

Lab 2: Creating the Location Survey Plat

Purpose:

The purpose of this exercise is to provide the steps for creating a Survey Plat based on an already created “County Template” for any particular project.

Background Information:

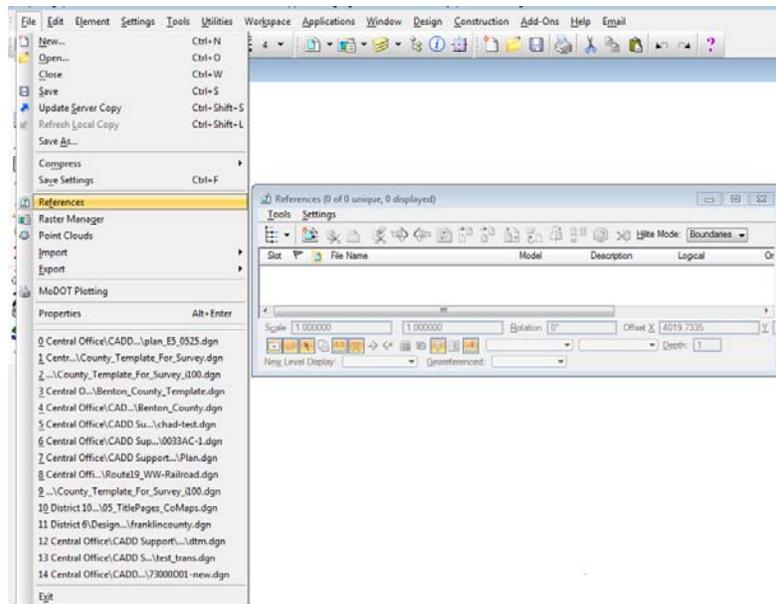
The survey geometry has already been provided in a MicroStation file. All lines and points have been visualized.

1. Open drawing PW:\\District CADD\\Survey\\Benton_##\\E5-0525\\data\\plan_E5_0525.dgn
Save the files as **plat_E5_0525.dgn**

2. Refer to Appendix D to determine the plot scale based off the survey data. In this Lab, assume an approximate area of 700' x 1000'. Benton County requires a B-sized sheet (11" x 17"). This would mean that a 100 scale border would fit the data.

3. Reference in the template previously created for Benton County. Go to **File>>Reference** and then in the Reference dialog box, select **Tools>>Attach**. Browse for the file and attach the **Benton County Template**.

PW:\\District CADD\\Survey\\Benton_##\\Benton_County_Template.dgn



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3. (cont)

NOTE: In order to be able to scale the border without affecting the survey geometry, you will need to attach the file differently than what is commonly done. This should **ONLY** be done for this process.

- a. Select the **Standard Views >> Top**
- b. Change the Scale (Master:Ref) to **100:1**
- c. Click **OK**
- d. Drop the border file in a **BLANK** area to the right of the survey geometry.

Reference Attachment Settings for ...\Benton_County_Template.dgn

File Name: ...\Benton_County_Template.dgn
Full Path: ...d0171397\Benton_County_Template.dgn
Model: Default

Logical Name: Top
Description:

Orientation:

View	Description
Coincident	Aligned with Master File
Coincident - World	Global Origin aligned with Master File
Standard Views	
Top	
Saved Views (none)	
Named Fences (none)	

Detail Scale: CUSTOM

Scale (Master:Ref): 100.000000 : 1.000000

Named Group:
Revision:
Level:
Nested Attachments: No Nesting Depth: 1
Display Overrides: Never
New Level Display: Never
Global LineStyle Scale: Master

