TOM TOBIN: Good afternoon. Welcome to this session. You guys all fed? You feel good?

Not ready for the nap yet. Next class you can sleep all you want. This one let's pay attention to if we can, all right?

We're going to be talking about our CAD details today. Nobody here has CAD details existing? Big libraries? Yes? No? Of course we do, right?

So let me, kind of, give you the highlights of what this class is going to be about. It will not be a new features class. I am not going to go over anything in 2017 so if you're looking for that, I'm sure there's a different class for it. This class is marked as an intermediate class, which simply means that they expect that you already know everything you need to know about AutoCAD or AutoCAD Architecture, and you've got a pretty good understanding of Revit. Would the show of hands say that's about right? There you go. That's good.

So what we're going to be looking at are ways that we can utilize our CAD details in our existing Revit environment, how we can link or import those, whether we need to redraw them, or whether we can just Revitize them with the Revitization process, you know, that new app that's out there-- which doesn't exist, by the way. So that's what this class is basically going to be about. So I always like to give everybody the opportunity-- if this isn't what you thought it was going to be, you know, I don't want you to feel like you wasted your time here. So if there's another class that you want to hit, you won't hurt my feelings. We will be taking names at the doors, but you won't hurt my feelings.

So how many of you this is your first day at U? OK, quite a few of you. How about two to five? Even more of you in five or better. OK, we got a few guys who have been here quite a few times.

For you guys who are first-timers, are you getting a lot out of this? So by tonight, you'll start to have that little brain overload. So this is a good time to be doing this class.

All right, for every one of you registered architects, congratulations-- you will get learning credits for just listening to me talk. No easier way in the world to get a learning credit.

You should be familiar with this-- couple of housekeeping things. I like to do this before every

class. If anybody's still rocking a pager, please see me, OK? We'll have an intervention.

But just silence here your devices. Try to refrain from browsing the web if you have that ability because when I'm sitting in the class and someone next to me is doing that, I start paying attention to what they're doing as opposed to what's going on.

We're going to try to save questions till the end if at all possible. Autodesk is recording, so I will refrain from saying any foul words or what I may really think at any given time about how an operation works. Everything's wonderful, all right?

So here is our learning objectives. How do we use AutoCAD details in Revit? Anybody already trying to use AutoCAD details in Revit? Well, what are you here for? You're already doing it, right? You're completely successful. Right, OK.

We're going to discover how to use drafting view. Every one of you in this class should understand what a drafting view is. Yes. OK, good.

We're going to talk about the difference between importing and linking. You do realize there's a difference, right? OK. And then we're going to talk about how to Revitize these details, and then try to tie everything up in a nice ribbon at the end here.

So as I mentioned, this class is existing CAD details. They are still good. AutoCAD to Revit-- it's all about our details. So it's really about the library we've already created. That's what we're really getting to.

Those of you who are in this class-- how many of you are on the path to full Revit implementation? That's the goal, right? To be 100% Revit house. All right, that's most of you.

How many of you are going to be a split environment now and probably for the foreseeable future? OK. And that's OK, too.

And my firm-- that's exactly what we are. We like to make it even, you know, a little more difficult on ourselves. We're not using AutoCAD and Revit, we're using MicroStation and Revit, so we just want to add that extra challenge. You know, you guys running Auto-- this is easy, right?

Anybody running MicroStation? A few of you know exactly what I'm talking about then.

OK, let me give you just a quick bio on me and why, maybe, you can listen to what I have to

say. I've been in the industry for about 26 years. I actually started on ink and mylar doing pen bar drafting. Anybody have a clue of what I just talked about? Oh man, this is a lot of you here. OK.

For those of you who don't know what I'm talking about, picture manual layers, OK? So you put a piece of mylar down, you draw the plan, then it's got little holes across the top. You put a bar in it. Then you lay down another piece of mylar and maybe you do your annotation. This is how you did layers in the old days. Then you blueprinted these together, OK?

Speaking of blueprint machines, you guys all miss the ammonia blueprint machines? Weren't they wonderful? OK.

One of the leading manufacturers of the ammonia blueprint machines was a company called Breuning Everybody familiar with Breuning? You may not know that Bruening came out with a CAD system to go against AutoCAD in the early '80s. That's the first CAD system I learned. It's like my father-in-law saying, you know what a good system's going to be? Beta. OK. So wrong choice on my part.

But I worked in that. I went to Intergraph, worked on Intergraph. Intergraph users? OK. OK, we're a dying breed.

