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ARCHITECTURAL CERAMIC ASSEMBLIES WORKSHOP
ARC 404 | OMAR KHAN
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Terrasol

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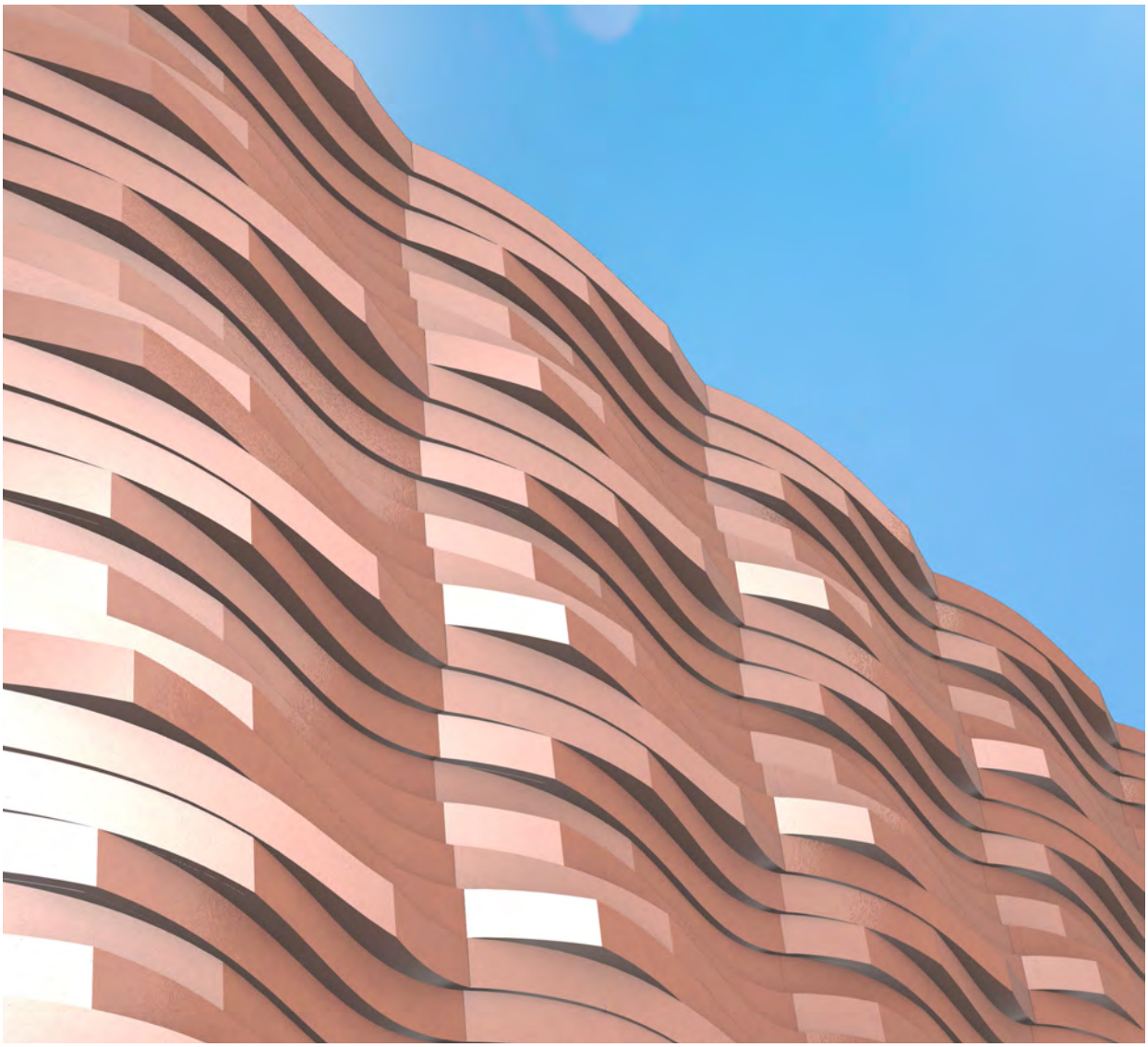
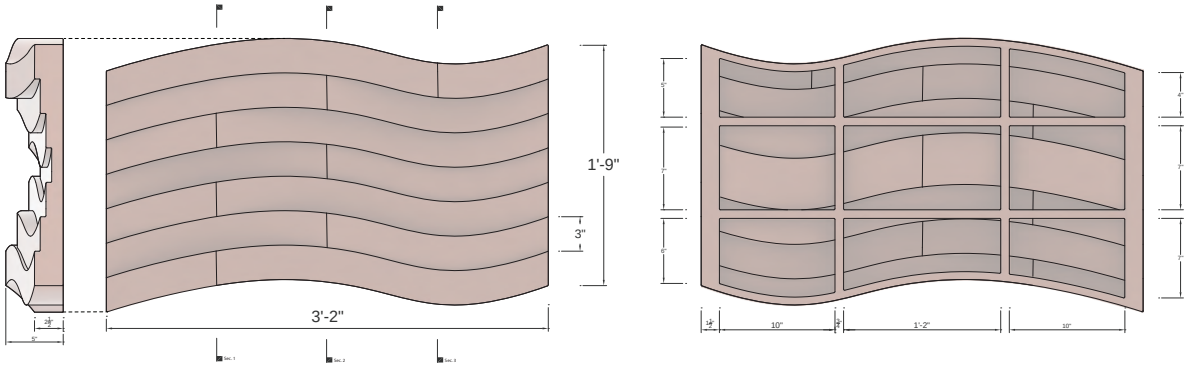
Terrasol utilizes a unique geometry that allows the panels to react to the lighting conditions from it's solar context. The panel' surface is formed in a way where it creates various exposures of light throughout the day. With this, depending on the direction in which you observe the panels, you may experience different lighting and shadowing affects due to this unique geometry. This characteristic gives the static panels a sense of movement. Through the perception of changing light patterns the panels create an experience of fluid movement across their surface. These panels are intended to be placed on the exterior of buildings where they can interact with as much sun-lighting as possible. Their horizontal arrangements will offer a wave like motion across its surface, while the vertical arrangement plays with a larger depth of shadows. The panels will be fabricated through a Ram Press process and further constructed through a monarch clipping system.