Synchronize with Saved View

Toggles

Drawing Title

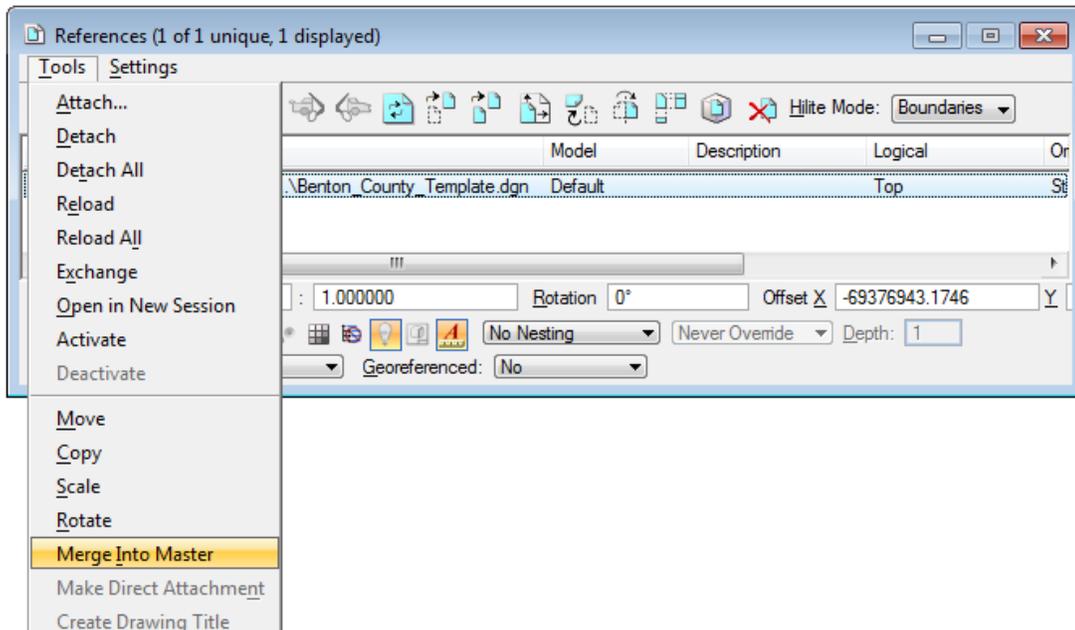
Create
Name: Top

OK Cancel

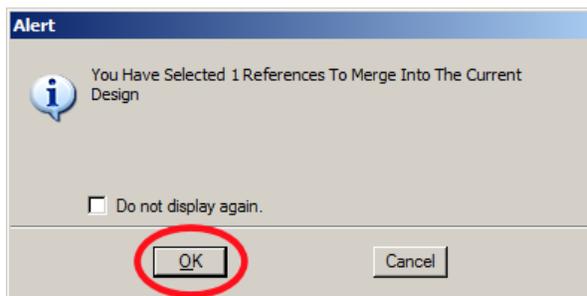
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5. Merge the Benton_County_Template.dgn into the active file so you can edit or modify data for the particular job you are working on

In the Reference dialog box, select the **Benton_County_Template.dgn** and select **Tools >> Merge into Master**. Left click out on a blank area of the screen somewhere.

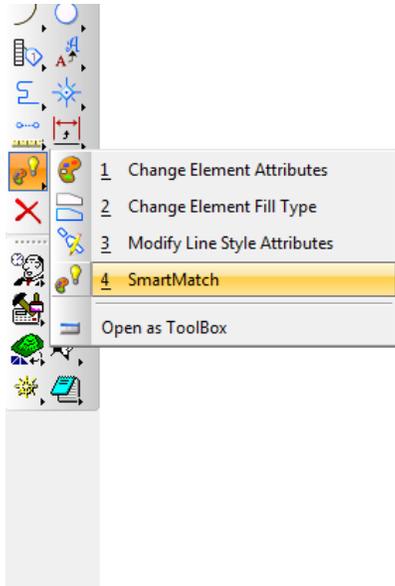


Click on **OK** in the Alert dialog box.



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- Use the **SmartMatch** tool and select the white text on the survey notes. This will load the proper attributes and text attributes for the Property Description Notes being placed in the next step.

