



BEST PRACTICES COURSE – WEEK 26 In-Office Project Management - Part 1 - Redlines and the Markup Palette

Welcome everyone to the Best Practice Course ArchiCAD training lesson. Today we will be starting on week 26 of the Best Practices Course. I'll scroll down in the course outline, where we will see week 26. I laid this out years ago originally as In-Office Project Management. And I tried to group tools that I think help to manage your projects in the office. So "Redline" and "Markup" are what we are going to be talking about today. [0:00:32]

There are some tools within ArchiCAD that have actually been around for many years, certainly back to version 10, and probably back to version 7 if I'm not mistaken. Version 7 of ArchiCAD was one that the slogan was "Publish the Virtual Building." So the idea was how you could distribute your work out to the world in ways beyond simple printing. So there were actually the beginnings of publishing on the web and the opportunities to create markups outside of ArchiCAD, which probably were very little used because the tools were cumbersome. [0:1:11]

But inside ArchiCAD, the tools for the markup palette were robust, and they continue to be useful to this day with only modest changes over the years. They've been extended this year with a parallel set of revision and change management tools that I think are really in parallel. Obviously, you're going to mark things up to say things need to get done and either take care of it yourself or have one of your in-house or out of the office consultants do the work. Then the change management tools now can notate what has been changed from one issue to another, so they are definitely talking about making changes to what has already been drawn up. [0:02:03]

So we'll take a look at that. In coming lessons we'll look at spell checking and version and revision comparison and probably some other things that aren't written down on this outline. I'll be thinking about it, and if you have any suggestions for anything that would fit under this week's topic let me know. I wrote this up a while ago, and I definitely want to make sure we include all the things that are generally related under this topic. [0:02:31]

So let's go on to ArchiCAD. I see a comment from Ian saying, "Check out UK government's BIM site." And Rick says - I'm not quite sure what that refers to. So Ian, perhaps you can tell me a little bit more. I know they are promoting BIM very strongly in the UK. And of course that involves the intelligent 3D model that we create in ArchiCAD. It's a great solution for BIM. And it involves saving out that model in a format that other team members can use. So your structural, mechanical and other consultants. And basically managing more of the data on the project so that it's usable as much as possible throughout the design and construction. And even facilities management of the building. [0:03:33]



I'm starting with a blank screen here, because I just want to start simple. Then we'll probably open up my sample project. I'll just draw a little box for the tiniest bit of context. And let's take a look at what are called the "Markup Tools". So if I go to the Window menu, Palettes, there's a palette that you may or may not have opened up called "Markup Tools". This markup tools palette is also available under the Document menu, and you can see "Markup Tools" here with a checkmark. If I select it, it goes away. Of course I can activate it. Now there's no keyboard shortcut built in, but you could add it into your keyboard shortcuts if you wanted to open it and close it quickly and easily. [0:04:17]

And this palette will dock to the side. You can see how it gravitated there. And if you were on Windows it would snap to the side there. By the way here is a little tip. If you do dock something either deliberately or accidentally and want to move it without moving the other part like this, you can hold down a key. I think on the Mac it's the Command key and then press down and it will move that palette individually. On Windows it is probably the CTRL key. Alright, so here we see markup tools. We can see a number of different panels here, so we can open and close them. Let's start with the topmost one here. And before I get going, I'd just like to ask the question, how many of you have used the markup tools? And if you have used them, let us know whether you have used them a lot or just played around with them. Okay so I will look for that in the chat box as we proceed. [0:05:19]

So what is a markup? Well a markup is basically an issue or a set of notes about a change or something that needs to be studied. Certainly it's intended to have some direct relationship to how we think about it, in terms of any design project. In other words, if you're working on the kitchen and there are some notes on the kitchen that are all grouped together and related, then you can have them as one markup entry; and separate ones for the entrance or for landscaping or things like that. If the kitchen is a big focus, you may want to have a markup entry for the kitchen sink and the window and its adjustment separate from the flooring and some work that you're doing there. So there's nothing that says a particular room has to be a single entry. [0:06:18]

Now what does it mean to make an entry? You can see that "Active Entry" is "None." There is a button here that says "Start or stop corrections." So if I click on this, you can see as soon as I click on it, it says "What are we going to call this entry?" So in order to work on corrections, and work on what you have onscreen, you need to attach the annotation to an entry. So we will call this "Issue 1". I'm going to give it a generic name. Now there are some styles here. And you can see that they initially are related to the severity of things. In other words, it's very problematic. Problematic or not, you can see it also has something to do with its status. Its revision might be noted that it is something that should be revised, in progress, or closed. [0:07:16]

And then of course if you have an approval process where one person does it and another person approves it, then you may want to use this. Remarks, obviously you could use that category to say this is just something for information. It may be a reason why something was done, a record of the decision, and things like that. So these are annotations. I will just call it "Issue 1" and I will call it a revision. And



I'm starting a new markup thread. We could also create a response if we had some markup threads. The term thread is something that most of you are familiar with, but in case you are not, it would be a sequence of comments or discussion related to a particular topic. It's common in e-mail. You send an email; they reply back, you go back and forth. That would be considered a thread or discussion. In online forums where something is posted, whether it's a question or comment or article and their comments and discussions. So thread ties them all together. [0:08:19]