Project Render:

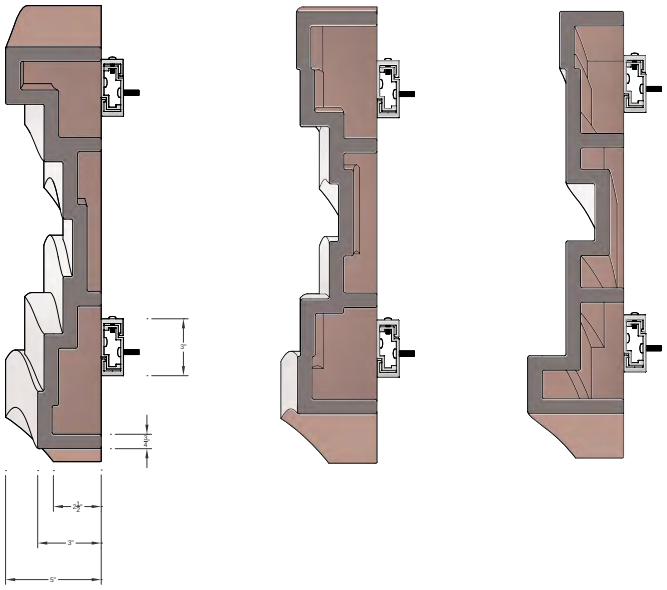


Panel Design

Plan, Elevation w/ dimensions:
1.25” : 1’

