



Knowledge Base Topic:

Guidelines for working with Data References

Software: AutoCAD Civil 3D 2012

GENERAL NOTES

- Do not ever make a block that contains a data referenced or Civil 3D object.
- If you are inserting blocks that need to be exploded, use the option to Explode on insert in the insert dialogue box. Do not explode after insertion.
- Limit the use of Copy and Paste between drawings that contain data references to avoid creating anonymous blocks containing referenced objects.
- Use Export to AutoCAD 2010 if you need to dummy down a file and copy geometry sources between drawing.
- Do not ever WBLOCK a drawing that contains data references.
- Do not Validate Shortcuts unless a source reference has been renamed, deleted or otherwise needs to be removed.
- Avoid making copies of source objects in a project by not making drawing copies using SAVE AS in the active working folder. If you need a backup or working copy place in a lower folder level.
- If you break it, clean up the mess. Deleting a reference will break a reference if it is used in another drawing. It is good etiquette and essential for project integrity that you **remove** the broken references from the drawings affected.

Validating Shortcuts

- Do not Validate Shortcuts unnecessarily. Objects listed are always available and valid for the project.
- Validation should only normally be performed after the user has intentionally made changes to data reference sources. Think of Validation more as a saving process.
- **Each user has memory cache of the xmls that is populated when the xmls are used. Validating Shortcuts adds all the xmls to your user cache. The application looks to the cache first for the file you need, if it cannot find it it looks to the source. When it finds it that is also added to the cache.**
- **After any xml is deleted Civil 3D needs to be relaunched to clear the cache.**

Renaming a Source Object

1. Rename source object
2. Save file and close source drawing and Civil 3D.
3. Validate Shortcuts in the Prospector
At change alert option window, choose to UPDATE the shortcut.

Deleting a Reference

1. If you break it, clean up the mess. – Deleting a reference will break a reference if it is used in another drawing. It is good etiquette and essential for project integrity that you **remove** the broken references from the files affected.
2. Save file and close source drawing
3. Validate Shortcuts in the Prospector
At change alert option window, choose to UPDATE the shortcut.

4. Go into any known referenced drawing that used it and clear the broken you

Validate Shortcuts – Object Rename

Rename source object.

Save file and close.

Validate Shortcuts in the Prospector

Rename source object.

Save file and close.

Validate Shortcuts in the Prospector

At change alert option window, choose to UPDATE the shortcut.

Promoting Data References

Promoting references does not make them a new source automatically for new references.

- Promoting only makes a copy of the source object into the target drawing.

- Promoting a reference does not delete any object or data reference in any drawing or in the shortcut tree.

I discovered while working with the data references that resolving them using the interface can sometimes fail to resolve the broken reference correctly.

Repairing broken references

Never leave a broken reference, broken.

Typically browsing to a correct location, after choosing to repair a broken reference works. However, this is not always the case. If you find yourself having to repeatedly navigate to the correct source path these steps may work for you.

These steps cleared the DREFs when all other methods fail:

1. Make sure your computer is mapped to I: drive *DOTSD4CADDPROXY\G\TIMSPROJECT\PILOT_PROJECTS*
2. In prospector, make certain the correct working folder and project is set for data shortcuts to this same location.
3. Open the drawing
4. In the prospector tree, locate the broken alignment reference. Rt-Click on any that has a exclamation symbol and choose from the context menu “**Repair Broken References**”.
5. You may get an option to navigate to the correct file. Civil 3D may have you do this more than once. If so, cancel. *Do not repair and navigate to a replacement file, this does not work.*
6. When this problem occurs, go back to the data refence with the exclamation symbol. Rt-Click again and choose “**Repair Broken References**”
7. A dialogue box will pop up on the second attempt to Repair **All** Broken References. When you see this screen select **CANCEL** and close the dialogue box.

Once cancelled, Civil 3D will take a while but should correctly repair find the reference and clear the exclamation symbol.

(repeat for each data referenced alignment)

Mapping Drives to Civil 3D Projects

It is VERY IMPORTANT that **everyone** map to this drive with EXACTLY the same path and **logical drive letter!** Example, everyone must mount it exactly the same way, that is: I:\22777415201*.*

Now, within the XML files themselves in the _\shortcuts folder, we found some hard mappings to “c:\” and other hard mappings. Civil 3D will use those to resolve shortcuts BEFORE either:

1. Hard path mapping
- 2) the relative paths, i.e., .\22777415201*.*
- 3) or, the dssysvar paths, i.e., %DSSysVar%22777415201*.*

If the project is ever “off-line” on a local hard drive, say C:\ 22777415201*.*, you must be very careful when associating your shortcuts folder to project, otherwise C3D will write “C:\22777415201*.*” and begin using “C:\22777415201*.*” to resolve data shortcuts back on the server version ! (Even if you re-associate the data shortcuts path back to the server). Once a hard path is written, that’s it. Moving a project to a different path (or any change in path) will lead to the same kinds of issues.

So to fix the path part of this,

- 1) Everyone must be out of the project so no one’s path corruption gets written back to project data shortcuts on the server.
- 2) Delete any local versions of the project (C:, D: if they exist on any production machine that you can
- 3) Use NotePad++ to easily search and replace the bad paths (in the data shortcut XML’s with the Logical drive mapping the project is on the server (Search > Find in Files) - Search for: C:\ 22777415201\ and replace with I:\ 22777415201\

Setting DSSYSVAR, Window Environment Variable

This is a variable that must be set if the design team sharing a project’s project directory is set to a different path on each user’s machine. Setting this will keep data references associated with the projects.

For example, Someone may be mapped to their Projects, D:\e\. Their computer needs to have the DSSYSVAR set to D:\e\. Someone else may have their same projects mapped to F:\projects\e\

