
Linear Dimension	Rotated Dimension	
Angular Dimension	3-point Angular Dimension	
Radial Dimension	Radial Dimension	
Arc Length Dimension	Arc Length Dimension	
Spot Elevation	The parameter is not mapped	Spot Elevation dimensions are exported as basic entities, such as lines, texts, etc.
Spot Coordinate	The parameter is not mapped	Spot Coordinate dimensions are exported as basic entities, such as lines, texts, etc.
Spot Slope	The parameter is not mapped	Spot Slope dimensions are exported as basic entities, such as lines, texts, etc.
Dimension Text	Text style	A unique text style is created.
-	Annotative	The Annotative property is set to 'No' in AutoCAD for dimensions exported from Revit.
-	Associative	The Associative property is set to 'No' in AutoCAD for dimensions exported from Revit.
Graphics		
Dimension String Type - Continuous	Rotated Dimension	
Dimension String Type - Baseline Dimension	Rotated Dimension	
Dimension String Type - Ordinate Dimension	Rotated Dimension	
Tick Mark	Arrowheads First and Second	
o None	o None	
o Arrow 30 Degree	o Open 30	
o Arrow Filled 15 Degree	o Closed filled	
o Arrow Filled 20 Degree	o Closed filled	

Revit Dimension Parameter	Mapped to the DWG Dimension Style Property	Comments
o Arrow Filled 30 Degree	o Closed filled	
o Box Filled 3/32"	o Box filled	
o Diagonal 1/8"	o Oblique	
o Diagonal 3/64"	o Oblique	
o Dot Filled 1/16"	o Dot small	
o Dot Filled 1/8"	o Dot small	
o Dot Open 1/16"	o Dot blank	
o Filled Elevation Target 3/16"	o Closed filled	Revit exports the tick mark as a temporary graphic to preserve visual fidelity. A closed filled arrow is assigned to the dimension style.
o Heavy End 1/8"	o Closed filled	Revit exports the tick mark as a temporary graphic to preserve visual fidelity. A closed filled arrow is assigned to the dimension style.
o Triangle Filled 3/32"	o Datum triangle filled	
Line Weight	Lineweight	
Tick Mark Line Weight	The parameter is not mapped	
Dimension Line Extension	Extend beyond ticks	
Flipped Dimension Line Extension	The parameter is not mapped	
Witness Line Control	Fixed length extension lines	
Witness Line Length	Fixed length extension lines > Length	
Witness Line Gap to Element	Offset from origin	
Witness Line Extension	Extend beyond dim lines	
Centerline Symbol	The parameter is not mapped	Revit exports the center line symbol as a separate block to preserve visual fidelity.
Centerline Pattern	Extension lines > Linetype	
Centerline Tick Mark	Arrowheads	
Interior Tick Mark	Arrowheads > Second	
Ordinate Dimension Settings		
Text Orientation	Support Parallel to Dimension Line and Parallel to Witness Line	

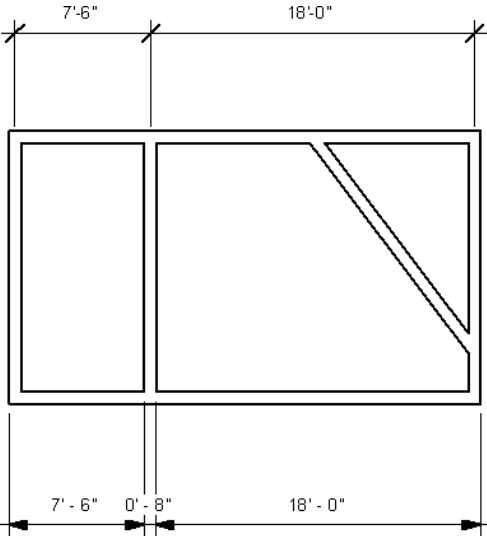
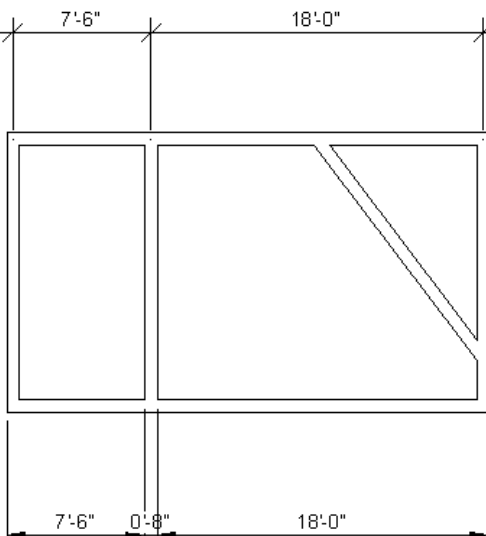
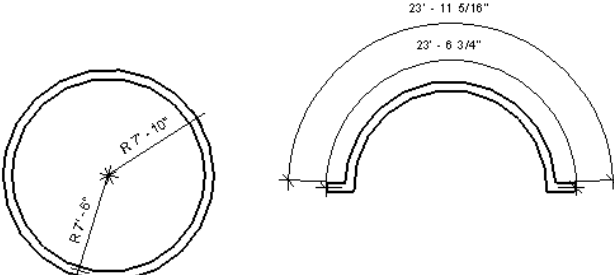
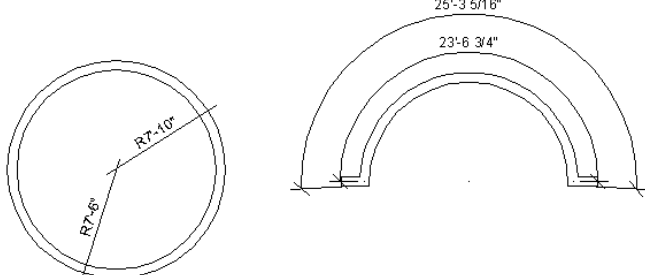
Revit Dimension Parameter	Mapped to the DWG Dimension Style Property	Comments
Origin Visibility set to: a) None b) Witness Line Only c) Witness Line with Text	a) It will not export the dimension. b) It will suppress the dimension/witness lines and set the arrow head style to "None," and it will not export text. c) It will suppress the dimension/witness lines and set the arrow head style to "None," and export the text.	
Dimension Line Style	Dimension lines > Suppress	
Text Position	Text pos hor	
Origin Tick Mark	Arrowheads > First and Arrow Size	
Length of Segments	The parameter is not mapped	
Color	The parameter is not mapped	The color set in the Dimension element's type property will not be exported to DWG. The color specified in the Layer table or in the Object Styles dialog is used.
Dimension Line Snap Distance	The parameter is not mapped	
Text		
Width Factor	Set on the Text Style	
Underline	Exported as a dimension text override	
Regular	Set on the Font Style	
Italic	Set on the Font Style	
Bold	Set on the Font Style	
Text Size	Set on the Text Style	
Text Offset	Offset from dim line	
Read Convention	Text view direction/Text inside align	
Text Font	Set on the Text Style	
Text Background	Fill Color	
Units Format		
Units	Primary Units > Unit format Primary Units > Scale Factor	Dimensions in Revit can use or override the project unit settings. To keep data fidelity, the Scale Factor is used to simulate the dimension unit in the

