

# ADT 2007 WALL CLEANUPS

## Using Autodesk Architectural Desktop ® 2007

### Segment 1 of 1

### Lesson 1 – 7

You can measure the initial success of using ADT in a project by your ability to manage wall cleanups. If you can't get the walls to cleanup you might as well throw in the towel. That is the truth.

The good news is that walls will clean up if you know all the rules. Our friends at Autodesk provide us with all the tools. You just need someone to pull it all together and lay it out on the table for you nice and organized. That is what we are about to do.

Via this document and 7 video tutorials you will learn all there is to know about ADT wall cleanups.

This tutorial could also apply back to ADT 2004 and even 3.3 to a certain extent.

This is an excellent tutorial for CAD managers and wall style builders.

This tutorial includes:

- a) 7 awesome **WMV** video files with live demonstrations of each lesson.  
Download at [www.dgcad.com](http://www.dgcad.com).
- b) This hard copy PDF document.

**Date:** Jan 1, 2007

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**Level:** Intermediate and Advanced

**Category:** Architectural Desktop 2007

**Web:** [www.cadclips.com](http://www.cadclips.com)

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*Additional Notes.*

*This entire tutorial is mostly presented through the 'Video Reference Files' indicated below each lesson title.*

*This tutorial does not supply any electronic dwg drawing files. You can just draw the basic walls on the fly yourself or use the built in adt tutorial files as I do.*

## Lesson 1. General Information

Video Reference file: **ADT2007-WALL-CLEANUP-1-GENERAL.wmv**

Welcome !

We start these wall cleanup tutorials with a series of fundamental rules.

**1. High, Low, Medium, display configuration.**

Just a quick note to be aware of the display configurations available and how they change the wall appearance. We also try the diagnostic display configuration later on in the tutorials.

**2. Use the triangle grips instead of the square grips on walls.** When you stretch a wall by the grips (and you should) always use the triangular grip when ever possible. It moves in a 2d linear direction and will filter out any 'z' value as you pick new points. The square grip is 3d and can snap to 3d points even if the ortho is on. This causes LOTS of problems later on. Please always use the triangle grips !

**3. Wall cleanup is turned on or off for the wall.** This is a no brainer. Automatic cleanup can be turned on or off per wall individually.

**4. Wall directions are going the same way.** Try to have any chain of walls all going in the same direction end to end.

**5. Cleanup Group definition styles a similar between walls.** Another no brainer. If the cleanup group definitions are similar between walls they will engage in a cleanup. Otherwise they will not. **This is also the place where cleanup across xref's is set.**

**6. Wall bases are at the same 'z' elevation.** This is a biggy. The walls have to have the same elevation or 'z' to even engage in a cleanup. Easier said than done. Over the course of these tutorials we will elaborate on this rule from a couple different angles. So what if all you walls don't sit at the same 'z' ? Skip to lesson 7 and see what the answer is.

**7. The wall baselines are the heart and brains of the wall. They have to touch each other to talk or at least be within the endpoint cleanup radius of each other to cleanup.**

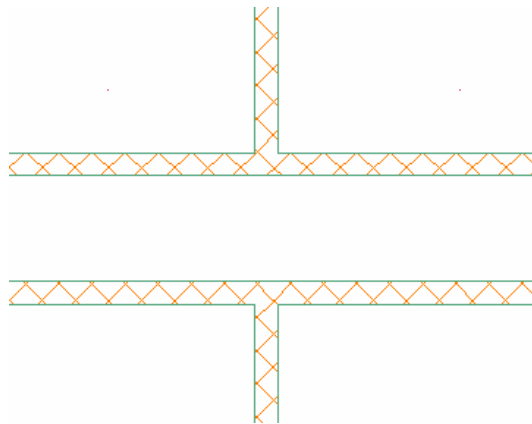
**8. You can also use Merges to make walls cleanup.** Covered later in this tutorial

Ok, how many adt walls do you see in figure 01 on the next page ?