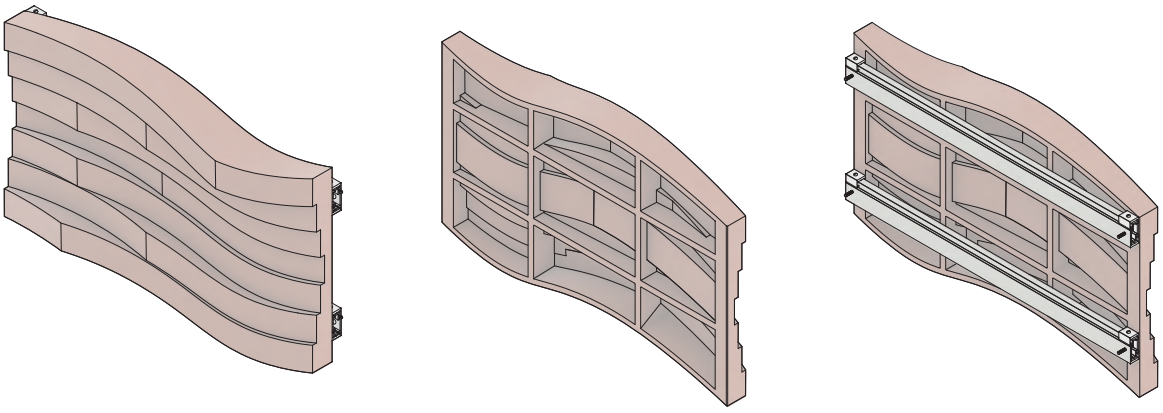


Sections w/ dimensions:
1.5” : 1’



