



BEST PRACTICES COURSE – WEEK 19 – Renovation Projects PART 6 - Renovation Using Tags and Filters in AC15 and Later (Advanced)

Welcome everyone to the ArchiCAD Best Practices Course training lesson on the renovation tool in ArchiCAD 15 and later versions. This is the second lesson on this topic. The first one was on the basics. This one will be on advanced areas. Things that are a little trickier, limitations that you have that you need to deal with and work around, etc. [0:00:28]

Here we have the file that I was working on last time. You can see the building in its final state. If I switch - let me open up the Window Palettes, Renovation here, and have that onscreen. If I switch back to existing, you will see the simple building that I have. Now we have a bit of an issue here, because I was making some adjustments in that call to basically to deal with some variations where you don't have things intersect in certain contexts. [0:01:08]

In any event, here is the basic existing plan. You can see that this element here is separate from the wall, and it continues to, because this element is going to be demoed. You can tell that visually by when you select it because it highlights in the renovation palette here. Also, if I hover over it, it will say "Renovation Status: To Be Demolished". So you can read that in the tag, as opposed to this one, where the renovation status is not mentioned, so it's 'Existing to Remain'. [0:01:36]

Now if I switch from 'Existing' plan to 'Demolition' plan, we will see all of these elements go into a dashed mode. In this case, one of the requests from last time was to make them have a poché, a fill pattern that is not the standard in the renovation setup in the U.S., but this is set under the Renovation Filter Options. I am just going very briefly through the basics here. In the override styles, when we have elements to be demolished, we added in a poché 25%. Whereas previously, this was set to be air space, basically making them empty. [0:02:18]

If I go back to the default, the way that it was done in the standard template for ArchiCAD, we will see that this is the way it comes 'out of the box' so to speak. So that is our demo plan; here is 'After Demolition' where the elements that are being removed are not showing. Here is 'New Construction' where we are seeing the new elements, but the new elements are being drawn in a way that highlights them. It shows them not in their natural status, but in an override; in this case, a hatch pattern. Here is the 'Planned Status', where they look much the same as the existing elements. They're in their natural state, they are not being overridden. [0:02:56]

And finally, we had some variations that we added for one that I am used to doing, which is 'Show All'. Sometimes you want to be able to see everything and manipulate things, but it actually is good to sometimes see 'Show All with Overrides'. This is where we can see all of these in different categories. And again, these things are controlled under Renovation Filter Options here. for example, 'Show All with



Overrides' says that the elements to be demoed are going to be shown in an override state as opposed to either hidden or shown in a natural state; and the same thing with the new elements here. [0:03:33]

So that is a quick summary of what I had set up before. Now we are going to be looking at a few interesting things that we hadn't covered and some limitations. If I go to 3D right now, you will notice that it doesn't look the way I had it on the plan because the renovation filter was the last way that I had it set in 3D. In other words, the 3D window has its own memory of what it should show. If I manually change it to 'Show All with Overrides', now you can see that the existing elements to be demoed are shown, but they are shown with this override color. [0:04:17]

So that is interesting. That is saying that in 3D, in addition to having things overridden in the plan, you can have them overridden in 3D. Let's go to the Renovation Filter Options, and we will see that both the existing and the new are being overridden. Remember I had that hybrid view with dashed lines for the demo and hatched green for the new. But let's go to the Renovation Override Styles and find out why the new elements aren't being overridden in 3D. This is because in the new elements here, the surface is not being changed. [0:04:56]

If you want to, and this may be the default - I can't remember since Graphisoft changed it between 15, 16 and 17 - what are the defaults. But this now is saying that if I change the surface here it will make it a particular color, any surface that we want. Now remember, this surface is what was called the "Material" in ArchiCAD 16 and earlier. Now it's the "Surface Appearance" of the element, which is made of a building material in ArchiCAD 17. [0:05:27]

So I say OK, and say OK here, now we are going to see the green. Now why would you want to do this? Well, it's for presentation or study. It's basically to help identify changes that are being made in the project. It's just a presentation tool. You can see here the window is being covered up like that. But you can see there is a new window being put in. If I put it into the 'Planned Status' here, we will see that - actually, that window is being removed. I guess that was the idea. So the 'Planned Status' as opposed to the 'Existing' plan where there was a window. [0:06:04]

So that is the first thing I wanted to cover is that there are options in 3D for presentation and study purposes to override elements to make them appear a certain way. Now an interesting trick here is I am going to go to Renovation Filter Options and we are going to take the existing plan and I am going to duplicate it. We will call it "Existing Plan with Overrides". Why would I want to do that? I am basically going to show you that we can actually show a drawing, even if it's a building that is not going through renovation. We can use this as a trick. [0:06:46]

What do I mean? If I say that I want to override the existing elements in this setting - and let's go to the floor plan - now let's switch this to 'Existing Plan with Override'. And now you can see that even though I added this at the end, it's being shown alphabetically, or sorted by the first few characters. So that's why



the number at least is useful in terms of controlling the position in this popup list. Now, we can see everything looking normal. I am not quite sure why this element here, the door is shown in a dashed form. It must have something to do with the override. But here is a little trick. If I go to the Renovation Filter Options and I go to the Override Styles and say for existing elements, I want to change the line type to be a sketchy line. [0:07:42]

