

The logo consists of the word "GEOPAK" in a black, serif, all-caps font, centered within a white rectangular box. Below this box is a horizontal gradient bar that transitions from a darker orange on the left to a lighter orange on the right. In the top right corner of the slide, there is a white square with a thin vertical white line to its left.

GEOPAK

Working With Geopak Legal Description Libraries

The legal description library contains phrases for coordinate geometry as well as general text phrases that need to be included in legal descriptions. These can be customized with prompts for key in text or list boxes to define project specific information.

Geopak Legal Description Libraries

Introduction

Legal descriptions for proposed R.O.W. and easements can be produced quickly using a Geopak legal description library and style file with the Legal Description Editor and a project's GPK coordinate geometry file.

The legal description library contains phrases for coordinate geometry as well as general text phrases that need to be included in legal descriptions. These can be customized with prompts for key in text or list boxes to define project specific information. The style file defines precision, bearing formats, and general phrases and specifies which legal description library items to use by default for the coordinate geometry, which defines a proposed R.O.W. or easement area.

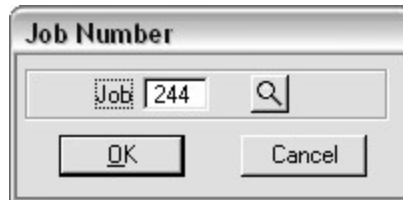
This document provides an overview of working on the legal description library so that it can be customized for each T.D.O.T. Regional R.O.W. office's needs. For anyone without experience with these files, it is recommended that the entire document be reviewed prior to making edits to a legal description library so that the person might better understand the functionality and application of the library items.

Accessing the Legal Description Editor

1. To access the **Legal Description Editor**:

Use the keyin **GPKTOOLS LEGALDESCRIPTION** or from Geopak Survey use the drop down option **Geometry > Tools > Legal Descriptions**

If no project has been created/opened, the user is first prompted for the job number. Use the browse button to access the desired GPK job which contains the R.O.W./Parcel coordinate geometry information.



NOTES:

The setting for working directory in Geopak's **User Preferences** will determine what folder it searches for GPK files in.

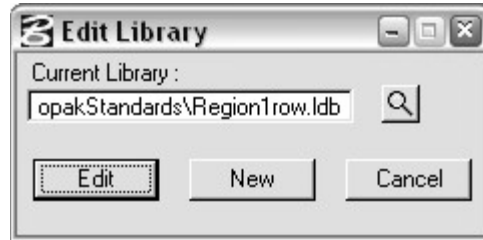
If you are just doing basic edits on the legal description library, it may not matter what project you open. As you edit different items in the library, it could be helpful to have examples of that data type in the GPK project so that you could test the changes.

2. Click the **OK** button once the job number is set and the **Legal Description Editor** is opened.

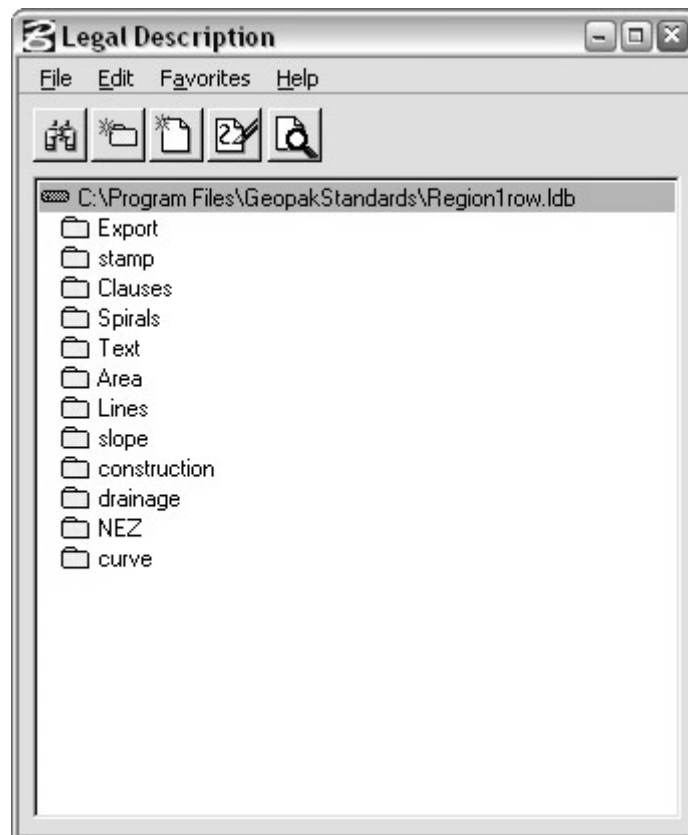


Opening the Legal Description Library

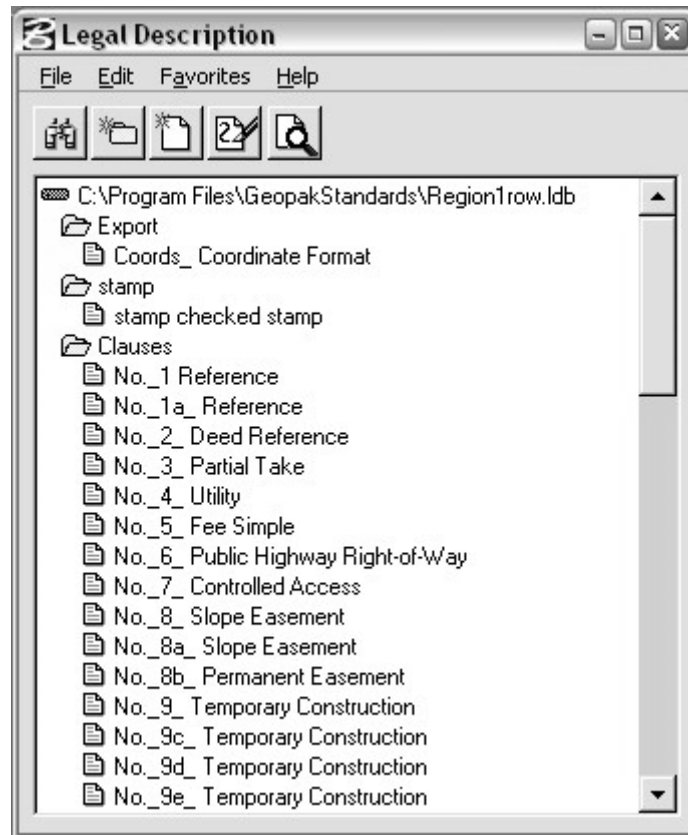
1. In the Legal Description Editor dialog go to the drop down option **Library > Edit Library**.
2. The **Edit Library** prompt appears showing the current library that is loaded. If needed, use the browse button to find and select the library you wish to edit (by default all Geopak standard files are stored at C:\Program Files\GeopakStandards). When the correct library is loaded, click the **Edit** button.



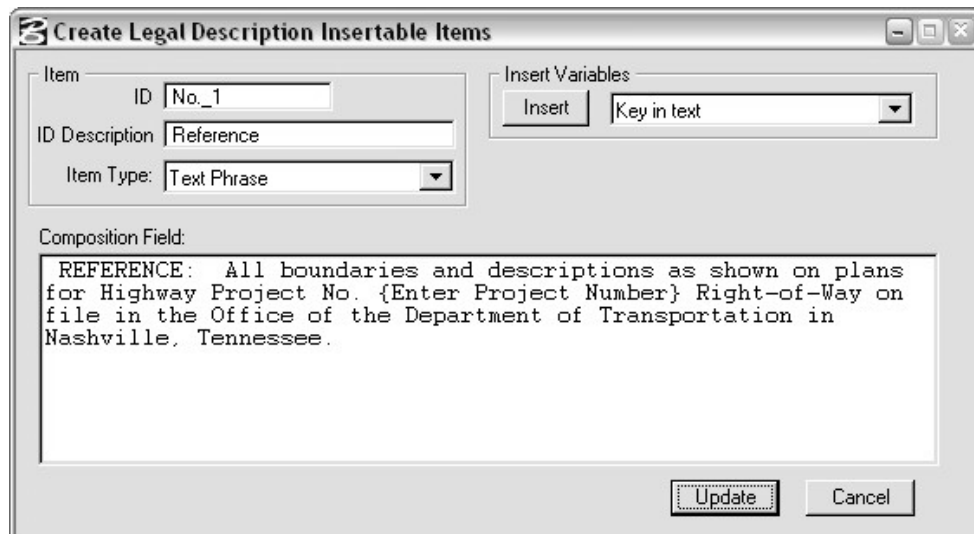
The **Legal Description** library is opened.



