BEST PRACTICES COURSE – WEEK 24 Detail Drawings - Part 1 - The Basics

Welcome everyone to the Best Practices Course ArchiCAD training lesson. Today we'll be starting on Week 24 Detail Drawings. We'll be looking at some of the basics as well as maybe intermediate level settings and options for creating detail drawings and placing them onto the layout sheets. We'll be looking in upcoming lessons on how you can manage these detail drawings and reuse them from project to project, etc. [0:00:29]

Let's get started here. I have the sample project open. Let's say we want to create a detail drawing from a section, like an eve detail. I will go to a section here and pick one at random. Let's say that I want it to have a detail up in this area. So how do you create a detail drawing? The Detail tool is in the Document Group of items. It's near the bottom here. Depending on what version of ArchiCAD, you may see above it the Worksheet tool that was added in version 12, and the Change tool that is new in version 18. So the Detail tool is down near the bottom. [0:01:22]

Click on it and it basically will bring up the Detail tool. The Detail tool has settings in the Info box that we'll be looking at. It also has geometry options. You can do a callout that is just a stamp, like an arrow pointing at something, or you can do one that outlines an area in a rectangle or polygon or rotated rectangle. And we have an option, when we are creating the detail, of creating a new detail viewpoint. This essentially means that it will copy the information that we are pointing at or outlining into a new detail window in the project map. [0:02:09]

This is the most common way to get started is to have this set for creating a new detail viewpoint. Either before or after you place it you can change the ID and the name of the detail. The ID is used for organization. It will sort the details in alphanumeric order in your project map. You can use this or not, but it does help you to keep track of multiple details so you can group them based on “D” for certain purposes or perhaps different types of details can have different prefixes. [0:02:46]

And then the name of course - let me call this “Eve Detail”. So this name is going to become available in the detail viewpoint in the project map. The default would be for it to become the name of the view, and then the name of the detail drawing that gets placed on the sheet. Think about this at the beginning and it will save you some time later on. I have it in the rectangular mode, that means it's going to expect me to click two points to create a rectangular reference. It's going to create a new detail viewpoint. [0:03:26]

And the marker, which would be the little bubble that has some reference, will point to that viewpoint and ultimately will usually give a reference to where that viewpoint is placed on a sheet. In other words, it will say the drawing number for that detail and a sheet number. So all that being said, to create a

detail, I simply outline the area with two clicks to create the rectangle. And then I have the little hammer. Go just where you would like the callout bubble to be. [0:03:58]

You can see that actually was where the elbow was placed, and there's a certain standard offset for creating the bubble. Of course, all of these sizes of text and other information can be adjusted. You can see right now that it's showing that “D-01” and the “Eve Detail” here. Later that will be substituted once we place it on a sheet with the drawing number and the sheet number; that would be the most common thing. Now if I right click on any of these points that are highlighted, it will select it. And as usual, it will give me some options including “Open Detail Drawing”. So when I select that, it will bring up this viewpoint. [0:04:45]

Now if I look in the project map, you will see that detail has shown up in the project map list. So going back over the real basics of ArchiCAD, we have our stories, sections, elevations, interior elevations starting in version 11 or 12, worksheets starting in 12, and details are one of these groups. The details can be linked to a source, like this, or you can create details that are independent if you want to bring in a standard detail from a manufacturer or a previous project and have it in a project. But the most common thing is to call out a detail and have it create a new viewpoint in the project map. [0:05:31]

Now you will notice this detail has a boundary here. This is a poly line which we can delete. And if we don't want these ever, then we can go into the Options menu, Work Environment, and I think this is under More Options here, which is “Create detail worksheet boundary in detail worksheet windows.” so if that is unchecked, then you won't have to delete that boundary. So that's up to you, whether you want it or want it to be turned off in general. [0:06:02]

This line here I think was a grid line that we are seeing. Maybe that's important, maybe it's not. I'm going to delete it just to make it a little simpler here. Actually I was doing a section, but this is a section and this is an elevation beyond it is what I was seeing. So it's not a true section, but that's fine. Sometimes we may want to create a detail for something like this. What makes something a detail? If you think about it, it's a detail view of what would ordinarily be seen in a smaller scale. Right now it's set at half inch to a foot. [0:06:42]

You may have noticed or just assumed that the standard section or elevation drawing was at quarter inch, and this is the standard method for ArchiCAD. If you do a new detail window, new detail viewpoint, it will double that scale from quarter to half. That would be from 1:48 to 1:24. So if you are in metric, it would be something roughly equivalent to that. Now in general, I would say that's probably a fairly small detail, and more commonly we would have details in a larger size. I will say one inch to a foot here, that would be 1:12. If you are in metric, that would be 1:10. [0:07:21]