And maybe I want to make the fill type say 'Air Space' here. And let's try this. What that's going to do is when I have the existing elements shown not in their natural state but in an override state, they will be made sketchy. And they will lose their fill at least temporarily; they will just have an air space fill. So let's say OK. So now look at what we've got here. We have these elements that are existing showing in this way. Now obviously we have some elements like this that are going to be demoed that are not being overridden. But think about it. If you want to take a design that you are working on and show it to a client as if it was a little bit more tentative; just a concept design. You might actually create a sketch line. Maybe this is a bit too bumpy here, particularly for the doors. [0:08:46]

But you might want to indicate that. Obviously these demo elements - let me actually go into the Renovation Filter Options and say let's just hide the demo ones here. So now everything that we have existing becomes sketchy. So you can see how that looks; even interestingly enough, the marker here aside from the text. So that sketchy line, this is a trick that - I can't remember who put it out - maybe it was Jared Banks - which I thought was quite clever if you want to make a sketch presentation. [0:09:22]

If we go to 3D, and we had this existing plan with override. Let's go and see if there is something when we have this override. If we are in 3D, existing elements, maybe we want to override it and make it just white, so that will remove the coloring. And I guess this sketch line type, I don't know if that actually works in a 3D view. But let's just say OK. So this is a way that we can switch from 'Existing' plan here, which is a full version of the building, to 'Existing Plan with Override'; so it's going to be a simple version to show. So we are using it to change the presentation style of the elements. And on the floor plan of course we now have it in sketch mode. So that's a nice little trick. [0:10:19]

Okay, now let me go back to our 'Standard Existing' plan here, and let's talk about your workflow in terms of your View Map and the settings. Now in a simple project where it is not a remodel, we can basically have the default or the elements be existing, and they are going to remain. Even though technically yes, you might say that they are new, you are building the new building. They are existing in terms of the design, and we are not making any changes. So we are just going to draw everything as existing. And we are going to have all the views - if we go to any view or clone folder, the settings in that case would be to have it set for 'Existing' plan. [0:11:08]

So that is the way the template is set up from Graphisoft from the beginning is to show the 'Existing' plan and have the default be 'Existing'. So if you are not doing a remodel, you don't have to think about it. Everything is just considered existing and all the views work. Now another alternative would be to



have all the elements on new and all of the views set to show the planned status instead of the existing. That would work too. You would basically draw your building; it's going to be a new building and everything is new and there are just no existing conditions. Possibly you could do that if you wanted to show the site by itself before the building is put in and the context of the site. That might be a variation where you actually have existing as the site and neighboring buildings and things like that; then you put in the building. [0:12:06]

So that could be an option. And most views would be the new planned status. And maybe some very limited views would be the existing. I think that might cause some issues. I am not quite sure where I would probably in that sort of case maybe control that by layers. After all, if you just want to show the site without the building then you could just have the site information in context on a layer that is just there in 3D or there on the floor plan on a layer. So you can certainly use layers to show thing and turn off the new building. [0:12:51]

Now in MasterTemplate, we took a slightly different approach, and this is another variation. And that is while the default for elements is existing, and of course, if it is a remodel project you are going to have some things designated as demo and some as new. We made all of the renovation filters defaults for the views to be the planned status. Now if you think about it, if you draw things that are existing and they just stay, you are not doing a remodel, then the planned status shows everything the way it's going to end up, so it works just fine. [0:13:37]

And by having it already set with the renovation filter for planned status, then it does accommodate if you start to do things that are existing, demo and new, then most of your views are already set up to show the final result. I would say that the conventional or most common plan for projects is to submit drawings where most of the drawings represent the planned status. You are going to go get approval and get bids based on what the building will end up with. And you may have some reference drawings for existing conditions and possibly some separate drawings for demo. [0:14:16]

So that is why in MasterTemplate we took an alternate approach which was to say all the default for elements is 'Existing'. The default for views is planned status. And we actually put in the template some other views that were for existing. So let me bring up MasterTemplate. I am going to go here and say New, and we will use - now I've just reorganized my hard drive, I actually put in another hard drive, so I actually have to go and find MasterTemplate. It will take me just a few seconds here. I don't mean to do this to focus on MasterTemplate, but just want to say that if you are working on your own template or with MasterTemplate, this is a very legitimate choice that I think can benefit you. [0:15:04]

So I will select a template. Here is the template here. I am going to launch a new instance so it will keep this file open. We will bring this up. So we will take a quick look at that setup. So that is another option. This brings up the question, what happens if a project is in multiple phases? Right now I am talking about either an existing project that doesn't have a remodel or a project that is - now that is interesting,



I don't know what this has to do with. We'll just get the template going. Since I have moved some things around I have a library thing that is not quite clean. [0:16:03]

Here is the template. And what you will see when we open this up is that the default is for creating existing elements, but the default renovation filter is 'Show All'. And actually, you can see in MasterTemplate we have 'Planned Status' and 'Show All' and 'New Construction'. So what is 'Show All'? If we go here, our default is to show the existing elements and override the new ones. And here is our planned status where we are showing just the final version. Here is new construction where we are showing the new elements in an override. [0:16:48]

