The Production Design of TERRA NOVA

AN UNREALIZED UTOPIA

ART DEPARTMENT TEAM

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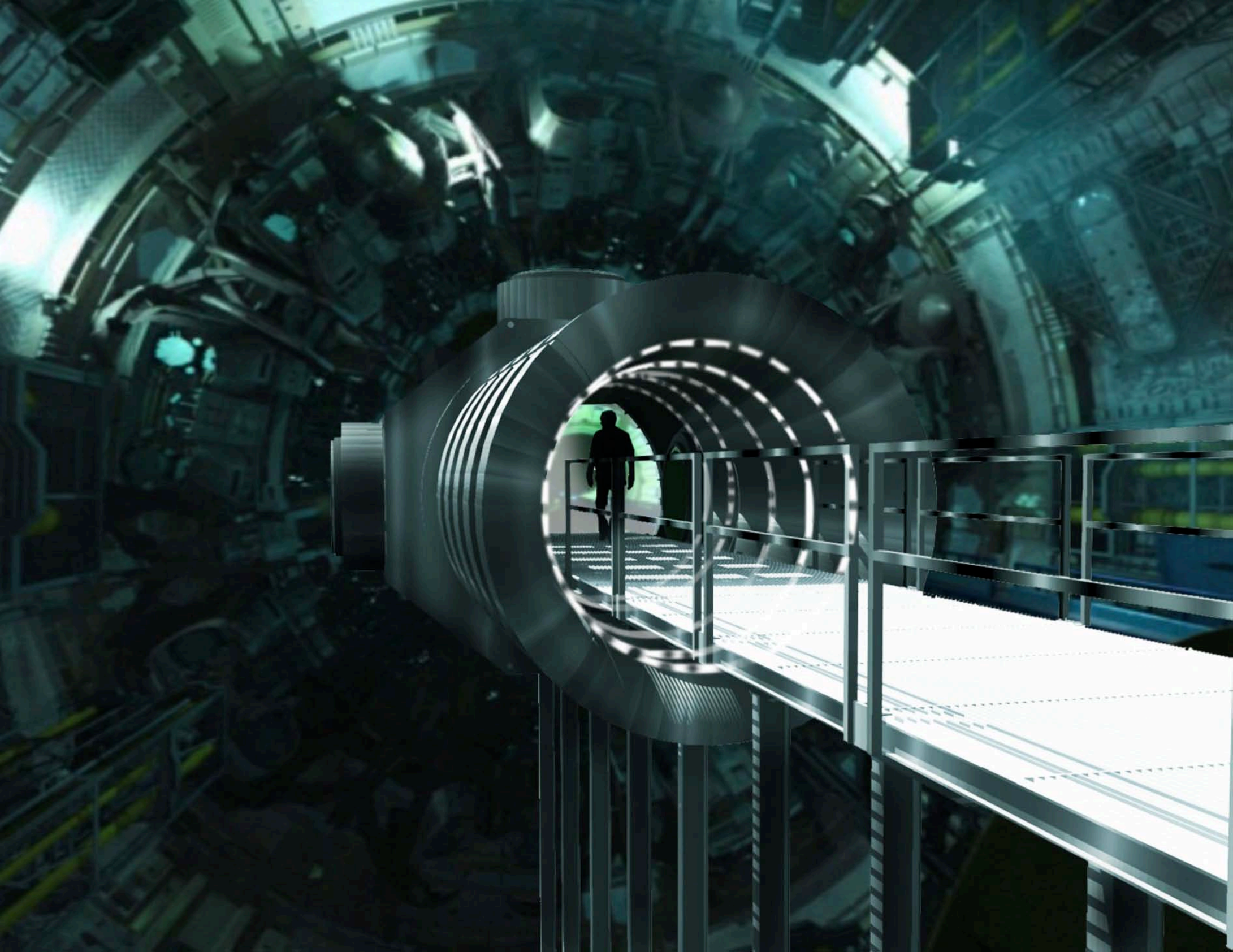
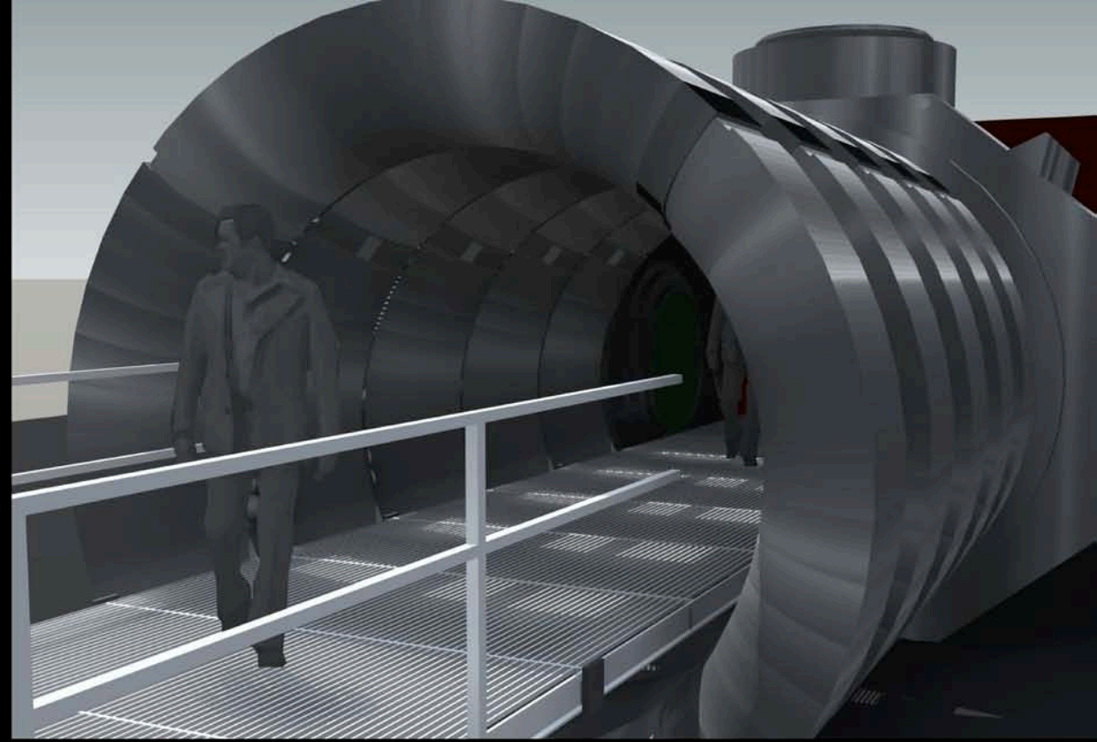
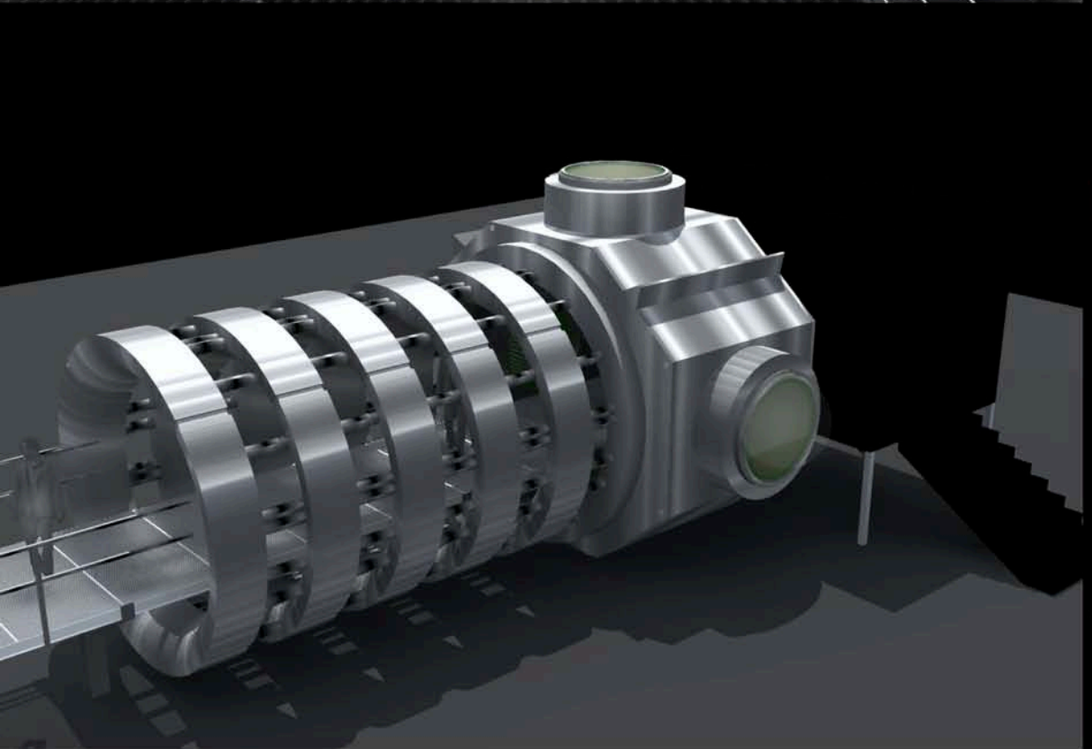
TERRA NOVA

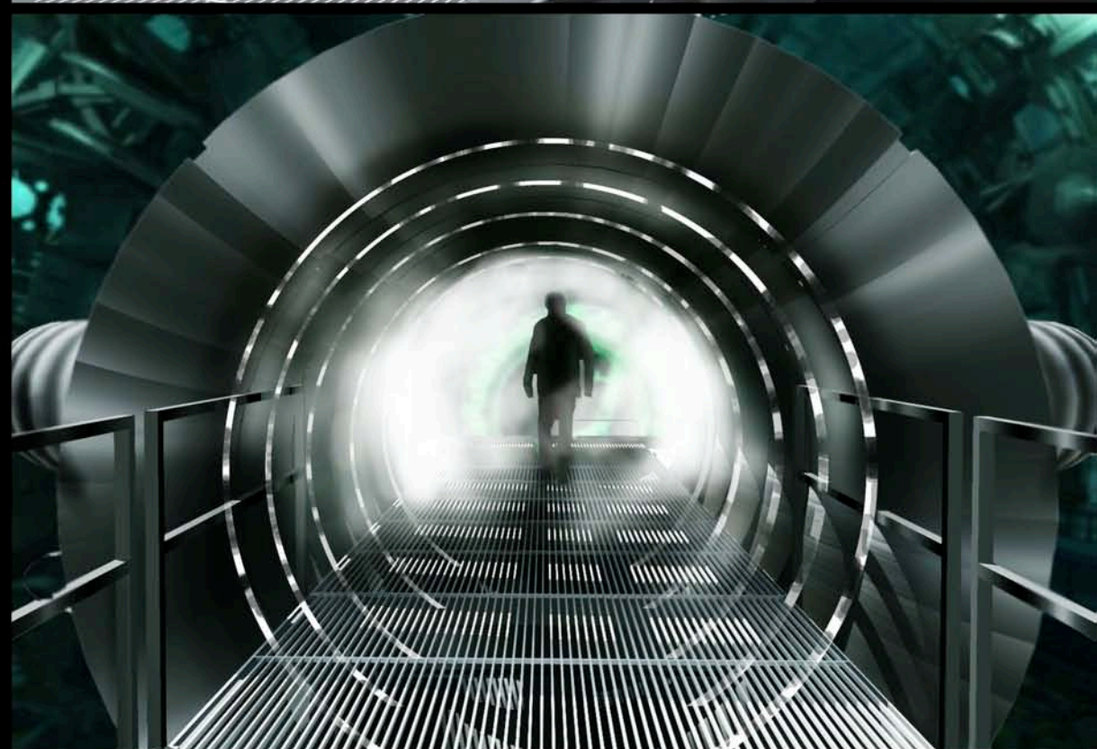
AN UNREALIZED UTOPIA

It is not often in our careers that we get a chance to design and lay out an entire city with all its building components, infrastructure, and technology.
Many architects and urban planners have attempted to design UTOPIAN cities and societies formulated on social, economical, and human interaction theories.
Not since the days when Oscar Niemeyer designed Brasilia in the middle of the Amazon have I seen plans for an entire city realized. One of those opportunities came my way when I was hired to design a city and a way of life for a society of one thousand inhabitants from the year 2049 that had been sent back to the era of Pangea and the dinosaurs to start over again.
The premise was simple. A portal not bigger than a garage door would open in the time continuum once a year for one hour allowing a small group of inhabitants to pass through on a one way trip to Pangea carrying with them all the resources, materials, and technology needed for a new beginning and successful colonization.
My concept was to lay a circular master plan for Terra Nova protected by electrified solar powered walls containing quadrants and blocks of housing, communal gardens for farming and recreation, a civic center, schools, hospital, market, and all necessary structures to satisfy the needs of the new society.
The entire city and all components were to be powered by solar energy produced by the enveloping solar membranes that could be used as roofs or walls making every structure independent and self-reliable. Only a limited amount of materials could be carried through the portal and the rest would have to be harvested from nature in Pangea. This made for the development of a unique esthetic that used super high-tech components in combination with natural fibers such as woods and bamboo.
Our art department team completed the designs for Terra Nova. The results were applauded and praised by the show-runner, director, producers, and writers of the show. Everything was set up for the realization of this utopian dream up until the moment when the construction estimates came in around ten percent higher than expected.
To my astonishment and total bewilderment, I was asked to turn in over five hundred drawings and renderings because they wanted to keep and implement the design but wanted to hire another production designer to execute the construction with the premise that they will make up the savings needed to bring the project back into budget.
Our drawings were turned in, a new production designer was hired with the mandate to follow the established design, and the budget … well … we all know what happened there.
In the end most of the original concepts are still present but a lot got lost in the execution. Is it better, worse, or simply different? Let the audience be the judge.







