

Structure for a Sentient Swarm

What does it mean to be human today? Do we control technology and its development? Does technology control us? Or are we working together?

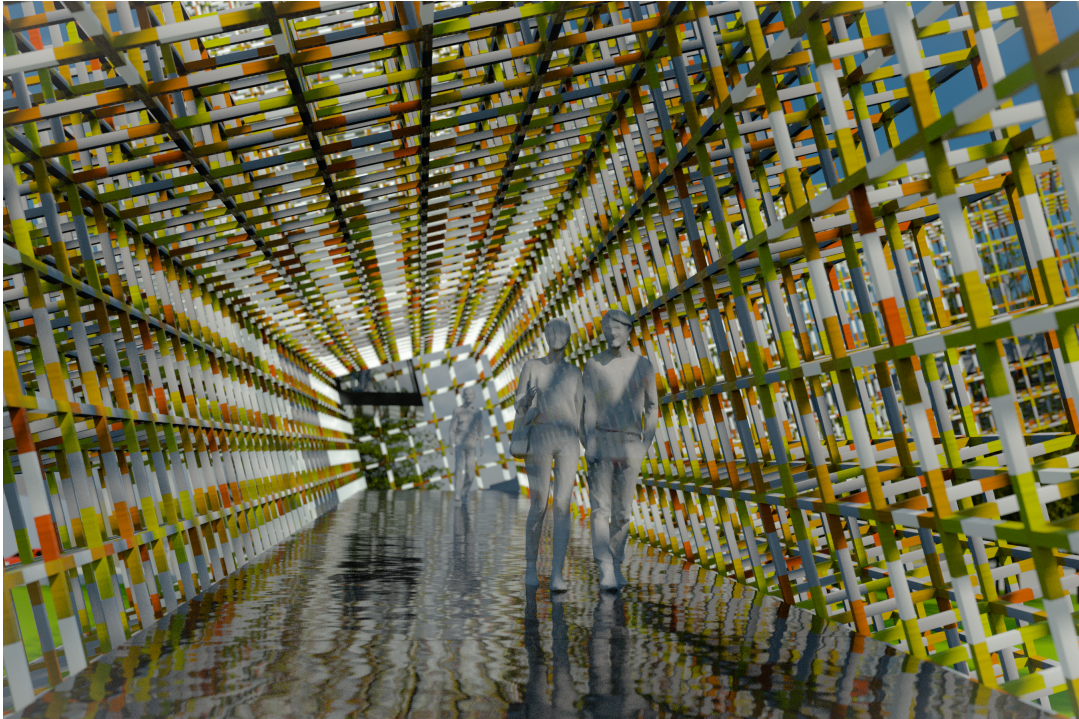
Positioned at the gateway to Silicon Valley where the debate over these questions is playing out with every line of code that is written, **'Structure for a Sentient Swarm' is an architectural scale manifestation of the invisible and increasingly life-like algorithmic environment that humanity is entering into.** The structure is envisioned to be largely constructed from sustainably sourced wood, while the energy efficient light sources are to be powered by renewable energy to achieve net-zero energy consumption.

The building's behavioural swarm algorithm, modelled on the phenomena found in nature, is a **live-learning AI that celebrates the ambiguous space between pre-determined and emergent behaviour.** The swarm that lives in our structure is curious to explore how to respond to (and interact with) our human presence. It evolves over time and learns to make itself known to visitors, spectators and the wider community through the medium of **orchestrated collective movement that, through it's behaviour, suggests the presence of sentience.**

