User Guide for Exporting A Map Book of Strip Maps for Selected Roads

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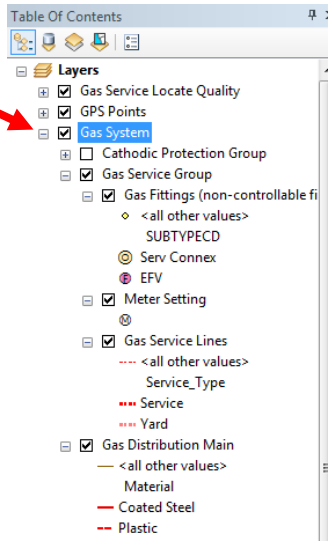
DEFINITIONS:

- **Attribute Query=** Request for features based on values in the attribute table. The three basic components of an attribute query are the attribute field, operator, and attribute value.
- **Dynamic Text=** Text added to an map document (*.MXD) that automatically is changed based on a given variable, when the current date, filename, coordinate system, or a custom field.
- **Feature=**A representation of a real-world object on a GIS map.
- **Geographic Coordinates=**A measurement of a location on the earth's surface expressed in degrees of latitude and longitude.
- **GIS=**Acronym for geographic information system. An integrated system of data, software, hardware, people and workflows used to answer questions, make decisions, and provide tools to create, share, and use geographic information.
- **Layer=**References GIS data that represents real world features. The layer creates a symbol to represent the collection of these features. The features in a layer have the same theme, geometry, and set of attributes. A **Layer Group** is another grouping of layer. In this example, the "Gas System" group contains individual Layers AND more layer groups, such as "Gas Service Group."