- a) 4
- b) 6
- c) 2
- d) I don't care, get on with it.

**Fig. 01**

How many walls ?



The answer is a). If you said c) you really need this tutorial. If you said d) it won't be long. If you said b) you would be drawing two walls too many.

The lesson learned above is > if the wall continues beyond an intersection don't stop and start a new wall. Just punch it on through.

**Lesson 2. Wall component priorities.**

Video Reference file: **ADT2007-WALL-CLEANUP-2-PRIORITIES.wmv**

Once all the rules from lesson 1 are satisfied walls engage in a cleanup process. They do a virtual handshake and compare component priorities. Once the walls start to cleanup it's all about the priorities. CMU cleans up with CMU and GWB cleans up with GWB etc. As well, components will cut through or penetrate other components of lesser priority at an intersection to get to one of it's own priority types on the other side.

So there is the 'getting the walls to talk' step then there is the 'compare priorities' step.

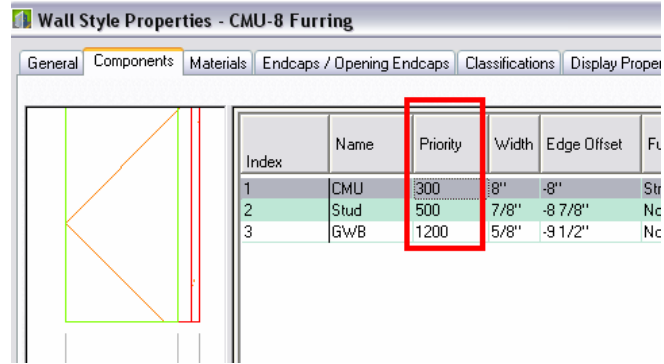
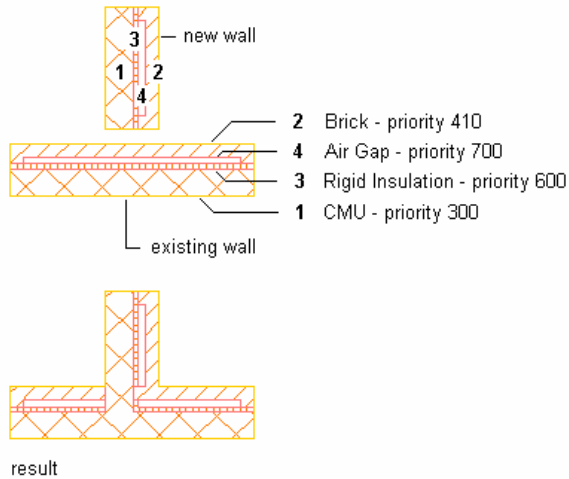
The highest priority is the number 1 and the lowest priority is in the range of 2000-3000. Each component gets a priority number. Usually the structural components get the highest priority (lower number) and the cladding materials get the lowest priority (highest number).

The priority numbers are just a series of numbers that are applied to a wall component

**Fig. 02**

Cleanup priorities

Wall cleanup priorities



The following table lists the default adt cleanup priority for each component used in sample wall styles provided in Autodesk® Architectural Desktop catalogs. You can assign different priorities to wall components in wall styles and individual walls to control cleanup with other walls.

**Fig. 03**

Suggested table of numeric Cleanup priorities

| Component             | Index |
|-----------------------|-------|
| Air Gap               | 700   |
| Air Gap (Brick/Brick) | 805   |
| Air Gap (CMU/CMU)     | 305   |
| Air Gap (Stud/Stud)   | 505   |
| Brick                 | 800   |
| Brick Veneer          | 810   |
| Bulkhead              | 1800  |
| Casework - Backsplash | 2030  |
| Casework - Base       | 2010  |
| Casework - Counter    | 2020  |
| Casework - Upper      | 2000  |