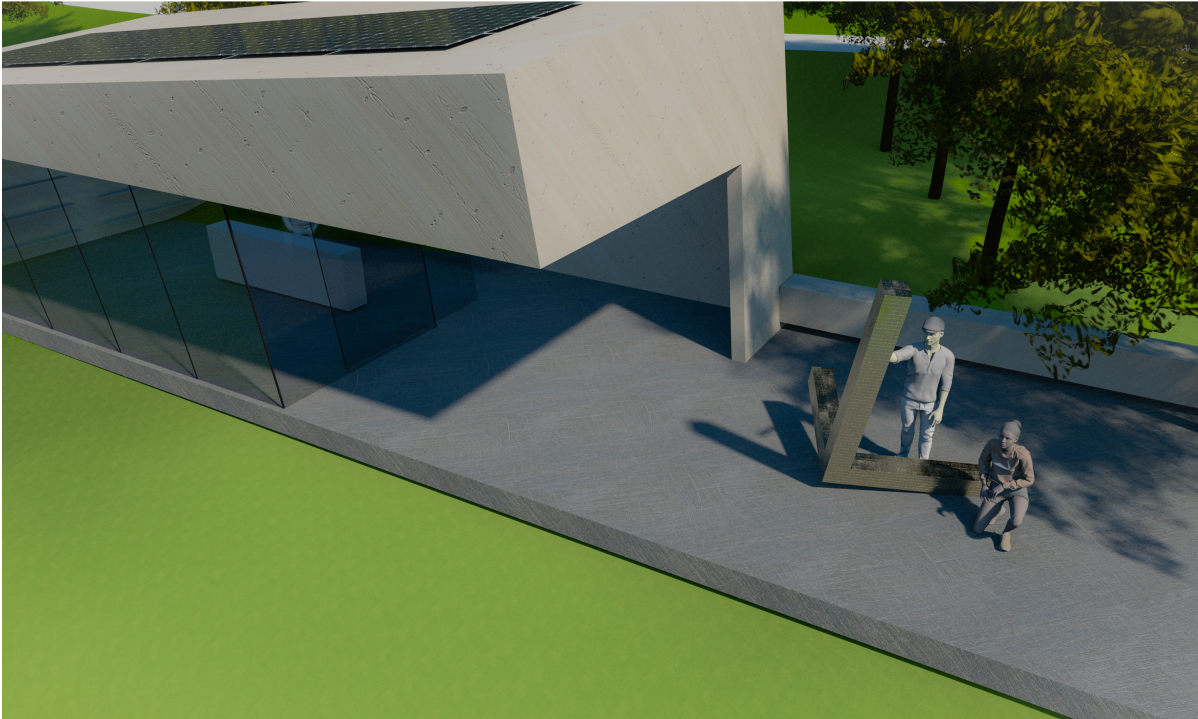
A powerful visual spectacle from afar by both night and day, the visitor experience of 'Structure for a Sentient Swarm' begins by offering an initial intimate encounter at the visitor centre. Here, a **maquette of the structure is situated to celebrate the architecture at the human scale. Touching the reactive maquette activates the monumental 'Structure for a Sentient Swarm' in real time** and allows asymmetric dialogue over touch, distance, scale and light.

The main 'dialogue' between man and the sentient swarm occurs when we enter the building itself. Within the structure, **visitors are immersed in the live learning swarm algorithm that reacts to them as they progress through the space** and to the viewing platform at its apex. Never pre-programmed or pre-determined, said reaction of the swarm evolves algorithmically driven while encountering spectators and visitors alike and over time.

