



BEST PRACTICES COURSE WEEK 18 – Complex Projects – PART 2 – Multi-Story Walls

Hello, this is Eric Bobrow. In this lesson, we'll take a look at how you can create multiple story walls - that is, walls that span more than one story - and manage the opening, such as windows, that might actually go over more than one story. So let me just draw a box of walls to start out with here. I will go up to the upper story, and then I'm going to show as a trace reference the lower story here. And I will draw a smaller box for the upper area. [0:00:39]

If I go to 3D - let me switch this to an axo view - we'll see what we expect. The walls clean up nicely. Even though this is a separate wall, which cleans up there in the 3D view and in the elevation. Now, let's put in some floors and let's say that we have a floor slab on this story. I'm just going to draw it inside here, and then I'm going to go down a story and use the keyboard shortcut Command or Ctrl+down arrow, which will take me down to the lower story. And then I'll draw one underneath these walls here, and we'll look in 3D and see the subtle change. We have the lower slab, and you can see if I go up above we have the upper slab inside. [0:01:26]

Now let's imagine that in this building we do want this right-hand space to be a double-height space. So the building, in this case, is going to look like a box. But on the right side it won't have a floor; it will be going full height. So how can we achieve that? Well, we could stack another wall on top around here and just not have a slab, but let's look at how we can do this by creating walls in this area that actually span the two stories. [0:01:57]

So I'm going to go back to the floor plan, and in this case I will show the upper story as a trace reference. And I will select the two walls along this edge and split them. I'll use the split command here, take this wall, and click to say these two walls plus this third wall here really should go up twice as high. And now when I go to 3D, we'll see the building now has a double-height space. Now you may notice this extra line here between where this double-height wall meets the upper wall. Why is that happening? It's not happening down here, because this after all is one wall and another wall, it's not happening. [0:02:43]

It's because this upper wall here is actually sticking into it in terms of cleanup. You can see how ArchiCAD is essentially joining these two walls and ignoring this other one, which it shouldn't. It should actually pay attention and cleanup. So here's what we do. We go back to the upper story plan. And notice that this right-hand wall here can only clean up to this because we're not seeing these walls. In fact, that brings up the whole issue of how can you make these walls show up? [0:03:16]

So go down to the lower story and select those three walls. Let's go and make sure I am selecting the walls rather than the slab. And deselect the slab, there we go. So now I have these three walls. And let's look at the floor plan and section. And you can that it has the option to show on stories. Let me just roll this over a little bit so we can see it more clearly. It says, "Show on stories, home story only." Well what I would really like is to show it on all relevant stories. That means if it sticks up into another story, like the upper floor here, it will show up. [0:03:56]



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When I do that, and if I go up to the upper story, you can see that it is showing properly. Now it's cleaning up nicely here, we're not seeing a line in space there. And in fact, now if we go to 3D - well, actually no, we haven't changed it, were still seeing this line. I'll tell you what, let's just take this wall here and look at its settings for the floor plan and section because there's a setting here that is a little bit subtle that has to do with the wall priority. [0:04:26]

Wall priorities can, if you're doing composites, can be set on a skin by skin basis so that the outer sheathing will meet up with sheathing in the core, whether it's wood or steel or masonry. It will clean up to masonry, but the surface elements will wrap around and things like that. But in this case, I just have simple walls. And I can adjust the wall priority of this wall and make it lower. It says number eight. I can grab this slider and move it down to any number below that. [0:05:00]

And as I did that, you may notice that instead of it being a mitered corner like it was - and I'll move it back so you can see that - you can see now it's mitering this. I'll just zoom in here. If I bring this to a lower value, then it stops short. Now it is actually cleaning this up, it's not putting a line there. Notice that it's now removing this line here, and we would not see it if we were to take the south elevation here. We're going to see a nice, clean result. [0:05:32]

And go back to that 3D view and just in fact undo this here. So now we've got this. This does show up on an elevation. So this is important in terms of getting clean drawings that you understand how to do it. So again, we select this and go into the floor plan and section, and change the wall priority to a lower number. And so then it will actually clean up better in this case. And if we go to that elevation it will clean up here. [0:06:04]

Alright, now let's take a look what happens when we have doors and windows on the different stories. So I'll go back to the first floor and we'll pop in a door here. Now by the way, I'm seeing the upper story in a trace reference. I'm going to turn off the trace and reference so we see a clean representation. And I'll just pop in a door. Let's just get that in a reasonable place here. And I'll go to a window. And in this case, because I'm going to be stretching these windows fairly large, I am going to go in and change it to a fixed window that is a ribbon here. And I will just adjust the size as need be. [0:06:49]

