

# Lab 3- Working with Data, Labeling, Applying Correct Attributes

## Lab 3- Working with Data, Labeling, Applying Correct Attributes.

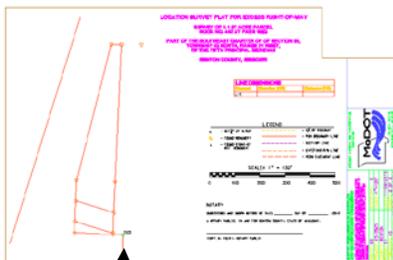
### Purpose:

The purpose of this exercise is to provide the steps for reviewing your Survey Data, cleaning up the file, applying correct attributes and labeling the line work.

### Background Information:

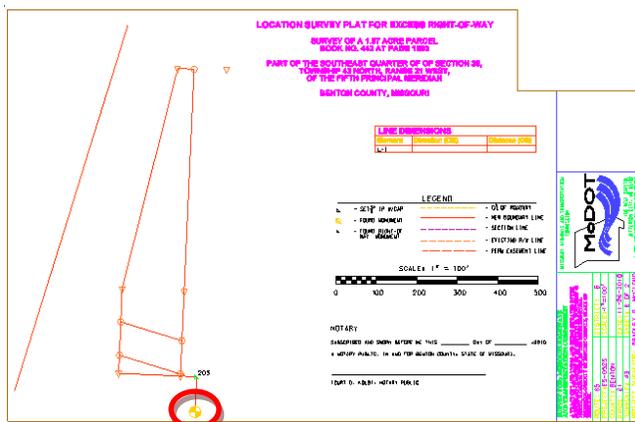
The Survey data and county template have been combined into 1 file. We will now clean up the data.

#### 1. Working with the data.



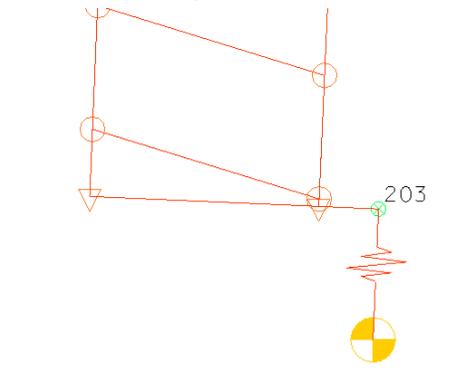
Point 201

- Point 201, which marks a Found Survey Monument, is off the bottom of the sheet. This point can be moved onto the sheet as long as a break is shown, and the monument is properly noted.
- Use the break tool to break and shorten the line.
- Use the Move tool to move the monument onto the sheet.
- Delete any leftover text that is below the border.
- Use the Partial Delete tool to put a break in the line.
- Show the break with a zig-zag by using the Place Line tool (Do not worry about the attributes of your line for now).



Point 201

It should look something like this when you are done



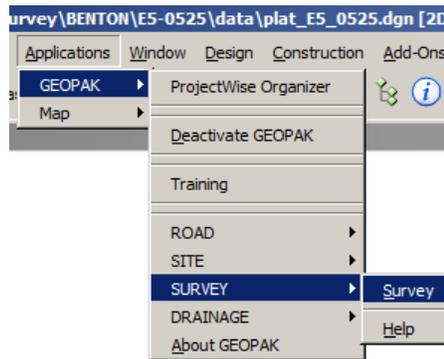
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2. Activate Geopak Survey.

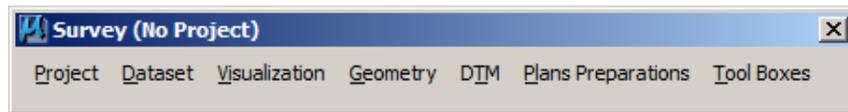
Go to the MicroStation menu bar and select **Applications >> GeoPak >>Activate GeoPak**.



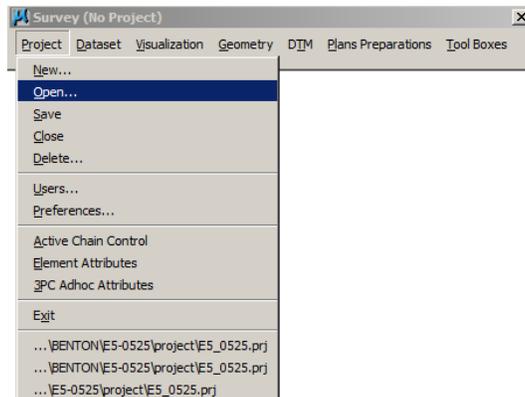
Now that GeoPak is active, select **Applications >> Geopak Survey >> Survey**.



This will bring up the Survey menu bar.



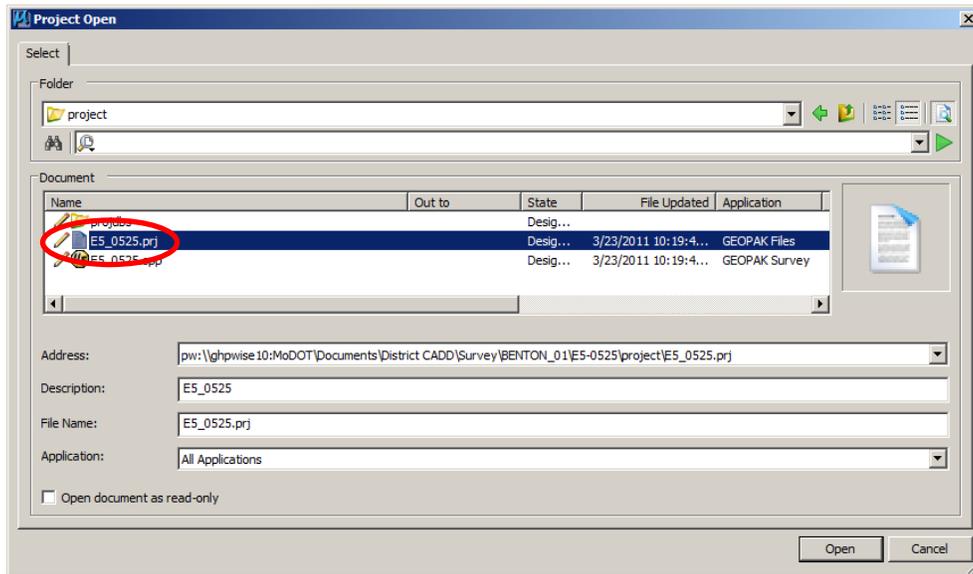
3. Opening a Project. To open a project, select **Project > Open** on the survey menu bar.



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## 3. (cont)

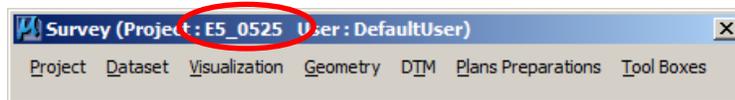
This will bring up the Project Open dialog box in ProjectWise. If it is in the wrong directory, use the drop down arrow on the right side and navigate to the Project directory.



Select the project file (E5-0525.prj in this case).

Select **Open**.

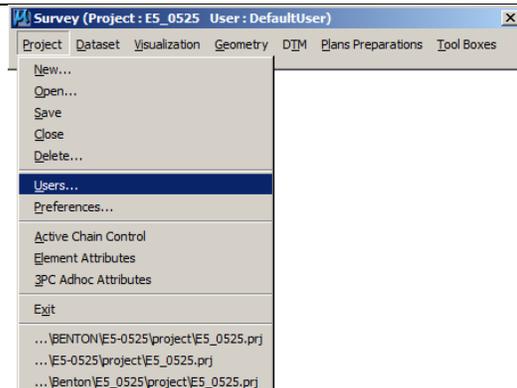
The project will show up in the banner for Geopak Survey.



## 4. Adding a User

While the project showed up, there is no User defined (shows as **DefaultUser**).

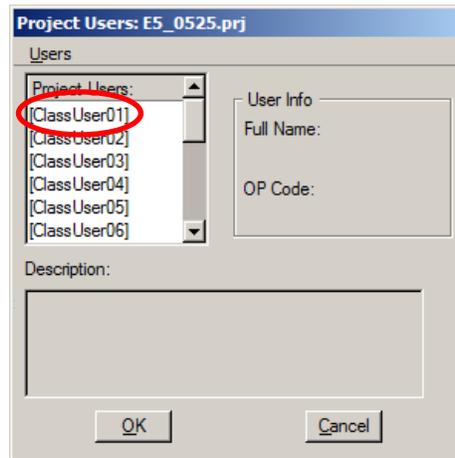
Select **Project > Users**.



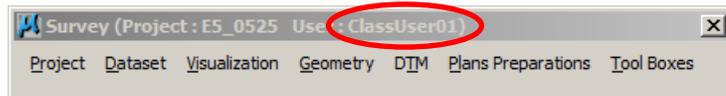
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## 4. Adding a User (cont)

In your office, you will select your user ID. For the purpose of this class, select the “ClassUser” that corresponds with the computer you are sitting at. CaddUser1=ClassUser01, etc.



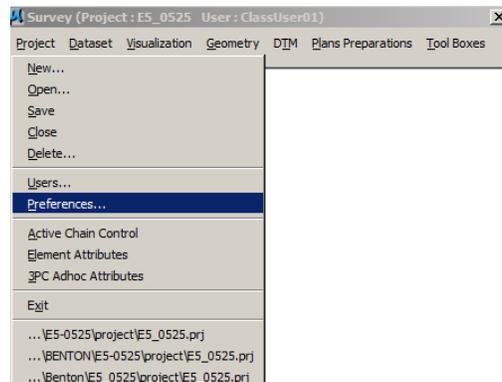
Select “OK”.



The User name will show up in the banner.

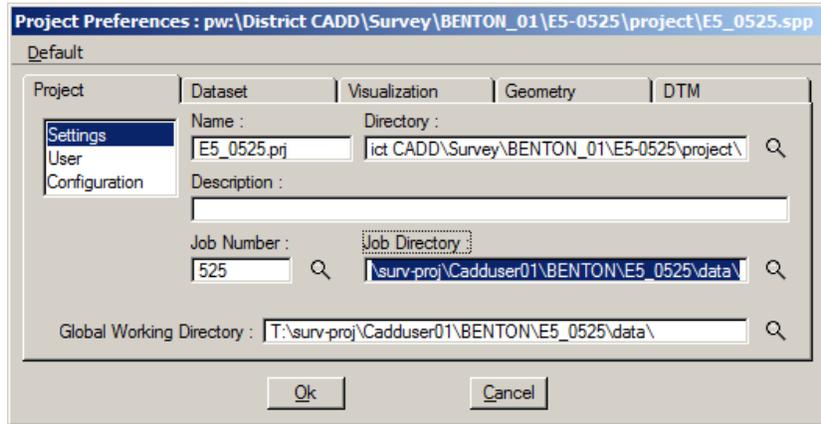
## 5. Project Preferences (optional)

The preferences are set up when the Start Job option is used. The only time these settings need to change if a user needs to use a different gpk file then the one originally created.

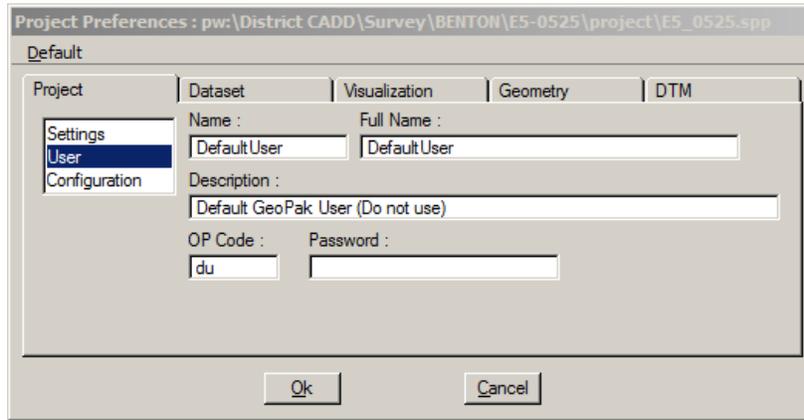


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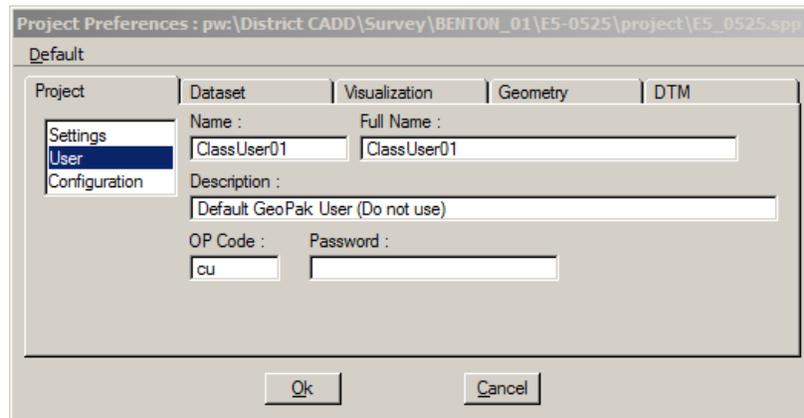
## 5) Project Preferences (cont)



If a change is needed, click the magnifying glass to the right of the field to be changed, navigate to the correct location, say **OK** to accept it.



In the User area of Project Preferences, data will need to be entered manually.

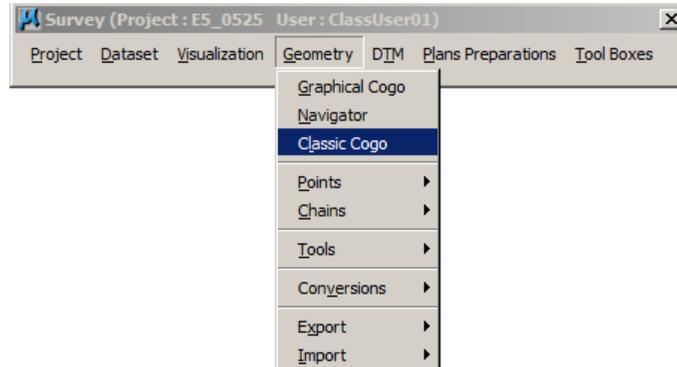


Select **OK** when done.

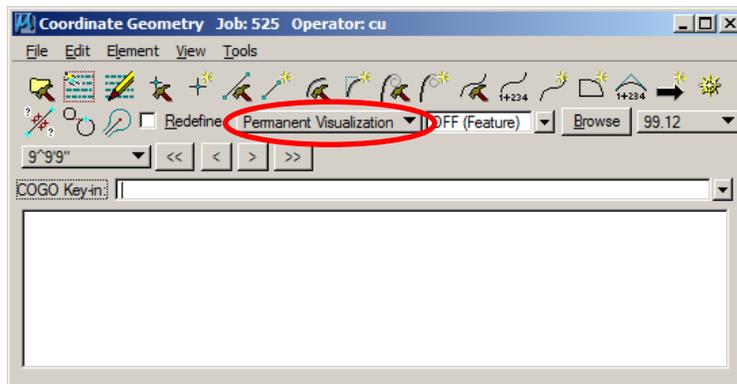
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6) Review COGO Geometry and points.

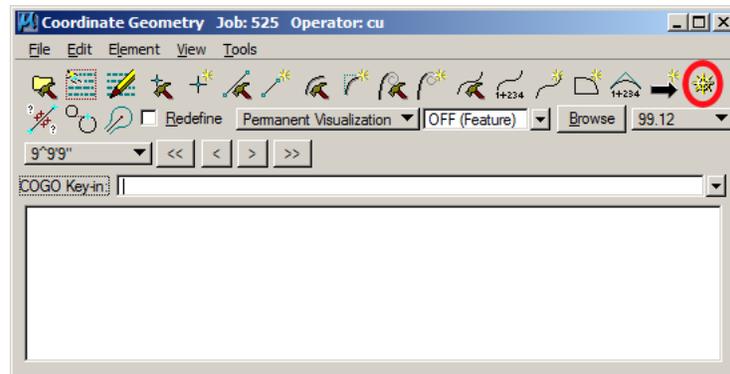
Select **Geometry >> Classic COGO**.



This will open the COGO dialog box there we can verify the points, lines, curves, chains, survey chains, or parcels have been included in the gpk file. Make sure that Visualization is set to **Permanent Visualization**.



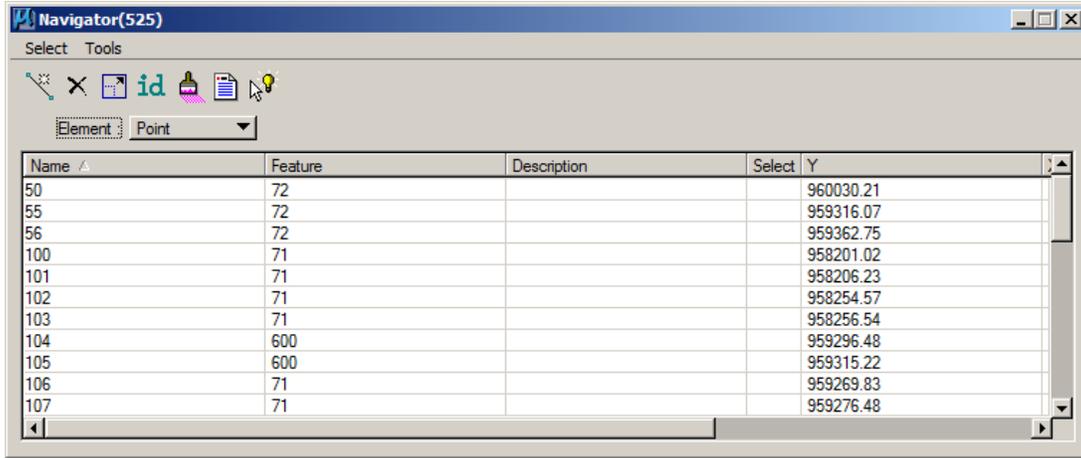
The Navigator is the icon that looks like the Captain's wheel on a ship. Depending on how your dialog box is sized, it may be in a different location than shown here.



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6) Review COGO Geometry and points (cont).

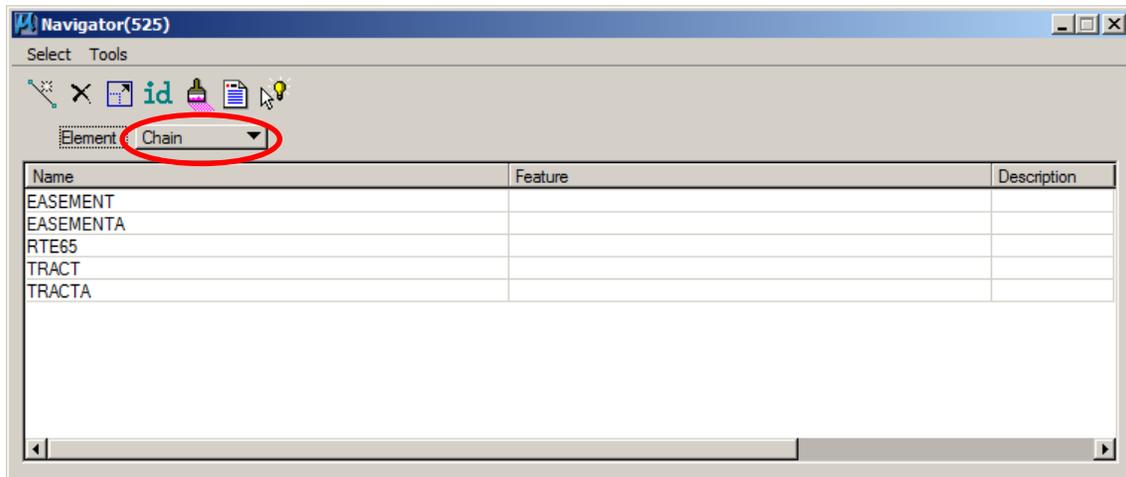
This will bring up the COGO Navigator.



