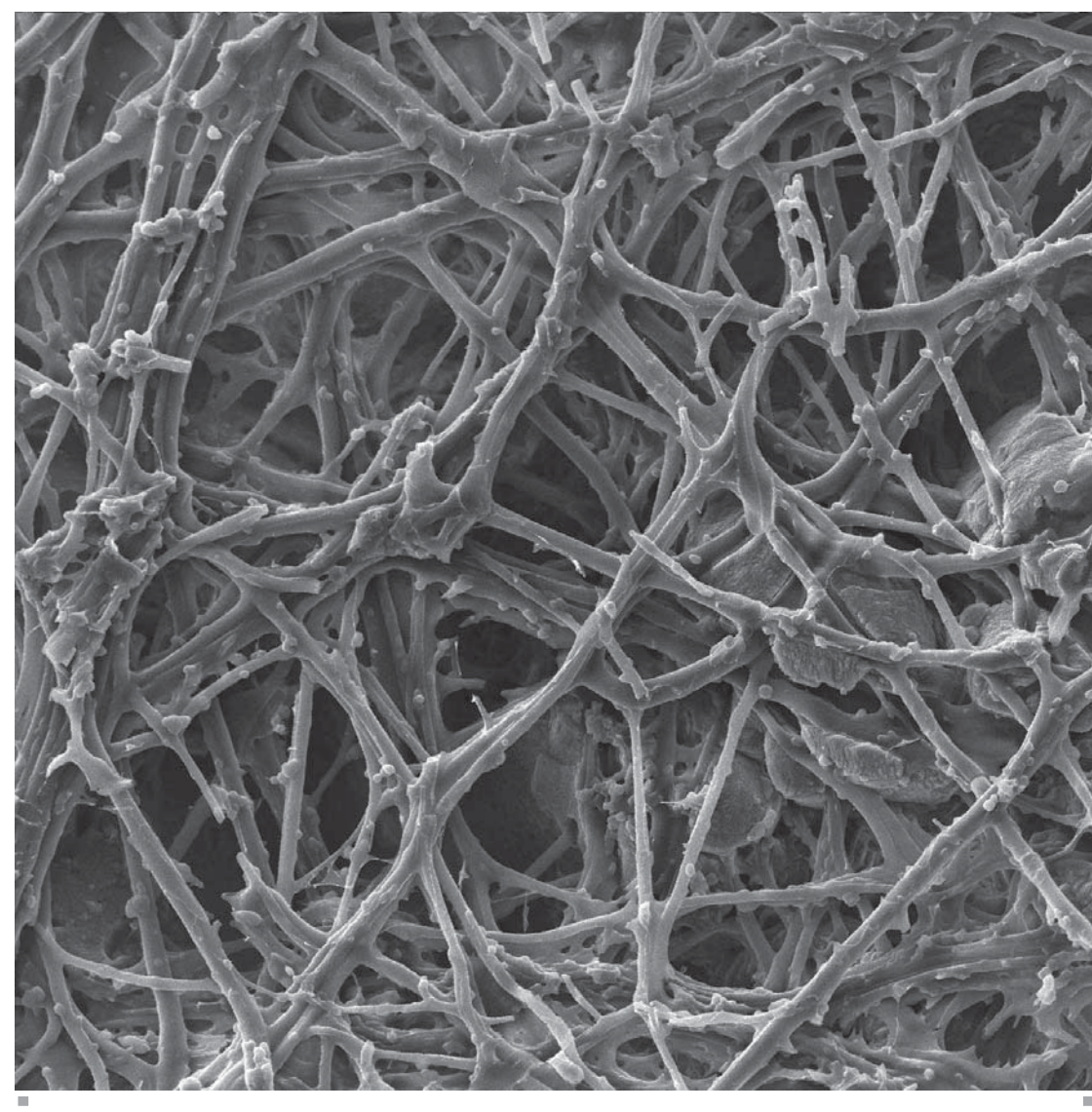


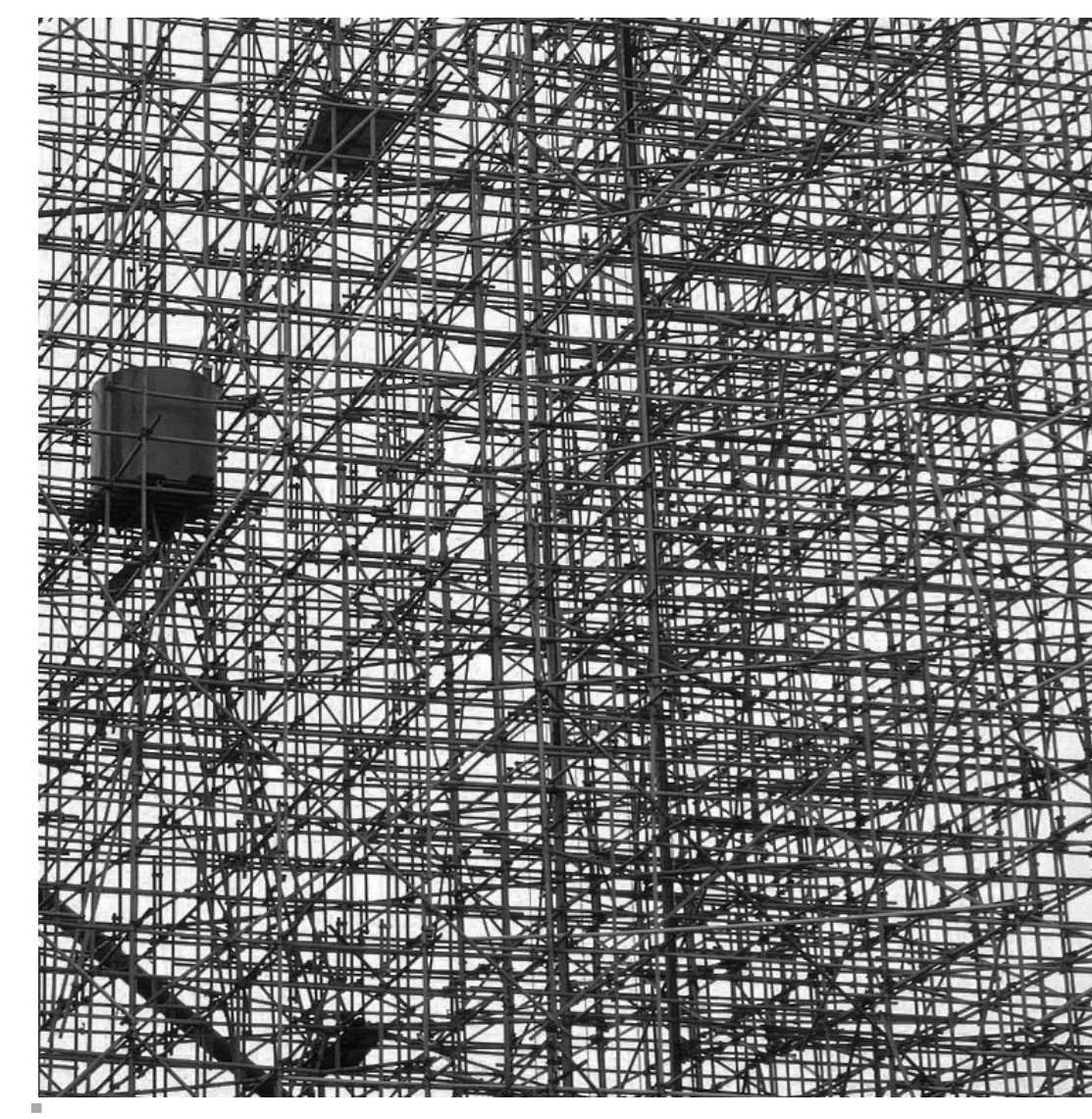
A. Forms in nature



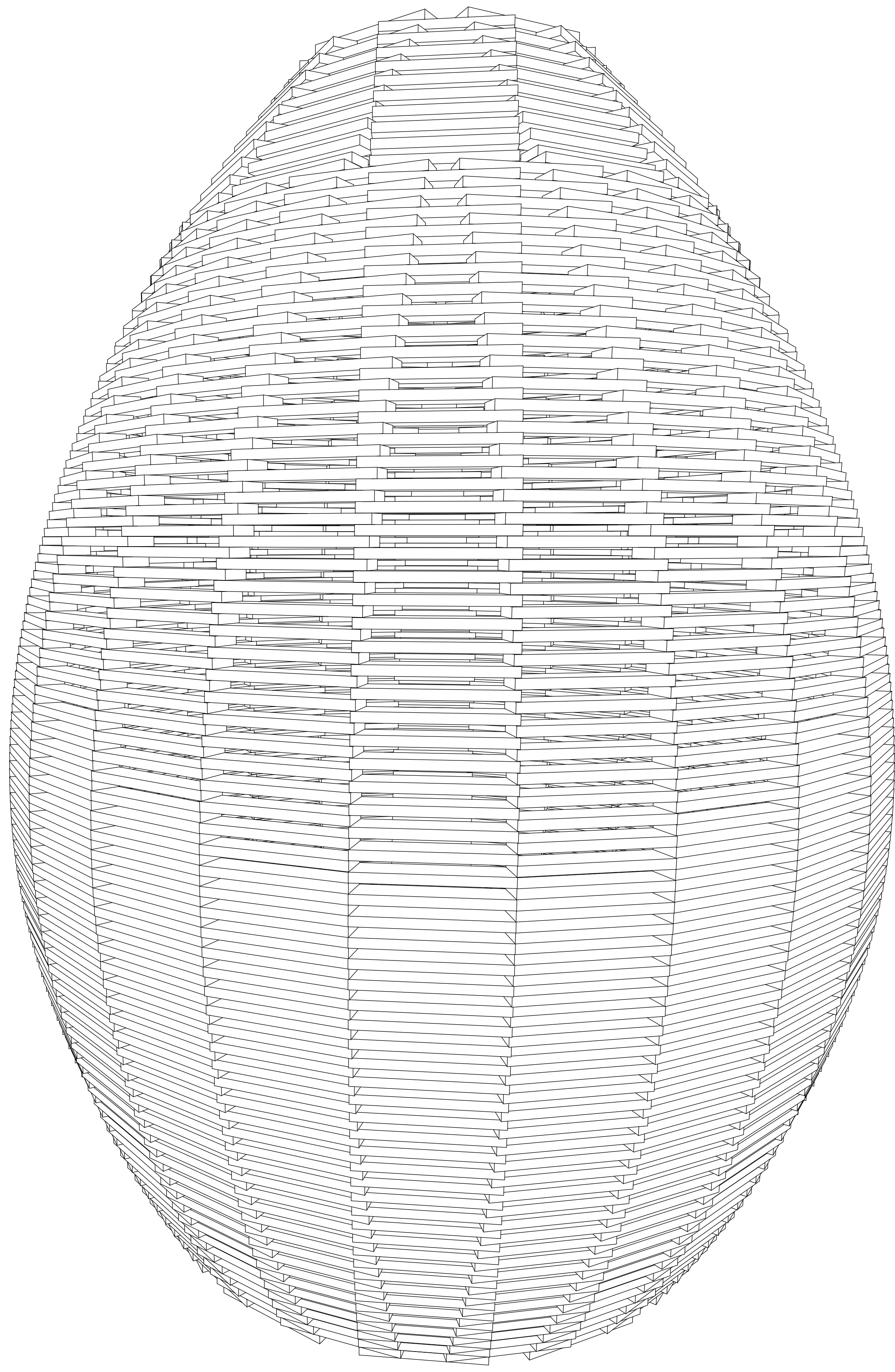
B. SEM image of eggshell



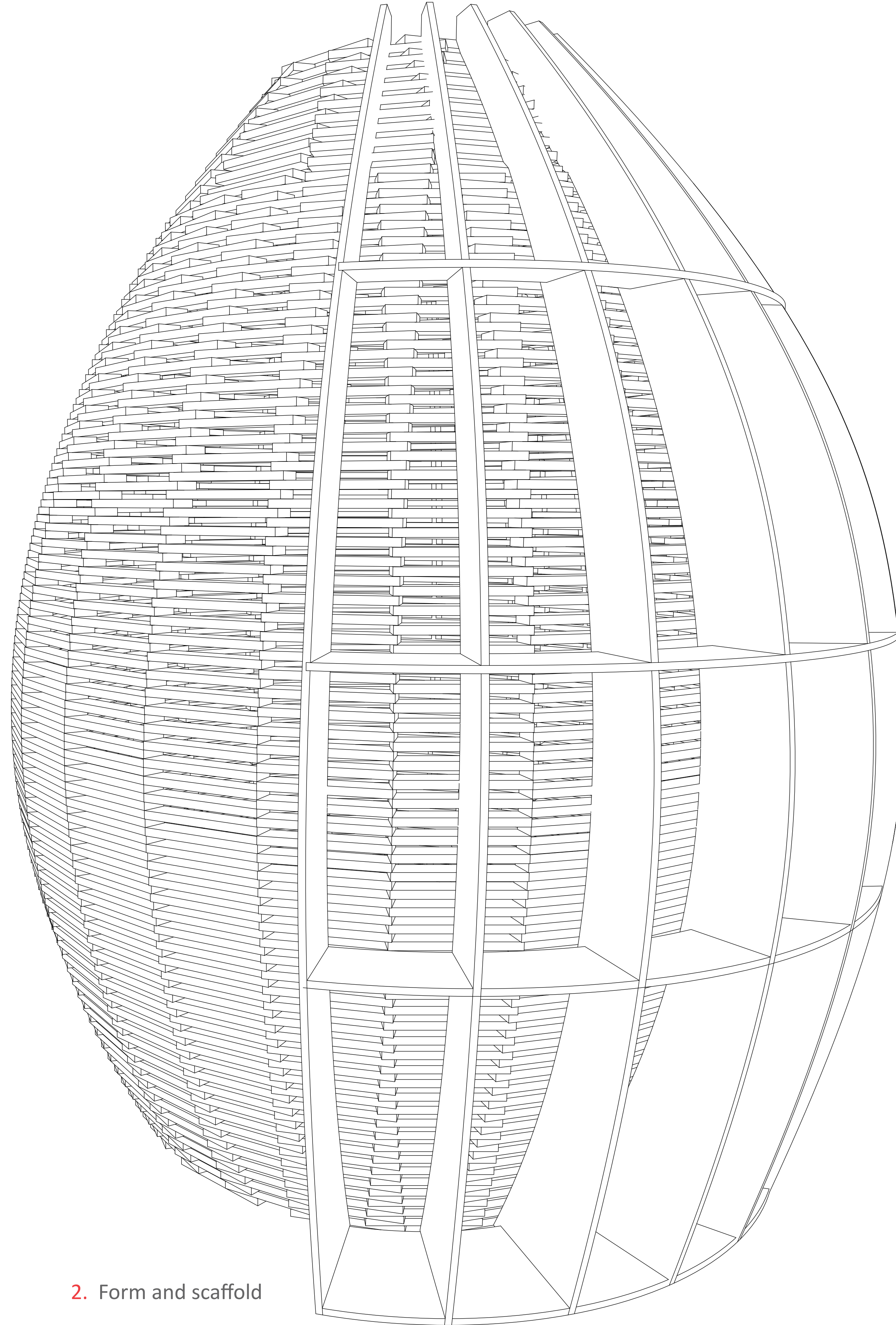
C. Bamboo scaffolding on building



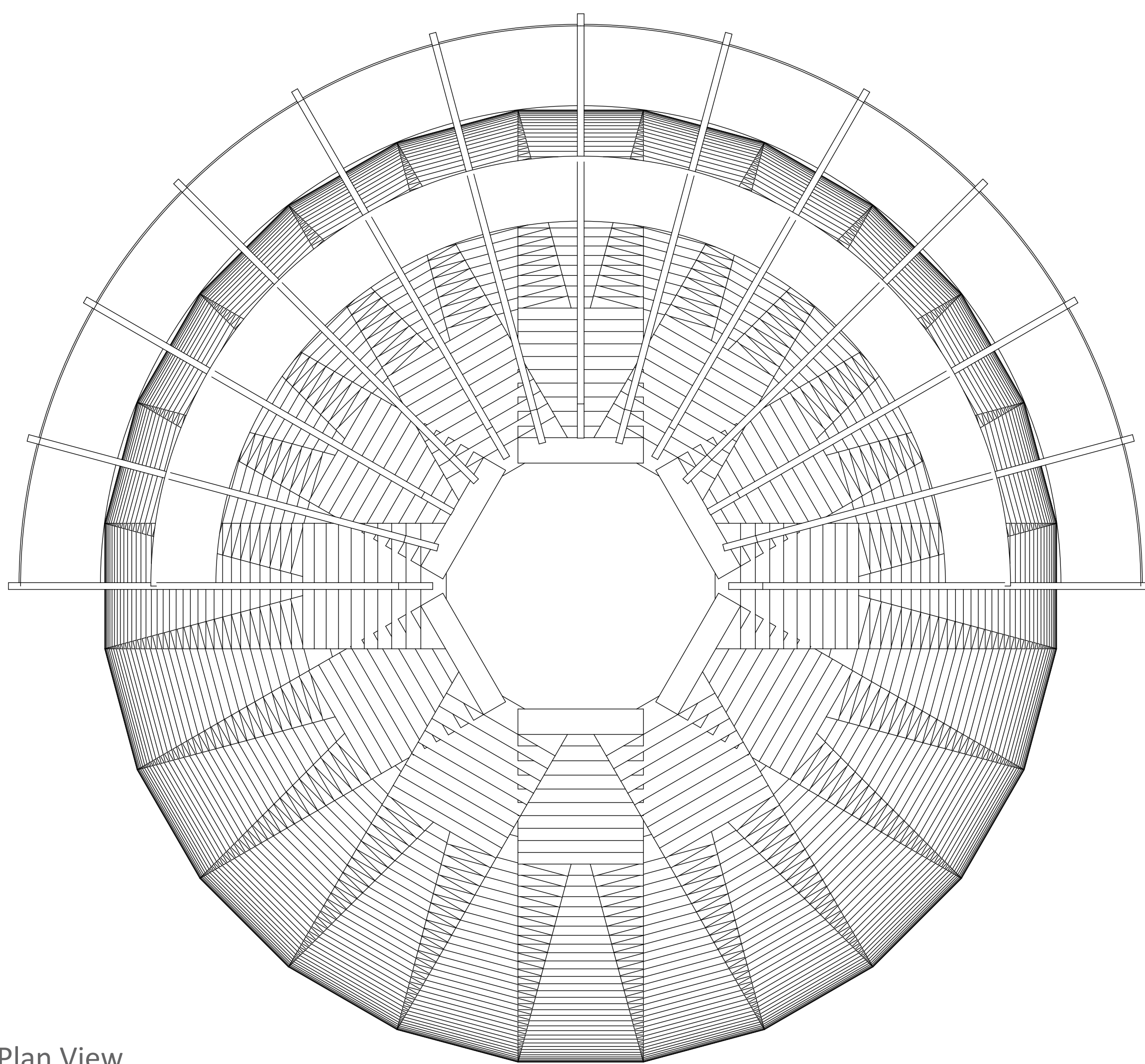