3. When Categories are expanded by double clicking on them, the individual items that can be used when generating legal descriptions are shown.

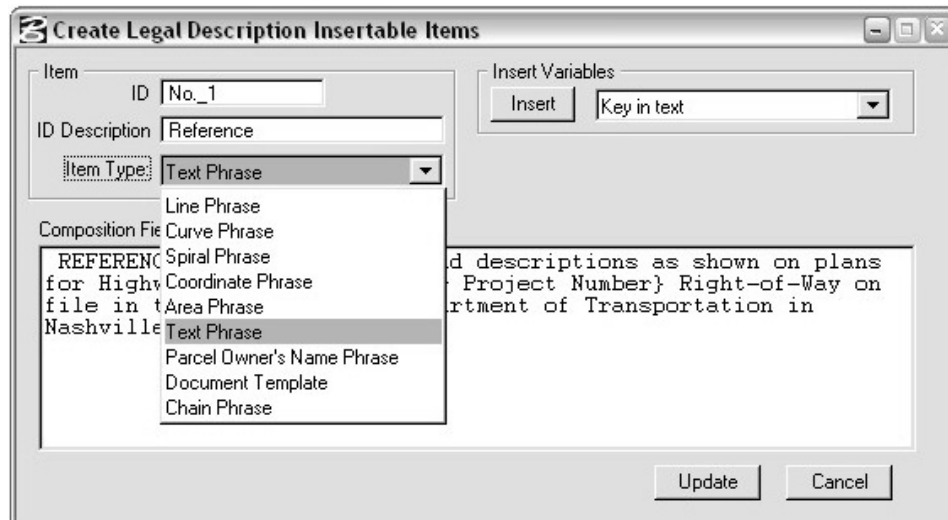


4. Double click on any item to open it for review or editing.



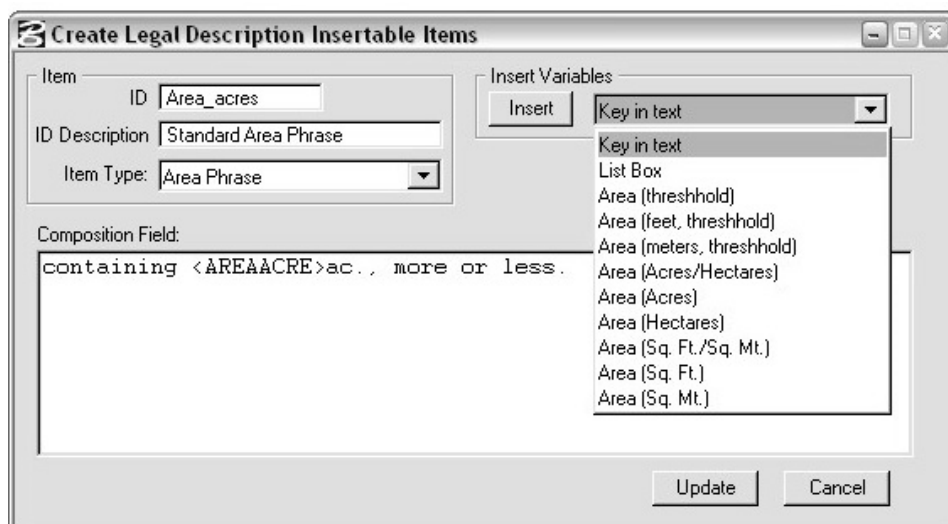
Legal Description Library Items

1. Under **Item Type** click on the drop down arrow and you can see the item type choices that are available.



2. Under the category Area, open item **Area_acres**. The item type, as described in the previous step, determines the **Insert Variables** that are available since they are based on the data content.

In this Area Phrase item, we can see the area variables which are available under Insert Variables. As you can see in the completed item, these variables can be inserted at any point and are shown in all caps enclosed by < & >, in this case, the variable is <AREAACRE> which will add in the actual area in acres when this item is used to build a legal description.



3. Under the category Text, open item **Header_**. Standard text phrases are just typed in the **Composition Field** and as shown in the previous step, variables can be utilized that will read cogo elements to include numeric information to define the legal description. Other information that may vary between legal descriptions can be automated as well. These can take the form of a list box where standard choices can be made or a prompt so that the user can key in data specific to that legal description. This example shows several of these.

Create Legal Description Insertable Items

Item
ID: Header_
ID Description: Project/Owner/Grantee
Item Type: Text Phrase

Insert Variables
Insert [Key in text]

Composition Field:
[CDS\cds|BRS\brs|GAH\gah|DKM\DKM]·
Federal Project No. {Enter Federal Project Number:}·
State Project No. {Enter State Project Number:}·
[Bradley|Bledsoe|Cannon|Clay|Coffee|Cumberland|DeKalb|Fentress|Franklin|Grundy|Hamilton|Jackson|Marion|McMinn|Meigs|Overton|Pickett|Polk|Putnam|Rhea|Sequatchie|Warren|White|VanBuren] County·
Tract No. {Enter Tract No.}·
Owner: {Enter Owners Name}·
Grantee: {Enter Grantees Name}·

[Update] [Cancel]

List Boxes

The example shown above is standard header text for inclusion at the top of legal descriptions. The first line of text is a list box. They are represented by items enclosed by square brackets, [], with each item to appear in the list separated by the vertical pipe symbol, |.

In this case, the items in the list box are the initials of the various personnel at the Region 2 R.O.W. office that prepare legal descriptions. Beginning on the fourth line is a list box that includes all of the counties in Region 2. When this item is applied to a legal description each of these will pop up as they are encountered, allowing the user to choose the appropriate item to fill in the header of the legal description.

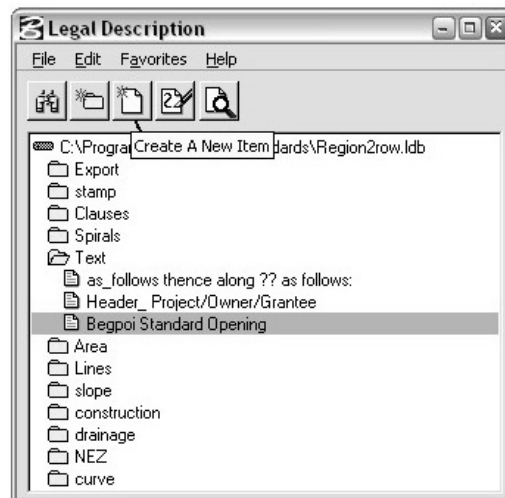
Prompt/Key In Field

On the second line of this item is an example of a prompt with key in field. The prompt is enclosed in curly braces, { }. The text within the braces will tell the user what data they need to enter. In the example, they will be told to "Enter Federal Project Number". If you look further through this particular example you will see other prompt/key in fields.

