SYMBOLS

# PART 16

**DESIGN CONTENT**

**Contents:**



## 1 Design Content - Access



### Design Content Toolbar

How do I get this toolbar?

For most of the other Objects in ADT there is a rather logical path to accessing them but ironically when it comes to one of the most obvious sources of Content, the access is somewhat vague. There are no alternate pull-down menus and obviously no toolbars ( though you can use our PowerSTRIP to get the old ones back as per illustration right).

The new Tool Palette is obviously going to replace the DesignCenter so that probably explains why accessing these Objects is a little out of the way right now - see comments below.



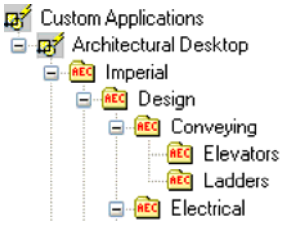
### Design Content Menus

Menu **Insert> DesignCenter [Ctrl+2]**


Keyboard **ADC**

Links Adjusting to the New Interface for AutoCAD and ADT Users- for how to activate the Design pull-down menu

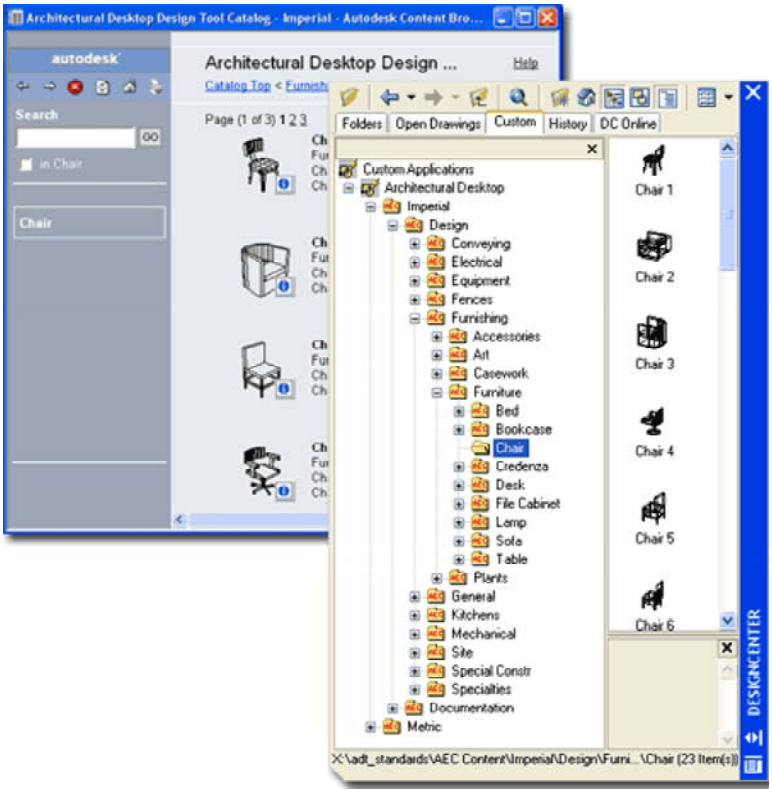
Full expanded DesignCenter folder.




The most expedient and arguably the most effective way to access the Design Content is through the **DesignCenter.** However, if you browse the **Content Browser** you should find that it is well stocked with Design Content that you can i-drop to your own **Tool Palettes.**

As with Object Styles, Design Content can be found as separate folders under the Imperial or Metric folders in the DesignCenter. If you have trouble getting your DesignCenter to find these Objects, make sure the Custom tab is set and that the top item reads "Custom Applications" with a sub-category of "Architectural Desktop". See comment below for more on the location of Design Content.

Once you find a symbol you like, simply **drag-n-drop** it into your drawing from the main list, **NOT** the Preview Pane. Need more help; see DesignCenter for Fixtures and Symbols below.



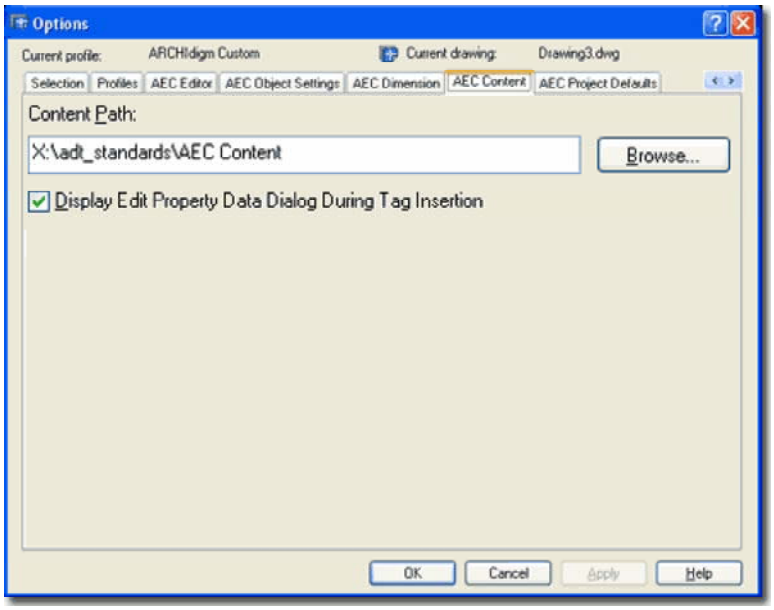
**Design Content pull-down menu - Content Path**

Links [ADT Installation - Setup] - for information on other content options

Illustrated to the right is the **Options** ( type "OP" ) dialog box with the **AEC Content** tab active. For offices that work off of a Network Server, it is fairly typical to have all of the Content located in a common folder on the Server so everyone has access to identical Design Content.

**Content Path** - this is where you can set your ADT to see a common folder on an office's network server. By keeping all of the Content in one place, it's growth and change can be managed much better ( just like a block library ). Once changed, the icons will automatically look for this Path. This Path is **Profile Specific** so you can actually have different paths under different Profiles.

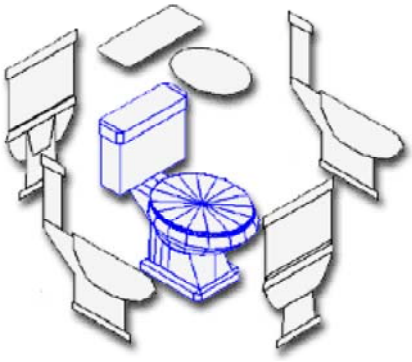
**Display Edit Schedule Data Dialog During Tag Insertion** - this is one of those options that you wind up living with though you can turn it off so easily. Unchecking this option is much like making Attributes Preset upon insertion. To see what this thing does, try attaching a Window or Door tag to a Window or Door and look for the **Edit Schedule Data** dialogue box. Uncheck this and repeat the exercise. Then, decide which option is better. Unchecked, right? I leave it unchecked.



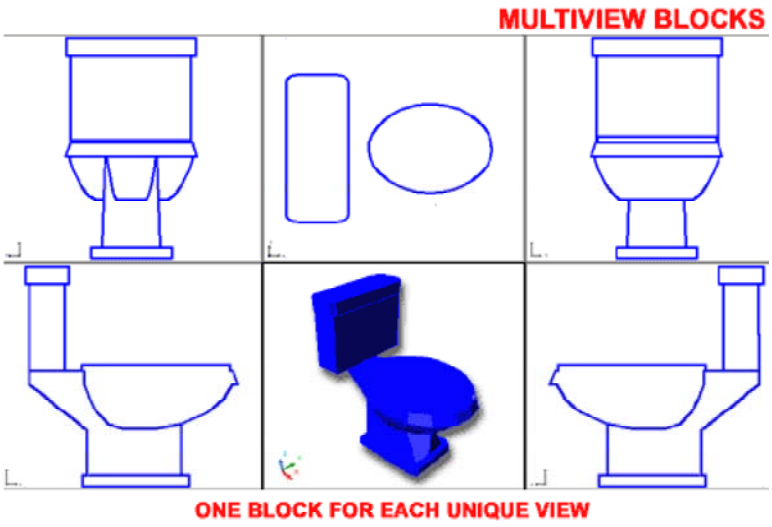

**Design Content - Multi-View Blocks**

Links [Creating Multi-View Blocks] - for more on this subject

Most of the **Design Content** in ADT involves using **Multi-View Blocks**. For those familiar with the traditional AutoCAD Blocks, Multi-View Blocks act as containers of many blocks in a fashion similar to nested blocks ( blocks with other blocks in them ). The cool thing about Multi-View Blocks is that they can be designed to react based upon the view orientation. This is why you will notice that many change appearance when viewed from the Top, Left, Right, Back, Front, Bottom and in Isometric. One of the reasons this technique was employed in ADT was to satisfy the desire of architects and designers to represent one object differently in different types of drawings; in Floor Plans we often simplify objects for easier reading while in Interior Elevations we show more detail.



The part about Multi-View Blocks that is not so great is that since they are made up of multiple blocks, there are multiple places for mistakes when you make them. The file size for these objects is also much larger than just one 3D object. They are also not an "industry standard" making translation weak and finding libraries unlikely.