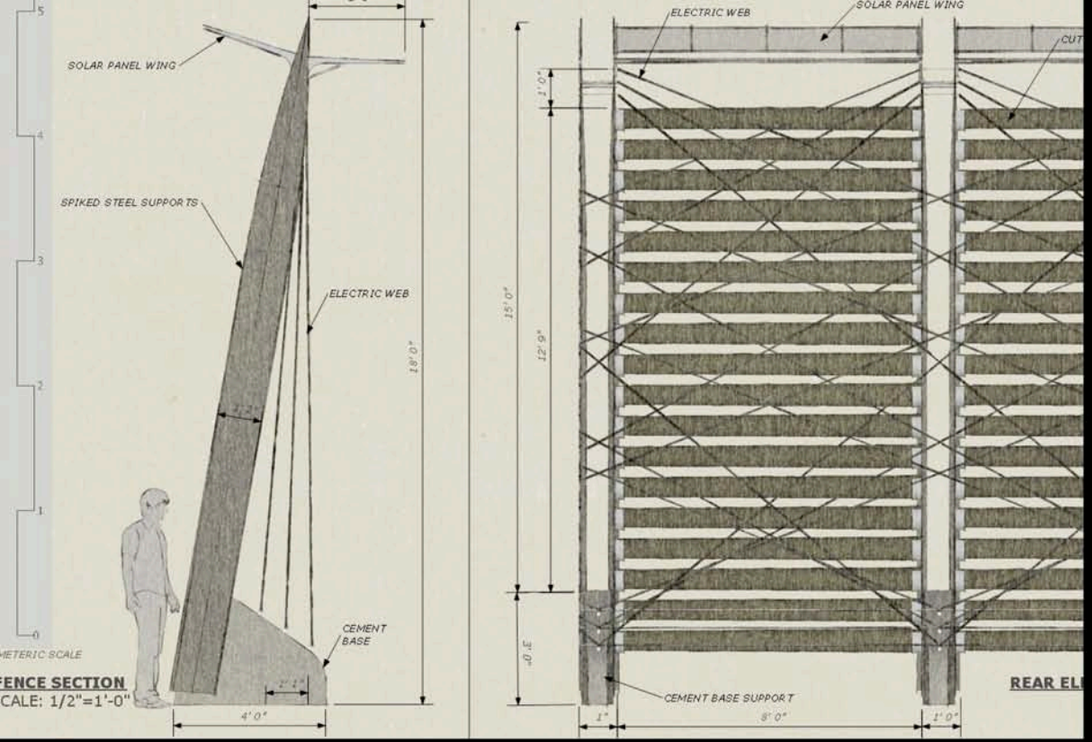


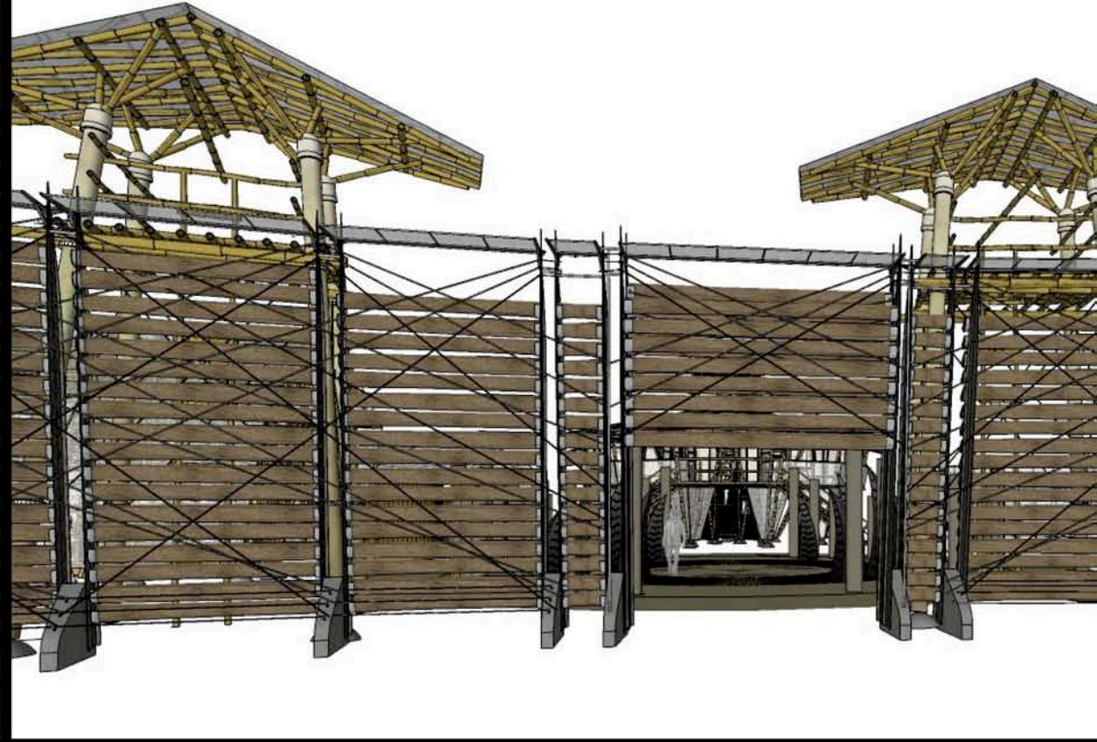
Once a year and for one hour, a particle accelerator would be used to open a portal in the time continuum allowing a small group of specially selected inhabitants to pass through on a one way trip to Pangea carrying with them all the resources, materials, and technology needed for a new beginning and successful colonization.

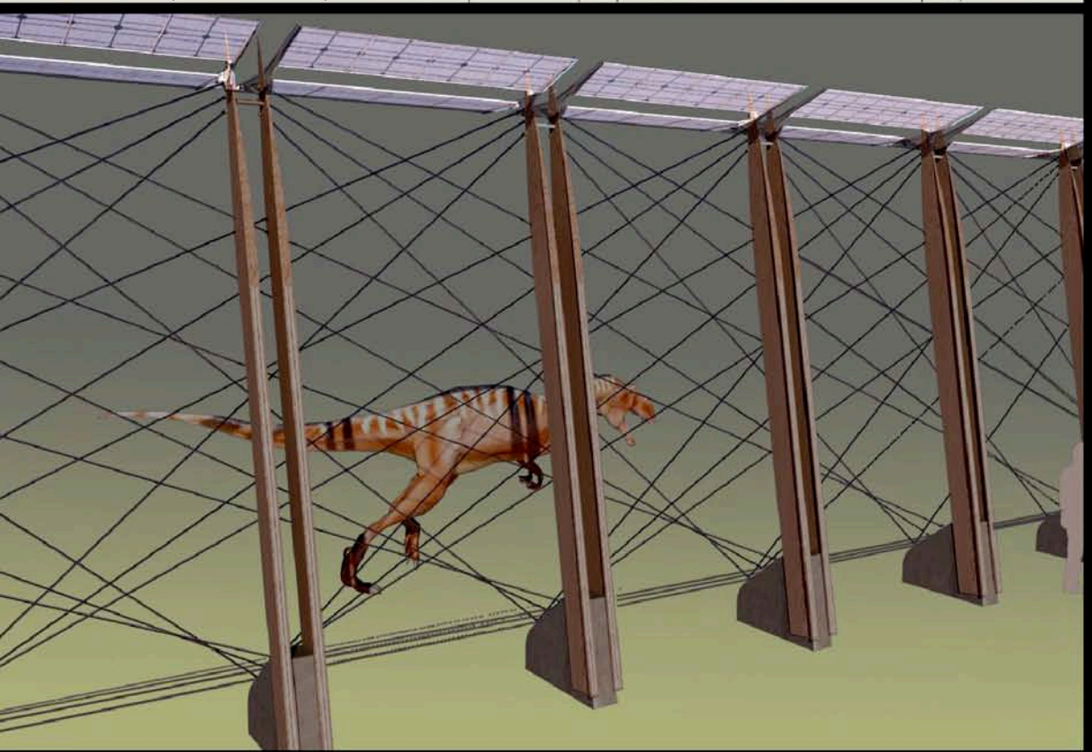
TERRA NOVA, the new human colony in Pangea where state of the art technology from the future would meld with prehistoric natural raw resources to create a unique esthetic, a new way of life, and a chance for a new beginning.

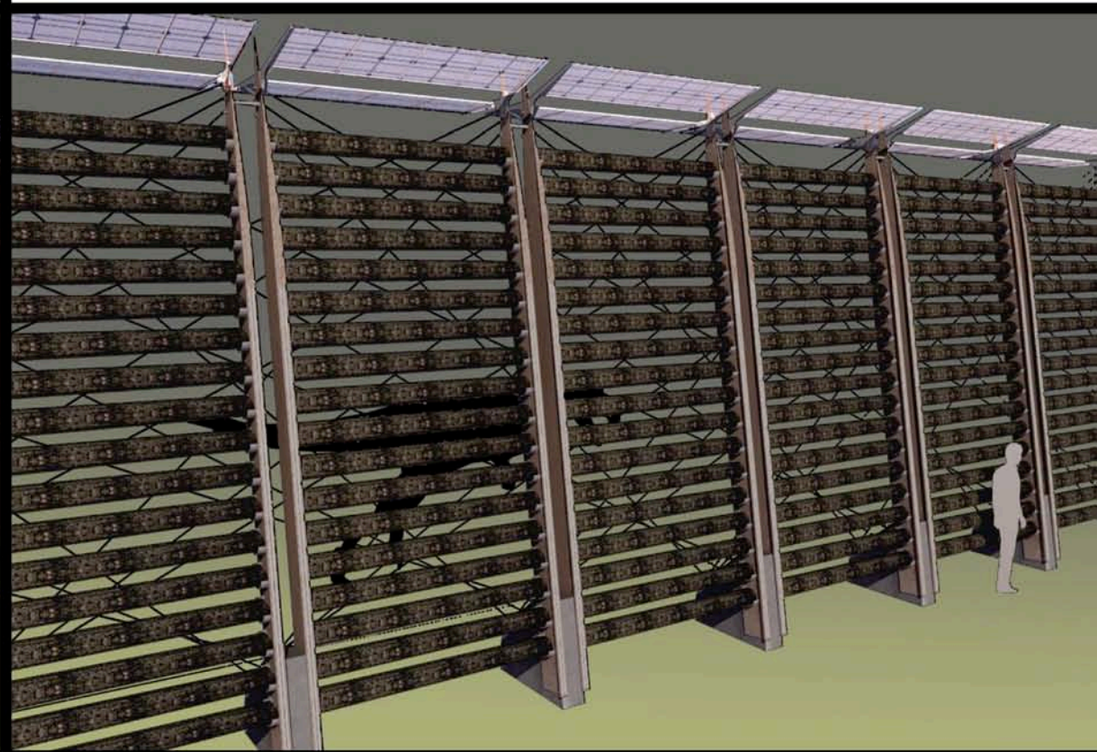
The concept was to lay a circular master plan for Terra Nova. It would be protected by electrified solar powered walls, divided into quadrants containing blocks of housing, communal gardens for farming and recreation, a civic center, schools, hospital, market, and all necessary structures to satisfy the needs of the new society. The circle enclosure would complete as new inhabitants arrived every year bringing with them the necessary materials and supplies. Once complete, the center area would become dedicated to recreation and agriculture and would be fully protected from predatory species.

A perimeter solar powered fence consisting of an electrified cable web over locally harvested wooden logs stacked twenty feet high would keep a line of defense against predatory species. In the center and flanked by watch towers, the main gate to Terra Nova's main plaza could open and close under tight security.



