How to: Modify Field Character Limit and Data Type

The following instructions show how to change the character length and data type of a field that needs to be revised. Once a field is created on a shapefile, edits to the fields cannot be made to the field directly and any work arounds can be time consuming. The <u>Feature Class To Feature</u> <u>Class tool</u> is a quicker way to make edits to attribute fields by creating a new shapefile with all the same information and geometry, but with all the new field details added.

You must first add the shapefile that needs to have its attribute field character length and data type changed.

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To get started, click the **Add Data** button.

Figure 1. Finding the Add Data Button

Select the desired shapefile from the saved location on your computer.

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Figure 2. Navigating to the Desired Shapefile

Search for the **Feature Class to Feature Class** tool from the **Search** window.

If the search window is not already on the right pane of the **ArcMap** window, move your mouse to the **Windows** tab at the top of the **ArcMap** window and select **Search**.

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Figure 3. Finding the Search Function

The **Search** window will pop out from the right side of the **ArcMap** window. Type in "Feature Class to Feature Class" and click the **Search** button.



Figure 4. Searching for the Feature Class to Feature Class Tool

Click the second result with the hammer that says **Feature Class to Feature Class** (Conversion).



Figure 5. Finding the Feature Class to Feature Class Tool

A new window for the tool will pop up; here you will enter the **Input Features**, **Output Location**, **Output Feature Class**, and **Field Map** information.

To select the shapefile, click the drop-down arrow in the **Input** Features section and select the desired shapefile.

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Input Features Inc_shapefile_sample_gas	Input Features The feature class or feature layer that will be converted.
OK Cancel Environments << Hide Help	Tool Help

Figure 6. Finding the Input Features Button

For the **Output Location**, click the file folder in that row.

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Figure 7. Finding the Output Location Button

Create a folder for the new shapefile with updated field attribute character lengths and data types that will be created after running the tool. This should be in an easy-to-find location on your computer. For example, if you want to save it in your **Documents Folder**, click the drop-down to the right of the **Look in:** section at the top of the window.

✓ Feature Class to Feature Class	- 🗆 X
Input Features Trc_shapefile_s Output Location Look in: Output Featured Output Featured Output Featured Output Featured Output Featured C: Users \martinal \Downloads C: Users \	Output Location The location in which the output feature class will be created. This can be either a geodatabase or a folder. If the output location is a folder, the output will be a shapefile. Tool Help

Figure 8. Finding the Correct Output Location Folder

If the folder is not already in the drop down, you can click the **Connect to** button, which is the folder with the **+** on top.



Figure 9. Finding the Connect to Button

A new window will pop up for you to select the folder you want the shapefile folder to be saved into.

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Figure 10. Choosing a Folder to Connect to

After the folder you want the shapefile saved in is navigated to, you must create a new folder by clicking the **New Folder** button.

Output Lo	ocation				-	\times
Look in:	🚰 C: \Users \martina 1 \Downloads	~ 1	b	i	- 🖴	•

Figure 11. Finding the New Folder Button

Add whatever name you wish to help you locate the shapefile later (such as the permit number). Left click on the new folder once so it is highlighted and click the **Add** button.

Output Locatio	n X
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55555	
Name:	55555 Add
Show of type:	All filters listed V Cancel

Figure 12. Adding a Shapefile Name

The **Output** Location should have the file path of where the new shapefile will be found.

Input Features		^	Output Location
rrc_shapefile_sample_gas		- 🖻	
Output Location			The location in which the
C:\Users\martina1\Documents\Permit	shapefiles\55555		created This can be eith
Output Feature Class			a geodatabase or a folder
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Figure 13. Finding the Output Feature Class

Now you will need to enter a value into the **Output Feature Class** of what you wish the shapefile to be named inside of the folder from the **Output Location** created previously.

Input Features			^	Output Feature
rrc_shapefile_sample_gas		•	2	Class
Output Location				T (1)
C:\Users\martina1\Documents\Permit	shapefiles\55555		2	The name of the outp
Output Feature Class			_	leature class.
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Expression (optional)				
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Figure 14. Naming the Output Feature Class

The **Expression** portion of the tool can be skipped.

The **Field Map** section of the tool is where all the changes to the field attribute character lengths and data types can be made.

Right click on the field you want to edit and select **Properties** from the selection window.

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Input Features	Field Map (optional)
rrc_shapefile_sample_gas 🗾 🖻	
Output Location	The fields and field
C:\Users\martina1\Documents\Permit shapefiles\55555	input feature class. You
Output Feature Class	can add, rename, or delete
55555.shp	output fields as well as set
Expression (optional)	properties such as data
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Field Map (optional)	
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OK Cancel Environments << Hide Help	Tool Help

Figure 15. Finding the Field Properties

A new window will pop up for the selected field. There you can change the **Data Type** by selecting the dropdown to the right of **Type**.

Output Field P	roperties X
Name:	SYS_NM
Alias:	SYS_NM
Type:	Text V
	Long
	Double Blob Date Short Float GUID Raster
Merge Rule:	First ~
Delimiter:	
	OK Cancel

Next, you can change the character length of the field by clicking the cell to the right of the **Length** cell in the **Properties** section. Click the **OK** button after everything matches the required field data.

Output Field P	roperties	×
Name:	SYS_NM	
Alias:	SYS_NM	
Type:	Text	~
	Properties	
-	Length	40
	Allow NULL values	Yes
Merge Rule:	First	~
Delimiter:		
		OK Cancel

Then click the **OK** button after everything matches the required field data.

You can also add a data field if your shapefile was missing one. Click on the + button in the **Field Map** area to add a field to the shapefile.

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Output Feature Class			can add, rename, or delete
55555.shp			output fields as well as set
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A new window will pop up, and you can add the field name that needs to be added, type of data and character length.

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Type:	Text ~
	Properties
	Length 50
	Allow NULL values Yes
Merge Rule:	First ~
Delimiter:	
	OK Cancel

Click the **OK** button when you are finished.

Once all the fields are revised and any new fields added, click the **OK** button at the bottom of the **Feature Class to Feature Class** tool window to create the new shapefile with updates.

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The new shapefile will be added to the **Table of Contents**.

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To review your changes and additions, and verify they all match the required values, right click on the new shapefile in the **Table of Contents** and select **Properties**.

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A Layer Properties window will pop up.

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Click on the **Fields** tab and the fields on the shapefile will show up.

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			Allow NULL Values	No	
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Clicking on any of the fields on the left will populate the field details on the right, allowing you to check the **Data Type** and **Length** of all the required fields.