D. Image of scaffolding



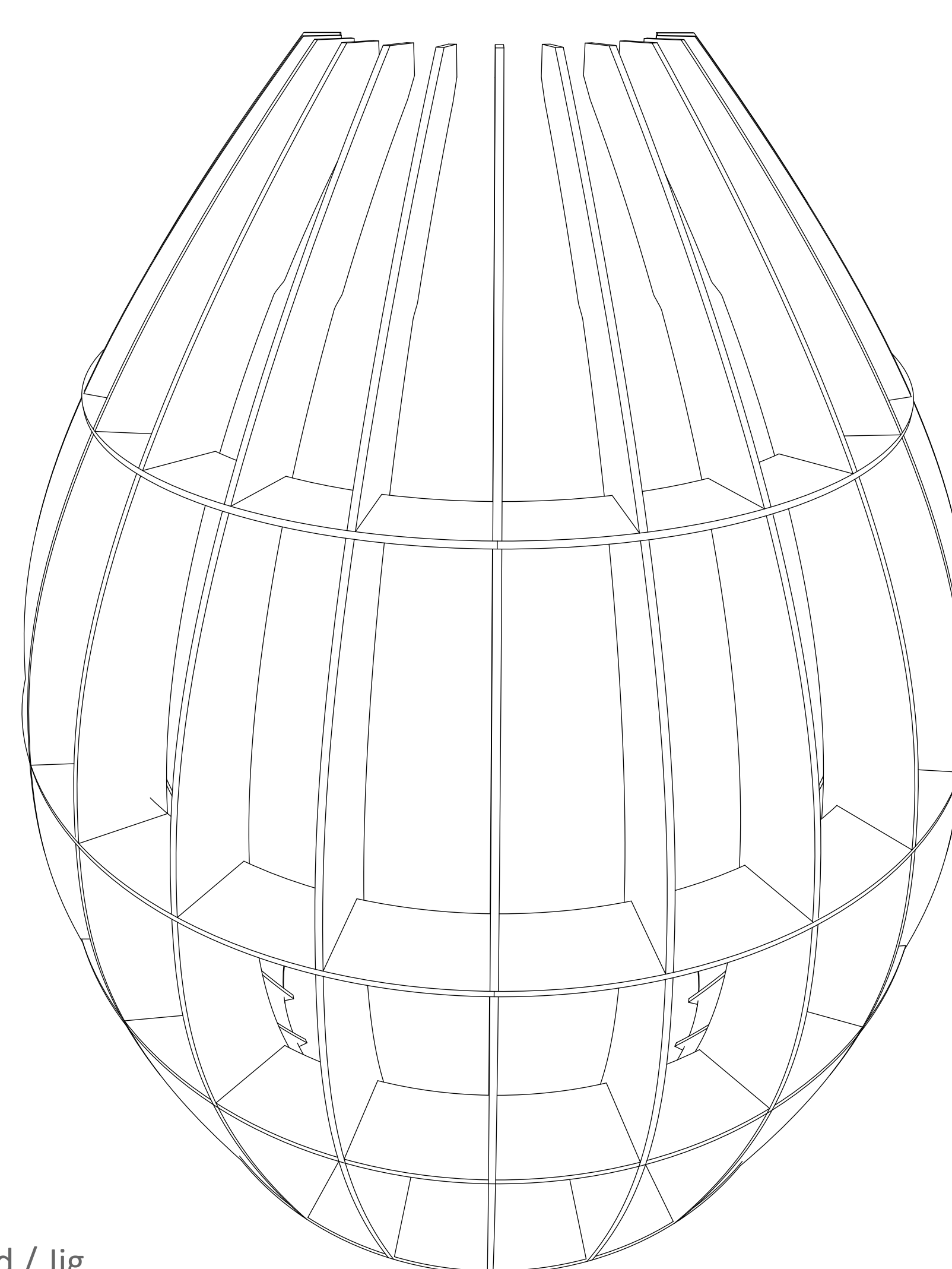
1. Completed Form



2. Form and scaffold



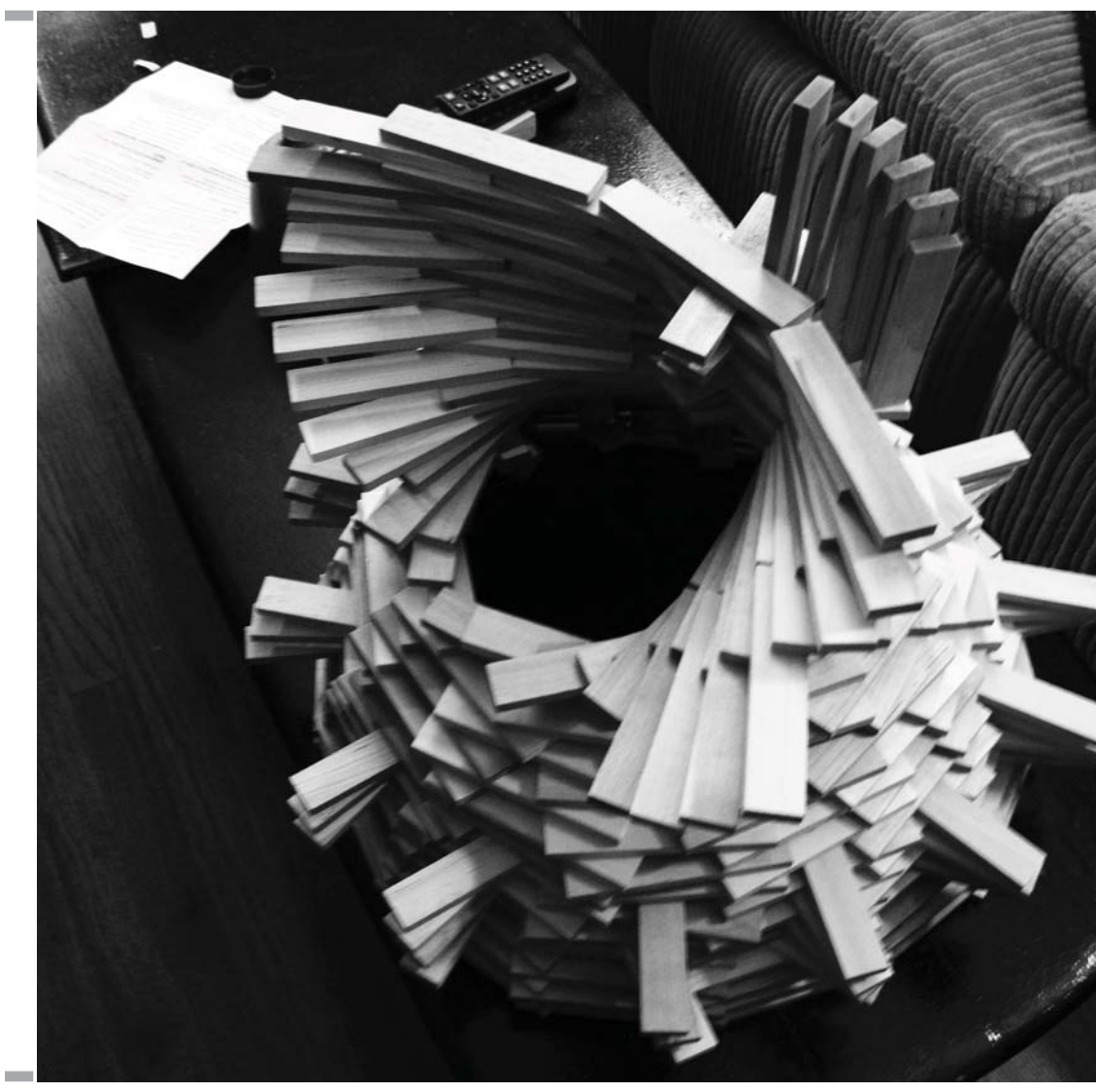
3. Plan View



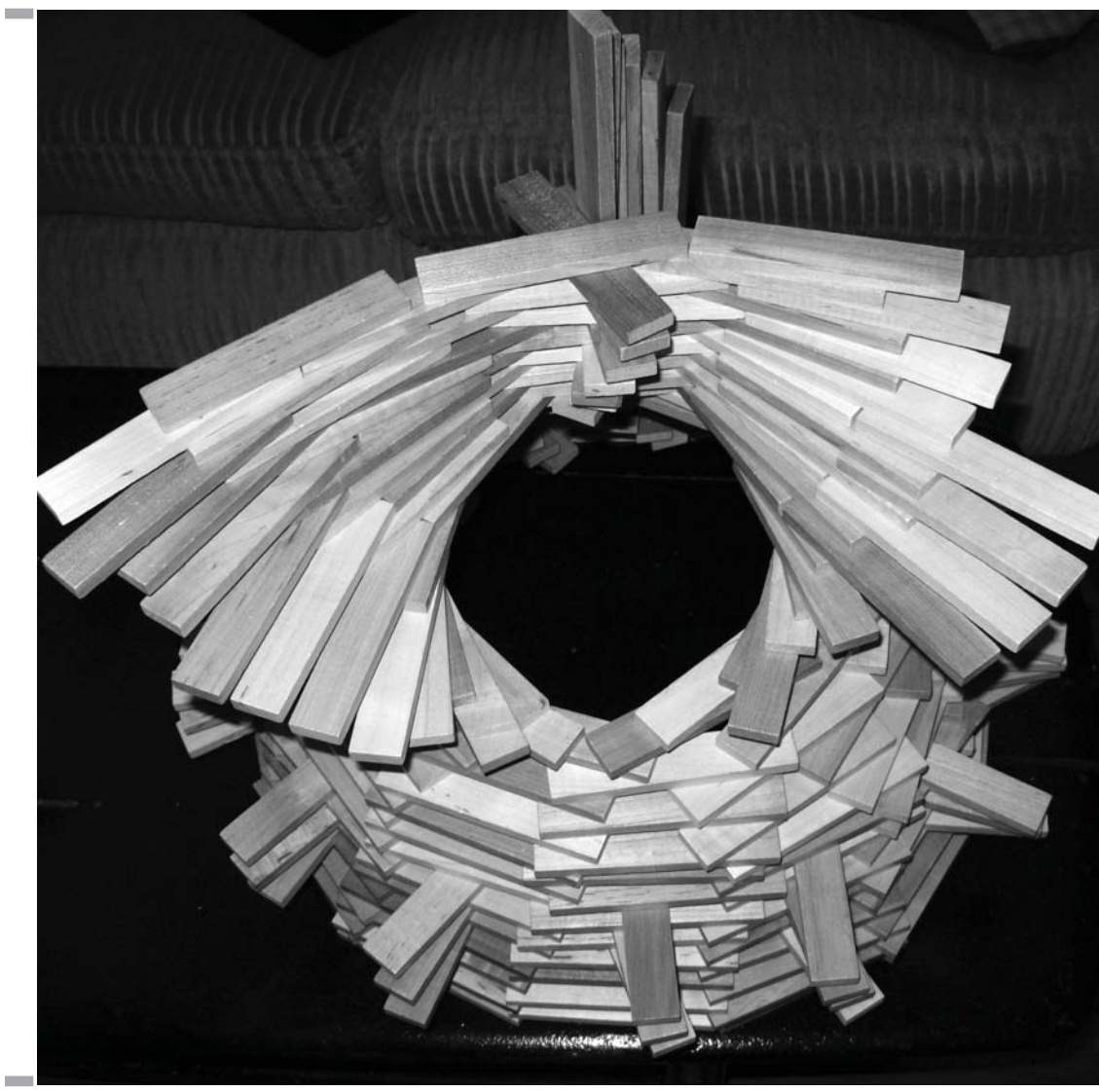
4. Scaffold / Jig



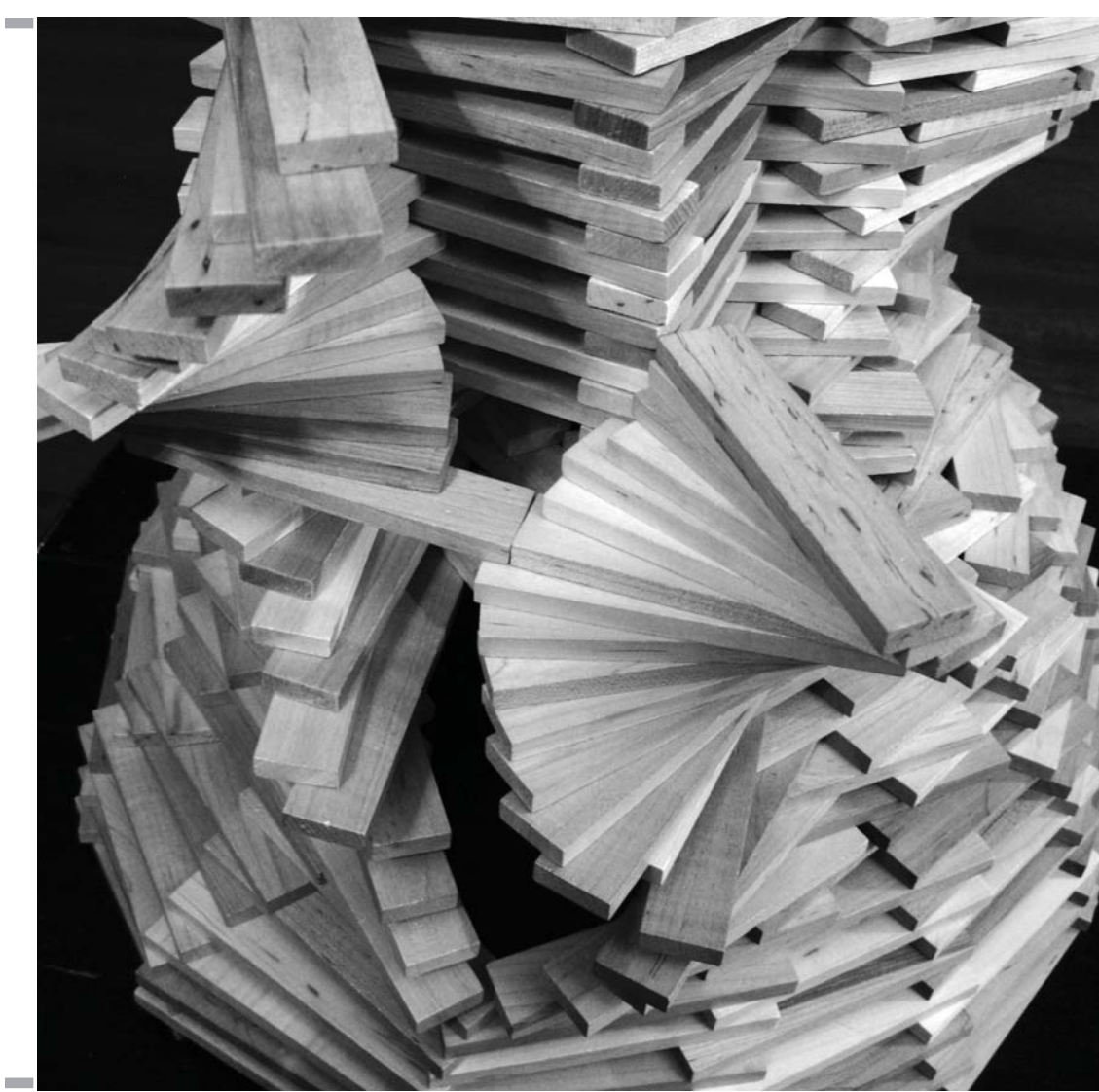
E. Stacking study of multiple voids