So what happens when I do that? Of course, the drawing gets larger onscreen. Everything still measures the same; the heights of the fascia, eave or dimensions are all going to measure the same. But if we do

put in text, the text will have more space, the labels, etc. So I am not going to pretend to create a real detail here. I am going to put in a couple of labels here. The Label tool was set in this sample project with a default that had some contents. Let me just actually delete that. In case you are not sure how this happens, under the Label tool, there is “Settings”. If you are working with an independent text label, which would be the most common one for on the fly labeling of things, there is a text label here and it says “Default text”. [0:08:15]

If this is blank, then you get the opportunity to type it in fresh. If it has something in the default, then every time you put in a label, until you change it, it will have that text. You saw it popped up with some text. This is a time saver if you eyedrop labels from one view and then drop a similar label into another view. It's a great convenience. Just go and eyedrop, place a label. Eyedrop another one and place. Possibly you could place more than one label that has the same information. [0:08:47]

But I want to remove that default text so that it's not going to be there. And also in this particular case, it has an opaque background that is yellow. I am going to turn that off so that there's nothing behind it. I will also turn off the frame. So it will be a very simple label. This has nothing to do with details, but obviously we label a lot of things in details. So I am going to say OK and now I will go and create something here. And I can either draw a boundary or click twice to say I want to put in text and manually wrap it. So we are just going to call this “Shingle Roof”. [0:09:28]

So something very simple here. So I have just labeled a couple of things. Obviously we have the annotation tools that you would expect to have available when you are creating a detail. You can be dimensioning things and putting in text and fills, etc. Now you will notice that the 3D tools are gray except for the Object tool, because we can't draw new walls or put in new windows in a detail drawing. It's a 2D drawing. The only reason the Object tool is available is because there are objects that have an appearance, and whatever their symbol is can be used in a detail drawing as well as other 2D drafting. So this is now the beginnings of a detail. It's set at one inch to a foot. [0:10:27]

How would we place this onto a sheet? We are in the project map. We can see the “Eve Detail” here is in bold. It's just slightly highlighted so that we can see what we are in. If I go to the view map, then if we move down through the views, since I have a clone folder for the architectural details, this is a clone of that same set of views. Each one of these is linked to the viewpoints that I create in the project map. Each one has its own individual settings; however, they are inherited from the top level. So the top level for this clone folder was set as one inch to a foot with a certain layer combination and a certain model view option. [0:11:19]

Generally, you would want to set it so that it shows the right things in layers and has the right options for model view options. We'll look at those a little later. I want to point out that each one of these details can have a separate scale factor. It can have potentially different layers, although it would be rarer to do that. So here is where you might say this detail is at three inches to a foot or 1:5. Right now I

do have it set to match because the default for the clone folder matched what I did here. But of course, we could change that to whatever we need. [0:12:02]

So this now exists here. If we didn't have a clone folder, then you would use the option to “Save the Current View”, which would save this viewpoint in the view map. You have the opportunity to give it a name and to confirm what the properties of the view settings are. Whether you have it in the clone folder or you create a new view, we now have the opportunity to place it on a sheet just like anything else. So let's go to one of the architectural sheets here. We'll go back to the view map and drag this detail onto the view, and you can see that it has shown up. [0:12:37]

Now this detail is showing up at the right scale. If I select it and go to its settings, we'll see that one inch to a foot or 1:12 here. It does not have a title. That's simply because the default for the drawings at this point in time is set to not show a title. I can either manually switch to show a title if I want or I could go and eyedrop one of these and inject it into this one. What that will do is inject the drawing settings which will include the title. [0:13:14]

When I do that, you can see that this one was set up to automatically display the drawing title of the drawing. It's set up to be placed in terms of a grid in this case down at the bottom area. So generally the favorite settings for the title of the details will be similar. If you have a grid and you want them to be positioned in the grid consistently that would be a part of your drawing settings. Now the next time that I place a detail it will just pop in with the title below it. If I zoom in on this, you can see what we would expect here. It is shown in black. If we go back to the source view – let's see if I select this, right click, and say “Open Source View” we'll be back in this view. [0:14:14]

You can see we have color here. If I go back to the layout book, you will notice it's in black. That is because again the settings of the drawing itself as opposed to the source view and the drawing has the option under the properties for a different pen set. In this case, it's turning the first row of pens all black. So that is again a standard part of the drawing settings that you can use to make all your drawings pop out. You can use black lines for the main structural information there. [0:14:54]

We now have a detail drawing on a sheet. It says that it's drawing 3-A on sheet A-12. Let's go back to the section where it was called out. We are still seeing a reference based on the ID of the detail and its name rather than the drawing information. How would we change that? I will select it and go to the Detail Selection Settings. This is the detail marker. It's selected, and here are its settings. One of the things is we have an option for the marker head. And it says, "What is the first text row we are going to show?" Here it says reference ID. So that was the D-01. [0:15:41]