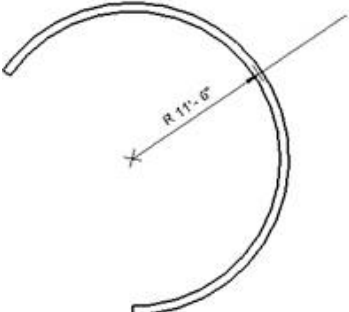
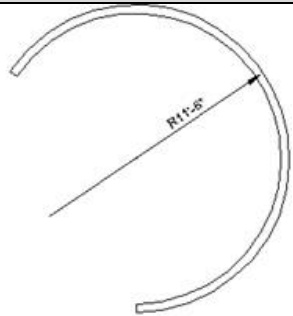
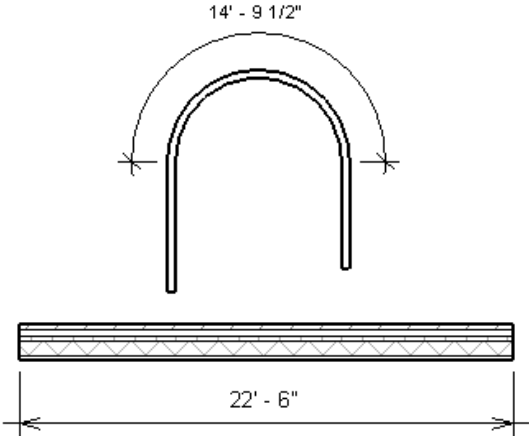
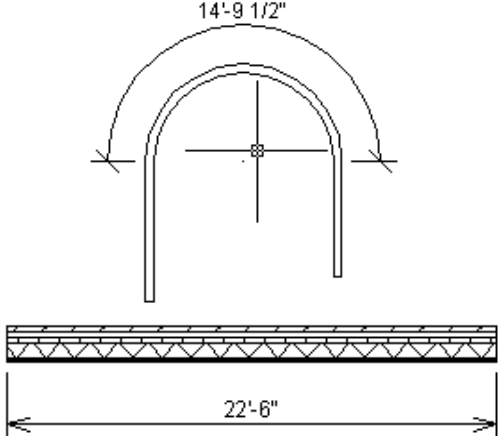
Revit Dimension Parameter	Mapped to the DWG Dimension Style Property	Comments
		exported DWG file [<i>Dimension Unit = Drawing Unit / Scale Factor</i>].
Rounding	Primary Units > Precision	
Rounding increment	Primary Units > Precision Primary Units > Round off	For Angular dimension: if custom rounding is used, only the precision can be exported to the DWG file not the round off value.
Unit symbol	The unit symbol is added as a dimension suffix on the primary dimension object	
Suppress trailing 0's	Primary Units > Trailing	
Suppress 0 feet	Primary Units > 0 feet	If the checkbox in Revit is greyed out, the checkbox is also greyed out in the DWG file but it is selected.
Show + for positive values	Applied as a Primary dimension prefix	
Use digit grouping	The parameter is not mapped	
Suppress spaces	The parameter is not mapped	Spaces display temporarily to preserve visual fidelity. They will be removed when the dimension is regenerated.
Alternate Units: a) None b) Right c) Below	a) The alternate units checkbox is unchecked b) The alternate units checkbox is selected; The "After primary value" radio button is selected c) The alternate units checkbox is selected; The "Below primary value" radio button is selected	If you set the Alternate Units location = Below and the Read Convention = Horizontal, the location of the Alternate units will be changed when the dimension is regenerated.
Alternate Units Format		
Units	Alternate Units > Unit format Alternate Units > Multiplier for alt units	
Rounding	Alternate Units > Precision	
Rounding increment	Alternate Units > Precision alternate Units > Round off	
Unit Symbol	The unit symbol is added as a dimension suffix on the Alternate dimension	
Suppress trailing 0's	Alternate Units > Trailing	
Suppress 0 feet	Alternate Units > 0 feet	If the checkbox in Revit is greyed out, the checkbox is also greyed out in the DWG file but it is selected.
Show + for positive values	Applied as Alternate dimension prefix	
Use digit grouping	The parameter is not mapped	
Suppress spaces	The parameter is not mapped	Spaces display temporarily to preserve visual