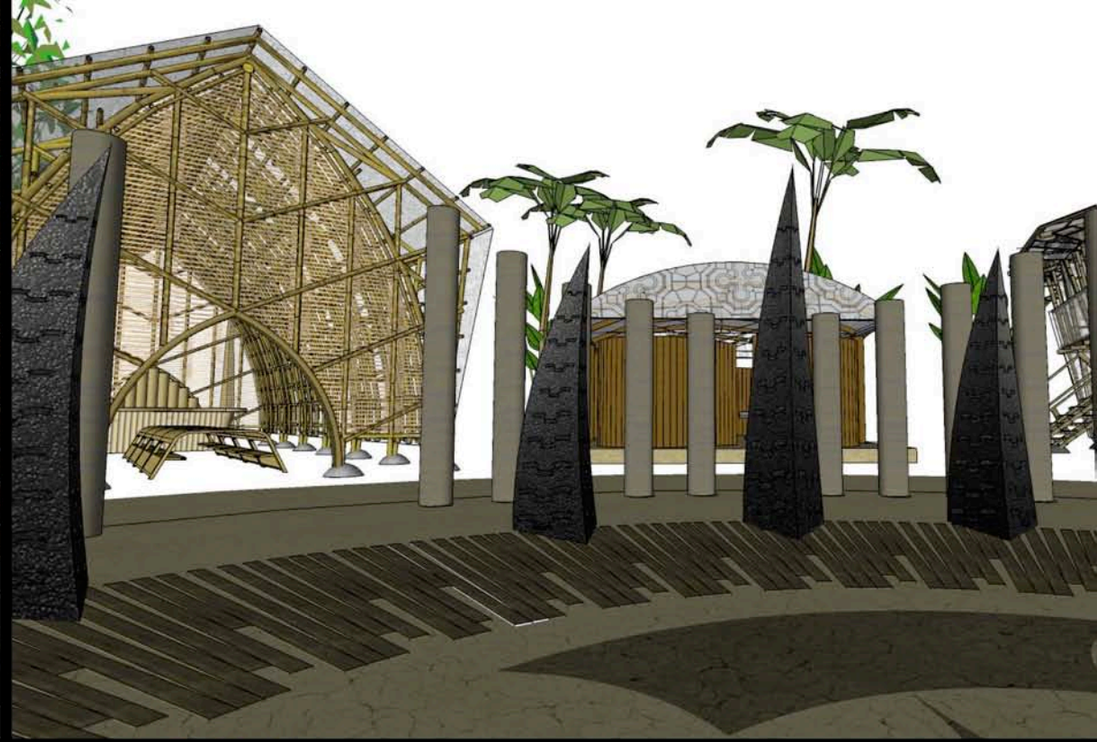


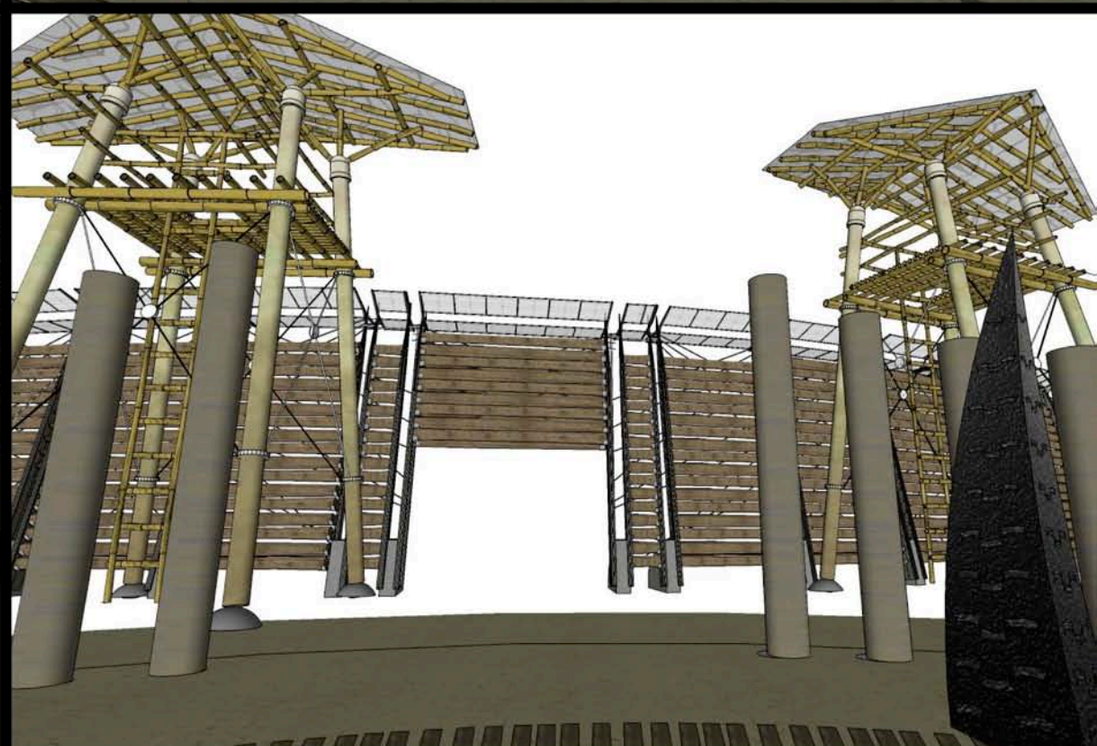




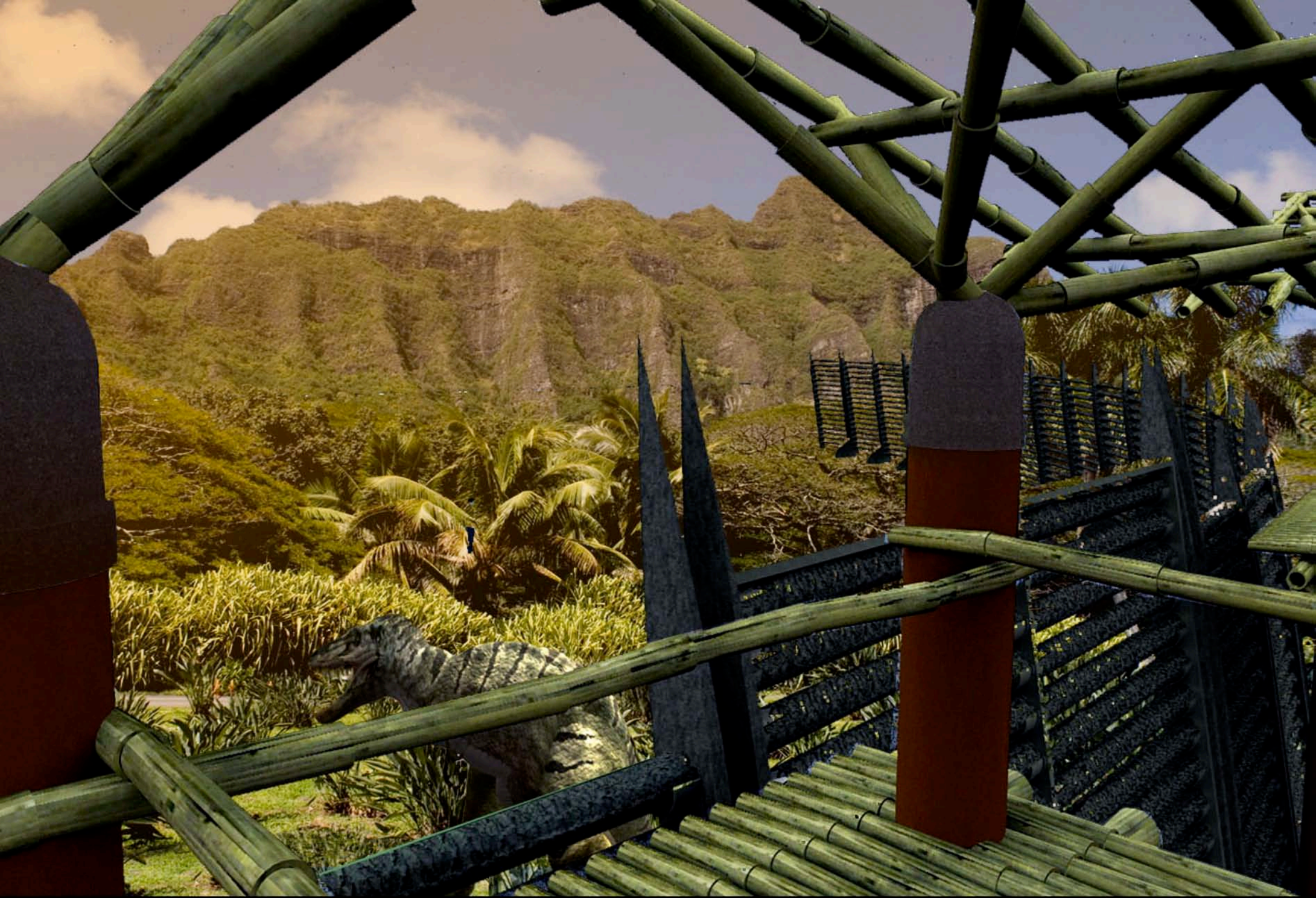
The solar panel membrane, the cables to create the electrified web, the steel supports and the concrete prefabricated foundation are all elements that were brought in through the time portal from the future. Locally harvested logs were added to the structure to complete an additional layer of defense creating a blended esthetic unique to Terra Nova.

When entering the main gate the new inhabitants of Terra Nova would arrive to the Main Plaza, a circular urban space defined by tusk-like metal solar collecting structures which at night would radiate light to illuminate the space. A decking made of slivers of Bamboo defines the space around the pebble made symbol of Terra Nova.

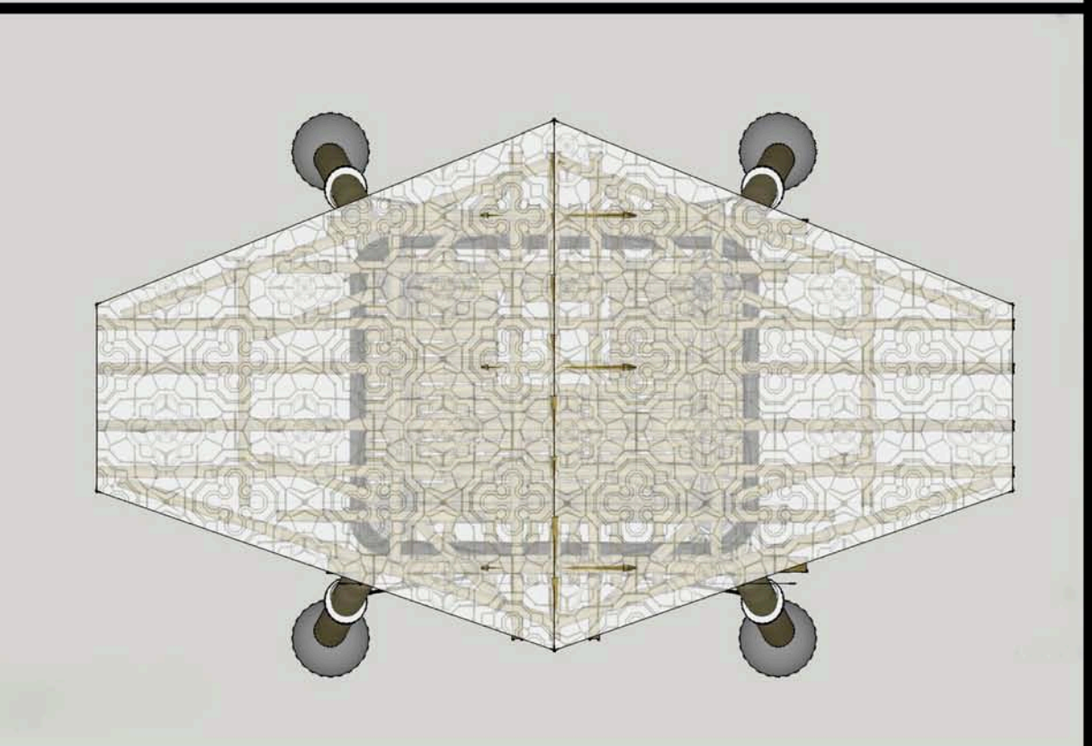


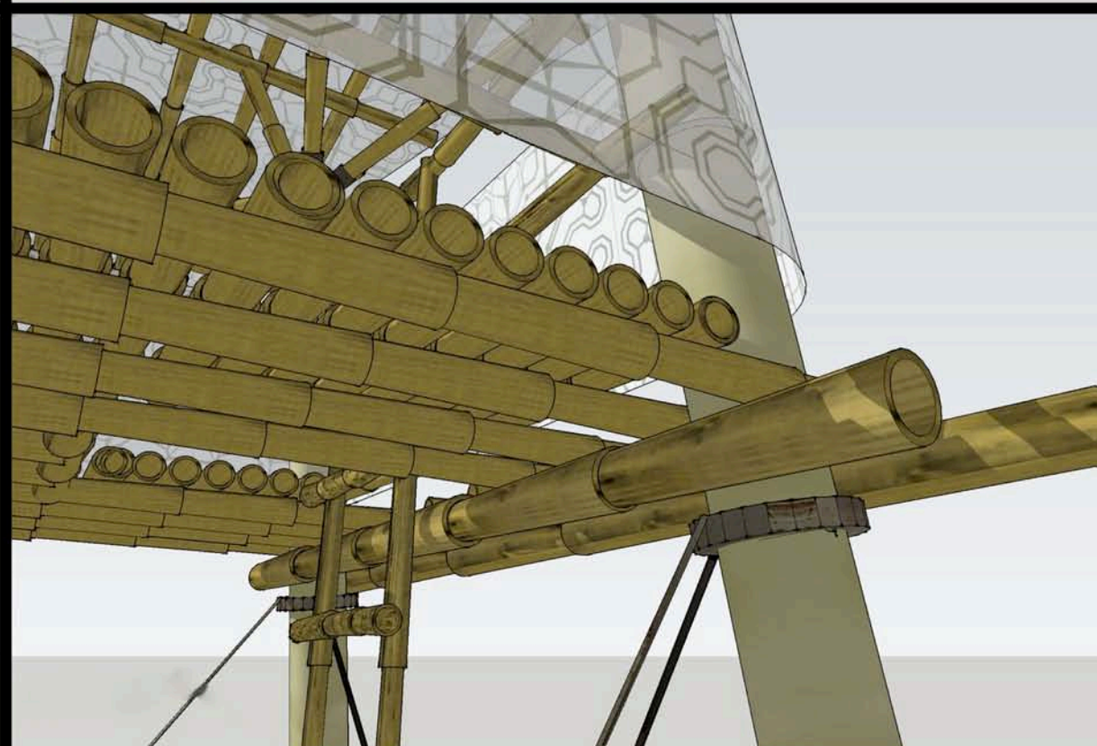


As the new inhabitants entered through the main gate, they would be greeted at the Main Plaza getting a glimpse of the main structures around it. The first structure they would see would be that of Terra Nova's master, Taylor's compound. Flanking it would be the Main Hall, the market, the school, the hospital, the watch towers, and a couple of multipurpose pneumatic structures, all enveloped by power generating solar membrane.