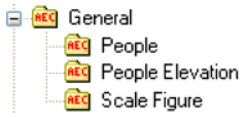



My personal hope is that we move away from this type of AutoCAD based logic and work with smarter objects much like ADT's native Walls, Doors, Windows and so forth that are controlled internally by the system. If we can get to that level, then we can rely on one object that not only adjusts correctly for various views, but can be used for many different scales ( more detail for scales near 1:1 and far less detail for scales near 1:100 ). Currently, you can add many blocks to your Multi-View blocks so that you not only have the various views but various Display Representations ( like Plan 1:50 and Plan 1:100 ) - that's a lot of blocks to keep track of.

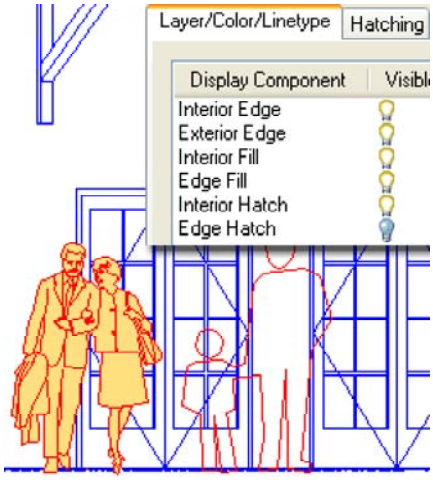
Menu **N.A.**

Keyboard Unknown

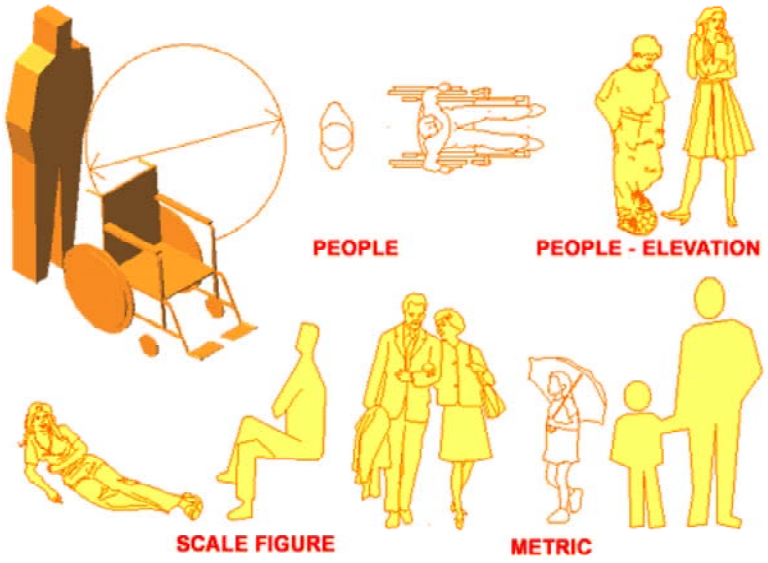
Metric For folder location, see **Site**.




Under the **CSI Division 01 - General** category, you will find some folders with confusing titles that all appear to refer to the same thing: **People**. Illustrated to the right I show a few samples of what you can expect to find within these three folders and one example of the Metric equivalent which, by the way, was defective and didn't work until I fixed it ( girl with umbrella 2D Human (6) ).




Not to start this overview of the Design Content on a bad note but it is a bit unfortunate that I had to start with the Division 01 Content since it is fairly poor in scope and quality. The 3D Figures amount to two and the wheelchair has no figure in it when viewed in 3D but does when viewed from Plan. Generally, the 2D High and Low Detail People/Figures are acceptable. Metric users need to be aware that their "Humans" were not created with AecPolyline Objects and thus do not have the option to Fill in when Shaded or have Hatch Patterns in them for normal display.




Illustrated to the left I show an example of how the Imperial based People can take advantage of the **AecPolygon Style Display Properties** to Solid Hatch across the surface and cover linework behind them. Unfortunately, whoever made the decision to use AecPolygons did not create a unique AecPolygon Style for these Objects and thus you must work with the **Standard Style** - which affects all other Objects using the Standard AecPolygon Style. I have not found that many ADT users actually use AecPolygons so you probably won't find this to be much of a problem. Maybe now you will become an AecPolygon user but you should also look into Mask Blocks that can be used to Hide or "Wipeout" ADT Objects.

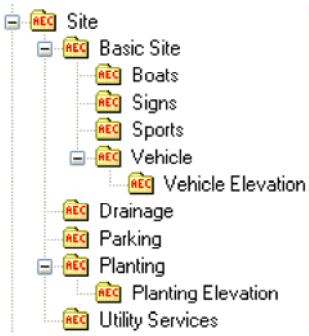
**DIVISION 2**

**Site**

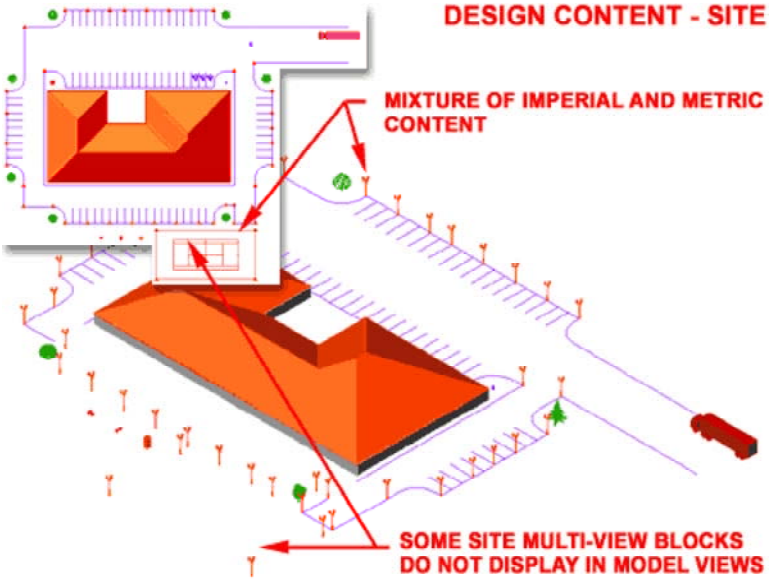
Menu **N.A.**


Keyboard **AecDcSetImpSite -** imperial

**AecDcSetMetSite -** metric



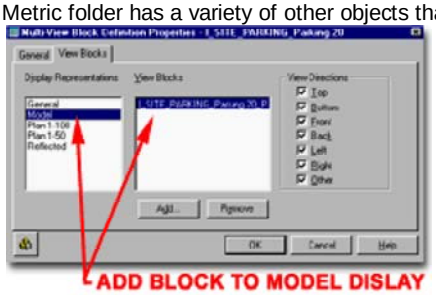

Both the Imperial and Metric Design Content folders have a **Site sub-folder** but the type and quality of the MvBlocks hardly warrant our time to discuss this topic. If you happen to find something you need in these folders then you are fortunate, but the obvious sloppy efforts really should be exposed for what they are. If you look under the Metric Boats, for example, you will only find two boats but they happen to be in 3D while the Imperial folder has many more boats but they are all in 2D. The Imperial folders

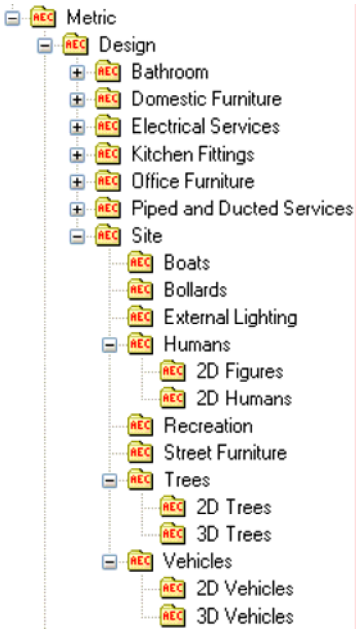


offer no street lights but the Metric folder does and they are fairly good; as are the street furniture offerings.

On the topic of a more serious set of offerings, the parking solution is atrocious with no options to control or adjust sizes nor any options for labeling and counting. A better solution may be to use the the Area objects and then Anchor them to Layout Grids.

**Note:** Even if your project is in Imperial units, you may want to look in the Metric folder for other Site objects that may be of use to you. The Metric folder has a variety of other objects that are actually better.




When you view the Parking Multi-View Blocks, they don't behave like Multi-View Blocks at all and thus if you want to at least see the linework in a 3D View, you have to add the Block yourself - Select a Parking object, right-click and select "**Edit Multi-View Block Definition...**" On the **View Blocks tab**, use the **General** Block Name and **Add...** it for the **Model** Display Representation as illustrated.