So I guess if I go to the first floor plan, what we are going to see is that it changes to Planned Status. So all of these views here are set up - if I go to any one of these folders - you will see that the settings for the clone folder is 'Planned Status'. So that is what I was mentioning. Now this is what we did in the template. If you were creating your own template, you might want to consider this as well. We did create some views that were - let's see, miscellaneous views, so where is it? Oh, renovation. Here is the renovation folder that I have set up, and here is existing plan. [0:17:32]

So this folder is a clone folder that is set up of course with the existing plan. Inside that folder, we have the existing conditions here. If we were doing a project that was not a remodel, then all of these plans would just be showing the planned status. And if you just did existing elements, everything would work fine. If you were doing a remodel, this would essentially show the new building and then you would have these reference views for existing. And of course we have 'New and Demo' and 'Demo'. So what is the difference? [0:18:15]

Again, not to highlight MasterTemplate so much but just to show what these options will do is in the 'Demo' plan, it's going to show the settings for the demolition plan. That means it's going to show the existing elements and the demo elements in a dashed or override form. And as the 'New and Demo' are going to have the same setting that says 'Show All'. The 'Show All' says show existing, new and demo, but override and show specially the elements in their different categories. This could be a legitimate floor plan view. You might just want to show the demo elements in dashed and the new elements you could override, or you could choose that the 'Show All' would not have an override so the new elements would look natural. [0:19:09]

So that would be just a quick adjustment of the renovation filter. So that's basically what we did in MasterTemplate and I think it's worth thinking about if you are setting up your own template just to simplify your work. In other words, to have it all ready to go for either an existing standard project or a remodel project, because this sort of makes it all work right off the bat.

Okay, now this says, "Use New Hardware", interesting. [Audio cuts out for two seconds]



Okay, I just want to double check, can you hear me? It asked me if I wanted to switch audio. Are you hearing me okay? Yes, good. [0:20:02]

We will move on then. I want to cover phasing. I was starting to talk a little bit about phasing. If we start with a project that doesn't have any phasing, then we have the simple case where there is a remodel where some things are demo and some things are new. Or maybe there is no demo, there's just new stuff. Either case works pretty well. Let's go back here and talk about what if we were to have a building where we go to planned status. So here is our building. And then in phase 2, we are going to do something else. Maybe we are going to build another building off to the side. [0:20:47]

In a more complex case, maybe we are going to fit out some interiors or do some other renovations that connect up between elements. So how would we do that? Well, unfortunately, the renovation filters and the renovation tags do not accommodate multiple phases. I am hoping - and I think many people are - that Graphisoft will eventually expand the system to allow multiple phases, but at this point they do not have that. So one option that you could do is to do layers. You could then draw these walls. And let's say that they are going to be new. [0:21:28]

Let's put them out here. These walls, instead of being on the wall exterior layer, we will put them on some other layer. Let's just temporarily create a new layer here. We'll call it "New Building Phase 2", and we are going to hide it for now. I will take these elements and put them on the "New Building Phase 2" so they disappear. And of course, by having a layer combination - let's just put a new layer combination, a new building here; and that layer combination has this turned on and updated. So now we can switch between 'New Building' and the standard floor plan. So we can then do that. [0:22:26]

Now it will obviously get tricky, depending on how much detail you need. If it's just for planning purposes, and you can put all of the stuff potentially on one or a small number of layers - so you want to mostly hide it but then show "This is the next thing that's being planned", you could add a small number of layers and control it. But if you were doing entire working drawings, then this wouldn't really work. So then you have let's say two choices that I can think of right off the bat. One is the possibility of doing a hotlinked module. [0:23:28]

So in previous lessons in the course, I talked about how you can reference another file. You can go to the File menu, External Content, and Place a Hotlinked Module. This can be an entirely new or separate PLN file. And that hotlinked module has a master layer. That master layer can be any layer that you wish. But you can set one up for a specific purpose. This layer, when hidden or turned off, will hide the entire module. And when it's turned on, it will allow the elements to show. Each individual element will still have its own controls in terms of visibility. [0:23:51]

For example, you can turn off the furniture when you don't want to see it and turn it on when you do. But there is a master layer that controls the whole thing. So in the case of a phased project, I can easily



envision that you might have phase 2 in a separate file that is brought in as a hotlinked module here. It can be one story or multiple stories. And that it's controlled by a layer. So that single layer makes a difference between showing the new building phase 1 and the new project phase 2, because it turns on phase 2. So that would be a way to do it. And of course, you could have phase 2, phase 3, phase 4, and these things could then be controlled by a single layer for each one of those groups. [0:24:40]

So that would probably be a pretty robust way to do it. There are going to be some issues in terms of schedules and in terms of other management of sections and things like that. I am not going to attempt to figure out an answer for right now, but I think it would be worth exploring in some cases is to have a secondary and third phase in separate hotlinked modules that you link in. and if you recall or if you have gone through the lesson, you can not only have the whole building - the new building or new addition - but you can have it reference another file which could be this one, to see the context. [0:25:28]

So you could be building the new building but seeing the original context. And by turning off the nested modules, which is this option here, you can avoid having a circular link. So if you are considering this, check out that lesson about hotlinked modules with the idea that you might use it for phasing. Now the other way that you can do phasing separate from individual layers or hotlinked modules with master layers would be to use the tool that is in the Document menu, Renovation, and it's called 'Reset Renovation Status'. [0:26:06]