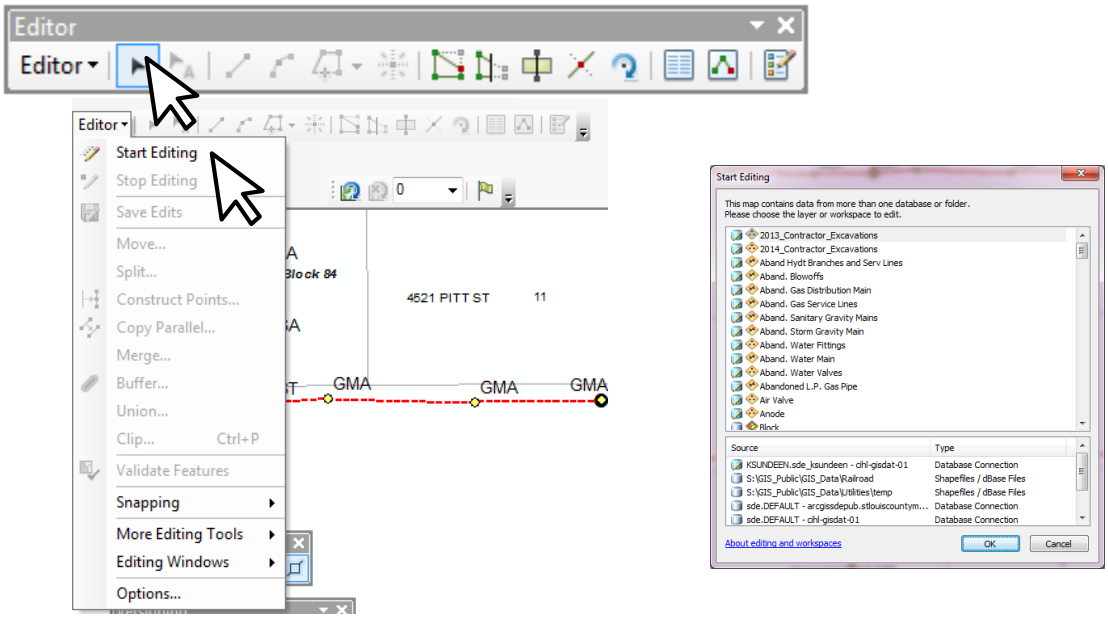


- **Location Query=**Request for features based on the location and spatial relationship to other features. The three basic components of a location query are the layer containing features to select, the location relationship, and the layer containing the related features.
- **Metadata=**Information that describes the content, quality, condition, origin, and other characteristics of data.
- **Raster=**A data model that defines surfaces as an array of equally sized cells arranged in rows and columns. Each cell contains an attribute or measurement value. A raster's origin, cell size, and relative cell location are used to determine the location of the cells and raster on the earth. Think of this as a picture.
- **Scale=**Relationship between the size of a feature on a map and the actual size of that feature in the real world. Scales can be expressed as a ratio or an equivalence.
- **Vector=**A data model that represents geographic features as points, polylines, and polygons. Attributes are associated with each vector feature, as opposed to a raster data model, which associates attributes with grid cells. Vector data uses pairs of geographic coordinates to determine the location of the features on the earth.

Contents

A. CREATE YOUR PROJECT LINES

1. Open existing ArcMap MXD: navigate to S:\GIS_Public\GIS_Data\MapDocuments\Engineering "…MXD" or drop this layer (.lyr) into your MXD.
2. You need any line feature to create the strip maps. In this example, we're using a pre-created *Strip Map Project Line* layer. Right-click this new layer "*Strip Map Project Lines*" →*Edit Features* →*Start Editing.* Open project to edit and start editing session. OR….In ***Editor Toolbar***: *Editor* →*Start Editing* →*OK (use default settings)*

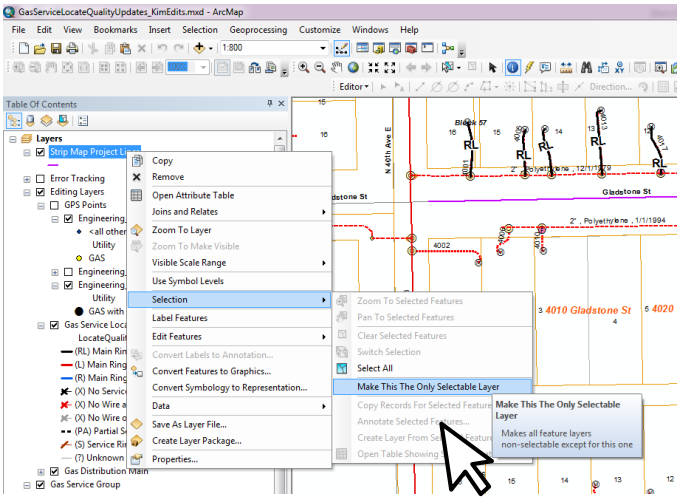


3. Make sure only the *Strip Map Project Lines* are selectable. Selectable means that when you go to edit it, your cursor can select the point/line/polygon and view the associated record in its table. You can use 2 methods to make it selectable:

   a. Showing the "List By Drawing Order" 

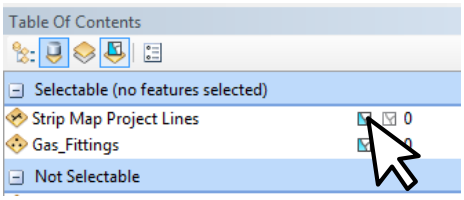
Right-click "*Strip Map Project Lines*" layer in "***Table of Contents"*** *window* →*Selection* →*"Make This The Only Selectable Layer"*