The screenshot shows the Navigator(525) window with a toolbar and a table. The toolbar includes icons for selection, deletion, and identification. The 'Element' dropdown is set to 'Point'. The table below lists various points with their names, features, descriptions, and coordinates.

Name	Feature	Description	Select	Y
50	72			960030.21
55	72			959316.07
56	72			959362.75
100	71			958201.02
101	71			958206.23
102	71			958254.57
103	71			958256.54
104	600			959296.48
105	600			959315.22
106	71			959269.83
107	71			959276.48

Chains can be accessed by using the drop down next to **Point** and changing it to **Chain**. If there was a parcel, you would change it to parcel.



The screenshot shows the Navigator(525) window with the 'Element' dropdown menu open and 'Chain' selected. The table below lists various chains with their names, features, and descriptions.

Name	Feature	Description
EASEMENT		
EASEMENTA		
RTE65		
TRACT		
TRACTA		

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### 7) Visualizing a point.

If a point is missing from the plat, it can easily be visualized. Point 113, which is the North  $\frac{1}{4}$  Corner is not visualized.



Set Element to **Point**, and scroll down the list to 113.

Name	Feature	Description	Select	Y
109	71			960029.29
110	71			960199.38
111	71			959479.60
112	71			959486.00
113	73			963432.77
114	600			959458.03
115	73			955511.45

First select the point number, and then click the **Visualize Element** icon ONCE.

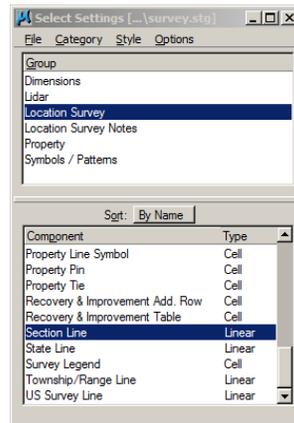
Name	Feature	Description	Select	Y
106	71			959269.83
107	71			959276.48
108	71			960030.68
109	71			960029.29
110	71			960199.38
111	71			959479.60
112	71			959486.00
113	73			963432.77
114	600			959458.03
115	73			955511.45
116	73			952873.83

To locate the point, select **ID** and click on 113. You will be brought to the location of that point.

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8) Cleaning up the data.

Connect the North  $\frac{1}{4}$  Corner to Survey Point 203 using the correct line style (**Design >> Survey >> Location Survey >> Section Line**). This will invoke the Place SmartLine tool automatically.



Move the North  $\frac{1}{4}$  Corner onto the sheet on the line. To get the Corner to fall exactly on the line, you may want to snap to the middle of the corner point while using the Move tool, then single left click the **Near Snap Point** on the Snaps toolbar.



This will activate it for a single click and allow you to place the point along the Section Line. If it falls on any text, don't worry about it. This text will be moved later on.

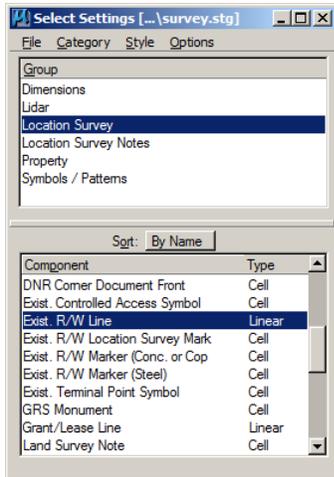


Then break the line and delete the part that goes past the Corner Point you just moved onto the sheet.

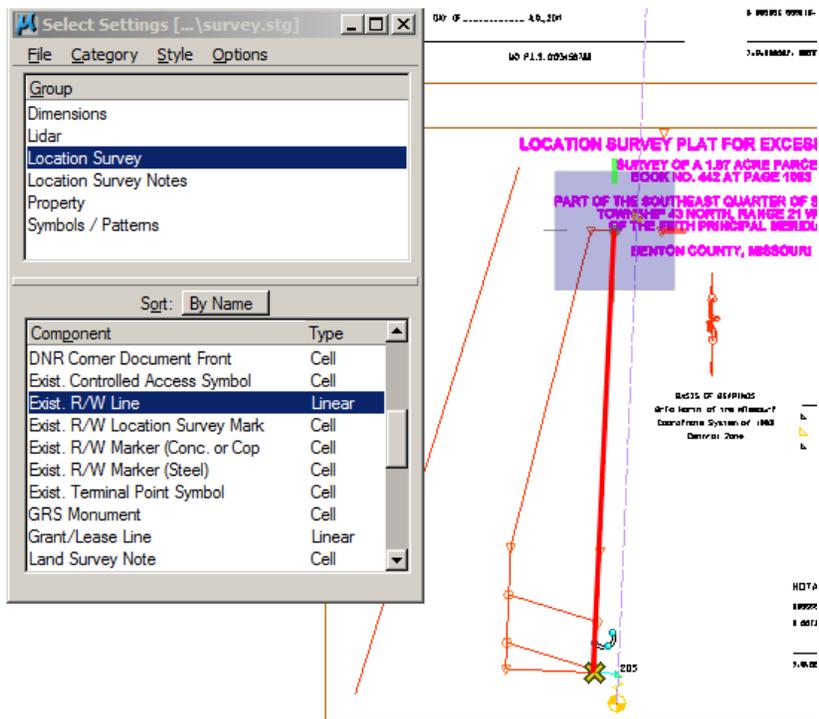
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8. (cont)

The Section Line is also the C/L of the Outer Road with an 80' R/W. To draw that R/W, set the correct line style in the Settings manager (**Design >> Survey >> Location Survey >> Existing R/W Line**),



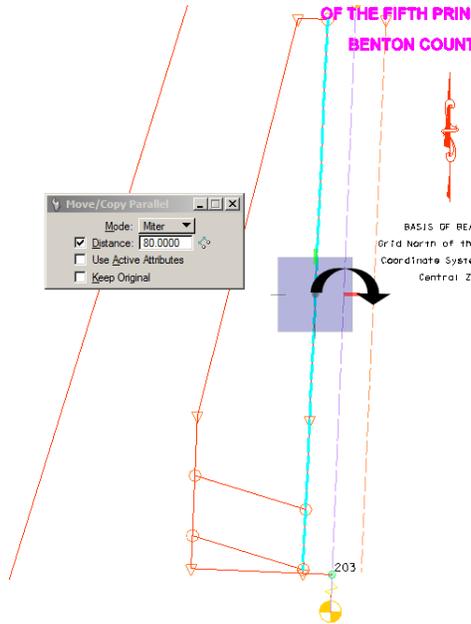
Draw the line on top of the east side of the parcel as shown below (The line style is exaggerated intentionally in this illustration).