I am going to say that I prefer this to refer to the first placed drawing of the viewpoint. So here it's referring to the viewpoint in the project map, which has an ID and a name. I could say I would like to point it to a particular drawing on the sheet, and I can actually select that. But a very common thing

would be to say it refers to a viewpoint, and it will show where this viewpoint is placed as a drawing. The reason why this is a common one is because in most cases you are going to place the drawing of the detail on a sheet once, and the first place drawing will refer to the one that you expect. [0:16:32]

In rare cases, you might place it in more than once in more than one location in your drawing set. This would say, “I will pick the first one you do.” If you need to, you can point it to a different reference, but that's a rare case. So this would be the most common: first placed drawing of the viewpoint. Now that I have done that, it has the option of showing the referred drawing and the drawing ID. I will put this back. There is the viewpoint. You will notice how this switched down below. If I say it's going to refer to the first placed drawing of the viewpoint, then it automatically switches to show the drawing ID, the layout ID, and possibly the name. [0:17:15]

The name is going to make it a mess. I will just say OK so you can see that. You can see it has the 3-A and the A-12, but it also has the “Eve Detail”. That's probably not what you want for final output, although you could leave it temporarily. I will say 'Show Name' is turned off so it's only going to show the referred drawing layout ID. Now we can see something very conventional. You will notice that this has the round bubble here, and the elbow leader line there. And it has the rounded corners. Then there is this rectangular extension. When I deselect this, you can see how that information gets simplified. [0:17:59]

This is sort of what you would expect it to print. The important thing to realize is that this detail has an arbitrary cropping outline. When we created it, remember we clicked on two corners, and it copied everything within it. Remember, there's nothing over in these corners really, it's empty space. But basically, it will copy everything within the rectangle. The graphic here, in terms of the rounded rectangle, is just one of the choices that you can do. And you do have options for its graphic appearance. So you will notice this little magenta hotspot. [0:18:35]

If I press down on that and say I want to move it, or actually move this icon here, you will notice I can make it more rounded like this or less rounded like that here. So these are options that you can do on the fly if you wish. Let me undo this back. You can set it up as a standard. Now I just did this manually here, but if I go into the detail settings, there is an option under the marker for geometry. In this area, we will take a few minutes to look at some of the options for the marker itself. [0:19:20]

The marker has different options. You can see there are different styles of calling out details. So there is a built in one and there's a better detail marker and indicator and stuff. You can experiment with them. One that would be used in a different context would be “Detail Part Marker”. If I select it, you can see that even though it refers to this box here, it has a little line and a flag. This would be useful if you wanted to place the detail marker on a plan to indicate that something is being referenced in an alternate view. [0:20:05]

So there are different styles. Let's go back in here and see what happens when we do “Detail Marker 01-18”. You can see this is a slightly different look here. There are going to be some different options. I am going to put it back to the standard one here, and let's look at the options within the parameters, including the text and size information. Depending on which one you pick, these may be somewhat different. Let's just get a sense of what they do. [0:20:39]

First thing is what font. For some reason, this has Arial and this funny extension Cyrillic, which would be something maybe that allows you to do Cyrillic characters. I am going to choose Arial regular here. It probably didn't make a difference for the standard characters here, but this changes the character set for some of those accented and odd characters. Here is the size of the text. It's in points if you are in the U.S. Just like text labels and other uses. This is how big it is on paper. Points in general, there are 72 points in an inch, so this would be 1/8” high. [0:21:24]

Now if you were in metric in the international version of ArchiCAD, then this would show millimeters and it would be the height on paper in millimeters. This is the height of the bubble. This is the letter D here with the circle. So it's the height of this bubble at 35 pt. I want this to fit in a little more comfortably. Right now it's barely fitting in here. I may want to take this down to 7 pt, and that will make the text a little smaller. I will say OK, and you can see what it did there. Clearly you want to look at that and set up a standard so that whenever you do detail callouts, it's similar with rare exceptions. [0:22:05]

If I change this the bubble will get bigger or smaller. Now we can also change the font style to bold, italic, and underline, and the font pen for the callout area here. If we go to Marker Geometry – and I wish this would pull down. Maybe if I close up some things and pull this down. Now we can see more detail here. In fact, I can close this top one and then as I open these, we can see more information. So that's a nice trick. Close up some of these panels, then when you go to the bottom, you will be able to see more information. [0:22:47]