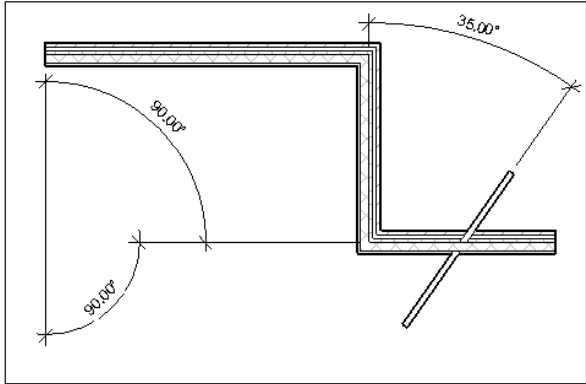
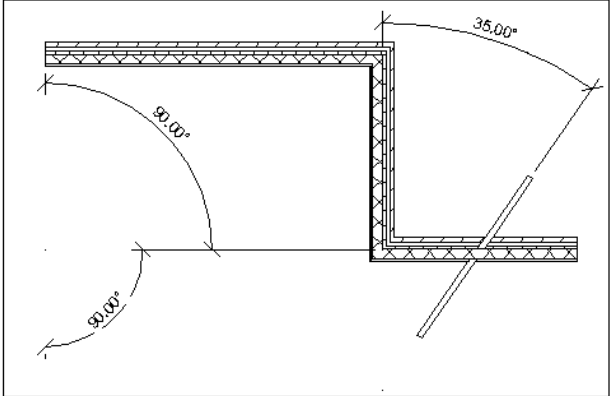
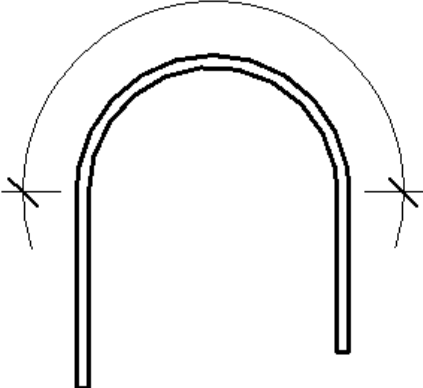
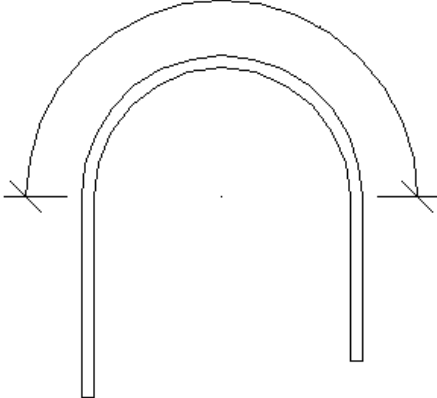
Revit Dimension Parameter	Mapped to the DWG Dimension Style Property	Comments
		fidelity. They will be removed when the dimension is regenerated.
Alternate Units Prefix	Alternate Units > Prefix	
Alternate Units Suffix	Alternate Units > Suffix	
Show Opening Height	Exported as a dimension text override	
<i>Other</i>		
Center Marks	The parameter is not mapped	
Center Mark Size	The parameter is not mapped	
Radius Prefix	The parameter is not mapped	

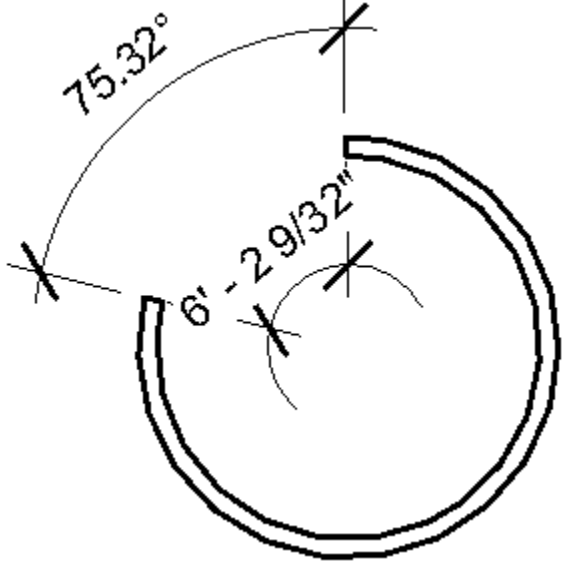
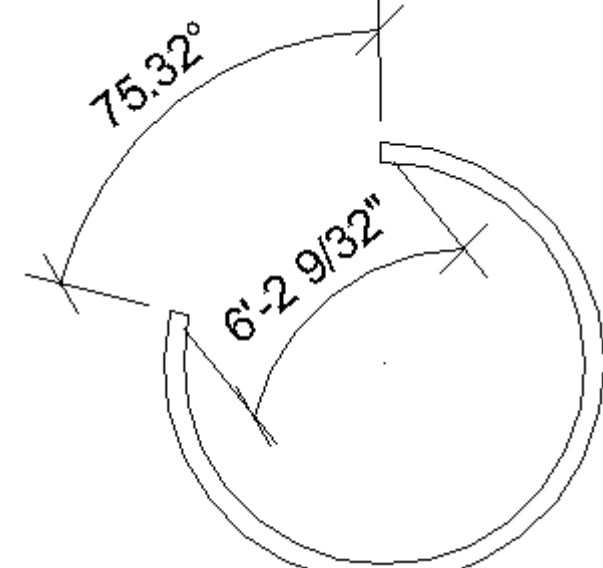
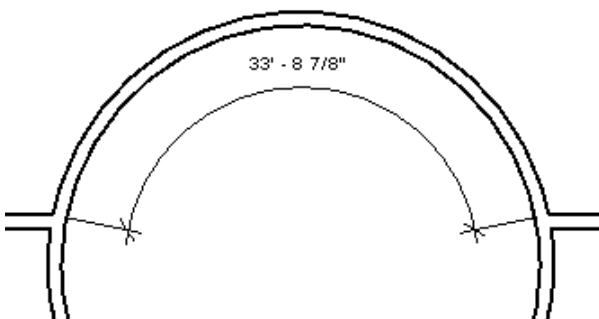
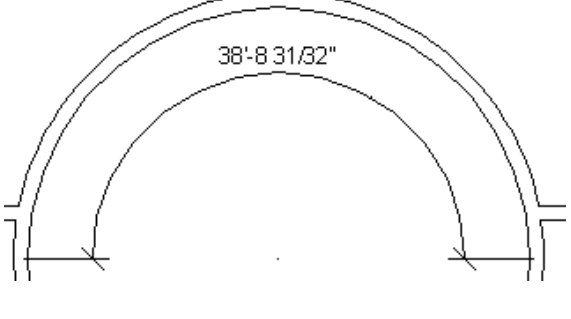
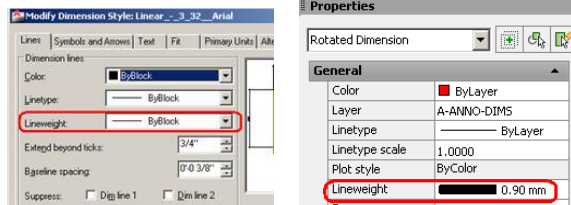
Known Behavior when a Revit Dimension is exported to DWG format