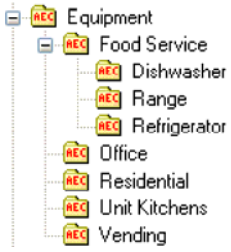
**DIVISION 11**

**Equipment**

Menu **N.A.**


Keyboard **AecDcSetImpAppliances -** imperial

**AecDcSetMetKitchen -** metric

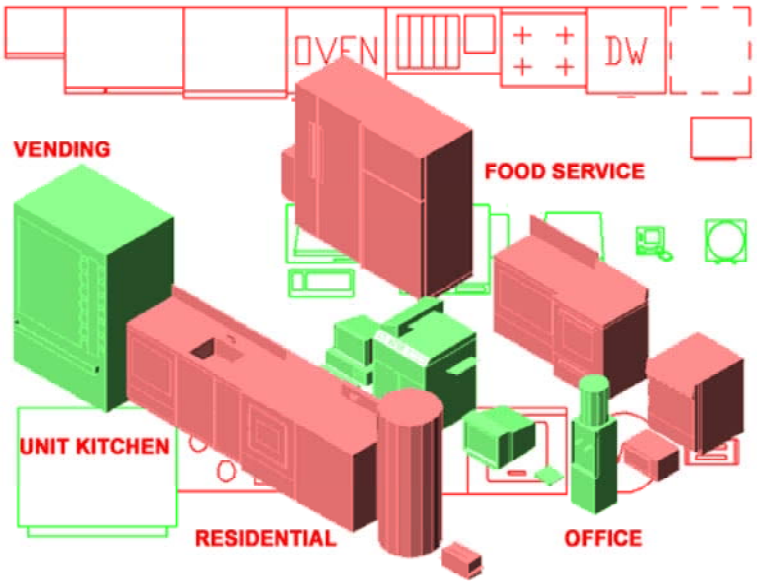



The **Equipment** folder ( Imperial ) has a group of sub-folders for Vending - 11120, Food Services - 11400, Residential - 11450, Unit Kitchens - 11460 and Office - 11680. The content of these folders is rather light in variety and appears to provide the bare minimum one would expect. Most of these old Softdesk Blocks are outdated and embarrassing to to use in presentation work. They tend to be okay for Plan and Section/Elevation drawings.

For those few MvBlocks that have Attributes, you can use the **Attributes dialog** on the Properties Palette to make changes to the text.

With exception of a handful of Objects, these are all 3D and will display different View Blocks for the primary view directions.


The **Kitchen Fittings** folder ( Metric ) offers a less extensive set of objects under the Appliances folder than what you will find in the Imperial equivalent. In addition to Appliances this Metric folder also contains other objects used for common Kitchen layouts such as Sinks and Cabinetry




To make these MvBlocks a little more presentable, I like to use fixed Color assignments on the 3D Model View Block which will not affect the other View Blocks that can remain as "ByBlock". you can read more about this trick under "Modifying Multi-View Blocks without Exploding"

For more options on kitchen cabinetry and custom MvBlocks or much higher quality, you can look into getting our Kitchen Cabinets 4 eKit.

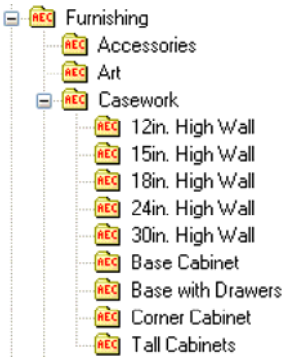
**DIVISION 12**

**Casework - 12300**

Menu **N.A.**

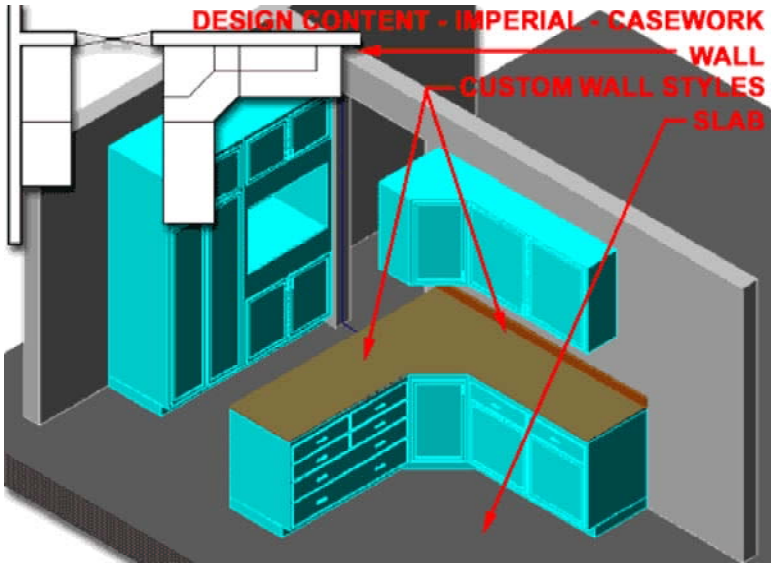

Keyboard **AecDcSetImpCaseWork -** imperial

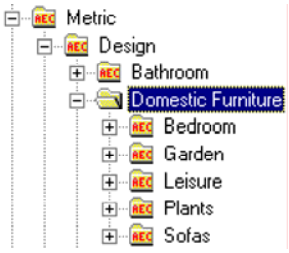
Links Walls for Casework - for information on using Wall Style to create cabinetry and countertops.




The **Casework** folder ( Imperial ) offers a fairly large set of cabinetry options but most designers will soon discover how basic these options really are. And this has a lot to do with how vast the world of cabinetry really is. This is why we like Sweets and numerous other Catalog sources so you will probably have to use these as schematic examples and do the details in the traditional linework way. Creating your own is a good, but time consuming, option.

These objects are Multi-view blocks and will display differently for Plan, Reflected Ceiling and Elevation views. For information on the Custom Wall Styles use for the Casework, read more under Walls.




The **Domestic Furniture** folder ( Metric ) offers objects similar to those found for Furniture ( Imperial ). See comments for the Imperial objects.

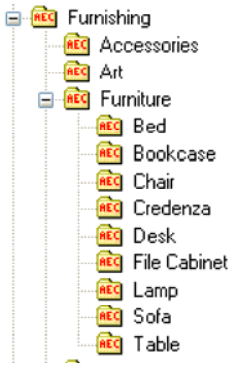
**Furniture - 12500**

Menu **N.A.**


Keyboard **AecDcSetImpFurniture -** imperial

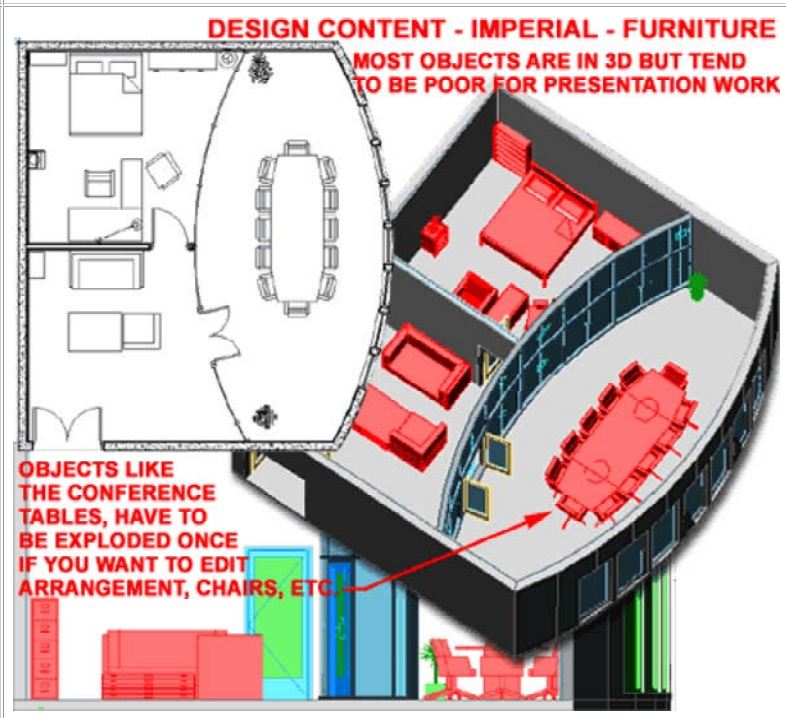
**AecDcSetMetOffice -** metric

Links Mask Block Definitions - Style Manager - Set From - for information on how to create furniture Masks that automatically cover floor tiles and other floor patterns.



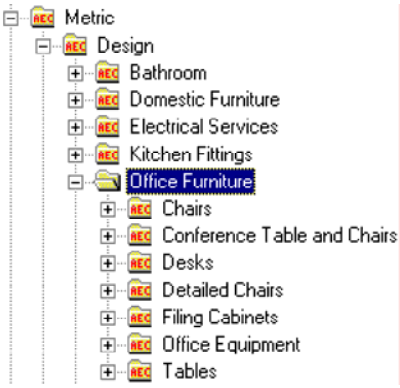

The **Furniture** folder is a parent folder for a whole suite of sub-folders that include everything from Beds to Plants. This whole library appears to be straight from the Softdesk Block library and will thus offer no major surprises to users of Auto-Architect. Overall these **Multi-View Blocks** are okay and function well with insertion points on the floor and good simple views for interior elevations and sections ( see lower right ).

Unfortunately, for those seeking other furniture or similar furniture with slight modifications, the choir is a beast to bear and you may find that




**Exploding once** is actually your best alternative. In some cases you may be able to use an X, Y or Z scale value, via the **Properties dialogue box**, to make a piece of furniture longer, shorter and/or taller.

On many of these objects, you may not be able to distinguish the **front from the back** in Plan View. The **insertion point** ( also displayed by the Grip ) is usually at the back for alignment with other objects like Walls.




If you have **old Blocks** from past libraries, don't hesitate to use them. Though they may not be as fancy, have multiple views and adhere to Display Characteristics, they may just save you hours of labor while someone else can focus on making cool 3D furniture.

