

CIVIL 3D 2018

Maryland Training
*Text, Dimensioning and
Multileaders*

Mtext and text

Dimensioning

Multileaders

Text styles in the Maryland Templates, annotative properties, create and edit Mtext

Create, Edit and learn about dimension styles

Multileader styles, create and modify

Mtext and text

- You can create several paragraphs of text as a single multiline text (Mtext) object. With the built-in editor, you can format the text appearance, columns, and boundaries. After you specify the point for the opposite corner when the ribbon is active, the Text Editor ribbon contextual tab displays. If the ribbon is not active, the in-place text editor is displayed. If you specify one of the other options, or if you enter -Mtext at the Command prompt, Mtext bypasses the In-Place Text editor and displays additional Command prompts.
- Civil3D consists of object label styles and they automate the creation of a label that pulls particular properties from the objects that your labeling so you can label alignment stationing, surface contours, surface slopes and many more.
- How to create Mtext to support manual drafting and manual annotation. The process to look at text styles in the Maryland drawing template.
- How annotative properties creates Mtext
- Go over express tools in Autocad which contains some useful commands for working with text

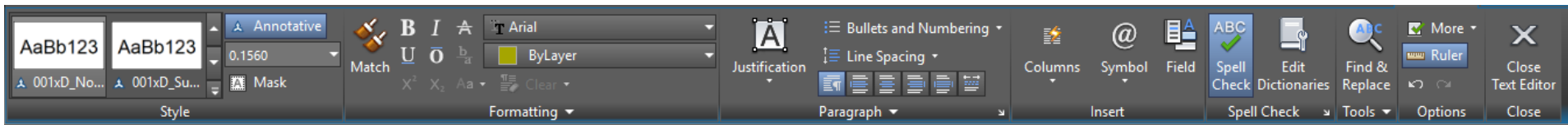
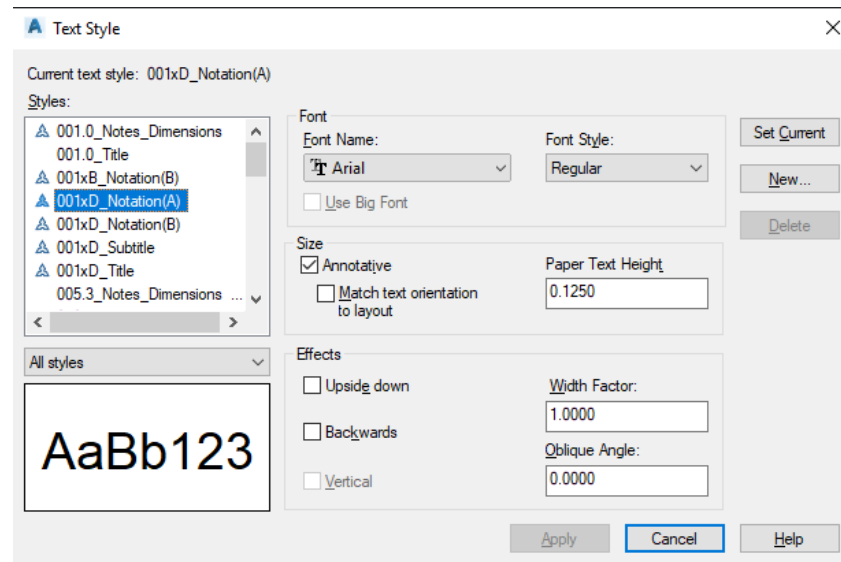
Text Styles

Text Styles

- ▶ A text style is a named collection of text settings that controls the appearance of text, such as font, line spacing, justification, and color. You create text styles to specify the format of text quickly, and to ensure that text conforms to industry or project standards.
- ▶ When you create text, it uses the settings of the current text style.
- ▶ If you change a setting in a text style, all text objects in the drawing that use the style update automatically.
- ▶ You can change the properties of individual objects to override the text style.
- ▶ All text styles in your drawing are listed in the Text Style drop-down.
- ▶ Text styles apply to notes, leaders, dimensions, tables, and block attributes.
- ▶ All drawings contain a STANDARD text style which can't be deleted. Once you create a standard set of text styles, you can save the drawing as a template file (.dwt) that you can use when you start a new drawing.

Text Styles

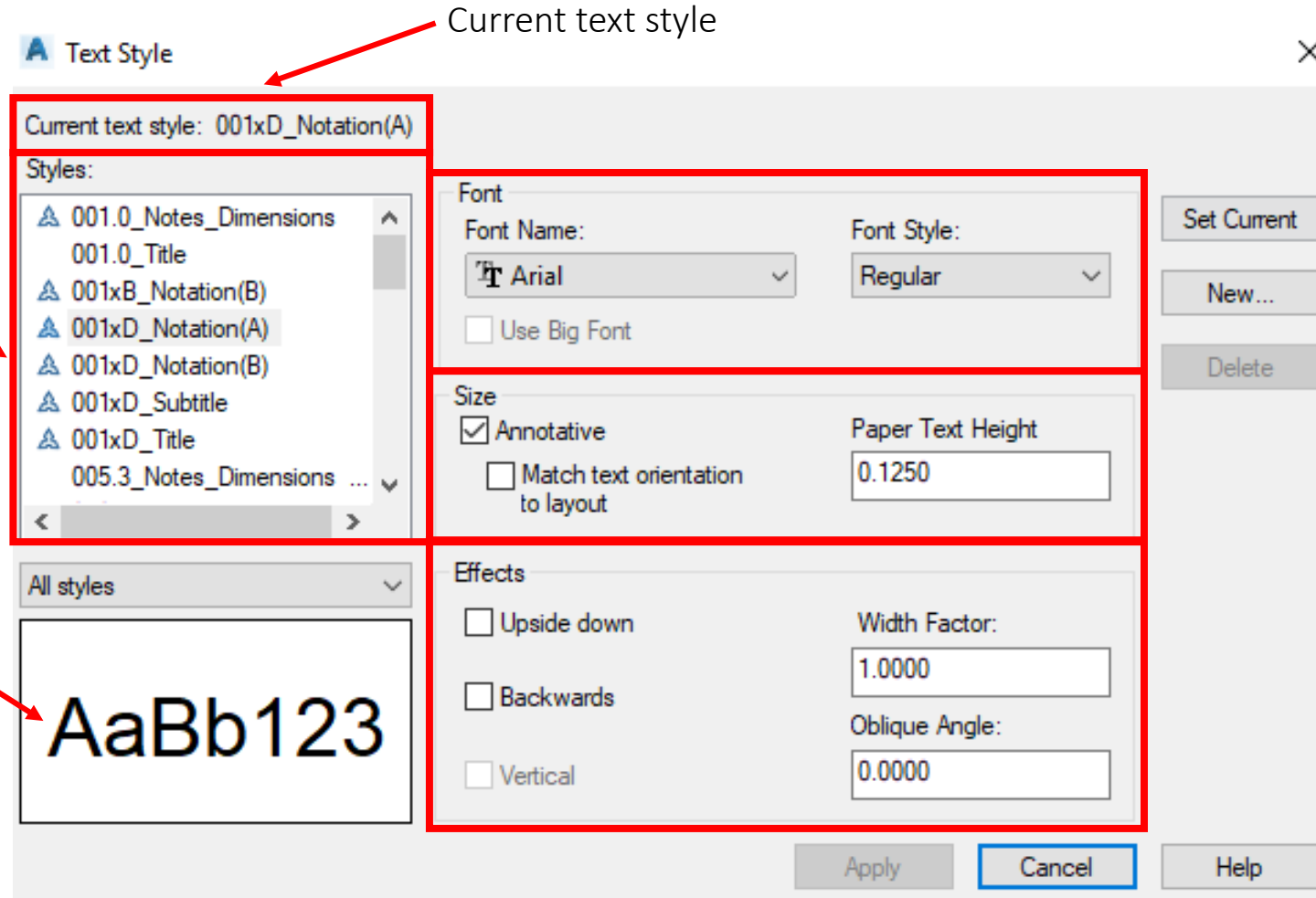
- ▶ Type in the command line `ST`, can select the text styles in the toolbar “styles,” and the ribbon