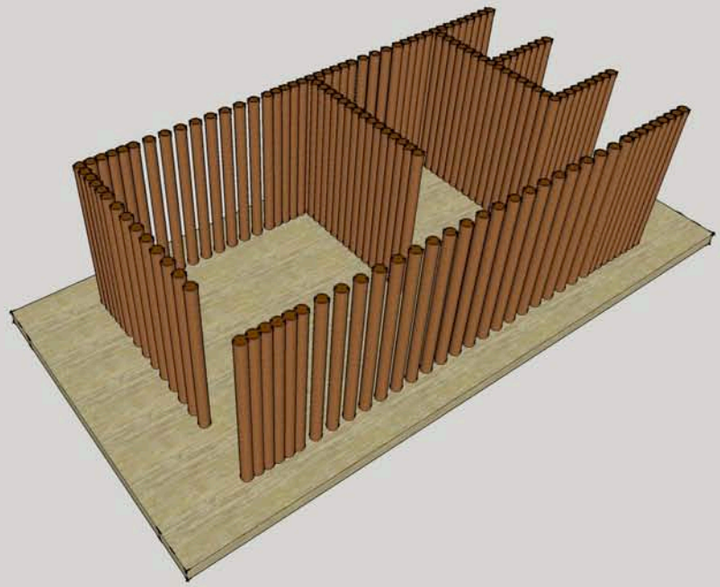
Watch Towers are spaced about every hundred feet around the entire perimeter of Terra Nova's fence. Their main purpose is to keep vigil and if necessary and launch a defensive attack against aggressive predators.

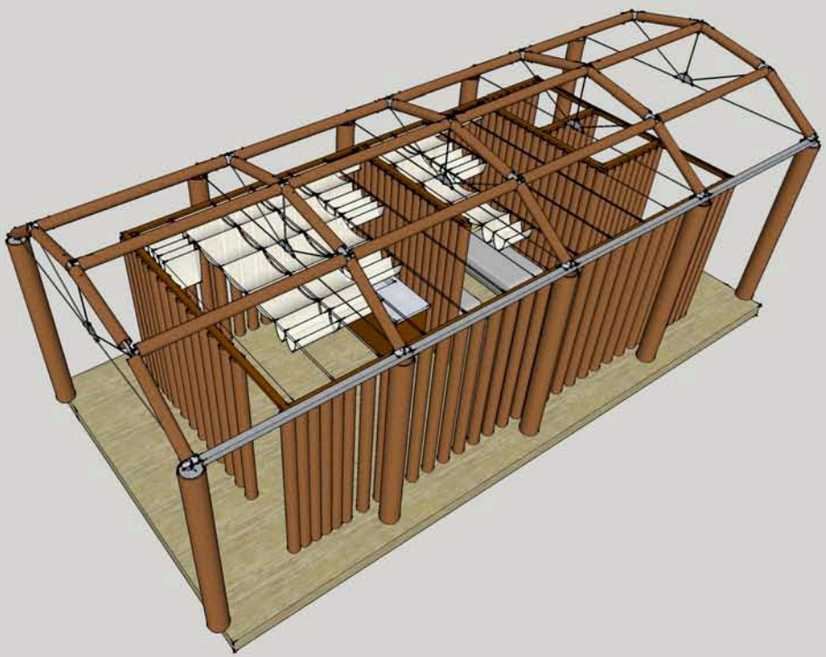


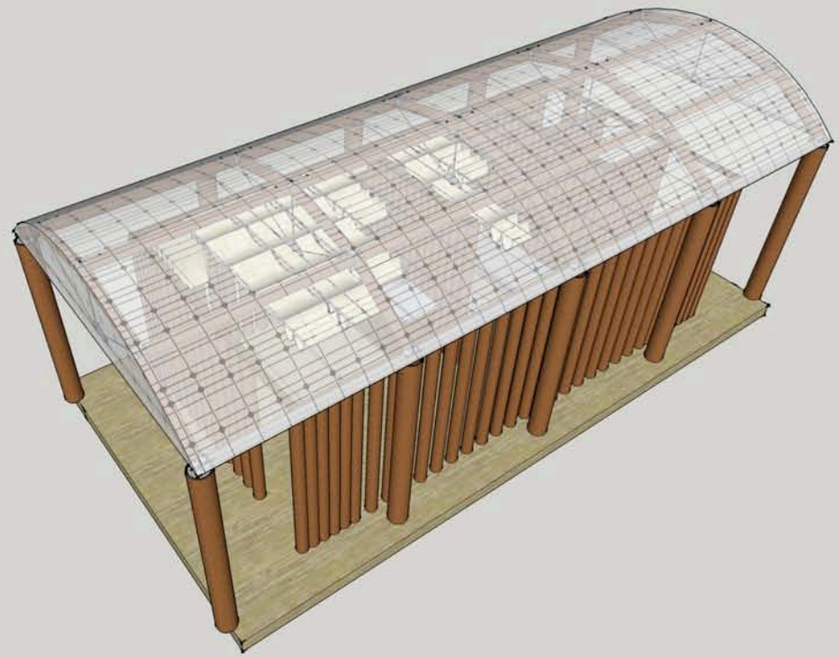


As all of the structures of Terra Nova, the Watch Towers are a hybrid between futuristic technology (solar membrane and carbon composite tubing) and local resources (Bamboo and lumber). The solar membrane would absorb and store energy from the sun during the day and provide power making each structure self -reliable day and night.

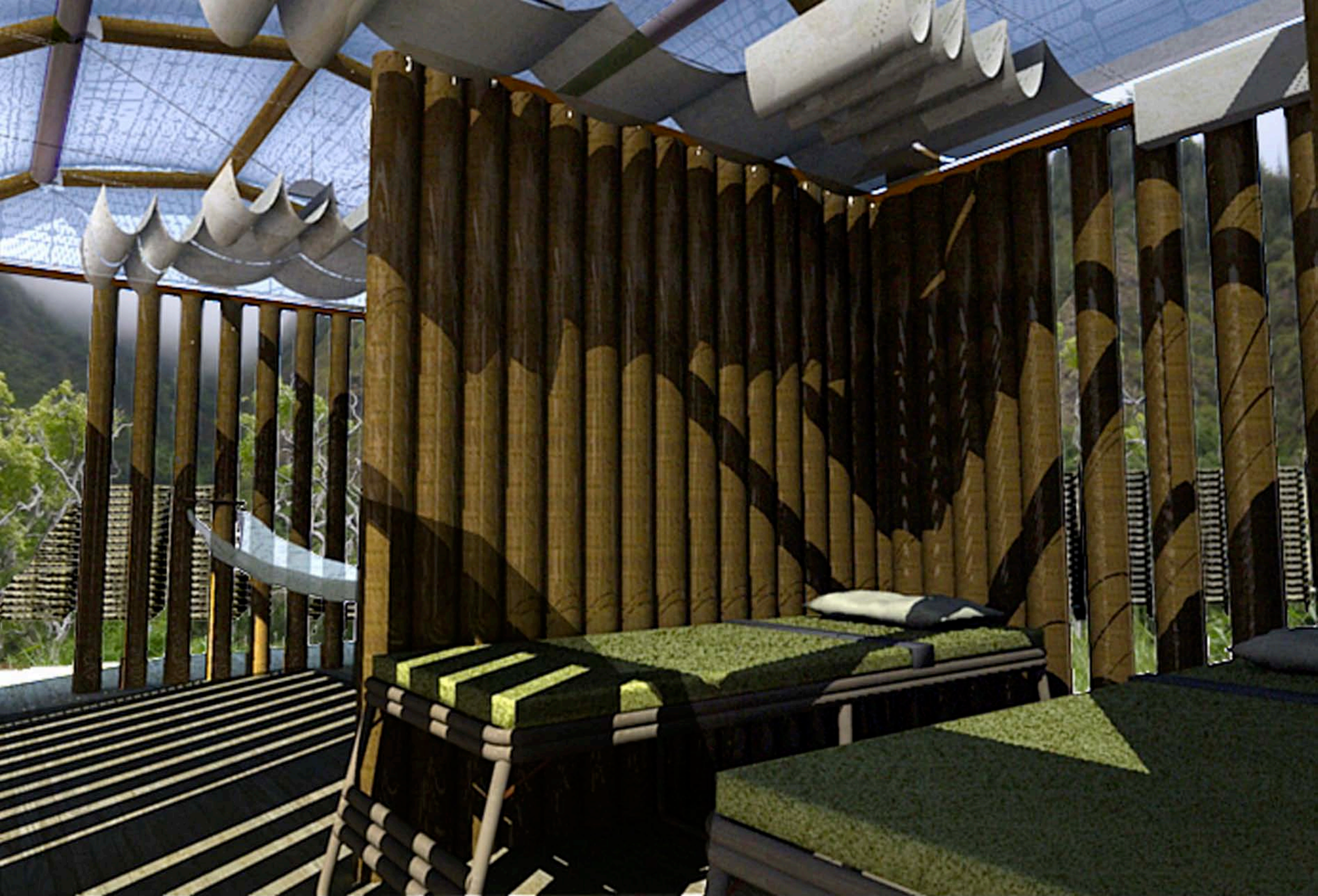
Various configurations of Housing units provide shelter for Terra Nova’s inhabitants but all of them share the same fundamentals, they are made of carbon composite tubing and sheltered and powered by the solar membrane roofs, a futuristic version of a log cabin.



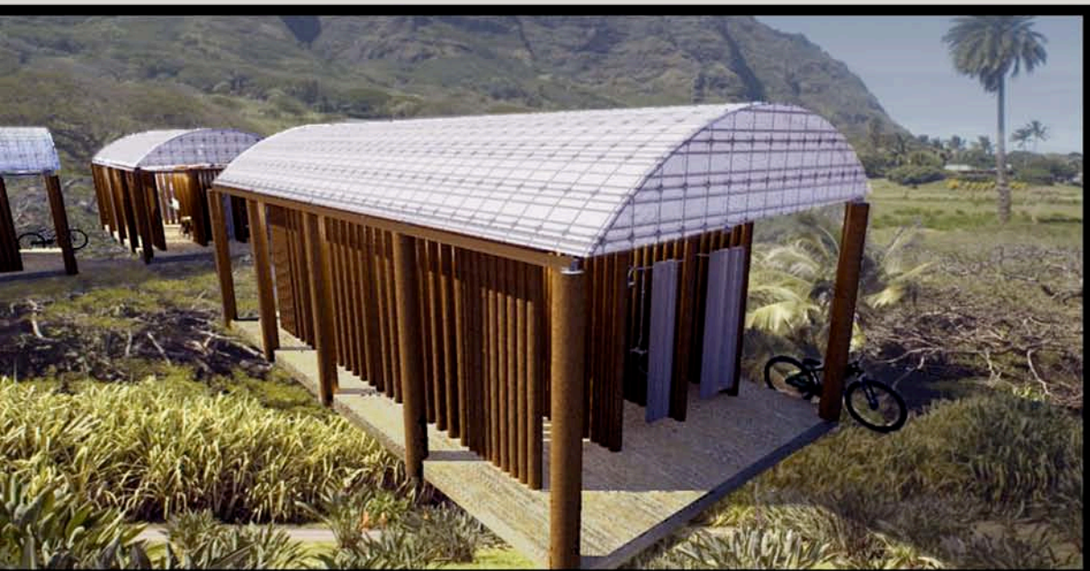


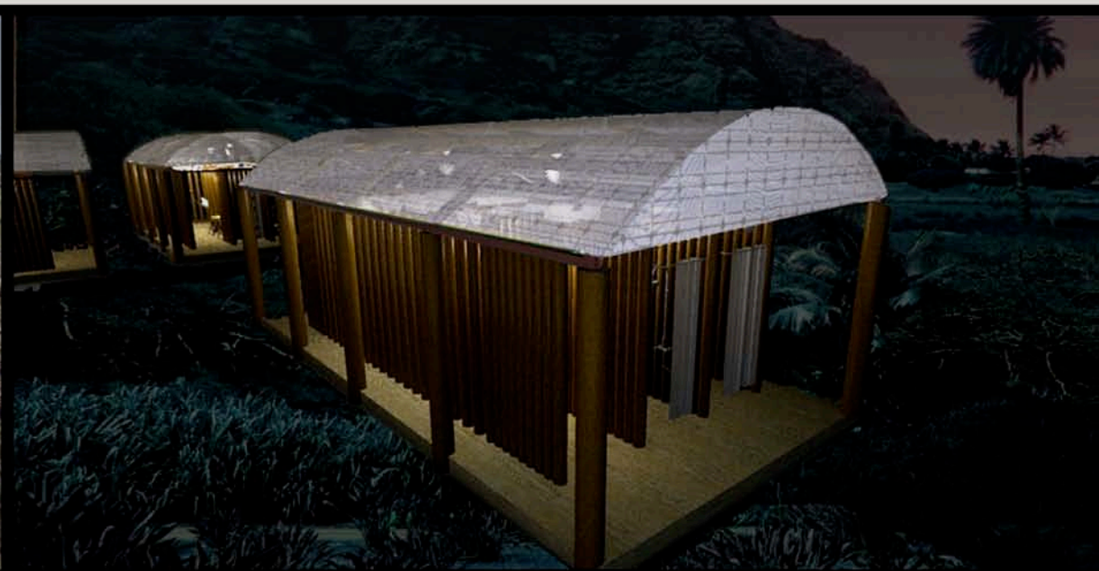


The housing kits consist of carbon composite panels slab and tubing. The tubing can be spaced to provide windows and doors. The ceiling is made of retractable fabric to control the amount of sunlight entering the dwelling. The roof is made of a truss system of tubing and cables covered by solar membrane.