-OR-

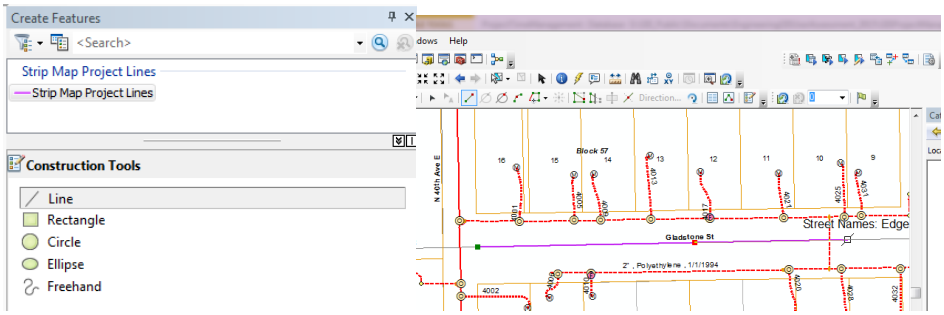


4. Showing the "List By Selection" 

, Left-click the grayed-out button to make it highlighted

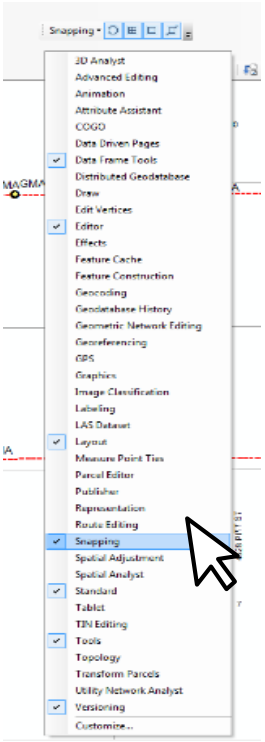


5. In "Create Features" window, click the "Strip Map Project Lines" layer (a purple line). Hover your cursor (now a crosshair ┼) over the map again and Left-click to add 1 point, move your cursor→Left click to add a 2nd point…etc.



a. When you have added as many point to construct you line, *Right-click→"Finish Sketch"*

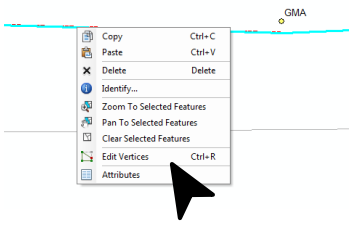
If you want to Editing Existing Line

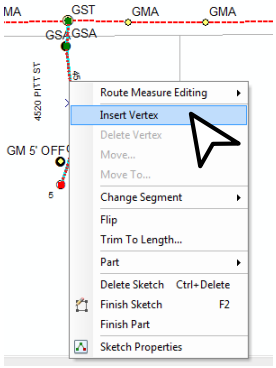


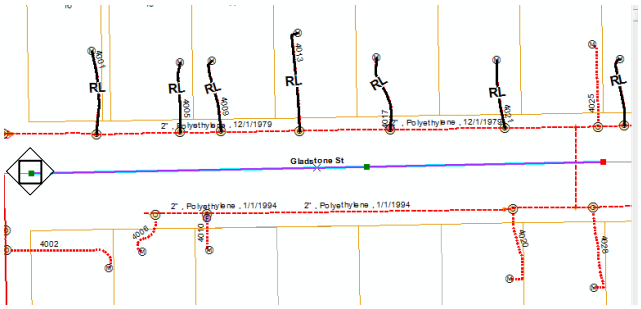
1. Make sure the snapping toolbar is visible by left mouse clicking on the gray area at the top of the window in ArcMap. The list of toolbars will appear and choose Snapping. Turn on the circle snap to allow your edits to snap to the GPS point features.

2. Double click left mouse button on existing gas main feature to edit the vertices. OR… Right-click the **SELECTED** line feature and "Edit Vertices"—both options allow you to edit vertices of the line.

3. While editing vertices, your cursor will change from a black cursor to a white cursor Right-click the line feature while hovering over the line you're editing and click "Insert Vertex".

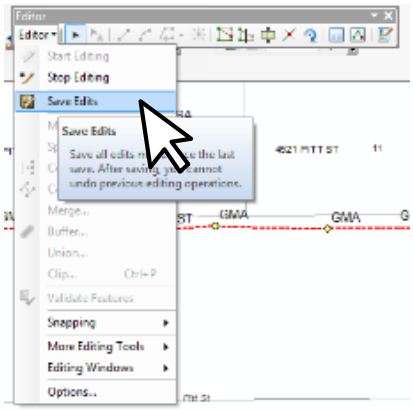






4. Drag the vertices to the new location you want. each GPS point and "connect the dots." Hover your cursor just over the vertex until the white cursor turns to a square icon . Continue to add or edit vertices along the line.