So we're going to start a new markup thread. I will say OK. And what do I do here? Well I have corrections going, I have an active entry, what can I do here? As I click, actually what I did here was I had the Wall tool still active. And notice that the walls all the sudden are in red. And it does correspond to the fact that the correction color is set for red. You could click on this, and I guess you can't change the color here, but there's another place where you can set up the color. You can see it says "Four elements added." Now that probably wouldn't be the way that we would notate this, we don't want to draw walls here. But it does bring up the interesting idea that you can sketch out something with real 3D elements and make them actually considered corrections or revisions or ideas. So we'll look at that more in a minute. I'm going to undo that there. [0:09:24]

If I go to the Label tool here, I will draw this here and I will fillet this corner. Let's say we wanted to make a change to this. We're going to round off the corner of this building for some design purpose. Now that is a note under the issue. You notice it's red. If I turn off corrections, if I click on it again and do a similar note like this, you'll notice that this is not a correction. Now what is the whole point of this correction? Well one thing is that I can now see that there's an issue. If I double click on this, you can see it zooms to it. So by double clicking on it, it zooms to whatever it is. And you can have multiple items here. If I double click on it here and let's give it a little context, I can also attach a view. [0:10:39]

Now this is new. I think this was added maybe even in version 18, having an attached view. It's tied into the BIM collaboration format tools that are new in ArchiCAD 18. The idea being that you could mark up something and send the notes and a view of that area to a consultant. So I can actually go outside of ArchiCAD. These markup tools will now be available through this special format when you send it to a structural engineer. Now it's not just 2D, you can actually have views of a 3D collision and things like that where duct work is colliding with structural. [0:11:22]

I can say "Capture" here, and you can see now this particular view is set up. And also if I double click and say "Apply View" you can see how it brings that back. So this could be a 3D view as well. So this is new in version 18 I believe. The rest of this palette has been around pretty much since the beginning. Now if we wanted to put a cloud on this, we could do that. One way we can do that is with the Spline tool. I'm going to go back to the corrections. So I activate this, and it automatically goes to this issue, this particular one. So it's going to be attached. And let me use the Spline tool to create a little bubble around it. [0:12:12]



Now it doesn't look like a bubble because it's using the simple Spline tool. But if I change the solid line here to the one that it's intended as a bubble then you can see what happens. Now this you can see is now added, so there are two elements into the corrections there. And you'll notice the red color. Now one of the advantages of the markup tools is that you can hide them. So I can click on this and hide it. Now if you think about this - and I'll turn it back on - this element here, the label is on "Annotations Notes". And this Spline, if I select it here, is on a layer called "No Plot" here. So I'm using the standard U.S. template. Actually this is - layers are different than what I remember the U.S. template having. In fact this is definitely not what I remember. [0:13:18]

Aside from that, the main point is that these two elements are on different layers, so we can actually have annotations on multiple different layers that are natural. And I could go and use our Quick Layer palette here to, for example, hide this layer. So you can see that hid both the note that is part of that issue as well as the other label. And I can undo that. So the layers and the markup issues are two separate ways of organizing information. Now it could be confusing at first to say, "What should I use for what?" Let's just say that layers generally are going to control what you'd like to see for particular phase of work or for particular drawing types. [0:14:15]

So for a floor plan, you want to see certain things. You don't want to see the trees or the ceiling lights. For a ceiling plan you want to see stuff that's relevant there, etc. So those are layers. Now for the markup, essentially, when you're focused on either noting things that need to be discussed or changed or working on them, then the Markup elements are useful. Now in order to avoid having the project get too cluttered, you can turn on or off different issues individually. So let's just say we were working on the kitchen over here. Let me go here. Right now we have the markup entries. We have one issue. You can see these buttons, if you hover over them, it says "Add Entry" or "Import and Export Markup Entries" or "Delete Entry." Well "Delete Entry" would be obvious. Add entry we're going to do in a minute and then we'll see about import and export later. [0:15:15]

So we'll say "Add an entry" and we'll call this "Kitchen Redesign." So it says "Start new markup thread," or it could be something that is a sub-item; a response to another one. So you get the idea that this is really a pretty flexible and extendible system. So let's just say "Kitchen Redesign". Now I don't have a kitchen here, but let's say I wanted to mark something up over here. Now I use the Spline tool, and I use the option that is built into the Spline tool that allowed me to just click a series of points and it created a smooth curve between them. This is also a more detailed Bezier curved Spline. But unique to the markup tool is the free hand option. [0:16:03]

So with free hand, we can actually go and hold down the mouse and drag. And you can see how it just sort of followed my cursor. This could be selected and turned into a bubble. You'll notice that it created sort of an arbitrary number of points here just based on the way I drew my pencil. In this case it's not intended to be a final output, so it's just to make it very easy to actually mark things up like you would by hand. Now if I wanted to, I could again switch this to the bubble here or not. That's optional. Now



this here is the kitchen redesign, and so you can see I can turn this - this here is the kitchen redesign, and it's the active entry. Let's see, if I turn this one off, this kitchen redesign is not actually part of it. I apologize; I'm not quite sure what I did wrong there. [0:17:17]