To create your own Multi-View furniture, read Creating Multi-View Blocks

**DIVISION 14**

**Conveying**

Menu **N.A.**


Keyboard **AecDcSetImpEquipment -** imperial

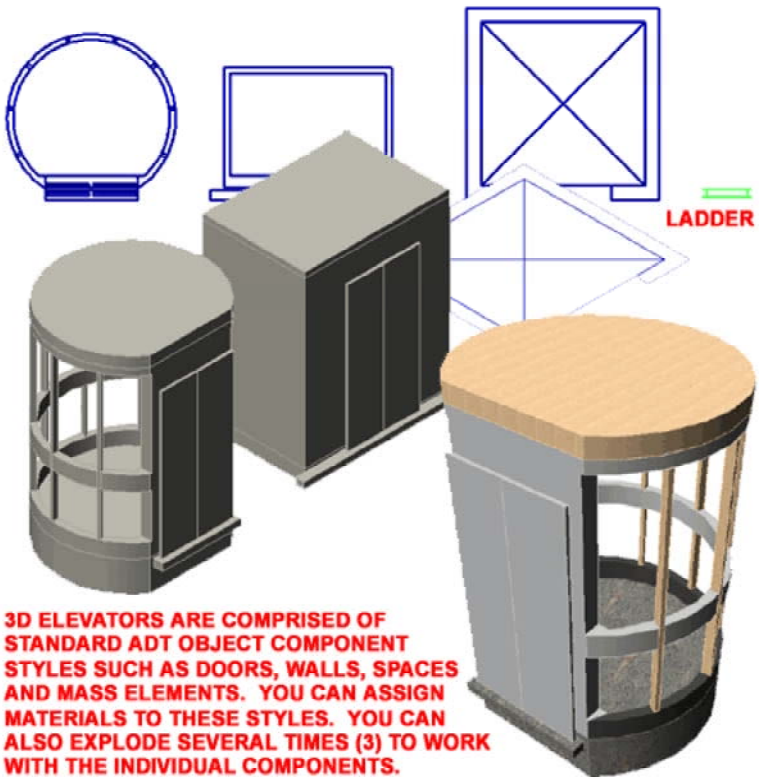
**No Equivalent -** metric


The **Conveying** folder (Imperial) has two sub-folders for Elevators - 14200 and Ladders - 14800. There are two 3D Elevators, one 2D Elevator and only one 2D Ladder. To me, the Elevators are most valuable as examples of how you can create Multi-View Blocks out of a collection of standard ADT Objects; i.e., an Elevator is a small building made up of Doors, Walls, Slabs, Spaces, Mass Elements and whatever else you need.

When you import one of these 3D Elevators, you also acquire new Objects Styles that you can assign Materials to to improve the presentation quality. If you need to modify either of these two Objects, you can use the Explode command repeatedly until you get down to the basic Objects ( this is typically three times for MvBlocks ). Of course you can also use the Refedit command on the 3D Model View Block as discussed below.

**Note:**
The round Elevator was created prior to ADT 3.3 and thus uses a Wall object where a Curtain Wall should have been used - that's why there is no Glass in the round one.

You can create your own ladders using a Curtain Wall Style.



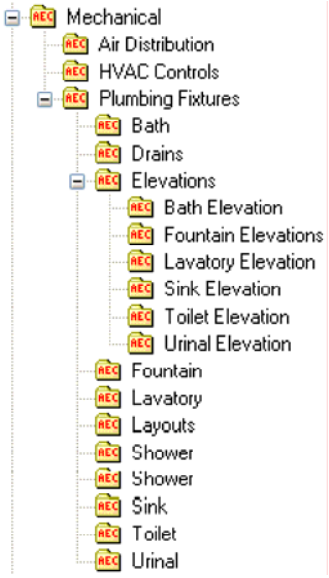

**DIVISION 15 Mechanical**

**Plumbing Fixtures - 15400**

Menu **N.A.**


Keyboard **AecDcSetImpPlumbing -** imperial

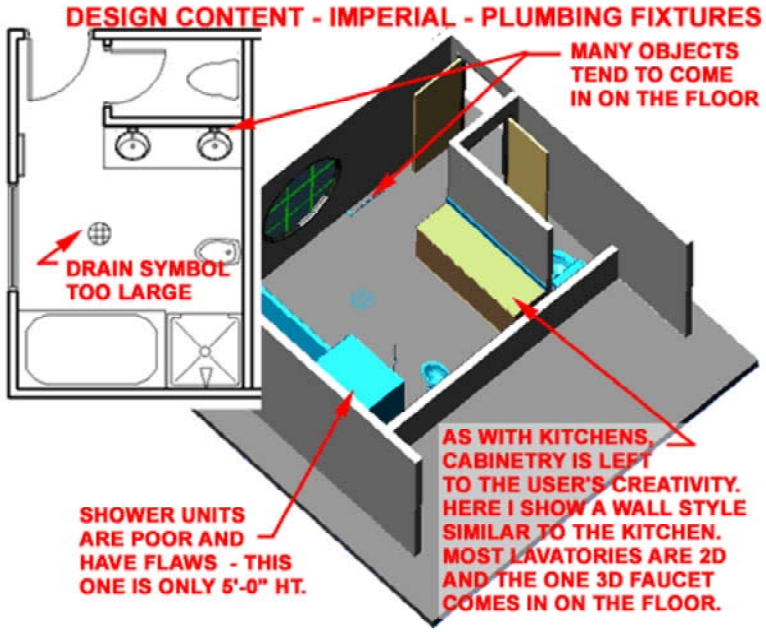
**AecDcSetMetBathroom -** metric




The **Plumbing Fixtures** folder ( Imperial ) is a sub-folder of the **Mechanical folder** but includes quite an extensive list its own sub-folders for Content that ranges from 3D Bathtubs to 2D Elevations of drinking Fountains.

The Plumbing Fixtures include common items for residential Kitchens and Bathrooms as well as ADA compliant Layouts for commercial, hospitality and other public bathroom designs. The assortment is fairly extensive with a diverse list of offerings but there are numerous problems with many of these Multi-View Blocks.

One of the more surprising aspects of these objects is that, despite the Plumbing (2D) folder, many of the Multi-View Blocks are actually not 3D at all and can cause quite a bit of frustration when you expect 3D results; an example is the




Lavatory selection which is mostly 2D and these objects end up on the floor rather than at typical counter top height. By using the **Properties dialogue box** you can quickly set an accurate **Z-axis Value** for these objects.

On more serious objects, such as Tubs and Showers for custom residential design, not only are the options quite poor but inflexible for designers. I recommend using Slabs and Walls for Showers and Slabs or Mass Elements for custom tubs ( use Boolean Subtraction for negative tub space ). Creating custom Multi-View blocks is always an option but tends to consume a tremendous amount of time.

**Note:** for a fairly good 3D Lavatory, you may want to use one from the Metric "Basin" folder under Bathroom.

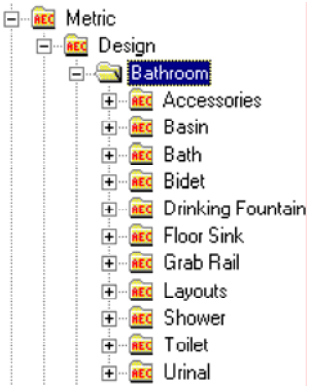
For information on **Fixture Layouts**, see comments below under Adding Bathroom Fittings - metric.

**Bathroom Layouts**

Menu **N.A.**


Keyboard **AecDcSetMetBathroom -** metric

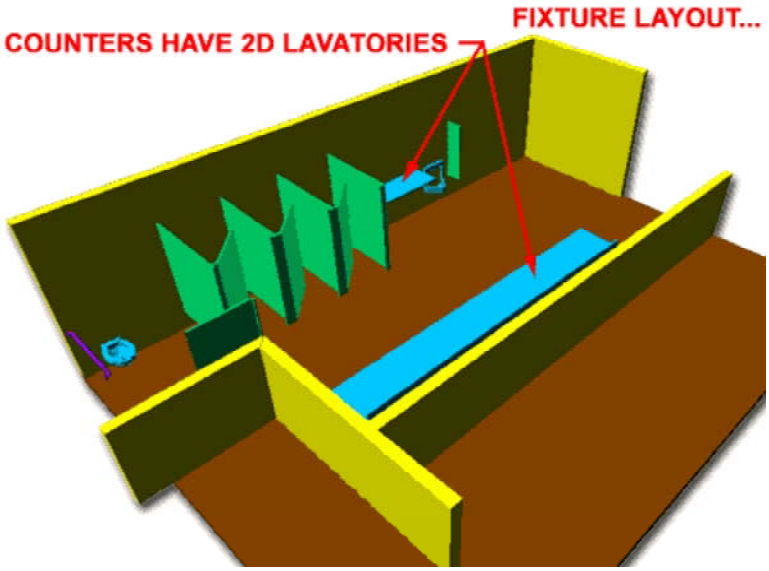
**AecDcSetImpPlumbing -** imperial




Both the Imperial and Metric Design Content Folders have a sub-folder for Bathroom Layouts. You will find this section under the Mechanical CSI Division for the Imperial Content but under the Bathroom folder for Metric Design Content ( as illustrated to the left ). See comments above for information on residential fixtures.

The **Layouts** folder contains a short but useful variety of Commercial fixtures; including ADA (disabled) compliant toilet stalls, an assortment of lavatories and urinals.

Illustrated to the right are a few of the fixtures that you can use. Some of these fixtures have some unexpected surprises; the lavatories, for example, do not employ 3D sinks but 2D sinks on top of 3D countertops.




To correct some of the Fixture Layout design flaws and to allow for object rearrangement, you can **Explode** the Fixture block to gain access to the individual Multi-View blocks within it. In other words, the Fixture Layouts are Blocks with Multi-View blocks nested inside. Exploding these, just **once**, will not harm the product.