Text Styles

List of current styles in the drawing

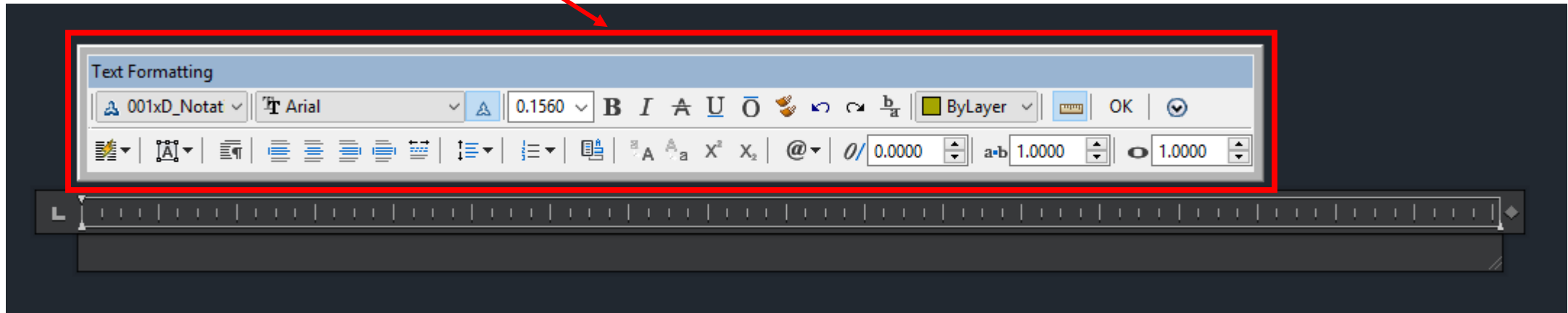
Preview of what the text will look like



Text Styles

To turn on the Mtext tool bar

Type in the command line `MTEXTTOOLBAR` <1> turns it on <2> turns it off





Annotative Text

Annotative Text

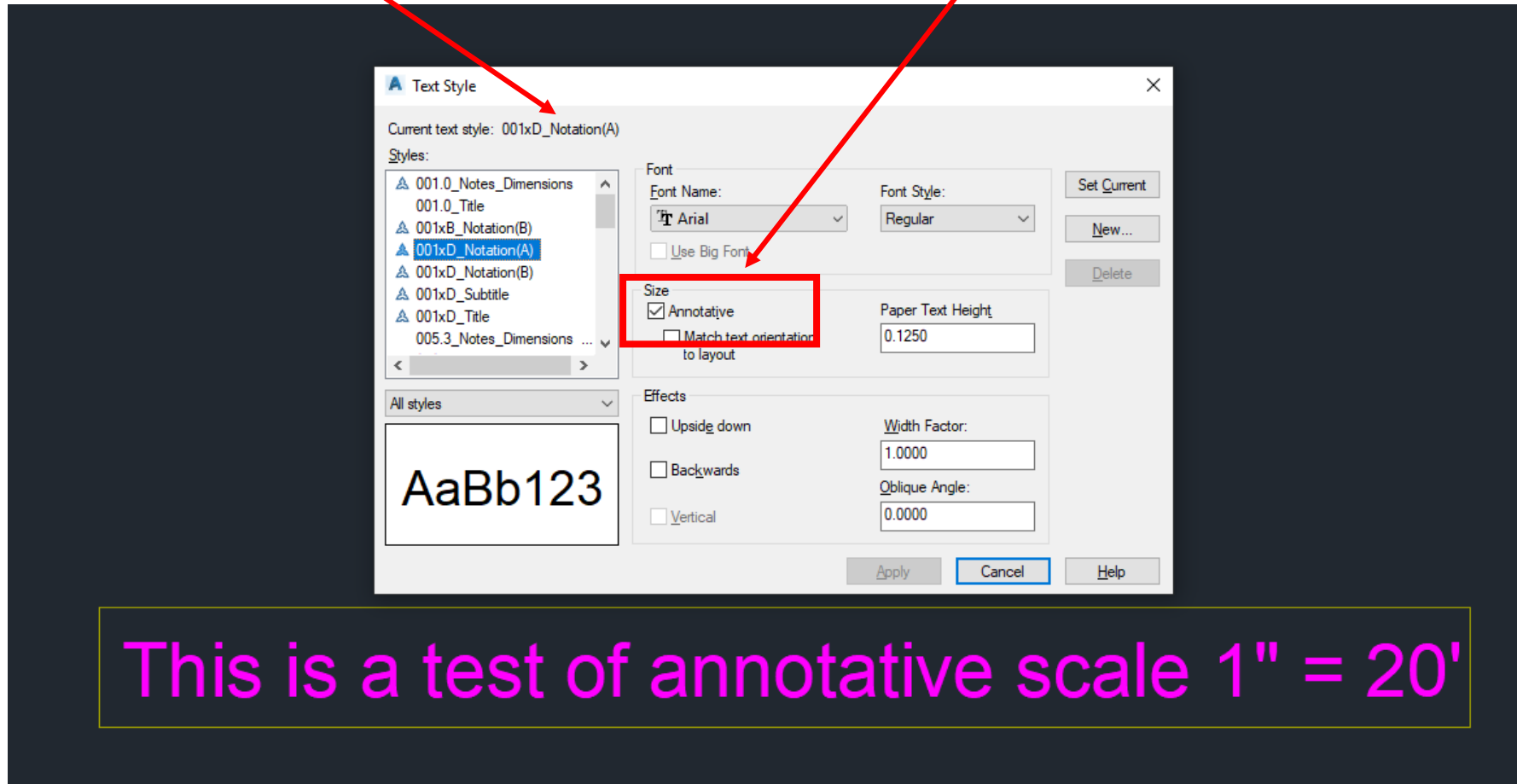


- Annotative objects and styles are used to control the size and scale at which annotation objects are displayed in model space or a layout.
- When using annotative objects, the process of scaling annotation objects is automated for you. Annotative objects are defined by specifying a paper height or scale, and then the annotation scales at which they should be displayed for.
- An annotative object can have multiple scales assigned to, and each scale representation can be moved independently of each other.
- Each viewport on a layout is assigned an annotation scale, which is often the same as its viewport scale value.
- The annotation scale of a viewport or model space, controls when the annotation object is displayed and at which size. If a scale is not assigned to an annotation object but is used in a viewport, the annotation object is not displayed.
- The following lists the types of annotation objects and styles that can be annotative:
 - Text (single-line and multiline)
 - Text styles
 - Blocks
 - Attribute definitions
 - Hatches
 - Dimensions and dimension styles
 - Geometric tolerances
 - Multileaders and multileader styles

Annotative Text

Current text style

Annotative



This is a test of annotative scale 1" = 20'

Annotative Text

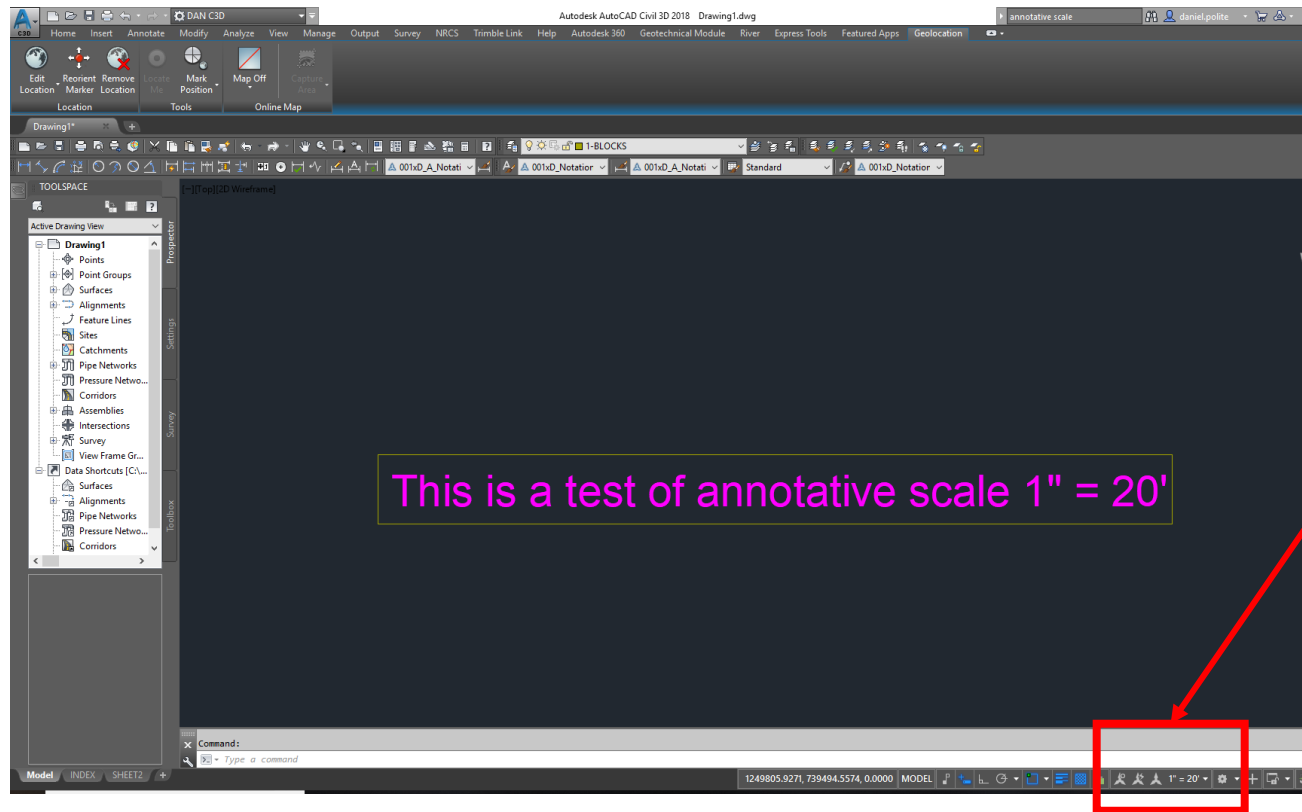
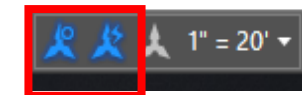
Scale text was created in Model Space



Show Annotation objects - at current scale



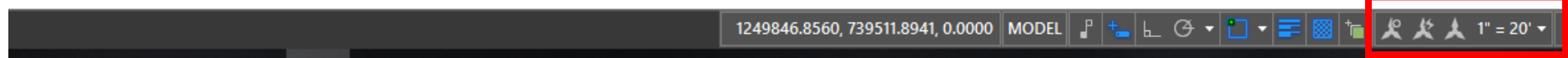
Add scales to annotative objects when the annotation scale changes



Important to have both of these ON (when they are blue, they are on)

Annotative Text

This is a test of annotative scale 1" = 20'