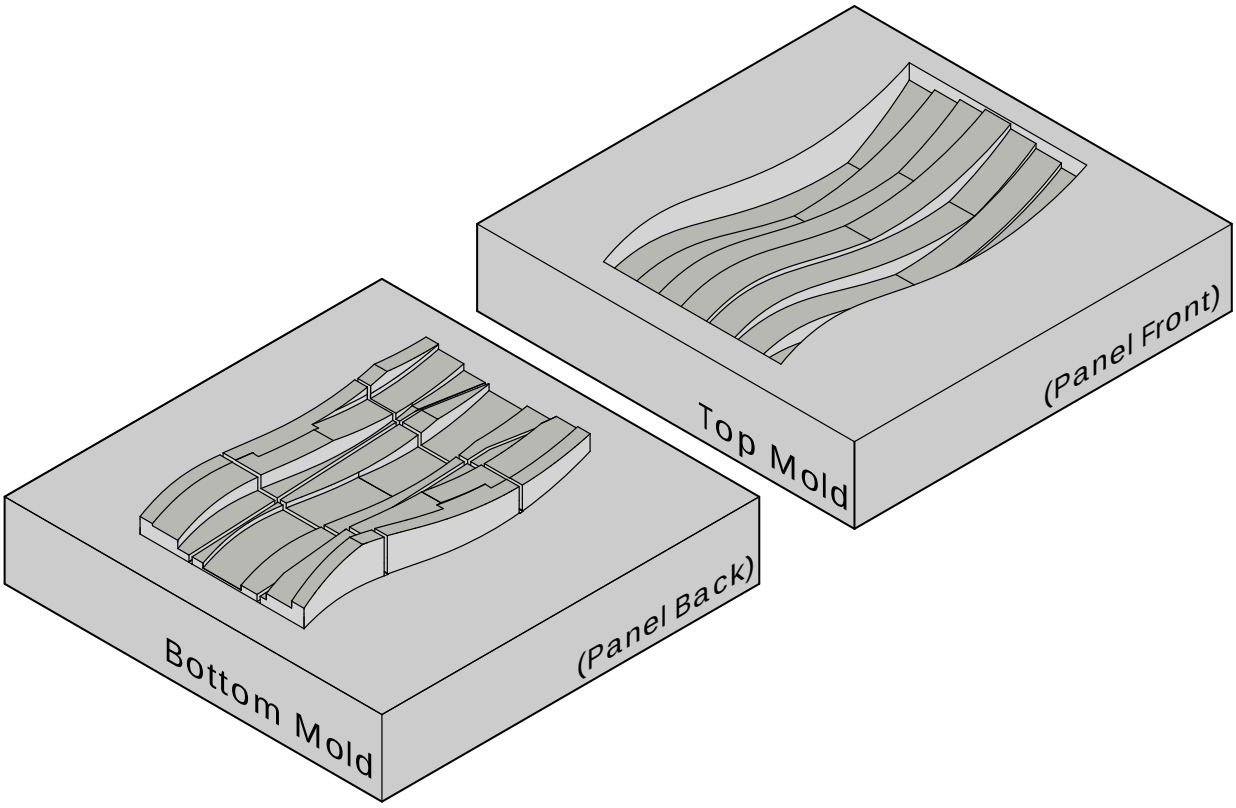
Section 1 Section 2 Section 3

Caption: Isometric of one panel and hanging system:
1.25” : 1’

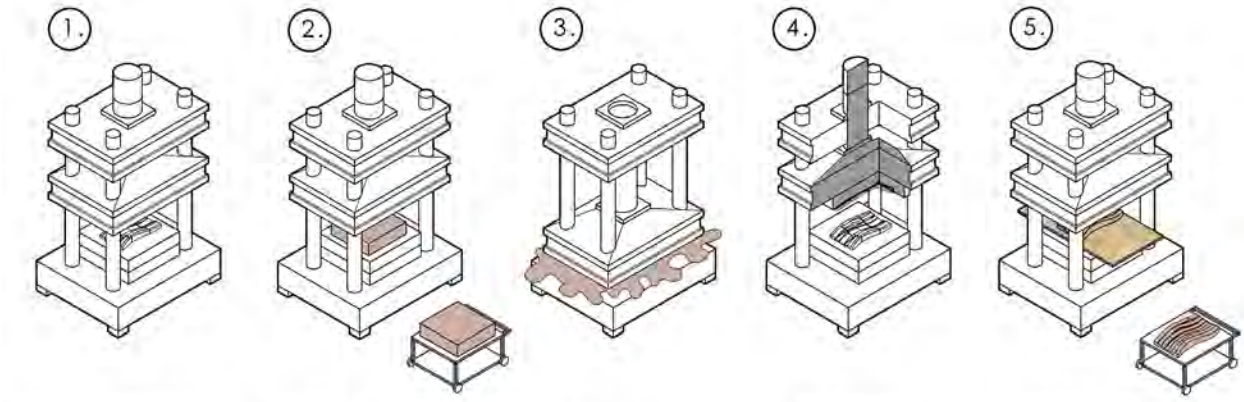


Manufacturing Technique

Isometric Mold Design: Ram Press Molds:



Isometric Manufacturing Technique: Ram Press Process



Mold Installation

-Panel Molds are installed into the Ram Press with the front panel press being the top, and the backside panel being the bottom due to its flat surface.

Clay Packing

-Wet clay is brought from the mixing lab. The clay is then loosely placed atop the bottom mold

Pressing

-The clay is now pressed between the two molds; the top mold lowering onto the bottom one. The molds come within 1/16" of one another to allow excess clay to be pushed outward.

Releasing

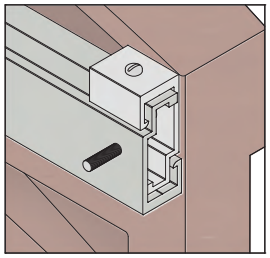
-The pressed clay will typically stay stuck to the top mold as it's lifted from the bottom mold. Water is pumped through the mold to loosen the clay from the mold.