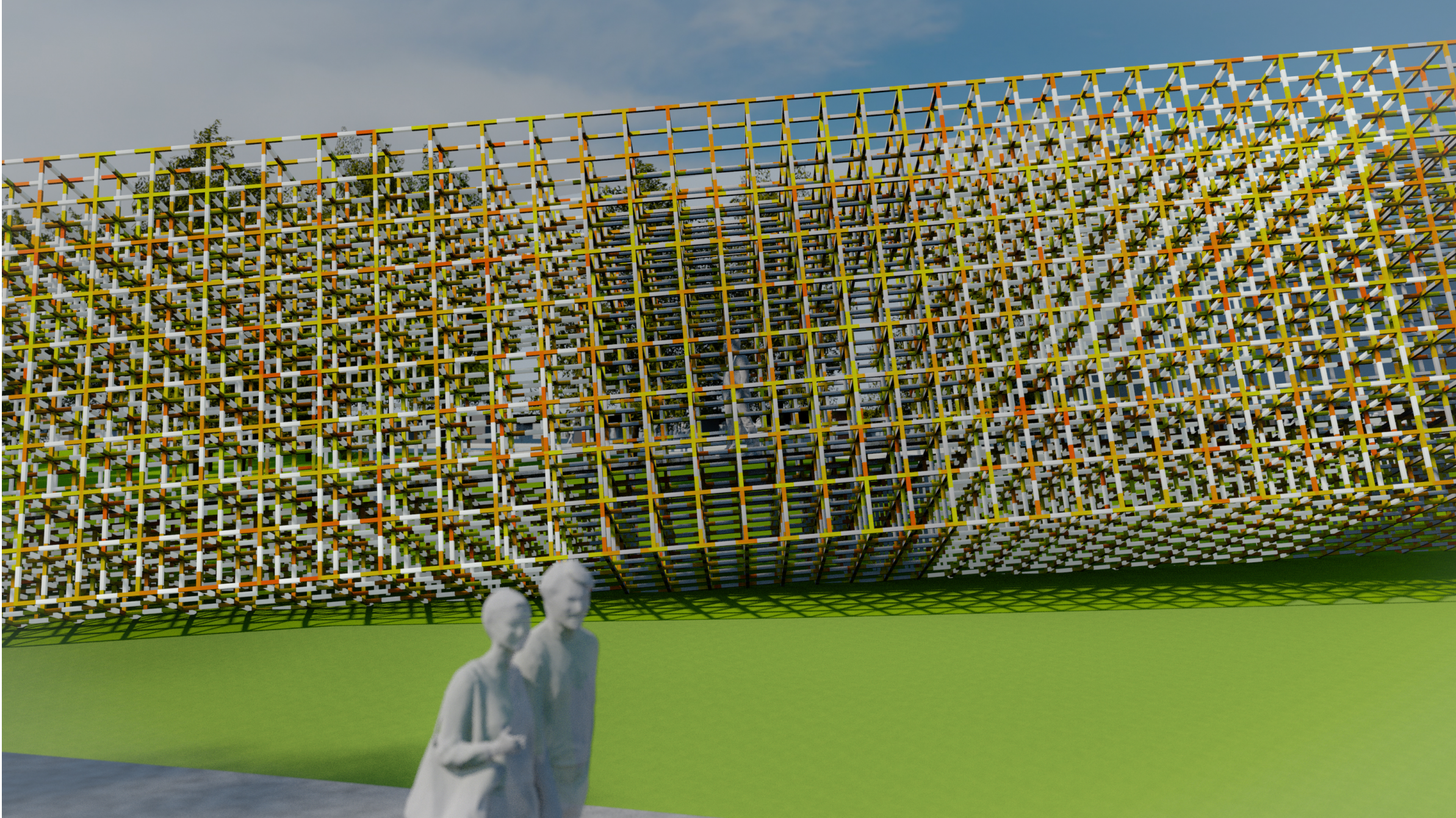
This interaction with and within the building is visually translated into an engaging and subtly changing experience of a 'life form'. Going beyond surface decoration or an animated facade, **the sculpture is a widely visible algorithmic living monument to the communities' collective responsibility and its collective intelligence.** 'Structure for a Sentient Swarm' generates a tangible reminder of the quiet and mysterious perfection found in nature, which surrounds and pre-exists the contemporary, anthropocentric landscape of our lived reality.



