Why build a model

They help explain and convey the design more quickly than drawings to a wider audience.

The process of building a model exposes difficult, challenging and sometimes impossible design elements in a building. Very often, if it cannot be built on a model, it cannot be built. They are very useful as a design development tool.

Scale and mass are more easily and thoroughly understood by a wider audience compared to drawings (clients and public included)

Site conditions relative to a building can be resolved.

Tips to prepare for a model

Allow enough time. A model can take anywhere from a week to many months to complete, depending on size, scale and complexity. If no CAD drawings are available, allow for time to produce these as part of the process, as CAD files will need to be prepared before construction of a model.

3D printing can speed up the process if the files are already created. Most Architectural drawings are not suitable for 3D printing without considerable editing because of scalability of the smallest elements and the amount of information in a drawing not required in the model. 3D print drawings are most often created specifically with 3D printing in mind.

Engage a model maker as early as possible to determine how long ahead of a deadline you will need to start.

Cost

There is no such thing as a typical budget price for a model. Every model is unique. The price of a model is determined by the scope, scale, complexity, information available and the deadline. As in normal construction, if changes are made after a model has been quoted and commissioned, it will affect price schedule, and normally the deadline.

Type of model

It makes sense to think about the type of model to build, based on why the model is necessary. If the model has a single purpose, it might be different to a model used for many purposes. The material selection, color, base and scale should all be determined by the model use.

Think about who will be transporting and setting up a model. Is weight and size a factor? Will it need a certain size vehicle to transport it?

Type of information required to build a model

To receive a quote and to build a model, dimensioned plans, elevations, sections and roof plans are typically required. If the model requires a site that reflects topography, landscape and topography drawings are needed.

Colors and textures of material: if the model is monochromatic, a color or two should be selected. If the model is full color, all color swatches are required, and textures of materials known.

Surrounding buildings for models showing context: dimensioned plans, elevations and roof plans showing pitch are required. Aerial photographs are very helpful. If the information is not available, allow extra time for this to be created. At a minimum, a good Sketch-up model can be used.

Scale

In almost all small-scale models, the smallest architectural features normally need to be exaggerated to include. This will help determine the smallest scale a model can be built. The overall physical size also determines the scale.

Figures, cars and trees/landscaping help give a model scale, especially if surrounding context is not part of the scope of work.

1/8” = 1’ allows a decent amount of detail on the exterior of a building, without it looking like a dolls house. Important architectural details, including balusters and muntins can be well represented at this scale, even if slightly over-scaled. If less detail is acceptable, a smaller scale will work.

Protection and transport

Models typically do not transport well. FedEX and UPS do not insure models to anywhere close to their value. If a model is to be transported a lot, a suitable crate should be considered. If a model is to be displayed where passersby can touch it, a clear acrylic dust cover should be commissioned. A dust cover is not typically included in a model quote unless asked for.

The final location of a model: environment has a direct influence over how long a model will last and stay looking good. Humidity, sun and dust all influence the longevity of a model. If it is intended that a model last, these should all be discussed before a model is started or quoted.