The purpose for design drawing has changed for the centuries of architectural record. The first known design drawings were full size accurate depictions of the pieces to be constructed. The drawings were used as construction templates. During the renaissance, technical methods of drawing were developed. Drawings during this time were made at a reduced size to accurately represent the construction to occur. Drawings were also made to reflect suggestions or possibilities of what could be (designs). The techniques used to develop these accurate small scale drawings were even considered a state secret by some. The basic drawing tools used by renaissance architects were rule and compasses. Many design details were documented in treatises by well known architects. Design drawings were made to represent buildings intended for construction.

In modern times, design drawing is done not only by architects, but by many other allied design professionals. The techniques used for 3-D representation as greatly varied depending upon the purpose or design phase at hand. Computer software has introduced a new realm where things can appear to be real, but in actuality, are improbable, impractical and impossible to construct. Should they still be considered design drawings, or fantasy pictorials?

The inner workings of an architects design process can be revealed through careful scrutiny of the progressive design drawings. By examining what changes are made, refinements introduced, details clarified, one can begin to understand the thought process of the designer.

Different types of design drawings are used at different stages of the process. Initial ideas or concepts are often quick loose sketches that are later translated into scaled drawings. As the design continues, the further refinement of details brings forth obstacles that need to be overcome and adjustments or compromises that need to be made.

Architects often use a tracing made from a scale drawing to explore new design ideas and variations. This allows a method of rapid trial and experimentation. It is sometimes through these quick sketches that ingenious ideas develop. Many ideas for this quick sketches have been known to be pulled from pictorial diaries of architects travels, influences and experiences.

In general, design drawing is a method of conveying the future of a potential structure. Without tangible, visible pictures, how could one describe the special relationships, physical appearance and structural components? But not all levels of design drawings reflect the actual construction process. It is presently common to have the construction companies and their sub contractors build construction working drawings. This goes to show that the understanding of and the level of detail and refinement vary in drawings by who their intended audience is.
I loved the line “architecture is a study of interpretation.” Only by developing common, well documented and repeatable methods for design drawings can they be used across a wider audience for interpretation. The architect uses different drawings to explain meaning to different audiences. Why can we not have a multi dimensional view of a design drawing that allows for filters to screen out or focus in the specific set of information for an intended audience? Why must drawings be constantly redrawn for different user audiences with the same basic form?

I think we need to invent a multidimensional drawing system. It would keep track of all the revisions made to a project and henceforth create a historical record for future analysis. By combining all documents into one source, when changes are made to one level, layer, plan or elevation, the needed changes on other levels would be immediately identified. The drawings details would know of their dependencies to other levels details. When a representation of a drawing is needed, the target user is identified and the appropriate level(s) of detail would be produced.

By thinking of design drawing as a multidimensional object, much time could be saved by designers and draft-persons on a project. This would also allow for a standardized method for all building trades to document and coordinate the construction details of a building. By making this a ‘single source’ of reference for all construction activities, quality control and productivity could be increased.