Maybe I hadn't hit the "Start Corrections." That's right, I had created a new issue but I hadn't started the corrections. So the new things that I was trying were not included. But that's not a problem. I can select anything like this after the fact and use this button here to add this, to turn it into a correction. And when I do that, now it's red here, but if I turn this off or on you can see it's attached. So let's just say that we had some walls. I'm going to turn off corrections. And just for the sake of a quick demonstration, let's say that here was a kitchen space and we wanted to make it bigger or something like that. Now we could of course just put an arrow and say "Make this bigger" but sometimes what you may want to do is, with the Wall tool, consider putting the walls over here. [0:18:16]

And you can see how they show up as elements that are in a different style. And because the active note was the kitchen redesign, they are attached to it. You can see now there are three elements. you can see this one here. Let me take this and can I maybe do something interesting? Let's just say resize this and I will take this and make it bigger. So that may be a quick way to take a free hand sketch and move it around. So in case you missed that and are wondering how I did that, select one or more elements, go to the Edit menu, Reshape, Resize or hit Command or Ctrl+K. You can then define things numerically, make them twice as big or 50% bigger, or you can do it graphically. And there are some various options here. [0:19:11]

But if I click anywhere, I'll just click in the center and go out to this point, this is sort of a reference vector. And you can see that as I move my mouse, it's changing the length of that vector either bigger or smaller to get what I want. The first point is the anchor point, and everything else resizes around it. Alright so at this point, we now have the kitchen redesign idea here. I can close this and open it. Now we do have this little bit of an issue here where when I turn that off we're seeing this open here. We will look at that a little bit later. But let's just say we wanted to make a comment. Why this is important or what was the issue that we were trying to address. So I can go to the "Tag and Discussion" and I can say that I would like to add a comment. [0:20:00]

So let's just say "Kitchen needs to be bigger to facilitate client requests." So is this "Status Unknown." And here is a comment, and we can say this is a warning or info. Give it a warning. Maybe a warning would be appropriate if it's something like a collision or this is not up to code or something like that. Let's just call this "Warning" here and say "Add." So you can see the little symbol that we have there. Now I can also put a tag. I can say "Make the room bigger" here. And I can then say "Place on plan." And you can see that when I click on that "Place on Plan," I can actually put this note down here. So you can see the note is now part of this tag. If I turn off the kitchen redesign, everything disappears. If I turn it back on, we can see all of the things that I've put in there. [0:21:19]



Now I can turn off the "Show on Plan" or turn it on; this is a tag. So there are a lot of controls here for that. Now interestingly, if I go to 3D, you're going to see that these walls actually show up in a different style also in 3D. So this is a way that when you're drawing things, you can show or hide the elements that might be sketched out. So let's say you're the principal designer and you're having other people actually create the detail design and the working drawings. You might go and sketch something out with the Wall tool, putting in windows and doors, etc. Let's say I wanted to put in a window. So here is the Window tool. I can't activate corrections here, because I have the Active Entries, Kitchen Redesign turned off. Let me turn this on. Now I can turn on corrections and I can pop in a window. [0:22:29]

So now this window is - let's see, can I make it a correction? No. I thought you could indicate the window was a correction there. With the kitchen redesign selected, it says "Those elements could not be selected. They are not visible in the current view." So it selected the 3D elements that are a part of this. If I go back to the floor plan and I do the select, then it selects all of them including the 2D annotation. Now can I select this window and make it - no, it's not letting me add that. I thought you could do that for windows, but apparently not in terms of making it a markup entry. [0:23:21]

So let's see if there are some comments. I know I asked earlier how many of you have used markup. Chris says "Not recently." Buzz and Jim and Tom saying, "Never used it" and "Didn't know about it." Rick says, "Used it a bit, but it was trial and error." Scott said, "Markup is one of the few tools that I've never used yet. I haven't tried the change tool either, BUT I SHOULD." Okay. And Bob George says, "I usually use a PDF program for markups, so I am curious to see what ArchiCAD's markup system is like." [0:24:00]

Alright, these were comments right at the beginning of this. And I see some additional comments from Robert, Paul, and Steve, they also haven't used it. Okay, so this is all new territory for probably, I'm going to make a wild guess, 95% of ArchiCAD users. In other words, it's been sitting there but not really being taken advantage of. Now we'll spend a little more time looking at some of the additional features that you can take advantage of, but this is the core of it. The core is that you can annotate with 2D things like clouds, labels, text. And you can also annotate with 3D elements that are then considered to be markup rather than final. [0:24:56]

These are organized into markup entries. Each one can be studied in any view. In other words, we were able to find this in a plan view. If I look at this kitchen redesign, let's just take that 3D view here. Let's say that the clearest place to show it was going to be in this 3D view. We could then say "Capture this view". Here is that 3D view of it. So now when we're clicking on this you can see this "Issue 1" shows the view on the plan, kitchen redesign is showing the 3D view. If I click on "Issue 1, Apply View," it goes to this. If I click on "Kitchen Redesign, Apply View," it jumps to that view. So this is not just a picture, this is just a normal ArchiCAD view. It's just recording where you were sitting at the time you captured that view. So it can be a great way to show ideas or things that are problems, things that need to be changed. [0:26:10]