F. Stacking study of single void



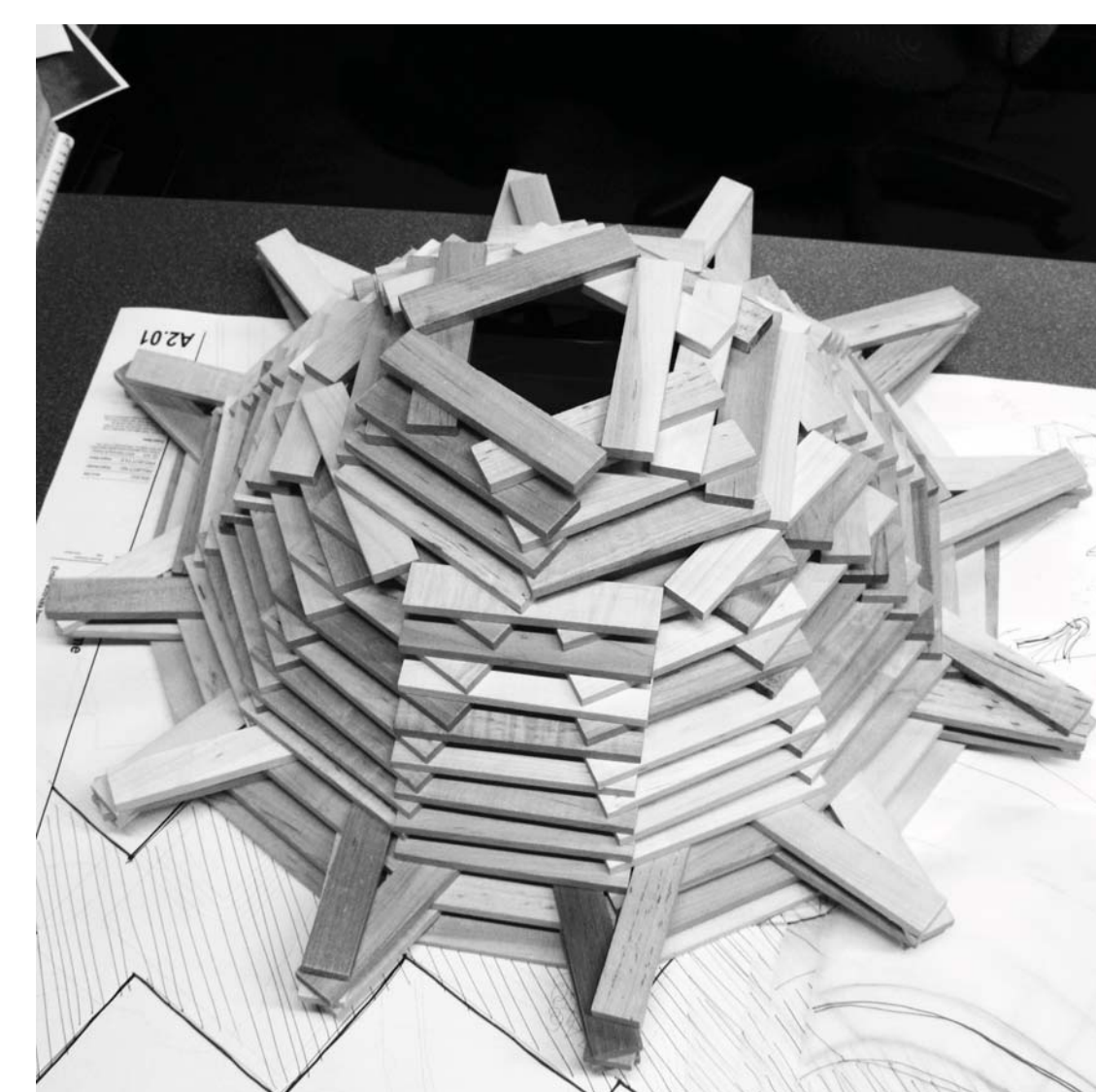
G. Stacking study of single void



H. Stacking study building from the void



I. Stacking study 12 to 6 row conversion



TEAM MEMBERS

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PLANNING • DESIGN

VRANA
Charles Vrana & Son Construction Company

In the developmental stages of the idea for the Keva structure we were drawn early on to various minimal forms found in the natural world. The simplistic and symbolic beauty of the form was derived from the egg(A). This interest was spurred on through a closer examination of the object on a microscopic level. What appears to be a simple solid structure at a macroscopic level is actually a complex, porous structure at the microscopic level(B). Parallel to this is the way in which we develop scaffolding systems to construct our architectural structures(C). The design/construction of the Keva structure represents both the natural(A,B) and man-made(C,D) elements of the design. Many factors played a role in the development of the form. The form was limited to the modular constraints of the Keva planks as well as

their limited tolerance in regards to each other. When developing the form in the computer, gravity and friction are not a factor, however, in the physical execution of the structure these factors are crucial. The blocks could not be allowed to cantilever beyond the midpoint of the previous block in any dimension, as well; the rows were limited to both a maximum and minimum radius so as to not overlap or span more than the distance of one block. Once the minimum radius was met the number of planks needed to be reduced from twelve to six per row in order to complete the form(I). The scaffold acts as a pattern to aid in achieving the consistency of the form which is removed upon completion.