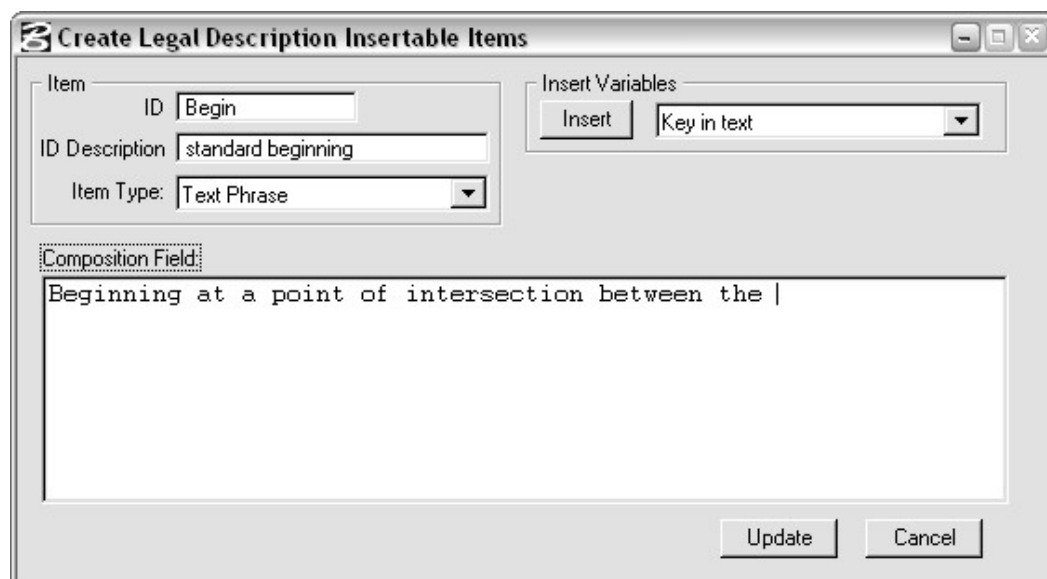
Creating/Editing Legal Description Library Items

The user can open any item from the library and simply type in changes. The **Insert Variables** option can be used to build and insert data as described previously so the user does not have to remember the syntax required for these.

1. Across the top of the Legal Description Library dialog are icons you can use to create new categories or items in the library. To create a new item, open the category where you wish to place it and click on the third icon as shown. To edit an item already created, just double click on it.

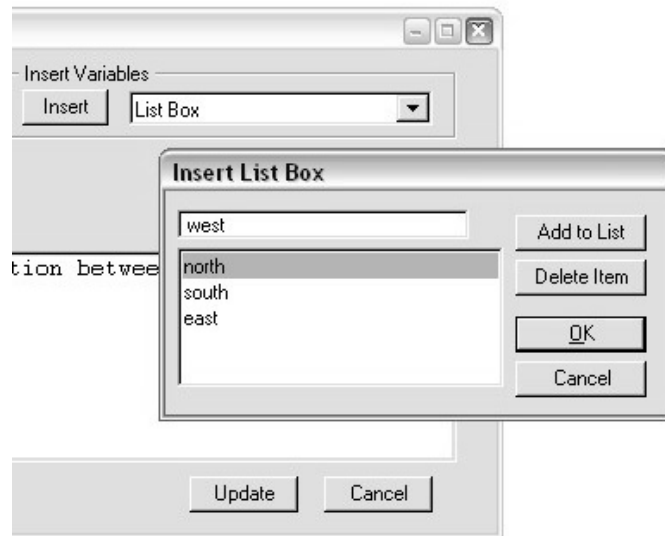


2. The item dialog is opened. For new items, enter the desired **ID** name and description. Change the **Item Type** to the type of item needed. For headers, clauses, etc. that do not require information from the GPK coordinate geometry file, **Text Phrase** should be used. As shown below you may key in a text phrase to get the item started in the **Composition Field**.

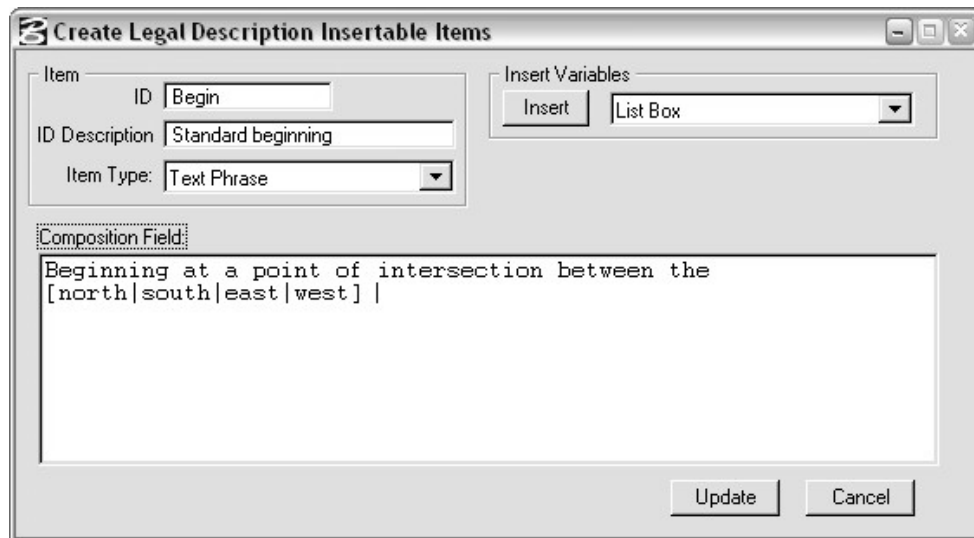


3. In this example we now want to specify a cardinal direction. Since the direction will vary we can set up a list box for that. Change the Insert Variable to **List Box** and click the Insert button.

The **Insert List Box** dialog is opened. Key in the desired items, clicking **Add to List** for each one.



4. When you are finished building the list, click **OK** to complete it and the data for the list box is displayed in the Composition Field.



Note that you could have just as easily typed this in manually as long as you follow the correct syntax for list boxes. The dialog just automates the set up for you.

5. In our example we have added another list box item but now we want to set up a prompt/key in field. Change the Insert Variables option to **Key in text** and click the Insert button.

The **Create Key In Field** dialog is opened. Key in the desired prompt and click **OK**.

The screenshot shows the 'Create Legal Description Insertable Items' dialog box. In the 'Item' section, 'ID' is 'Begin', 'ID Description' is 'Standard beginning', and 'Item Type' is 'Text Phrase'. In the 'Insert Variables' section, the 'Insert' button is highlighted and the dropdown is set to 'Key in text'. The 'Composition Field' contains the text: 'Beginning at a point of intersection between the [north|south|east|west] [present right-of-way line|property line|proposed right-of-way line|present right-of-way line and control access fence|proposed right-of-way line and control access fence] of'. A smaller 'Create Key In Field' dialog is open in front, with 'Enter Key in prompt' set to 'enter road name' and 'OK' button highlighted. 'Update' and 'Cancel' buttons are at the bottom right of the main dialog.