Now you can see that there are some organizational things that we really haven't started to look at such as we can sort by name or date or style. So of course you might have the naming convention instead of just an arbitrary text "kitchen entry" or something like that. You could have the name have a number or some type of organizing system for the first few letters. That would allow you to sort. You can also sort by date, so you can see the most recent things. You can sort by style. That's interesting. "Style," what is the style here? It says "Revision." So we could say this has been closed; we decided not to do it. Or it was done. Notice when I say "Closed," it made this green. And if I change this to "In Progress," we will see other colors. [0:27:01]

So each style will change it. If I go to the floor plan and zoom in, you can see that the kitchen redesign is "In Progress." You can see the color here is an orange rather than red. Let's just change it to the "Closed" and you'll see how it changes to that sort of green. It's a little hard to tell the colors but it certainly looks different than the red. So we could also sort based on the style. So if you wanted to, you could see things that were open issues. And of course the style could be "Very Problematic" or "Problematic." So you can see things that maybe require more urgent action and things like that. [0:27:47]

There are different ways to organize that. You can maybe see if there are comments, what's been commented on recently. So you can see markup comments in the last day. Somebody has done some action and made a comment. And you can also see it organized by thread. I guess the thread is something we should study a little bit. So think about it in terms of your use. If you're a sole practitioner you're the one who is designing and getting the drawings done. And this can be your to-do list. This could be something that when you're meeting with a client you can make some notes. Obviously sometimes if you meet with a client you can actually make changes right on the fly. It can be a very powerful way to get stuff done quickly. [0:28:44]

You can get the buy-in and the approval from the client. Some of you may not want to do that. Of course there are things that are going to take longer, so you may just want to mark them up instead of writing them on a piece of paper or marking them on a plan, you can do that in the model. Now we show this in 3D here. We didn't mark it up in 3D. We can mark it up in any view that you can annotate. So what does that mean? Let's just pop in a window here and a door so we have some context. When I show the elevations, we'll take this out, this elevation here. And if I zoom in on this, I could go and say I want to create a new correction. [0:29:35]

By the way, you can see the active entry is "None" because none of these have been placed onto the elevation. But I'm going to say "Front elevation changes" here. And I'm going to start a new markup thread rather than this response here. Of course, we could have the elevation that showed the kitchen from another angle. But let's just say I'm creating this front elevation. And you'll notice that it's actually showing that view. So here's our first floor, and here's the south elevation. So let me go and activate it,



corrections. They have started. Let's go down to the Spline tool here and make sure it's in the pencil mode. And I will draw something rather crude. [0:30:23]

Let me undo that, I don't like that. Let's do it a little bit nicer here. Okay, and let's take a note. I'm going to put in a label here. "Add side light." So we are going to change the door here. So this is now something we could - I will just go back to the Spline tool and put in a label. Obviously I'm being very silly with the notes here, but these changes I can turn on or off just like we would expect from other things. And we can capture this view here. So we can annotate in any standard view. If you wanted to annotate in a 3D view then you can take a 3D document. If I go to the 3D window here and move this around and get my window resized a little bit, I can go right click in a 3D window and say "Create a new 3D document from 3D." [0:32:02]

Actually, let me just get a slightly better view here. "Create a new 3D document from 3D." If you were in some earlier versions, that 3D document tool might say "Save window as 3D document" or might have a slightly different name. We'll just call this "Perspective of front building" here and create this. Now when we create a 3D document, now we have access to all the tools. And of course we could create a new markup thread. I'm going to add corrections, and we'll call this "3D notes" here. We'll start a new markup thread. you can see this is now in here. We're going to go to this. It's in this perspective, front of building, that's the 3D document and its 3D notes. And I'll put a label here, "Fillet Corner." [0:33:13]

Obviously we can make all the other notes that we want here. If I capture this, this is now going to go to that particular view. So again I can go to the "Kitchen Redesign, Apply View." I can go to the "Issue 1, Apply View." I can jump around here. And remember we have all the discussion here. So think of it as a way that you can make notes on things, and then when they are done, you can just change the state from "Revision" to "Closed" or "Improved" and turn them off. Go to the "Kitchen Redesign" here and we'll just say this is already closed here. We can hide it here. So these things then become not seen. If we go back to the first floor here we don't have those notes. [0:34:11]

Now we are going to deal with this in a minute, because I want to check out what options we have for these elements and not interacting with the existing elements. This may be a little bit sloppy in terms of the controls that we have with markups. In addition to it being a to-do list for your own purposes, this can be used for other team members. In the simple case, you're doing some work on the file and you mark it up, and then hand it over to a staff member or colleague and then they work on it. It's the same file, they just open it up. If you do have comments and you're working in the same file, the author - so remember we had comments on the kitchen redesign. Here is the author, my name here. So all of the author names will be the person who is logged in. [0:35:12]

I guess it's picking it up from my name on the computer I'm assuming. If you handed this off to someone else in the office as a solo project, then their name would go on there. Now in Teamwork, this becomes even more useful because you can not only assign things and see what people have done and see what



their notes are, but you can actually literally assign things. So I know that we can - let's just put this in here. That's the help. I believe that you can assign things. Now maybe it's only in Teamwork, I apologize. I haven't worked with this in a while. But as I recall, you can select markup items and assign them to team members. [0:36:09]