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8. (cont)

Offset it by 80' using the Move/copy parallel tool with the settings shown below.



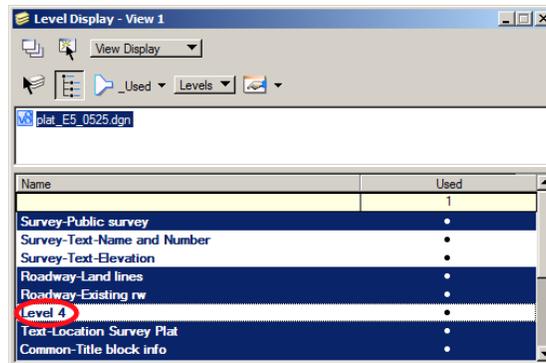
9) Working with the D&C Manager.

When the parcels and easements were first brought in through COGO, they were automatically assigned attributes, which are not to our CADD standards. This can be easily corrected through the D&C manager. You first need to turn off the level they are currently on, which is level 4.

Open the Level Display dialog box.



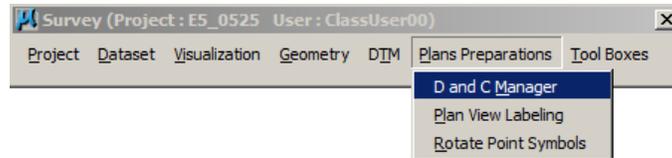
Click on Level 4 to turn it off.



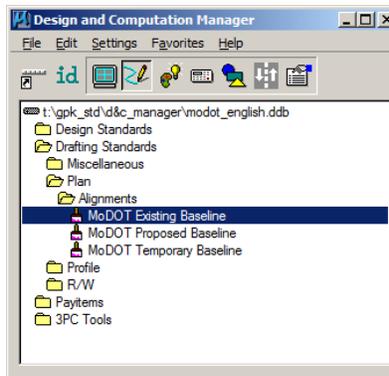
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9. (cont)

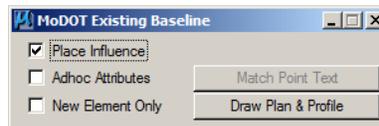
We can now place these lines through the D&C manager so they have the correct attributes, and labels. The Survey D&C Manager is used to visualize all linear data from the gpk file. It can be accessed through **Plans Preparations >> D and C Manager**.



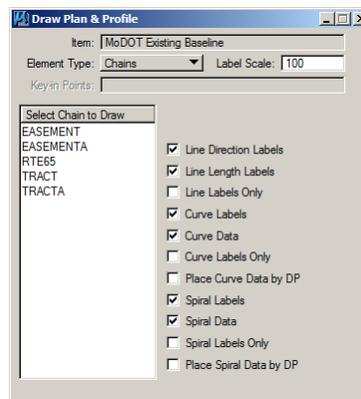
First, we will visualize and label the C/L of US-65 on the left side of the plan sheet (see Appendix C). The line style for the CL for US65 can be found under **Drafting Standards >> Plan >> Alignments >> MoDOT Existing Baseline**. Double left click it.



Make sure “Place Influence” is the only box checked and click **Draw Plan & Profile**.

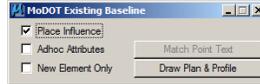


This will bring up the “Draw Plan & Profile” box. Make sure the following check boxes are checked.



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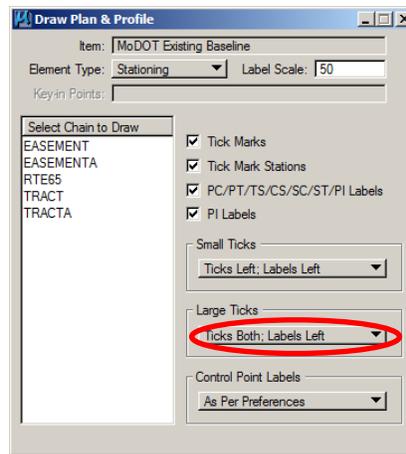
9) (cont).



Once again, check the “Place Influence” checkbox and select the **Rte 65** chain once (checking “Place Influence” places the text using the same attributes as the line).

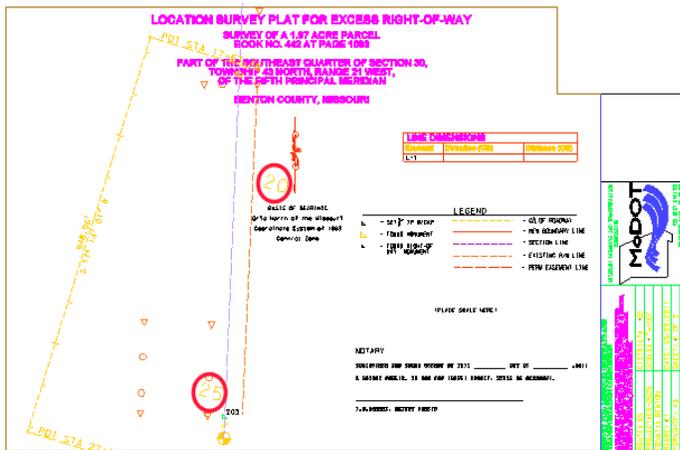
To place the tic marks, change the Element type from Chains to **Stationing**, and fill out the box as shown below.

Note: The **Large Ticks** box tends to default back to “Ticks left, Labels Left”. Make sure to change this to “**Ticks Both, Labels Left**”



Select **Rte65**, and you will see the stationing appear on the plan sheet.

The station labels are far over on the sheet. Move the Station Labels, and edit them to look correct.