6. The new prompt/key in field is displayed in the Composition Field.

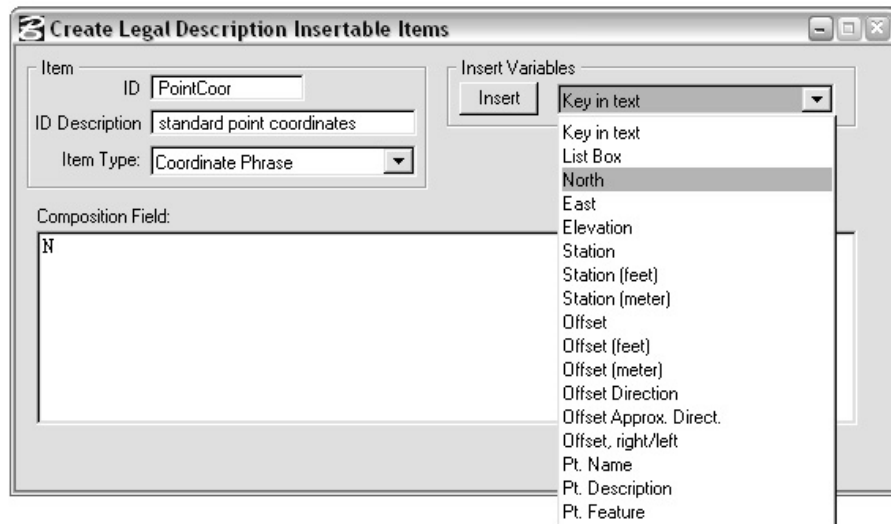
This screenshot shows the same 'Create Legal Description Insertable Items' dialog box, but the 'Create Key In Field' sub-dialog is closed. The 'Composition Field' now displays the updated text: 'Beginning at a point of intersection between the [north|south|east|west] [present right-of-way line|property line|proposed right-of-way line|present right-of-way line and control access fence|proposed right-of-way line and control access fence] of {enter road name}'. The 'Update' and 'Cancel' buttons remain at the bottom right.

As we mentioned with list boxes, you could have just as easily typed this in manually as long as you follow the correct syntax.

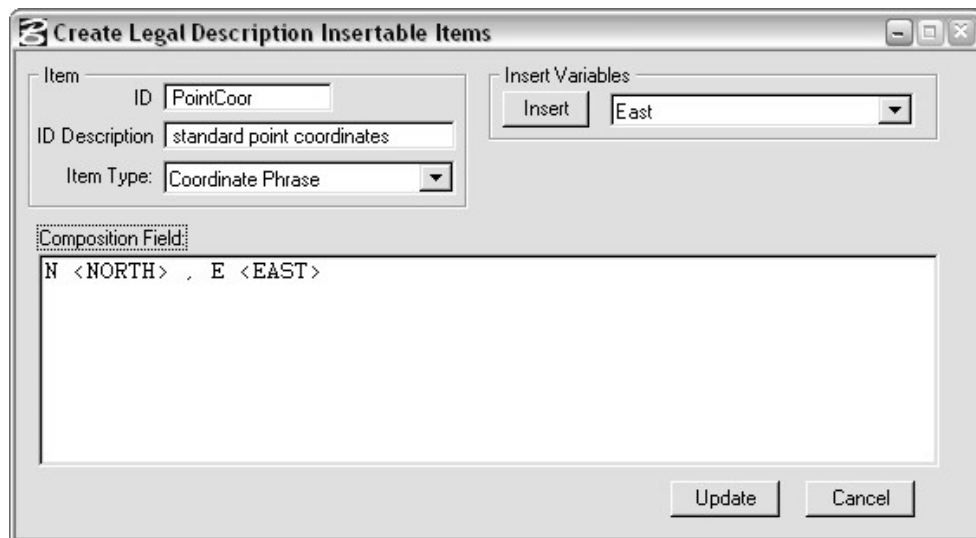
7. The final step in creating a new item or just revising a current one is to hit the **Update** button at the bottom to save it.

8. Here is a cogo element example where we wish to automatically pull information from the GPK coordinate geometry file. We are setting up a point item that will automatically fill in the coordinate information.

First, we must set the **Item Type** to Coordinate Phrase. This controls the data types that are available from the Insert Variables option. Then in the Composition Field, we entered the prefix for the north coordinate value. Now we can go to **Insert Variables** and click the North data type.



9. The data variable is entered for us and we can repeat the previous step to add the east coordinate value. Click **Update** to save the item.

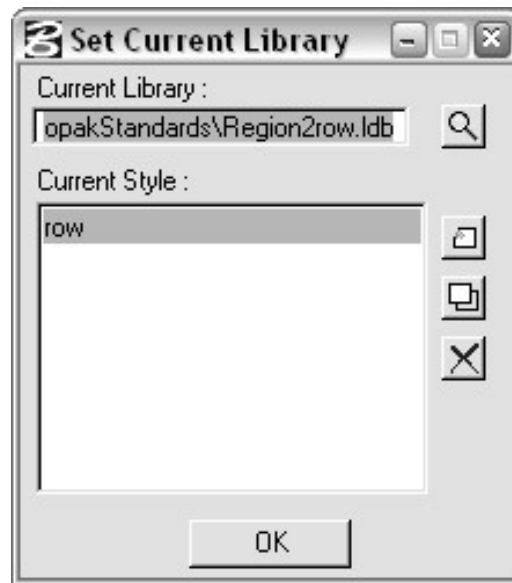


10. After making changes to a legal description library, you must save the library to keep the changes. In the **Legal Description** dialog go to the drop down option **File > Save**. If you try to close without doing this, the user is prompted to save the changes.

Legal Description Library Items in action

In this section we will set up a basic legal description illustrating the use of the various types of legal description library items.

1. In the Legal Description Editor go to the drop down option **Library > Set Current Library/Style**. This opens the Set Current Library dialog. Use the browse button to activate the desired legal description library.



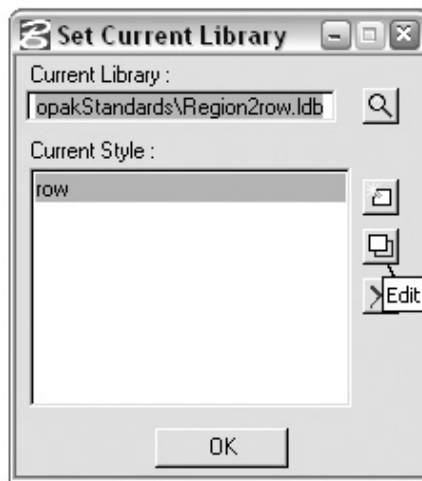
NOTE:

If the user has never used a legal description library or the Geopak software has just been loaded, they will be prompted to create a style since one does not exist yet for the library.

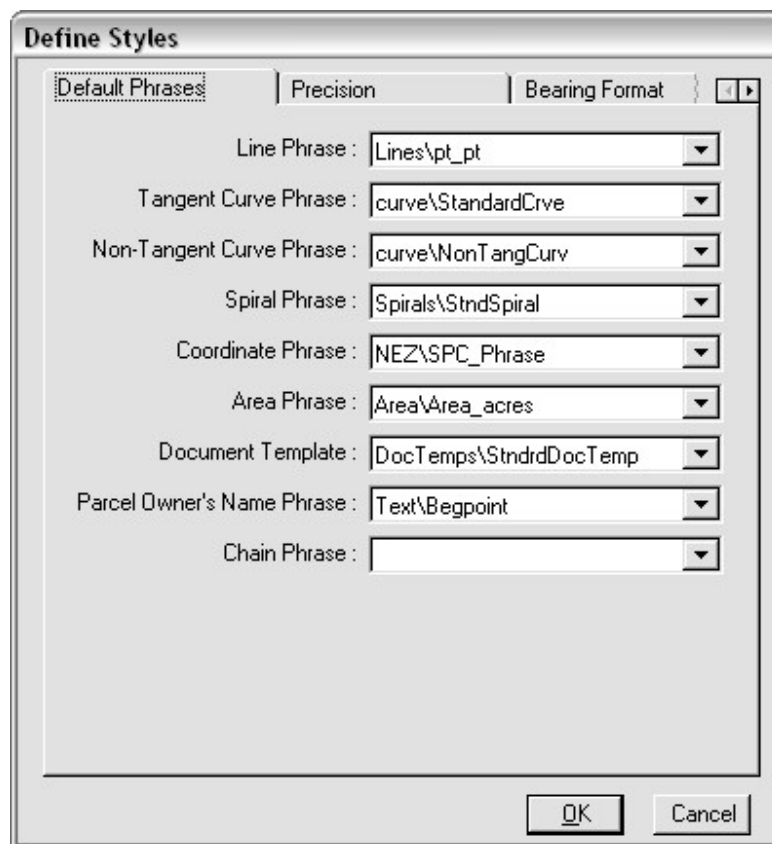
If you get the following prompt, click OK and in the Define Styles dialog click OK again. This will bring you to the Set Current Library dialog described above where you can switch to your legal description library.