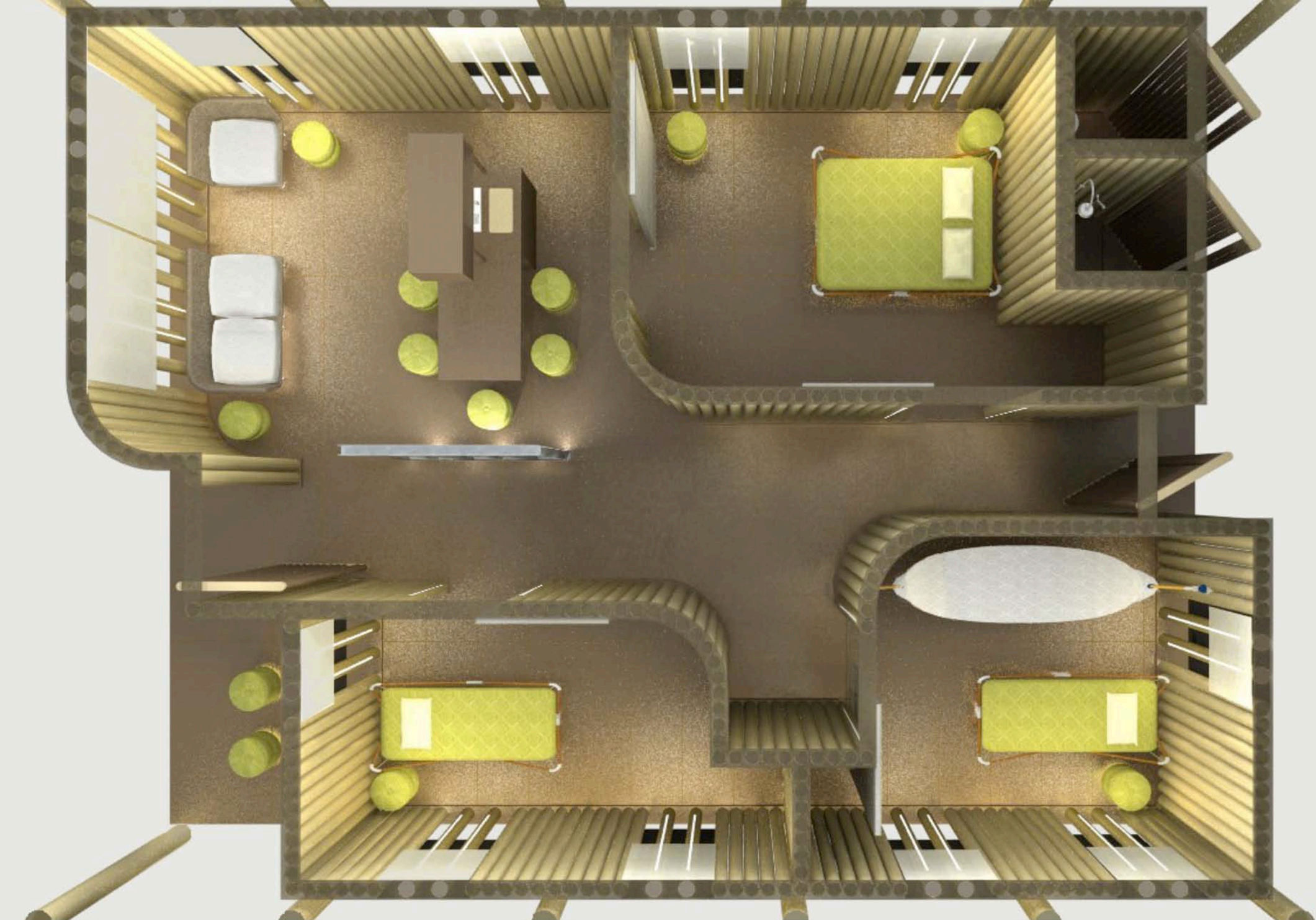


A typical dwelling interior would feel lite and airy. The spacing of the tubing would create windows and doors. Retracting the ceiling fabric would allow to have natural light pouring in and the view of the sky. The effect is total integration between the natural exterior and the high-tech interior.





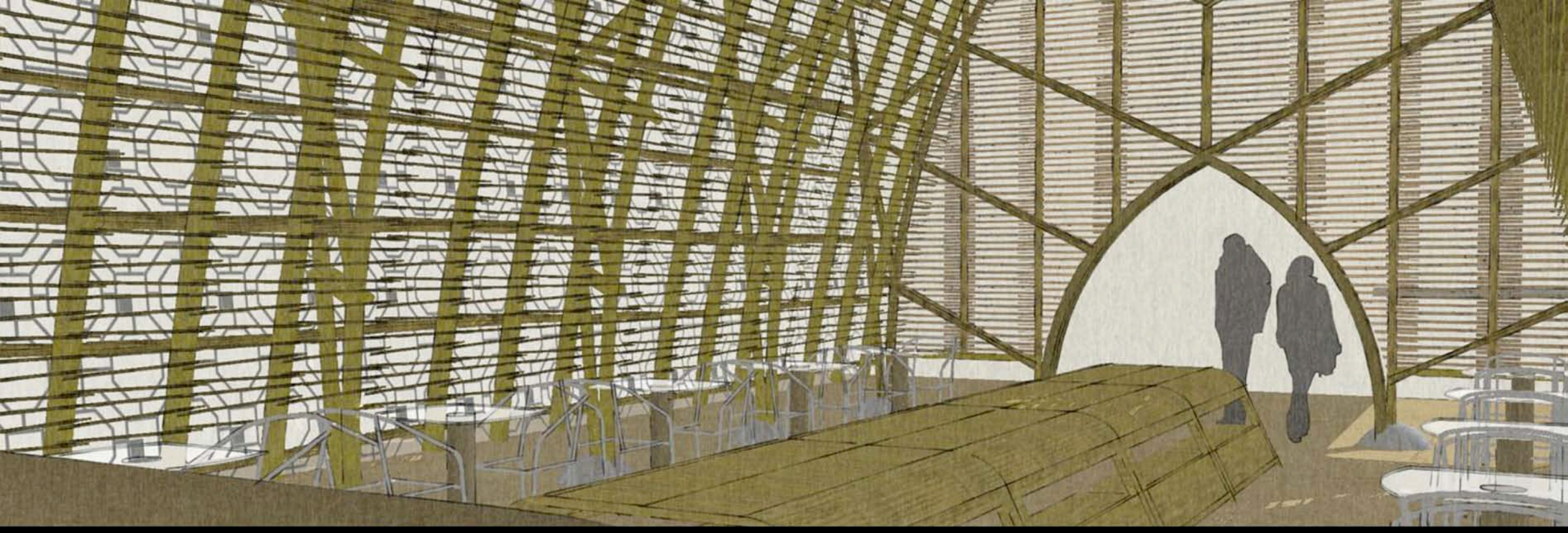
The solar membrane roof would collect and store energy from the sun during the day providing sufficient power for each structure's needs and giving off a controllable illuminating glow during the night.

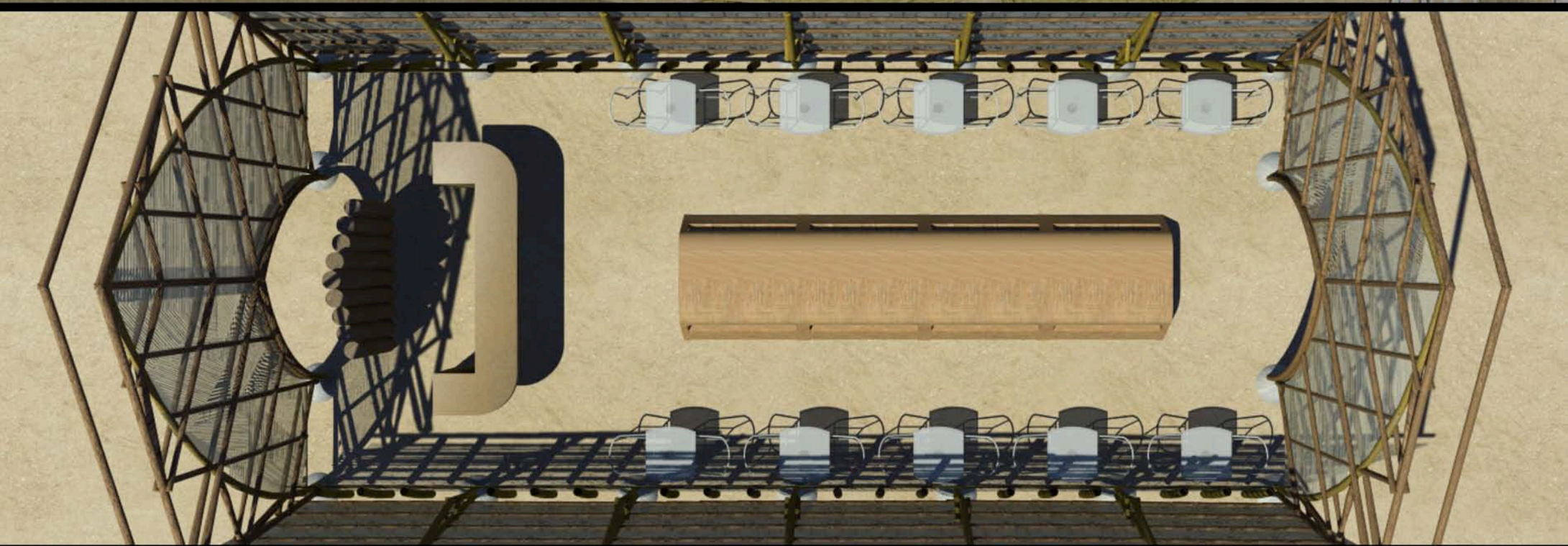


A typical single-family dwelling would consist of a living area with a modern kitchen, master bedroom, two additional bedrooms, and outhouse style shower and bathroom stalls.

During a sunny day at Terra Nova, the solar roof membrane would collect more than enough energy to supply all power needs. At night the ceiling Roman shades could be fully retracted to observe the stars through the transparent solar membrane. Window shades are the standard for controlling light and privacy on all windows.

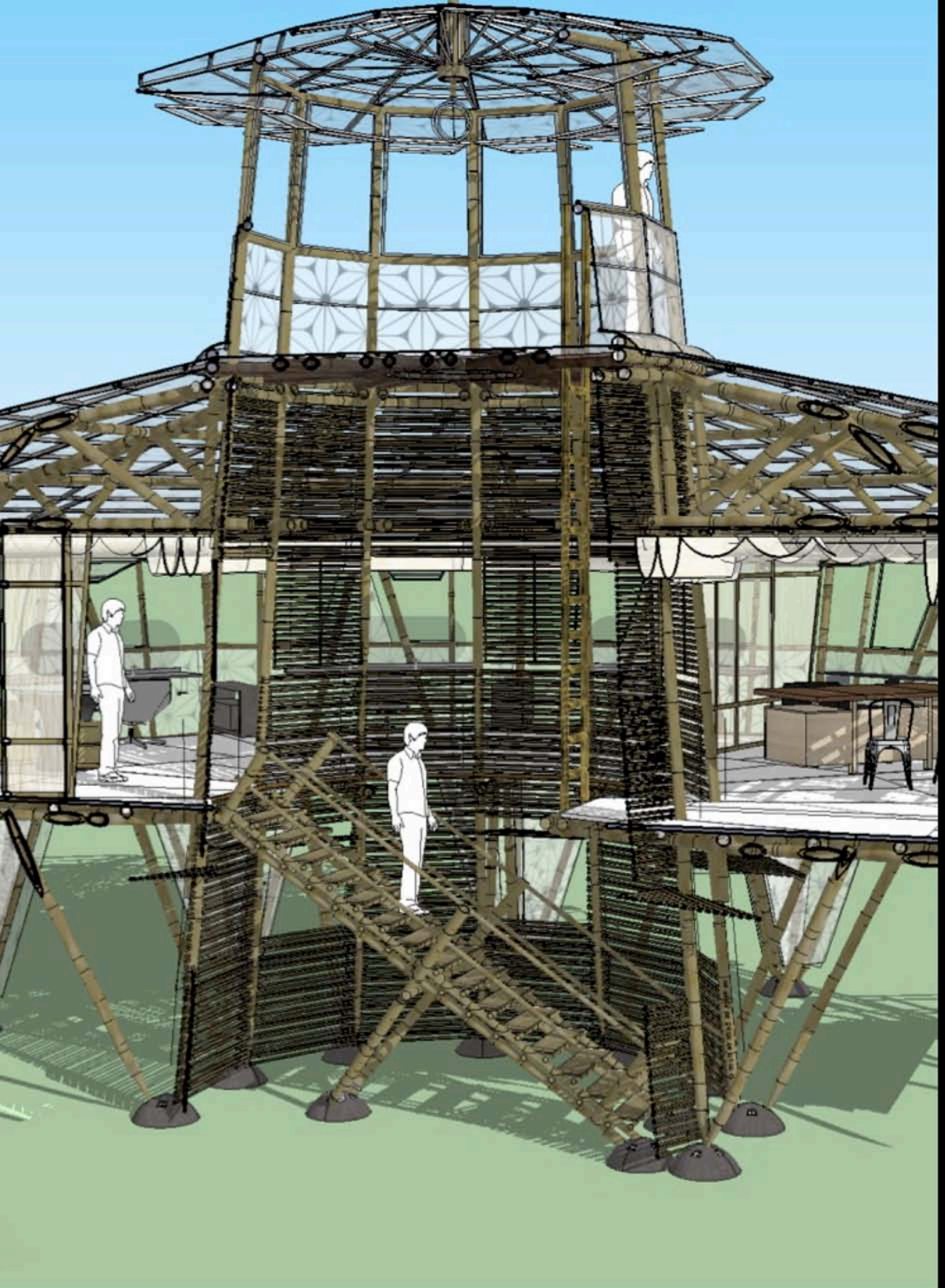
The Main Hall is another structure flanking the Main Plaza. It is a blend of futuristic high -tech materials (Solar Membrane) and Terra Nova harvested bamboo. The bamboo was assembled into a truss system, repeated to create space, and covered by solar membrane to provide full power and protection from the elements. It is Terra Nova's social gathering hall.