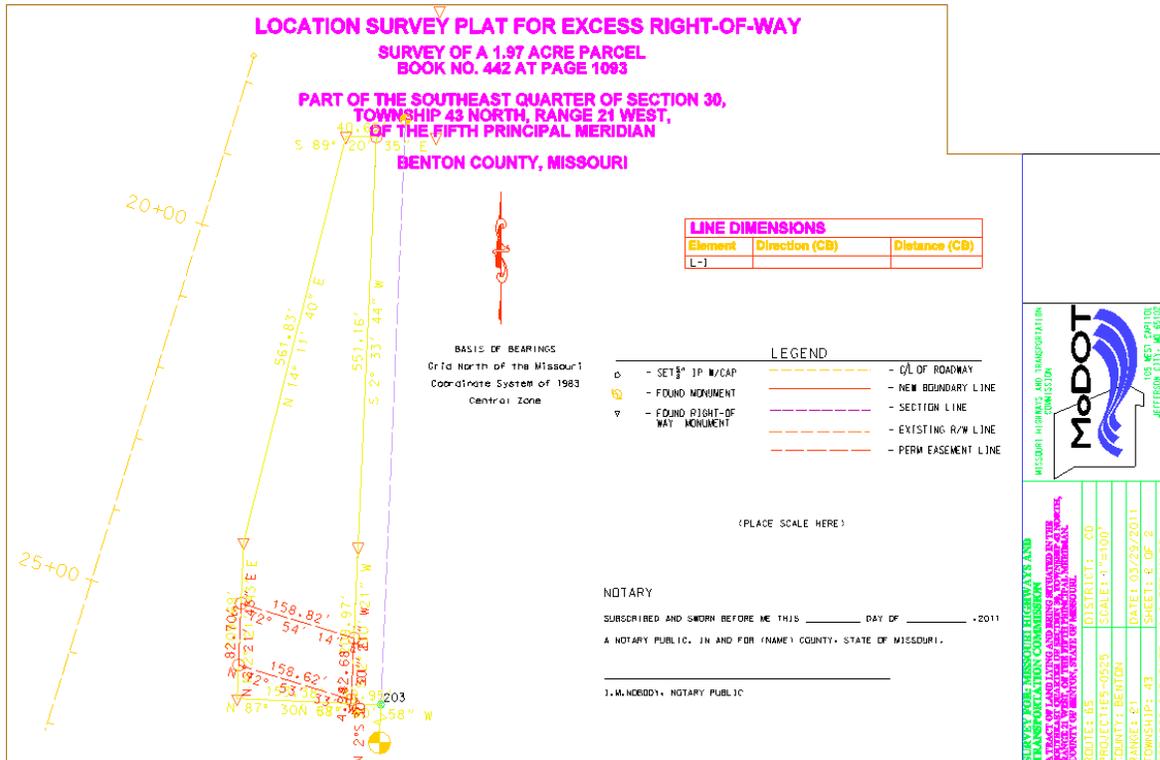


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9. (cont)

Visualize the parcel and easement using the same steps we did for the US-65 Chain. Use **Drafting Standards >> Plan >> Alignments >> MoDOT Proposed Baseline** for the parcel, and **Drafting Standards >> R/W >> Parcels >> Permanent Easement** for the easement. These do not need to be stationed.

When you are done, it should look similar to this.



Move the Bearing and Distance Labels. You may change the text height with the Change Text Attributes tool. Do not make the height less than 10 !

See Appendix D for minimum actual text height according to the scale of your drawing.

10. Labeling.

In Lab 2, a Graphic Scale was placed in the file. Per the CSR, "A written scale shall be noted on any plat".

SmartMatch the text in the Graphic Scale.



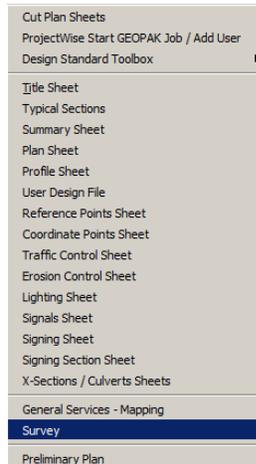
Use the Place Text tool to place **SCALE: 1"=100'** somewhere on the plan sheet.

## Lab 3- Working with Data, Labeling, Applying Correct Attributes

10) (cont).

Begin placing the rest of the notes for the plat. Refer to **Appendix C** for the note contents, and **Appendix E** for the correct Attributes.

The **Design >>Survey** Settings Manager has the correct attributes for the text.



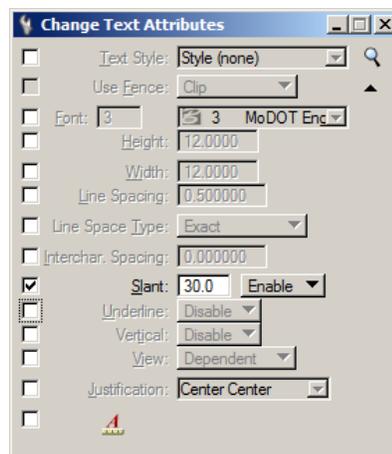
When placing these notes, keep in mind the following:

- a) **Do NOT stack fractions.**
- b) **Make sure all text height is 0.08" or larger on printed paper.**
- c) **Easements: Slant text 30 degrees.**
- d) **Section Calls: Slant and rotate text 15 degrees.**

Continue labeling the sheet using the appropriate Components for the text you are placing.

If the text is too large to fit, you can scale it down or abbreviate using L-1, L-2, etc for lines, and C-1, C-2, etc for curves. The complete text will be placed in the table on the right side of the page. Add rows to that table if necessary.

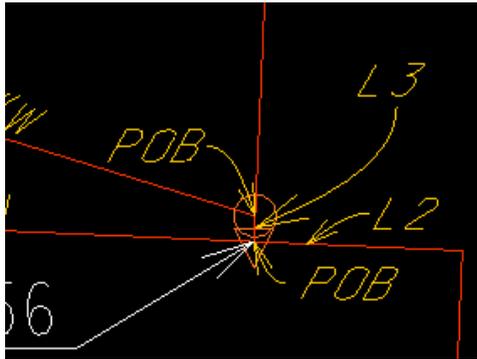
After all the labels are on the sheet, then use the **Change Text Attributes** tool to apply a slant to all Easement text and Section Calls. Only check the box next to slant. Make sure all others are unchecked.



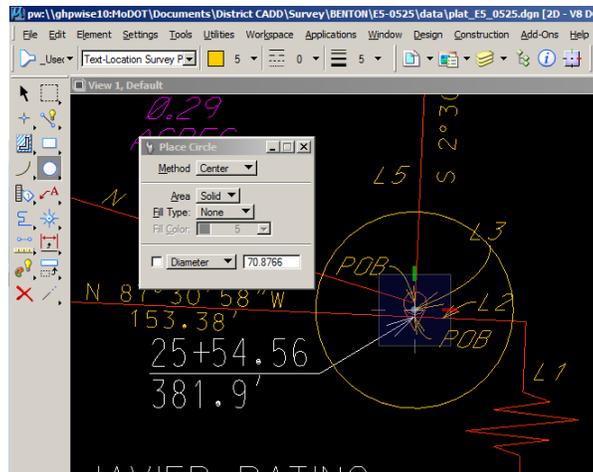
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10) (cont).