So you can see “Marker head shape”. The head is the circle. You have some options here for triangle, and you can see how that shows up. I am not going to experiment with all of them, but certainly if you have a different standard like hexagon, you can use that. I will put it back to circle. The “Marker text rotation” is horizontal. You could change it to vertical. Sometimes that may be what you want for certain types of drawings that were going to be placed. Maybe you were going to place that drawing rotated, so you are telling it to rotate in this orientation, and the whole drawing is going to be rotated onto the layout. [0:23:24]

So that could be what you do there sometimes. Now we have the “Marker Head Rotation” - “Rotated” or “Always horizontal”. I think that would have to do with this line here, because this is a circle, but there is a line dividing it and is it rotated. So you can experiment with this. The “Marker Polygon and working mode.” This is a little more confusing to people. I have seen people have some frustrations with

it, so it's definitely important to understand a few things about it. The Marker Polygon is this rectangle. It doesn't have to be a rectangle. It could be a polygon, it could be a circle. It could be just a straight rectangle. [0:24:16]

These are all different options that are available here. And let's say I do it as a circle. So here is the circle. Even though it's copying this information here, the callout is the circle. Remember when I click outside it we just see the callout, so you could do that. And you will notice these magenta hotpots, I can pull that out. So depending on what graphic you want, this may be very satisfying to work with. You will see this geometry circle – I am not quite sure, the distance here, I don't see a way that you can type it in. [0:25:21]

What is equally as important is this. See here we do have a rectangle. It's just going to be a box or rounded rectangle which is what we started with. There is an option for the "Working mode". This is important because sometimes you may want to adjust that, and it's not letting you. So you see this thing that says "Follow clipping polygon". When I press down on it, it says "Editable polygon" or "Fit to clipping polygon". So what does that mean? [0:25:51]

The clipping polygon is the boundary that we used when we called this out. So I just click two points to define a rectangle. That's the "clipping polygon", it happens to be rectangular. But there is an option here that allows me to clip out a different shape, possibly an L shape or some other shape here. Now if it follows a clipping polygon, that means that the rectangle is going to automatically be just as big as the extent of the clipping polygon. So this is the default. Let's say OK, and we'll see how now here is the clipping polygon and here is the rounded rectangle sitting neatly within it. [0:26:34]

Now there is a question from Iain which relates to this which is "How do you amend the extent of a place detail?" This is exactly what we are looking at right now is what is the extent? So suppose that we realize that we need to go a little further. We need to include more context. How would we edit that? When I have this selected, you will notice that there is a sensitivity to the edge here, just like you would expect from other polygons. When I press down and use the edit the shape, now I am saying let's take it a little further out here. So now the clipping polygon is bigger and the rounded rectangle that matches it and shows us what we are looking at is bigger. [0:27:22]

So that has changed the clipping polygon. Let's go to the detail and see if it's got now that extra rafter tail here. It does not. So what do we need to do to make that happen? Remember, this detail was copied from the 3D model. It's nice, because we get linework. And in fact I will demonstrate one thing here. Here is a line. Maybe we don't want to show that line. Maybe even just to be arbitrary we are going to clean it up and remove a couple of these lines. You get the idea that this is a line; this is not the rafter tail itself anymore that we are dealing with. This is a fill; it has a particular shingle pattern. I could adjust the boundary of it or possibly pick a different pattern. [0:28:14]

I will do something odd like that. So here is a stone pattern there. So this is editable. It's not affecting the roof or rafter tail in 3D; it's only affecting the linework. Remember, I changed the extents, so this should have gotten bigger or ideally matched what I did. In order to have that happen, I need to go to View menu, Refresh, Rebuild from Source View. What that will do is go look at the clipping polygon and grab the current state of the model and put it into this view. So now you notice that the notes I put in are still there, but the things that I deleted have come back because it rebuilt them from the source view. [0:29:04]

So in this case, I haven't gone very far. I can go delete the few things that I was cleaning up. And now I have the detail showing further. So that command is under the View menu, Refresh, Rebuild from Source View. Or, if I right click in empty space, you will have access to that same command "Rebuild from Source View." Be careful because when you do this, any edits such as the cleanup that I was doing here, will be forgotten. It will redraw the model as it stands. But you don't have to worry about annotation on top of it. Anything that I have drawn that has linework, labels, text or fills that is sitting there will still be in the same place on the detail when it completes the rebuilding operation. [0:29:56]

So the workflow that you should generally aim for is to call out details at any convenient point in your process. If you want to do a cartoon set, and say you will need a detail for the foundation, the eave, one here and one there, you can do those callouts anytime you wish. In the detail window, it will essentially start to collect in your file. You can place those details onto sheets having verified the appropriate scale. In other words, is it going to be one inch to a foot or three inches to a foot or whatever. You can drop it in even before you annotate it. Then, when you are ready, you can go in and annotate it and clean it up, etc. [0:30:46]