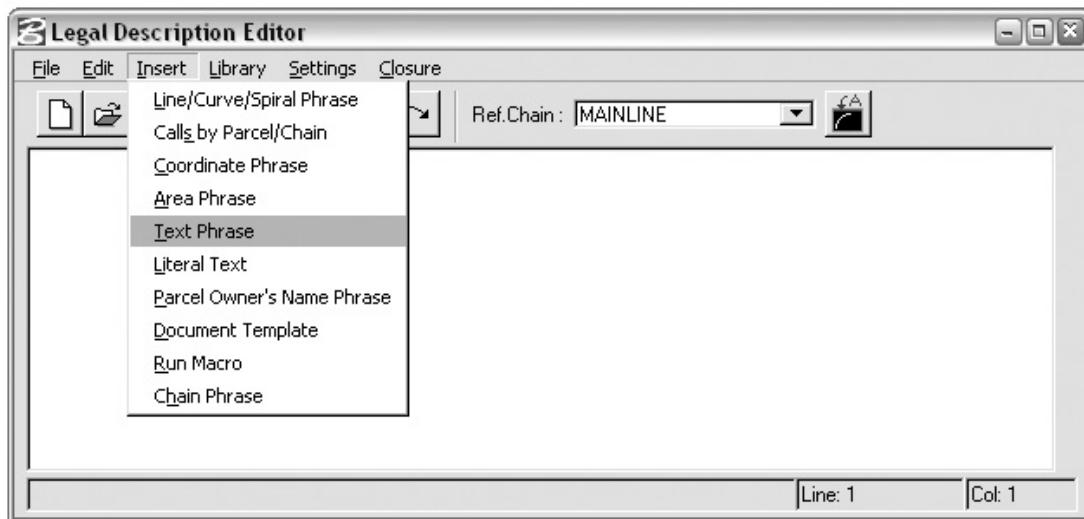
2. Click on the **Edit** icon at the lower right of the **Set Current Library** dialog (center button). This opens the **Define Styles** dialog. As needed, the style definition can be changed from this dialog.



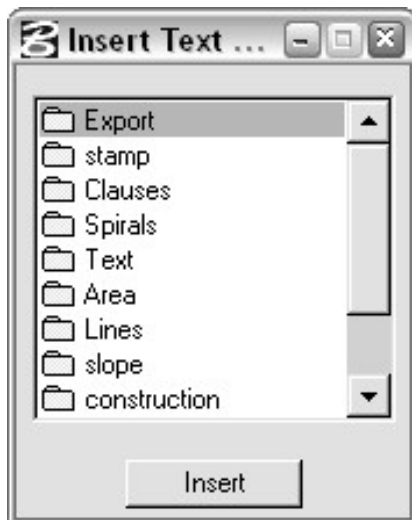
3. Use the arrow keys at the upper right of the **Define Styles** dialog to navigate through the various tabs to set precision, bearing formats, general phrases and which legal description library items to use by default for coordinate geometry items which define a proposed R.O.W. or easement area. Click **OK** to save any changes to the style and exit.



4. Once the desired legal description library is activated, a legal description can be written. In the Legal Description Editor dialog go to the drop down menu under **Insert** and pick the **Text Phrase** option.



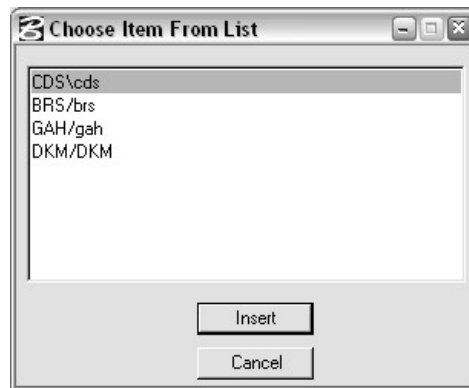
5. In this example, we will start with a header text phrase to illustrate the use of List Boxes and the Key In Text functions. Under Insert we picked **Text Phrase**. The Insert Text dialog is opened. Double click on the **Text** folder to expand it and pick the item **Header_**.



Click the **Insert** button at the bottom and that item is inserted/started.

When you use this insert item again, it will open to where you were before. Double click on the back-up icon at the top of the list to navigate to other categories as needed.

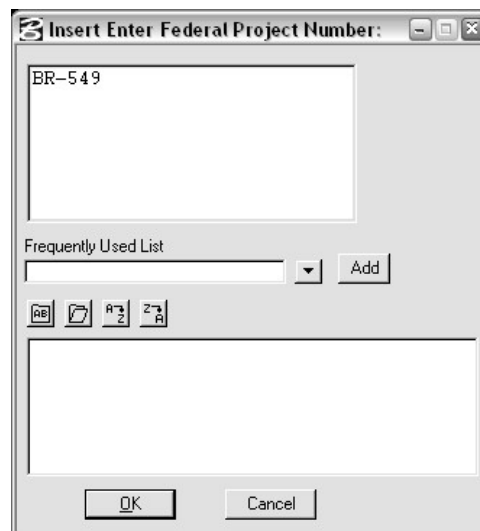
6. A list box option is defined at the beginning of this item to add the initials of the person preparing the legal description so a list box pops up with the various choices. Pick your initials and click the **Insert** button. The data is placed in the text entry area of the Legal Description Editor dialog.



Since we are using the Region 2 library, the list reflects their R.O.W. personnel.

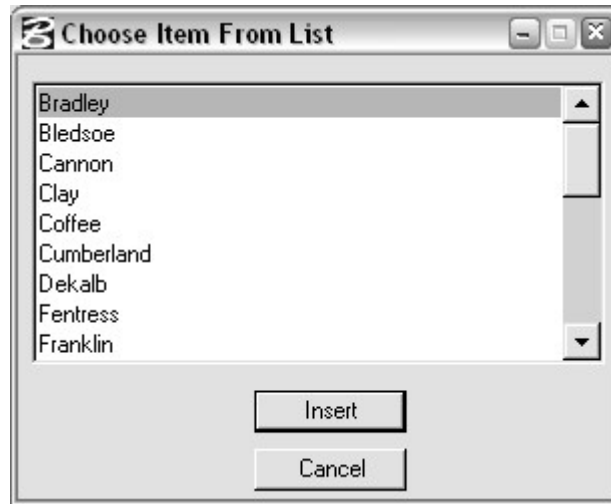
7. Next in the Header insert item are key in prompts for federal and state project numbers. The title at the top of the dialog indicates what data to key in, in this case, the federal project number. This dialog is re-sizeable. **If you cannot read the entire prompt, grab the edge of the dialog to re-size it.**

Key in the project number and click **OK**. The data is placed in the text entry area of the Legal Description Editor dialog along with prefix text included with the item. The user is then prompted for the state project number which works the same so we will not show that here.



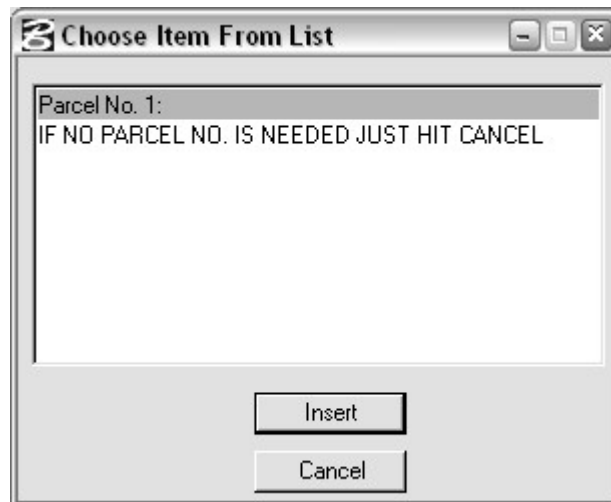
Note that recently used information is also available. If you have keyed in this data previously, you can pick it from the list and click **Add** to put it in the key in area at the top. The bottom section of the dialog allows you to pull in separate text files for inclusion as needed.

8. Next we have another list box option for the county. Make your choice and click the **Insert** button. The data is placed in the text entry area of the Legal Description Editor dialog.



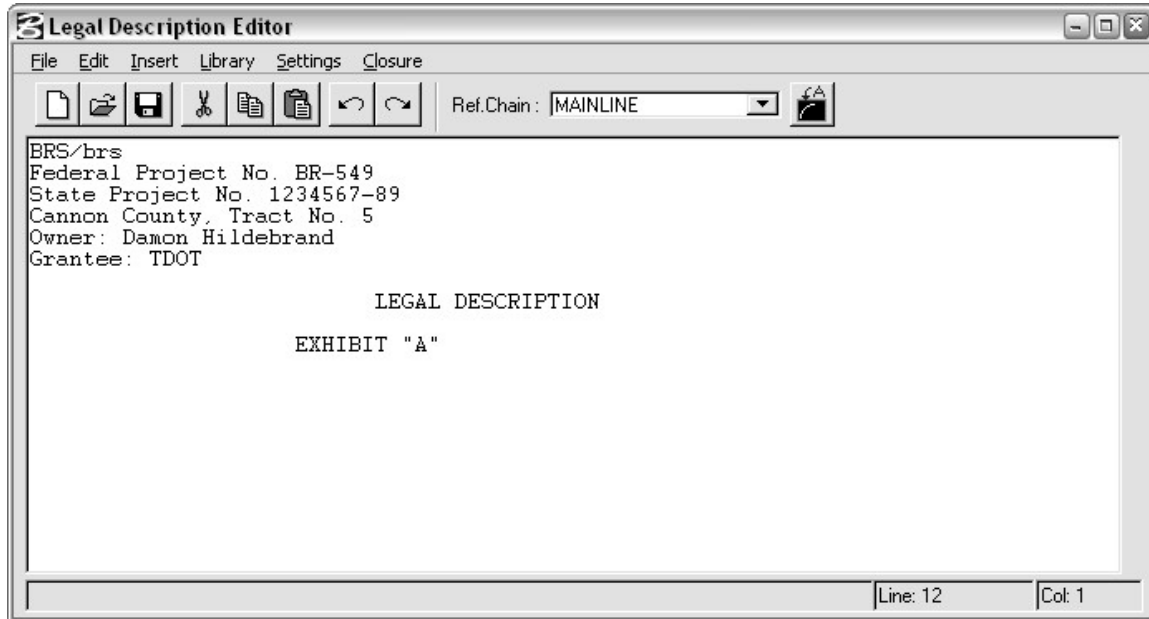
Again, since we are using the Region 2 library, the list reflects their counties. The user is then prompted to key in the tract number, owner name & grantee. These work the same as the federal project number key in on the previous page so we will not show those here.

9. Finally one additional list box is given for inclusion in the header. This works the same as the others that we have shown but we also wanted to show, as indicated in the second option below, the user can simply hit the **Cancel** button at the bottom to quit.



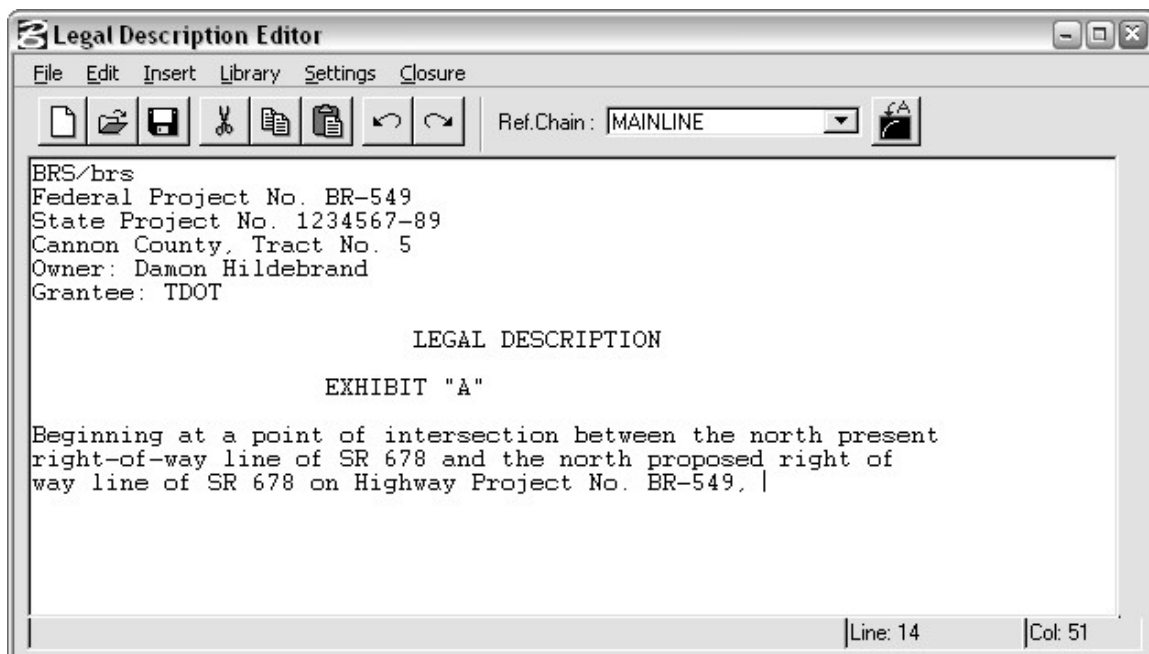
Hitting the Cancel button on any list box or key in dialog while building a phrase will cancel the rest of the phrase insert item.

10. Here we can see the completed header text in the legal description we are building on.



Normally the first insert item for the legal description itself is the begin point phrase. This is another Text Phrase from the legal description library with various list boxes and key in prompts to set it up.

Since we have illustrated those functions previously, we have set up the begin point phrase and will go on to some coordinate geometry inserts to further build the legal description in the next step.

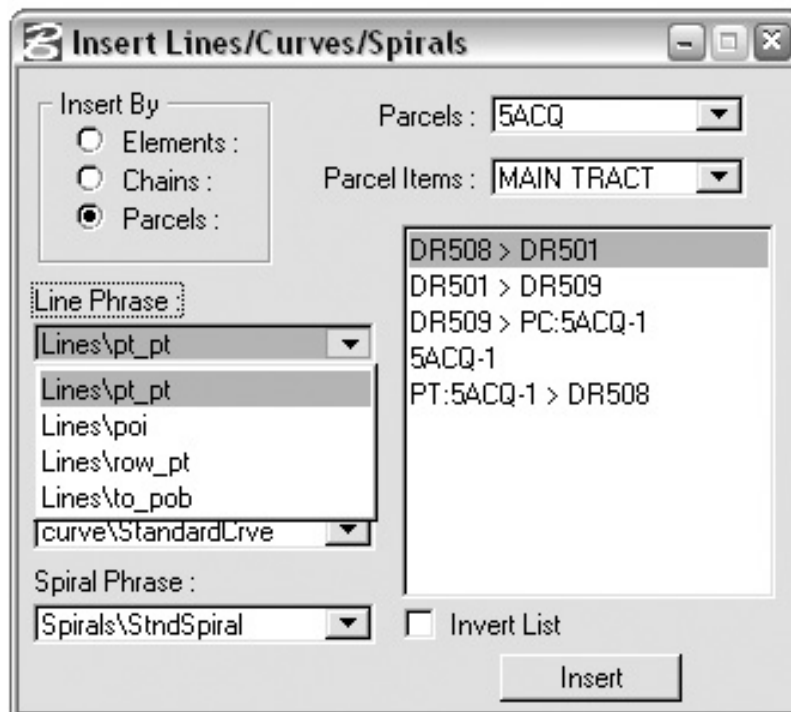


11. Go back to the Insert drop down options and this time pick the option

Lines/Curves/Spirals to add some coordinate geometry based phrases.