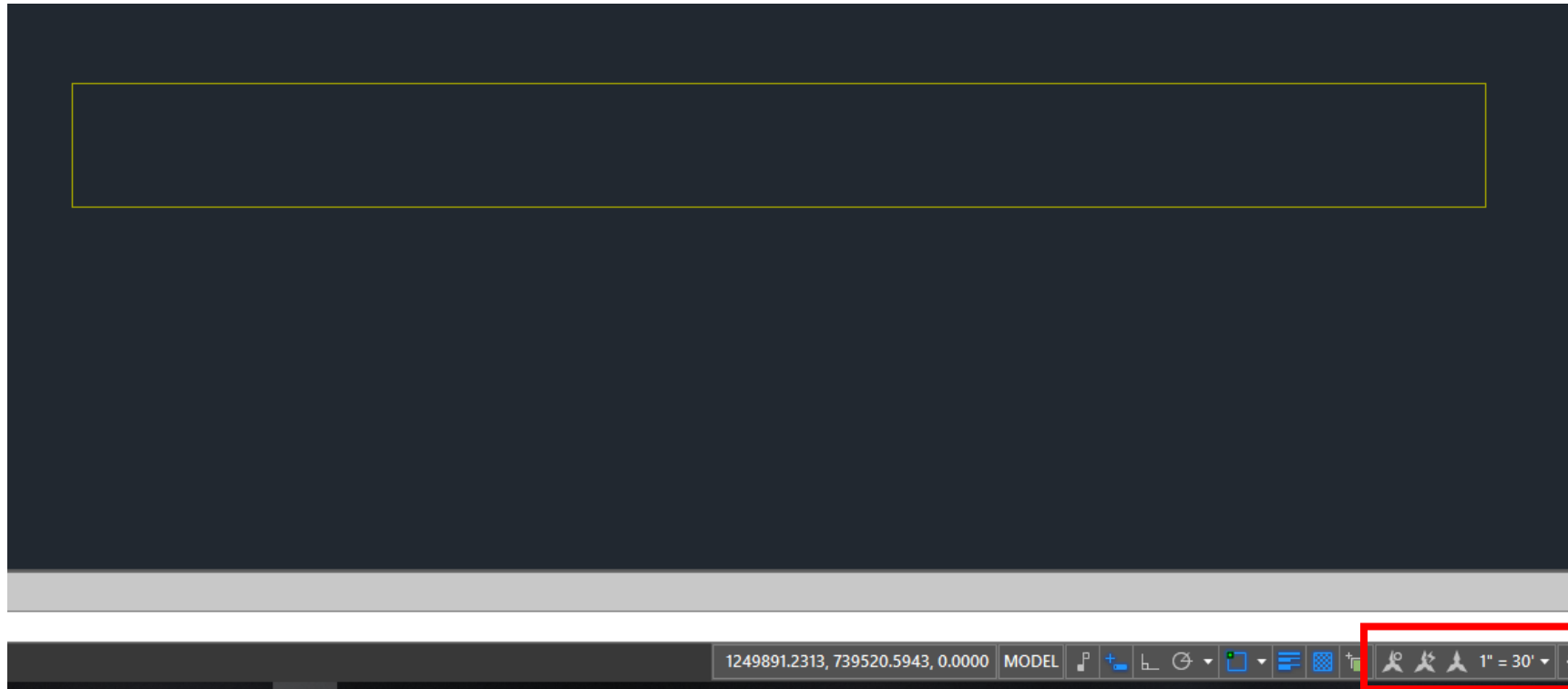


This text was created in Model Space at a 1" = 20' scale

A box was drawn around the text at a 1" = 20' scale

If you were to change the scale in Model space, the text would disappear because it will only show in the scale it was created in. In order for the text to show at all scales, select the 2 annotative buttons as described before.

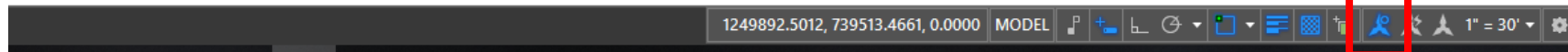
Annotative Text



The Model Space scale was changed to 1" = 30' and now the text has disappeared.
Notice that neither Annotative Icons are selected

Annotative Text

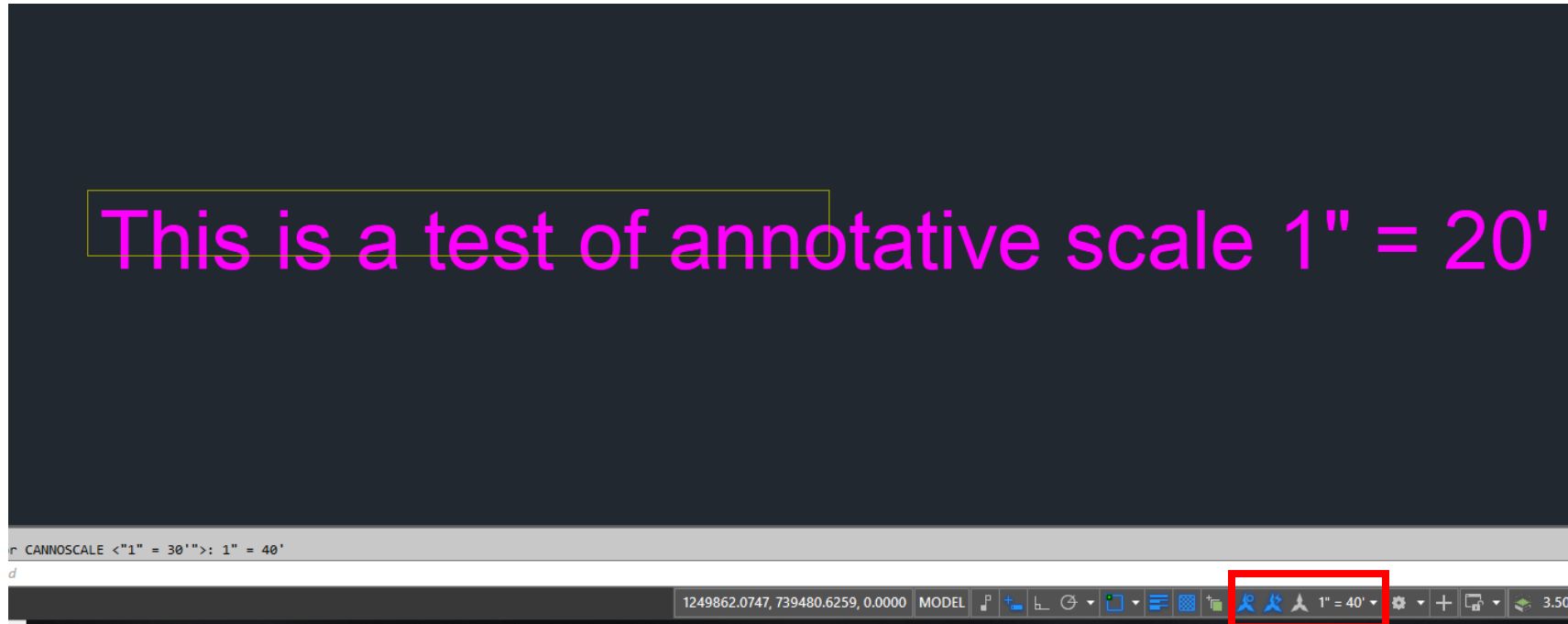
This is a test of annotative scale 1" = 20'



The Model Space scale was changed to 1" = 30' and now the text is shown because the show annotative objects at current scale is turned on.



Annotative Text



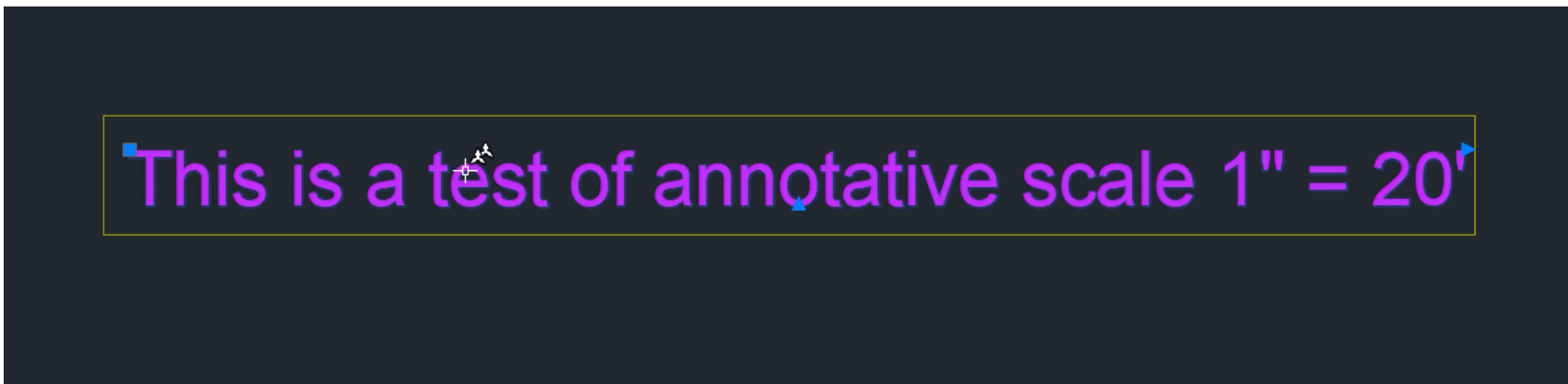
The Model Space scale was changed to 1" = 40' and now the text is shown 2 times larger (the yellow box was created in 1" = 20') then when it was created in 1" = 20' because the *Add Scales to Annotative objects* was on.



Annotative Text



As you draw in Model space and continue to add different scales, you will notice that because you have the Add Scales to Annotative objects turned on, when you select any of the Mtext you will notice it will show ALL the different scales that it was created in. To turn this off, type in the command line **SELECTIONANNODISPLAY** and set to **<0>**



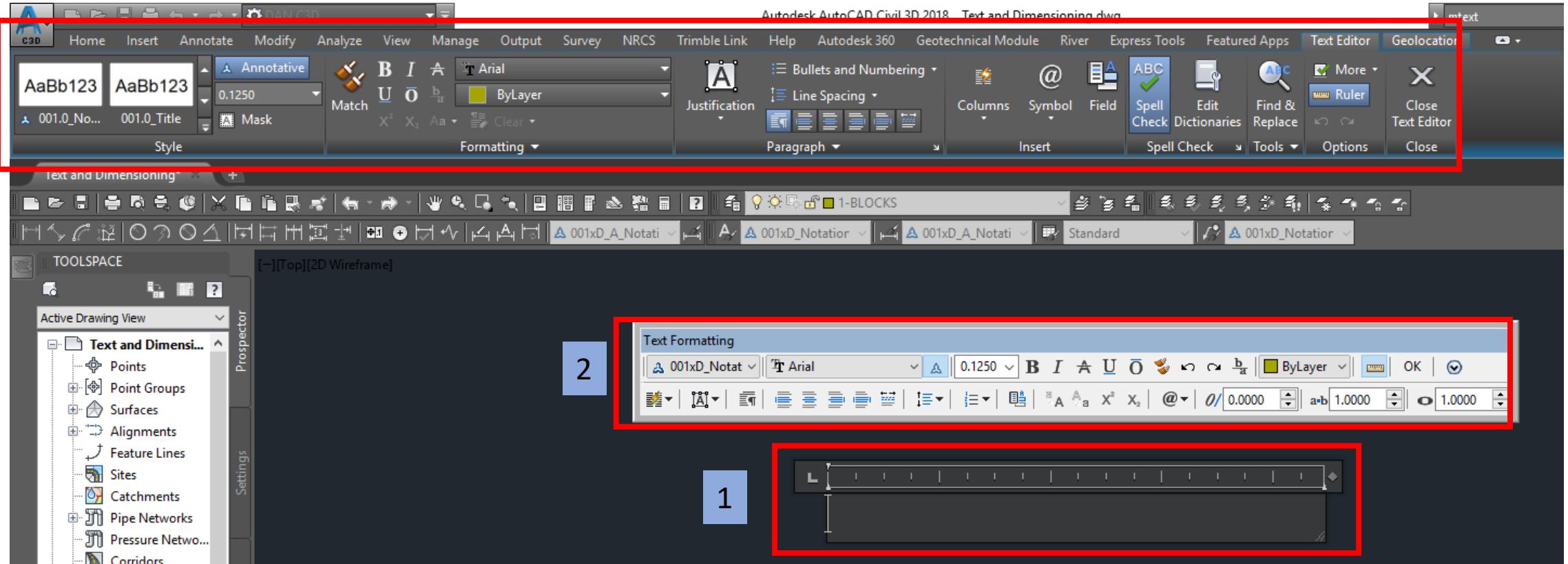
Multiline Text (Mtext)