In general, you can do this at any point that is convenient in the process. You can have the cartoon set, which would have the layouts with the basic detail drawings on there. Even if they haven't had any detail added, you are showing here is a foundation detail; here is an eave detail, etc. At convenient points, you are going to go in and add the detail information. Then when you update the sheets, they will always have the latest version of the detail. [0:31:17]

The one thing that you have to be careful of along the way is if you call out a detail, like we did in the demonstration in the section and then later decide – that's interesting. We have some extra layers showing up here. Let me explain that in a minute. If you call out a detail and then later the model changes, the design has changed, and/or the detail should be repositioned to a new point in space, then the original detail drawing that was generated won't be updated, because one of the limitations and features of a detail drawing is that it is a 2D copy from the model that is created at a certain point and does not get modified or changed by ArchiCAD unless you tell it to. [0:32:24]

So there are two cases where you would want to do the Rebuild from Source View. One is if you reposition the detail, and you want to get a greater or lesser part of the model. The other is when the

model itself has changed when you have actually done some more work on the design. So there is more detail there, or it's just changed; maybe the roof has a slope or things like that. In either case, you would rebuild from the source view if you haven't started on the detail. If you essentially have a placeholder there, and you just want to bring it up to date. [0:32:56]

There is a convenience under the View menu, Refresh. Here is “Rebuild from Model” here. This particular one – let's go to the floor plan here and go to the View menu, Refresh. There is a command that allows you to rebuild all the details from the model. It think it's when you are in the project map and you go to the detail folder and right click here, “Rebuild All Details from Source View”. So use this very carefully. The main time that you would want to do that is when you have gone through and placed a bunch of detail callouts. Maybe you placed then onto the sheets, maybe not. And the model has changed, and you really haven't done any work on the details. Then “Rebuild All Details from Source View” will just make sure all of those callouts have the most current version of the model. [0:33:58]

It's a nice convenience there. But if you have gone through some or many of those details and actually removed lines and done other modifications, you would lose them. It would retain the labels or notes that you put in, but it would lose any cleanup or changes that you have done to the model elements. So this is to be used only when all of your details are sitting there waiting to be worked on and you just want to make sure they all have the most up-to-date version of the model. Otherwise, you can do it one by one when it's appropriate. [0:34:36]

Now you will notice that on the plan, I am seeing all sorts of stuff. This is a rather big mess. That is because the layer settings right now are not corresponding to any particular plan drawing. The layer settings were set up for the detail. So the detail here is – we double clicked on the view here. It has a layer combination called “Details and Worksheets”, which to verify that you can see here is the layer combination “details” plus “worksheets”. And if I open up the layer settings, “Details plus Worksheets” here has almost all of the layers turned on. [0:35:23]

So if you think about it, any floor plan view would generally have some layers turned off. In other words, you don't necessarily want to show the furniture and the roof at the same time, because it's a mess and you either are showing a roof plan with no furniture or furniture plan with no roof. Sometimes you just have the bare walls and fixtures and dimensions. So in general, all of your layer combinations, like the standard – what does the floor plan have? It has certain things turned off. It doesn't have furniture or roof on, etc. So in general, the plan or the sections will have certain layers on and off. [0:36:10]

But for the details, when we are in the detail environment, it's often convenient to have everything turned on. Why? Because in this environment here, this came from a layer. This is on the layer “A-ROOF UPPER”. So this is a fill that came from that roof element. This line here is part of “Roof Accessories Rafter Tails and Surfaces”. So it came from a particular detail. If I click on this line, it's part of “A-WALL EXT 3D”. So detail drawings, while there are some different strategies some people will do, we've

generally settled in on the strategy that when you are working on the detail, all the layers should be turned on. So you have all the access to the information from the model, and you can put your annotations wherever you want. [0:37:03]

One reason why this works different than say sections or floor plans is that most of the time a detail drawing is only going to have one representation. In other words, we work on this, we create the detail, we place it on a sheet at a certain scale, and that's that. We don't have alternate views of it with different layers. That is not to say you can't have more than one view of a detail. You may have the same detail at two different scales, so that it is a detail drawing within an even larger detail drawing. Or maybe there are things with scheme one and scheme two. There could be variations. Then you would want to use layers or possibly things like the renovation filter to control that. But the simple case, the most common case, is that when you call out a detail, you create one drawing, have the layers all turned on, and then you place it on a sheet and the only changes you make are to add more detail or revise it, but you don't have two versions. [0:38:12]

So that is a simple approach that works in the large majority of the cases. Now I see some questions here. Rick Skorick says, “Can you eliminate the four tick marks surrounding the text?”