Obviously, when we're in a solo project, that's not going to be available. So it then becomes a management tool for noting things that need to be done, following their progress or having possibly discussion or record keeping. "This was done as per the client e-mail on such and such a date "or" The consultant indicated that we need to make this change." So you now have a record. What are some of the advantages? It's part of the digital file, so you never have to worry about which piece of paper you wrote it down on. Did you put it into your notebook or one of those printouts of a half size sheet, the set that you carried to the meeting; you just have one place that you can put these into. As a record of the process, who requested it or what comments were made. Perhaps there's research and things that you can notate in the discussion that you want to keep track of. [0:37:08]

So it becomes a really powerful and generally pretty simple to use tool for these elements. And now remember, this kitchen redesign, if I show it, we have these elements here. I hid it, so it went away, but we could actually go and there are two things that we could do that I didn't show you so far. One is we could say these walls here are going to stay. They're no longer part of the markup. They are going to be removed. You'll notice when you're selecting things that are marked up, this option here says to "Remove corrections." I click on that, and now they're normal. And when I hide the kitchen redesign, this is showing normally. Now of course what that means is that in this case we might want to just delete this wall here. [0:38:12]

Now we've made it bigger, and of course these two walls could be combined. There's unfortunately no command says "Combine these two walls that are straight." I wonder if we can - when you have more than one wall selected, you can go and edit the shape of them. And one thing is you can move one vertex and it will move either ones. I can go to the edge here and pull this out, and it will actually extend like that. So it treats it like a polygon. And I can move this point around. So I can move this node point around and now it's a short wall here and a longer wall there. And of course I can bring this to the corner. So that actually has combined both walls into one. So that's an interesting way that you can do that. [0:39:04]

Now if I did have a door on this side and a window or door on this side, I'm not sure what would happen there. We might lose the other door. In other words, when we stretch this wall to take up the full length, we might lose the door that was in there. So that would be at least something that might make it a little bit more awkward. But ultimately, what you can see is that now the "Kitchen Redesign," we're going to say that it is "Approved." If I hide it, the notes go away and of course this element is no longer part of the markup; it's part of the final model. So that has to do with taking things out here. Now



"Highlight" we didn't look at, but if I go to the "Issue 1" I can select things like this with this button here. I can zoom to them or I can zoom and select. You can see these are two separate things. [0:40:03]

And if I go back to previous view these also highlight. Let's see, if I had the "Issue 1" I can select stuff. And then if things are selected, I can highlight it. So highlight there - if I select these walls here and add a highlight. So now if I hide the issue, you can see that the notes go away but these walls did not go away. If I show it, when this issue is showing, we're seeing the notes and these elements here are highlighted. So when we're in the markup tools and they are active and a markup is highlighted here - now if I go click on a different one, it's still leaving it highlighted. So if we want to look at this issue, then this allows me to see here. Now let me just change the color to "Revision" and you can see now it's highlighting that. [0:41:12]

So there's a difference between elements being part of the markup and elements being highlighted in the markup that is pretty flexible. You can see two elements, those two walls are highlighted, and two corrections there. So that explains most of that concept there. Now if later on, let's just say I select these two here, go to the corner, use the fillet option and let's say round this here. So now I want to say these two walls I no longer want to highlight. I will just take them out from the highlight with this button here. And now this no longer has them highlighted. If I turn off the issue this goes away. So we've covered most of the markup tools basic usage. Let's see if there are some questions. [0:42:14]

So I see some additional comments. Dave Olaf says, "I've used it, but just needed first issue but couldn't find it and gave up."

Rick says, "I used it for revision notation." Okay. So you can use it for noting revisions that are done. But in ArchiCAD 18 we have a separate tool called the "Change Tool" which is visible here which allows you to note changes that have been done and collect them to indicate them on sheets. So it has the ability to be essentially scheduled to say what's been changed in any particular sheet or which sheets have been changed since the last issue date and things like that.

Ted says, "Can the style names and categories be changed or added to?" Good question. So here we see styles, and we have a limited number of style names. We don't see anything that says "Add to that." [0:43:20]

I also mentioned there are some color choices here that were built into the styles. These are editable under the Options, Work Environment. We will try Onscreen Options here. Here are some colors relating to teamwork and energy evaluation. Where is it? It's not in this one. Let's see, Project Preferences. I'm trying to remember where this is. Document, here's the Markup Tools. I don't remember, and I know you can do it. So I'm going to right click on this and say "Help". So I'm right clicking in part of ArchiCAD's interface, in this case, the Markup Tools palette, and choosing "Help." This will open up the ArchiCAD



help in the browser here. Now we are seeing different things. That didn't really go directly to that. We could browse through here, and I could search for "Markup Styles" here. [0:44:55]

Let's see if that brings up something. "Markup Styles dialogue box" here. Markup Entries, Markup Tools palette. About project markup. So there are a bunch of things here. And let's just see there, "Read More". They are project attributes which can be defined and edited in Options, Attributes, Markup Styles. And here you can see the dialogues. So let's go and look at that. We're going to go to Options, Element Attributes, Markup Styles, an area that I've pretty much ignored I think. We may have briefly looked at it when I was looking at the element attributes in week 20. Let's look at Markup styles. Here they are. So each one of these, you can create a new one. This is "Ted's markups." I can give this a - let's see. Style Attributes, Correction Elements. I can say I want it to be a certain color here. You can see how those colors can be changed. So it doesn't have a lot of choices, just a name and colors. [0:46:22]