Mtext

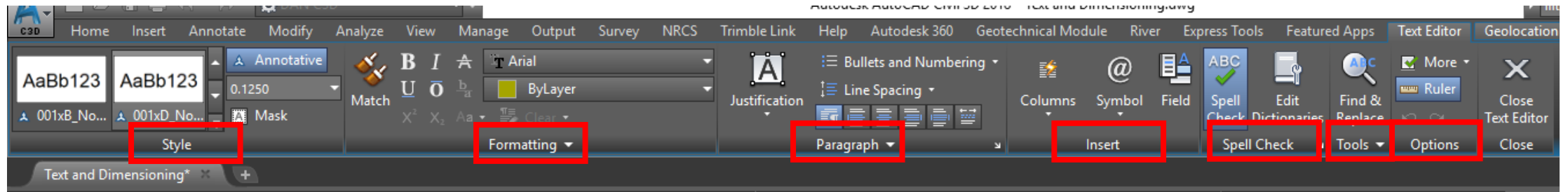
- You can create several paragraphs of text as a single multiline text (mtext) object.
- With the built-in editor, you can format the text appearance, columns, and boundaries.
- After you specify the point for the opposite corner when the ribbon is active, the Text Editor ribbon contextual tab displays. If the ribbon is not active, the in-place text editor is displayed.
- If you specify one of the other options, or if you enter -mtext at the Command prompt, MTEXT bypasses the In-Place Text editor and displays additional Command prompts.
- As you click with the pointing device to specify one corner followed by the diagonal corner, a rectangle is displayed to show the location and size of the multiline text object. Arrows within the rectangle indicate the direction of the paragraph's text flow.
- When you create the multiline text, you will have all the editing text options available in the ribbon or mtext toolbar

Mtext



- 1) When the mtext command is executed in the command line and after you draw the text box area
- 2) Text Formatting toolbar (may be turned on or off) commandline **MTEXTTOOLBAR** <1> turns it on <2> turns it off
- 3) Contextual ribbon for TEXT EDITOR

Mtext



Style

Specifies the text style you want to use. Default will be to the current style that is already in use.

Formatting

These functions will allow you to change the actual look of the text

Paragraph

Justification, Bullets and Numbering, and Line Spacing can be adjusted

Insert

User can insert Columns, Symbols and Fields

Spell Check

User can turn this function on or off

Tools

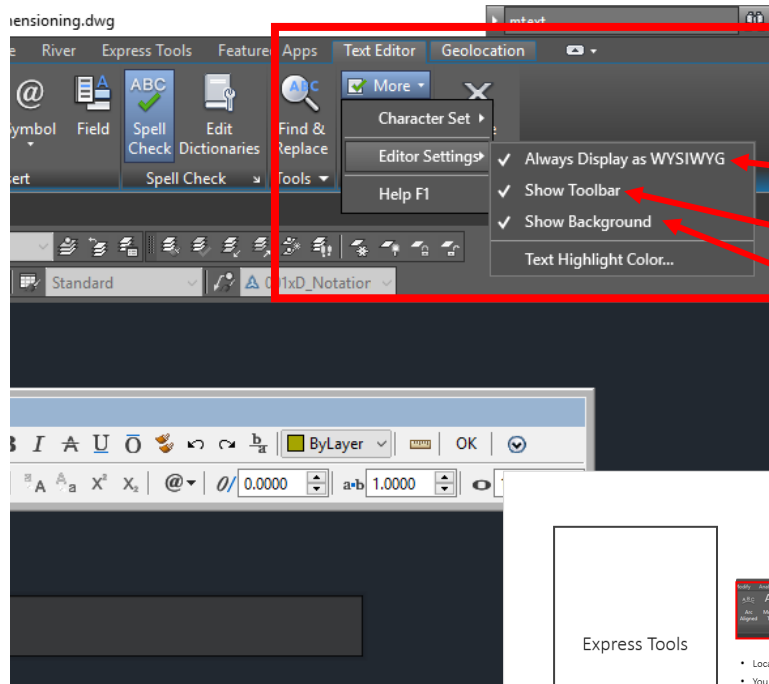
User can find specific text and or words and replace it with something else defined by the user

ALL CAPS function is located here

Options

Additional text features

Mtext



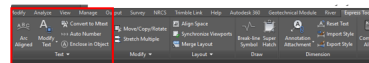
TEXT EDITOR < MORE < Editor Settings

What You See Is What You Get

Can turn the toolbar on and off here also

Turns on the background of the text box

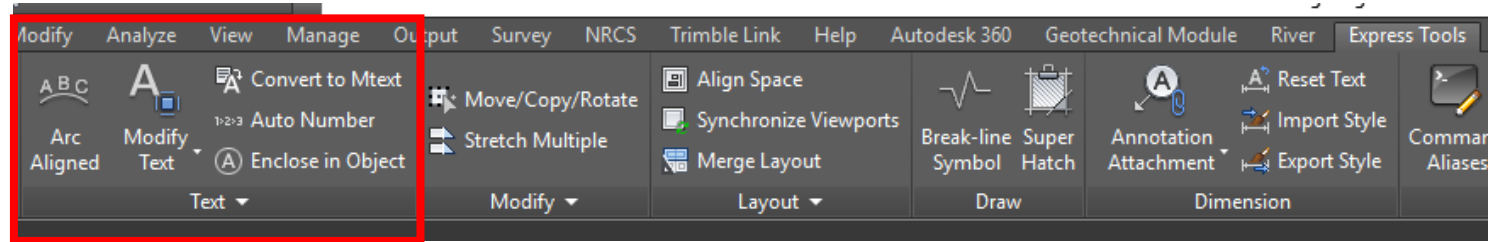
Express Tools



- Location on the ribbon where there are additional functions for text
- You can align text to an ARC
- Convert text to mtext (command line...text2mtext)
- Enclose text in an object (command line...tcircle)

Express Tools

Express Tools



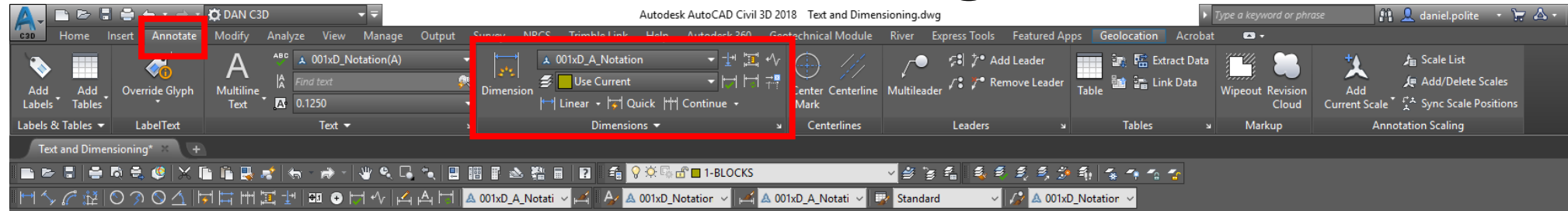
- Location on the ribbon where there are additional functions for text
- You can align text to an ARC
- Convert text to mtext (command line...text2mtext)
- Enclose text in an object (command line...tcircle)

Dimensioning

Dimensioning

- ▶ You can create several types of dimensions for a variety of object types in many orientations and alignments
- ▶ The basic types of dimensioning are linear, radial, angular, ordinate, and arc length.
- ▶ Use the DIM command to create dimensions automatically according to the object type that you want to dimension.
- ▶ You can control the appearance of dimensions by setting up dimension styles, or by editing individual dimensions in special cases.
- ▶ Dimension styles allow you to specify your conventions quickly and maintain industry or project dimensioning standards.
- ▶ To simplify drawing organization and dimension scaling, you can create dimensions on layouts rather than in model space.
- ▶ Keep in mind for our application of use, we will not use all the styles/functions that are available. Dimensioning is developed more towards architectural and mechanical applications.