Okay, so you can see the little tick marks surrounding the text here. This is something that is turned on and off through the View menu, Onscreen View Options, and it's called “Text Box Handles”. So this does not print out, it's just an easy want to select text. If I turn it off, then you can see we are not seeing those. There still are those handles, but no tick marks. [0:38:54]

Okay, so that's an option for visual clarity. Maybe you are meeting with a client, and you want to turn that off. When you are working yourself, you leave it on just to make it easier to select text. That is one approach.

Marobathota Mamabolo – welcome Marobathota. I hope I pronounced your name close enough. You write, “Details would normally require dimensions. Can you do that?”

Absolutely. So I obviously didn't pick something that was – I didn't do it from a section, so we're not dimensioning little things for the wall. But how wide is this rafter tail? How far are they spaced apart? Let me go to the Dimension tool. Whatever layer you want to have it on here, the dimension tool – I don't know why it's on the wall layer, but we'll just put it on dimensions here. And I will go and dimension from this point to that point, and from this point to that point, and for good measure, go to the end line here. Double click, and here are our dimensions. [0:40:08]

So just like labels, dimensions, text, fills, all of these 2D tools will be fine. And this is set at a particular scale factor, so in other words, how large the text is here is based on the size of the text that is set up for dimensions. And the scale of the drawing that is going to be printed out.

Todd also asked, “What about dimensions? If you revise the model, will the dimensions retain their associativity?” In general, the primary workflow is that you create the detail and you detail it and place it on the sheet. You revise the detail as needed, but you don't update it from the model. That's the general rule. If you update it from the model, because the model has changed significantly, then let's just see what happens. I haven't changed the model. Let's rebuild from source view. It says “Associative elements, dimensions or labels created in this viewpoint cannot remain associative upon rebuild if they are associative to elements generated from the source view elements.” [0:41:20]

So these dimensions were linked to this. And it says do you want to delete these elements or change these elements to static? These are two choices. One would be to delete it, obviously they would go away and you would have to redimension. The other would be to change them to static. Be careful. I will show you what happens. What happened here? Okay, we still have the dimension. It is what is called a “Static Dimension”. That means it's basically just a graphic that we could delete, but we can't really edit. [0:42:00]

Now can we actually go and move hotspots here? I am not sure if it will let me. No, it's static. I can select this dot and delete it to change that, but I can't move that. So this is not very useful. Now why is this all gone and why did the rafter tail go away? I told it to rebuild from model, but the model was not set up with the right layer combination at the time that I did that. That actually brings up the issue of how it's linked back to the source view and how did it know what layers the source view should have? And what the heck are we seeing down here? [0:42:45]

Well, in this sample project, if we go to 3D, we are going to see that there is this stuff on the outside of the roofs that is obscuring the rafter tails. What are these? These are elements that are modeling elements. You can see from the popup “Y Special Modeling Elements SEO Invisible”. So these are used for SEO or Solid Element Operations. They are used to carve out the edge of the roof and sort of allow the rafter tails to have space. Let's just turn that off manually by hiding the layer. And you will see that the layer disappeared. Here is the roof. If I select the roof, you will notice it actually has a notch. So the top part extends beyond the wall, and it's notched to basically be cut out. [0:43:50]

So it's being cut out by that extra piece to allow the rafter tail to have extra space to be seen. So the roof - in the simple case would just be a simple volume – is being cut out. So this is something I go into in the section on Solid Element Operations and using profiles. So there are some layers that were turned on. When I said “Rebuild Detail” that made it a mess. Let's just go back to the section. When I double click on the section view, it puts it back into the layer combination which is what this detail was about. If I right click on this and say “Open Detail Drawing”, that layer is now turned off; the extra layer that was a Solid Element Operator. [0:44:41]

But we are not seeing all the rafter tails anymore. Let's go now and say “Rebuild from Source View” now that we have the right layers. And there is what we've got. You have to be careful. If you choose to

rebuild from source view, use it very selectively. You will lose associative dimensions, because it can't keep it up when you rebuild it. You will lose any changes – like remember when I was going and deleting some of these lines, like this. So you will lose those changes. But you will retain any labels, text or fills that are placed on top of this. You can think of this as the background and the annotation in the foreground. So anything in the background that is managed by ArchiCAD from the model will just get freshened up, and you will lose any changes you had done to that. [0:45:39]

So that is the answer to Todd's question on the dimensions no longer being associative. I don't know what happened to the dimensions disappearing; the ones I thought were static. Maybe they are on a layer that is hidden or maybe they just deleted. But in any event, only use Rebuild from Source View in rare cases where you haven't done any work on the detail but you just want to make sure it's started fresh with the right stuff. Or the model has changed and you want to bring that in. [0:46:19]