And now when I go back in here, here's "Ted's markups." So you can add your own styles there. Now Ian says, "How to note that the revision has been done?" Well basically, if I go to any issue here, there is a choice of style. And the style could be the phase. In other words, is it a revision that is noted, in progress or closed? Which would be one way of saying it's done. Or is it closed and approved? Because if you do have a hierarchy in the office, someone may say, "I finished it." Closed could essentially say, "We're not doing it. It's no longer under discussion." Closed could also mean it's done. So you could have a separate category for completed but needing approval. [0:47:13]

So anyway, just by changing this to "Approved" you can see how the color changes. And you could also sort by style. And you can see these issues with the style identified. So this allows you to sort it and see, in this case, where it stands. Now these are gray. Why? Because they are in other views, they aren't visible on this floor plan view. But if I wanted to, of course I could go and look here. These 3D notes here, this revision - I guess they're both actually done. So I could change the style here to "Approved" or "Done" or something like that. Now it resorts. [0:48:00]

Rick says, "Where do you control the highlighting poché colors and attributes?" I think it's basically the simple color. So if I go back to the "Issue 1" which is on the floor plan, and apply that view here, where it's approved it has this particular color. If I change this to "Very problematic," you can see how it has a rather different color there. And let's just say this element here, I wanted to highlight it. So when I say "Add a highlight," you can see with "Very problematic" it has a different color for the highlight. So let's just look at that. Options, Element Attributes, Markup Styles. And that "Very problematic" here, you can see the highlighted elements is this color. [0:48:08]

So if you want to make this a bright red or something like that, you could. Now you can see that it's highlighted in that color. So in terms of the poché, I'm not sure you have control over that. It looks like it's set up as this dot pattern. I'm not sure if you have controls over that. So what do you think of this in terms of future use? I think almost everybody here said that they hadn't used it and many said they



weren't aware of it. Many of you said you just played around with it or were looking for it and didn't know how to get started. Now that I've showed you the basics of how to use it, do you think this is something that you would want to use? So let me know here. [0:49:59]

Rick says, "Cool. I like it."

Tom says, "Can you clean up corners?" Good question. Let me see if I can go back and figure that out.

Dave says, "Housekeeping question. Can a Spline bubble be cleaned up so that both ends of the Spline meet neatly?" Let's just see about both of those.

So if I change the bubble to just a solid line here, you'll see that this is a clean result. Basically the Spline can be - if we open up the Spline settings, there's an option that says it's a "Closed Spline." So you could make a Spline that is open or you could make one that is closed. [0:50:51]

And it may automatically close it if you click on the starting point. In other words, I started at one point and I clicked a series of points back here. That may just be the default and you can finish anywhere you like and it'll just close off the last side. So it is a clean result there, but in terms of the bubble, the issue is that obviously the bubble spacing is not quite enough space here. Even though we're only seeing some points and we're seeing the line, if you think about it, if I put it back to the line, these points define the virtual line here. And the bubble is connecting around that. Now if I move this and press down on this, you can see that we have editing options for the Spline. I'll just make it a little bit bigger. If I make this a little bigger or change it, you can see that we're getting closer to having a clean result. [0:51:49]

It's a little bit funky there, but there, I have it correct. What I did was essentially, if you think about these, they're not all even. In other words, these bubbles are somewhat different sizes to make it look a little bit more hand drawn. But if we say that that the total distance - I'm just going to say in terms of inches of paper, to have this many bubbles was 8 1/2 inches and I was at 8 1/4 inches, then it would miss out that last quarter piece. If I made it a little too big, like 8 3/4 or 9 inches then it would start the next one. So you have to move it around until you have the virtual circle having the right distance. [0:52:38]

I don't think there's an instant way to clean that up, but you could tweak this. And just to verify, if I make this bigger like this, it's going to now start another one here. You can see how it started that. So it's not a perfect solution there, but if you play around with it a little bit and know that you're trying to either add to the length there, I made it a little bit bigger so it was able to finish that last one.

[Reading a question] "Could you use the bubble from objects?"

Okay so let's see other comments here. Steve says, "I like the idea of using it as a to-do list."

Ted says, "I'm going to start using it tonight!" Cool.



Scott says, "I appreciate the overview. I'm more likely to try it because of this lesson."

Dave Olaf says, "Can modify the bubble line in line attributes, but it still trial and error to get it closed." That's true.

Okay, Dave Norman says, "Thanks for the little demonstration of cleaning up the Spline bubble."