So let me pop in a window here and a window here. Now remember this is the single height wall, this is the double height. And let's go up to the upper story. Now of course, as I'm on the upper story, I'm not seeing any of these openings. Let's go ahead and just pop in a window here. And let's take a look now in 3D. So I've got the window in the upper story, the one in the lower story here. Let's take this window and stretch it up higher so it becomes a double height window like this. And maybe just to make it really nice, we'll stretch it horizontally as well and make it a little bigger. [0:07:33]

Now let's take a look on the floor plan. You can see now on this upper story we are seeing both windows. And when I go down to the lower story, we're seeing this window. So this window is automatically showing on both floors, which is quite convenient. It just happens that way with the default settings for the windows, as long as of course the wall is set up to be showing on all relevant stories there. [0:08:03]



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Now let's look at a little different context when we might have a window spanning multiple stories. And that would be in a stairwell. So let's say that I go to the stair tool, and I just pop in an L shaped stair. I'll grab this and put this L shaped stair right in the corner there. And we'll take a look in 3D. We'll just do a little marquee of this space. So I'll choose show selection marquee in 3D. You could use the shortcut - on Mac it's F4 and on Windows it's F5. And you can see now that we've got this stair. [0:08:44]

Not I'm going to clean up the model here. I'll go into the stair and turn off the railing, so it's only on the right side. And that will allow me to put in some extra detail. For example, a window in the stairwell. Let's just, for convenience or just be nice, let's go up to the upper story and cut a hole for the slab in line with the stair. So I'm going to go up to the upper story. Now you'll notice that the stair doesn't show up. Well, it has similar controls to the walls. I select this, go to the floor plan and section here, and say instead of showing on home story only, we'll say home story and one story up. [0:09:31]

So with stairs, it has more options to be very specific about what stories you want it to show on. In fact, you can force the stair to only show a story above the home story or a story down. That is something that I hadn't noticed before. So instead of the home story and one story up, you can force it to be on a different story than what you consider its home. And of course you can have it show on all stories, which would be an interesting option in some cases. [0:10:00]

So let me just say home story and one story up. So now, if I go up to the next story up, we can see that it is showing. Now I'll go and select the slab here, and we will cut out a hole. So I will go to the corner, I'll use the Boolean subtract. This will allow me to cut out a space. And going to cut out a space like this so that now we get some head room. Actually, I think I'll probably want to extend this opening at least over to the landing, possibly wrapping it around, but I think that may be good enough. So let's take a look in 3D here. [0:10:36]

Now we have what we would expect, the stair. Now let's pop in a window in the stairwell. So I'll go back down to the first floor and we'll pop in a window here. Now this window is a little bit too big for what I want to demonstrate. So let me just go and stretch it to fit in here. Maybe just equal to the landing give or take. And we'll go in here and instead of having the three divisions, I will go into the sash frame here and say only one. And perhaps I'll go and also take off the stool, the trim on the inside here. [0:11:23]

So now you can see how it's only having the sill on the outside. Now if I go to 3D, of course we're going to see that this window is in an awkward position. It's actually straddling the landing. So let me go and drag this up in space here, and we'll take it up to a nice convenience height. Perhaps on this stair I want to take it up higher. Let's go and do that. Now notice when I take it up higher, it's not actually cutting a hole in the upper wall, because remember this is a separate wall from the lower one here. So how would we handle that? [0:12:03]

Well, before we had the option to the multi-story walls, here is what I would do. And sometimes this really is still the best way to do it. So I want to teach you this and then we'll look at how you work with multi-story walls for a similar, probably simpler answer in many cases. So what I'm going to do is eyedrop this window. We'll go up to the upper story and we'll pop in a new window in exactly the same



location. So we'll end up with two windows. Now in order to be able to see this - right now, I know that it happens to be snapped to the corner. But let's say that I didn't know or make sure that I was lining it up. Let me go and show the lower story as a trace reference. [0:12:48]

Now we can see a little bit of the window peeking out, but we're not seeing the opening. Why? Because the fill of the wall is opaque and it's blocking it. So what I'm going to do now is look at the trace and reference palette. And in the trace and reference palette, I will use the option that says "Make fills and zones transparent." When we do that, we can see through the fills and zones that otherwise would block our view. [0:13:16]