Now there is another approach when you want to refresh this from the model. And I will demonstrate this. This detail drawing does know what the source view is. Let's see, there's a rebuild from source view. We don't have the source view in this popup. But let's look at the trace reference. So if I click on trace reference and open up the Trace and Reference palette, there will be an option for the trace reference – it understands what its source is. Remember it came from the section "A". So if I say "Show me section A as a background", you will notice here is the callout. Let's zoom out a little bit. Here is the actual section that we can see. [0:47:22]

Now you can see here is a slightly different color because the reference is in red. Let's make it a little fainter so that we can more clearly see that it's a background. So here is the 2D stuff we are working on. Here is the actual section that we have. I guess it's the section up here and it's an elevation in the background. And we can see how well this coordinates. Right now of course we haven't changed the model, so it coordinates perfectly. But let's just go to that section. Let me switch between the detail and the section. Now you will notice I am in the section. [0:48:07]

Now here is a rafter that has a tail at the end. I am going to drag this over six inches. So here is a design change. It's now in a new position. Let's say that the roof – I am going to pick something really dramatic and different. It's a 4 and 12 slope. I will take it up to a 5 and 12 slope. So it's going to be slightly steeper. You will see the angle update. Here we now have a different roof design and a different placement for the rafter tail. And let's go back to the detail. I will swap the reference with the active. Now here is the detail. Let's say that I had done a lot of work on this detail, and I didn't want to lose it and start over. What can I do? [0:49:13]

I could go and edit it. So here is the fill that comes from the roof. I can go and take that up there and take this down there. Now the roofline matches. There also happens to be a line that came from the original drawing. I will drag it up there and reposition this. So there is some other work that would have to be done because of this. So basically I can see in the background what the roof is doing and I can take

this line work here and make it correspond. So I am actually going and redrafting the detail. I don't know where this belongs here, but let's just do a couple of quick tweaks. [0:50:00]

Here is the rafter tail where it was originally and here is the new position. So I might need to – let's see. If I turn off the quick select I can select these elements and maybe turn these off. So now I have just the elements that make up the rafter tail there, and I am going to drag them over to here. So you can see it's a little painful, but I was able to make sure that the detail drawing now corresponds to the new design. So, this is what you need to do when you are doing a detail drawing. It's essentially what you would have to do in any office, whether you are working in 2D or other CAD programs. If you start to create a detail and the design changes, you want to coordinate it. And you have two choices. You can either start over, rebuild from source view, and that has certain compromises. [0:51:16]

Or, you can keep your work and just edit it. In this case you have the beautiful assistance of ArchiCAD with the virtual trace. When you turn on virtual trace, it always has the source view as an option. So it understands what it is and will always present the right view that you came from; section view here in this case. Now we can also use the trace and reference to say that this is placed onto a particular sheet. Let's look at that sheet in the background. [0:51:54]

Now you can see here is the detail on this sheet. So why would you want to do that? Right now, the detail of course I extended it to the left so it's not quite fitting on here. I can easily adjust that. But sometimes you have a certain size that you are trying to fit it into, and you want to basically move some of your annotation around so that it fits better on the sheet. So maybe it's just sticking down a little bit too far to the right, or something else that you want to adjust so that it looks better on the sheet. By using the Trace and Reference with the sheet there, then you will be able to see that. [0:52:32]

Let's see if there are any other comments. Steve writes, “Sort of like erasing and redrawing.”

Certainly Rebuild from Source View is a little bit like erasing and redrawing, but it does keep the stuff that you added like if you labeled things or put in text notes. Those will still sit there. So you are selectively erasing and redrawing. Or in terms of the trace and reference, you are editing it but with a trace that you can see. So you are coordinating it with the current design. [0:53:08]

Okay, let's see if there are any other questions before we finish up. We are at the one hour mark, and we have covered the basics of detail drawings. The basics are that we are in a view, let's say the section view, and we go to the detail tool. We go “Choose, Create a new detail viewpoint”. And a particular style for the callout, so rectangular here. There are some settings for the marker itself that we looked at here in terms of which type of marker and all that. And you give it the right name. We then create the boundary for the area, create the callout marker here and in the detail drawing we add some additional information. [0:54:02]

We set the scale properly once we have it ready, or as an initial quick cartoon set even before we work on it we can just drag a view of it onto the sheet. Now you have a detail that can have a reference to, in this case, the first placed drawing of the viewpoint. This will always stay up to date if you did reorganize your drawings. So let's just see how that works. If I go to the sheet and let's just move this over here to 3B. It's now 3B and we go back to that section here. We'll zoom in a little bit. It now says “3B”; it updates as soon as it rebuilds the view when I zoom in or out. [0:54:49]