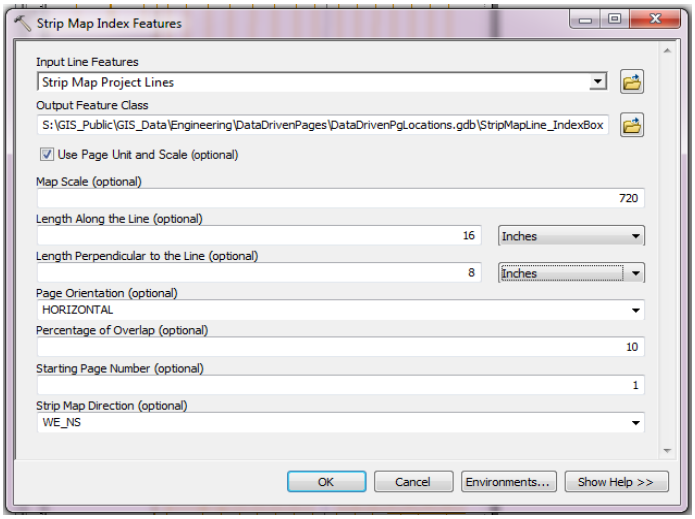
5. Save your edits.
   a. ***Editor Toolbar*** →*Save Edits*.



   b. You can chose to ***Stop Editing*** if you're done.

B. CREATE YOUR PROJECT POLYGONS FOR CENTERING YOUR PDFs

1. Open the tool located in ArcMap under Toolboxes\System Toolboxes\Cartography Tools.tbx\Data Driven Pages**Strip Map Index Features**:

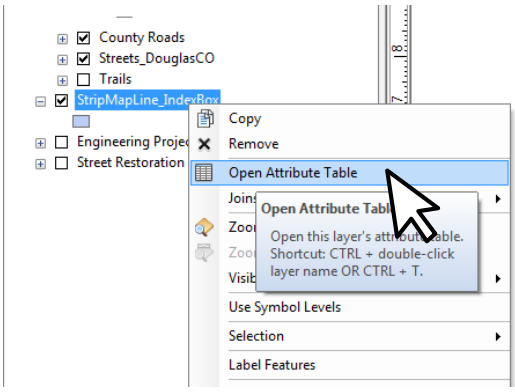


Input Line Features = your "Strip Map Project Line" layer. Drag and drop it here from your table of contents.
Output Feature Class = S:\GIS_Public\GIS_Data\Engineering\DataDrivenPages\DataDrivenPgLocations.gdb\S:\GIS_Public\GIS_Data\Engineering\DataDrivenPages\
You're your file something like this: "StripMapLine_IndexBox"
Use Page Unit and Scale = check this
Map Scale = 720
Length Along the Line = 16 inches
Length Perpendicular to the Line = 8 inches
Percentage of Overlap = 10
Starting Page Number = 1
Strip Map Direction = WE_NS

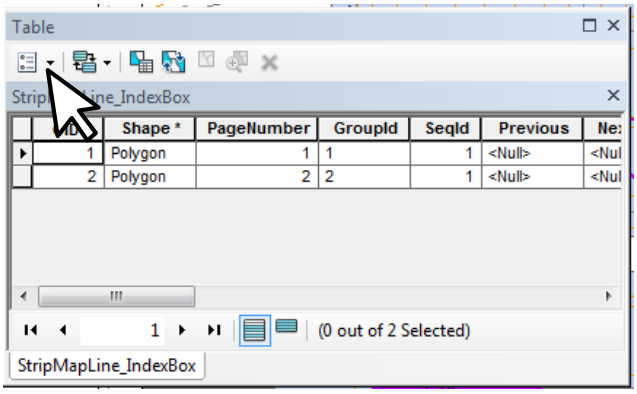
2. The tool will run in a window. Upcoming completing, it will add the new polygon layer to your map.