You ever hear of ARRIS? There was [INAUDIBLE] even fewer people alive. ARRIS was, like, 1980s, 1990 Revit. It was database-driven. Everything object-based. Whole thing.

I just like to tell you because I stopped using ARRIS in '94. I came back to do some consulting for a company in 2004. Opened it up, and it was exactly the same. Except for now instead Unix, it ran on Windows. So there was a big leap forward.

From there, the first version of AutoCAD I ever was on was 10. Then to AutoCAD Architecture, Revit Architecture. Dabbled in BuildersCAD. Anyways, my point is I've been on a lot of different systems. And the point of telling you that is that I believe when you know one CAD package, you know them all. So we can work within these two different environments, and we should be able to make this be cohesive.

I also spent some time in the reseller chain. I was the AutoCAD Architecture consultant and the Revit consultant, and so I helped companies do implementations in trying to get here. So that's just a little bit about my background. And I think I've probably been or have seen what you're going through.

And I have found that one of the most important things ever in any operation is our attitude. PMA-- my father beat this into me as a kid. You know, maybe "beats" is not the right word, but yeah, I felt like I was hit over the head with it several times. The man who thinks he can. A positive mental attitude is everything. You guys have found this out in your own businesses, right?

How many of you are end users? I don't want to say just end users, because that's not right. But you are the guys who are doing the production in the trenches trying to make this thing work to get the jobs out, right? How many of you are bin managers or CAD managers? And how about project architects? And owners? OK, just a few of you.

And the reason why I ask that is because this goes both ways. If the owners, project managers, bin managers don't have a good attitude about what you're doing, your users aren't going to have a good attitude. If the users have a lousy attitude, you're not going to make this. So everybody's got to have a good attitude to get through this. So enough soapbox preaching on what we need to do there.

We got CAD details, right? AutoCAD details. We're going down the road of moving to Revit. Most of you in this room are trying to do to 100% implementation of Revit. So what you want in the end is 100% clean Revit detail, ultimately, right? That's the goal.

But we've developed all this stuff over the years. We got a huge library of MicroStation details that we use from job to job to job. Now, when a lot of companies are doing their implementation process, you have somebody come in and they give you a great talk on what you need to do.

What are some of the things that you need to create when you're doing your implementation to Revit? You need to create a template, right? That's one of the first things they tell you you got to do. So in this template, you need what? Anybody.

Well, yes. Eventually you're going to need details, but mostly what you set up in these templates are, like, your wall types, your families. Doors, windows, schedules, fonts.

How's this going to look? What's our title block going to look? How do we get that over from the other to look this way so that our drawings still look consistent, right? So you're thinking about all these things that you need to do to make Revit work for your firm. Oftentimes, the

details is the last thing people think about because it's just something they haven't had to think about, right?

So how many of you have started moving towards Revit, you're in the middle of a project, and you realize, well, I have no Revit details? Just a couple of you. Yeah. And that's kind of a scary thing when you got to get the job out or you're go to a meeting, right?

So if you're doing an implementation process, and let's say that implementation to full Revit is a year, maybe year and a half. You can start getting those details redrawn or Revitized, or some of the ways we're going to talk about how we're going to do this. Can you guys say the word "intern"? Right. Fantastic use for an intern.

So this is something that we need to look at what we're going to do. The biggest question that always comes up-- do we trash these details? Yeah. No. I'm sorry, no.

But ultimately, our goal is to phase them out. For those of you who are trying to become a 100% Revit house, your ultimate goal is to phase these details out, right? Because they're all going to be Revit details.

So as we move towards a full implementation, we may be getting rid of them eventually. If you're going to stay a mixed environment-- and I can tell you right now in my office, we're going to be a mixed environment for a very long time. And that's OK. You can have a set here and a set there.

And it's really not trying to manage these two. Oh, I can't manage these CAD details and these Revit details. Now I'm doing things twice.

The reality is that when you've created these, you put them in a library on your server, right? How many of you put them on your server? OK, you're not just copying them from job to job? How many of you are just copying them from job to job. You're too ashamed to raise your hand. Got one guy who is willing to tell the truth.

So when you bring these into your job, most of the time-- not all the time, but most of the time-- you may have to edit that to your job's specific environment anyways. So it'd be the same thing in Revit. So managing these two things isn't going to be terrible once they're in the system.