Now I believe that this was added into ArchiCAD 16, so in 15 when renovation was first introduced it wasn't there. It was added in after that. This command allows you to open up a file and modify all elements in all views. Now why would you want to do that? Well, let's say that you have a building. Maybe you went through construction and it's now complete, and now the client says "We'd like to do some more work on it." And you have that file that previously had existing, new and demo. And you now are going to use that as the basis to start your next phase of work. [0:26:47]

In that simple case, where it's already all done, and let's say it's been corrected so we have an as-built, clean record of the construction. Now essentially the stuff that was new is no longer new. It's going to be existing in the context of the new design. So this is set up by default to say, "Let's take the new element and make them existing." It simplifies it - anything that was supposed to be demoed, it will assume it's gone. And we'll be starting with the new conditions, but it will all be considered existing. So you can play around with this; it's pretty self explanatory. [0:27:33]

Before ArchiCAD 16 or when they added this, you could manually go and select all of the elements and tell them to be existing. You could change them manually. You would have to do that potentially in multiple views. You can do that in all the stories with all the layers turned on and unlocked; that would be pretty quick. But potentially you might have some annotation or other elements in sections or worksheets that also would have tagging. And you would have to go through that if you wanted to clean it up. This does it in all viewpoints. [0:28:10]



Essentially, if you have a building that is already complete and was a remodel project and now you are going to do some further work, this is what you would find to be very convenient. Potentially, if you are doing multiple phases, then you could use the same thing. You could develop the design for phase 1 with existing, new and demo elements. Then copy that file, and even though it hasn't been built, we're just assuming that going from phase 1 to phase 2 that phase 1 has been completed. And we use this 'Reset Renovation Status'. [0:28:44]

So that would be the workflow that Graphisoft has set up for that. Now let's look at some limitations here. Let's take a case - let me go back to the existing plan here. I will do a wall. I am going to eyedrop this wall here. Remember, when I eyedrop an element, it switches to that element, picks up all the settings, but it does not actually switch the default. So in other words, it allows me to pick up the settings of an element that is already there. These are going to be demoed. You can see this is demoed here. But I can have the default be existing. [0:29:34]

So I can eyedrop an element here and it did not change the default. So what I am going to do is say a very simple thing - sort of an odd shape that I am going to do. In fact, let's take this out, because that is not going to be demoed, and let's extend this one. So I am basically saying that in the new conditions we are removing these elements but I am leaving this one in here. So let me go to the existing plan and I will put in a door. How would we get in there? Let's pick up the settings of this door and we'll put in a door there. [0:30:24]

Now what I want to do, let's actually put in a window. Let's eyedrop this here and say that this is a window here. Now remember, this wall is going to be removed in the new conditions. It's going to have an extension on there. So why am I doing this little change? Because I want to show you what happens if we have an interior elevation set. So I will go to the interior elevation tool and use the simple rectangular creation here and do this interior elevation here. And let's make the marker a bit simpler; I will call it "1". I don't want to deal with the marker information too much. [0:31:13]

Just say here is a marker. Now the marker is referencing this particular area. If I go and let's say hover over one of these lines and right click on it, I can open the interior elevation. You can see here is just a view of that particular window. If I switch from existing plan to new construction, we are going to see a little different view. And let's see, planned status here, why are we not seeing the door? I think there are some issues here, and this is what I want to get at. What are we trying to see? Is this elevation showing the window here or should it be showing the planned status? [0:32:01]

If I select the marker, you will notice that there is nothing highlighted or nothing available to highlight in the renovation tagging. That means that I can't specify that this marker is only for the existing or only for the new. Now because the limit line is set here, it's showing this. Let me move that window down. Let me switch to our planned status. And you can see that this marker should show this door, except we



have a bit of an issue and that is that the wall is beyond the limit line. Let's see if I move this wall, this new wall, just sort of drag it to the corner here. [0:33:01]

I think this had to do with the fact that I changed the construction of the wall, so it got thicker. But let's go to this interior elevation, and now we are seeing that. So which should it show? Should it show the existing plan, or should it show the new construction or the planned status? Well basically, that is set up by the view. So remember, we can have the elevations or plans; in the view map they have a setting for this. So if I go to the interior elevations here, this interior elevation group that has a default setting that says 'Existing Plan'. [0:33:45]

If I want it to show the planned status, then I can change that. And that means that every one of these, if I go to any one of these, it's going to show the planned status. So here is the planned status with that door. So that is one limitation is that there is only one interior elevation - or let's say the marker itself is not specific, it's the view that is specific. Now if the room changes shape or if you want to somehow show both options, obviously I haven't played around with the marker callouts, but this should be able to show where the drawings are on the sheet. [0:34:28]

Of course, maybe we have an existing plan. You want to have an existing interior elevation marker that shows 'Existing Kitchen', and then you want to have another version of it that is an interior marker that shows that on the same sheet or a different sheet that you have drawings showing the new kitchen. Well the problem is that this marker can't do both. It doesn't understand for example what drawings are on the sheet. I haven't put the drawings on the sheet, that's why they are all showing "#1". [0:35:00]

But that could be set up to show that. So how would you deal with it? The best workaround that I can think of is to have two markers and control them by layer. So what does that mean? It means that since a marker doesn't have a status - if I select the marker here it doesn't have a status - it does have a layer. And I could create a layer for existing markers and a layer for new markers or something like that. And then selectively turn them on or off. So when I have the existing plan and I switch to existing plan, maybe I would have a different marker show. [0:35:44]