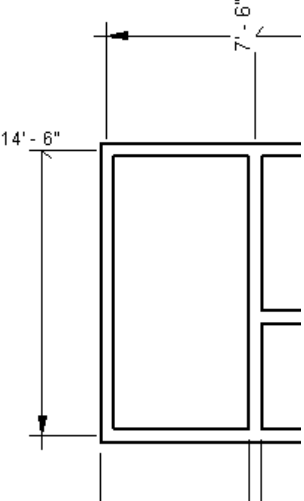
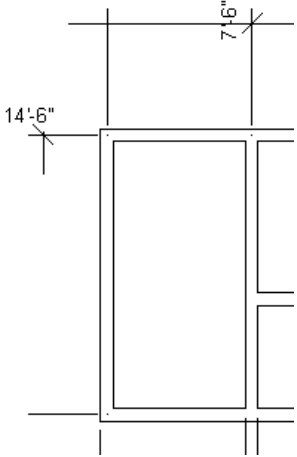
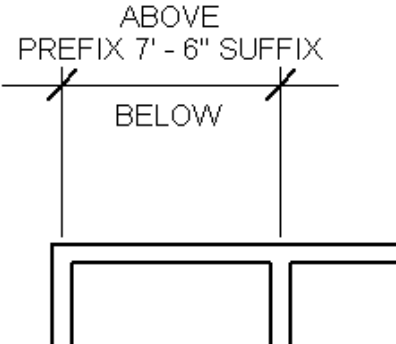
Revit always tries to map the Revit dimension parameters to the proper DWG Dimension styles properties. But in some cases there may be parameters that cannot be mapped. At that point Revit will export the dimension to preserve its visual fidelity. The visual fidelity will only be a temporary display, as soon as the dimension is regenerated it will read its properties from the dimension style and the display may change. Below are known cases when that can occur:

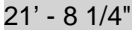
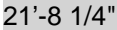
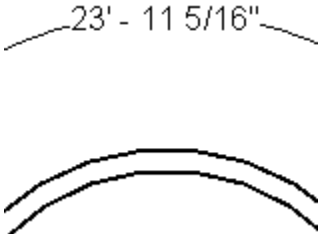
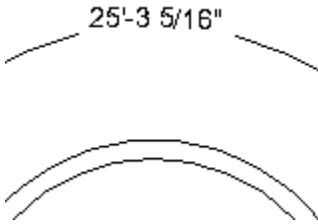
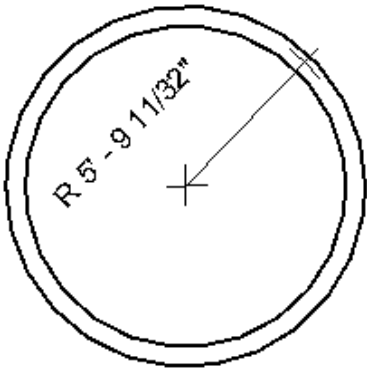
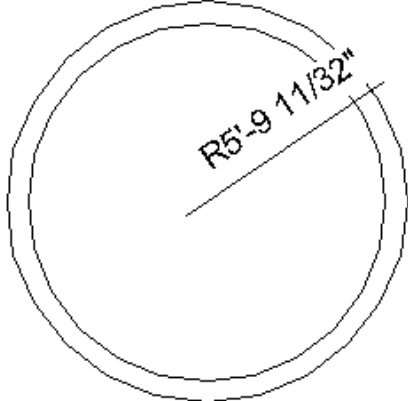
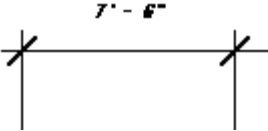
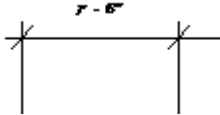
Case	Display in Revit	Display in AutoCAD
<p>Dimension Line Extension The display of a dimension line extension is changed for a dimension that has the tick mark set to something besides "None" and "Diagonal."</p>	 <p>The diagram shows a rectangular frame with a diagonal line. Two horizontal dimensions are shown above the frame: one for the left section (7'-6") and one for the total width (18'-0"). Two vertical dimensions are shown below the frame: one for the left section (7'-6") and one for the total height (18'-0"). The dimension lines have tick marks pointing outwards.</p>	 <p>The diagram is identical to the Revit display, showing the same rectangular frame, diagonal line, and dimensions (7'-6" and 18'-0") with tick marks pointing outwards.</p>
<p>Dimension Extension The display of a dimension extension is changed for a radial and an arc length dimension.</p>	 <p>The diagram shows two circular elements. The left one is a circle with a radial dimension line labeled R7'-8" and R7'-10". The right one is an arc with a dimension line labeled 23' - 11 5/16" and 23' - 6 3/4".</p>	 <p>The diagram shows the same two circular elements. The left one is a circle with a radial dimension line labeled R7'-6" and R7'-10". The right one is an arc with a dimension line labeled 25'-3 5/16" and 23'-6 3/4".</p>