They're still good. They still have value. We can still utilize them. I do want to make one thing

very clear. I probably should have said it at the beginning. We're only talking about 2D detail drafting details, right? We're not going to be talking about the details that we can create from callouts within the model.

Are we all on the same page with that? That's a different class. It's a good class, but it's a different animal. OK. So now that we're talking about true just drafting, we should be able to move forward.

I like to throw this in all my talks the first step towards change is awareness. The second is acceptance. A little bit of philosophy. Something you take home, think about, you know. The reality is that whether you're making this change because you want to, you're aware that it's happening.

How many of you are forced to move to Revit? OK. There's a few. Most people, when I say forced, they get a job and they say the deliverable has to be in Revit, and that's where a lot of people decide that, OK, I guess I'm going to learn Revit.

So now that you've become aware that you've got to go that way, the second step is, of course, acceptance of that. So there are three different types of approaches to how we handle our details in Revit. Any guess as to what they might be? Go ahead, shout it out.

Link. Link is one. The number one thing is-- oh. Exactly. I like that-- oh. Is redraw them.

This is where I talked about an intern. Say it with me-- "intern." There you go.

This is the perfect world scenario, right? Every firm has this kind of time. I know, I work in an architectural office. You never have fires or deadlines. You map these things out perfect. You have time for this, right? Every one of you have time for this.

No. No, this is a perfect world. This is where we would like to be. And once again, when I mentioned with the implementation plan, if we plan this out and build it in, then we have a shot at that becoming pretty standard.

But that's not the real world we live in, is it? That's the perfect world. The real world is hey, let's import or link them, OK? They're like reference files, but really, this should be a short-term solution. This is not something you want to do project after project after project and keep doing it. This is more of a as we're transitioning, getting over the hump, got to get something out the door-- I got a meeting. This is what we want to do.

By the way, how many of you downloaded your handouts? Did you bring them? Yeah. Anybody who didn't bring a handout, I have some extra handouts if you want to grab them. I'll throw them out out here.

Now that I said that, you don't need the handout for this class, OK? Those are your take-homes. Everything I say is in there. There's a little bit more information than what I'm talking about.

But the big difference-- what is the big difference between importing and linking? Can somebody tell me quickly? OK. And why wouldn't we want to do that? For those of you who didn't hear, linking is a separate CAD file, and importing them brings them and makes them live in Revit.

Now, is there any reason why we wouldn't want to import them? Go ahead. Harder to modify. There it is-- when we import CAD files, it brings unwanted things with it that can muddy up our Revit file. It can add size, it can cause warnings.

What it'll bring in is line types that we don't want, line styles, patterns, things that we don't want in our pristine, pure Revit environment that every one of us in this room have, right? No errors, no warnings, everything's perfect.

So when we do this procedure, we want to link them-- now, there is a time when we want to import them, and we'll talk about that. So that's number two. And the third method is the Revitization process, right? How to Revitize the detail. It's not quite the perfect world, but it's close.

How many of you have Revitized details? It's a good time, isn't it? It's really not that bad. Once again, intern, OK?

No, this is a process-- there's two methods for Revitizing a detail or for doing Revitizing anything in Revit, and we're only going to talk about one, because one of them is just bringing it in. How many of you bring in an AutoCAD floor plan, and then you trace over it with your walls and whatnot to create your model? Yeah, there's a few of you that do that.

There's a lot of companies that still do their SDs in CAD and then push it into-- when we start going in-- I'm sorry DD, thank you. When they get into SD and CD, it's all in Revit, OK? So when you do that, you trace it.

So that's one of the methods. We're not going to talk about you're referencing the CAD detail, and you use the pick line command, and you just trace over it. That doesn't really need any explanation.

We will go over how to actually turn those details into Revit details themselves. So you'll have to forgive me. I have had some bad experience with trying to do some of this live, so I've made videos of this, and I'm going to talk through it.

And it's not a beautiful, canned video that makes everything work. So I was doing it when I was just free-talking, so associate. Please be kind.

So here is my project. We're not going to talk about number one at all, redrawing. I think that's pretty self-explanatory. You guys all understand Detail Component Manager, right? Yes, Tom. Yes. Thank you.

OK, you all understand that, so redrawing is pretty simple. What I'm going to show you is we're going to link a CAD detail in here. And many of you may already know how to do this who've gone through it, but after we've linked it, we're going to link this beautiful typical floor construction joint out of my AutoCAD. I washed my Revit or my MicroStation into CAD. You can bring a DGN, but I tell you, for those of you who have tried it, it really slows Revit down. Turn it into a DWG.