**Air Distribution - 15800**

Menu **N.A.**

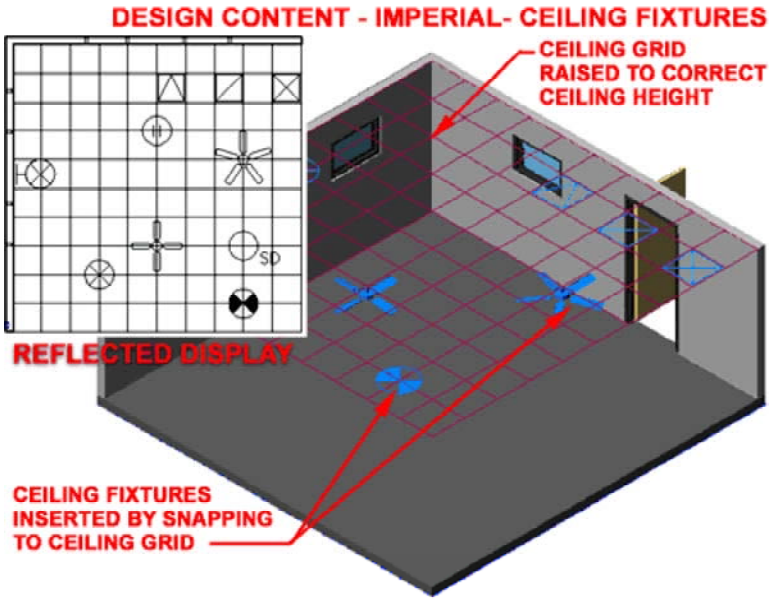

Keyboard **AecDcSetImpCeiling -** imperial

**AecDcSetMetPipeAndDuct -** metric

Links
- Multi-View Block Definition Properties dialogue box - for information on how to change when these objects are displayed.
- Adding Electric Fixtures - imperial - for more on ceiling objects


The Air Distribution and HVAC Controls folders are sub-folders of the Mechanical CSI Division. Within these two folders there are a sum total of six Objects including 3D Ceiling Fans. All of these objects are Multi-View Blocks that are set to display in **Reflected** Plans and thus will not show up when inserted in Views that are currently set to Display Representations like Standard or Medium Detail.

The ceiling fixtures will come in at whatever Z-axis elevation your current UCS icon is set to so if you want them at the correct ceiling heights, you may want to use a **Ceiling Grid** that has been set to the right elevation and then OSNAP to it.

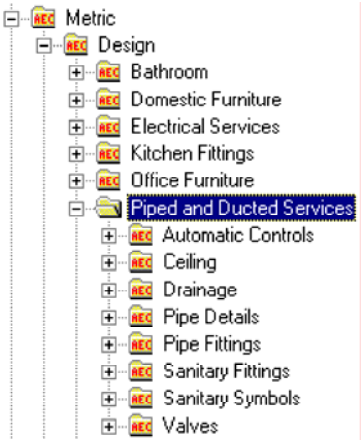



**Tip:** If you turn off all OSNAPS except **Node**, working with Ceiling Grid Fixtures can prove to go a lot faster than by using Intersection.

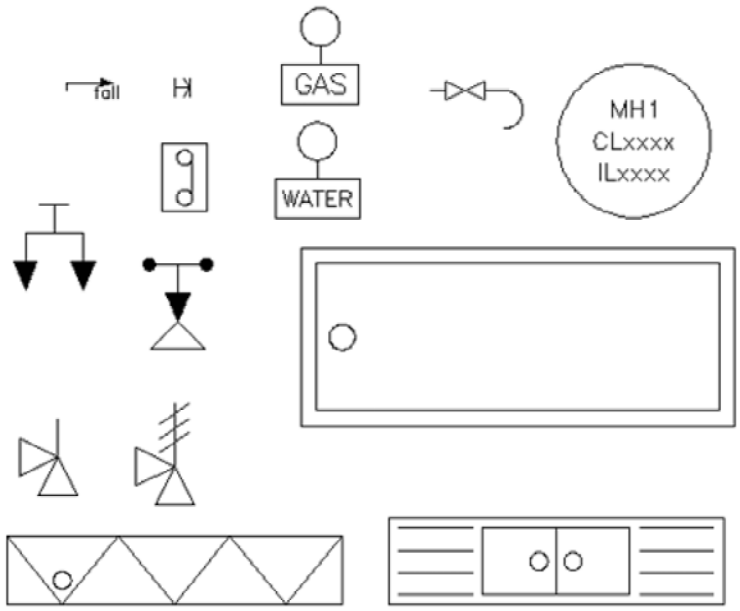
**Piped and Ducted Service - metric only**

Menu **N.A.**


Keyboard **AecDcSetMetPipeAndDuct -** metric




The Metric **Piped and Ducted Services** folder contains most of the Objects from the Air Distribution folder, discussed above, but the rest of the Content is mostly comprised of 2D symbols that related to the various folder titles. These symbols are unique to the Metric Content.




**DIVISION 16**

**Electrical**

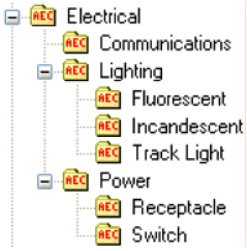
Menu **N.A.**


Keyboard **AecDcSetMetElectric -** imperial

**AecDcSetImpElectric -** metric

Links [Ceiling Grid Symbols](#) - for an example of working with ceiling grids and lights

[Adding and Attaching Mask Blocks](#) - for the full story on Masking Blocks.

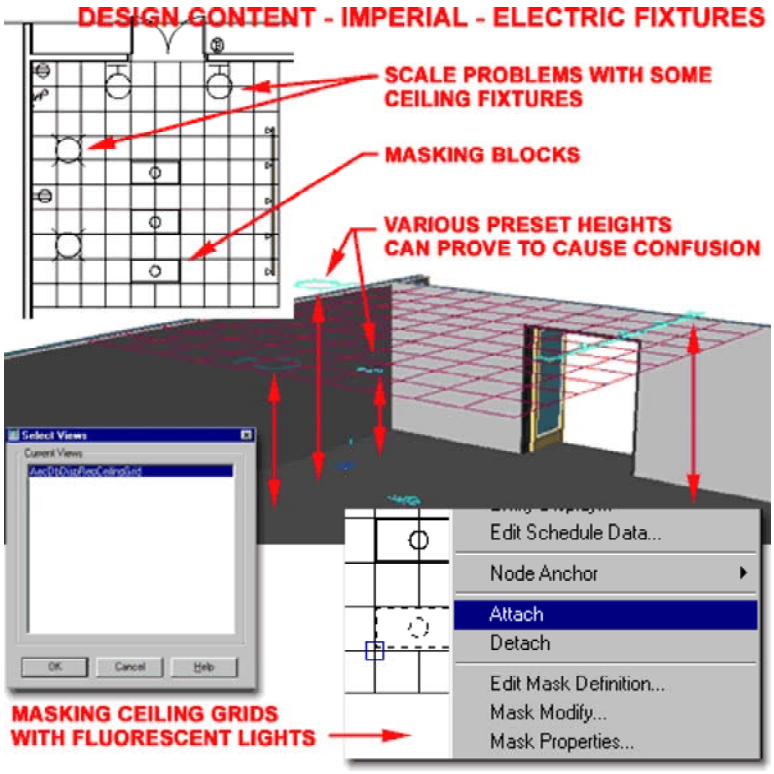


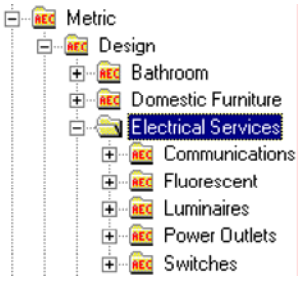

The **Electrical** folder (Imperial) has two sub-folders for Power - 16200, Lighting - 16500 and Communications - 16700. Within these folders you will find more folders for specific Content such as Fluorescent lights. Because many of these fixtures, like the Incandescent and Track Lights are designed for Reflected Ceiling Plans, they will only display when the current Display Configuration uses their **Reflected Display Representations**. Other fixtures, like Switches, only display in non-reflected Display Configurations.

There are a few aspects of these symbols that may cause some confusion and irritation. Most are not in 3D form and in cases where you may want a 3D representation, it comes as a separate object rather than as a Multi-View Block with a proper representation for plan view. Some of these objects come in at pre-specified heights that may not be right for your design needs. The scale of these objects is based upon the Drawing Scale and seems dramatically different for Ceiling objects and Plan objects ( compare Switch symbols with a Ceiling Light fixture, for example ).

The **Electric Services** folder ( Metric ) is very similar to that for the Imperial users. See comments above for Electric Fixtures ( Imperial ).

An interesting aspect of the Metric symbols is that there are a lot more to choose from resulting in a more developed library; a case that is echoed for many of the symbol folders.