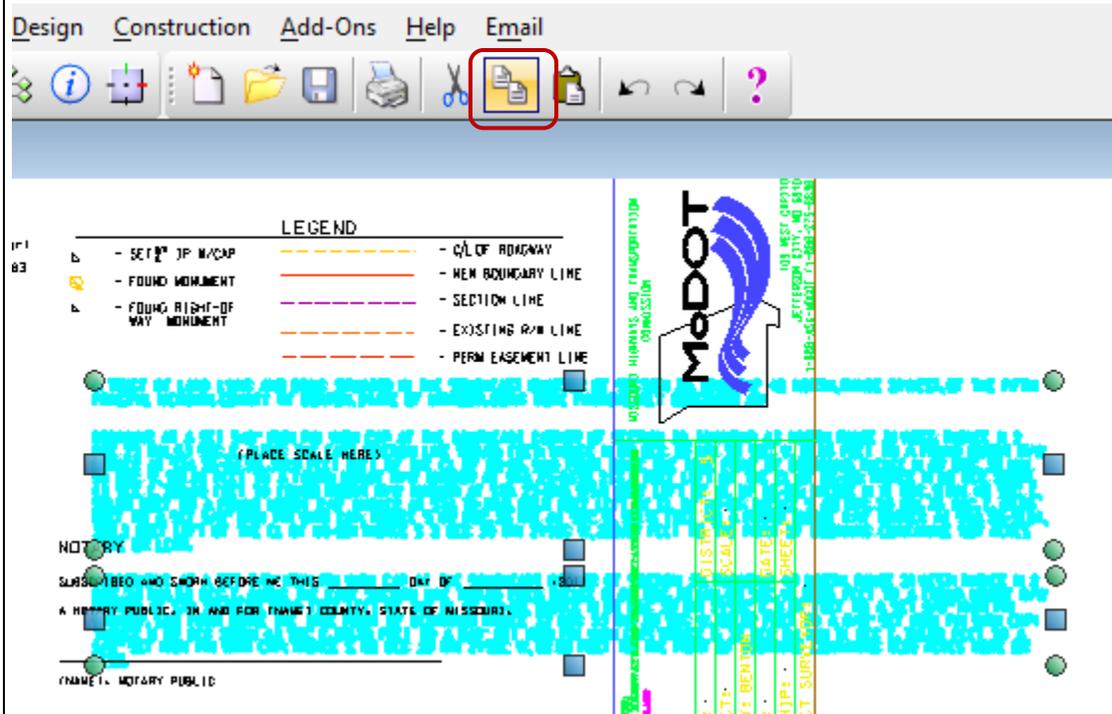


SURVEY NOTES:

THIS SURVEY OF A XXXX ACRE PARCEL FROM THE TRACT RECORDED IN BOOK NO. XXX AT PAGE XXX.

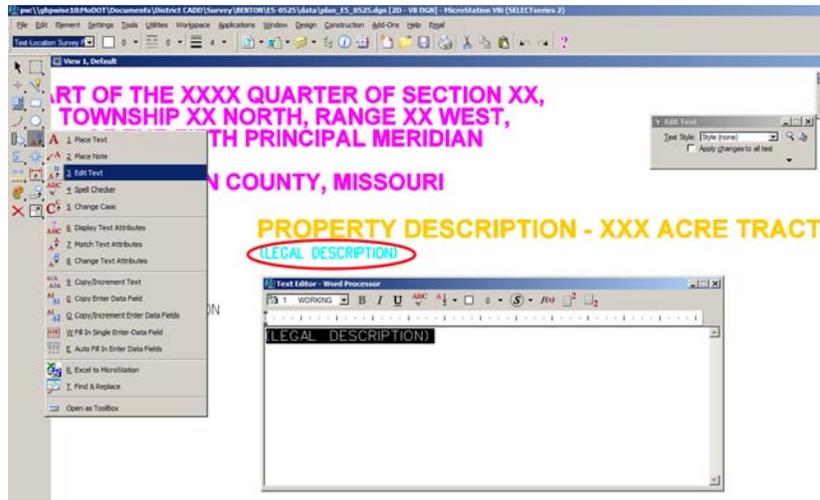
- BASIS OF BEARINGS - GRID XXXXX 1983 MISSOURI STATE PLANE COORDINATE SYSTEM XXXXX ZONE, DERIVED BY REAL-TIME KINEMATIC (RTK) GPS OBSERVATION USING MISSOURI GEOGRAPHIC REFERENCE CONTROL STATIONS; (GRS STATION COORDINATES SHOWN IN METERS: 1meter = 3.28083333 feet).
CORS_ID XXXX; NORTHING: XXXXXX.XXX EASTING: XXXXXX.XXX
- ALL DISTANCES SHOWN HERE ON ARE GROUND DISTANCES. TO CONVERT TO GRID, MULTIPLY BY A COMBINED GRID FACTOR OF XXXXXXXXX.
- MEASURED DIMENSIONS SHOWN WITHOUT PARENTHESES. DEED OR RECORD DIMENSIONS SHOWN WITH PARENTHESES.
- TYPE XXXXX PROPERTY.
- APPARENT OWNERSHIP AS SHOWN IS BASED ON INFORMATION PROVIDED BY OTHERS AND DOES NOT REPRESENT AN OPINION AS TO TITLE.
- SUBJECT TO ALL EASEMENTS OF RECORD.
- CONVENANTS, LIMITS OF ACCESS, AND RIGHTS RETAINED BY GRANTOR OF THE HEREIN SHOWN PROPERTY ARE NOT SHOWN, BUT MAY BE DISCLOSED BY A FULL TITLE SEARCH.
- ALL IMPROVEMENTS AND UTILITIES ABOVE AND BELOW GROUND LEVEL NOT SHOWN.
- PROPERTY WAS SURVEYED BY THE MISSOURI DEPARTMENT OF TRANSPORTATION.
- THE RELATIVE POSITIONAL ACCURACY OF THE COORDINATES OF THIS SURVEY ARE WITHIN THE SPECIFICATIONS FOR XXXXX SURVEY, WHICH IS A MAXIMUM OF X.XXXX METERS.