So I'm going to create the new drafting view. Give it a name. Once again, this is nothing earth-shattering at this point. The big thing that you will have to do when wanting to link this detail is what? Any guess? Scale, right.

It's Revit-- we can change the scale. But that was drawn at a particular scale, so if we want it to print out right, we got to make sure that our scales match. That's a big one that when you're doing this, you want to make sure that you get right.

So here is my beautiful, blank environment. Who knows what I did next. If we come and look over at the project browser, we can see that it showed up. There is my control joint.

So this is how you would go about creating a detail from scratch at this point. There's no secret sauce here. Nothing really magic that's happening at this point. But what we're going to do is we're going to insert, and we've got our two different options that are available to us-- the link and the import.

We already said we were going to do what? We're going to link. Yes, we're going to link this.

One of the things that you want to do before you link these files-- first off, this works best for individual DWGs. You guys have already experienced that, right? Somewhat.

You can bring in full things and then clip them, but we get tied up in naming conventions and things like that, so it works best if it's an individual DWG. So we want to do that, and then we can link it. You also want to make sure that you copy that DWG into a project folder.

Don't leave it on your server. Don't be referencing this from your library. Copy it out of your library and put it into your job, just like you do now, right?

So we're going to bring this in. Here's my list of drawings. And I'm going to pick my DWG here. My system must have been running great that day. So there it is.

Now, we see we have the different choices. We got DXF, DGN, as I mentioned. Really, DGN-- it works, but it slows things down. Those of you who've been using MicroStation, did you experience that? Maybe, a little bit.

OK, so we can bring in different types of files. And then the next thing we want to do is dealing with the color. And we have three different options in the color here. It's inverted, preserve, or black and white. I preserve it. I want to visually see that this is not a Revit detail when I look at it.

You can invert it and everything looks, hey, it's just like Revit. But I like to see it this way. I think it's easier to know what is on your sheet that's Revit and what is CAD.

Layers and levels-- you can bring them all in. Have you guys messed with this when you're bringing stuff in? Is this all refresher? OK.

Once again, I like to set up my DWG with just the visible layers so that what I see is what I get. We want to make sure that we correct the lines that are slightly off-axis. Not quite as important when we're just referencing it, but when we want to Revitiez it, we want to make sure everything is straight.

And as far as the positioning and how we bring it in, doesn't really matter at this point, OK? If you want to have it autoinsert or place it manually, it's coming in, there it is-- boom. Just like that, right? Everybody's familiar with this? Right.

OK, so now that we've got this beautiful-looking thing in here, we can see that it would completely go along with my drawings. No one would ever know when this is printed out that it wasn't created in Revit, right?

This is where I like to talk about-- I hate to use the word standardization, or CAD standards or whatnot, but Revit really likes using true type fonts, right? That's where it wants to be. AutoCAD can use true type fonts. All you shaped font people out there-- it's time to let go, OK?

We need to let go of that and we need to start doing our CAD files in the same types of fonts that we're using in Revit, especially if our goal is to become a Revit house. That's going to help. We really won't know what this looks like till we print it out, to be perfectly honest.

We can try to set up STBs instead of CTBs. How many of you guys are using CTBs? Most everybody's using CTBs, right. So you don't have to change that, but you may have to do a little extra work here.

Now once again, if this is "I got to get this out the door," we're not exactly worried about pen quality, are we? Were always concerned about how our drawings look, but we can do that.

But what we can do is we can come into the visual graphics, our beautiful VG command. Or VV, I think. And we can go to our imported category, and this is why I like to only bring in what's visible layer-wise. That way, I only have the layers that are affecting that particular detail.

Once again, you guys all familiar with this? OK. You're glad you attended, I can tell. All right.

So we're going to override these. Unfortunately, at our office, we actually, in the name, say what the line weight's going to be. I'm just going to do this all at once. Give it just a Revit number here. Number 12 is I think [? R ?] 0.25. So I'm just going to assign that so you can see how this works. So we can override these.

Now, once you've done this, you just create a template and it works for everything, right? No. You have to do this for every detail DWG you bring in, unfortunately.

Now, there are some packages out there that will help with the translations and try to make this a little easier. If you're using STBs, this could be a little easier, all right? You have to kind of work this out in your office as to how we create these. But you can see that I actually could change some things here, and try to make it look a little more like I didn't just copy them from

a different cad package and slap it on a drawing.