**Note:** When Electric Fixtures, like the Fluorescent Lights, are dragged in from the DesignCenter, make sure to use the "**Select Layout Node**" option to Anchor the fixture to the Ceiling Grid object. You should find this comment stated on the command line once the fixture has been dragged in. If you ignore this option, you will not be able to Mask with the fixture nor take advantage of the Anchoring features that save a lot of time in labor. To repair a lost Anchor use the **Node Anchor** tool - see Node **Anchors in Part 23 Anchors**

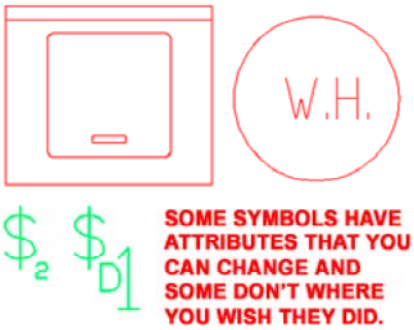
**Modify Multi-View Blocks Properties Palette**

Menu **Format> Multi-View Block> Multi-View Definitions...**


Keyboard **MvBlockModify**

Mouse **Double-pick on Object** or Select Object, right-click, select **Properties**

Links Modifying Design Content - for more on the same subject




Most Design Content is in the form of Multi-View Blocks so we can defer the discussion of Modifying these items to **Part 25 - AEC Blocks - Profiles** but there are some basic concepts that should be covered here.

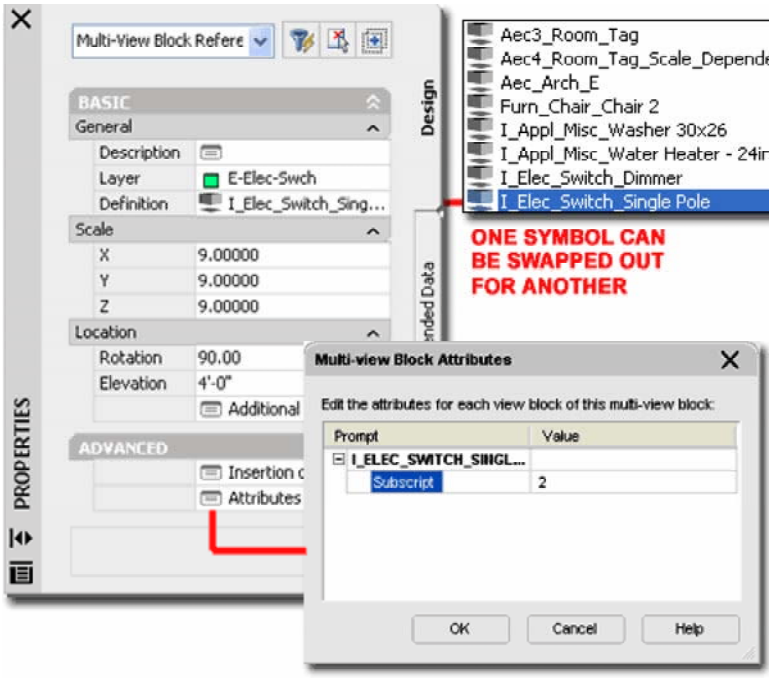
Illustrated to the right I show the Properties Palette and the basic list of options and settings that all Multi-View Blocks offer.

**SCALE**

**X, Y** and **Z** - though the numbers you see here may be odd, they are derived by the **Drawing Scale**, the **Annotation Plot Size** and the **Drawing Units**. Changing any of these three settings will affect the scale of Annotation Based Design Content such as Switches. Other Objects, such as Appliances, are not affected by changes to the Drawing Scale or Annotation Plot Size.

**LOCATION**

**Elevation -** some Objects that are not 3D, such as Switches, are automatically set to an Elevation Height when this does little more than serve as a potential for linework problems in Plan. Other Objects, like Sinks, come in at the an Elevation Height of zero so you may want to check this setting after inserting Objects.

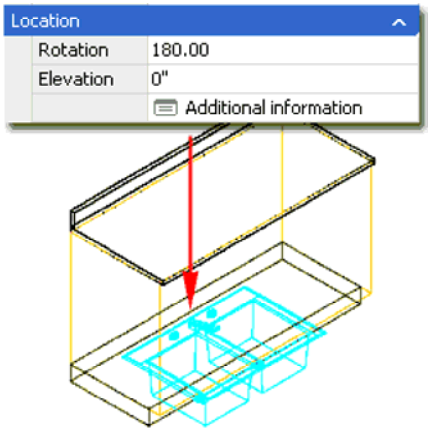



**ADVANCED**

**Insertion Offsets** - this dialog offers another approach to controlling X, Y and Z positions in space.

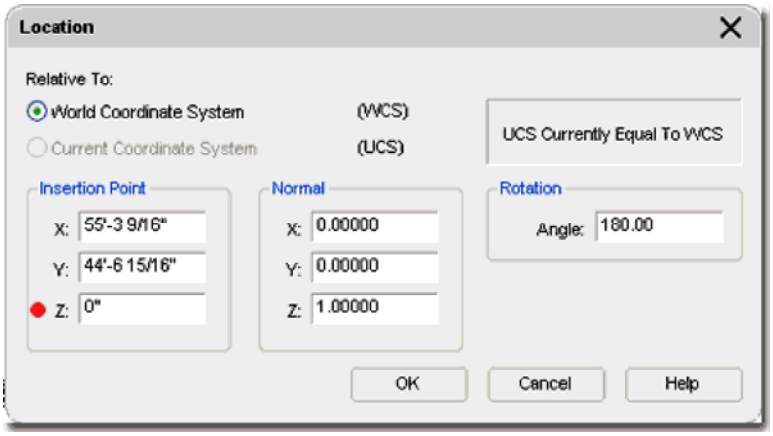
**Attributes** - All Multi-View Blocks will offer this dialog box but not all MvBlocks have Attributes associated with them. Illustrated above and to the left I show that the default Single Switch can actually be set to display as a 3 way or have other Subscripts. On the other hand, the Dimmer Switch seems to have a scale problem with its Subscript offering. I recommend that make a habit of checking for Attributes whenever you find that you could use one. If you don't find any, you can add your own Attributes as discussed in Part 25 - AEC Blocks - Profiles -> Creating Attributed Multi-View Blocks.

**Multi-View Block Properties Palette - Location dialog**




On the **Location** tab of the **Multi-View Block Reference Properties** dialogue box, you will find Insertion Point value fields that you can use to adjust the position of a Multi-View block should its default Insertion Point prove to be undesirable.

Illustrated to the left, I show how some 3D Design Content objects come in sitting on the floor plane when they should sit at a more appropriate height to match where and what they are used for. Left, I show how a common kitchen sink can be set to the correct counter top height by using the **Z-axis Insertion Point** value on the Location tab of the Multi-View Block Reference Properties dialogue box, illustrated right.




**Multi-View Block - Extended Data**

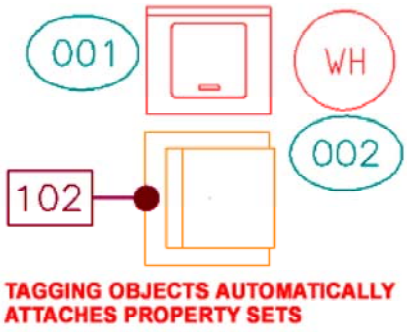
Alt.Menu **Document> Scheduling> Property Set Definitions...**

Keyboard **PropertySetDefine**

Links [Loading Property Set Definition Styles]

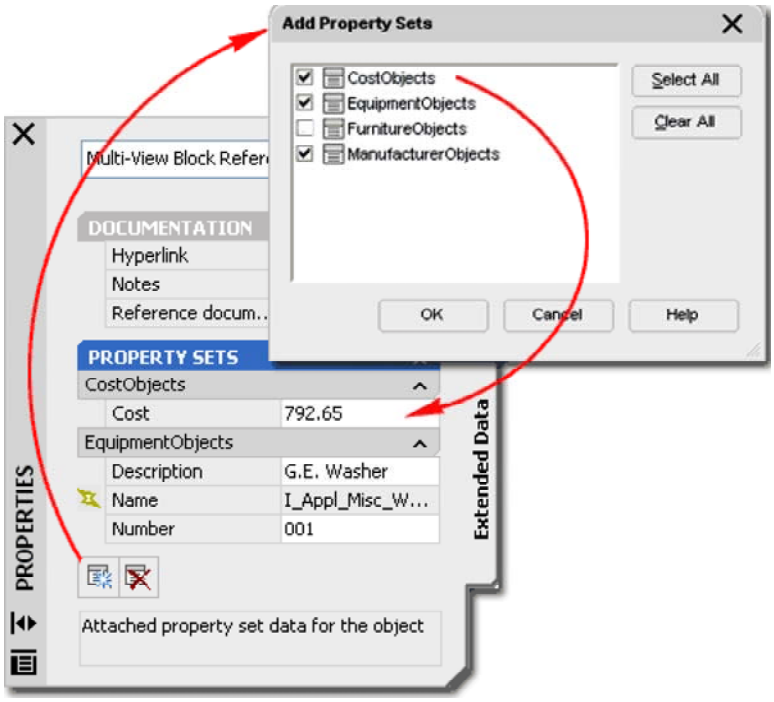

Keyboard **AecDcSetImpObjectTags -** imperial

Links [Adding Object Tags]

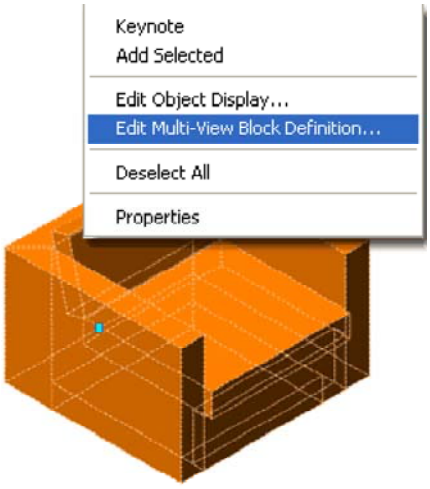



To get a little more return on your investment in using Multi-View Blocks, you can take advantage of the option to attach Property Sets via the Extended Data tab on the Properties Palette. In some respects you can think of this as the next generation of Attributes where the data can be linked to symbols such as Tags or Schedule Tables.