So the filter wouldn't control it, but I could have a layer combination floor plan here. Or of course we have floor plan new building, which was the one I was creating a little earlier. So that is one limitation is that markers don't have the option for a renovation tag. And therefore, if you want to have two different versions of sections or elevations, you would need to put in essentially two different markers and have them on different layers and work around that limitation that way. [0:36:21]

Okay, another thing that is a limitation is that polygon elements, there is no way to in this system to show before and after with the renovation tags. So I haven't drawn a slab, but let's say that I have a slab here underneath this building. And this slab is existing. And then I have the planned status. Now you can see the slab is just fitting under here. So what's going to happen? Well, if I eyedrop this and then say



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let's create a new slab here, and we'll expand it to there. Then I can go and say this is one piece that is being added. And this one I will designate as new. So I can do that. [0:37:27]

So now if I go to 3D, and I go to the existing plan here, and if I go to Planned Status, we'll see that this piece has been added. Let's rotate around so we can see this. This piece has been added to that. Now depending upon your view, you may see a line. In this case, we are not seeing the line because ArchiCAD is smart enough to remove it because they both are the same surface on the same plane. But on the plan we are seeing the line here. So that is a little bit of an issue. The main workarounds I can think of would be - well, there are a few workarounds that could be done. [0:38:18]

One is on the floor plan, do you really want to show the floor slabs? Obviously the floor plan is showing the partitions, you are showing the walls and fixtures and things like that. But if you decided not to show the slabs, for example, if you don't want to show the line of the wall here because you are going to have a threshold for the door and so it's going to actually cover that up or not have that line here. Or the slab is set to the inside here because that's where the finished floor comes up, then you might turn this layer off. So then you wouldn't have that issue in the plan view. [0:38:56]

Another possibility would be if you do want to show it on the plan but hide certain lines, you could use a cover-up line. Now you have to be very careful about this, but I can draw a line over the top of this. Let me choose a layer here. I will put this line on the floor plan wall layer. I want to think about that, but let's say for now I just put it on there. Now that's a red line, but I can make that line, instead of being red, I can make it be white, depending on which version of ArchiCAD and what pen set you have. You may find different ones are set for white. In the U.S., "Pen 91", the first one in the group of ten that is a ramp up from white to black, that one is white. And you can see now this line disappears. [0:39:58]

Sometimes you may have to actually tell that line to be brought to the front. I may have to select it, right click and say 'Display Order, Bring to Front'. But other times it may already be there. Now if I eyedrop this here and then draw this line across there, now it looks like there is no line there, even though this element exists. So I've covered up that line. Of course if the design changes and things move around, then you may have this white line sitting in empty space and it may get in the way of things. So that is a work around; not an elegant solution, but it can work. [0:40:35]

Another possibility is instead of having this piece as 'New' and this piece as 'Existing to Remain' is that we call this one a 'Demo' element. And then we'll take this one and tell it to add in - or we just basically have it include all of this. So now this is a new element, and when I go back to existing, this slab is considered demo. So it technically isn't a demo, but it does allow us to switch between an early version and the new version or planned status where we have the new conditions. So this is again a compromise but it could be useful in some cases to have two versions of the slab. And this would apply not only to slabs but to roofs. [0:41:42]



So if we go to the roof - let's just go to the 'Existing' plan here, and let's go to 3D. And remember we have to switch to 3D here for 'Existing' plan. And let's just go and put in a simple roof. Let's see, the walls are set at 10'. So let's go to the Roof tool, set it at 10' here, and say 4 and 12. And I will do a roof across. So now we have that roof. Now that roof is 'Existing to Remain'. So when I go to the new conditions, of course I have to do some stuff here. Well, let's ignore this piece here and let's just say what might we do here? [0:42:37]

There could be a lot of different choices and I'm not sure what the best one would be, but in some cases maybe part of a roof would be extended. Obviously, in this case if we extend these roofs down, they're going to cut into the vertical clearance in a way that isn't appropriate. But let's just say that instead of adding a new roof - well actually, let's just say first of all what would be the simple case? The simple case would be that maybe we have a flat roof on this area. So maybe that doesn't make sense, but we'll go to the Roof tool and do a simple roof. I will draw this flat and I will click on these two points and this point. [0:43:20]

And by the way, I'm using a command that not everybody knows you can do which is in 3D, I can click on three points to create a roof plane. And then you can see "Enter first node of roof polygon." I'm actually now creating a polygon here. And this roof, if we look, is set up to follow that plane. It's set up with a zero slope and it's matching those points. I could click any three points that determines a plane and that roof will follow that angle, whatever that slope happens to be. Now this is going underneath. Let's just change this to be, "Standing C Metal Roof", so we can see it a little differently. [0:44:07]

So obviously in this case we would make this a new element. So when I switch to the existing plan and I switch to the planned status we can see the new element. So that works okay. Of course it's a total separate one, and maybe I shouldn't go inside the building. I made a total rectangle. But what if this roof was going to be extended or changed? Maybe we might say that this plane, we're going to make this a gable instead of a hip in the new conditions and we are going to do some other things there. [0:44:40]

