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Training Lesson TRANSCRIPT

BEST PRACTICES COURSE – WEEK 11 – PART 3
Early modeling approaches – Massing, Pseudo-Detail, Profiles & Room Modules

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Hello, this is Eric Bobrow. And in this training lesson, we'll take a look at early modeling approaches. How can you start with a massing model, a very simple model, and add in certain types of differentiation or detail that will communicate better with your clients and prospective clients.

So here we have a blank project, and I'm simply going to draw a box of walls to start out. And then I will go up to the upper story, and I would like to create the second floor. So I'm going to right click on the first floor and say that I'd like to show it as a trace reference. That will allow me to easily see it, so I can snap directly on top of it. Let me go to 3D, and we'll see that we have just a very simple building with two stories. And I'd like to perhaps make the area of the building that sticks out a different material. So while I may not know what materials they are, I may just want to differentiate it visually. So I could select these three walls, and change the material here. Let's just pick a different material color. [0:1:11]

Now the problem is that because this wall goes the entire length, when I made that change, it changed all of it, not just the part that out. So let me go and undo that and go back to the floor plan, and we will make the change. Now I'd like to actually make the change of course on the ground floor. So I'm going to switch down there. But when I switch here you'll see that I'm no longer seeing the upper story. So I can't refer to it. Now a very good little shortcut tip is in your Trace and Reference palette is to say that I'd like to work with the previous story. So this way we're not locking it in on only the first floor or the second floor or some specific story. But it will be the last one I was looking at. [0:02:03]

So now, when I do that, I can go up to the second floor and we will see the lower story as a trace reference. And when I go back to the first floor, you'll see that the upper story is now a trace reference. So it is very convenient as you go back and forth between two or more stories to see the last story or previous story as a reference. Now I will go ahead and select these two walls here and split them. So I can use the split option here or go to the Edit, Reshape menu for Split. And then perhaps go to the edge of this wall from the upper story to be the dividing tool. And then click to the left, in this case with the eyeball, to say that I would like to retain the settings or actually retain selection of the new wall pieces that stick out. [0:02:53]

Now while I could make the change here on the plan, I'll go back to 3D, because I would like to just see the change immediately take effect. So I will go here, select those three walls, and then change the material of them to stand out. So at this point, I've now got the beginnings of a massing model with

some differentiation saying that these walls here are going to be a different material than the other walls to the side. Now sometimes it may be useful to actually add some extra detail. Even if the material is not decided, it may communicate better with the client. So for example, I might actually select these three walls here, and instead of using a simple paint or solid color, I might pick something like a brick here. And when I do that, and we zoom in on it, we'll see something that perhaps the client will be able to understand better, even if the brick might be a different style or color. [0:03:55]

We have just indicated a material that would communicate nicely. So I call that pseudo-detail, meaning it's not really detail that has been decided on, it's just a placeholder for some type of detail that you're going to be working out. Now let's take a look at what happens when we put in some windows and doors. Now if I go to the Window tool and I just pop in a window with the standard settings in ArchiCAD, at least in the U.S. version, it has a lot of detail already in it. It has a sill and casing and things like that. And of course that may or may not be appropriate given your project type. One thing you may want to do is actually put in windows initially as very simple placeholders before you've made any decisions, just to show the finished openings in the wall. [0:04:47]

So what I might do is go into the window and say I'd like to turn off casings and sills and stools, etc. And let's just take a look here at the view of it. That's much simpler. We may even want to go into the parameters or the custom settings again and say that we are putting this into just a simple solid wall. That will actually make the window as simple as possible, just with a basic frame. And so we can now have the window really with very little information, just that it's there. Now the 3D opening lines here are sometimes going to show depending upon the style of view that you've got. And this is controlled in ArchiCAD 13 and later under the Document menu, Model View Options. Because in the Model View Options, we can say for example in the options related to library components whether we want to show opening lines in 3D say for windows and doors or not. [0:05:59]