All right. So we've got this whole thing from Revit or from AutoCAD. You guys, once again, this is probably nothing too earth-shattering, but now we want to add Revit intelligence to this. Now, have you guys all done this at this point? Yes? No? Maybe? I'm not sure where you're going, so I'm not going to answer. All right.

OK, so essentially what we're going to do here-- oh, well, the other part that I didn't talk about with linking it in is using the manager for links. And that's another reason why I like to link it as opposed to importing it, because now it's just like my XREF manager, right? You guys use-- yeah.

So I can repath this to a different detail if I want. I can just unload it without removing it so that things might work a little faster at times. I just have a lot more flexibility, once again, with a link. You can't do that with an import. In an import, depending on whether you just made it that view-specific, or in all views you got to start looking for it. If you want to remove it, you got to find it and click it or go into purged objects and-- you know, this is a lot easier for managing my drawings.

You can see it comes in pinned, typically. So if you want to do anything to it, you're going to have to unpin it and move it around. But once again, this is just the detail view, and we can't what here? We can't really edit this in Revit. We're going to edit it in AutoCAD.

The other nice thing about it being with the link is we can reload it. Or whenever we get out of the project and get back in, it automatically reloads. So those are good things that allow us to do that.

So now to add that intelligence, all that elusive Revit intelligence that I was talking about, we are going to add a callout. And we're going to make that callout go to the detail that we want. You've done this? A couple of you have, some of you haven't. OK.

So what I'm going to do, and graphically just bear with me. I'm just kind of throwing this in as a demonstration purpose. I'm going to make a plan detail. This may not be where you would really put it in a real project or how you would show it, but the principle is all the same. So I'm going to create this plan detail.

Now, what's important here is that this guy up in the ribbon used to be on the option bar, but

he's now up in the ribbon. You guys are familiar with this, right? We must always do this before we place the callout. We can't do it after.

We get the handy-dandy dropdown-- every view that's in our drawing or in our database. It's organized for us. I'm going to go to my drafting view of my floor control joint, choose it. And once I have selected it, then I can place the callout.

Once again, this is exactly how we would do this in Revit, except for we're having it reference in AutoCAD detail. Now, in our office, we actually did this with some interior elevations. We did it with some building sections. We've done this with every aspect because certain parts of the project got ahead of us, so we referenced until we caught up.

And this was how we sort of kept the intelligence. Otherwise, you have to create non-intelligent callouts so that you can add text and fill in, right? We don't like doing that. We lose the power that Revit has for us.

So now, everything works the way we would anticipate it to work. The callout is there. It's still empty because it's not on a sheet. So we're going to go ahead and place it on a sheet. And bing-bada-boom, it's going to fill out the callout once it's there. Once again, this aspect-- this is this is Revit 101, right?

So now we actually have a CAD detail that's been referenced in to Revit that has some sort of intelligence. So I renumber this. We're using alphanumeric.

Anybody know how to change the default from numbers to alphanumeric in placing that? No? Well, you can't do it. All right. I would love to know how to do that.

So we're using alphanumeric. I change that. It's great.

The other thing I just want to use the opportunity to talk about right now-- how many of you let the view name when you put it on be the actual view name? OK, there's a couple of you. Then I don't need to preach the other one, because best practice is to always, whether it's the same or not, always use title on sheet, right? Everybody's using title on sheet? Right.

That way, we can have our browser. Doesn't have to be in all caps if that's our standard. You can read it a little bit better, work through it a little bit better if I use title on it.

We can only use one view name on a sheet, so if I want to call these details or head and jam

or whatever it is, and just say head 1, head 2, head 3, I can't do that unless I use title on sheet. So that's very important.

Any questions about this? This is pretty straightforward stuff, right? Go ahead. That's step two.

Did you guys all hear that? Because that's actually what we're going to be going over next. I don't understand why you guys are here. You already know how to do that. OK.

No, what you have to do is in the AutoCAD-- so what he's talking about is the colors being associated with the pen weights. And you guys all use CTBs, for the most part, so color is determining the pen weight. You could also use STBs, which is style-based, so that it doesn't matter what color it is. It's going to have a certain pen weight assigned.

So if you use the STBs and it knows that it's going to be, like, a 0.25 when it comes over-- now, I'm not going to say always-- for the most part, it'll be a 0.25 when it comes in, OK? But if it's based on color, color means nothing in the Revit side. So you might have to do something else. Or if you can get a translator that you can download, you can try to have that map across that I want certain levels to be certain pen weights or whatnot.

