Tip Sheet

ArchiCAD 11
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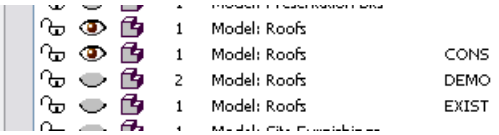
Additions and Alterations

Additions and alterations are everyday projects in architectural practice; they can be time consuming and tricky, managing these projects in ArchiCAD is key to the efficient production and completion of these projects.

The first part of any alteration project is drawing up the existing conditions via a set of measured drawings. Accurately modelling the existing conditions is of the upmost importance as this is what you are going to be basing your proposed project on. Traditionally when modelling an existing building you would have a set of layers including "existing" and "demolition" layers for each modelled element. The existing model would exist in its entirety and then you would be constantly changing the layer all of those objects and placing them on the proposed / construction, existing, and demolition layers. Otherwise it was common to duplicate the entire model and change its layer to proposed or existing. Either method has its problems; larger file than normal (duplicated model data), and often problems with layer intersections of hidden items.



The Worksheet tool and Trace & Reference in ArchiCAD 11 allows us a new method of managing addition and alteration projects. This method reduces the number of layers and means you only have a single model of the building in your project.

Model the Existing Conditions

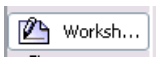
The first step is to model the existing conditions from your site measure; you can draw all of these elements on their normal layers ie; walls on "Model: Walls" roofs on "Model: Roof". There is no need to have special layers for Existing and Demolition elements, just pretend for now that you are modelling your proposed building.
Once you have finished modelling the Existing Conditions, ensure you have all the views that you will need to document the Existing Conditions; eg Plans, Elevations, and possibly Sections. You don't need to have all the 2D annotation finished just the 3D modelling.

At this point Save a Copy of the project ie "Jones House Existing".

Create Worksheets of the Existing Conditions

With the Existing conditions modeled, open the main project file ie "Jones House"; this file is going to be our main project file.

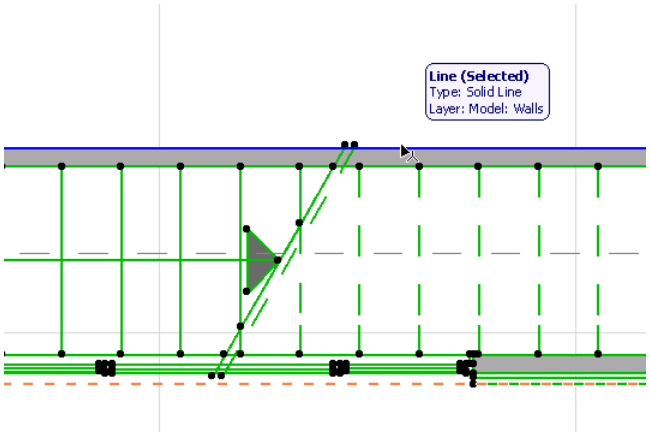
1. Open one of the views (eg: floor plan)

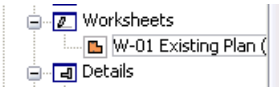
2. Select the Worksheet Tool 

from the Toolbox and choose No Boundary as the Geometry Method

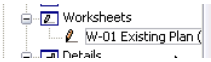
3. Click anywhere on the plan and the tool will place a marker and create a new Worksheet

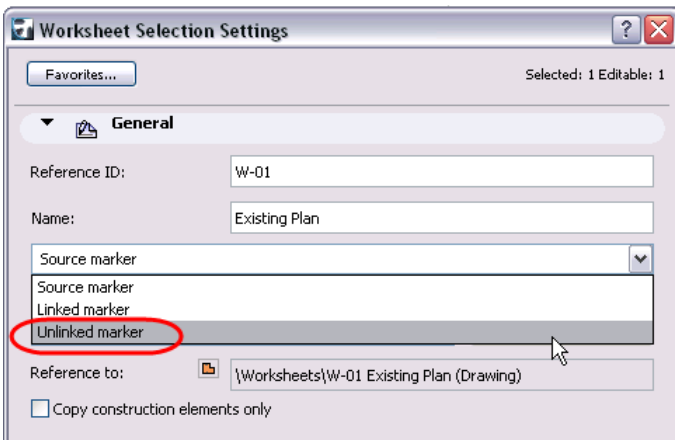
4. The Worksheet will contain an entirely 2D snapshot of the Existing Floor plan (ie; all lines and fills)



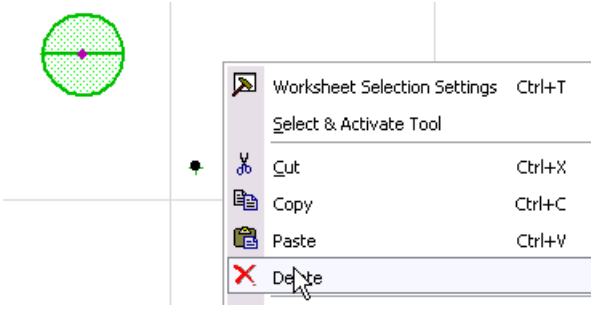


5. Open the settings of the Worksheet, and change the marker type to an **Unlinked Marker**. This will convert the Worksheet to an **Independent** Worksheet denoted by the pencil icon, (ie a Worksheet that has no relationship to the model, and more importantly one that cannot be rebuilt from the model, by accidentally selecting "**rebuild from model**").

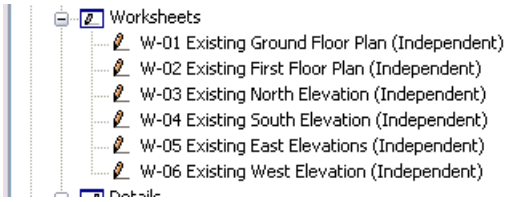




6. At this point the marker that the Worksheet Tool placed in model view, ie. Floor Plan, can also be deleted.



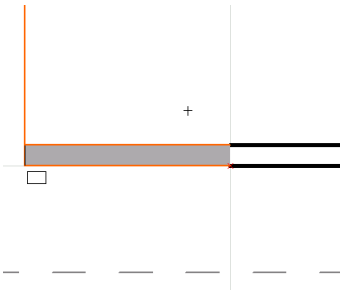
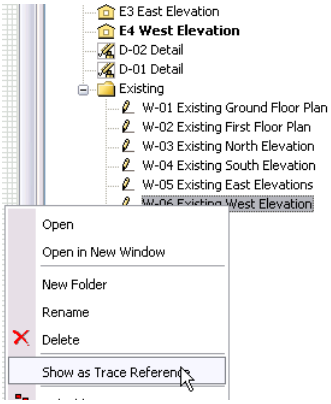
7. Repeat steps 1 to 6 above for all of the Existing views until you have a Worksheet for each of the views of the Existing Model that will be required, eg. Floor Plans and Elevations.



8. Any additional annotation can now be added to these and the Worksheets can now be saved as Views and placed on Layout sheets; your Existing Conditions Drawings are finished!

Design & Model the Proposed Building

Now with the Existing Conditions Drawings finished you can begin modelling the proposed building, delete and add to the model as required to suit your design. You may wish to keep track of existing and proposed walls by using different Floor Plan and Section fills eg; grey and white for Proposed and Existing.



If required at any point you can compare the Existing and Proposed views using Trace and Reference.