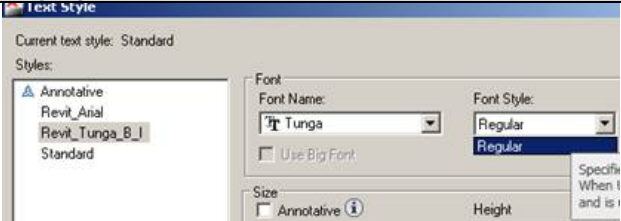
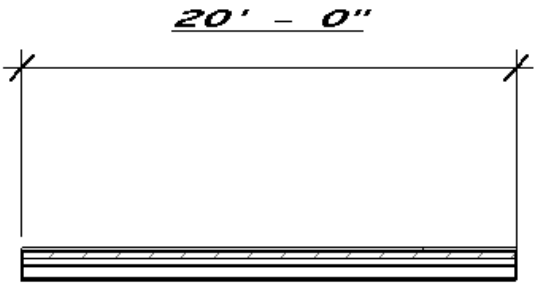
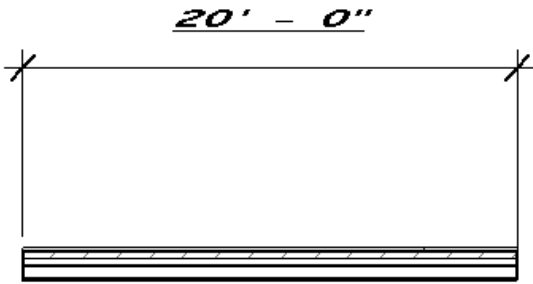
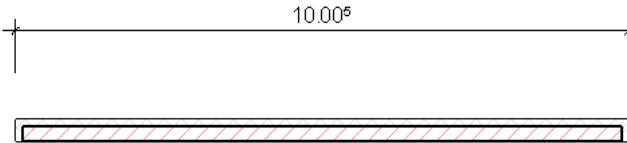
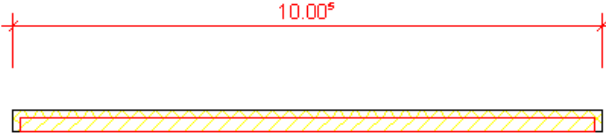
Case	Display in Revit	Display in AutoCAD
<p>Dimension Extension/Center mark The display of a dimension extension and a center mark is changed for radial dimension.</p>	 <p>A diagram showing a curved dimension line with a center mark at the end of the extension line. The dimension value is R 11'-6".</p>	 <p>A diagram showing a curved dimension line with a center mark at the end of the extension line. The dimension value is R 11'-6".</p>
<p>Extended Dimension Line Extension If you have any other tick marks specified other than "no arrow" or "oblique," the display for "Extended dimension line extensions" is changed.</p>	 <p>A diagram showing a U-shaped object with a dimension line above it. The dimension value is 14' - 9 1/2". Below the object is a horizontal dimension line with a value of 22' - 6".</p>	 <p>A diagram showing a U-shaped object with a dimension line above it. The dimension value is 14'-9 1/2". Below the object is a horizontal dimension line with a value of 22'-6".</p>

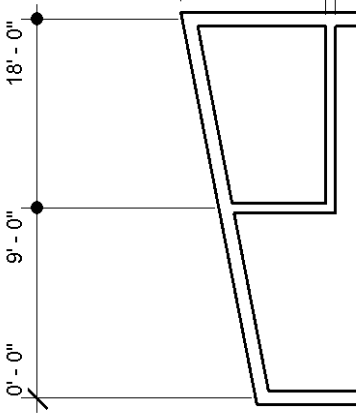
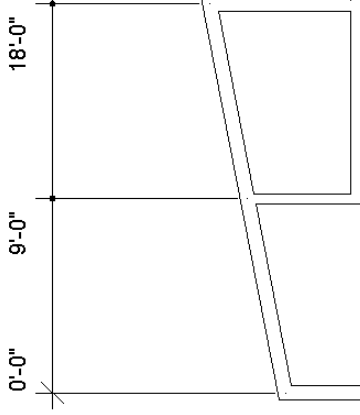
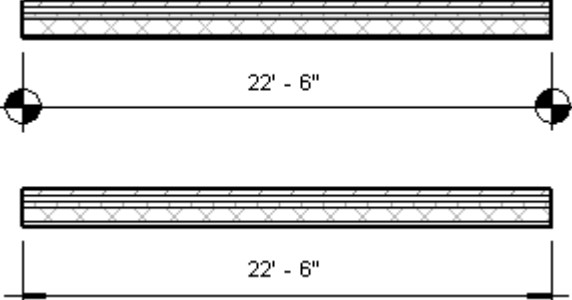
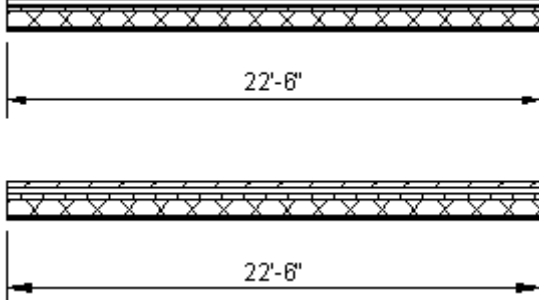
Case	Display in Revit	Display in AutoCAD
<p>Extension Lines The display of extension lines on an Angular Dimension is changed.</p>	<p style="text-align: center;">Angular Dimension</p>  <p>The diagram shows an L-shaped object with a 35.00° angle dimensioned. The dimension line is placed outside the object. Extension lines are shown as thin lines that do not extend past the object's boundaries. The angle is also labeled as 90.00° at the corners.</p>	<p style="text-align: center;">Angular Dimension</p>  <p>The diagram shows the same L-shaped object with a 35.00° angle dimensioned. The dimension line is placed outside the object. Extension lines are shown as thin lines that extend past the object's boundaries.</p>
<p>Arc Length Dimension The display of extension lines on an Arc Length Dimension is changed.</p>	<p style="text-align: center;">14' - 9 1/2"</p>  <p>The diagram shows a U-shaped object with an arc length dimensioned. The dimension line is placed above the object. Extension lines are shown as thin lines that do not extend past the object's boundaries.</p>	<p style="text-align: center;">14'-9 1/2"</p>  <p>The diagram shows the same U-shaped object with an arc length dimensioned. The dimension line is placed above the object. Extension lines are shown as thin lines that extend past the object's boundaries.</p>