Jim Belisle says, "Markup looks very useful. Must leave webinar now for a project meeting." [0:53:52]

Now there are two outstanding comments here. Ian says, "Can you use the bubble from objects?" In terms of objects, if we go to the Object tool there are two things. One that I didn't mention, but it would be implied. Let's say that I go - here's a cabinet. I'm going to pop in this cabinet and drag this into position. Here is a cabinet kitchen sink. This cabinet could be highlighted with an issue. So now you can see it's highlighted, and when I turn off the issue, the cabinet shows in its normal view. So when I say "Highlight the issue" we can do that, just like I had those walls highlighted. Another thing is the elements, instead of being only a highlight, can literally be added into the correction. I guess maybe it can't be if it's highlighted. Let me un-highlight it and then add it to the correction. [0:54:49]

So it beeped at me. You may have heard that. Now if I hide it or show it, basically we can put any type of element, except for maybe windows and doors and maybe markers. We can put them into a markup as a correction to hide or show with it or as a highlight to show its highlight or not. So those are one thing. Now that's separate from the question of can you use the bubble line in the object? So in the Object tool, if I go to "Bubble," it is searching. There's nothing with the word "Bubble." Let's look at "Cloud." [0:55:43]

So there is "Red line cloud rectangular or round" from ArchiCAD 17. So we are in ArchiCAD 18. If you were in ArchiCAD 17 or earlier, then we would have these as objects. I can't remember I thought we had some cloud ones in the standard library. In this case, I'm just going to download and embed this. So this is something that was built in starting with maybe ArchiCAD 15, the ability to go to the Graphisoft BIM components portal and grab elements, to search for them and to grab them. Now this is an element. I will drop this in and see what it does. So you can see that it is certainly convenient. I will drag this into position and stretch this here. [0:56:37]

So this is a cloud that I can apply. Now it's not part of this issue, but I could make it part of this issue here. Now when I hide this or show it, we can use that. And there is around one that I think can be made oval. So you can at least have quick ones using that tool as opposed to drawing the Spline. And by the way, I drew a spline, but we could just as easily do a circle. So I will do a circle here, and maybe make it an oval something like that. So I can put this into a cloud like that. It's similar to the Spline and not necessarily going to have a closed thing, so it will potentially be a little messy. But again, we can use any rectangle or marker circle or Spline and put the bubble line type there. [0:57:43]



And you can create your own bubble line type if you find this too bumpy or not bumpy enough. This is built into the standard template for ArchiCAD, so you should have one like this. There's another one here that is a sketch line. This is another way that you can indicate this isn't a hard line; it's more of a description or showing an idea here. So those are some entries there. We have to get back to wall cleanups. [0:58:21]

Robert says, "I can see using it, but to be honest, I am so surrounded by AutoCAD users, I would be making red lines for myself." Certainly if your workflow is that you're doing stuff in ArchiCAD, but then handing it off to AutoCAD users, you might as well get it cleaned up yourself before you pass it along. But there are going to be things we're going to look at next time where we use the markup in a way that can go out to other team members using AutoCAD or other tools. So we'll be looking at that. [0:58:57]

Bob George says, "It will take a little practice before I see the benefit of moving away from my PDF system." I understand. Certainly you can print to PDF and markup using Acrobat or other tools in PDF, which is fine. Some of the advantages that I can think of doing it this way are that you can have a discussion and different status things in terms of is it complete or not. You can hide or show it by particular markups, so you can have different markups and focus on the individual ones. You can have markups that are tied between different views that will actually show elements in 3D view or elevations. So there are some options there, but of course working with paper or PDF, there's a simplicity to that that is very nice. [0:59:51]

Okay, Rick says, "Strange that you can do the same thing with windows and doors, don't you think?" Yes, I'm going to check on that. I thought we could do that, but apparently not as corrections.

Ian says, "Last question. Can this generate a revisions list or schedule to add to the drawing package?" No, because first of all it never was there, but secondly, in order to address that we have the Change tools. So the Change tool - which I did go through in a recent lesson on ArchiCAD 18 new features - does allow you to put bubbles and arrows and other things down to indicate changes that have been made. [1:00:35]

And the power of it is that these can be collected in terms of issues. So in other words, you submitted something to the city; they marked up stuff or asked for changes. You're going to have a revised issue for second submission or something like that. So you can have, on the layouts, a list of things that have been done. Or you can actually see which layouts have been changed, because you may have a set of a hundred drawings and only eighteen drawings actually need to be printed again because only those ones have been modified. So that's done with the Change tool and the Revision Manager technology that's built into ArchiCAD 18. [1:01:20]

So it's certainly related, but I would advise you to look at the demonstration in the training in the Best Practices Course, ArchiCAD 18 New Features. Let's just bring that up here. If I go to the Best Practices



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Course, Advanced Lessons, we have ArchiCAD 18 New Features. I will scroll down. Change Manager and New PDF Options. So that would be where we want to go would be the lesson on that topic there.

Dave Norman says, "Gotta go." Okay. I understand we're at the hour mark.