So now with the window tool I can go and say pop it in here. And we now actually have a window on this story. So if I go to the 3D view we are going to see that we have an identical window up above. But what happens if I drag this down? So let's say I want to move it vertically using the pet palette and snap it to the little checkmark here. And you can see now we have a window that straddles the stairwell. Let me just spin it around so we can see how it works in terms of this design. [0:13:54]

Now many of you may be aware or have thought instantly that now you have two windows. In fact, if I go to the window tool and say select all windows, there are two selected here. So if we were to do a window schedule, that might not be ideal. So let's take a look at the solution for this, which I would propose to be on the second floor and the upper story here. We'll select this window and we're going to do something drastic. Go to the Edit menu, Reshape and Explode it. [0:14:30]

So normally when you explode things that are 3D like a wall or a roof, it gives us the 2D graphics of whatever we're looking at. In other words, the lines and fills that look just like what we are seeing on screen, but it gets rid of the actual 3D element. In other words, there won't be a wall or a roof after you explode it. But in the case of windows, ArchiCAD does something very interesting. I can say I only want to keep the drawing primitive, which normally would be just the lines and fills. But in this case, even though the lines are here - and let me just turn off our trace and reference so we're not seeing it - and this is a fill and this is a line. [0:15:14]

You can see individual components. But guess what? The wall still has an opening. In this case, it's a simple window opening. If we look at it in 3D, you can see it's just a cutout. In different versions of ArchiCAD it may be called empty opening. But it would basically be the same idea. Now having done that, if we go to 3D, we are going to see that it looks much the same here. There's a slight difference because the edge of it, it's using a different material. So there's actually a setting that we might need to do to make sure that the material on the edge of the empty opening is the one that we want. [0:15:54]

But basically, we've got a clean representation. If I were to spin this around you can see how it's working beautifully. And we do just have one window that cuts out its hole in this lower wall. But there's another empty opening up here that is cutting out space for this window to sit in. So you only have one window for the schedule, and it looks good. We can actually see through it as you would expect here for visualization. [0:16:26]



Now there is a simpler solution that we can do given that we can do multi-story walls. So let's go and zoom out a little bit, and let's get rid of the marquee and show everything in 3D. And we'll spin around to the back side here. I'm going to get rid of this upper wall. In this case, what I'm doing is simpler because I do not have any windows in it. If we had windows or whatever and we were trying to do this, we would have to carefully make sure that when we do this next step that we replace them where they were. But right now there's nothing up there. So I can simply take this wall, stretch it up using the pet palette. Sometimes you have to click an extra time on this to make sure that it knows what you're doing here. And you can see how this wall now straddles those two walls there. [0:17:20]

Now there is a little bit of an issue in that we are seeing that line. And in fact if we zoom in on it, we can see that these walls are not talking to each other, they're not intersecting. Well why do you think that is? Basically, this wall lives on the lower story and it's set up to only show on the home story. So if we go to the floor plan, we will see that it's no longer showing on this upper floor. So I need to go down to lower floor, select it - or it could have done that right in 3D, I could have switched the setting that I was pointing out and change it from home story only to all relevant stories. [0:18:00]

And then we go to 3D and you can see how it cleans up, because these walls know that they coexist on the upper story and will clean up to each other. So having done that, let's just go and put in the window. So I will eyedrop this window here and pop it in on this side. Actually, go to the floor plan and the lower story, and pop this window in by corner here. And you can see it's popped in right next to the other window. If we go to 3D we will see that it looks beautiful right away because there's only one wall for the window to be cut into. So you don't have to go through that extra step. So in many cases, you can have windows and stairwells easily done by simply making that wall - even if you don't want multiple walls to do this - you can make individual walls go multiple stories and put the window in the taller wall there. [0:19:13]

Now let's look at how the window anchors work in relationship to multiple stories. So when I select or put in or set up before putting in window, we have the height of the window here and its width. And then we have the height relative to something. The anchor is the header to - most commonly, this would line up the tops of all the windows to whatever height you choose. But it can be a header to the base of the wall or the story. And of course sometimes you might do the sill, but most of the time you going to be doing the header I think for windows and the sill for doors, because you want the base of the door to be at floor level most commonly. [0:20:05]

Now if I go up to the upper story here, I do have this window here. And let me go and eyedrop it. So when I eyedrop this and say that I would like to put in a window here - now remember that although this wall is double height, there is still a slab. This is a normal room that we could have a window in up here without even thinking about it. When I tell it to put in this window, where is that window? Let's go back to 3D. We're not seeing the window. Actually we are seeing the window here. Why? Because the window setting was set up to be the - the anchor was "header to story two". [0:20:50]