- Use the **Element Selection** tool and select the **Property Description** provided in the original plan drawing. Then **Copy** the selected text.

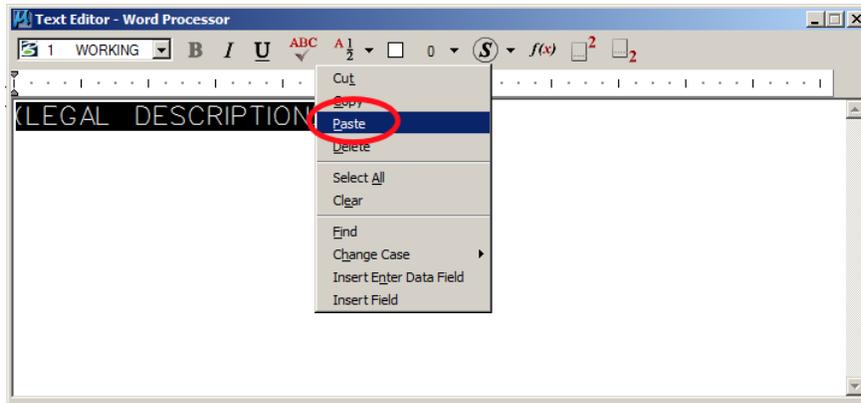


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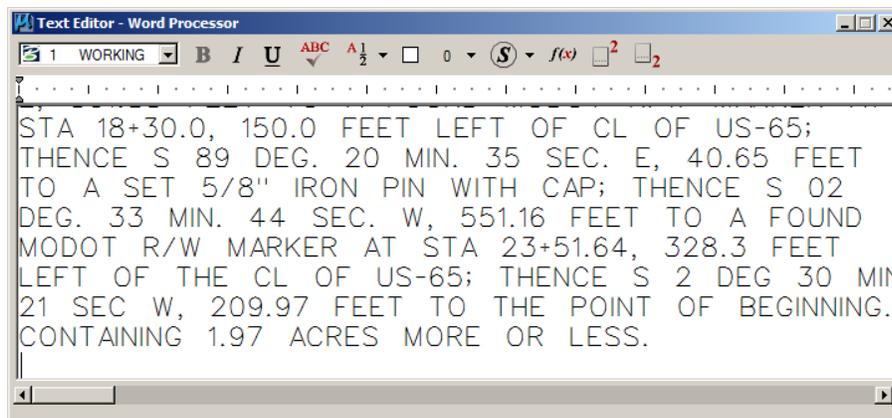
7. (cont) Select the text that says "Legal Description". Then select the Edit Text tool. This will bring up the Text Editor dialog box.



- Right-click over the text in the Word processor, and select Paste.



- The Legal Description will appear in the Text Editor.



- Right click on a blank area of the screen, and the Legal Description will be in the correct place.

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7. (cont) If the text does not fit correctly, grab the handle on the bottom right edge of the text, hold your left mouse button down, and drag it to the left to resize it until it fits on the page properly.

PROPERTY DESCRIPTION - XXX ACRE TRACT:

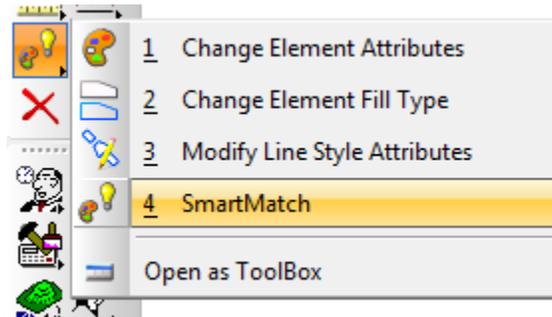
TRACT OF LAND LYING AND BEING SITUATED IN THE SOUTHEAST QUARTER OF SECTION 30, TOWNSHIP 43 NORTH, RANGE 21 WEST, OF THE FIFTH PRINCIPAL MERIDIAN COUNTY OF BENTON, STATE OF MISSOURI, BEING MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT A SET 5/8" IRON PIN WITH CAP AT THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 43 NORTH, RANGE 21 WEST; THENCE N 2 DEG. 23 MIN. 53 SEC. E. ALONG THE EAST LINE TO THE POINT OF BEGINNING; THENCE N 87 DEG. 30 MIN. 58 SEC. W. 58.95 FEET TO A FOUND MODOOT R/W MARKER AT STA 25+44.56, 181.97 FEET LEFT OF THE CL OF US-85, 549.2 FEET BEING THE TRUE POINT OF BEGINNING; THENCE N 82 DEG. 30 MIN. 58 SEC. W. 153.38 FEET TO A FOUND MODOOT R/W MARKER AT STA 25+93.91, 233.3 FEET LEFT OF THE CL OF US-85; THENCE N 02 DEG. 21 MIN. 43 SEC. E. 209.69 FEET TO FOUND MODOOT R/W MARKER AT STA 23+910, 179.8 FEET LEFT OF CL OF US-65; THENCE N 14 DEG. 11 MIN. 40 SEC. E. 561.85 FEET TO A FOUND MODOOT R/W MARKER AT STA 18+30.0, 150.0 FEET LEFT OF CL OF US-65; THENCE S 89 DEG. 20 MIN. 35 SEC. E. 40.65 FEET TO A SET 5/8" IRON PIN WITH CAP; THENCE S 02 DEG. 33 MIN. 44 SEC. W. 551.16 FEET TO A FOUND MODOOT R/W MARKER AT STA 23+516.4, 328.3 FEET LEFT OF THE CL OF US-65; THENCE S 2 DEG. 30 MIN. 21 SEC. W. 209.97 FEET TO THE POINT OF BEGINNING, CONTAINING 1.97 ACRES MORE OR LESS.

If your handles do not appear, make sure the “Disable Handles” option is not enabled on your Element Selection tool, and try it again.



8. Now we can fill out the rest of the title information. **SmartMatch** a piece of text in the title block area.



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8. (cont) Use the **Place Text** tool and place the necessary text in the title block using the handles (points) provided in the title block area.

The screenshot shows the MicroStation software interface. On the left, the 'Place Text' tool menu is open, displaying various options such as 'Place Text', 'Place Note', 'Edit Text', 'Spell Checker', 'Change Case', 'Display Text Attributes', 'Match Text Attributes', 'Change Text Attributes', 'Copy/Increment Text', 'Copy Enter Data Field', 'Copy/Increment Enter Data Fields', 'Fill In Single Enter-Data Field', 'Auto Fill In Enter Data Fields', 'Excel to MicroStation', 'Find & Replace', and 'Open as ToolBox'. The main workspace shows a title block template with the following text:

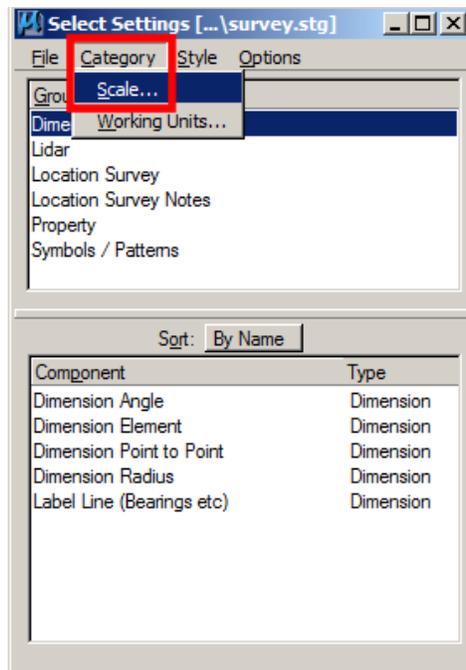
SURVEY FOR: MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
A TRACT OF LAND LYING AND BEING SITUATED IN THE SOUTHEAST QUARTER OF SECTION 30, TOWNSHIP 43 NORTH, RANGE 21 WEST, OF THE FIFTH PRINCIPAL MERIDIAN, COUNTY OF BENTON, STATE OF MISSOURI.