I will turn them off, and you can see that disappears. So that's one way that you can sort of avoid the issue of which way is the window actually going to be opening. Another way you can do that is you can switch the window perhaps from a casement, which obviously does open to something like a fixed window. When I switch it from one window type to another, then you will see here the preview. When I switch it to the fixed window, it will all of the sudden pick up all the settings that are in the Graphisoft library. And that of course is wasting some time, because I'm really going to have to again simplify it that that is what I want. So instead of doing it that way, I will take advantage of parameter transfer. So I've just cancelled out. [0:06:44]

And now if I go to the fixed window here, I'm going to hold down the Command and Option keys on the Mac. Or on PC it would be CTRL Alt, and I will get the syringe tool. And then when I click to switch for example to the new library part, you'll see it now says that I'm in a fixed window but it kept the same style, all of the parameters were transferred. That's probably about as simple as we can get in terms of a window style. And I will go ahead and eyedrop this and put in some more windows on this face of the building. So I'll just pop in another window here and then select this, and perhaps multiply this a few times. [0:07:30]

So now I've got several windows. And let's just say that we wanted to make these two wider. So I will go ahead and change the size of them. So we don't have much detail, but we do have two different sizes. And perhaps at some point you may want to start adding some additional detail. So I will go and take these two windows here, and we'll put in again some tentative detail information. So I might go into the custom settings and say that I would like to go into the sash and perhaps put in a certain grid spacing. So I will just make it simple here with just some dividers. And now let's take a look at how we could change the style of the window entirely once we start making decisions. [0:08:33]

So we've put in some placeholder windows, and we've put in a little bit of detail, but let's say that we now start getting specifics. So again, perhaps these two windows I would like to make them slider windows. So when I open up the settings for these similar windows and I go to switch this to a slider, if I just click on the slider one, it will forget the size; it will just put in the default size. So instead of doing that, I'm going to go and let me just show you. I'm going to go and hold down the syringe shortcut, Command+Option or CTRL+Alt, and click. And you can see how it switches to the slider window type but kept the size. It did not reconfigure there. In the same way, I can select perhaps these two windows and keep their glazing pattern while I switch to perhaps some other type of special window, maybe an arched one. [0:09:35]

So I will just go ahead and hold down the syringe shortcut and click. And you can see how it switches to that particular style of window, retaining all of the information. Now of course its height, the overall height here, we may need to adjust it or want to adjust it. For example, we might want to go to the information here on that shape and opening and say that the 5' that I had for the height is actually going to be the shoulder height. Now I think if I do that, it probably will complain because I need to make the window itself bigger. So let's just make the size of the window here taller. Let's just make it 7' or say 6'. And then I'll go back to the shape and opening and make it the 5. [0:10:31]

So what I've done here is I've just taken the information with the glazing pattern. It's going to remain consistent as I make to change. And I've told it to make the shoulder at the same 5' height and that it's going to arch up a little bit across it. So you can see what's happened here. Now sometimes when you do that, of course the positioning of the window may get adjusted. The anchor in this case was set to be the header. If I wanted in that case for the window to go up rather than to go down, then I might anchor it to its sill to maintain a constant base. Of course I can just select this and move it up and perhaps snap it into position. [0:11:24]

So it now lines up on the bottom of these windows. So there are some examples of putting in some initial placeholder windows: adding in certain information initially, some size differentiation, and then later the grill pattern, and then starting to pick out and determine the window operational type like sliders or the style, such as the arch, but maintaining as I went through the design process some of the original information by using the parameter transfer keys, the syringe. So basically starting with something simple and then as I make changes, and this of course might happen over days or weeks, using ArchiCAD's tools to maintain the decisions as I move forward. [0:12:18]