In the example we are using, the proposed R.O.W. is stored as parcels so we can set the **Insert By** option at upper left of the dialog to **Parcels**. Then we select the parcel we are writing the description for and its components are then listed for us.

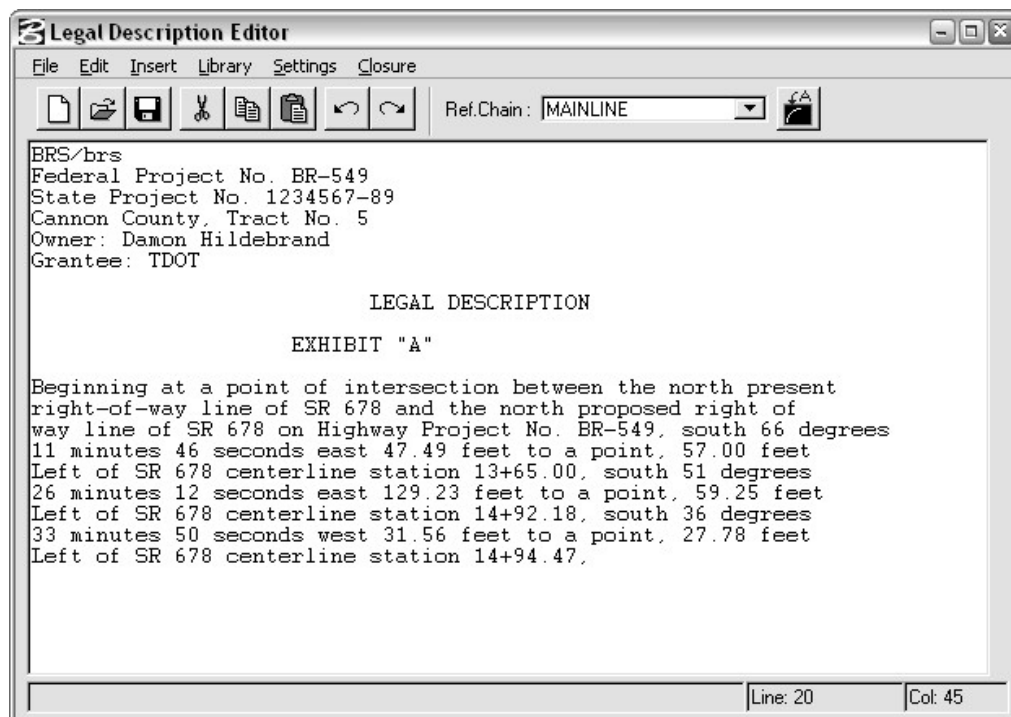
The first three sides of this parcel are lines going from point to point so we need to go to the **Line Phrase** options and pick the appropriate legal description item. In these cases it would be **pt_pt** (point to point). When you have that set, pick the first parcel side and click the **Insert** button at the bottom.



12. As shown in the Legal Description Editor below, coordinate geometry data for this parcel side is automatically entered followed by a prompt for the centerline name so that the end point of the line can be referenced by station and offset. Key in the centerline name, click **OK** and the phrase is completed.

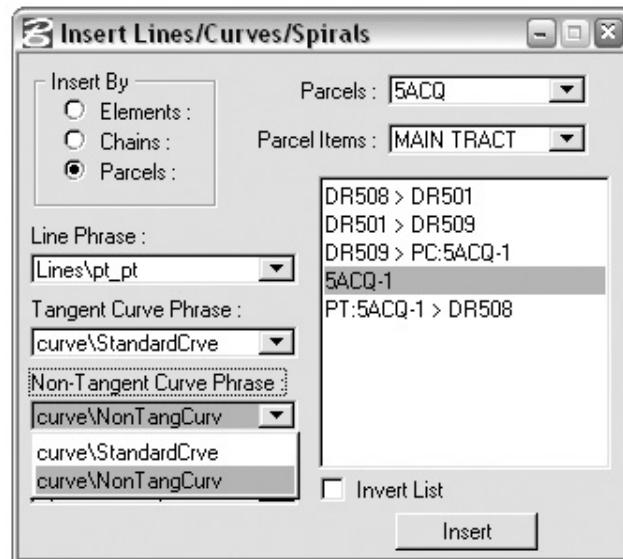


The next two sides of this parcel are also point-to-point lines so we select each of these and click **Insert** to build their phrases as we did for the first line.

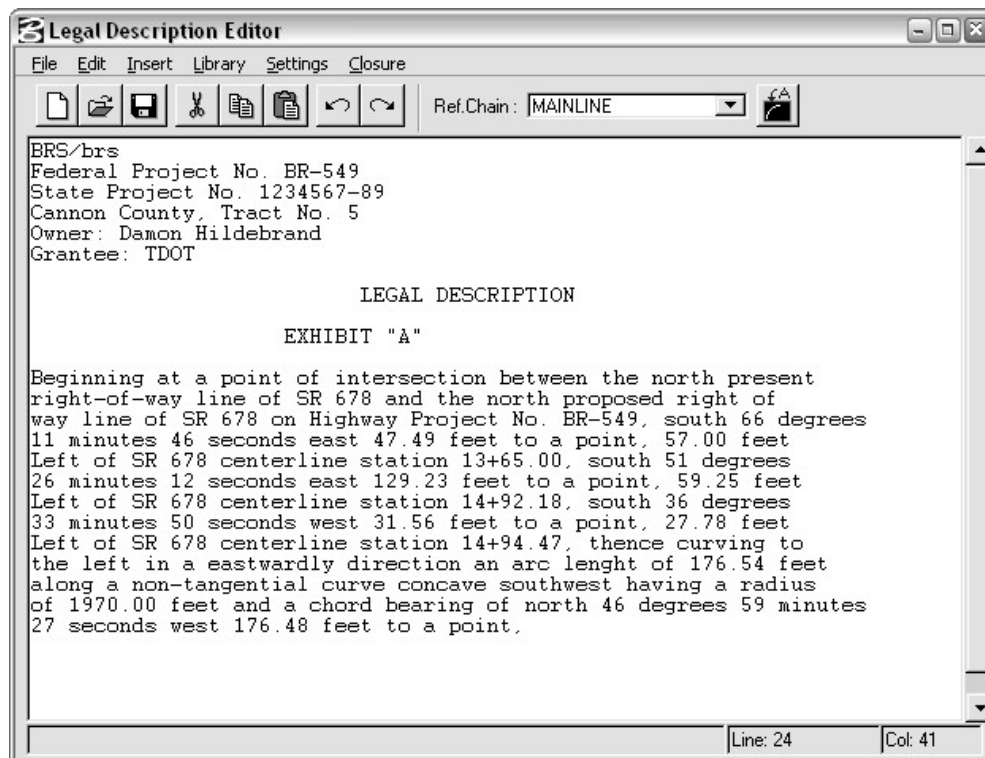


13. The fourth side of the parcel is a curve. As shown below, we only have two curve phrases, standard (tangent) or non-tangent. Depending on whether the curve is tangent or not, set the appropriate phrase using the drop down list. In our example, we have a non-tangent curve so we will set item **NonTangCurv** under **Non-Tangent Curve Phrase**.