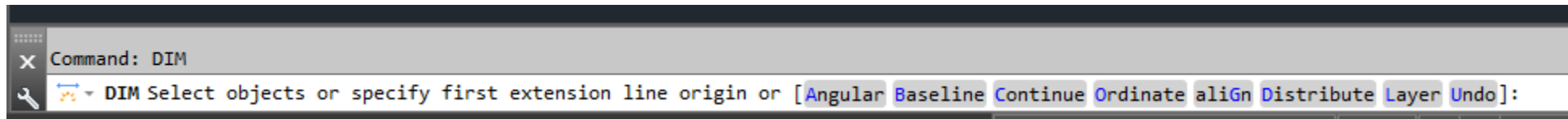
Dimensioning



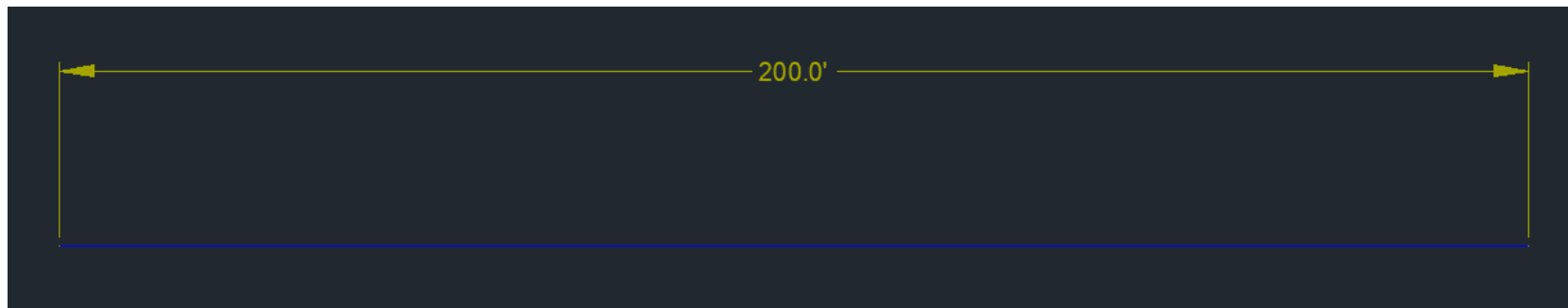
Must have the object drawn in order to use Dimensioning

Located under **Annotate Tab....Dimensioning**

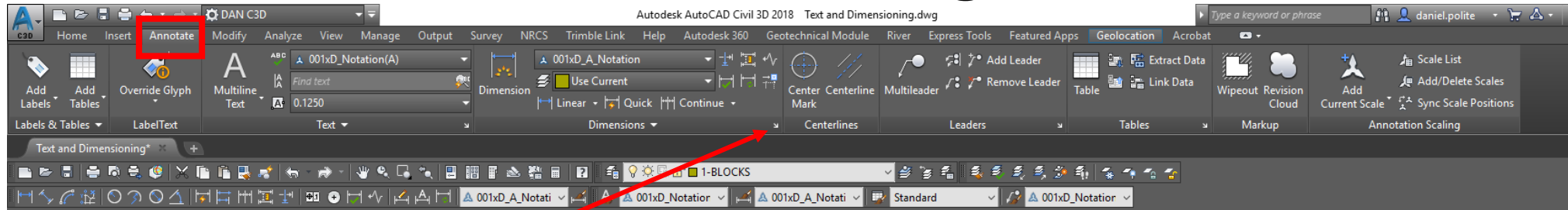
Type in **DIM** in the Command Line



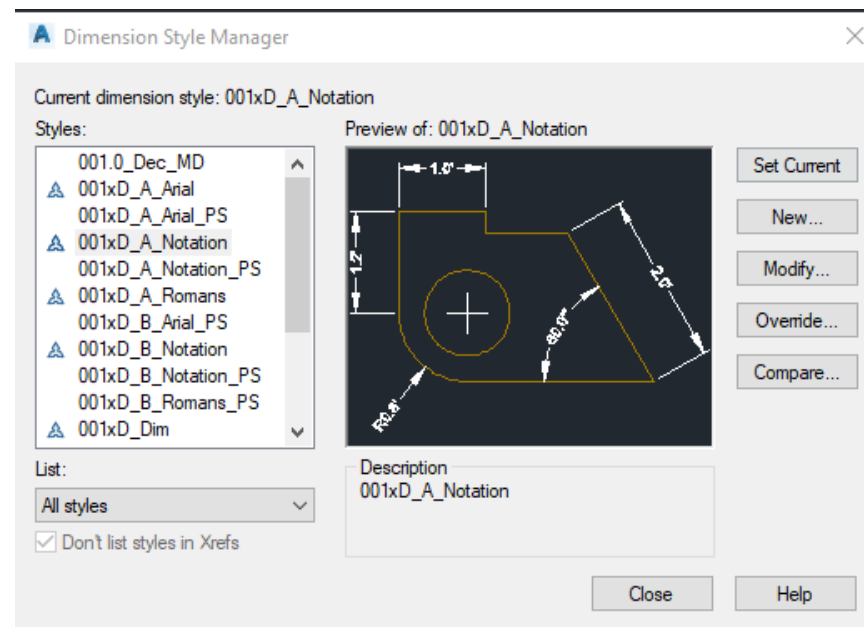
When using dimensioning, make sure you place it on the **1-Annotation Layer**




Dimensioning



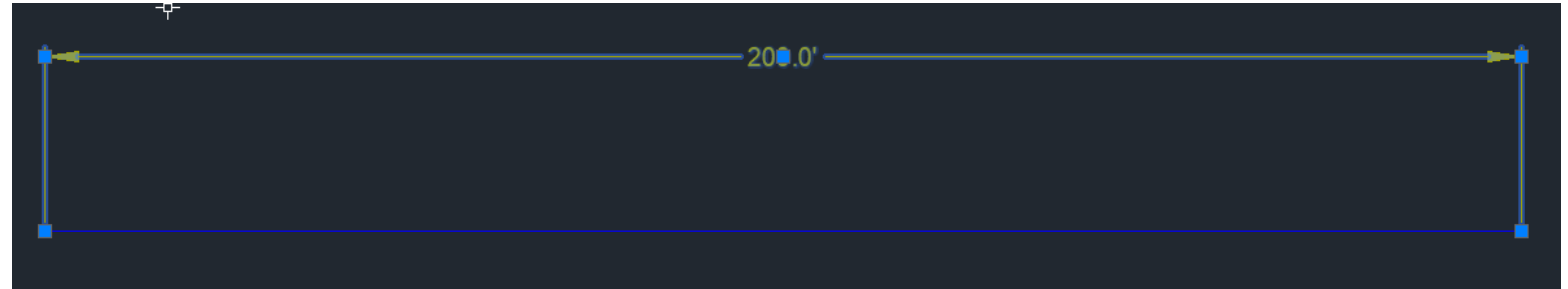
To change dimension **STYLE** Type in the command line...**ddim** will also bring up the below window



This will show all the Styles available in the drawing. (Remember that the styles with a  next to it are annotative)

Dimensioning

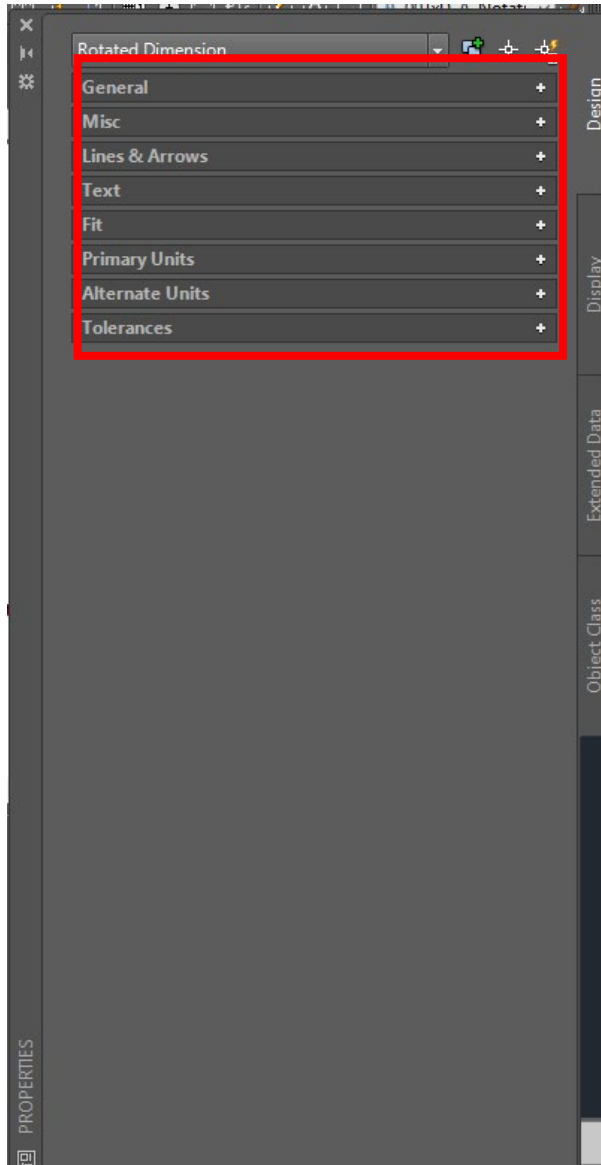
Select the dimension and then right click on **PROPERTIES**



This will bring up the **PROPERTIES** window where you will have many different options to choose from for the Dimension

GENERAL

General	
Color	<input checked="" type="checkbox"/> ByLayer
Layer	1-ANNOTATION
Linetype	————— ByLayer
Linetype scale	1.0000
Plot style	ByColor
Lineweight	————— ByLayer
Transparency	ByLayer
Hyperlink	
Associative	Yes



Dimensioning

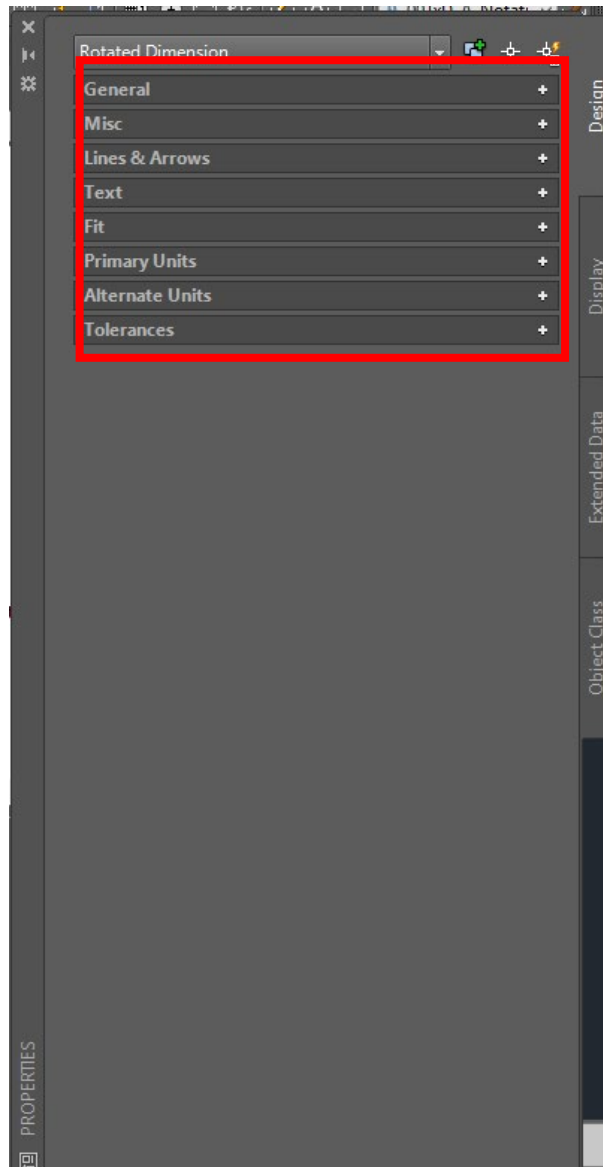
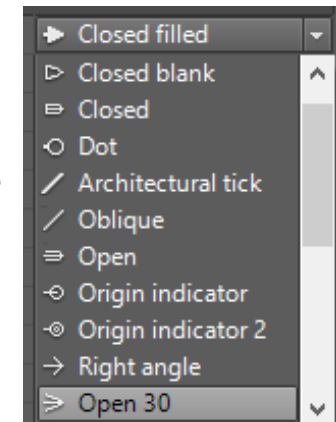
MISC