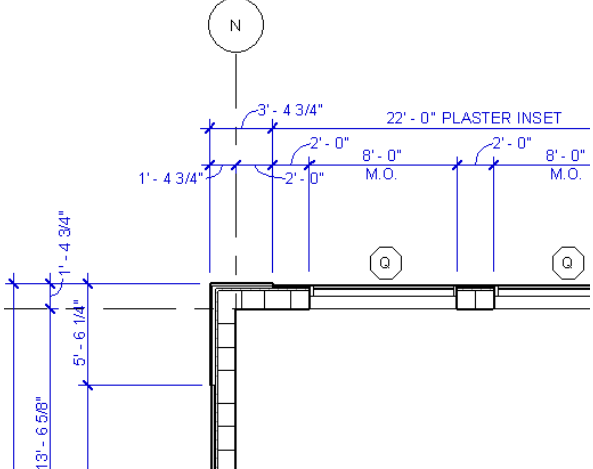
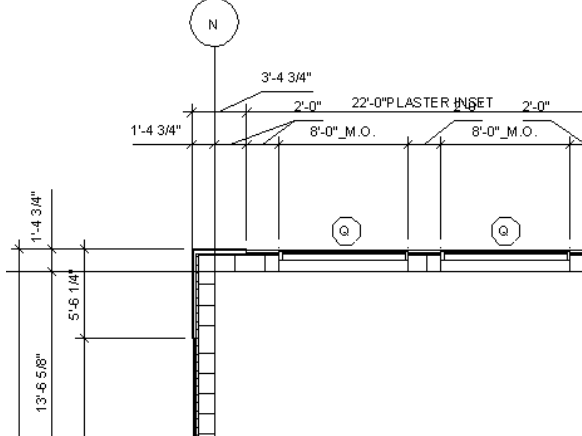
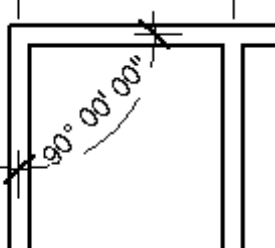
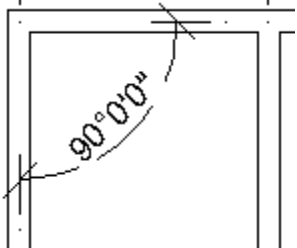
Case	Display in Revit	Display in AutoCAD												
<p>Arc Length Dimension The display of dimension extension lines through the center will change.</p>														
<p>Arc Length Dimension The display and the dimension of an arc length dimension will change.</p>														
<p>Line Weight The value for “Line Weight” parameter is not mapped to the AutoCAD dimension style property for “Lineweight,” instead it is set on the object itself.</p>	<table border="1" data-bbox="787 1258 1165 1364"> <thead> <tr> <th colspan="2">Graphics</th> </tr> </thead> <tbody> <tr> <td>Dimension String Type</td> <td>Continuous</td> </tr> <tr> <td>Tick Mark</td> <td>Diagonal 1/8"</td> </tr> <tr> <td>Line Weight</td> <td>7</td> </tr> <tr> <td>Tick Mark Line Weight</td> <td>7</td> </tr> <tr> <td>Dimension Line Extension</td> <td>3/32"</td> </tr> </tbody> </table>	Graphics		Dimension String Type	Continuous	Tick Mark	Diagonal 1/8"	Line Weight	7	Tick Mark Line Weight	7	Dimension Line Extension	3/32"	
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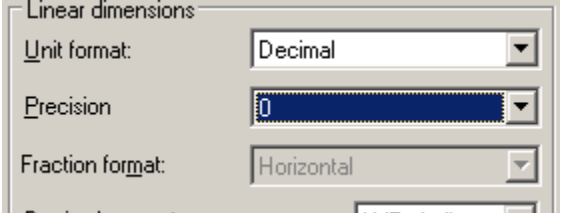
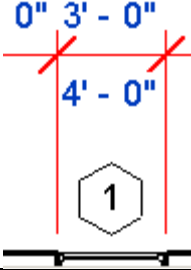
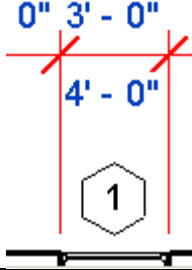
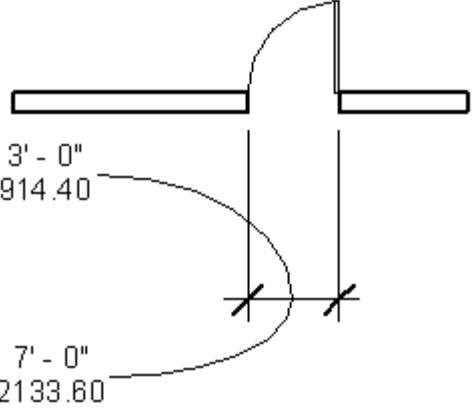
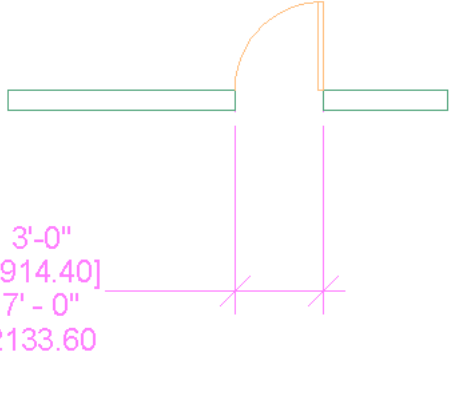
Case	Display in Revit	Display in AutoCAD																																
<p>Witness Line Length The value for "Witness Line Length" is mapped to "Ext line fixed length" but the witness line length is calculated depending on the view scale.</p>	<table border="1"> <tr><td>Line Weight</td><td>1</td></tr> <tr><td>Tick Mark Line Weight</td><td>5</td></tr> <tr><td>Dimension Line Extension</td><td>3/32"</td></tr> <tr><td>Flipped Dimension Line Extension</td><td>3/32"</td></tr> <tr><td>Witness Line Control</td><td>Fixed to Dimension Line</td></tr> <tr><td>Witness Line Length</td><td>2"</td></tr> <tr><td>Witness Line Gap to Element</td><td>1/16"</td></tr> <tr><td>Witness Line Extension</td><td>3/32"</td></tr> </table>	Line Weight	1	Tick Mark Line Weight	5	Dimension Line Extension	3/32"	Flipped Dimension Line Extension	3/32"	Witness Line Control	Fixed to Dimension Line	Witness Line Length	2"	Witness Line Gap to Element	1/16"	Witness Line Extension	3/32"	<table border="1"> <tr><td>Ext line z linetype</td><td>Byt</td></tr> <tr><td>Ext line 1</td><td>On</td></tr> <tr><td>Ext line 2</td><td>On</td></tr> <tr><td>Ext line fixed</td><td>On</td></tr> <tr><td>Ext line fixed len... 18'</td><td></td></tr> <tr><td>Ext line color</td><td>ByBlock</td></tr> <tr><td>Ext line ext</td><td>3/4"</td></tr> <tr><td>Ext line offset</td><td>1/16"</td></tr> </table>	Ext line z linetype	Byt	Ext line 1	On	Ext line 2	On	Ext line fixed	On	Ext line fixed len... 18'		Ext line color	ByBlock	Ext line ext	3/4"	Ext line offset	1/16"
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Ext line 1	On																																	
Ext line 2	On																																	
Ext line fixed	On																																	
Ext line fixed len... 18'																																		
Ext line color	ByBlock																																	
Ext line ext	3/4"																																	
Ext line offset	1/16"																																	
<p>Ordinate Dimension Settings When the Dimension Line Style is set to "Segment" in Revit, the display of the dimension will change.</p> <p>When "Text position" is set to "Next to Witness Line" and the Dimension Line Style is set to "Segment," the origin tick marks will be removed when the dimension in the DWG file is regenerated.</p>																																		
<p>Dimension Text Text specified for Above and Below is exported as a text override.</p> <p>Text specified for Prefix and Suffix map to Dim Prefix and Dim Suffix fields in the Properties dialog in AutoCAD.</p>																																		