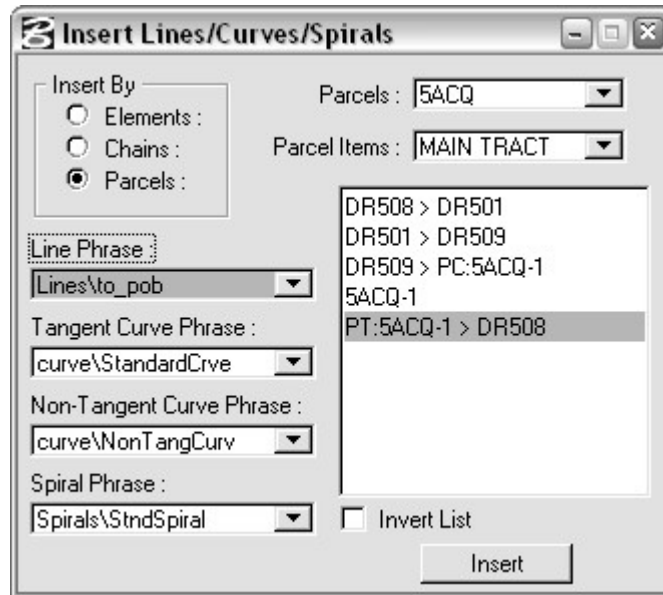
Select the curve from the parcel side list and click the **Insert** button.



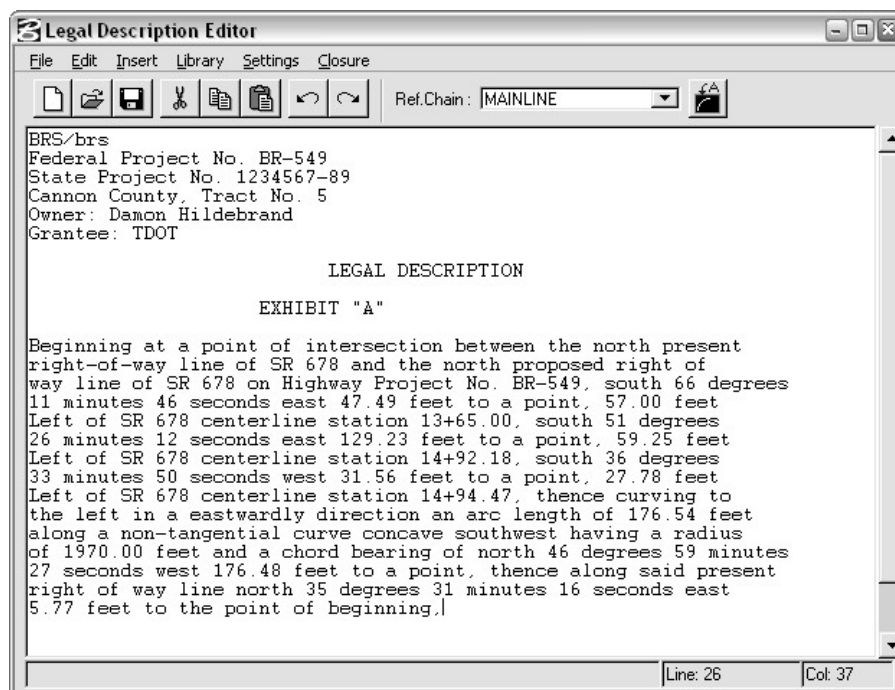
List boxes are used to specify the general direction of the curve and the final portion of the phrase. All coordinate geometry information is added automatically as shown below.



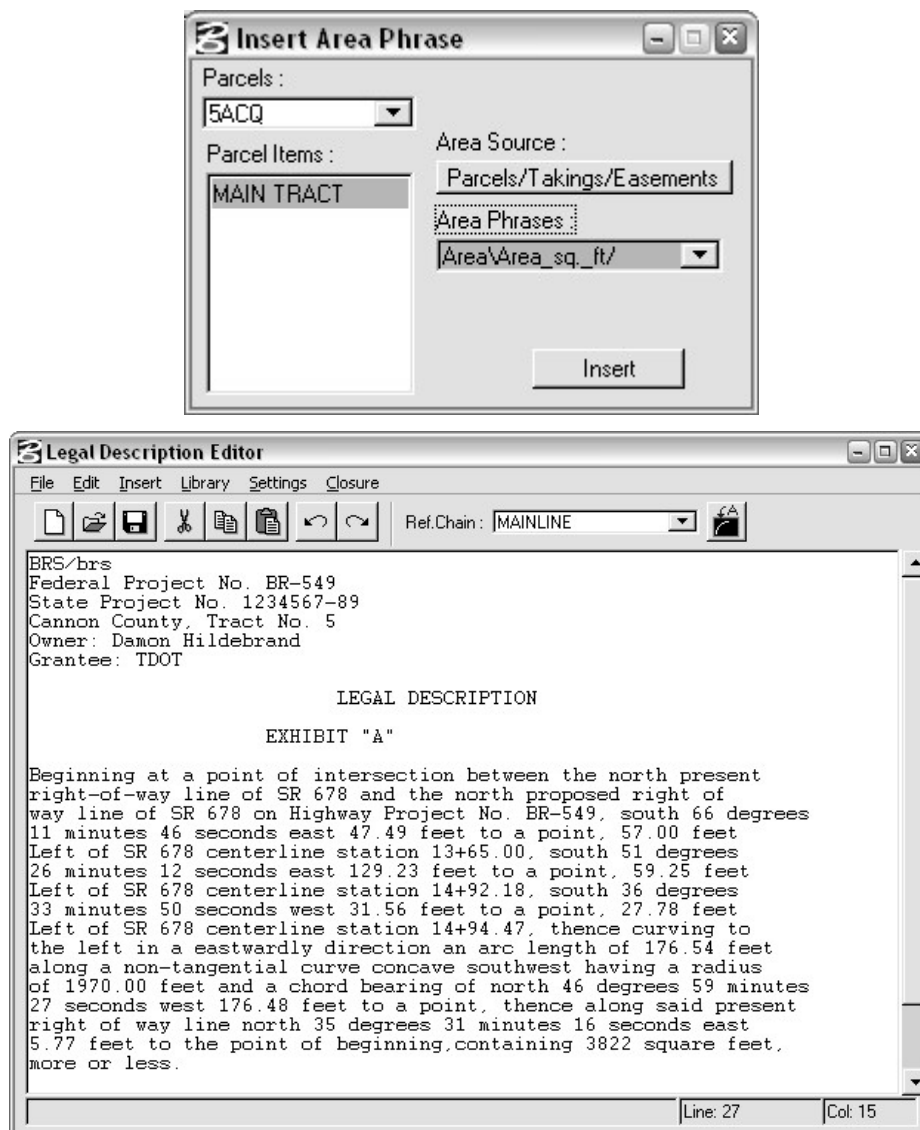
14. The last side of the parcel is a point-to-point line but since this is the last side we need to switch the Line Phrase to **to_pob** (to point of beginning).
- Select the last line from the parcel side list and click the **Insert** button.



A list box is used to specify the location of the final line and coordinate geometry information is added automatically as shown below.



15. Now we can add area information to the end of our legal description. Go back to the Insert drop down options and this time pick the option **Area Phrase**.
- Choose the appropriate parcel and set the **Area Phrase** as needed for data in acres or square feet. Click the **Insert** button to add the area information.



16. When you have completed the legal description, use the Save icon or go to **File > Save** to create a text file (*.txt) of the data. As needed, this can be opened, formatted and saved as a Word document. .

Note Concerning Numerical Information:

All numerical data generated automatically from the project GPK file should be reviewed for compliance with information provided in the project plans. Discrepancies may occur due to rounding or incorrectly entered data in the GPK file.