Misc	
Dim style	001xD_A_Notation
Annotative	Yes
Annotative scale	1" = 20'

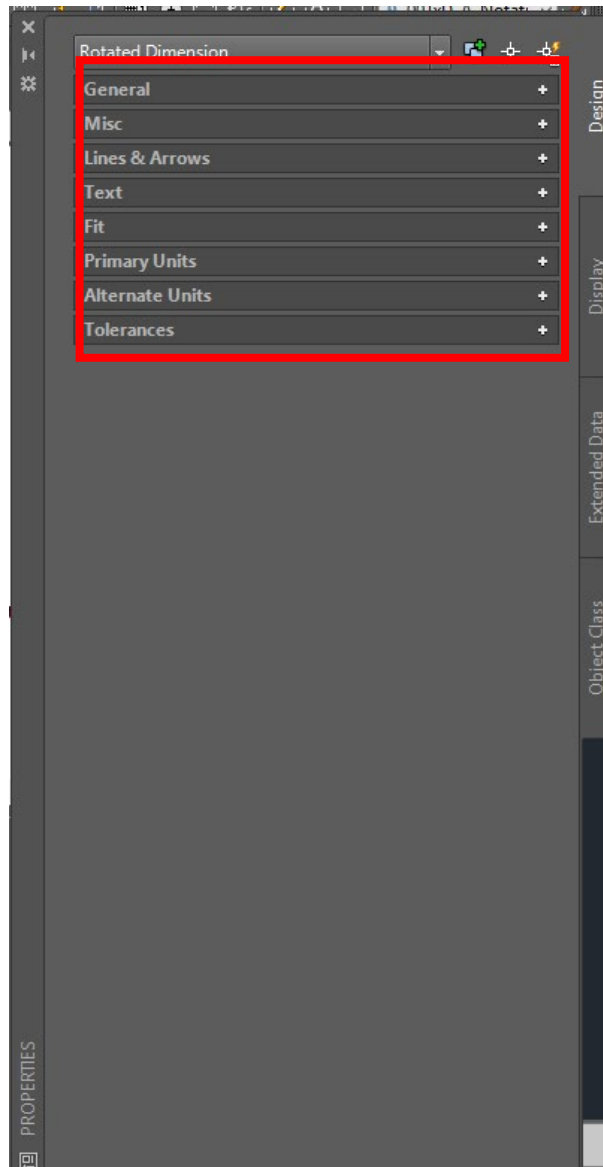
LINES & ARROWS

Lines & Arrows	
Arrow 1	Closed filled
Arrow 2	Closed filled
Arrow size	0.2340
Dim line lineweight	ByBlock
Ext line lineweight	ByBlock
Dim line 1	On
Dim line 2	On
Dim line color	ByBlock
Dim line linetype	ByBlock
Dim line ext	0.0000
Ext line 1 linetype	ByBlock
Ext line 2 linetype	ByBlock
Ext line 1	On
Ext line 2	On
Ext line fixed	Off
Ext line fixed length	0.5000
Ext line color	ByBlock
Ext line ext	0.0625
Ext line offset	0.0625

Change arrow type



Dimensioning



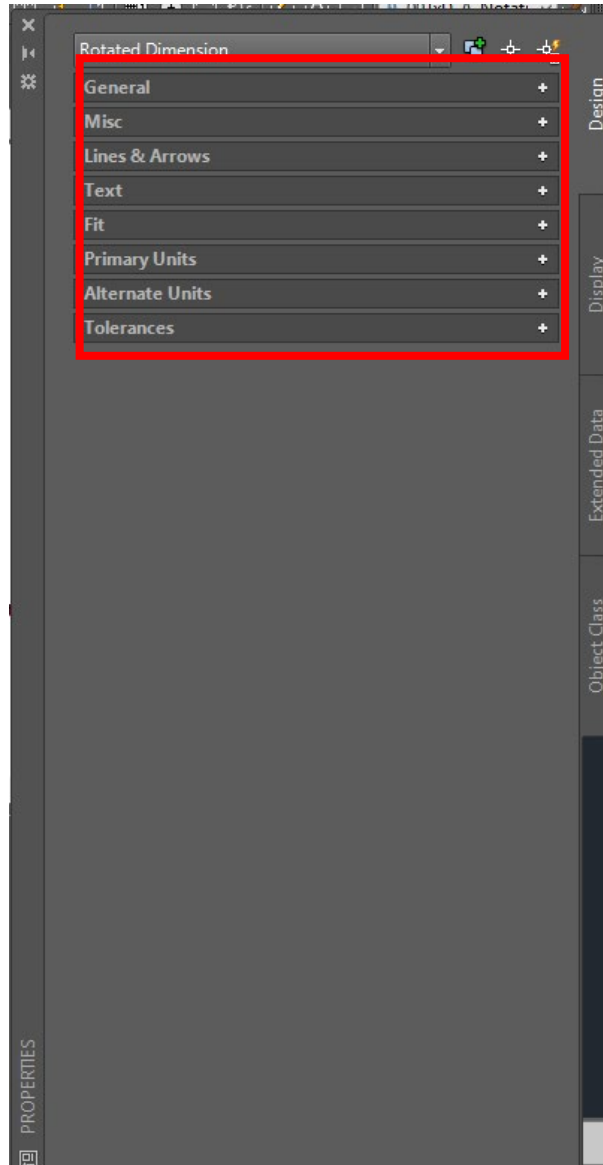
TEXT

Text	
Fill color	None
Fractional type	Horizontal
Text color	<input type="checkbox"/> ByBlock
Text height	0.1250
Text offset	0.0625
Text outside align	On
Text pos hor	Centered
Text pos vert	Centered
Text style	001xD_Notation(A)
Text inside align	On
Text position X	1249922.9682
Text position Y	739735.7718
Text rotation	90.0000
Text view direction	Left-to-Right
Measurement	200.0000
Text override	

Actual measurement of dimension

If you need to adjust the dimension text you can place the text in here

Dimensioning

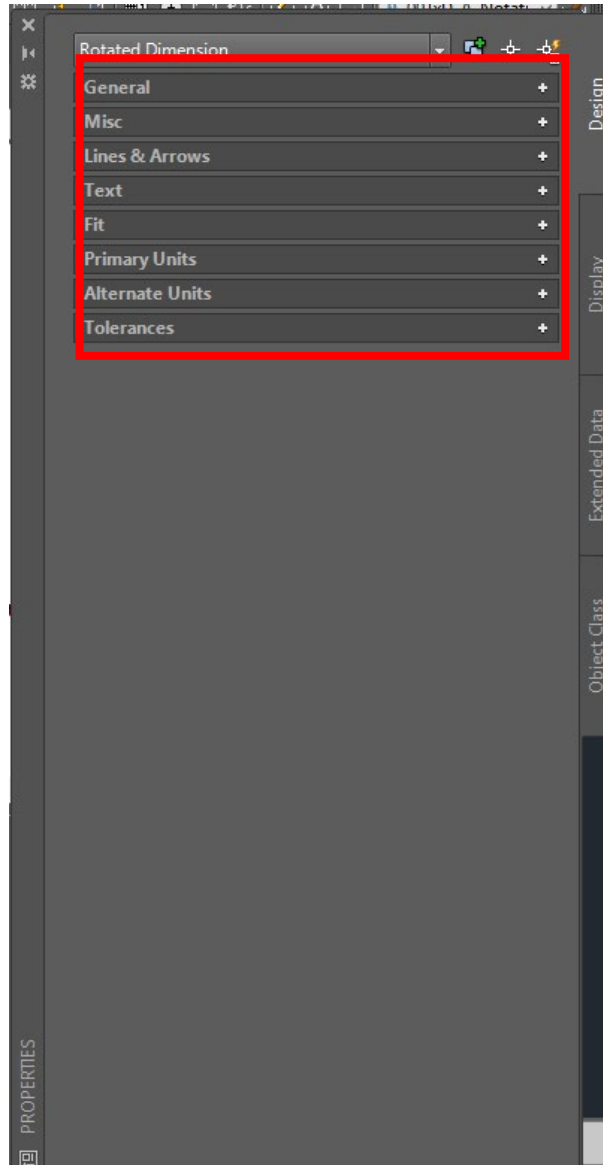


PRIMARY UNITS

Primary Units	
Decimal separator	.
Dim prefix	
Dim suffix	'
Dim sub-units suffix	
Dim roundoff	0.0000
Dim scale linear	1.0000
Dim sub-units scale	100.0000
Dim units	Decimal
Suppress leading zeros	No
Suppress trailing zeros	No
Suppress zero feet	Yes
Suppress zero inches	Yes
Precision	0.0