Well, the issue is that we can't define a single roof or roof system element in an existing condition and a new condition. ArchiCAD doesn't allow us to define a change, saying, "Here's where it was and here's where it will be." You either have to designate this whole thing as demo and put in a new version; and then just like I did with the slab one will replace the other, or you create an extra piece. So you can see how I did this little standing seam roof here. So if I wanted to I could have parts of the roof extend. But in a case of this complex roof or roof system, this is - as you should know - a multi plane roof here. [0:45:34]

And if I wanted to do some things with the specific planes what I need to do is - let's just say if I wanted to turn this into a gable in the new condition, I might right click on this and say 'Split into single plane roofs'. It's warning me that it's going to be broken up into multiple pieces. Now I could take this one and



say that this is going to be a demo element. And then let's just say that if I go to the 'Existing' plan, here is what we have. [0:46:09]

When I go to the new I have this gap here. So what I would do is create some new elements that would fill that in. So let me just go to the floor plan. This is now a single plane roof here, so I will eyedrop that. I will create a new piece with - actually let's see. Here is our pivot line here, so I will create a new piece that has the same pivot line going up. I will draw it as a single plane roof. Can I switch this? No I have to switch it first. Oh, okay, it is a single plane. Sorry. So I'm going to go and draw a single plane going up and do this here. [0:46:56]

So this is now a new piece of roof which I'm going to designate as 'New'. So now when I show the 'Existing' plan you can see here's the hip. When I go to the 'Planned Status' you can see here is the extension on here. And let's just take this one and mirror a copy across here and go to 3D. Of course now I'm in the new construction where it highlights the new elements. here's the planned status where it's not so obvious. So that would be a way to do it. Here's the existing to remain and here is the new. So it's not ideal. I would rather be able to say, "Here is an element in its original state," and "Here is a modified version in the new state," but this would be a work around. [0:47:48]

And you can see it's smart enough to remove the line. Let's just take a south elevation and see if that line shows up. We can see this slightly dashed line for a moment, but it actually seems to be cleaning up. It's not showing that line when it finally cleans that up. So it looks like it would probably work okay, however on the floor plan we have this extra line which maybe is okay. It doesn't quite look dashed in the same way as the other ones; probably because we have the two dashed elements and they sort of overlap each other in an odd way. [0:48:21]

So that's another limitation is that with complex elements like polygon slabs and roofs, you can't have two versions of them with the renovation tool, you have to basically create extra pieces or arbitrarily say here is the original one, it's being demoed although only part of it is being affected, you use the tool to say it's being demoed. That could cause an issue with the demolition plan because it will maybe show lines in an odd way that isn't appropriate. So there are some real limitations that perhaps at some point Graphisoft will address. [0:49:04]

Now a similar question would be what if you were repainting a wall? What if you were making a simple change to the attribute of a wall? So let's just turn off the layer for the roofs here. I will go hide the layer, and let's take a 3D view. In the existing plan here, these walls have a certain color. Let's say we override the surfaces. I am going to make a simple case; I'm not sure which side is which. But let's just say that they're going to be painted this blue color. Actually, let me lock it so we have all of them as blue. And in the new version they're going to be green or white or something like that. Now how would we deal with that? They are still the same element, they are not being demoed; they're just being treated. [0:50:11]



Well unfortunately we can't say, "Here is what it was originally and here is a slight change to it." In the new conditions what we need to do is actually call these 'Demo' here, and then copy them. So I am going to go back to the floor plan. Let's go back to the floor plan for the 'Existing' plan and select these walls here. I'm going to drag a copy, so I'm going to hit 'Drag' and drag a copy, but I will drag it right on top. So now I have four walls and I'm going to have the walls duplicated. But the new ones I'm going to say are new here. So now in the existing plan, there's the new construction. Did I end up with - oh, you know what? I didn't duplicate them, I'm sorry. [0:51:08]

So now let me undo the change and we'll put it back to the 'Existing' plan. So what I'm going to do is select these two walls, drag, and then instead of dragging them away I am going to drag them back but I am going to press and release the Option key or the Ctrl key on Windows to get a "+" which means it's going to be a copy. The new copy I'm going to say are 'New' here. So now if I go to the 3D view, these elements are existing after the demolition. They are gone. And then there some new ones being added in here, and these new ones I can say they're going to be painted a little different color. [0:52:04]

So I will just go and paint them yellow or something like that. So now if I go back and forth between 'Existing' plan and the new one, they change color. So again, they are being designated as 'Demo', and a new version of them is being put in with - it's really a copy with slightly different attributes. This would be the same thing you might do when you're going to replace a window. You're going to essentially have to demo one window and have a new window that is designated with a 'New' tag, even though they might be in the same place. [0:52:44]

Of course they could change size, and there could be other modifications being done. But if you were just changing the door panel or the door hardware or some other style, you would have to do a workaround like this. So let's see, I think I've covered all of the complications that I have thought of in terms of issues that people have brought up. I'm now open to your questions and comments. I hope that you will give me some feedback. Did this clarify some things, and do you have some remaining questions or other challenges that you have been facing that maybe I didn't address? [0:53:32]

I'm waiting for somebody to type something in. Are you hearing me okay? Chris Dvorak says, "I try to show existing walls with no finishes. For example, siding or brick,"

