IN - BETWEEN

Introduction

The project began by looking into the history of Fly Ranch and what makes it so different. As a result, the aim was to showcase the narrative between the natural and artificial world of Burning and Fly Ranch. The site embodies these worlds through the existing flora and fauna, the springs, the geysers and the art installations. The land contains over ten thousand years of history that begin with the Numu and Newe residents that lived there to the people that attempted to drill wells onto the site to now. Throughout this record, it is evident how humans are moving towards a natural world that embraces nature and the environment to an artificial one. All of this history is forever present in Fly Ranch and continues to transform. Therefore, in our project, we wanted to showcase this, to highlight the ever-changing nature of Fly Ranch - what it is and what it can become.

Fly Geyser is a unique creation that was man-made but looks natural like it’s been there for years. It is in this in-between state of owning so much history but integrates well onto the site that it looks natural. This started the discourse of creating land art on-site that merges into its surrounding environment while still using the landscape’s natural resources to harvest and collect energy and water to benefit the community.

Project Description / Summary

The design intention of this project was to embrace the site’s history and demonstrate the in-between of the natural world and the artificial world. The design consists of panels where the bottom half of the design is constructed with rammed earth while the top half uses metal pipes. The rammed earth signifies the natural world while the technology on the top symbolizes the artificial, man-made world. The objective of these panels is to display the transition between the opposites and how the world is developing. The project utilizes the rammed earth at eye-level of the design that resembles the earth so it becomes the first thing users see. However, as the walls move up they transition into the technology man-made side to unveil how the art installation was made, to create a story with the walls, similar to Fly Geyser which appears to be a natural landmark until one learns its history and learns its truth.

The project has multiple entryways and exits to provide visitors with many different ways to access the installation. Likewise, it creates somewhat of a maze sensation to make people relax and enjoy the quiet the desert gives them as they make their way through the complex geometry.

The different colours of Fly Geyser were also an inspiration to use rammed earth because it allows us to take advantage of its different colours and patterns to create lively visuals along the walls. Rammed earth can be constructed with different clays and sand to achieve a wide range of colours. Furthermore, the panels are placed in an organic pattern and shape to show the randomness and undefined area that is Fly Ranch and Fly Geyser because they also continue to grow without an outlined path.

Technical Systems

The design incorporates four systems: energy, water, food and shelter. These four come together to create spaces that embrace the natural environment and utilize the site to its fullest potential while also allowing users to grasp the site’s full beauty and become one with nature.

The energy systems used in the design are photovoltaic panels that are utilized in varying ways. Some of the metal pipes on the curves that open out contain thin-film semitransparent photovoltaic panels between them. Additionally, there are also site paving panels that use piezoelectric sensors to harness the kinetic energy as people walk through the path.

Then the water system used in the project includes multiple water harvesting ponds that collect rainwater on-site that will be filtered and reused. The ponds also connect to one of the existing ponds to connect back to the site and reuse the water in the ponds there. Additionally, to mimic Fly Geyser and create cooling areas for the user, the installation has mist sprayers incorporated in between the panels that use the harvested water to provide a relaxing environment. Additionally, the mist-sprayers are located at the food hubs to provide water for the plants growing onsite so they can sustain themselves.

Moreover, the project contains a food system to grow vegetables and other plants. The areas where there are smaller areas and curves inwards are used to grow food. Instead of having photovoltaic panels in between the metal pipes, the spaces are left open so for vines and food to grow. This allows many vegetables to be grown on-site that can be harvested by the workers at Fly Ranch or be open to the users who can pick up vegetables as they wander along the path creating a community garden on site. To provide the plants with the nutrients, they need there are water mists around the food crops to provide water on set times to help sustain themselves.

Finally, the shelter system uses the path’s organic shape to create spaces that are open and closed for users to use. Some of the areas are purposeful to allow one to program what is happening inside there while others are more undefined as a result of the path that is arbitrary. The open spaces allow for temporary gathering spaces guests can use to hang out with friends or have meetings. Whereas, the closed spaces, on the other hand, create private dwellings people can stay in or hold events.

Construction

The intention of the project is to be constructed off-site into prefabrication panels that are brought onto the site to connect like a kit of parts. The reason for this is to limit the amount of damage on-site due to construction and ensure the least amount of time building on-site.

The overall construction is made of four different sizes of curves. Therefore, this allows the design to modular and easily change the configuration and shape of the pathway for any use or preference. The second smallest panels are the food production panels and the other three contain photovoltaic panels.

To achieve this each semi-circle curve would be split up into two components that would be built separately. Then they would all be brought on-site together and built together using halving and dovetail joints. These joints would are located on the edge of the rammed earth panels beforehand so they can be easily connected. As a result, building the installation would result in little to no impact on the site.

Environmental Statement Impact

The artwork has a positive ecological impact over its lifetime. With the use of photovoltaic panels, piezoelectric panels, water harvesting ponds, food growing spaces and shelters, the installation creates an oasis that gives back to the environment with no damage to the site over its life-cycle.

Additionally, no harmful emission, pollution or greenhouse gases are generated as a result of the construction and use of the design. Instead, it only has a positive impact on the conversation of nature. The rainwater collection pond allows the design to seamlessly integrate itself onto the site to blend into its environment and become one with its surroundings. Also, it provides a space for local flora and fauna to use for themselves.

The structure of the design is adaptable where the modular panels can be assembled in any shape or form desired. At the end of its life-cycle, the modular panels can be easily removed to be recycled or reused for a different purpose or installation. Therefore, it can be modified to fit the requirements for any site and while still maintaining a low impact on the site.

The overall composition provides a space to educate the public about clean sustainable systems and the importance of renewable energy to help the environment. Walking through the multiple pathways provides a fun but also relaxing setting for visitors as they get to experience a new form of community.

The goal of the installation is to convey a positive message and promote community within Fly Ranch. With the use of renewables, water pools, community gardens, and shelters it provides a chance for the public to come together in a unique space where they can embrace innovation and the natural world around them to participate in the creation of sustainability.