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Now occasionally we may have something that is going to give us a problem. Let me undo this and let's say for example that we were to eyedrop this one and pop it in. Now it's a much bigger window, and let's take a look in 3D. In this case, this is anchoring header to story one. So it is lining up, and of course we do have a question of there's a floor slab in the middle of it, is that what we want, is that appropriate. But it did work. And sometimes we may have something a little odd. For example, if windows are set up to be header, instead of to the story, header to wall base. [0:21:38]

So this is basically saying that when we pop in the window it's got a certain height relative to the wall, not relative to the story. We go to 3D and we don't see any change here. Now if I eyedrop this window here and I pop in the window on this side, you'll say, "Well, where did the window go?" I clicked, and we didn't see it show up. Why? Because even though we are on this upper story, when I put it into this wall here, if we go to 3D, it put this window in relative to the wall base. So it's basically not in line with the window that we thought it was in line with. [0:22:18]

So this window looks the same regardless of whether its header to wall base or header to story. But it's setting back quite differently on this other window here. Now you'll remember how it worked properly. If I go and drag this up and line it up to the proper height here, you'll notice now it says header to wall base 17 feet. So it's recording that. Now that would be good if we were putting in other windows in double height walls, but it wouldn't be good if we were trying to pop in the window in the back wall. [0:23:02]

So if I eyedrop this in and say I pop in this window here, again it doesn't show up properly because now we've got this window floating up there. So while individual windows can have whatever setting you want, it's good to understand what you are trying to achieve. So for example, let me undo putting in that last window. And let's say that this window here, instead of being header to wall base 17, let's change it to header to story two. And guess what? It automatically adjusts. And I'm not sure it does this the same in every ArchiCAD version, but it automatically adjusted to the appropriate height for the story. [0:23:45]

Now if I am using that as a common height, and I go pop in another window say on this wall, now this is going to be correct. Why? Because it's basically saying that each of these windows and wherever you put them - and in fact, I can go pop in a window here and it's basically saying this window is a certain height relative to the story even if the wall of course is lower. So there are times when you do want to use the header to the wall base. That is particularly appropriate for a split level construction where walls have different starting heights. And you do want the windows to sort of move up with the wall, either when you raise the wall or a few of a wall that is raised up a certain elevation. [0:24:36]

So that is very useful. But probably the most common one in terms of just residential construction here in the U.S. and I think in many designs would be to make the window height be anchored as this is saying. This is interesting, this says sill to wall base here. That's not what I had said. This is header to story two. I guess I must not have had that selected properly, header to story two. So basically that would be the most common one that if you don't have a split level construction will handle both normal



walls and walls that are multiple story walls, because it will put the window height based on the story.
[0:25:28]

Now occasionally I have also seen clients have something where the window is put in and maybe moved into position but it was linked to the wrong story, or let's say a story that is not obvious, it was confusing. You can select the story and say, "I'd like this anchor to be relative to another story." And there are some special cases where that might be very useful to set up. Ultimately the window lives at a certain height in the model, and this is just a way of anchoring it and perhaps using it when you eyedrop to put in similar windows with similar or related positioning. So sometimes you may need to change this or correct this in some rare cases. I've seen this cause some questions and some issues. That's why I wanted to bring this up. [0:26:14]

Now let's look at what happens if we have a tilted wall, because things can get really interesting with tilted walls. So let me eyedrop this window here, and let's just go down to the first floor. And I'll just pop in a window on this side and maybe we'll drag this over here. Then I will go and put in a door on the lower level here, move this into a reasonable position, and we'll go up to the upper story. And on this upper story here, you can see that the tall window is showing up already. And let me just put in a sort of smaller window up above to so that we have some differentiation. [0:27:05]

Let's see, this window is set up for sill to wall base. And that's not what we want to do when I pop this in. So again, the most common or general one would be header to the particular story you want. So if I eyedrop that and pop in this window, now we have the upper window. We'll go to 3D and we can see on the side of the building we've got the door down below, the two windows, one single story and the other double story. And if we go down to the floor plan and go to the lower story we'll see what we expect. [0:27:50]

Now let's say we were to tilt this wall. So if I go in here and press down on the corner of it and use the option for tilting here, then I can tilt it. Let's just give it a modest tilt but it will certainly be an interesting design option here. And of course we have to figure out what's going on with the door and whether the wall is thick enough to accommodate it and things like that. But what does this look like on the floor plan? So you can see that right now this wall actually is being shown in its tilt. And if we go up to the upper story, let me just zoom in on this here, we'll see that same outline for the wall. [0:28:37]