Now let's just take a look at the idea of selecting multiple things to make that change. In other words, I have three walls here that are brick, but what if I wanted to change all of them at once. Maybe there would be 10 or 20 or 100 walls that are that style. So what I'll do is go to the Edit menu, Find and Select, and use the eyedropper to pick up the settings of, for example, this type of wall. Now initially, it just says, "Alright. I'm prepared to select all walls, but I will add in another criteria." By clicking his add button, I say I really want to find walls that have a certain material. So we can look at the reference side material in this case which would be that particular brick that I had chosen there. And I will just click on the plus sign, and you can see how it instantly selects three walls. [0:13:14]

Of course, in a large project, that might be dozens of walls that would be selected. And then I can go ahead and make any change that I like. For example, let me just make this a really thick wall just to show visually what happened. You can see how that has changed on screen. Or perhaps I'm going to go to the material and try out a different version of the material. Let's say some other type. I will just put in some stone to show a rather dramatic change. So there is an example of using some initial differentiation of material to be able to find and select elements quickly that you know are similar, but you haven't really decided exactly what they're going to be like. So by selecting them enmasse using the Find and Select, its very quick to try out different styles and develop the project in terms of the design materials or other things. [0:14:15]

Now let's take a look at a rather different part of the process. So I'll go back to the floor plan here. And let's say that we wanted to put in a kitchen. So I will go to the Wall tool and just set it up to put in some interior walls. And these interior walls, let's just make them a little thinner here. And I will just draw some partition walls, just to create a context for the next stage of the training lesson. Now when you create a kitchen, one of the things you're going to be defining initially is what are the orientations of the cabinets, where the cabinets will be. But it can be time consuming to create cabinets and put them in and make them look good. So I know some people will pick the line tool or perhaps the poly line tool and just simply draw in 2D where the cabinets are. [0:15:20]

Now I'm going to sketch this in. I will simply draw a line down here and tell it to be 2', which would be a common cabinet depth here in the U.S. I will take this next line to the edge of the wall, but then I'm going to take it back the distance that I want. So you'll notice with the tracker its saying this line currently is going a certain arbitrary length, 11'4" and a fraction. And I would like to take it back 2'. So I'm going to do 2-0. Now if I just hit Enter, that line would only go exactly 2' in this direction, it would not go 11'. But I'm going to instead type in a minus after the dimension, and you can see how it has pulled back. And we get some strange guidelines, because it thinks maybe I'm going to be doing some type of a radius distance. [0:16:14]

But simply put, when I see the cursor move and the distance get highlighted, I know that it's accepted the distance I typed in with the minus or a plus as an offset. So it's now setback 2' which in metric terms, just for international users, that would be I guess about 600 mm. So I'm just going to hit the Enter or Return key to confirm that one, and then take this down an arbitrary distance and close it up. So I've now just very quickly sketched out where cabinets might be in this particular room. Now one of the main limitations of this is that while it does communicate a certain type of spatial planning, the client

plant may have very little idea of how this room will look or feel, and there's no way to show them anything in 3D. [0:17:13]

If for example I go and use the Camera option in the group of tools called More here, and place a camera say from this corner to the other corner, and let's just give it a little bit of differentiation. Let me just put in a window on each of these sides. Now if I go and select the camera and then go to the 3D window using any of the standard 3D options, we are now looking in that direction in the room. So we're now seeing just plain walls, we don't know that there are any cabinets there. So how would we be able to get a sense of that? Well, let's just simply put in a slab. In this case, I will say I want the slab to be at 30", which would be I guess something like 750 mm, and going down to zero. So this is going to be a simple slab that will represent the cabinets. [0:18:20]

And I will tell it to make it all a uniform wood color. And I will go in and just outline this shape. So now the actual lines that I had put it in, if I go ahead and delete it, I will just select the poly line and delete it, and see, I don't need the line because I've got a slab there. So in terms of plan representation, the slab does the work. But when I go back to 3D view, you can see now it's very clear where the cabinets are. Now the cabinets of course look very plain. And we might want to differentiate them a little bit by making the top a different material. So if I pick the top material here, and change this for example to a granite here, now it's got just a little bit of differentiation there. We can go further with very little work by adding perhaps a thin slab on top as a counter. [0:19:29]

