

Creating and Adding Symbols

Symbols in Carlson are drawings consisting of the elements of a symbol. For example, a Fire Hydrant symbol is made up of a circle and a polyline which is first made into a block and then made into a drawing. The drawing is loaded into the symbol library under a desired symbol category. The customized block can therefore be accessed in the symbol library in Carlson. Of course, an alternative to creating a symbol is to simply copy a set of CAD elements (lines, arc, circles, and/or text) that can then be copied to other places in the same drawing. This is the most rudimentary CAD function. However, doing this becomes very inefficient when that same set of elements is needed in another drawing or many other drawings.

So, the first step is to create a block (group) and then to create a drawing from that block which is accessible in other drawings by using the *Insert* command. But this inserted drawing is not accessible by the Field to Finish commands or the symbol library which makes the drawing process very efficient. This Quick Reference Guide illustrates the steps necessary to create and add symbols to the Carlson Symbol library.

Instructional Steps

A set of CAD elements can be created OR a symbol may be inserted into the drawing and then edited. The latter works well if an existing symbol is similar to a symbol that is desired. For example, the standard fire hydrant symbol in the Carlson Symbol Library is as shown in Figure 1. The arms of the symbol (circled in red) are so thin that they can hardly be seen. So, this QRG will show how to modify this symbol and add it to a new category in the Carlson Symbol Library.

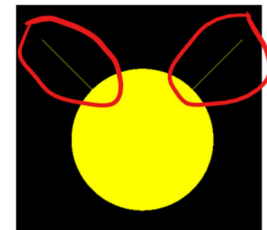


Figure 1 Carlson Symbol
(WATR-11) Fire Hydrant

1. Insert the WATR-11 symbol into any location in the drawing. Set the symbol scale to 1.00 and place it on layer zero. (Layer 0 is a unique layer in CAD such that symbols (blocks) with an original layer of 0 will automatically adapt to the current/active layer when inserted into a drawing). Layer 0 defaults to color white.
2. Explode the symbol (use the *Explode* command) this will force the symbol to its original layer when the symbol was created which is or should be 0.
3. Modify the arms by using the *PEDIT* command. Select the arms and W for width. Change the width of the polyline to the desired width in proportion to the filled circle. This will often be an iterative process to get the width of the arms exactly as desired. See Figure 2.
4. Create a block from the elements of this new symbol. Use the *Block* command. Note Figure 3 shows the name of the block



Figure 2 Proposed Fire
Hydrant symbol

(GSM_HYD) the name should be whatever is chosen (recommend making the name unique either by company initials or personal initials).

5. Using the command WBlock create a .dwg from the Block created in step 4 above. Ensure the identity of the file name and directory location.

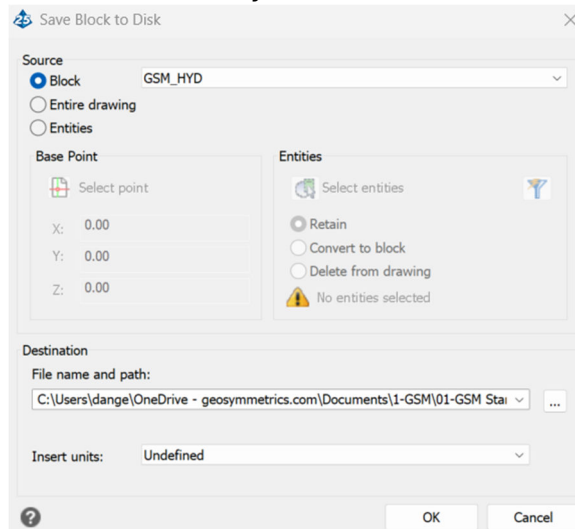


Figure 3 Save Block to Disk dialog

6. On the Menu bar navigate to Settings/Symbol Library and select the Add Category button.

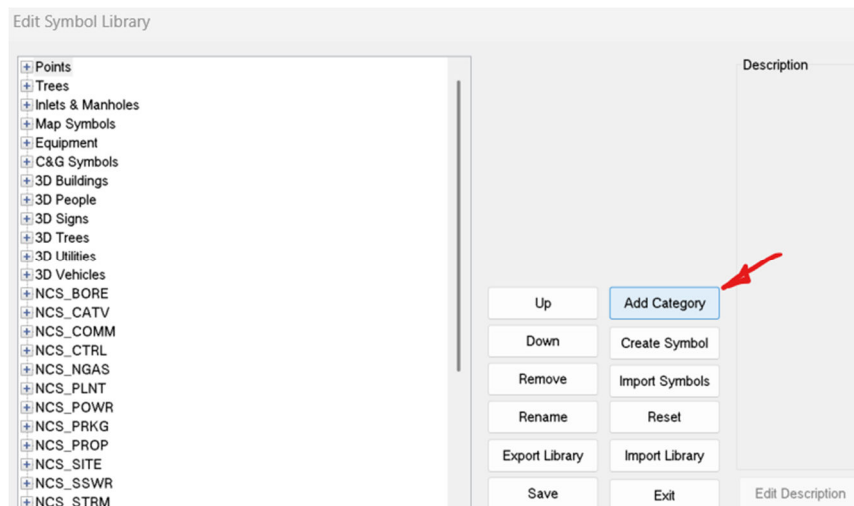


Figure 4 Edit Symbol Library Dialog

On the next dialog box click *Top-Level*. Then type in Company Initials or Name or some way to identify a category of customized symbols. Click the *Import Symbols* button and browse to the directory and file of the newly created or modified block saved as a .dwg file. (example: GSM_HYD). Click Yes on the confirmation dialog as shown in Figure 5.

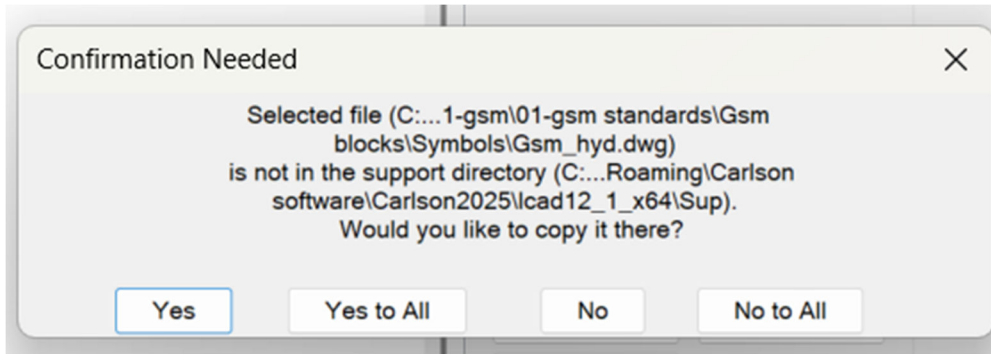


Figure 5 Symbol Confirmation Needed Dialog

Click Save and Exit.

7. Verify that the symbol has been added to the symbol library by navigating on the Draw menu bar/ Symbols/Insert Symbols as shown in Figure 6.

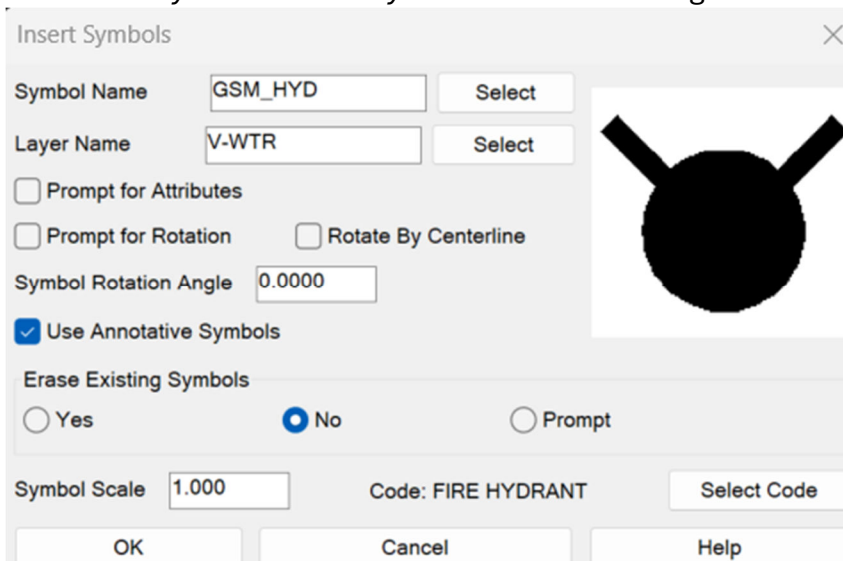


Figure 6 Insert Symbols Dialog

8. Once a block has been added to the symbol library it is also available to be selected as a symbol in the Field to Finish process (see QRG_GSM Field to Finish P1_Points only.pdf or QRG_GSM Field to Finish P2_Lines.pdf)