So basically we're seeing the entire wall on here as we go from one story to the other. Why is that? Because first of all this wall is showing on all relevant stories. But the reason why it's showing this particular display is called "projected with overhead". So it's basically saying if it tilts, we'll see how the cut plane at the 4 foot or 1 meter (give or take) height where the doors and windows are, and we'll also see projected down to the base and the overhead will us up where the upper part of the wall is. And the other thing is we have the entire element showing. So this wall is two stories, but we could choose to say I only want to look in the floor plan range. [0:29:29]

So that would be for the floor plan cut plane that we are setting. So the floor plan cut plane in this common case is from floor to ceiling of a particular story. So basically if I say floor plan range, now it's



going to show only on this story. When I go to the upper story, notice what happens. It moves over because now we are seeing the upper story. So when we go back and forth we can see more precisely what's going on. So the option, if I undo that, to have it showing multiple stories is certainly good in some cases, particularly complex geometries. But it may be confusing in others where for example on the upper floor here, we are seeing down to the lower one. And actually the slab should extend. In fact we want to extend that slab. I tilted the wall but the slab would need to be extended and trimmed neatly. [0:30:30]

So let's take a look at the option for windows. So if I were to select this window here, right now this window is showing in the same way it usually does. It's showing just a symbol here, symbolic, but it's showing just with a tilted wall, where of course it's offset, it's moved over to the side. Now let's change it from symbolic. Let me just move this over a little bit so we can see it onscreen here. Change it from symbolic to projected or projected with overhead. Let's try projected. So projected says, "show the window here and how it goes down." We can actually see something down below, so it's a rather confusing situation. [0:31:26]

It is doing a true cut, and sometimes for a complex situation that's what we want. Let's actually do the same option here where we can see where this might actually be a very elegant way to display it. So if I go to floor plan and section for this window and change it from symbolic to projected, you can see that now we are looking at the lower part of the window, which is pretty interesting symbolic representation of that window. It's not a symbolic; it's actually a cutaway of the window. And then another option would be instead of projected, we do projected with overhead. And now it takes it up above. [0:32:08]

Now again, if I go to the lower story, projected with overhead shows it up to the current story range. And this one here takes it up to the upper cut. So it's interesting how that works. I think you have to experiment a little bit to see what is going to give you the results you want, because these tiled or canted walls, certainly the geometry gets more complex. And ArchiCAD gives you quite a few options that I think you'll find useful there. Ultimately, if you need it, you can probably get ArchiCAD to display it the way you want. For the simple case for these windows, I think probably the ideal simple one is to make this, instead of projected, make it symbolic. [0:33:09]

And while the wall shows here differently on each of these stories - I will go down to the lower story - you can see that the window looks normal. So it really depends upon what you want to indicate and how you want to communicate this on plan. Now let's take a look finally at doing tall buildings, ones with multiple stories, not just two or three but potentially 10, 20 or more. So what I'm going to do is move this building into a different position to make room just so I don't have to move these elevation markers around. [0:33:45]

And I'm going to use a little trick here, not really a trick, it's just understanding that when I use the marquee tool, if it has a heavy border on the marquee it's affecting multiple stories. It will show me things in multiple stories and also it will move, drag, delete or copy things on multiple stories. Now you can't actually go and say select everything in the marquee and then drag. If I do that, I'll just drag this



over like that, and then if we say show everything in 3D, we're going to have a mess. Why? Because I just moved only the upper parts of the building and not the lower parts. Let me undo that. If I don't have anything selected, and I have the marquee active, then if I do the drag command - and I just did Command+D as a shortcut, you can see it move down. And now if I go to 3D, the entire building has moved. So in fact it's all together. [0:34:43]

So that's an important thing to recognize. Don't select anything, just have the marquee large enough to include the entire building or building and site, whatever you want. Make sure all the layers are visible and unlocked because it will only affect the ones that are visible and unlocked. The only exception is if you have elements that are grouped and you move some elements and the elements that are part of the group, some of them are on a hidden layer, if the groups are active, then it will move the connected parts, the parts that are in the same group at the same time. So just be aware of that, that groups can, if you move something as part of a group, it can affect elements that are on hidden layers without you realizing it. [0:35:32]