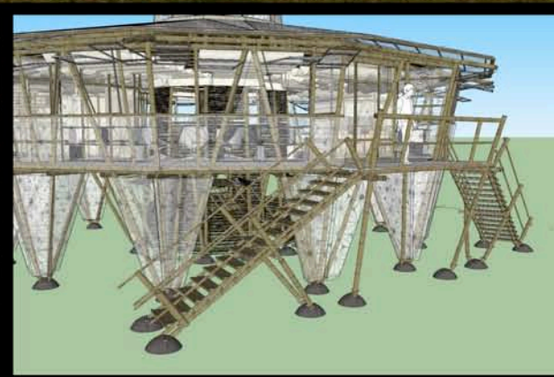


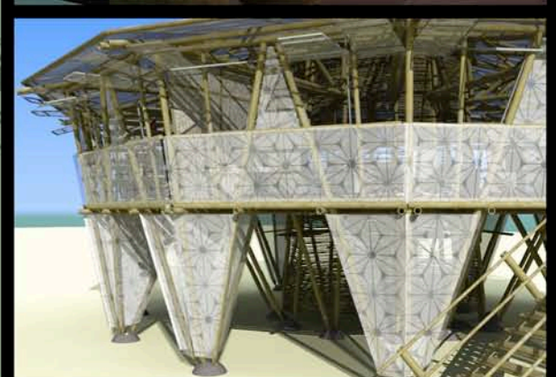


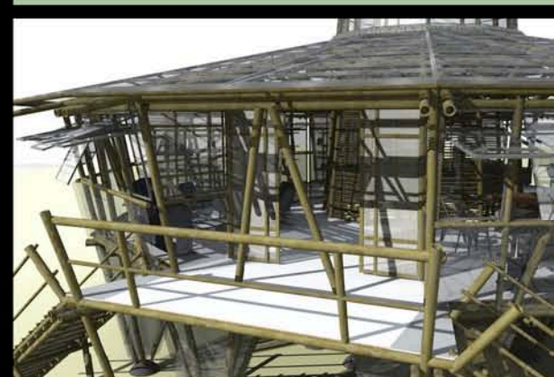
Fine Bamboo lattice beneath the solar membrane make the airy interior walls allowing light to filter through. A communal table, additional smaller tables, and a bar provide the furnishings necessary for a place to meet and hang out.

The man who rules Terra Nova occupies Taylor's Compound, another structure resulting from the unique blend of high-tech materials and Terra Nova's natural resources. Solar Membrane, carbon composite tubing, bamboo, wood and cotton combine to make this the symbol of power and domination in Terra Nova.

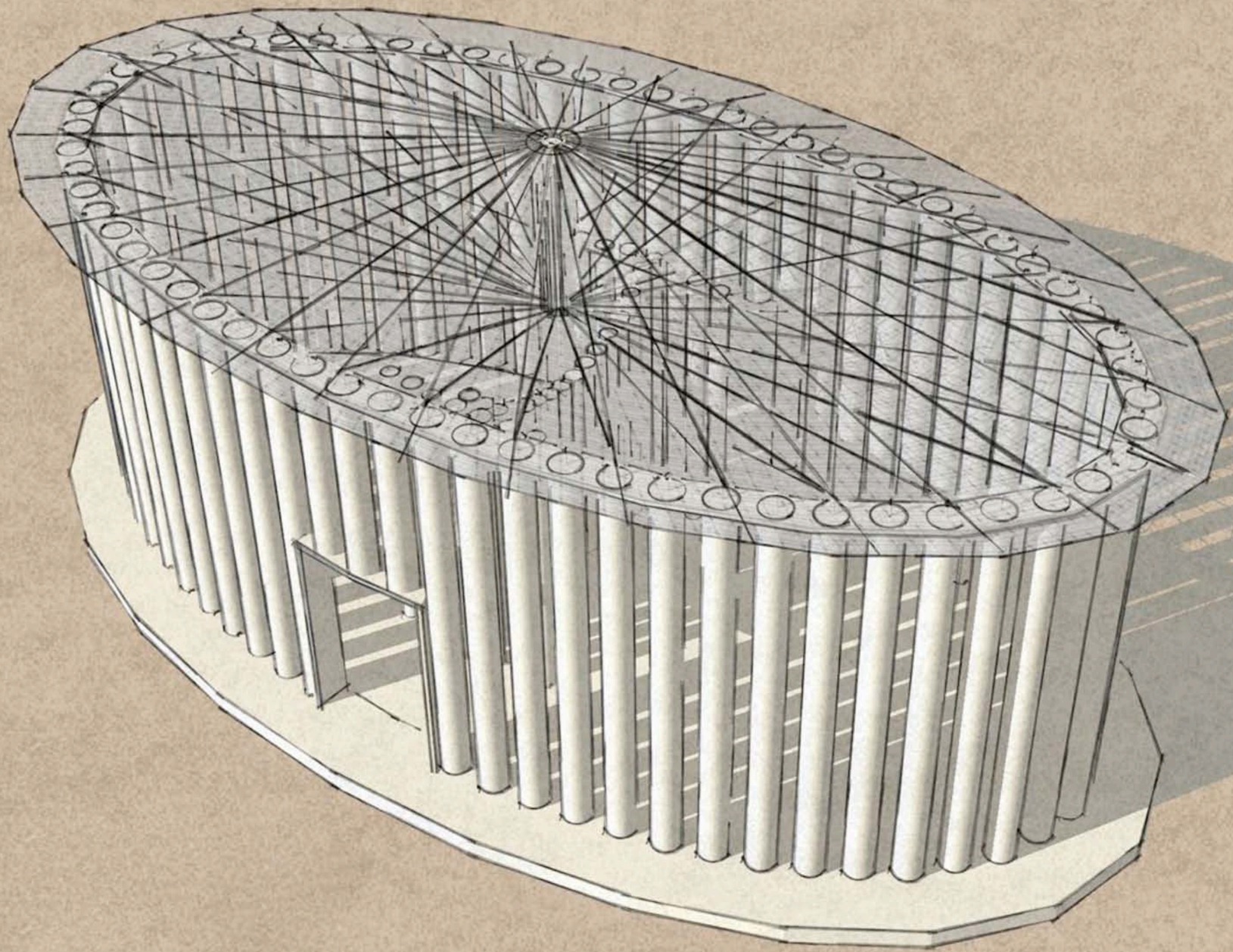




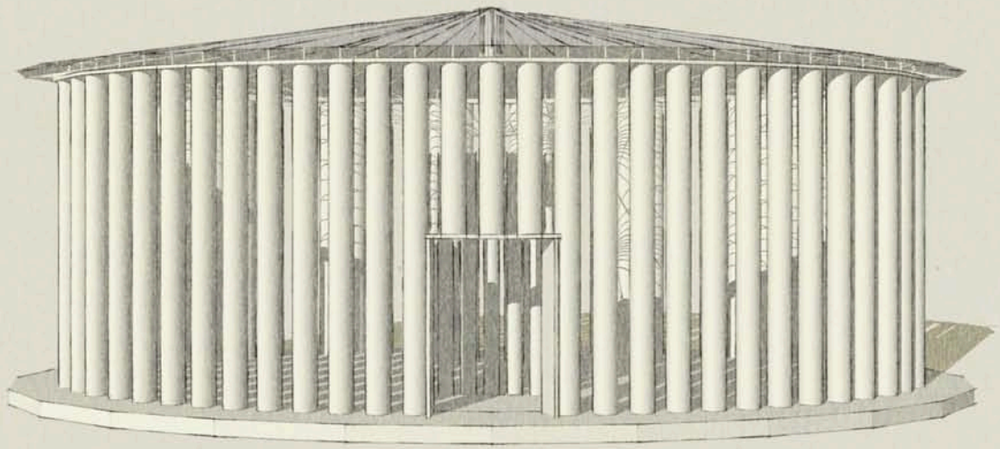


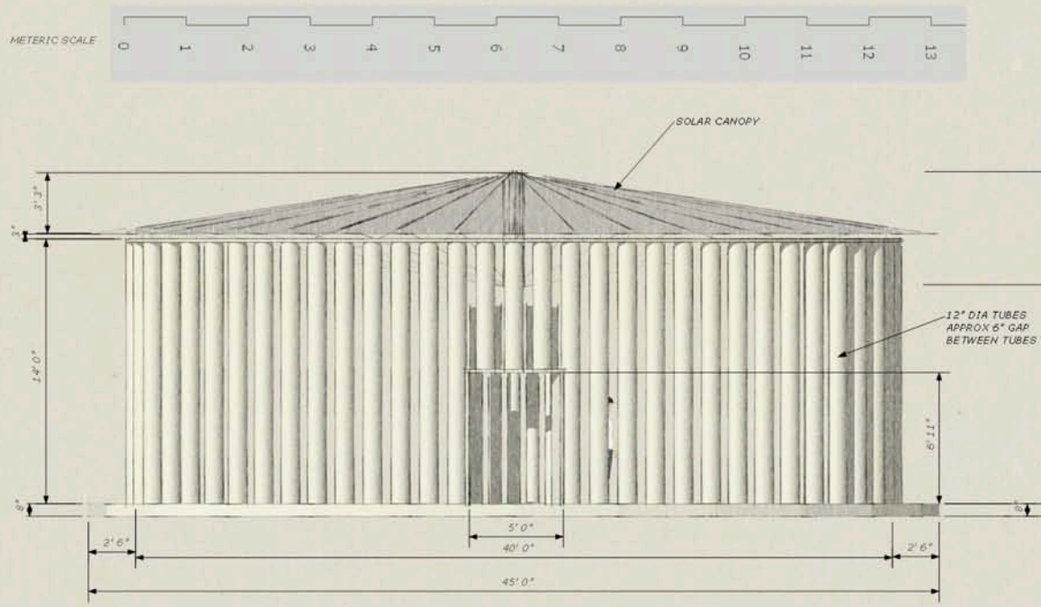


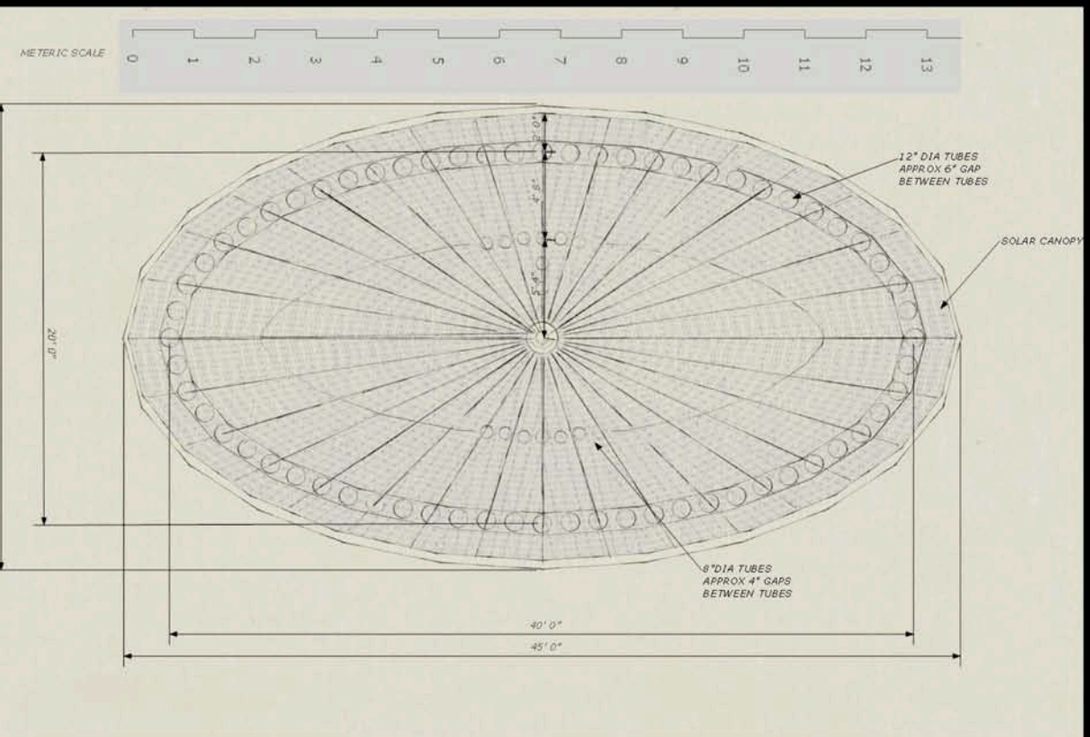
A center atrium with walls made from bamboo slivers topped by a watchtower is at the center of the compound. The entire facade and roof are enveloped by transparent solar-membrane. The retractable cotton Roman shade ceilings along with shoji style room dividers allow for maximum flexibility and climate control. The structure is the center and the symbol of Terra Nova's government.