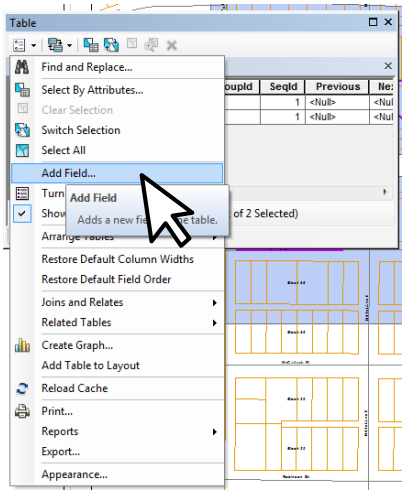
C. ADD NOTES TO YOUR MAPS & PAGES

1. Right-click your new layer→Open Attribute Table.



2. Click upper-left black arrow→Add Field

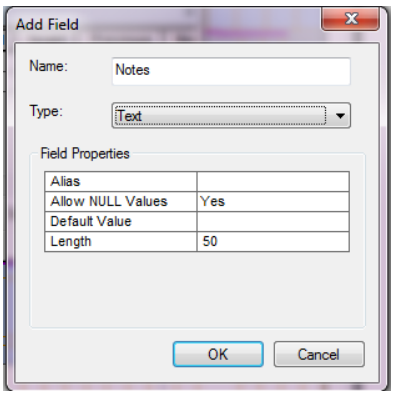




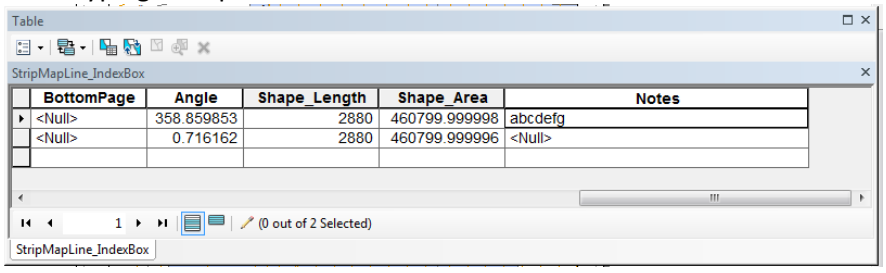
***NOTE: If you are EDITING, the option to Add Field will be grayed-out**

. In this case, Save Edits (in editor toolbar), and then try adding the field again.

3. Add a new field called "Notes", with Length=50 (the default). Click OK.



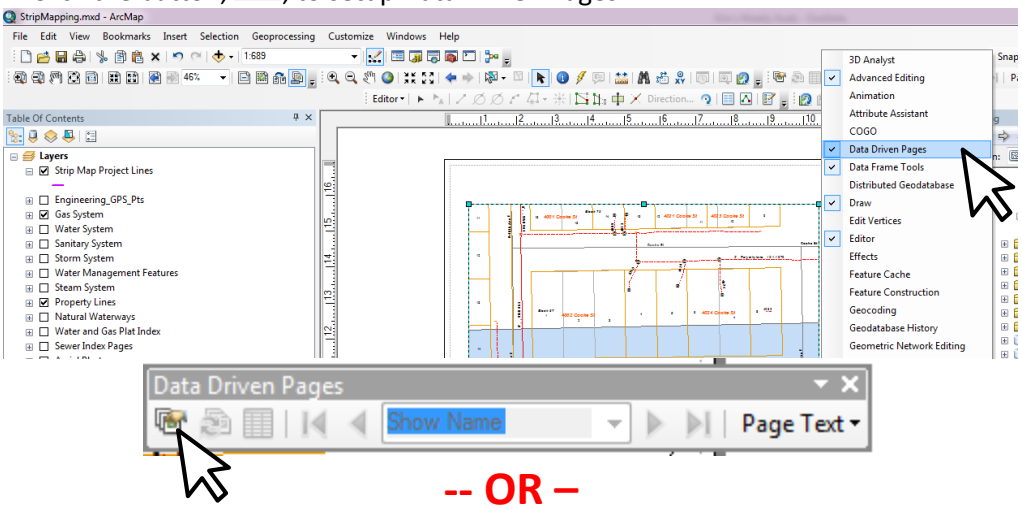
4. This new "Notes" field will be added in your table to the far right. Once you start editing, you can enter your comments like you're typing in a spreadsheet.