So let me go back to the floor plan, and let me just go ahead and eyedrop this but then change it, say take it up a couple of inches. I'm just going to do a very quick and dirty version of it of course. And let's just say that I'd want to draw this a different style. I'll just do a little piece across the top, and then I will extend that after I've worked with it. So let me just show you, I've now created another piece that is on top, and let me make its material totally that granite color. And then I can go in and perhaps extend it. I can go use, even in the 3D, use the pet palette and extend this out some distance as an overhang here. Perhaps pull it out again the same distance there. [0:20:26]

So now I'm starting to get some differentiation in terms of the base of the cabinet and the top. I can certainly extend this down. I will go in, use the Boolean addition here to say that I would like to add this section to the countertop, and then perhaps use the pet palette to extend it the same 2" in this case on all the sides. So very quickly then, when I go back to 3D, we will see that I now have a base cabinet and some type of differentiation for the counter. Now if you wanted to have a back splash as we call it in the United States, and I forget what the term is, upstand I think is what it's called in New Zealand and perhaps in some other areas. I can do it with a variety of tools, but perhaps the simplest tool to do it with is the Beam tool. [0:21:25]

I might say this is going to go from 32" at the base to let's say 4' here. And I'm going to make it just a couple of inches thick. And I'll just draw this. And we'll see what this does. We will make it the same material, so I can go and lock in the materials here, and pick that same granite color. And I will draw it across here to the window. Now when I did the Beam tool, it put the axis line against the surface of the wall. And what I really want to do is have it offset. Right now, if I were to make it the offset half the

thickness, the 1", it would pop it inside the wall. So I'm going to change it to a -1", which will pop it outside the wall. And so that, if I eyedrop it, I can draw in additional ones. And we'll just see very quickly how I can draw in some of these backsplashes or upstands like that. [0:22:49]

And so when I go back to 3D, we're now seeing the kitchen take a little bit more form without worrying about the exact cabinets or where the sink is going to be or all of those styles. But very quickly we can get this information shown. Now, a really clever way to do this even more quickly is to create or have in your library a custom profile which will actually define the entire counter and backsplash or upstand as well as the base. Perhaps even with some more differentiation like having a recess for the kick underneath. So let's see how I can create that very quickly. [0:23:33]

I'm going to go into the Document menu and get the Section tool and draw just a temporary section here. And I will open up that section. And in that section, we can see that we've got the counter and the upstand or backsplash merging into the cabinet. And the reason is that in the section, all of these, the wall as well as the other pieces, have the same fill. So what I'm going to do is select this slab here that is the countertop. And in the floor plan and section area, change this to perhaps a 25% fill. And I would like it to merge with this one, which is also a beam, and I will make that the same 25%. And now you can see how those two will join together in this particular view. [0:24:32]

Let me take the cabinet and perhaps change its fill from the background fill to a similar one, in this case, air space. It will look the same, but it will be considered different so you will see a line between it and the wall. So that's a really good trick to know is that when you have two elements side by side that have the same fill, ArchiCAD may join them in a section, but if you use a different fill, even if it's essentially the same but just has a different name, you'll end up with a line in between. [0:25:09]

So what I'm going to do is take this information here as the start of creating a profile. So I've selected the three 3D elements here, and I'm going to copy them. Now I can't actually copy and paste them in this view because essentially these are 3D elements and we can't create new 3D elements in the section. But what I can do is go and start to work on a complex profile. Here you see under the Design menu, Complex Profiles, Profile Manager, where I can create a new profile. And I can paste in this information. So let me just drag this to where the bottom left corner is on top of the origin point. That will allow me when I draw it to use this origin as the reference for what I'm creating. And perhaps let me just create a little differentiation, a recess for the kick. [0:26:13]