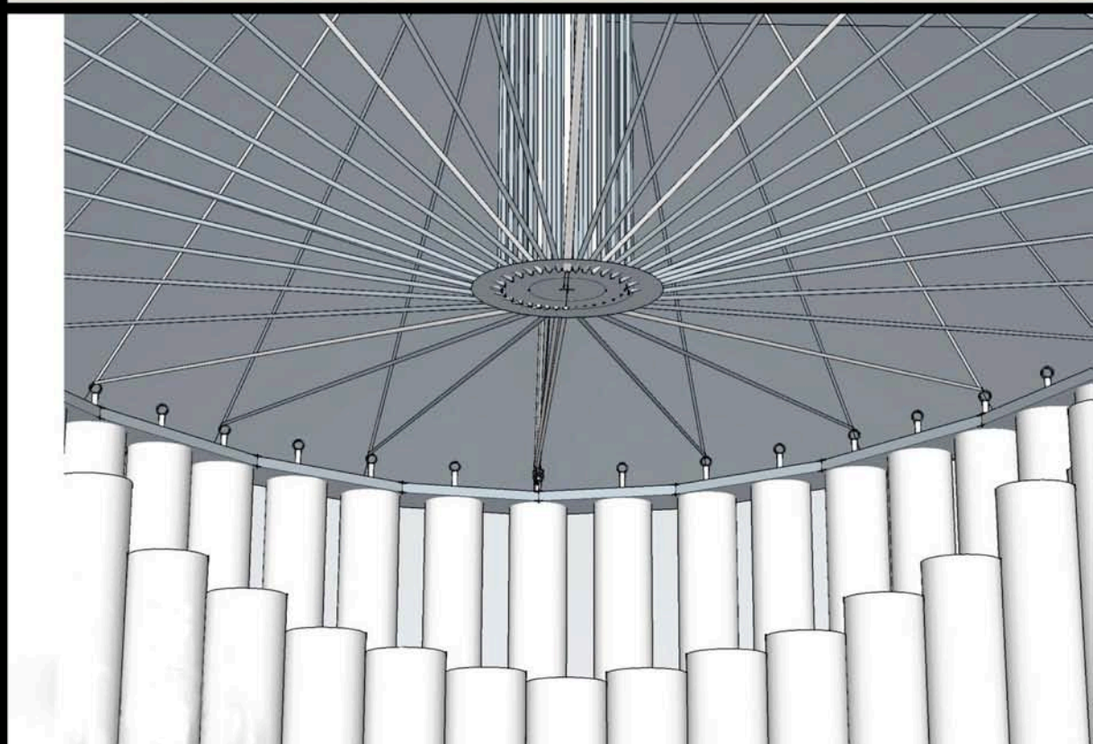


Several School structures provide for the needs of young Terra Nova students. With roofs made out of cable spokes covered by Solar Membrane and Carbon composite tubing spaced to provide slivers of ventilation for walls, the school structures are basic but effective.

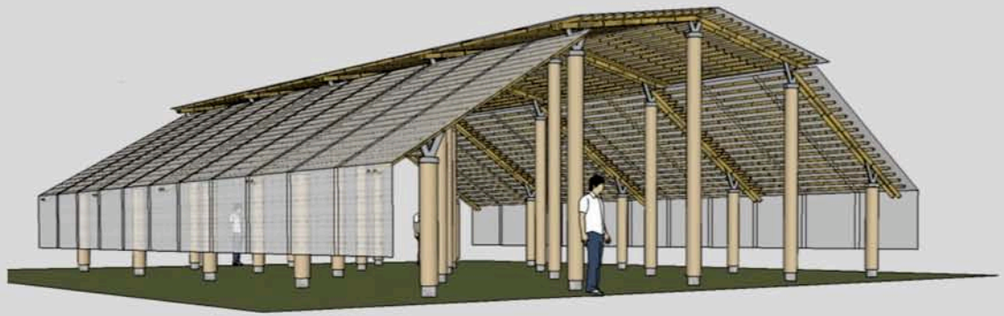


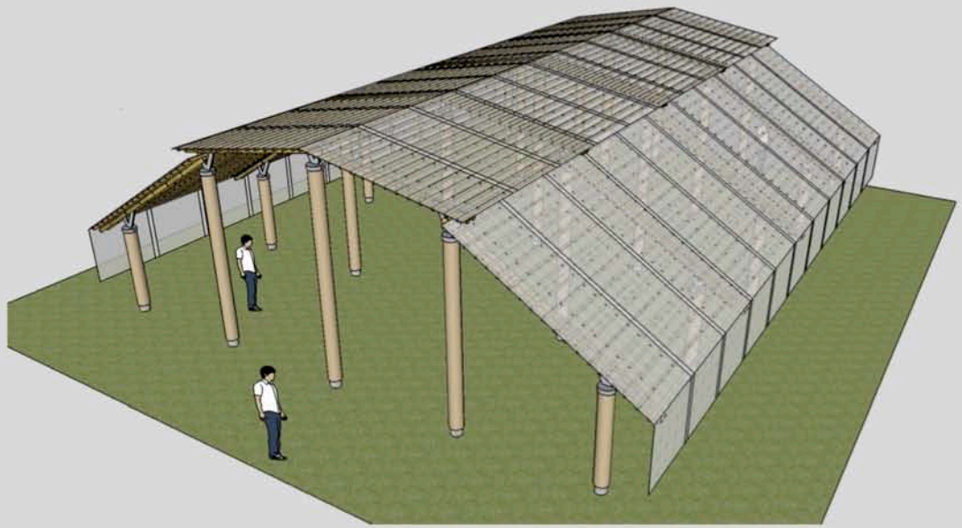


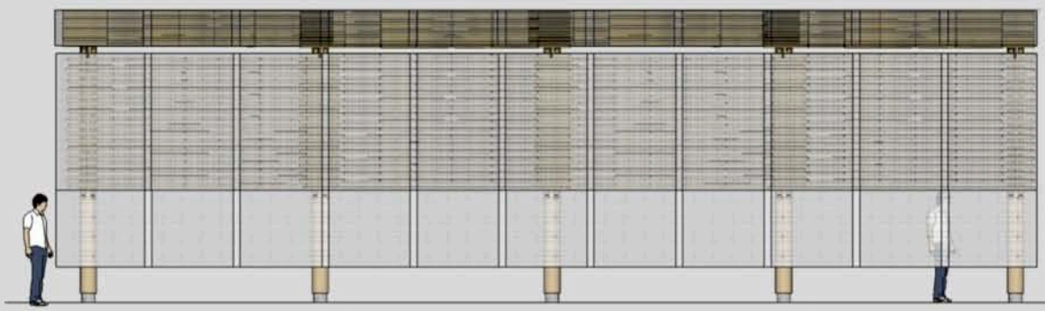


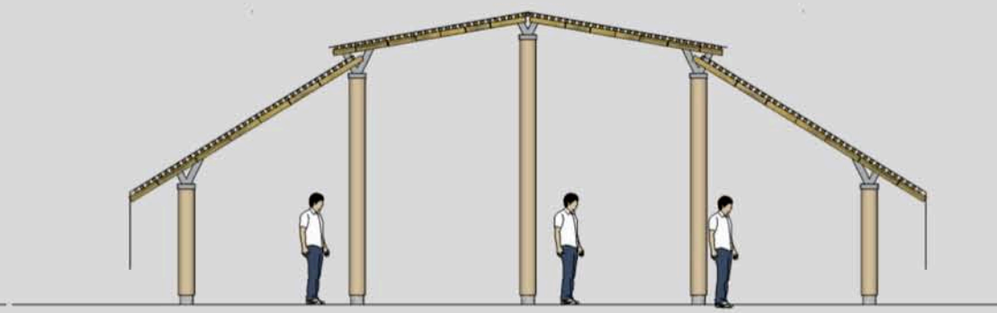


This basic school structures are designed to split into two classrooms and accommodate up to forty students and two instructors each. The translucent roof and spacing between each of the carbon composite tubes allows for total integration between the exterior and interior environments while providing safe shelter from potential predators and weather elements.