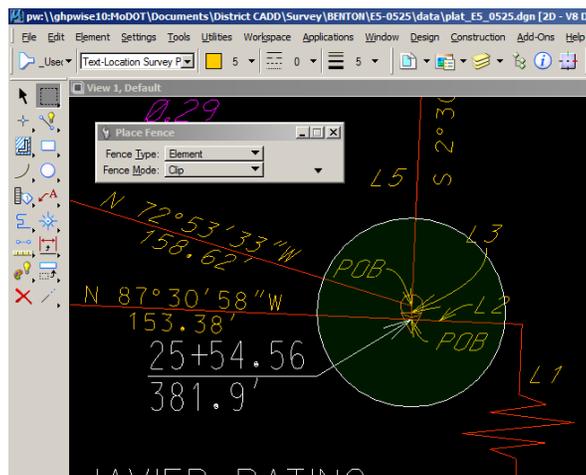
If an area of the drawing is too compact to clearly see the details, copy and scale the area up as shown in the steps below.



Place a circle around the area that you want to scale.



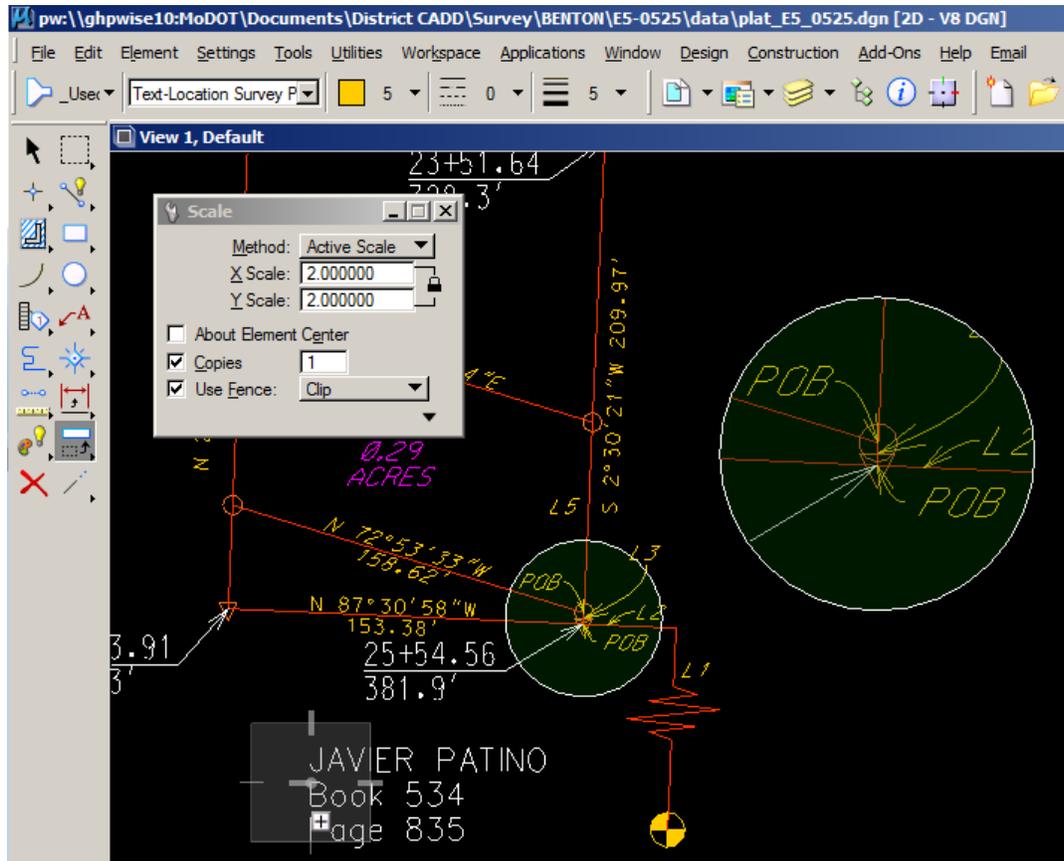
Use the Place Fence tool set to **Element** and **Clip**, and select the element (circle).



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10) (cont).

Use the **Scale** tool with the settings shown below.



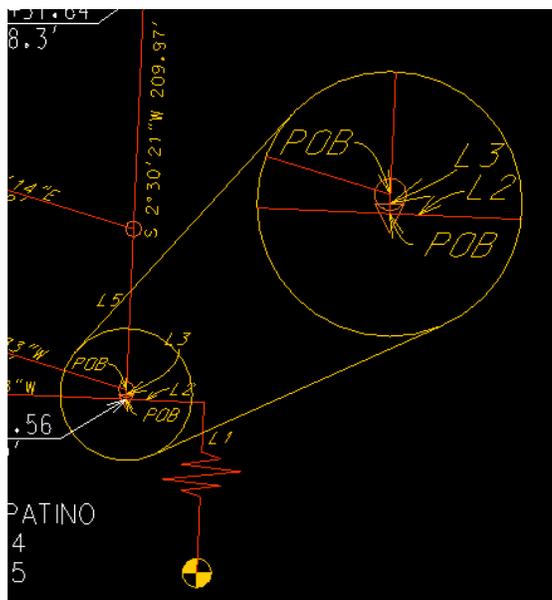
After you drop the scaled area off, drop the fence by selecting the Place Fence tool again.



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10) (cont).

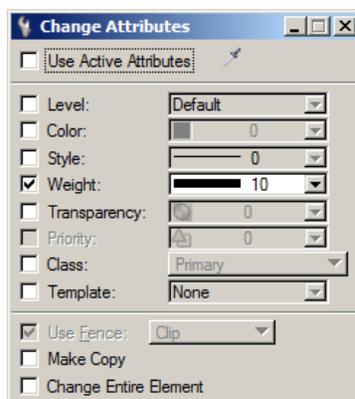
Smart match one of the circles, and use the Place Line tool to link them as shown below.



11) Adjusting Line Weight.

The parcel and all monuments/points associated with it need to stand out with a heavier line weight.