So again I will use the minus option here in the Boolean. And I will sketch this out. Let's say cutout a little space here. So what I've done is I've made the fill pull back, but there are still some lines. And you can see this line, when I select it and I delete it, it disappears. The lines actually came in when I copied and pasted, but they are not going to make a difference in terms of the actual profile. It's only the fills - this is one fill, this is another fill, this is another fill - that really matter. Now I could manually merge these or actually remove I guess it's the line that is showing here. I think these will actually merge in our profile. But let's just say that I'd like to store this profile and give it a name, "Cabinet Massing". [0:27:13]

And it's set up to be used with walls. And that means that if I go back to the floor plan, I can go into the Wall tool. And in the Wall tool, I can go and say that I'd like to select a complex profile here and perhaps

pick this Cabinet Massing one that I've created. And let's just zoom out a little bit, and I'll just draw this next to the other element and go around the corner. So now I've put in two. Here's one and here's the other, two pieces of a profiled wall. And when I go back to 3D, you'll see, oh, well I didn't quite get that right. Let me just turn my view here. This window is a little bit larger than it needs to be. So we have something that looks like cabinets in terms of shape, but I forgot to set the materials of the elements. [0:28:20]

So let me go into edit this profile again and select the cabinet bottom and say, "No, no, no, no, no, you should not be this brick color." And let's make this some wood. So I guess I'll make it just a simple cherry wood here, and then I'll perhaps pick these two and make them that granite one. And then I'll say "Store it". And when I go back to the plan, you can see how now this is looking actually very simply and easily like cabinets. So you can literally create this profile here. Let's see, if we just select it, we can create this profile and stretch it along any direction that you want, and it will very quickly communicate the idea of the cabinetry that you want. You might want to create a variation that doesn't have the back backsplash or upstand, and use that for when you need to trim the windows out. [0:29:35]

Of course we would need to trim the windows. Let's see if we zoom out a little bit, we would need to get these two windows up in this case to fit nicely above the cabinets. I think this gives you some ideas for how you can quickly put in initial information about cabinetry using first lines or simple slabs or a simple massing version where you have a slab and then another slab as a counter top and perhaps some beams or other elements to provide a backsplash. And then another option would be to create these little custom profiles and have them available in your project for this type of quick use. [0:30:31]

Now I'm going to show you one other example of putting in a kitchen for a study that I think will also be very useful to you. So let's say that I want to put in a kitchen with lots of cabinets and things like that, and have more detail to present to the client, but without having to spend all the time to create it bit by bit. Well I'm going to go to MasterTemplate. In MasterTemplate, we've got a number of what I call "Quick Rooms". They're basically room groupings that have been saved. Now you can make this yourself, but if you have MasterTemplate, you can go into the Interactive Legends section of the View Map, and the legends plan for copying. This is a special area of the legends. Normally we go to the legends, these sets of visual favorites, by going to the Interactive Legend Worksheet and we use the eyedropper. [0:31:28]

But here we are actually in a worksheet. So you can see the plan is behind it and the worksheet is in front. But what the worksheet is showing is a reference and the reference is a particular view of the plan. So without getting into too much explanation, to go to that particular view of the plan, I go to one of these ones here, the legend 3D all. Or in this case the one that focuses in on the quick rooms without notes. So what you'll see is I'm now in the first floor. I'm in the actual plan, but I'm looking at these legends components. Here is the group of all of them, and then here you see we are still on the ground floor. And here is the quick rooms, which just zooms in a little bit and turns off some of the explanatory notes. [0:32:21]

So having done that, let me just zoom in on this kitchen. And I will go and select these elements. Now in order to select the elements for copying, I need to make sure that groups are suspended so I'm only selecting these elements and not everything else that's part of the legends. And I will need to make sure that when I'm working with the Arrow tool that the Quick Select Magnet is turned off, that way I won't select the base. When I click on it, I won't be selecting what they are sitting on top of. So all that being said, I've just copied this information, and I'll go back to my project file, and I will paste. And when I paste, it says, "Do I want to paste it in the center view", where the original location was? Well, the original location is not relevant; I will just paste it in the current view here. [0:33:20]