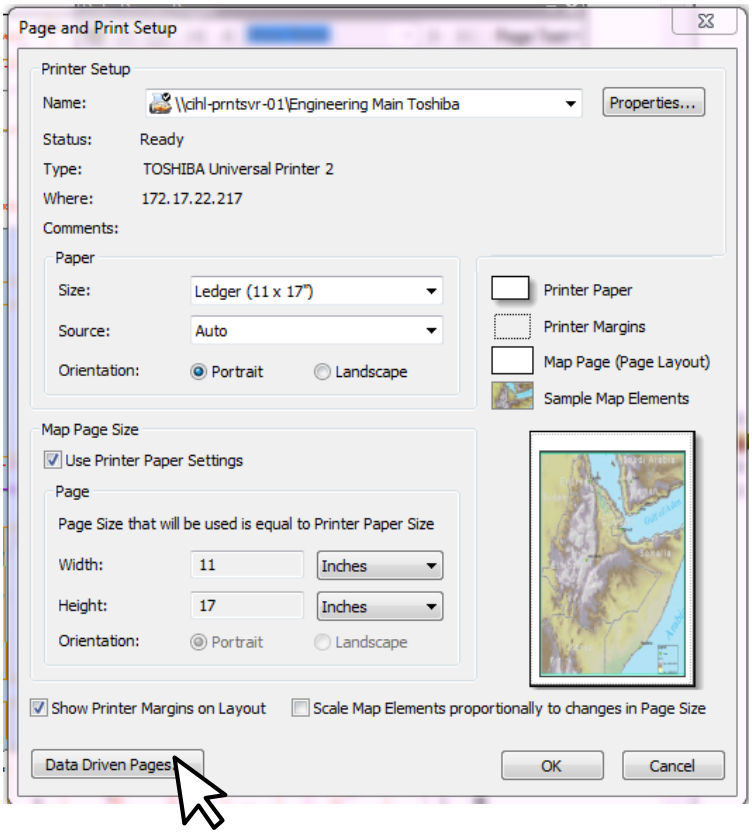
5. Start editing your layer again and add notes about each polygon that you want to display in your exported PDF pages. *See A.2 for instructions on editing.*

D. EXPORT STRIP MAPS USING DATA DRIVEN PAGES

1. There are 2 ways to configure the export strip map on the **"Data Driven Pages"** setup window:
   a. Turn the toolbar "Data Driven Pages" on. Right-click in top gray area in ArcMap. Select Data Driven Pages. You can chose to "dock" this toolbar by moving the toolbar up or down on the screen.
   b. Click the button,  , to setup Data Driven Pages.

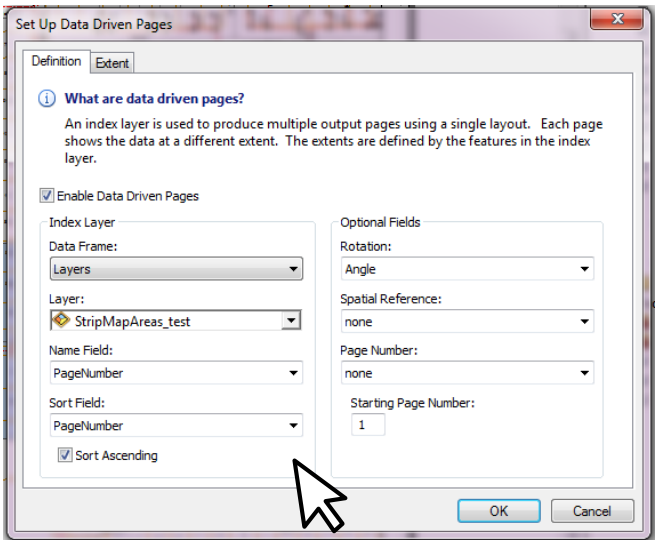


   c. Under *File→Page and Print Setup→ at bottom left of wind, click "Data Driven Pages…"*