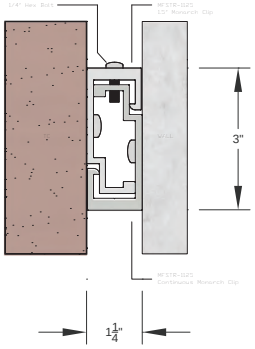
Retrieving

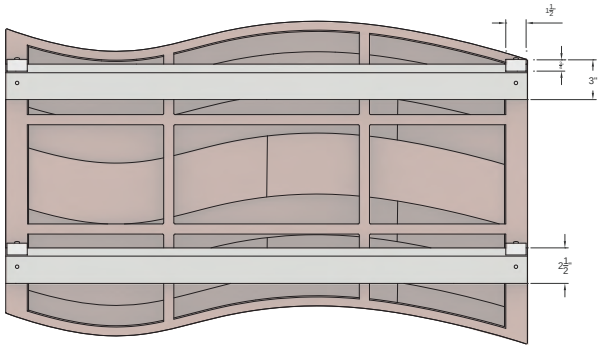
-The formed clay will then be caught on a wooden board and then carried to a kart to be delivered to the kiln to be fired.

Construction Details

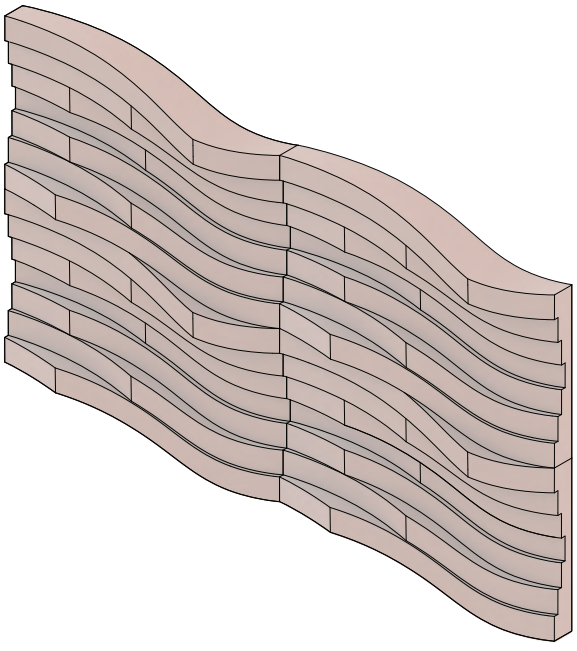
Detail, Section, and Elevation of attachment: Monarch System:
1.5” : 1’

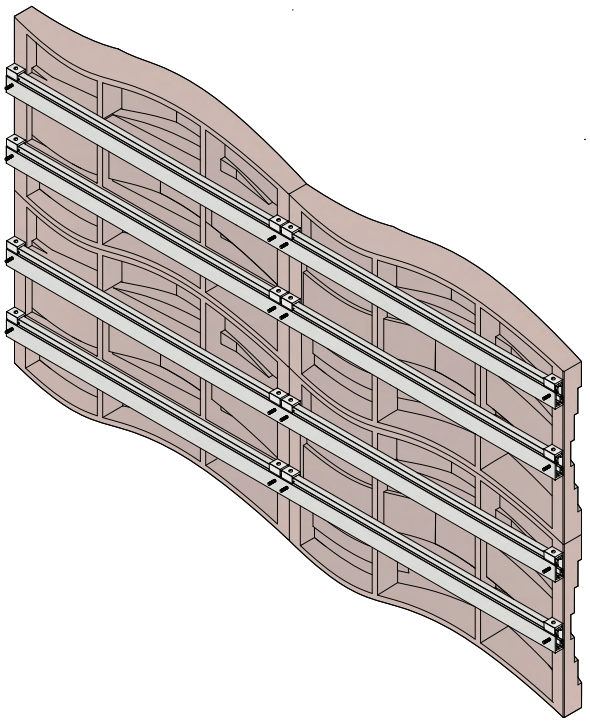






Isometric of constrcution detail with multiple panels:
1.5” : 1’





Performance

Luminosity Diagram: