Spatial Editor
Creating and Using Geodata Templates

Any object you can open directly for editing in TNTmips' Spatial Editor can be opened and/or saved as a template for use in creating similar objects. A template object has the same georeference and database structure as the object it was created from but has no elements (geometric templates) or cell values (raster templates). Templates are the same data type as the object they were created from. For example, for a new vector object, the coordinate type and topology level would match and for a new raster object, the cell type would be the same (bit-depth, signed, unsigned, composite color, and so on). Currently editable geodata opened in the Editor using Object/Open External (E00, Coverage, or shapefile) are saved as vector templates. Templates for external CAD format files that can be opened directly for editing (DXF, DWG, DGN, and TAB) are saved as Project File format CAD objects.

Raster templates also include contrast tables, color maps, edit and display parameters subobjects, and if a class raster, the style object. Geometric templates include style objects, display and edit parameter subobjects, and database tables as described below. Because you get both the style object and the style assignment table, as you add elements to the new object created from the template and give them attributes used for styling in the object the template was made from, the new elements will automatically have their styles assigned.
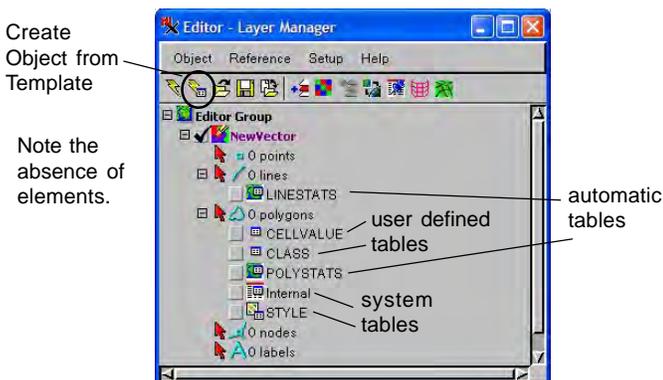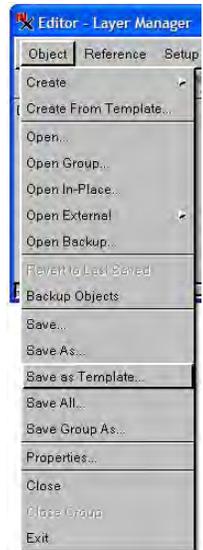
Maintaining the database structure does not mean simply copying all the tables. Because there are no elements in geometric templates, tables that are directly attached to elements have no records. These tables have all the fields and relationships of the corresponding table in the object the template was made from. The only tables that have all records copied are tables with a related only attachment type.

If you have tables that are directly attached with values you want to reuse in objects made from the template, you should set up database constraints that use a related only table to provide a pick list for the field (see the Technical Guide entitled *Constraining Database Field Values*).

If standard attribute tables exist in the original object, they will be created for the new object but will not have any records. As elements are added after the template is used to create a new object, records are automatically added and populated in the standard attribute tables. Element ID tables, if present, and the Internal system table also have records added and populated automatically. Style assignment tables have a related only attachment type, which means these tables are fully populated in the template enabling automatic style assignment as described above. For more information on table attachment types see the Quick Guide entitled *Database Attachment Types*.

To create a template object, open an existing object for editing in the Editor and choose Object/Save As Template. When you create a template in this manner, the object that remains loaded in the Editor is the original object. To use a template to create a new object, click on the Create Object from Template icon (left) or choose Object/Create from Template from the menu in the Editor Layer

Create Object from Template

Note the absence of elements.

automatic tables

user defined tables

system tables

A new vector created from a template has no elements and the same database structure as the original object.

Database Table
Name: RailroadL
Description: attributes from VMap0 (2000)
Attachment: One record per element
Records: 0
Fields: 12

Database Table
Name: Status
Description: Status of object.
Attachment: Related only
Records: 17
Fields: 3

DataTips showing table contents in a template object. The DataTip on the left is for a table that was directly attached to elements in the original object. It has no records in the new object created from the template, but all the fields are defined. The DataTip on the right is for a related-only table, which has all the fields defined and the same number of records as the original table.

Manager. You can choose either a template object you have created or choose an existing, reference object from which you would like to produce an object without elements or cell values. When you do the latter, the elements/cell values are stripped out and database adjustments made just as when you save a template, but there will be no saved template. If you use data-containing objects to create your new objects without elements or cell values, any changes made to the reference object will be reflected in the next new object made from it. You could also create a new template that reflects the changes.

After choosing Create Object from Template, add elements and assign attributes as desired to your new object. You are prevented from saving the new object over the template because a template is designed for reuse.

You may want to create a directory used exclusively for storing templates, for example Vector Templates/Forestry Projects. You then know immediately where to go when you want to create a new object of the same type. There is no special icon for template objects because they simply are the same object type as the original (raster, vector, or CAD) without elements or cell values.

It may be that templates already exist that can be acquired and used for your discipline. It may also become customary when performing a project for someone, such as image interpretation, that they supply a template to define what form they want the geodata you return to be in and what attribues it should have.

The table relationships shown are exactly the same in the original object and a template saved from it. Most of the tables in this database have a related only attachment type and, thus, all of their records are retained in a template. The three tables that are directly attached to elements do not have any records in the template object.
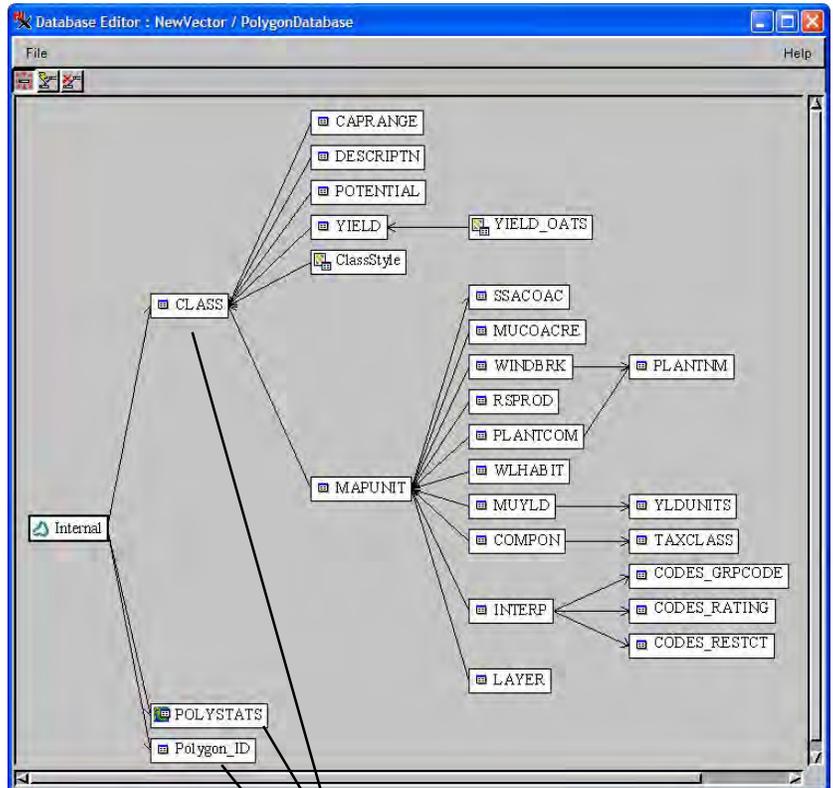
These three tables would have no records in a template.