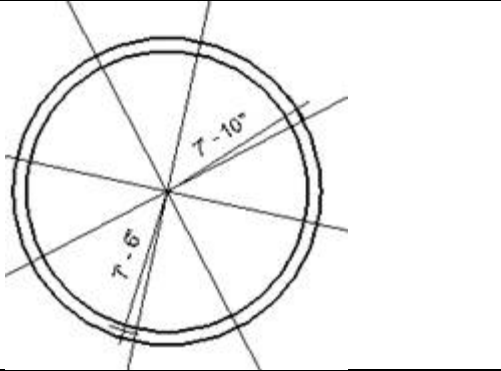
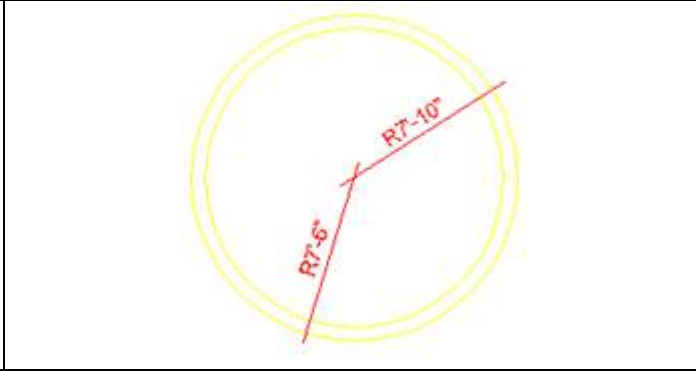
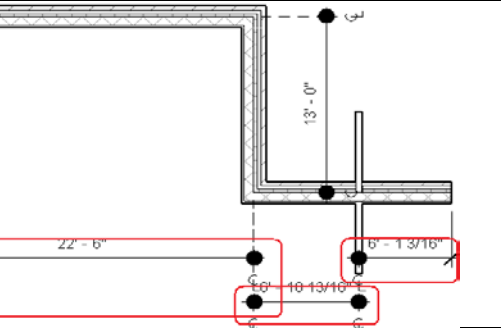
Case	Display in Revit	Display in AutoCAD
<p>Dimension Text The spacing of the dimension text is different in a Revit file and in a DWG file. In Revit, the dimension value includes whitespace, but in AutoCAD the whitespace is removed. This may cause unexpected results on export, for example, a dimension with the Text Width factor is changed.</p>		
<p>Text Location If the dimension text in Revit has been moved, the dimension text location will change slightly in the exported DWG file when the dimension in the DWG file is regenerated.</p>		
<p>Radial Dimension Text If the dimension text on a radial dimension has been moved in Revit, the location of the dimension text will move in the DWG file when the dimension is regenerated.</p>		
<p>Bold/Italic The settings for Bold/Italic on the dimension text in Revit are not mapped to Bold/Italic on the DWG dimension style, if</p>		