And so Joe Archibald writes, "I haven't seen the option to split multi-plane roofs. Thanks for that Eric. I learn something new every time." Excellent. That's something that was introduced with ArchiCAD 15 with the multi-plane roof option where you can create single-plane roofs to start with or you can create a multi-plane roof and later split it into single planes when you need to have certain extra controls such as what I was doing. [0:54:26]

So Chris continues. Chris Dvorak says, "When I show a window demoed, I can't figure out how to show the exterior finishes only on the spot with the window where the window is being removed." Okay, so



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that's probably a limitation that is hard to do with the built-in tools. Let's just take a quick look here. So if I go to the 'Existing' plan, here we have a window. And I said that in the new construction it disappeared. So you can see in the new construction it's shown here. In planned status it's shown there. So it is doing what I was expecting, but I know you have a slightly different preference. You like to show existing walls as a solid fill with no composite structure as well. [0:55:34]

So you're basically trying to deemphasize the existing elements and just say, "They're here, but they're not something we're focusing on because we're not building them." So you are trying to make them look simpler. Okay, so let's just see if there's some way that maybe I can help you, but my guess is that you're a pretty sharp guy and you probably are doing everything that is available in built-in. [0:56:02]

So if we go to the floor plan here, this is existing. And remember that in the existing plan - well, let's say in the existing plan we want to show this. But let's look at 'Planned Status'. And remember that last time I had a version for one of the attendees, Gerald, where we showed the existing ones here with an override. In this case, I've gone ahead and made the override show with a sketchy line. That's sort of interesting. But this is sort of the same idea. If I go to the Renovation Filter Options and go to the Overrides for Existing, and let's say let's not override the line type. And let's make the fill foreground color - actually, let's not override that. [0:56:55]

Let's just make that foreground color white so it just becomes simple there. Now it's going to be simpler. And you can see the difference here. Also this is not intersecting, and that's because in this planned status one here I had something saying 'Do not intersect' there. So let's turn that off. And now it's cleaning up sort of a little bit. So I think that's probably closer to what you're doing Chris. [Chris says], "Use a solid fill or white, that's fine. Bingo." Okay. [0:57:32]

Now if we go to 3D here and we go to the 'Planned Status Gerald' - that's the modification. So here we are showing the existing elements with some arbitrary simple surface and the new is showing this. So it's a little bit odd, but it is clear that this exists and this is being filled in. So does that actually solve your issue?

So let's see, "How does that appear in elevation?" Well, let's see. If we go to, this would be I think the east elevation, or maybe it's - let's see. Okay, the east elevation; and its set up to show the 'Planned Status'. So let's show 'Planned Status Gerald'. So let's just switch it manually to see what happens when we do it this way. [0:58:31]

Okay so we are now showing in the elevation the fact that there is this window filled in, but it's not being filled in in terms of the override there. So it's not quite doing it. We might just need to put in a 2D fill to work around that issue.

"Just change the renovation filter to put 'No brick hatch'." I'm not quite sure what you mean, but it does not have a brick hatch there. If we go to Renovation Filter Options and Renovation Override Styles for



'Existing', so this was only existing. The new elements actually here are not being overridden. They are showing in their natural state, but for some reason that window, even though it's been filled in by walls similar to the other walls it's not showing in that state. So it appears to be a limitation of that. [0:59:41]

So he asks, "So in the plan, what does the in-fill wall look like with that filter? This might work on plan." Let's take a look here. We'll go to the plan and go to this one here. So it is showing the in-fill on the plan. It's a little bit odd in terms of showing all of this, but I guess that's actually maybe the wall type. If we look at the wall type here, it's showing the skins of the wall and brick is being filled in just on the outer part. So it's actually showing the lines of the wall just in the area that was being filled in. [1:00:25]

Alright, so Tom Downer had a comment. "I think I've been using the wall replacement technique for demoed and new in the same place. Good thing to know that it's about the best that I can do." Okay. That's at least what it appears to be.

Okay so Scott Newland says, "Are markers the only thing you can't assign a renovation status to that you're aware of? "The only thing that comes to mind, if I go to the Line tool you'll see that you can assign lines to that. You can assign text. So generally annotation labels all can have renovation options. But when I switch to a marker, you can see how this becomes gray. Actually let's go to the - no we are on the floor plan here. And this is the default, but when I - I'm just seeing if I go in here and we go to - there's no tagging. There's nothing that says "Tags" versus when I go to the Line tool and go in here, there are 'Tags and Categories'. [1:01:43]

So markers would be section markers, elevation markers, interior elevations, worksheets, and details. All of these detail call-outs, they do not have tagging. I think that's probably it. I really haven't looked through it but I can't see any reason why that would not affect others. Now cameras also really don't relate to that. You would potentially with a camera tool have different paths. So if you want to create a path you could say "Existing views" here and create another path. That would be "New Tour of Building". So you can now have two different groups of cameras there but that's not using the renovation palette. There's no tagging here. [1:02:35]

Okay, so getting back to Chris' comment: "So for the existing wall I need to try and decide the construction of the existing wall and make it composite." Okay.

"Section markers, elevation markers, detail markers don't allow you to set renovation filter from my experience." Okay, so you're just confirming that all the markers are the ones.

So okay, I think I have answered all of the comments that have been typed in. Let's see before we finish up if there are any other comments. In general, has this been clear enough? You feel that what I was able to share with you this has helped you to understand it better and is there anything remaining that you would like me to explore before we finish up? [1:03:22]



Alright, so Louise Brodman writes, "Thank you Eric, thoughtfully presented as always. Have to run." Okay.