Let me go and just see if I can get something cleaned up in terms of the walls. What's the best way to do it? Let's say that I wanted to create a new markup entry. So I'm going to go to corrections and make a new entry. We'll call this "Exterior Addition" here, and turn on corrections for that Exterior Addition. I'm going to draw some walls. [1:02:52]

These walls are basically being added on, and of course I'd want to indicate that these walls would be taken out or not. How would we do that in this particular case? So let's deal with it in two separate ways. If I go back here to sort by name, we have the exterior addition. If I hide it, you can see those walls that were proposed go away. If I show it, they come back. When I hide it, you can see that there are gaps in there. Now the reason why there are gaps is because these walls are on the same layer as the other walls, so when they are visible, they show up. When they are hidden, they're still part of the same intersection priority. So frankly, I don't see a graceful way to deal with this, but I do see a simple way. [1:03:53]

What I mean by that is let's go and put this on another layer. I don't want to put it on Interior Walls because it's not that, but let's just create a new layer specifically for this purpose. So I will go to the layer. Now maybe we want to have another layer for "Exterior Walls in Addition." Maybe we want to use things like the Revision Manager. Actually the Renovations. Let me try two different options here. I'm going to create a new layer, and we'll call this "New Walls" here. And I will change the number here to number 2. And you'll notice all of these other ones are number one with the exception of demolition here. [1:04:10]

This is indicating that elements that are put on this layer should not interact with elements that are on the other layers here. And the layer combination for new walls are not going to be seen. Let me say we want to show them here. So I'll just turn them on, and I'll also change it to the number 2 for all of these. If you're not quite sure what the heck I'm doing, I'm basically creating a new organizational category for certain elements. I am telling it that in each view, I want to show these elements so that's why the eyeball is open. But I want them to be in a different intersection group. You can see this little icon of the intersection priority. [1:05:30]

I now have these walls that I can put onto the "New Walls" layer. and now you can see they're not cleaning up to that. If I hide the Exterior Addition, as soon as I zoom in or out, it cleans up. It just needed to be refreshed, that's all. So I can show this or hide it, and it's clean. Now let's say we did make this make these finalized. In other words, they're not going to be part of a markup. I can say that I'd like to remove them from the markup, and you can see they lose their poché. And then would want to put



them onto the normal layer, let's say "Walls Exterior" so that they would clean up. And of course maybe I would want to take these partition walls and delete them. Now they are going to clean up because they are on the same layer. So that would be the simple way, but it isn't dealing with it as a markup. [1:06:37]

It has to do with dealing with it just with layers. Still, if I undo the fact that these are - now these are still in the markup in here, so you can see how they go away or come back that way. Now the other way we might do this - and let me go back here to where these walls were on the same layer. Now they're on the "Walls Exterior" layer and we're going to call them markup ones here. So we'll add them to this; we'll turn them into corrections is what it says. And now of course they're going to have this issue. But let's also use the Renovation palette and see how that works. let's see if it combines. So the go to the Window, Renovation, and say that these elements are, we're going to call them "New." [1:07:39]

And now because they are new they don't show because we are showing the existing plan and they don't have a problem cleaning up. If I switch to "Planned status" then they do show up and clean up. So this works separately from it. We can hide them as ideas and say let's go back to the existing plan, or we can show the planned status and show those as corrections. So we have different ways to manage it, depending on things. When doing renovation projects, you can put things into the planned status as ideas before they are finalized. If you want to have them in a markup status and do some discussion, this is a supplemental way to organize your thinking and your record keeping. [1:08:40]

There was a comment from a few minutes ago about generating a report that lists all the issues and probably their status.

Ian says "Good night." Okay thanks, for joining us.

Here's this button here that says "Import and Export Markup Entries." So "Import from file," this is one way we could bring things in. now it says "Contents from .bcf file" So this has to do with BIM Collaboration format. So we're talking about collaboration with other professionals who use BIM tools, whether it's a structural or mechanical system or other types, like energy analysis. You can import markup entries that way. You could also export them out. [1:09:32]

Now I haven't work with this, but the intention here is that you can send over your markups to the engineer. And maybe they have some sort of structural element that conflicts with some mechanical and you want to ask them, "Take a look at this. Can we remove this or change the size of it, what are the alternatives." So instead of trying to write it up in an e-mail and hope that they understand what you're talking about, you can actually show a saved view. So those views that I did here will come across so they can see the notes as well as the actual view of the 3D model. [1:10:13]

So I'm not going to spend time looking at this today, but at some future date I will get some example files and we'll see how that works. Okay, so this would be something that would export it, but I'm not



sure there is any other way. Oh here it is. "Show report of all entries." Here is a report, sorted by name. So this is just a simple text thing. And here are some notes. This is a tag that I had to make the room bigger. We don't see any of the discussion. I think I had something that said, "This is based on the clients' thing." This is a text file that we can save out. [1:10:57]

If I go to one of these where the comments were, "Issue 1", didn't I have Kitchen Redesign? Here we can see this. Now maybe because this is hidden - let's turn this on and say "Show report of all entries." No, we're not seeing that note. So when we say "Show report" it doesn't have that discussion. So it's a little bit limited from what I see here. Tag and discussion, show on plan. This is an internal way to keep track of things. And the "Export" has certain options, but not necessarily all of the stuff that you could imagine it could do. [1:11:43]

Alright, I think we've covered the basics of this pretty well. I will proceed onto some other tools related to markup and communication, and we'll go on to spell checking and revision or comparison. One of the things that may come is wanting to see what has been changed between two versions of a project or two versions of a design. And how can you actually study that, what tools in ArchiCAD will help you to pinpoint changes there, whether they are coming from outside the drawing or internal. I want to compare where we were at three months ago compared to where we are at now, because I think we made some changes over in this area that we should double check. Okay, please add your comments and follow-up questions to the page down below the recorded video. This is been Eric Bobrow, thanks for watching.

[END OF AUDIO 1:12:49]