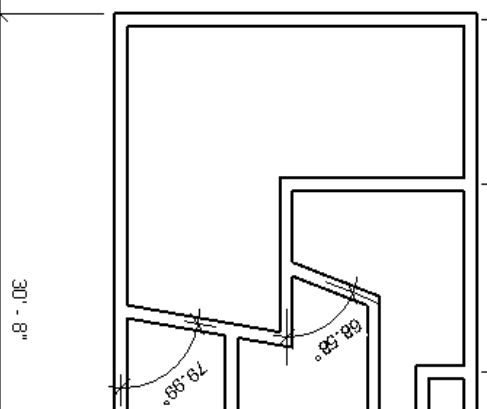
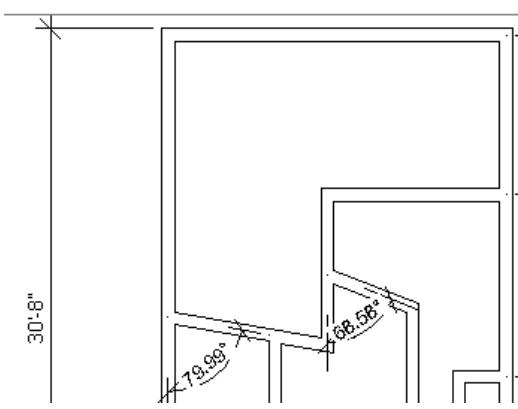
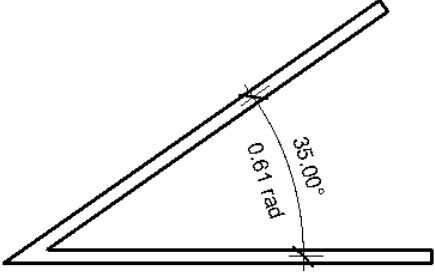
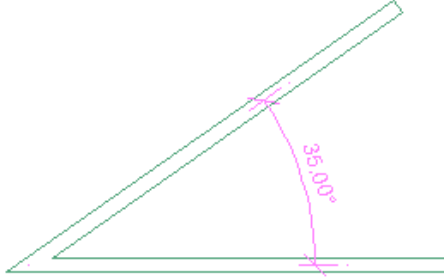
Case	Display in Revit	Display in AutoCAD
<p>the font style does not support Bold and/or Italic. However, the text that is exported will still display as Bold/Italic in AutoCAD.</p>		
<p>Underlined Dimension Underlined Dimension is exported as a dimension text override.</p>		
<p>Superscript Superscript in Revit will export as a dimension text override. However, since the text is exported as an override, the dimension value will not be converted to the unit that you specify during DWG Export. It will always read 10.00⁵.</p>		

Case	Display in Revit	Display in AutoCAD
<p>Tick Mark There is no support for different arrow sizes for one dimension segment in DWG; therefore the size of the arrowheads may vary in some cases after the dimension in the DWG file is regenerated.</p>		
<p>Filled Elevation/Heavy End The dimension tick marks "Filled Elevation" and "Heavy End" will display as a "Closed Fill" arrow after the dimension in the DWG file is regenerated.</p>		

Case	Display in Revit	Display in AutoCAD
<p>Dimension Spline Leader Spline dimension leaders will change to straight leader lines when the dimension is regenerated in the DWG file. As a result, text location will change and may overlap other dimension values.</p>		
<p>Units Format If you override the project unit settings on a Revit dimension style, a new dimension style is created for the overridden dimension when it is exported to DWG.</p>		
<p>Units Format When you specify "Degree minutes seconds" as units for angular dimensions, the unit will not display the same amount of rounding in the DWG file after the dimension in the DWG is regenerated.</p>		

Case	Display in Revit	Display in AutoCAD
<p>Custom Rounding Increment If you specify a number larger than 1.0e-8 for "Custom Rounding increment," the rounding increment will be treated as 0 rounding increment in the exported DWG file.</p>		
<p>Show Opening Height The Opening Width is exported as dimension, but the Opening Height is exported as a dimension text override.</p>		
<p>Show Opening Height If the opening is dimensioned with a Spline leader in Revit, and then exported to DWG, the location of the dimension will change when the dimension is regenerated.</p>		

Case	Display in Revit	Display in AutoCAD
<p>Center Mark Size and Radius Prefix The settings for Center Mark Size and Radius Prefix will not persist when the dimension in the DWG file is regenerated.</p>		
<p>Center Symbol, Pattern and Tick Mark When the tick marks, extension lines and dimension pen widths are different on the dimension segments, a new dimension style will be created in the exported DWG file.</p>		
<p>Tick Marks Dot filled dimension tick marks have varied sizes in the DWG file.</p>		

Case	Display in Revit	Display in AutoCAD
<p>Views on Sheet Rotated views placed on sheets may get the read convention incorrect in the exported DWG file when the dimension in the DWG file is regenerated.</p>	 <p>A technical drawing of a mechanical part, possibly a bracket or a joint, shown in a rotated view. The drawing includes three dimension lines: a vertical dimension on the left labeled '30'-8"', and two angular dimensions: '79.588°' and '68.58°'.</p>	 <p>The same technical drawing as in the Revit column, but displayed in AutoCAD. The dimensions are identical: '30'-8"', '79.588°', and '68.58°'.</p>
<p>Alternate units of Angular Alternate units of Angular dimensions will export to AutoCAD to keep visual fidelity, but after the dimension is regenerated the alternate units will disappear.</p>	 <p>A drawing of an angle formed by two lines meeting at a vertex. Two dimension lines are shown: one labeled '35.00°' and another labeled '0.61 rad'.</p>	 <p>The same drawing of an angle as in the Revit column, but displayed in AutoCAD. The dimension is now '35.00°', and the '0.61 rad' dimension is no longer present.</p>