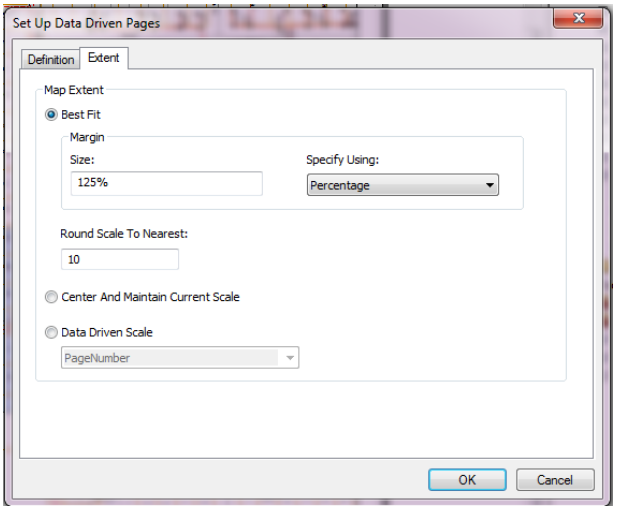


2. In the "**Definition**" tab ,click "Enable Data Driven Pages", which will allow you to edit the fields.

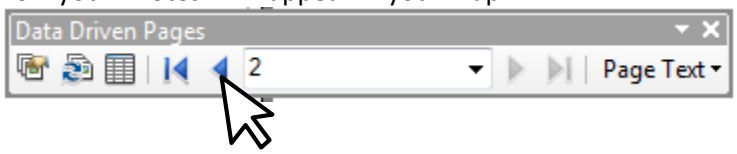
a. Set the ***Index Layer→Layer*** to your new polygon layer that you created after running the tool. It should be in color on your screen (unless you changed the fill color).
b. Set **Rotation** to "Angle"



3. In the "**Extent**" tab, make sure the **Map Extent** is "Best Fit."

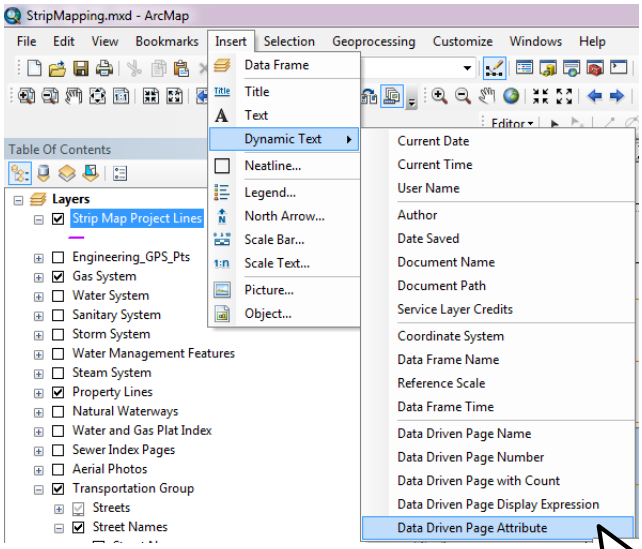


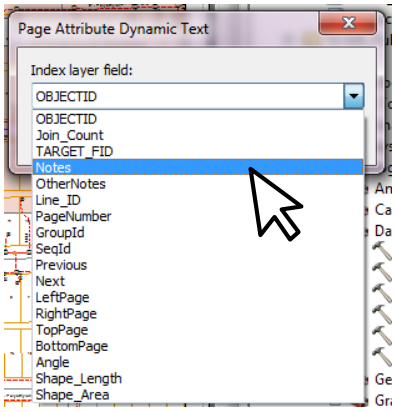
4. Click OK to export your PDF strip maps. Remember to look to where your PDFs will exported In the "Print and Page Setup" window.
5. In the Data Driven Pages toolbar, you can also scan through how each exported PDF page will look and how your "Notes" will appear in your map.