Okay so what I'm going to do is go to the wall tool and deselect the marquee. And let me draw a tall building here. Now actually, I just drew these and they're at a certain height. Let me just undo this and go down to the lower story here. And I'll draw these walls, but I want to make them 30 feet high, making them three stories as an example. Now I can go and manually select them, but here's a nice shortcut that some of you may know. If undo and redo, then you can see that these elements are selected. So anytime you either paste things in or draw a group of elements like this, if you want to select them quickly just do undo and redo. On the Mac that's Command+Z and Command+Option+Z, and on Windows, Ctrl+Z and I think Shift+Ctrl+Z if I'm not mistaken. [0:36:25]

Here we have this building. If I go to 3D we will see that actually I didn't change the height. Let me undo and redo here and then change the height to 30 feet. And now we will have a tall building. Let me go to the elevation from this side here. You can see the new tall building with a single wall there and the other ones. This is with two separate walls there. So let me go now and pop in a window. I'll go and take this basic window here and pop this in here. I'll go back to that elevation, and let me just multiply it. So we can either use the popup menu "Move, multiply". Or you can use the keyboard shortcut Command+U or Ctrl+U, U being the second letter of "multiply". [0:37:25]

And let me get three copies and I can then drag these along and get them into some position. You may not know but you can actually select multiple ones here and do the same thing. So I'll do Command+U and say give me just two copies in this case. And I'm going to go drag from here and take it up. If I lock it in on the guideline - you can see the guideline, the orange dashed line showing - it says 90° so I'm going straight up and down. So I can just type into the tracker the floor to floor distance, 10 feet in this case, about 3 meters. And you can see that I've now created a whole building façade. [0:38:08]

If we were to go to the floor plan, we will see that these windows are showing up here. If I go up to the upper story - I'm sorry the first floor - we have this issue that again on this floor we're not seeing it. Why? Because these walls are not set to show on multiple stories. So I want to select them and again



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change the setting here to show on all relevant stories. And then of course if I go to the upper story, we will see that. Now what happens if I, right in the elevation, go to the north elevation and just delete a couple of these windows and perhaps stretch this window sideways and snap it into position here? So we will now have a little different arrangement on the middle story. So if I go to the floor plan, of course here on the second floor on his upper floor, you can see the wide window. And on the lower story we have separated windows. So this is a very quick way to get a building with multiple stories. You can actually make the walls go up as high as they need to be for five, ten, twenty or more stores. [0:39:37]

You want to be a little bit careful about it. There are some small issues that you need to be aware of. If you say I want to show only the current story, let's say. There is an option, we are on the second floor here, the upper story, and say that I want to just look - actually if I say, select all just for the moment, if I say select everything and then I say just show what is selected, what are we going to get? We are going to get just parts of things. Obviously the walls that were just on the one story and the walls that are on this story and span multiple ones. [0:40:21]

So sometimes it's nice to just be able to see within a certain story height. And so having walls that span that story span multiple stories reduces that flexibility. But that's probably a pretty minor drawback. Now you may or may not know that you can actually copy windows on multiple walls, even if they are not the same wall. So let's go to the south elevation here. And so remember that this wall is distinct from this wall, these are two separate walls. Let's go and just - let me get rid of this window just for now. And let's say that I wanted to have a window lined up neatly here. I can drag, hit Command+D, use the Option key to give me a little + - and I found in windows it would be Ctrl+D and I believe Alt. [0:41:20]

And then I can go and say I want to drag this. And I'm dragging it down and let's take it that 10 feet so it's going to be at the same height. So what did I do here? I actually can drag a window or a copy of a window from one wall to another. So let me undo that and let's say if I were to drag it and just drag here and go the 10 feet, I've actually moved the window from one wall to the other. So we'll just move this back. Now that became available. And I'll just add the extra copy here. That option became available somewhere in ArchiCAD 12 or 13, I can't remember, where you can actually drag copies of windows or drag windows themselves from one wall to another as long as they are in the exact same plane. [0:42:17]

So they have to be basically the same surface, then you can do that. They can literally be different buildings, they can be separated in space, they just have to have the same plane. And I believe in ArchiCAD 17 there are some new options for dragging stuff in sections and elevations and actually making copies of things beyond windows and doors, but up through ArchiCAD 16, the only 3D elements that you can make new in section or elevation are windows or doors, which you can drag copies of if you wish inside one wall or into a wall that is in the same plane. [0:42:57]

So this concludes our lesson on Multi-Story walls. I hope you've learned a few things here, certainly as I planned this lesson out I remembered all sorts of little things that were important that sometimes trip



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people up. So please post your comments and your questions on the lesson page down below. This has been Eric Bobrow, thanks for watching.

[END OF AUDIO 0:43:27]