So the next step is what this other gentleman was talking about, and that's how to Revitize a detail. So we'll go through this. And basically, we're talking about the exact same process. The first half of this is we're going to bring in the same detail, but this time, the most important thing-- I cannot stress this enough, and this gentleman here already said it-- never, ever do this in your active project, OK?

Do you guys do this in your active project? OK. Never ever, ever, never do it. So start a new project. Use your template, your office template. It's best if you set up a template just for doing this, OK?

So you don't have to have everything in it. Doesn't matter. But if you just want to have the few line weights or patterns that you use, then just put that in a detailed template and you bring in this way.

So everything is going to be pretty much the same. First part-- we're going to go ahead and create our view again. So this is going to be pretty similar to what we were doing before. Because you guys already know how to do some of this. Let's see if we can go live here and have this not screw up on us.

So here's our job, right? Let's go back to this guy. And let's pick that back up. I want to do-- being tough on me.

OK, so we're going to try to bring this in. We're going to start a new project. You can't see what I'm doing, can you? All right.

OK, let me go back to this. It's still not working. Come on. OK, so this is back where we're at. Let's see if we can speed this up some.

So what we're going to be doing here is just-- I don't know why it's playing havoc with me. Is it up on the screen? OK, it's moving. What I'm trying to do is get it so that we can fast forward that.

OK, well, we'll go through this process. So basically, what happens is that we're going to bring this into our environment. We're going to create the drafting view just like we did before in a separate project. Is it not moving now? OK. Is it moving now? OK.

Well, what we're looking at is we're going to bring this into the environment. We're going to create the whole thing, just like we did before. I'll just kind of talk through this a little bit and we'll see where it's at when it catches up.

So we create a whole different project to do this in. We create the view that we try to make this happen in. At this point, we give it the name. It doesn't matter what the scale is. Why doesn't it matter what the scale is?

Because it's going to be Revit, right. We can change this at any time. So when we Revitize this detail, it can become any scale we want it to be when it's done. So I'm going to bring this guy in, go to my drafting view. And then we're going to import it.

Remember when we were talking about importing versus linking. Why do I import this now instead of linking it? So I can explode it. The most favorite thing we like to do in AutoCAD ever is explode whenever there's a problem, right? First thing you do is you explode this thing.

We can't explode a linked file. So that's why we want to do that. And when we explode it, you definitely get all kinds of extra things into your file that you don't want. That's why we wash it through a separate file all together.

So we come up here. We're going to explode this bad boy. We can do a partial explode, we

can do full explode. 9 times out of 10, you always end up doing a full explode no matter how hard you try not to do a whole explode. Maybe you do it in a couple of different steps, but you end up exploding everything for the most part.

I'm getting a warning there that's saying that when I did this, one of my filled regions wasn't closed. So that's OK because I'm changing it anyways. And to do this quickly, I'm actually not even going to do that detail. We're going to do the simple one.

Now, I said there were two methods to doing this. One was that instead of exploding it, we would have just started tracing it, right? Using the pick tools command and trace over it. But this time, we exploded it. So instead of redrawing this or retyping in everything, I'm just going to change this to Revit styles. Revit types.

And you can tell the difference. The main way you can tell the difference is that when you choose it, it's going to have the drawing name in front of the font name. And that's how you know that it's a CAD font or what the CAD objects are. Or if you're looking at lines, it's going to have the layer name behind it. So we want to change this to be full Revit objects, types, and everything else, so that when this is done, there is no trace of that pesky little AutoCAD anywhere in this file.

So I'm just going through and I'm cleaning some things up. There's a couple of different ways you can do this. What I like to really use the most is my filter command. Filter is your friend--absolutely. But there are other ways you can pick it depending on the complexity.

Now, in the handout, I talk about the time that it takes to do something like this. So, you know, I can't truly project times. I mean, it's all relative, right? Time is illusion, especially lunchtime. Any of you guys get that reference? OK. All right.

But it usually takes anywhere from about 30 minutes to 2, 2 and 1/2 hours depending on the complexity of the detail. Now, in this case, all we're doing here is we're just changing some basic things. This is still going to be lines, circles, and arcs when we're done, right? But if we want to use the Detail Component Manager, then that's what's going to add a little bit more time. And I would suggest that that's what we want to do. We want to try to use the objects as best we can.