Change the precision here

Dimensioning

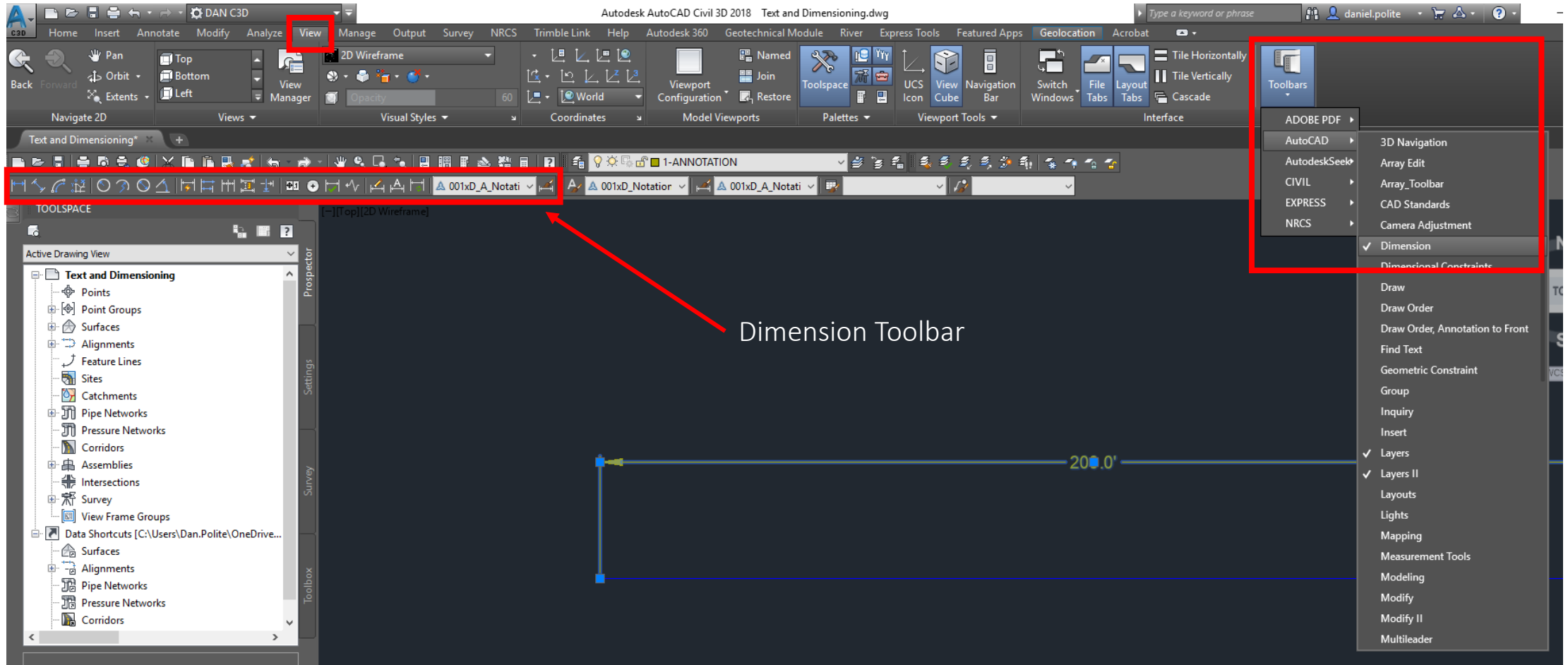


PRIMARY UNITS

Primary Units	
Decimal separator	.
Dim prefix	
Dim suffix	'
Dim sub-units suffix	
Dim roundoff	0.0000
Dim scale linear	1.0000
Dim sub-units scale	100.0000
Dim units	Decimal
Suppress leading zeros	No
Suppress trailing zeros	No
Suppress zero feet	Yes
Suppress zero inches	Yes
Precision	0.0

Change the precision here

Dimensioning



If you want the DIMENSION Toolbar to show...VIEW tab...Toolbars...AutoCAD..Dimension

Multileaders

Multileaders

- ▶ Displays information using leader **STYLES** for text and objects

LEADER STYLES

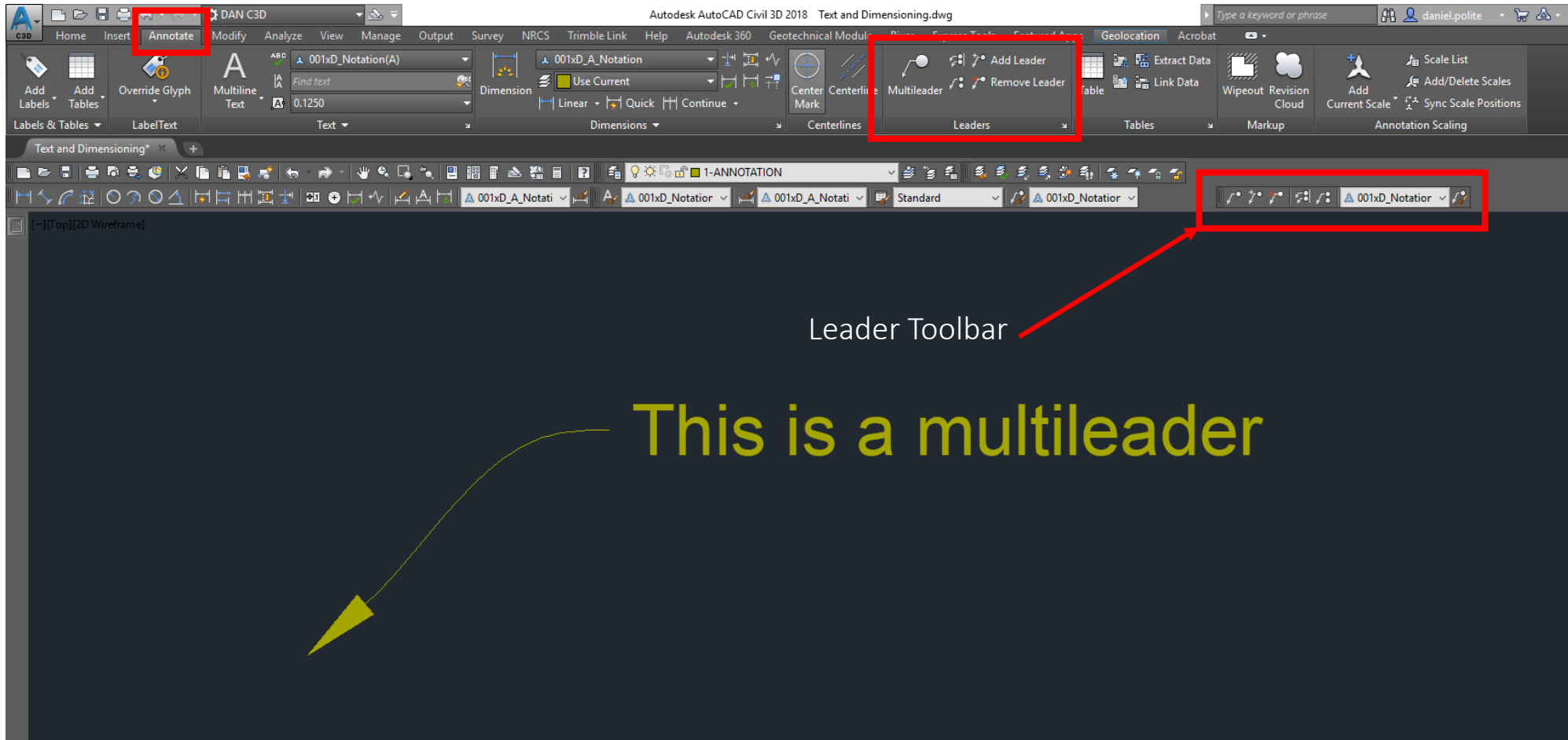
The appearance of a leader is controlled by its multileader style. You can use the default multileader style, **STANDARD**, or create your own multileader styles.

The multileader style can specify formatting for landing lines, leader lines, arrowheads, and content. For example, the **STANDARD** multileader style uses a straight leader line with a closed filled arrowhead and multiline text content.

Note: Annotative blocks cannot be used as either content or arrowheads in multileader objects.

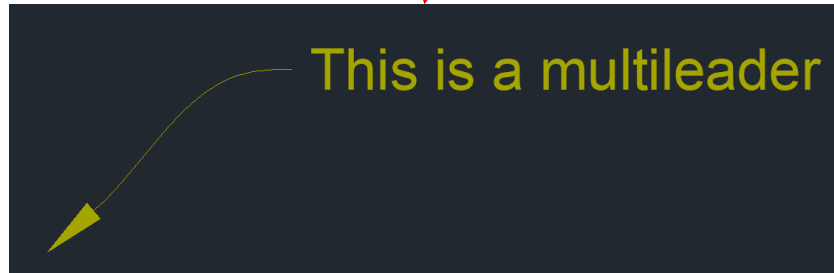
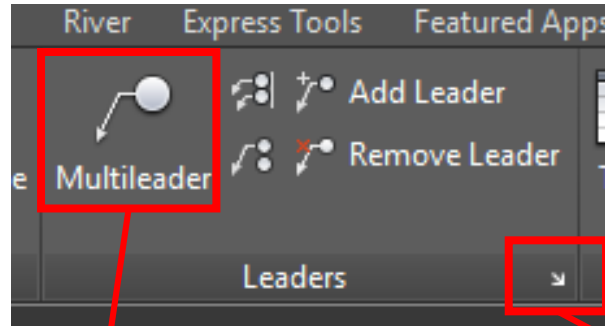
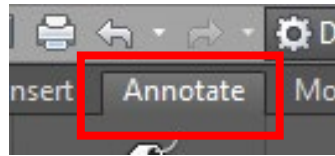
Once a multileader style has been defined, you can set it as the current multileader style to be used when the **MLEADER** command is invoked.

