## Overview - Section 18.4

**Internal Use:** Full compliance  
**Contractor Use:** Reference only

It is important that ARG data is cleaned up, to make the translation to GIS easy and accurate.
On the *CAD to ARG* Tool Palette, select Drawing Cleanup…:

The *Drawing Clean up – Select Objects* window will appear, click <Load>:

The *Select Drawing Cleanup Profile* window will appear; navigate to the *DW CAD* folder, select the *QA_QC.dpf* and click <Open>:

The Select Objects pop-up may appear, click <OK>:
In the Drawing Cleanup – Select Objects window, under Objects to include in drawing cleanup choose, Select manually: then click the selection button to the right. In model space, window all objects to be reviewed, hit enter (or right-click); then click <Next>:

In the Drawing Cleanup – Select Actions pop-up the “Actions” have already been preselected, the Cleanup Parameters may need adjusted per users’ preference (see Select Actions); click <Finish>:

NOTE: See Select Actions for details about each action.

If there were no errors detected in the drawing the command prompt will appear similar to the example shown below:
Drawing Cleanup Errors

In the Drawing Cleanup Errors pop-up the first Cleanup action with detected errors is selected; expand the Cleanup Action, by clicking the plus sign, to display the list of detected errors:

When the error is selected from the list, it will automatically zoom to the first error, and be shown with a temporary marker (dashed line):

To zoom closer to the selected error use the Zoom settings. Uncheck Auto Zoom, type the desired number in the Zoom % field, and then click <Zoom>:

Note the size difference in relation to other features.
Decide whether the error is valid or not. If it is not, click <Remove>; if it is, click <Mark>:

1. By clicking the <Next> button the temporary marker will move to the next error within the current Cleanup Action;
2. Click <Zoom> to see the error on screen;
3. Then click <Mark>, <Remove> or <Fix>;
4. Once finished marking all errors within the selected Cleanup Action click <Close>

Tip: Marking
Keep in mind the marker size is always 5% of the screen area, be sure 0 is set as the current layer and turned ON before selecting <Mark>.

Note: To help reduce the margin of error, do one Cleanup Action at a time so as not to confuse the errors. See Review Drawing Errors to correct the errors, then move on to the next step, after this one, for marking additional Cleanup Actions.
If there is more than one cleanup action, select the current Cleanup action, then click <Next Action>; this will display the next set of Cleanup Actions with errors, repeat previous steps for marking each error:

**Review Drawing Errors**

The following is just one example showing how to review errors. Each user may have a different preference, this is just a guideline.

Each marker placed, using the Drawing Cleanup, is now an AutoCAD block. To search for these blocks the user can utilize the Quick Select tool by either clicking the Quick Select button on the Properties palette or by right-clicking in model space and choosing Quick Select:

An error window may pop-up, click <OK> and move on to the next step:
In the Quick Select pop-up window, select the following options: Apply to: Entire Drawing; Object type: Block Reference; Properties: Name, Operator: = Equals. In the Value pull down there should be blocks prefixed with MAP_CLEAN, select one of these and click <OK>:

In model space the markers selected will be highlighted with grips; zoom into these to assess the errors and determine how they need to be fixed:
Example: This particular error is a zero length object and can be checked by windowing and reviewing the properties:

Simply erase the zero length object, and erase the Marker, then move on to the next error following the previous steps. Once all errors have been rectified refer back to the Drawing Cleanup Errors section of this document.

**Fix Drawing Errors**

Walk through the following steps to rectify errors using the Drawing Cleanup tools.

While in the Drawing Cleanup Errors window, and zoomed to an error, determine whether to use the tool to fix the error. If yes, simply click <Fix>, notice the temporary marker disappears. When zoomed into the area of interest the error has been fixed:
To double check use a crossing window, select the grip and move the cursor off to the side; the user can determine if the error was fixed if all items move together; press Esc to cancel without changing location of grip:

**Select Actions**

In the Drawing Cleanup – Select Actions pop-up window, each Cleanup Action can be selected individually by choosing from the Cleanup Actions list and clicking <Add>, this will copy the action to the Selected Actions column. Following is a description for each Action:

**General Description:**

**Crossing window.** All items have moved indicating error has been fixed.

**Cleanup Parameters:** Each action has a unique set of parameters that may need to be adjusted per project. See following sheets for brief descriptions.

**Add/Remove buttons:** Adds and Removes selected actions to/from the Selected Actions list.

**Options:** Determines if errors are fixed automatically or if the user wants to review each error - **ALWAYS** select Interactive.

**Tip:** Errors Some Cleanup Actions may cause null errors.

**Help:** Use this for more in depth descriptions on each action.
**Delete Duplicates**

Locates objects sitting on top of each other:

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**Zero Length Objects**

Locates lines with zero-length - for example, snapping to the same endpoint twice:

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**Cleanup Parameters:**
- Tolerance is set to 0 by default. This will alert the user to any duplicate objects that share the same location.
- The items checked indicate what objects the cleanup tool will look at in the drawing.

**Cleanup Parameters:**
- No parameter to set on this Action.
**Break Crossing Objects**

Locates areas where two or more lines meet or cross and breaks the lines at the intersection:

![Diagram of the Break Crossing Objects feature in CAD Standards - 3rd Edition - November 2016](image)

**Cleanup Parameters:**
- No parameters to set on this Action.

**EX:**
- Example shows instance where the user would NOT Break Crossing Objects.
- Example shows instance where the user WOULD Break Crossing Objects.

**Tip: Polygons**
- It may be useful to turn off layers that house polygons, such as enclosures and structures, as this will prompt the user to break objects in incorrect locations.
Snap Clustered Nodes

Locates endpoints of lines near each other (within a specified tolerance radius) and snaps endpoints together.

EX:

Cleanup Parameters:
Tolerance is set to 0.5 by default; this defines the radius distance at which the cleanup tool will look for Clustered Nodes.
The endpoints of lines that aren’t snapped to an ARG Attribute will show up as errors.

Line that appears to snap at the correct point.

Once zoomed in it is clear the endpoint of line is not snapped to the ARG Attribute.