So that's the basics of creating a detail. Let's do one more thing before we finish up, and that is if this is a typical detail here, and we want to call it out from another location. We aren't going to start over; we are just going to reference it from another location. How would we do that? Let's go to a different section here. We'll pick another one. It's not quite the same as this, and I have a mess here with the roof. Actually, let's go to an elevation, because that was an elevation here. So in fact, the other one was a section through the front part of the building and an elevation through the back. [0:55:43]

This is an elevation, and we can have the same callout. So how would we call it out if we did want to do that? I will go to the Detail tool, and instead of saying “Create a new detail viewpoint”, I will say “Place a linked marker”. So that means that I am going to put a marker, and it's going to point to something that already exists; it's going to link to it. It will ask which one, and refer to the selected viewpoint or the first drawing of the viewpoint. Let's say the first drawing of the selected viewpoint, and the viewpoint is this eave detail. So I am finding the one that I had been working on. [0:56:22]

It's going to refer to the drawing that this one has placed on a sheet. It will also know about this viewpoint so we can open it up. So let's just say OK, and when I do the place marker, I just click. Actually, I can do a similar shape. I will do a rough shape, whatever I want. And you will notice it knows about 3D and the A12, so that's already there. Let's change the settings for the marker head, and we are going to say “Don't show the name”. We don't want to have that “Eave Detail” there. [0:57:07]

So now it's going to be simple. If I right click on this, I can say either “Open Detail Drawing”, and now we are actually looking at the detail drawing. It is a little hard to tell because of the trace reference. If I turn off the trace reference we are now looking at the detail drawing. If I go back to this elevation I was just in and right click and select “Open Detail Drawing”, here is the detail drawing. It knows what it is. If I go back to that elevation, I can also say I'd like to go to the drawing. That's the drawing on the sheet. And there is the drawing on the sheet, and you will notice that it's highlighted. [0:57:52]

So any detail callout that you have that is placed onto a sheet will have that option to show the drawing on the sheet or open up the drawing itself, because you might want to edit it or look at it in detail. So that's the basics of creating a new reference that is linked to another detail. I guess we can do one other variation here. I will go to a section. Suppose we had a foundation detail and we hadn't brought it into the set yet, but we knew that we needed to have a foundation callout. So what we can do is go to the Detail tool and place an unlinked marker. [0:58:45]

It doesn't give us the opportunity to name it. We will place the unlinked marker here. So this is a marker that exists and does not show up in the detail folder in the project map. It's a marker. Now why would you do that? This is part of a cartoon set. You are basically going to go through your design and say, “Ah, we'll need a detail here and a detail there.” Then later, you will either select this and change it to being linked – so let's assume that we already had a foundation detail and now we are going back to other places. Let's “Link To”, and you go find that foundation detail. You can link it to that viewpoint or the first drawing of the viewpoint there. [0:59:41]

So that would be after you got another detail in place. The other possibility is that you bring in say a standard detail such as a foundation detail from your own work or a manufacturer. Some other public, generic drawing. And you say, “I want to link it to a certain drawing.” So let's say that we placed a drawing on the sheet. In fact, we do have a foundation detail on a sheet. Let's see – here is an example source detail. This one is I believe a foundation detail similar to this. So I am going to say that this callout should point to this drawing on the sheet. This drawing on the sheet has nothing to do with it, but as an architect or designer I say, “Yes, that's relevant.” I am going to point to it and say OK. [1:00:38]

You can see how again it fills in some information. Let's go and take out the name here. If I want to I can say, “Alright, so this callout, show me the drawing.” And there it is. So this is the drawing here. It roughly relates to the context that we had. So that is how you would do it. We have already gone through how you would bring in different drawings from different sources, whether it's PDF or DWG or any other project that has a detail or any other drawing. We placed it on the sheet, and then when we do a callout, you can link it to that. So that way you have a nice callout that points to where the information is on your layout book, and everything is all linked together. [1:01:30]

So let's see if we have any final comments or questions before we finish up today's session. Iain says, “Prior to rebuilding, I drag a copy of the detail off to the side.” Okay, that's fine. If you are doing a rebuild from source view and you are a little unsure whether there's any information you might lose, you can certainly select all the linework that you have and drag a copy off to the side. As a copy, it won't disappear. It will still be in the view when you rebuild from source view. So that is an interesting option there. [1:02:43]

Steve says, “Okay from here, another good one. See you next time.” Excellent, thank you Steve. I think we will finish up here. We will continue on with detail drawings next week. There are a lot of different things that we can talk about in terms of management of detail libraries and editing imported details and things like that. Please add your comments and questions to the page down below the recorded video. This has been Eric Bobrow, thanks for watching.

[END OF AUDIO 1:02:44]