Multileaders

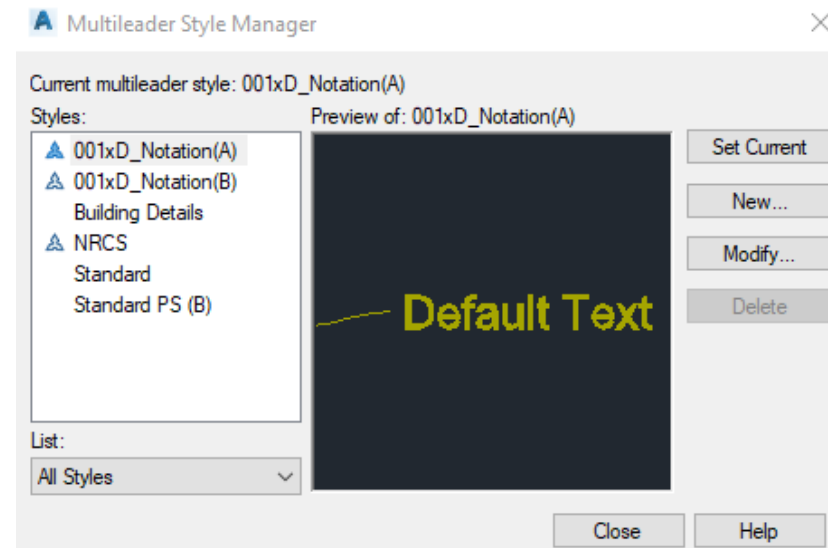


If you want the MULTILEADER Toolbar to show...VIEW tab...Toolbars...AutoCAD..MULTILEADER

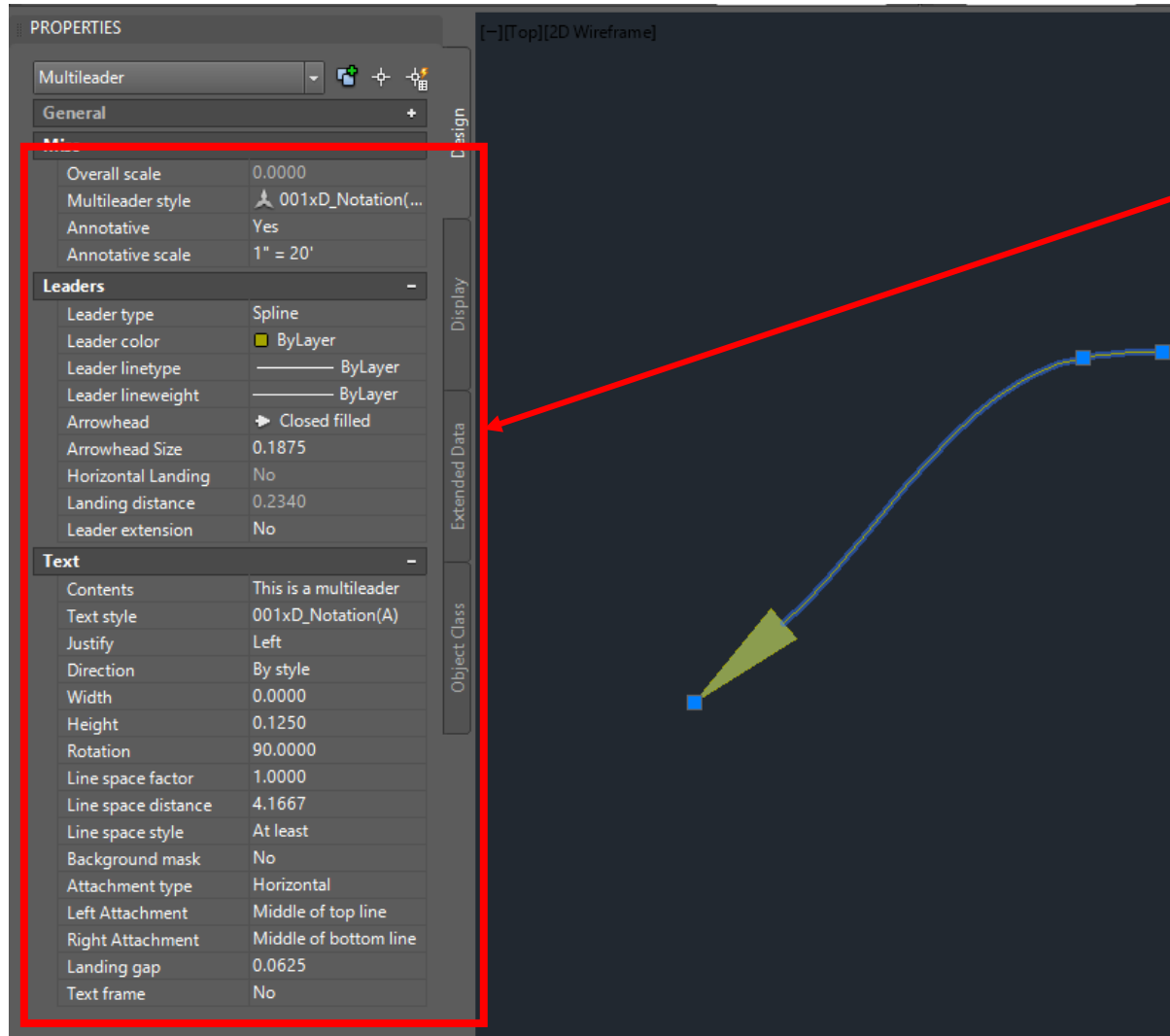
Multileaders



Change the Style here

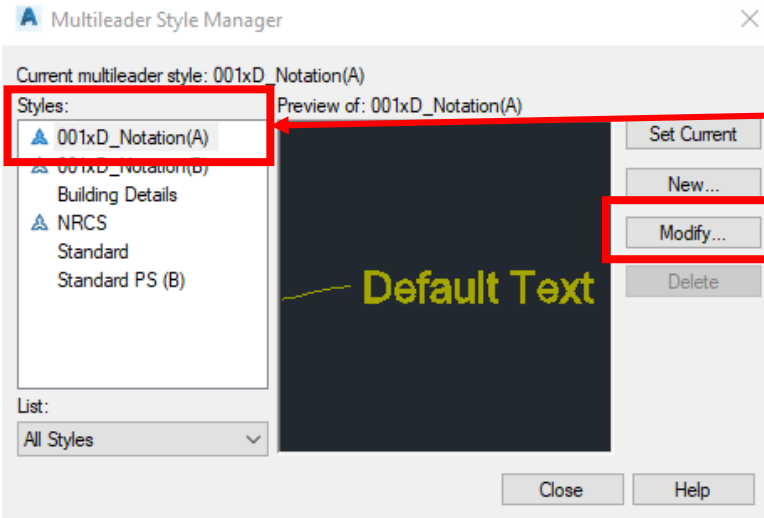


Multileaders



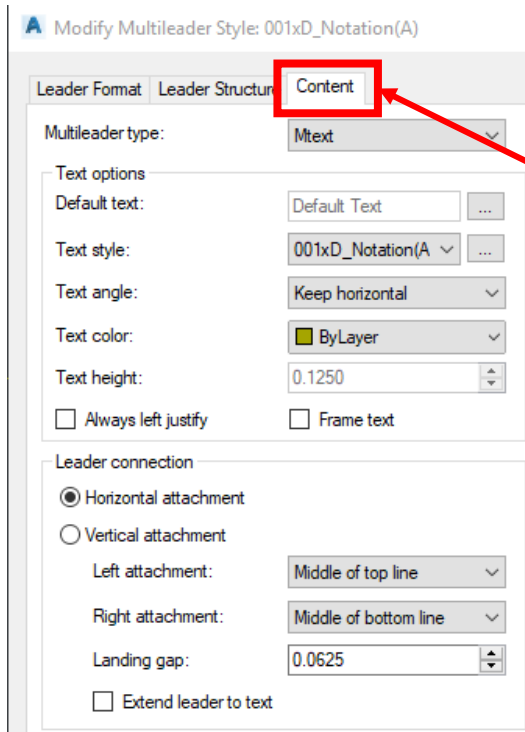
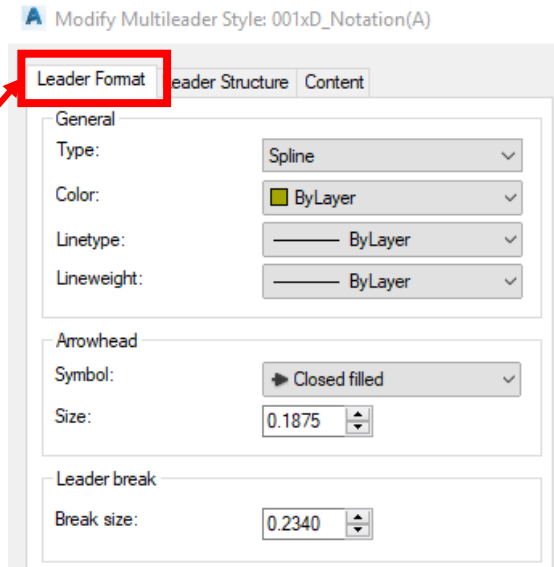
Select the multileader and you can right click to see the properties and change the properties of the leader and text.

Multileaders

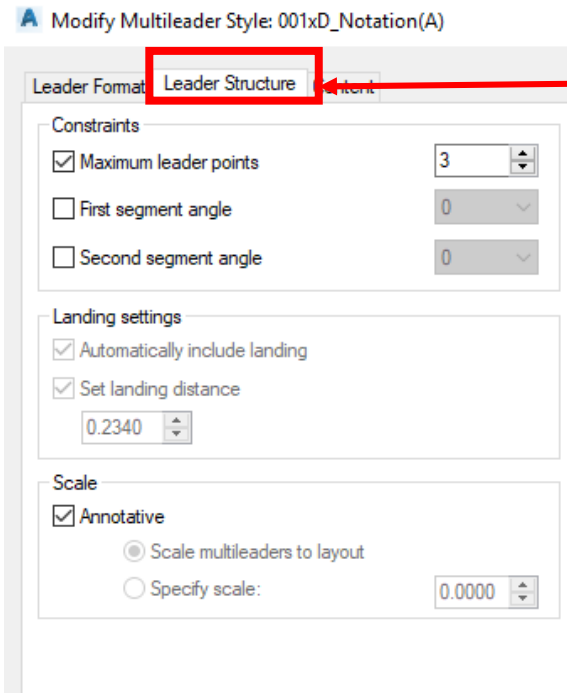


To modify a style. Select the style and then select **MODIFY**

Leader Format – General information of the leader and arrowhead type



Content – Multileader type – Mtext, Block or none. Text options and leader connections can be changed here.



Leader Structure – make sure that the scale is set to Annotative