ROUTE: 65	DISTRICT: CD
PROJECT: E5-0525	SCALE: 1"=100'
COUNTY: BENTON	DATE: 03/29/2011
RANGE: 21	SHEET: 1 OF 2
TOWNSHIP: 43	PROJECT SURVEYOR: J.C. FORMILES

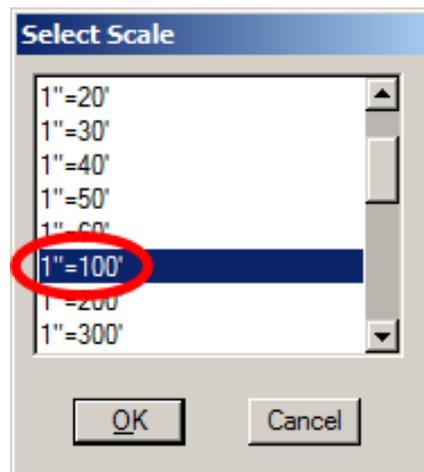
9. Use the **Edit Text** tool and edit all the text in both sheets that can be filled out. See **Appendix C** to get the data for editing the notes/text in both sheets.

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10. Attach a graphic scale to the file by going to **Design >> Survey**. The scale should already be set, but you should verify the scale by selecting "**Category >> Scale**".

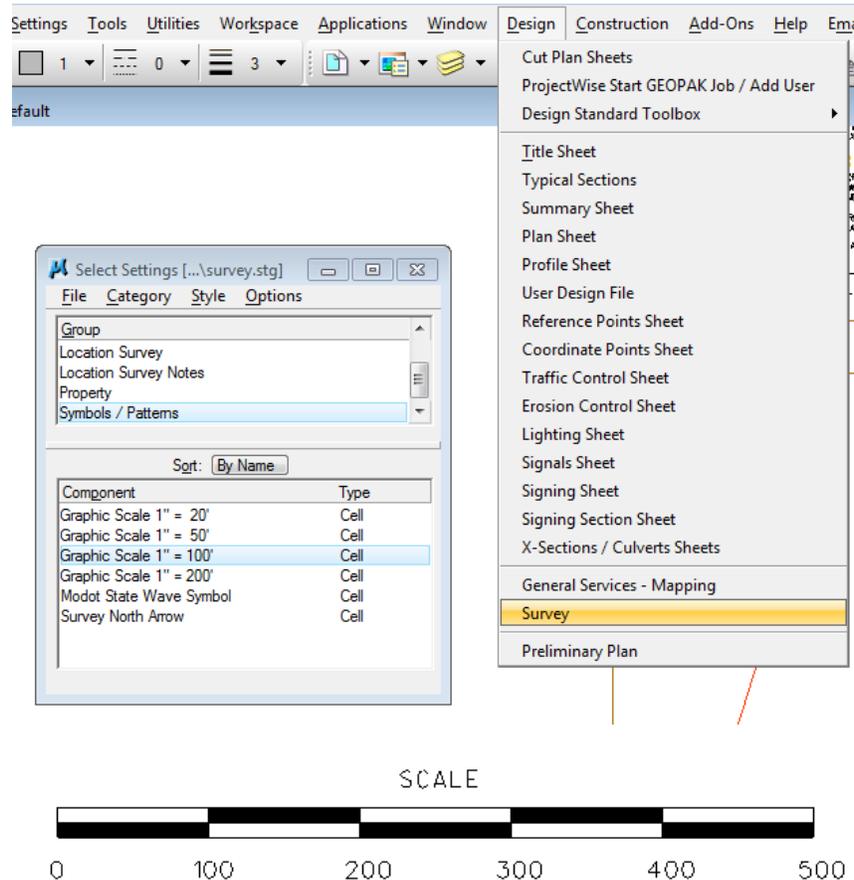


The scale is based on of the scale of the border. As you may recall from step 3 in this lab, the border that was placed is **100 Scale**. Scroll down and select **1"=100'** if it is not set to that.



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10. (cont) In the **Survey** settings manager, select the **Symbols / Patterns** group and then the correct graphic scale for the drawing, based once again on the border size. For this Lab, select **Graphic Scale 1" = 100'**. Place the graphic scale over top the *(Place Scale Here)* text. After the graphic scale is place, use the **Delete** tool and remove the *(Place Scale Here)* text.



Lab 2 is complete. Look over the drawing make any other necessary changes the file, such as moving text and notes around, etc, so nothing overlaps each other. Remember **NEVER MOVE** the plan geometry in the file. **Save** the file.