There's also-- I think it came out in '15. Might have been '16. But there was a new family which was a line-based family. You guys familiar with this? Right, so you want to start using that in

your details. So if you wanted to put a piece of flashing or a rough membrane or something like that, today we just draw a line in details, right? Just a detail line.

Well, you can now create a family that calls that rough membrane or a particular piece of flashing or whatnot, and you can use keynotes and whatnot. Yeah, so you can use keynotes with that. You can create other notes that will help you do that.

That way, the goal is to have a true 100% intelligent Revit detail when we're done. But in the meantime, just getting the data in to build this library is a pretty significant thing. So what I did was I just changed everything to be Revit lines. You know, I didn't worry about the weights.

But if we look at the filter, we can see that there is nothing there that has layer names in it or drawing names in it. So with that, we know that this is now 100% Revit detail, ready for our use and consumption in any project.

So how many of you have actually already started creating a detail library of Revit? I mean, what did you think this class was going to be? I mean, seriously, did give me an idea of what you were hoping to see here today. Better options. What's that? OK. Well, I'm glad you got-- OK.

Because this is really nothing earth-shattering, but it's something that a lot of people forget. It's sort of the down and dirty we don't want to do it, but we have to do it. There really is no better way today of hitting a magic button and these just being there and populating. We have to kind of go through these steps.

So in doing that, we've got the whole concept. We bring it into the project. You guys, when you do this, do you copy off to the clipboard out of your browser to bring it into your projects? Or do you highlight it all? Or do you use the insert from file? Insert from file, right.

So that's going to be a big part of what we're going to talk about when we start creating the library itself, is how to bring those into the job.

AUDIENCE: Is there something wrong with copying and pasting it?

TOM TOBIN: No. No, there's nothing wrong with copying and pasting it, but the problem is with copying and pasting it-- what you have to do is so we've gone into a different project, create it, we highlight it all, we copy it to the clipboard. Then we go into our project.

Now we have to create another drafting view. We have to name it, we have to give it a scale, and then paste everything into it. So it's a much more involved step.

Whereas if we just come to the project browser-- and this is just from when we've washed it through and we want to put it in our job. You right-click in the project browser, copy it to clipboard, go back to your job, and hit paste. Then it brings the name, everything, the scale with it. So it creates the view so it works a little easier.

Now, that's on your case-by-case basis. This is how you would be doing it for setting up your detail library view. No. Are you talking about if you copy and paste it?

AUDIENCE: Copy and paste it [INAUDIBLE]

TOM TOBIN: No, because what you've done is you've already eliminated-- what you're highlighting is only Revit information. And so the detail itself only has that information in it. So when you copy and paste it in, it's only bringing that.

The other thing that I do once I bring it in-- and I was sitting in a class by Paul Aubin today. I don't know if you guys have been in any of his classes. Great, great speaker, and knows everything there is know about it. But he was talking about little things that make us feel better. The anal-retentive things we do.

So whenever I bring it into the job, I immediately highlight it again, use my filter, and make sure I didn't bring in anything that I didn't want to bring in with it. Go ahead.

AUDIENCE: [INAUDIBLE]

TOM TOBIN: He's asking about creating it as a family so that we have borders around some of the details so you can place them on the sheet. You can absolutely do that. But I'm going to show you something else that we can do, as well.

So once we start creating our details, and we want to put them into a library. One of the ways that we are going to get that into the libraries is that we're going to create-- I've created a detail RVT in my standards folder. You guys have that? It's just detail. Right.

You don't want your end users working in this, do you? Right. So how do your end users get this out. They use the insert by file. One of the things that you can do with the insert by file is, like, I set mine up-- well, this is how I set mine up. I've got it on 8 and 1/2 by 11 pieces of

paper for the most part. And I make PDFs, and then my project architects can just sort of go through it and pick out which ones they want.

But I could have put this on 24 by 36 sheets, and I could have had multiple details on here. So when you're talking about trying to align them properly on your sheet, I can bring a whole sheet in and it'll bring in all those details that are associated with that sheet. Are you guys familiar with that? OK.

So for those of you who aren't familiar with that, that is really a great way of handling this if you have the same typical details that you do over and over. Now, once you've done that, you still have to create the callouts to point to those cheats properly. And that's another thing that people have sort of forgotten. I know a lot of firms who will reference in a whole AutoCAD sheet of details, OK? But now you have no control over how that works. So don't do that.