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|                                    |                     |
|------------------------------------|---------------------|
| CMU                                | 300                 |
| CMU Veneer                         | 350                 |
| Concrete                           | 200                 |
| Concrete (Footing)                 | 200                 |
| Glass                              | 1200                |
| GWB                                | 1200                |
| GWB (X)                            | 1200,1210,1220,1230 |
| Insulation (CMU/Brick, Stud/Brick) | 600                 |
| Metal Panel                        | 1000                |
| Precast Panel                      | 400                 |
| Rigid Insulation (Brick)           | 404                 |
| Siding                             | 900                 |
| Stucco                             | 1100                |
| Stud                               | 500                 |
| Toilet Partition                   | 3000                |

### Lesson 3. Baselines, Cleanup Radius, Autosnap.

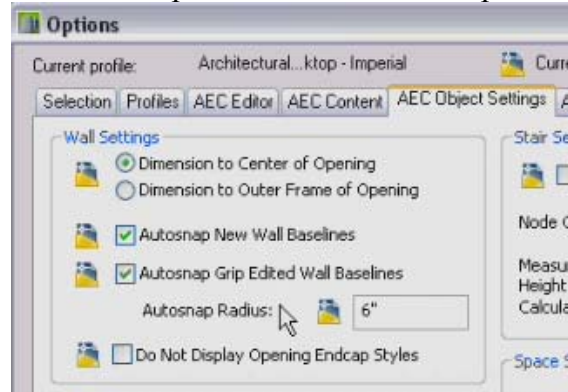
Video Reference file: ***ADT2007-WALL-CLEANUP-3-BASELINES.wmv***

As previously indicated, the wall baselines must touch or cross in 3d with each other before the walls will engage in cleanup. The other exception is to increase the endpoint cleanup radius.

Note the two autosnap options in the adt options dialog box under aec object settings.

**Fig. 04**

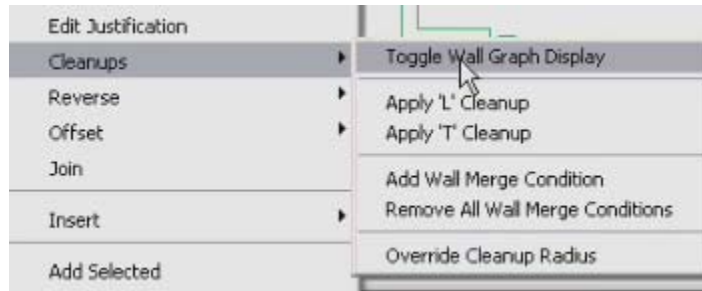
Wall Autosnap settings



Toggle on and off the Graph line display setting to see the baselines and cleanup radius circle along with the walls. I prefer to work in this mode myself.

**Fig. 05**

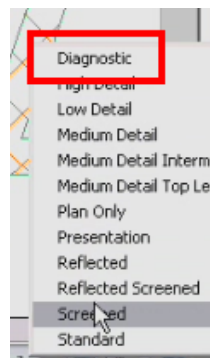
Toggle wall graph line on and off



Try using the diagnostic display configuration. It only shows the baselines and cleanup radius circles.

**Fig. 06**

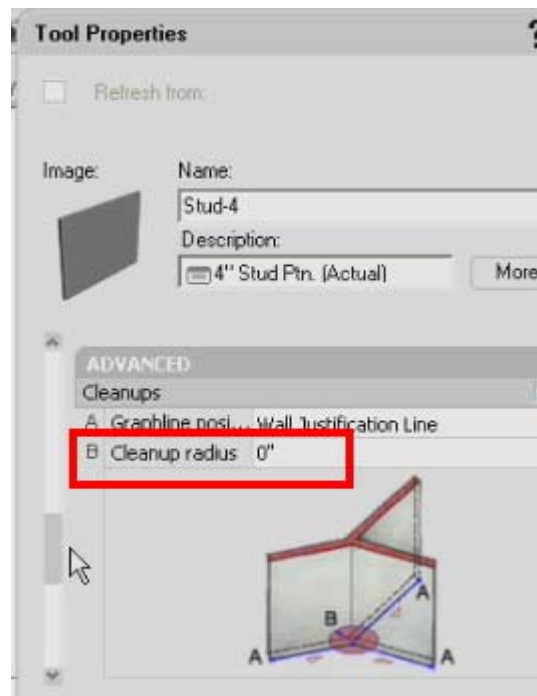
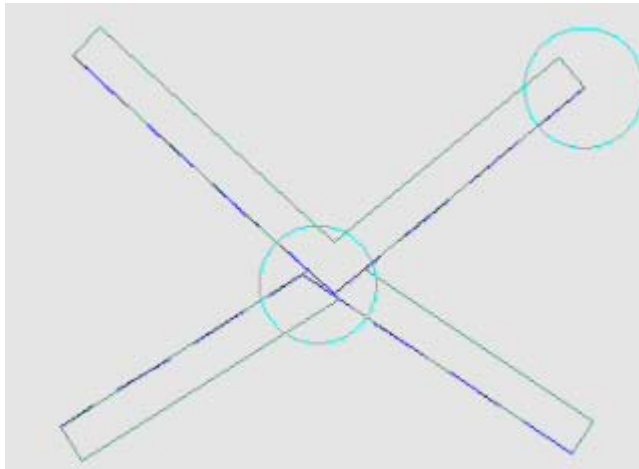
Diagnostic display configuration



You can apply the endpoint cleanup radius on the wall tool on the tool palette or by the wall properties after the fact or by using the cleanup radius grip.

**Fig. 07**

Cleanup radius



**Lesson 4. Wall Merges and Joins**

Video Reference file: **ADT2007-WALL-CLEANUP-4-MERGES.wmv**

Wall merges are easy. You simply merge one wall with another and if they physically touch each other they cleanup based on the priority rules. There is a host / client relationship. Right click a wall and click cleanups > add wall merge condition. Then click the wall to be merged with the first wall. The first wall is the host. Toggle on graphline and note the new merge anchor. Use the same method to remove wall merges.

**Fig. 08**

Add or remove wall Merges



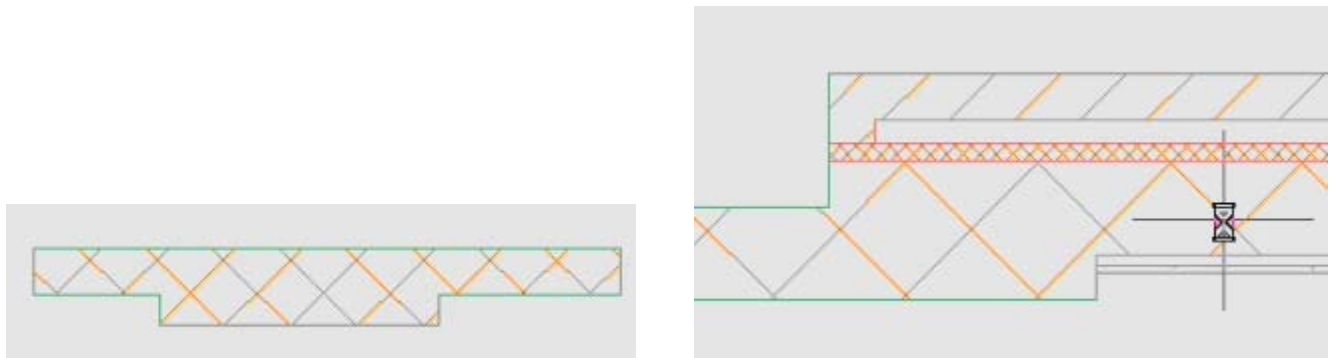
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**Fig. 09**

Sample wall Merge results between two walls



Wall joins are even easier. Joins are used to connect two walls together when both walls are exactly end to end and they are the same wall type. It is the opposite of a one point break.

**Fig. 10**

Two walls Joined end to end



## Lesson 5. Wall cleanups across Xrefs

Video Reference file: [ADT2007-WALL-CLEANUP-5-XREFS.wmv](#)

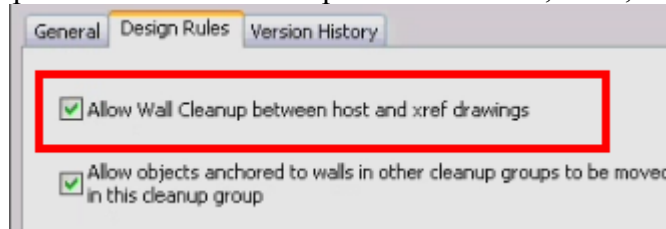
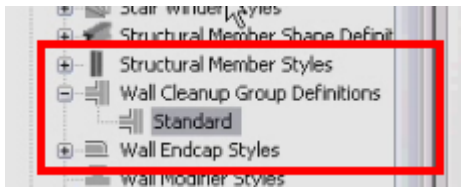
Autodesk has made some great improvements in this area. Although this was possible in earlier versions of adt it was not 100 functional. Now it is. You turn on the 'wall cleanup between xrefs' in the 'cleanup group definition' and use that cleanup group definition for the walls and then xref the files together and the adjoining walls will cleanup properly. Use the 'regen model' command to force cleanups to refresh.

You can now copy, rotate and mirror the xrefs around and the cleanups will work. Yeah !! We need this for our Unit Plans.

**Fig. 11**

Cleanup group definitions with xref cleanup setting





**Fig. 12**

Two xrefs cleaning up at wall intersections



**Fig. 13**

ADT Regen Model command used for ADT object refreshing



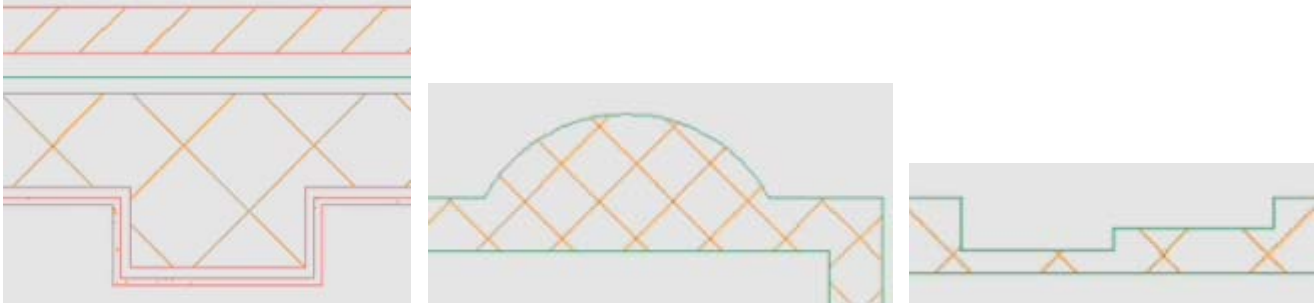
**Lesson 6. Plan Modifiers**

Video Reference file: ***ADT2007-WALL-CLEANUP-6-PLAN-MODIFIERS.wmv***

Plan modifiers are used to create non linear additions to walls as shown below. Wall component priorities still apply but you can **add or remove** a 2d profile to a wall to create indents or bulges. The vertical extent of the modifier can also vary to create a alcove or projection feature to a wall.

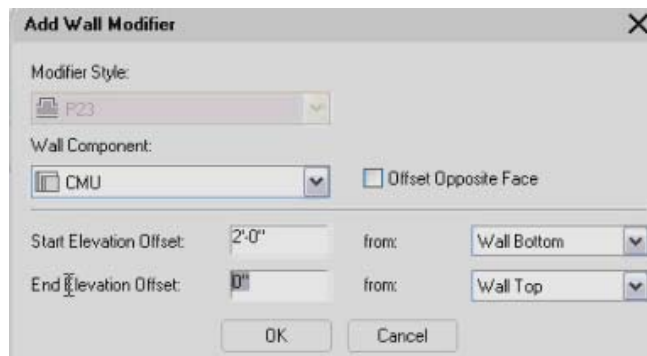
**Fig. 14**

Sample Plan Modifiers



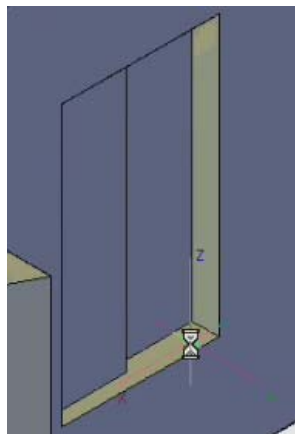
**Fig. 15**

Add wall plan modifier dialog box



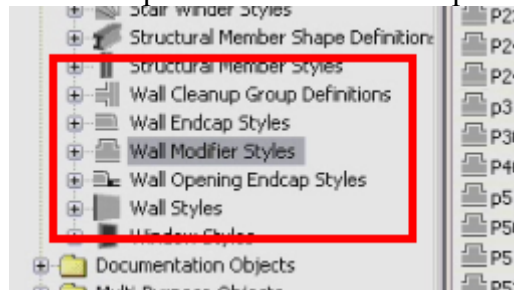
**Fig. 16**

Plan modifier used to create an alcove



**Fig. 17**

Wall Modifiers are organized in the Style Manager



## Lesson 7. Wall Floor Lines

Video Reference file: *ADT2007-WALL-CLEANUP-7-FLOOR-LINES.wmv*

**Fig. 18**

Walls with varying wall bottom at floor line

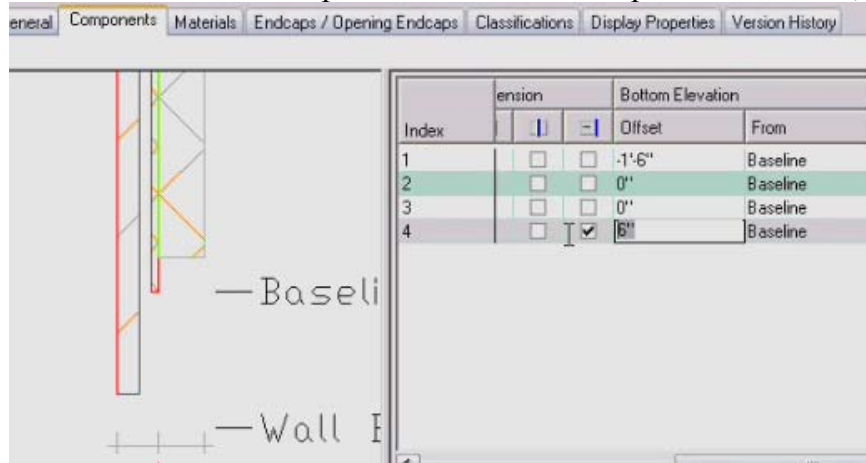


This lesson is a sort of bonus lesson as it is more of a lesson on wall style creation than wall cleanups. However as previously indicated walls only cleanup when they have the same 'z' or elevation. Well, heaven forbid we actually have walls that we want to cleanup but are not on the same 'z'. What then ?

We are not going to try to get around the baseline 'z' / elevation rule. We will still leave the actual wall baseline 'z' wall values equal but we **will change the wall style** to have it's components either above or below the baseline. In summary., leave the baseline as is and use the wall style to control the vertical aspect of the components.

**Fig. 19**

Wall style dialog box to setup wall base offsets



As long as you are raising the wall components you won't have a problem. **It's when you try to lower the components where things don't seem to work.**

So then.....drum roll please.....you have to change the wall 'floor line' offset to include at least down to the lowest point of the wall. Many an adt operator has made it this far only to be stopped dead in their tracks. Have a look at the video and learn all about it. In earlier versions of adt it was mostly command line driven but in 2007 there is a new dialog box. I actually stumble onto something live in the video that you use to control the floor line vertices.

Then once you have the actual display working properly you can go back and note that the walls will cleanup in your 2d plan.

*That's it. That's all I got.....hope you learned something !*

- End of Tutorial -