Now this current view, perhaps this is good or maybe it's not so good in terms of an orientation. Let me just rotate this around. So I'll just select these elements and say rotate them. Now if I wanted to do something in a 90° angle, just rotate it 90°, I find it's often easier to simply go and click in empty space use the guidelines to lock it in straight, and not even worry about snapping to the actual elements. You can see it's rotated around 90°, and I can just simply drag this up to a more convenient location. Now we obviously have walls in the original building, and we don't want to bring in these walls. So let me just go and suspend groups and select and get rid of the extra wall pieces. [0:34:25]

And let me then move this perhaps into position against the wall. So let's take a look in 3D. I will go and use the Marquee tool in this case to say I'd like to look in this area. And perhaps I will switch to an axonometric view so that I can see the building. Let's go back to the floor plan. I guess I need to say select just what is currently indicated with the marquee in 3D. And you can see now how I've got these elements brought in from the original grouping. Now the elements here can be moved around easily. They are all individual components. So if I wanted to put these cabinets against the other wall for example, then what I might want to do - actually, it might be simpler on the floor plan - I might want to go in here and select the cabinets like this, these upper cabinets, and say "Mirror them". [0:35:51]

And then drag them into position there. And perhaps take these base cabinets at the same time. So I'll just mirror them. And I'm just doing them in sort of an arbitrary place and dragging them into position. And so we will take a look now in 3D. And we'll see that I've started to reconfigure this kitchen. Now perhaps I don't need to have an open counter like this, so I will get rid of those things. And you can see how by having a group of elements in a kitchen that has already been set up, it's very quick to bring them in and move them around to suit the needs of the current design. This is all fully editable and reconfigurable as you need. In fact, if you wanted to change the styles of things, of course you could go in and select perhaps these cabinets, and start working on the actual cabinet door styles. Let's make this perhaps have some glass with a narrow frame. [0:37:16]

And I say OK, and you can see how they've changed. Or perhaps I don't want to have the mullion dividers. So let's go in and get more specific about the mullions, removing them. So we can build up a kitchen design or any type of a room, whether it's a bathroom, bedroom, office, lobby or other thing in your early design stages by bringing in a premade group of elements and then moving them around to fit your needs. Now, in MasterTemplate, we've created quite a few of these room modules. And certainly if you own MasterTemplate, you may find them very useful. But in general, what I suggest is you take your completed project or projects and mine them. Sort of go through to see what is useful

inside them. And then save, copy groups of elements, perhaps some room configurations, into another file for reference. [0:38:26]

I happen to open up a blank copy of MasterTemplate to go grab the quick rooms there. But you could have a special PLN file that had a bunch of different kitchen variations, or a bunch of different room types. And another file might have things for foundations and footings and roof styles. You can feel free to be as creative as you like with this. The basic idea is if you've created something once that you might find useful and do something similar in a later project, it will behoove you if you save a copy of it in a convenient location where you can go grab it, bring it in, and then reconfigure it as needed. [0:39:11]

So this concludes my lesson on early modeling approaches, and how you can start with a very simple massing model and add certain types of differentiation for color to indicate different materials, perhaps adding in some extra detail even before you know what it is just as a pseudo placeholder for your client to say, "Okay, I see that that's going to be brick." And then the ideas of using things like parameter transfer for switching, for example, from one window type to another while retaining the size or other styles that you've been putting in. And then some approaches I went over about drawing simple lines to show where cabinets might be, graduating up to some 3D representations using a simple massing of slabs, and then putting some additional detail, perhaps a slab countertop and backsplash or upstand. These can add more and more detail but still be very easy to just layout for concept studies. [0:40:17]

And then finally the idea of taking something that you've already drawn up, like the room configuration, and bringing it in and just reworking it quickly to suit the basic concept of what you're working on. Oh, and there was one other thing which was the complex profile for the simulation of the kitchen cabinet that you might find useful and very easy to create using complex profiles. So this has been Eric Bobrow. I look forward to getting your comments and questions on the page down below. Thanks for watching.

[END OF AUDIO 0:40:52]