I've also seen where they have made a fake index entry or dummy sheets, and then just inserted the PDF or the printed out version into sheets. Once again, you lose control over your callouts and how this works.

So what you want to do is you want to create subcategories in your detail library. You guys have subcategories in your detail libraries? There are some methods on how to create a subcategory. It is a project parameter that you can create and put in.

But as you can see, by creating subcategories, I can put under there, OK, these are my roof details, and I put them all together in one spot. These are my typical wall details, head details, whatever they may be. So it's a lot easier to organize this. I try to do that in my active projects, as well, because it's just easier to find. So if you don't know about subcategories, we're not going to get into that, but it's very simple, and there's a good YouTube video on how to do that.

So now that I'm back, I've put those into my standard Revit library that I've created. I've got that on my server. Just like anything else, once I bring that into my project, I'm not going to be affecting the one that's on the server. That's one of the things I like about this, too, is that once it's in Revit, it's in Revit.

So I'm pathing to my standard library. This is my active job. And many of you have already seen that you use the insert from file tool. Now, this looks exactly like our printing, or very similar to how we print.

But this is where we can bring in the sheets. If we had a 24 by 36 or 30 by 42 and we had that already full, it's not only going to bring in the sheet, it's going to bring in every detail with it. It's going to be named properly into our browser. What it may not be is organized in the subcategory where we want it, OK?

So all this is right now is just an example of going through. I love the preview tool. This was new to my guys. They were just blown away when they saw how to do this.

So the fact that they don't have to get into that Revit file and have the potential of completely destroying it, they can look at all the previews they want. The other beautiful thing about doing it this way is I can what? I can bring in multiples.

So if you get into the file and you right-click on the project browser like I was saying and copy to clipboard, you can only do that one at a time, so you got to keep going back and forth. If you do the highlight the detail, then you got to do a lot more work. Here, we can bring in all the details that we want all at once.

So that's a pretty efficient way of working this. And in this case, I was lucky. It did bring them in under their subcategories for me-- oh, no it didn't. OK, I was looking at the wrong spot.

So I may have to move these to where they need to go just to keep my project organized. But still, that's a lot quicker than having to do this individually, right?

AUDIENCE: [INAUDIBLE]

TOM TOBIN: They should. I've had mixed success with this, and I've had the browsers match. He's talking about if we have the same setup as to how we view the browser, they should come in the same. And you're right, they should, but they don't always.

I have had mixed results. That's all I can tell you.

AUDIENCE: [INAUDIBLE]

TOM TOBIN: Right. Right. Any questions on this aspect? Any other questions on how that part works? OK.

AUDIENCE: [INAUDIBLE]

TOM TOBIN: No.

AUDIENCE: [INAUDIBLE]

TOM TOBIN: Well, I take that back-- yes. I mean, the sheet will come in populated when it brings the views in. What it won't do is have any associated callouts. So you're going to have to create a callout, tell it to go to that drafting view, and then everything will--

AUDIENCE: [INAUDIBLE]

Yes.

AUDIENCE: [INAUDIBLE]

Yes. Yes. He's asking if you bring it in where I was showing how you can bring it in from file, and if you use the example of a 24 by 36 with multiple details on it, and I pick the sheet that has all those details on it, it will bring in all of those details. It'll bring in all those views.

So yeah, it's another way of instead of having to go through and sort of pick out each category if you pre-make this, it's how you want your workflow to be in your office. Another little piece of philosophy for you that this has some discomforts when we do this.

So in the end here-- summarize this. This really does come down to an attitude of how we approach this. Unfortunately-- and I feel bad for you guys. There is no magic bullet here, right? These are things that as Revit users, administrators, it's just the pain of having to do this. It's just a time-consuming thing, but the reality is that it's not a killer. It's how do you get across the room, you know? It's one step at a time.

So we've got this whole bunch of libraries of details. We just tackle them one at a time. And then before we know it, we've got all the details done. We've got a library. We can still have a mixed environment in our office-- that's really not a problem because if you're doing a full CAD job or a full Revit job, they're separate, right?

We reference them in so that we can get over the hump. We Revitize them so we don't have to redraw them. That's all this really is. And unfortunately, that's about as good as it really gets.

So use your Detail Component Managers when you're recreating them or redrawing them. Try to add as much intelligence. But to get over the hump, link them in, create the callouts, and keep moving down the road. And our attitude is everything. And the idea is to get to 100%

clean Revit intelligent details.

That's it. That's all there is.