E. DYNAMIC TEXT USING YOUR NOTES & MODIFYING TEXT LABELS

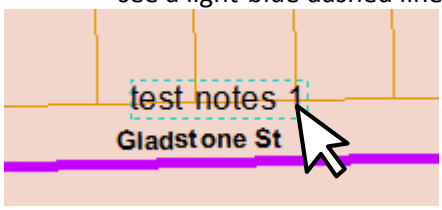
1. **Add Dynamic Text**
   a. To automatically change notes you display on each page of your exported strip maps, add Dynamic Text to your map document (*.MXD):
      i. At top menu, click *Insert→Dynamic Text→Data Driven Page Attribute*
      ii. Select "Notes" and click OK.



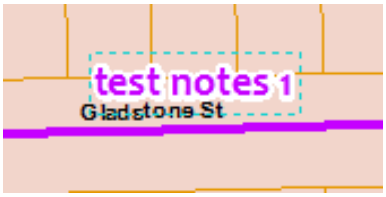


iii. The text will default to the center of your map document. Select the text item and drag it to where you want it to print on your page.

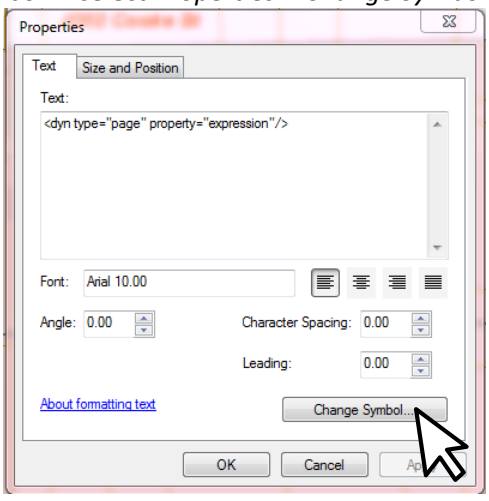
2. **Modify Text Labels**
   a. Chances are that you want your labels to be different colors, sizes, or fonts. Use these steps to change them:
   b. Select your text item by left-clicking ONCE on your text item. You know it's selected when you see a light-blue dashed line box around your text



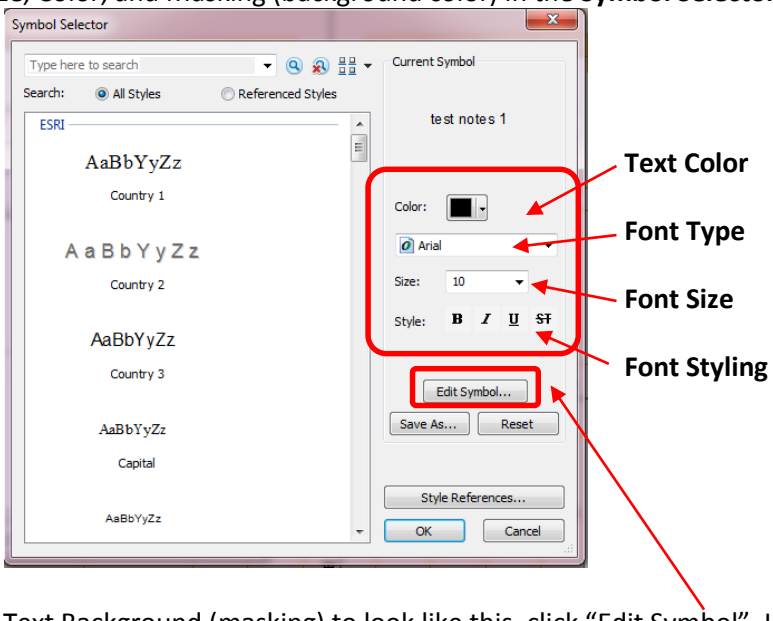
←Original **Changed Text →**



   c. Right-click your *text box →select Properties →Change Symbol…*



d. Change Font, Size, Color, and Masking (background color) in the **Symbol Selector** window.



e. To change your Text Background (masking) to look like this, click “Edit Symbol”. In this next **Editor** window, go to the **Mask** tab. Change the **Style** to “Halo” and adjust the size of the masking color around the text letters. Click OK in all windows to get back to your ArcMap session.