Scott Newland says, "Good overview."

Chris Dvorak says, "No thank you, nothing more." Okay.

I will give it another minute or two. Ken Andrews, Tom Downer, "Great, very helpful."

Dave Norman, "Does it make any sense to keep the existing building on a separate PLN file?" Does it make any sense? Certainly you could take your existing building - well, let's say here are two cases. [1:04:06]

One is that if earlier you did the design for the building and it was built, and that's of course considered existing. And then there's going to be some new stuff added and some things possibly demoed, then you would want to copy that file. And of course this is a new project. In that case it's a follow-up project to what was done earlier. So yes, you would have a copy of that, but then you would use these renovation tools and demo certain things and add new things and use them. [1:04:35]

There's no particular point to worry about the existing one other than possibly to import views from it to place onto the sheets if necessary. But you can create your existing drawing views in the new project. Let's say we were starting fresh. The building already exists and we're doing a remodel, so you going to do an as-built or existing conditions model with some documentation, whatever's necessary. And then you're going to go and redesign and add things. So is there a point in having that in a separate file? I don't see a big point, because as long as you work properly within the system, when you choose 'Existing' under the renovation filter, you will see the existing building. And you won't see demoed elements that are demoed in a way that shows that they are missing and you won't see the new stuff. [1:05:40]

So in general, I don't see a reason that you would do it. Obviously you could make a version of the file, have it proof read, have it quality tested and just verify measurements on site. This is the existing conditions. And then you can save a record copy before you start doing it just as a record, saying it's possible we might move something by accident or we might change something and designate it as demo when it really isn't or make a mistake. Then yes, you could have a copy of the file. But I don't see any reason to keep it and use it like to reference it in; like what I did in some of the earlier lessons last week for renovation before ArchiCAD 15. Those are my thoughts. [1:06:32]

Okay Chris Dvorak says, "Nooooooo!!!" Okay. So I guess there's another answer.

Steve Nichols says, "Good from here for now."



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Joe Archibald, "Great as always Eric. Is there a list of the upcoming topics for these webinars on the Best Practices webpage?" I will show you that.

Ken Brooks, "Pretty complete presentation until I actually do a renovation, then I may have questions." Okay. So we will of course address those if they come up in a coaching call.

Ken Andrews says, "If your labels for demolition are on that filter and you use dotted line in the override, how can you make the label solid?" This was something that was a problem originally in ArchiCAD 15. If I go to 'Existing' plan, you'll notice that this window is not being demoed. Actually here is a window that is being demoed. [1:07:31]

If I go to the 'Demolition' plan, we will see that the window is being demoed because it's going to be filled in. And the marker goes away. And then in 'New Construction' we have it filled in. Now if you wanted to show the marker on the 'Demolition' plan, the way that that's handled is that we go to the Renovation Filter Options, and in the 'Demolition' plan, in the Additional Filter Options, we say do we want to show or hide the opening marker? [1:08:09]

So there are some options here that I didn't actually go through that allow you - and frankly I haven't really explored - but gradually Graphisoft has added a few additional options to tweak or to fine tune it. So for example if I uncheck that, then on the 'Demolition' plan I will see that marker. Now in version 15 if you did show it, if the window was dashed this would become dashed, which would be rather crazy. It would make it look funny. But there is an option in the renovation filter here that says 'Do not override dimensions, text or labels.' That means that it won't make it - if you have the elements like walls being dashed, it won't make the lines or the text and label lines and the dimensions, like that dimension marker, it won't make them dashed. [1:09:07]

So this was something that was added into ArchiCAD 16. And here again you can say if I draw a line, I don't want in this 'Demolition' plan to change that. Now by the way, if I click on this you'll notice that each one of these has its own options. So each renovation filter can be tweaked to some extent for this purpose. So you can say, "Do I want the demolition plan with markers or not?" You might even potentially have two versions of that, because each one of these filters could have somewhat different filter options there. [1:09:44]

So let's see. Dave Norman says "Thanks."

Rick Skorick says, "Thank you. Very good Eric, ciao." Okay.

Chris Dvorak says, "I have questions and quirks that are happening when I create my own custom wall profiles." I would be happy to look at that in a coaching call Chris. We have another one next week and I can help you with that.



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Ken Andrews, "Not the markers, annotations and specifically using MasterTemplate." Okay, you answered, "Thanks, I missed that." [1:10:18]

Okay, so I think I've gotten everybody taken care of. Thank you all for your positive feedback. This is a tricky topic. Graphisoft has done I think a great job with the renovation tools. Yes, there are limits. Yes, it doesn't handle everything perfectly, but it's so much easier than previous versions. And they keep tweaking it a little bit here and a little bit there to make it really slick and elegant and easy. [1:10:50]

My main request for them if they're listening to this, and I know they are not, would be to add phasing, so that you could do multiple phases as well as options. So you could potentially do Option A, Option B; Scheme 1, Scheme 2, Scheme 3. And then in addition to that, a way to say that this element has a before condition and an after condition. So a polygon element could be reworked. Those are the main things that I see would complete the system.

Please add your comments and questions to the page down below of this recorded video. This has been Eric Bobrow. Thanks for watching.

[END OF AUDIO 1:11:38]