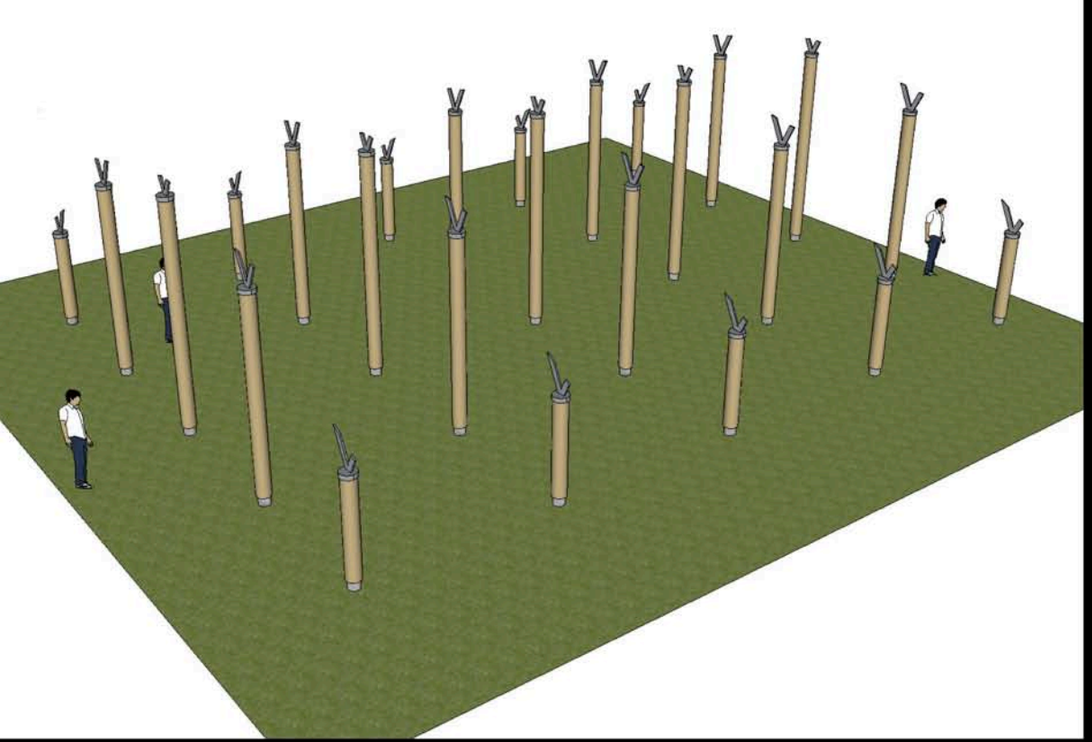




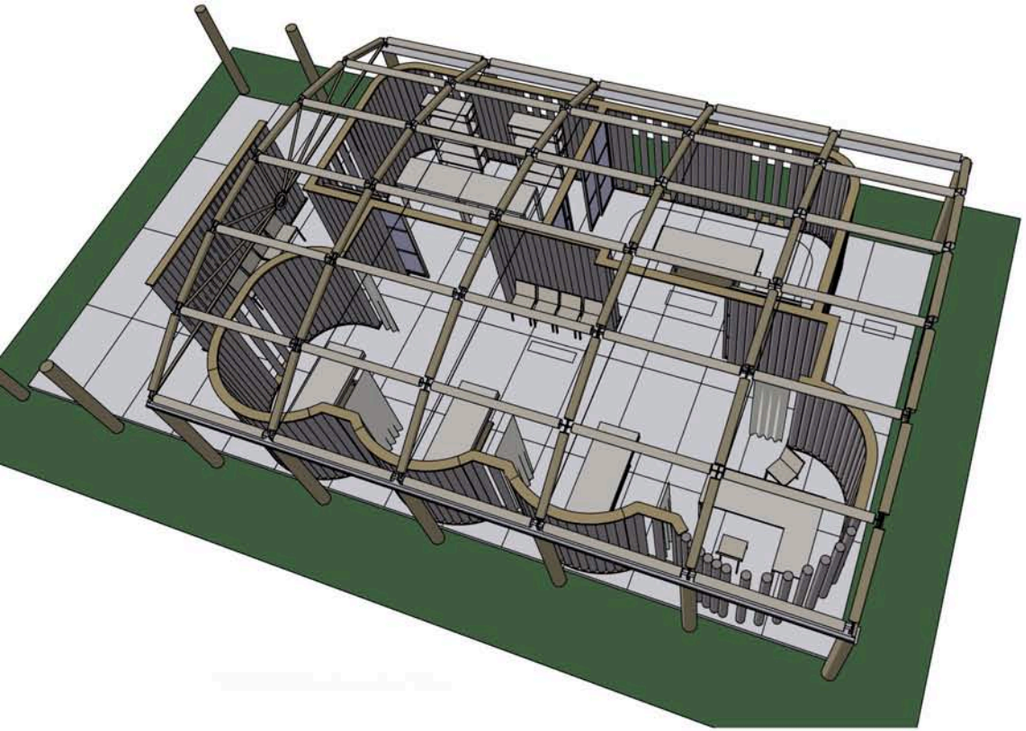


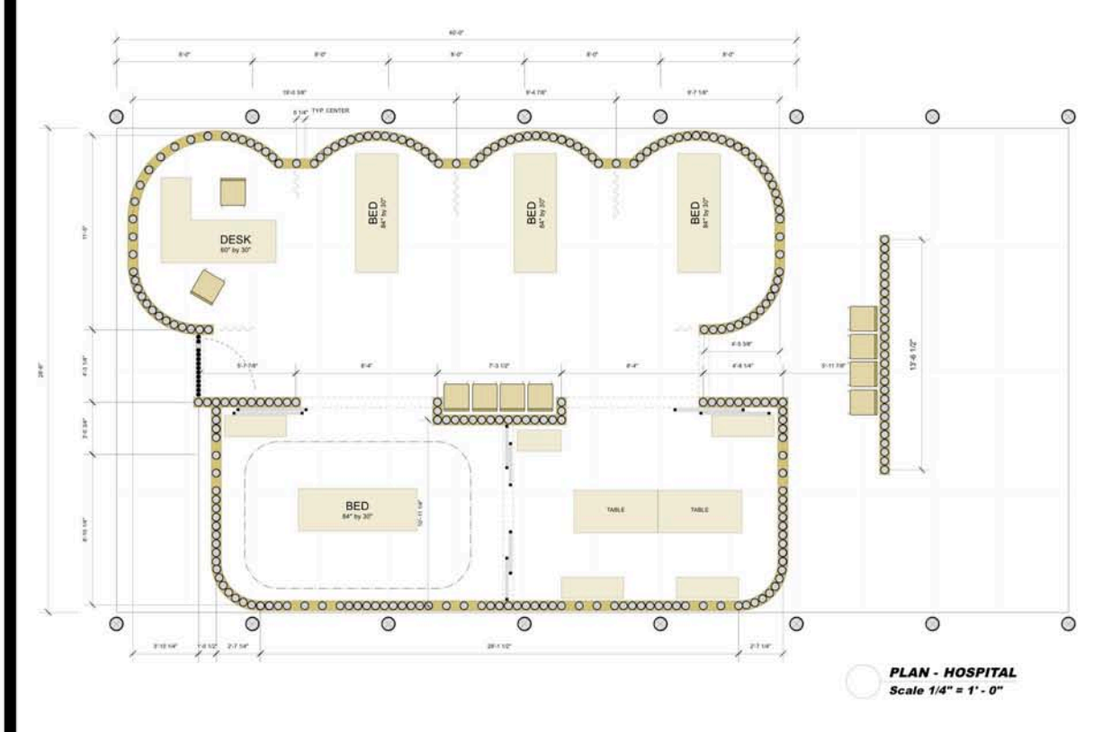


One of the most important structures flanking the Main Plaza is the Market. Combining Carbon Composite tubing, Bamboo, and Solar Membrane, the market structure provides basic shelter for the many stalls for produce vendors, traders, and food providers of Terra Nova ... so many new kinds of fruits, vegetables and animals to explore as new exotic foods.

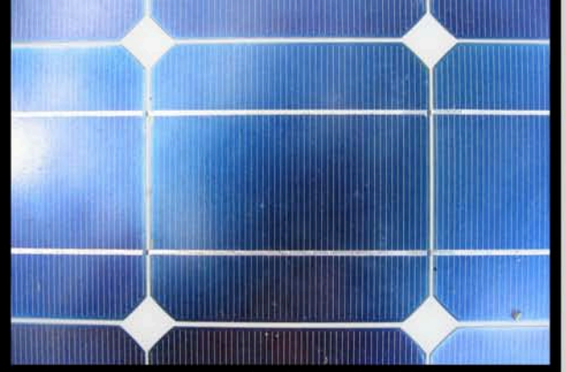


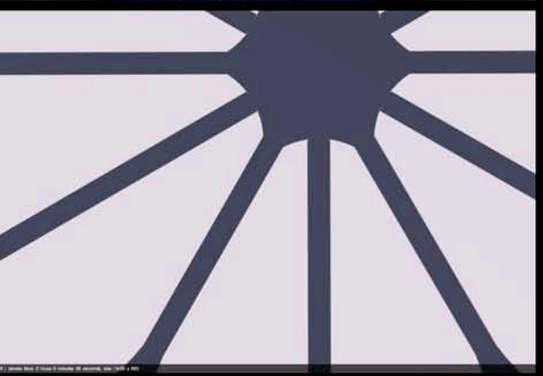
A series of carbon composite tubes are used as columns to support a bamboo ceiling frame structure over which solar membrane is draped over to provide shelter from the rain and satisfy all electrical and power needs.

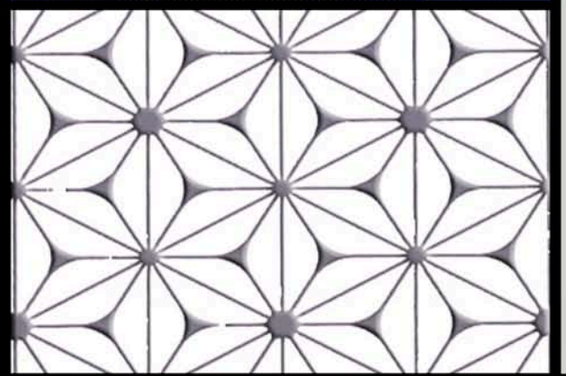


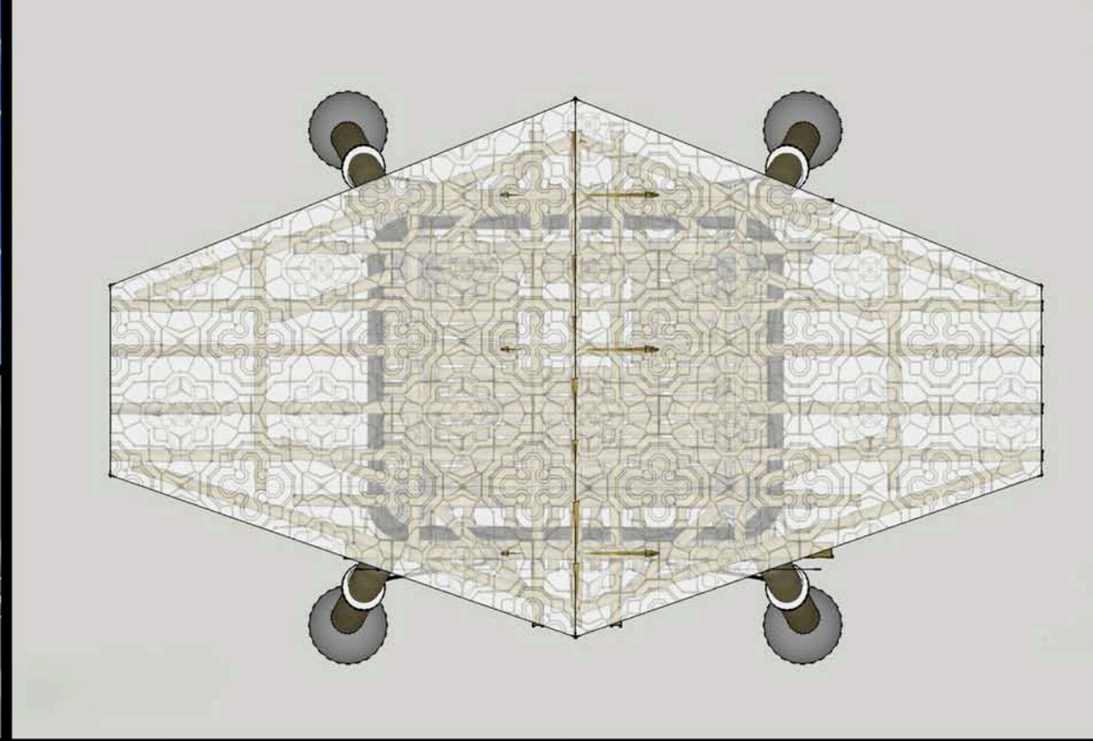


The same carbon composite tubing, cable, and solar membrane can be configured to satisfy the needs of a hospital or a small clinic. If the hospital needs to grow, the construction system is capable of growing with the need, like acquiring additional parts for a kit.

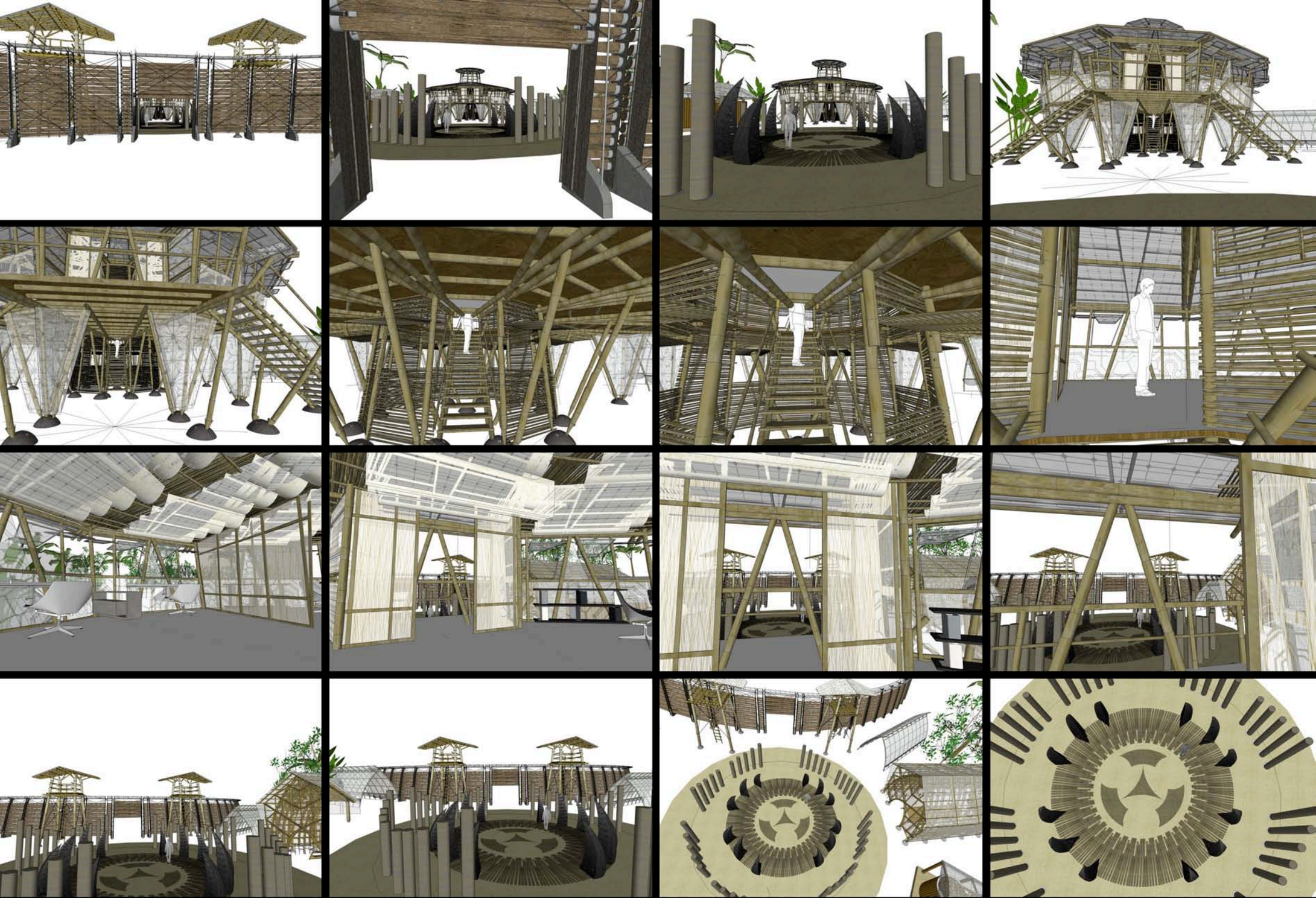








The Solar Membrane consists of a high-tech clear polymer membrane imprinted with photovoltaic paint. The pattern of the membrane can vary according to personal choice. The membrane can be used in multiple applications such as pneumatic structures, roofing, siding, wall covering, furniture, and clothing.



From outside the walls, through the gate and into the main plaza, Taylor's compound is the predominant structure. It can be accessed from the exterior balcony stairs or through the central atrium. Inside an airy flexible space can be configured according to need by sliding the shoji screens and the ceiling roman shades. From its balcony and guard tower the immediate view of the plaza and all of Terra Nova beyond.

CARLOS BARBOSA

Trained as an architect with a Masters degree from Tulane University, Carlos Barbosa's credits as a production designer include Magic City, the pilot and season eight series of 24, Lost, CSI-Miami, Studio 60, Action, Coach Carter, The Invisible, and Hurricane Season among many others.

www.carlosbarbosa.com