If you already intend to Tag your Multi-View Blocks, then some Property Sets are automatically Attached for you but this does not mean you can't Attach other Sets for use in your Schedules.



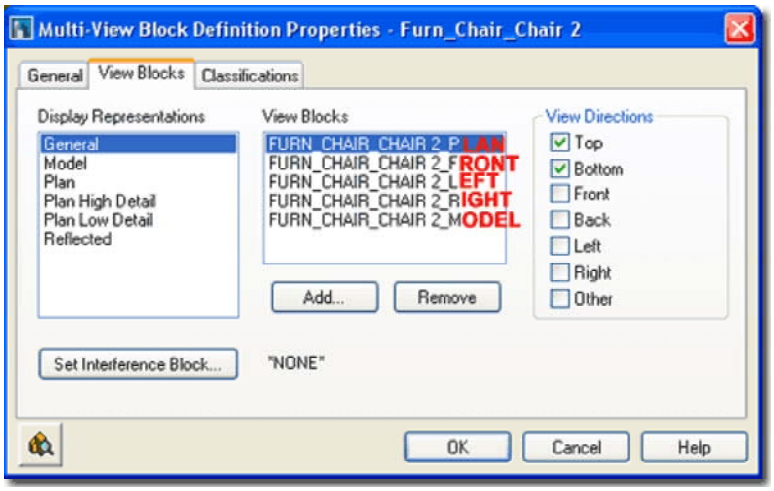

**Multi-View Block - Definition Properties dialog**




When you Select a Multi-View Block and activate the Context pop-up menu, illustrated left, you won't find much to work with. The "Edit Multi-View Block Definition..." menu option activates the Properties dialog illustrated to the right where you can work with the View Blocks and/or Classifications.

Beyond using the Classifications for advanced organization, the primary purpose of working with the View Blocks tab would be to adjust the Blocks that you see under different Display Representations.

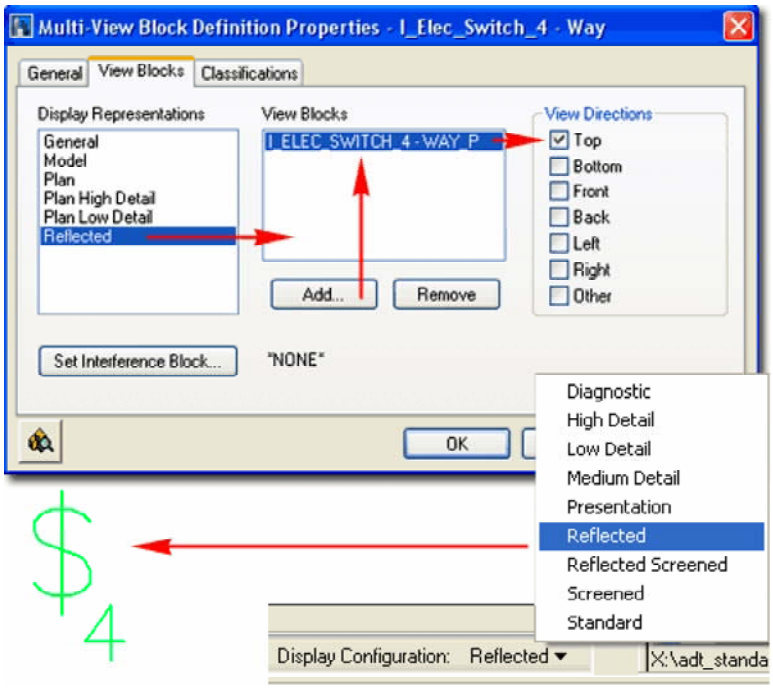
A great example of what I am referring to here is how the default Electrical Switch Multi-View Blocks do not display under the Reflected Display Configuration - see discussion below.



## Display & Behavior Changes to ADT Multi-view Blocks

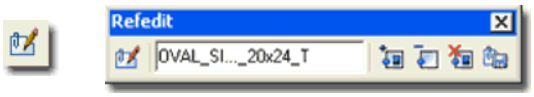
If you like to show your Electrical Switch Multi-View Blocks on your Reflected Ceiling Plans, as I do, you will need to make this modification to ADT's default Multi-View blocks because they are set to not display in RCP's. By using the same block ADT uses for Plan View on the General Display Representation, you can **Add** it to the **Reflected Display Representation** and orient it for **Top** View. The blocks for the various view directions will have names that are very similar with exception of the last letter which indicates view direction; such as "P" for Plan and "L" for Left and Right view and "M" for Model. In the case of the dimmer switch or regular switch you should see a block name such as "I_ELEC_SWITCH_DIMMER_P" or "I_ELEC_SWITCH_4-WAY_P".

If you want to make this a permanent change for the DesignCenter, you can edit the source Multi-View block by opening it directly. It's just a drawing file residing in the folder you see in the DesignCenter. Once you have it opened, you can repeat this example and save the file. Another change you might want to make, is to Add... the 3D switch Block, from the same directory, on all your Switch Multi-view blocks.




## Modifying Multi-View Blocks without Exploding

Menu **Modify> Xref and Block Editing> Edit Reference In-Place**

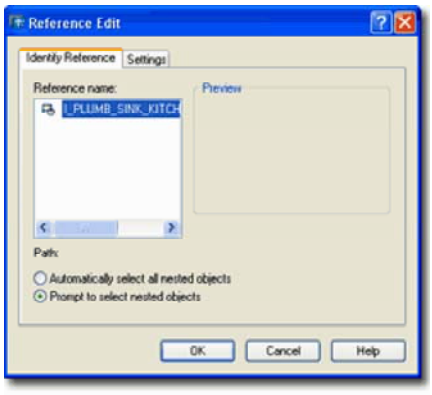



Keyboard **RefEdit**

Mouse Double left-pick on Block Object.

Links Multi-View Blocks and Refedit - for another example.

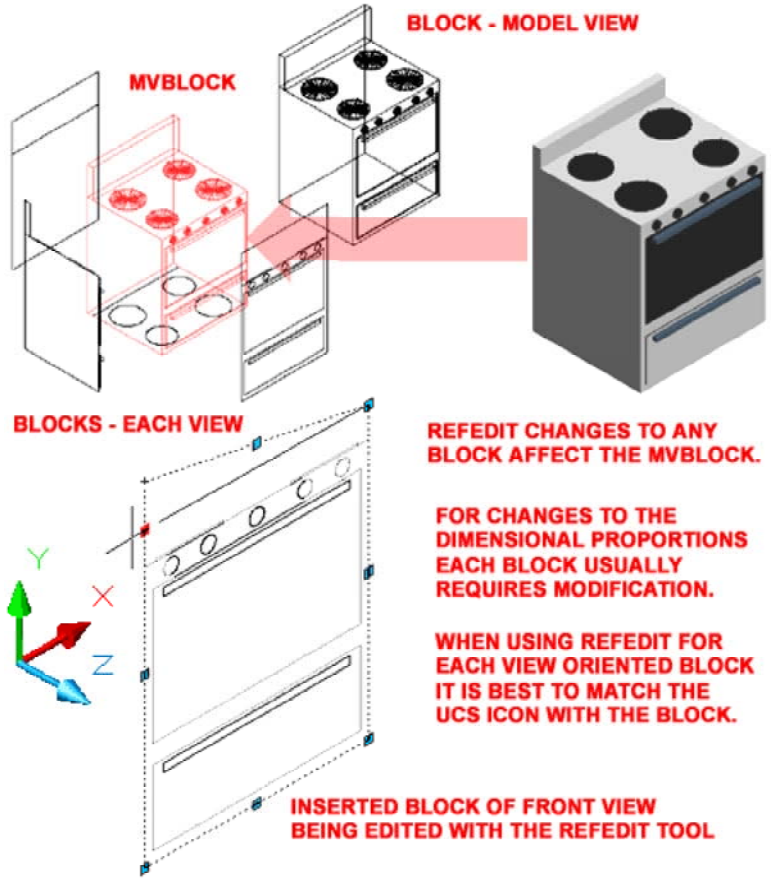
Creating New Design Content from Existing - for information on how to expand on this technique to create new Library Content.

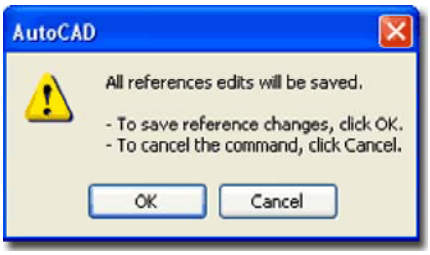



At times you may find that the default Design Content in ADT lacks a bit of design quality or is a bit off dimensionally. By using the **RefEdit** tool, you can make fairly short work of modifying Multi-View Blocks. You can employ this technique to any MvBlock in your current drawing or Open the original source file, RefEdit it and then save it for a permanent change to your library.

Illustrated to the right I show a default Kitchen Range from the Design Content Library in ADT. As with most MvBlocks in ADT, the **3D Model View** is completely monotone and acquires its colors from the "**ByBlock**" Property option but that typically looks pretty bad in presentation drawings. If you use the **Insert** command and look for the Model View Block for this or similar MvBlocks, you can insert it off to the side of your drawing file and make changes, like Color settings, using the **RefEdit** command. Such changes only affect the Model View of the MvBlock and will not affect the other View Blocks so your Construction Documents should be fine because they typically use the Top (Plan) and Side (Front, Right, etc.) 2D Blocks.

If you decide that an MvBlock needs more editing than Color settings, you will probably need to Insert all View Blocks and modify each one




Hopefully you know how to rotate your UCS icon but just in case you don't, type "**UCS**" on the command line followed by the letter of the Axis you want to Rotate about ( such as "**X**" ) and then conclude by specifying the angle of rotation ( such as "**90**" ). To put the UCS icon back to its default orientation, type "**UCS**" and then "**W**".

one-at-a-time. In the illustration to the right I show that I have decided to lower the back panel of my example Kitchen Range. In order to make this modification work for all View Directions on the MvBlock, I have to RefEdit all of the View Blocks associated with the MvBlock. The names are usually fairly easy to distinguish; such as: "I_Appl_Range_Range 30x26_M" for the Model View Block.

When Inserting the various View Blocks, you should find that they stand up from the **World Plane** and face the direction of the intended view orientation. The only problem you may face with the orientation of the various View Blocks is when you attempt to modify them. Typically, it is best to orient the **UCS icon** to match the object you are modifying.

To **RefEdit** a **Block**, simply **double-pick** on a **Block** to invoke the **Reference Edit dialog** ( illustrated above left ). **Select** the **OK** button on the Reference Edit dialog and you should find that you may now modify the Objects within the Block. Use the **RefClose** command or button on the **Refedit toolbar** to end your session and when the **AutoCAD alert** dialog pops up to warn you about "**All reference edits will be saved**", respond by Selecting the **OK** button. This action will modify the View Block inside the associated MvBlock and if you view that MvBlock from the direction the View Block was design for, you should see the changes.



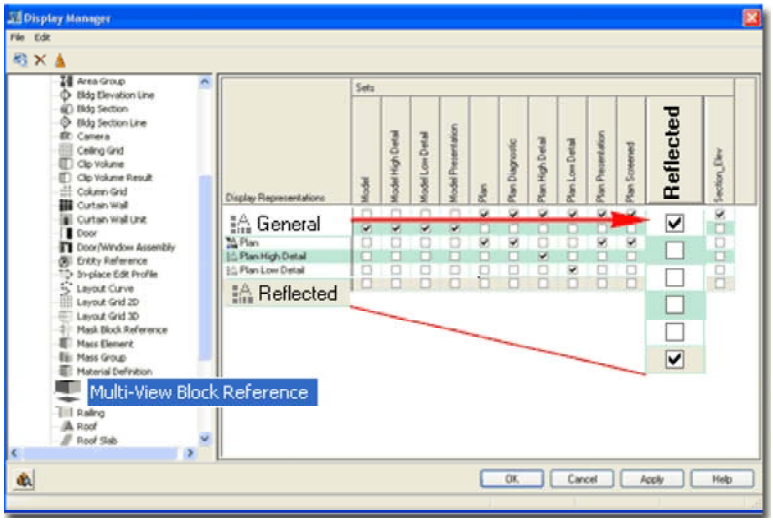
## 4 Design Content - Display

**Multi-View Blocks - Display Manager**

As discussed earlier, Multi-View Blocks do not have a lot of options to work with on the Properties dialog and that is because they don't utilize Styles. Without Styles, you don't have much to work with in the Display System so when you **Open** the **Display Manager Window** and look under **Multi-View Block Reference**, as illustrated to the right, you will find that you cannot Modify any of the Display Representations.

If you look carefully at the list of Display Representations and then compare that list to the one for any Multi-View Block on the Properties dialog ( see above right), you should find that the list is identical. Therefore, the way MvBlocks use these pseudo-Display Representations is by having Associated View Blocks for each one. By the way, by Duplicating any of the existing Display Representations, you can actually create your own should you want to introduce new pseudo-Display Representations for your MvBlocks.

Illustrated to the left I show how you can use the **Display Manager Window** to access the **Representation by Object** Folder and find the Multi-View Block Reference category. To turn on **All** Multi-View Blocks in your Reflected Display Configuration, for example, you can check the **General** column for the **Reflected** Set. Knowing this trick can be quite useful when designing things like lighting that relates to furniture or other MvBlock Objects.






## 5 Design Content - Customizing and Tricks

**DesignCenter for Fixtures and Symbols**

Menu **Insert> DesignCenter [Ctrl+2]**


Keyboard **ADC**

Links [Create AEC Content Wizard](#) - for more information on this tool.

[Tool Palette and DesignCenter Content](#) - for a trick on how to improve your Tools so they offer more options.

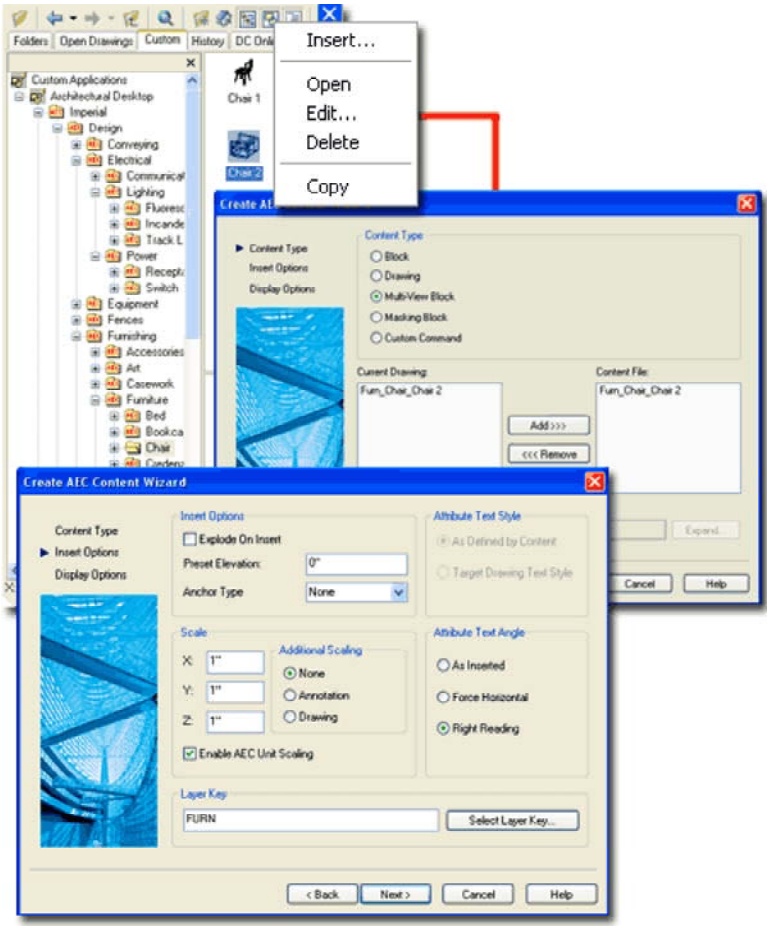
Though you can use Tools on the Tool Palette to Insert Design Content, those tools may not prove to be as effective or as flexible as working with the DesignCenter. The reason why Objects brought in through the DesignCenter offer more features has to do with the AEC Content Wizard and how it was designed to program unique properties into the Content.

Illustrated to the right I show the DesignCenter and how a right-click over and Object with the mouse activates a pop-up menu that offers two rather useful options: Open and Edit.

In the illustration to the right I show that I have Selected the Edit... menu option for a Multi-View Block of a Chair. On the second dialog of the "Create AEC Content Wizard", you can see some of the special properties that it can assign to Objects like Multi-View Blocks.

One of the most useful options on this dialog is the Layer Key setting that you can use to pre-assign or "key" your Multi-View Block to a specific Layer upon Insertion. Another very useful option is related to Annotation where you can scale according to the Annotation Plot Size or Drawing Scale as set on the Drawing Setup dialog. Notice that you can also force Attributes within Multi-View Blocks to remain Horizontal.

You can read more about these features in [Part 25 - AEC Blocks - Profiles](#).



**Creating New Design Content from Existing Content**

Links [Modifying Multi-View Blocks without Exploding](#) - for information on how to use the RefEdit command to modify MvBlocks without Exploding them.


Sometimes existing Design Content is well suited to become New Design Content much like some drawings are well suited to be modified and Saved As... a new file.

Illustrated to the right I show the three steps required to make New Design Content out of Existing Design Content. After **Openi**ng a specific **Design Content File** such as a Range, use the **Rename command** to change all of the Block Names to something **unique**. In the illustration to the right I show that I intend to create a new Range that is 36" Wide instead of the default 30" Wide so I am changing the "30"'s to "36"'s for each Block Name ( Copy Paste works really well for this type of work ).

After Renaming all of the View Blocks, use the **MvBlockDefine** command to access the Style Manager as illustrated in Step 2, right. Rename the **Style Name** to something **unique**.

The final step in creating new Content is to use the **Save As...** option to save the new Object to the same Folder as the original but with a **unique Name**.

Okay, I lied, that's not all you have to do to create New Design Content. You have to make it different by Modifying it but I thought that was obvious. So, to continue with this example, you can now use the **RefEdit** command to make changes to each of the View Blocks as discussed under **Modifying MvBlocks without Exploding**.