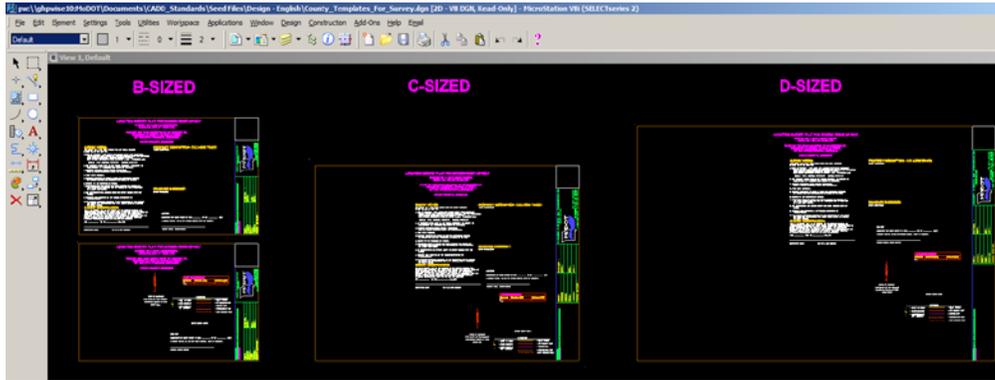
Increase the line weight by using the **Change Element Attributes** tool. Set it up as shown below.



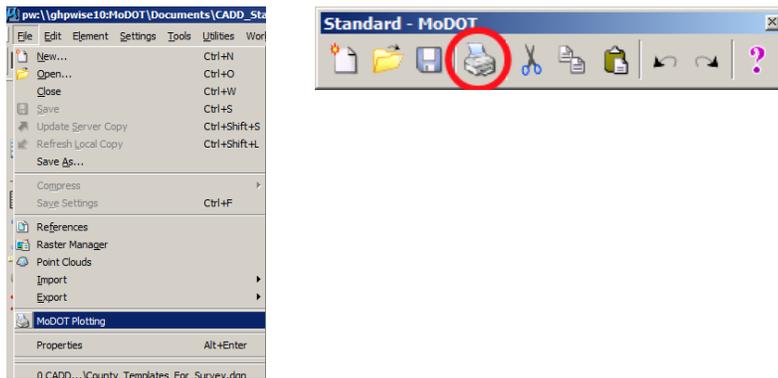
Select the Lines and Points associated with the parcel to apply the new weight to them.

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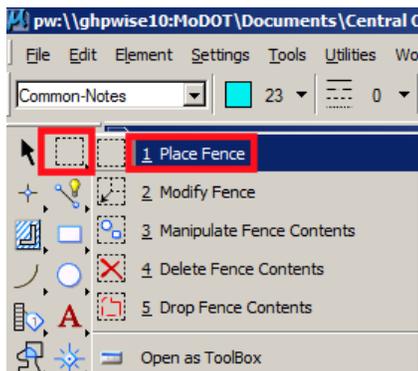
## 12) Plotting.



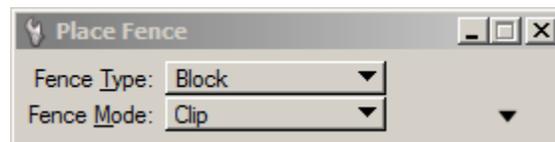
The County Template offers B, C, and D sized plots. For B and D sized, you can use the normal MoDOT plotting routine located under **File >> MoDOT Plotting**, or by using the Plot icon.



If there is no border you will need to place a fence first to define the plot area. To plot by placing a fence, select the Place Fence tool.



Make the Fence Mode and Type are set as shown below.



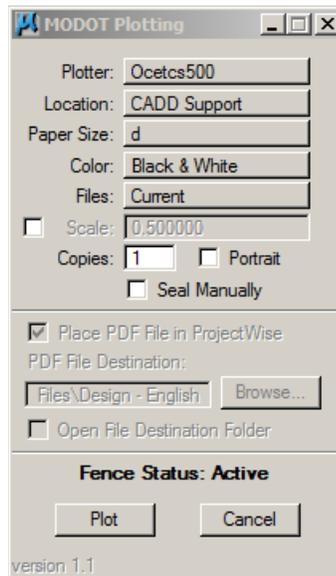
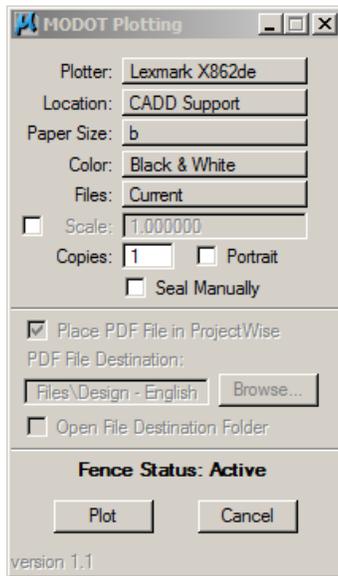
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12) (cont)

Snap on the point that is part of the plot border at the top, just over and left of the border corner. Accept it, and snap to the plot border just below and right of the bottom of the border. The area to be plotted should highlight.



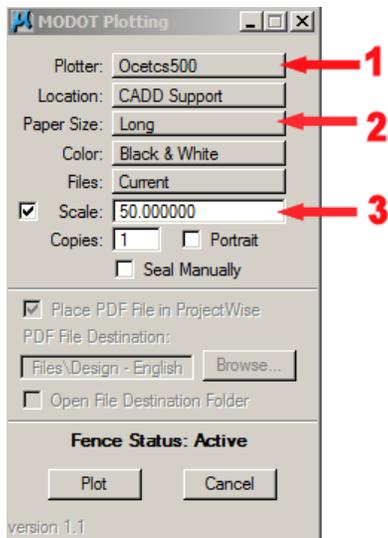
For B and D sized, you can simply choose the appropriate plotter and paper size.



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12) (cont)

For C-sized plots, the routine is slightly different. Follow the example below assuming that you have already placed your fence.

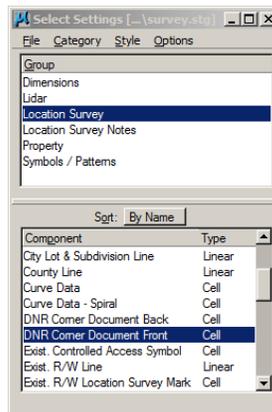


- 1) Choose the appropriate plotter.
- 2) Select the “Long” option for paper size.
- 3) Check the box next to “Scale”, and put the scale you used when you brought in the template in Lab 2.

When you plot it, you will need to trim it down to C-sized.

13) Certified Land Corner Documents.

If you are establishing, reestablishing or restoring a land corner, you can include these documents in the same dgn file as the plat. They are found under **Design >> Survey >> Location Survey**. Scroll down and you will see DNR Corner Document Front, and Back.



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13) (cont)

Select them and place them in the file. To work with the data, you will need to drop the cell into its individual components.

Click on the Groups tools, and select **Drop Element**.

Click once in MicroStation on the document you want to work on. Once it is dropped, you can then edit or add information.