Entrance walkway ramp



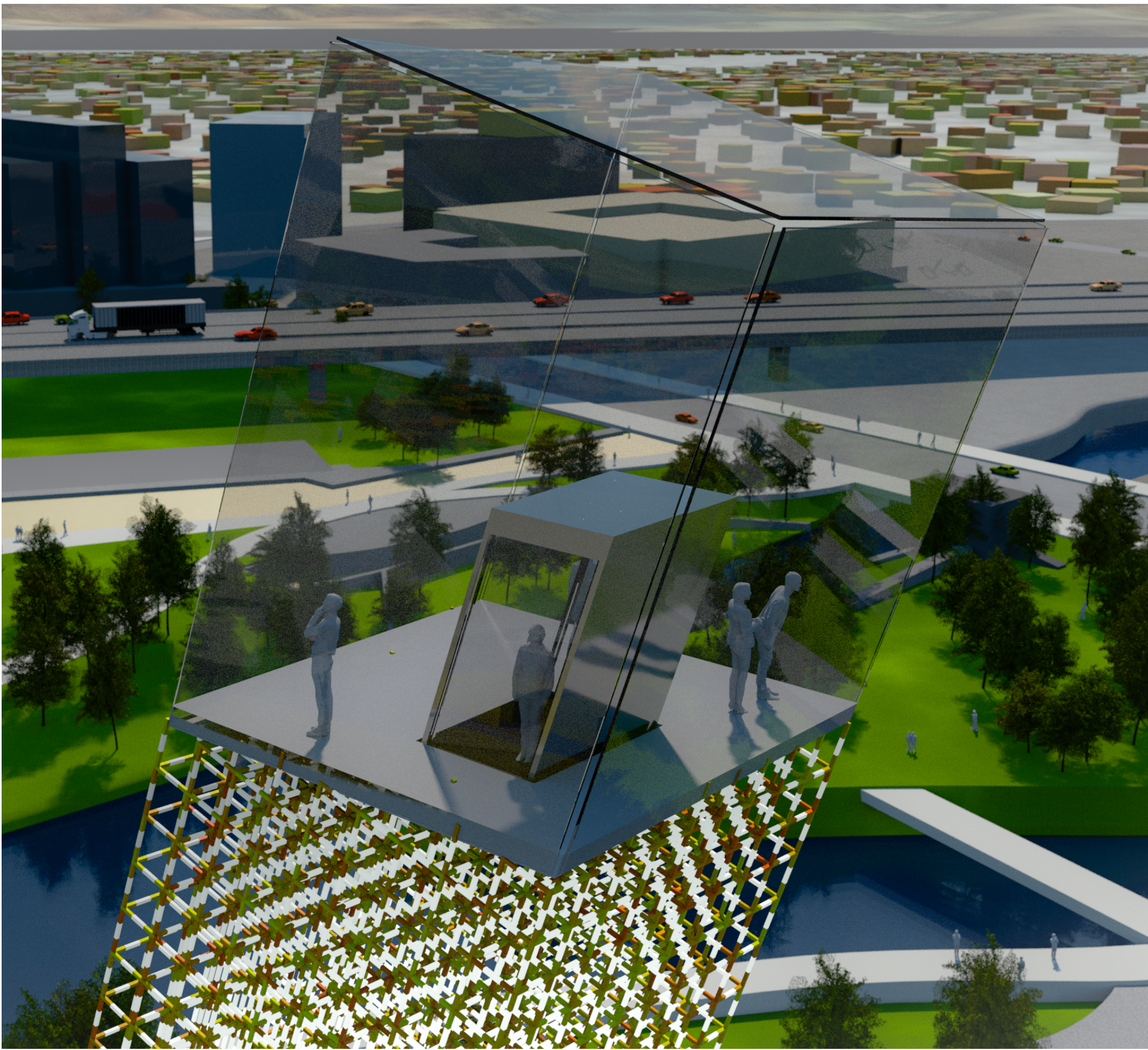
Visitor centre & interactive maquette



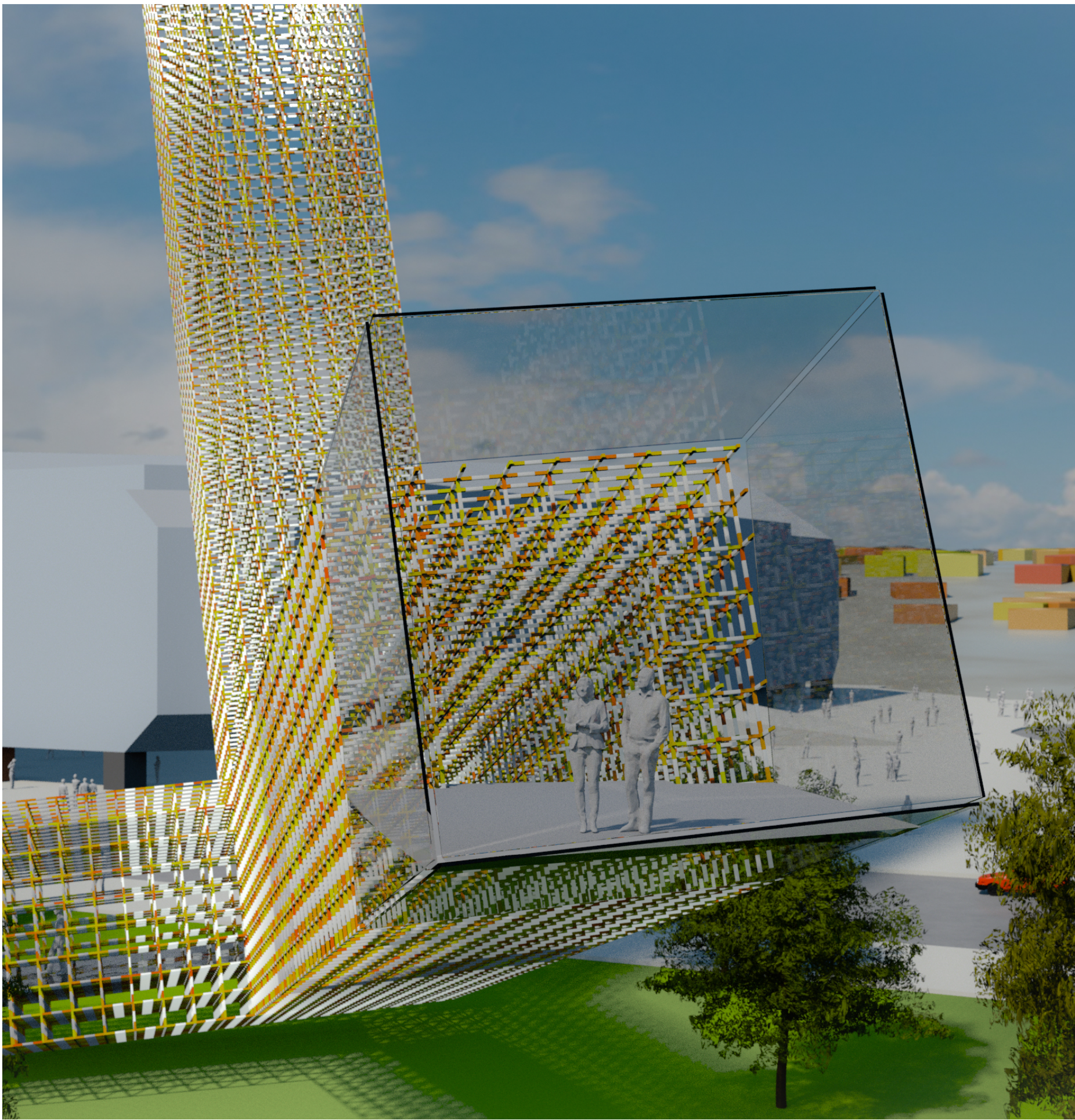
Swarm lattice structure



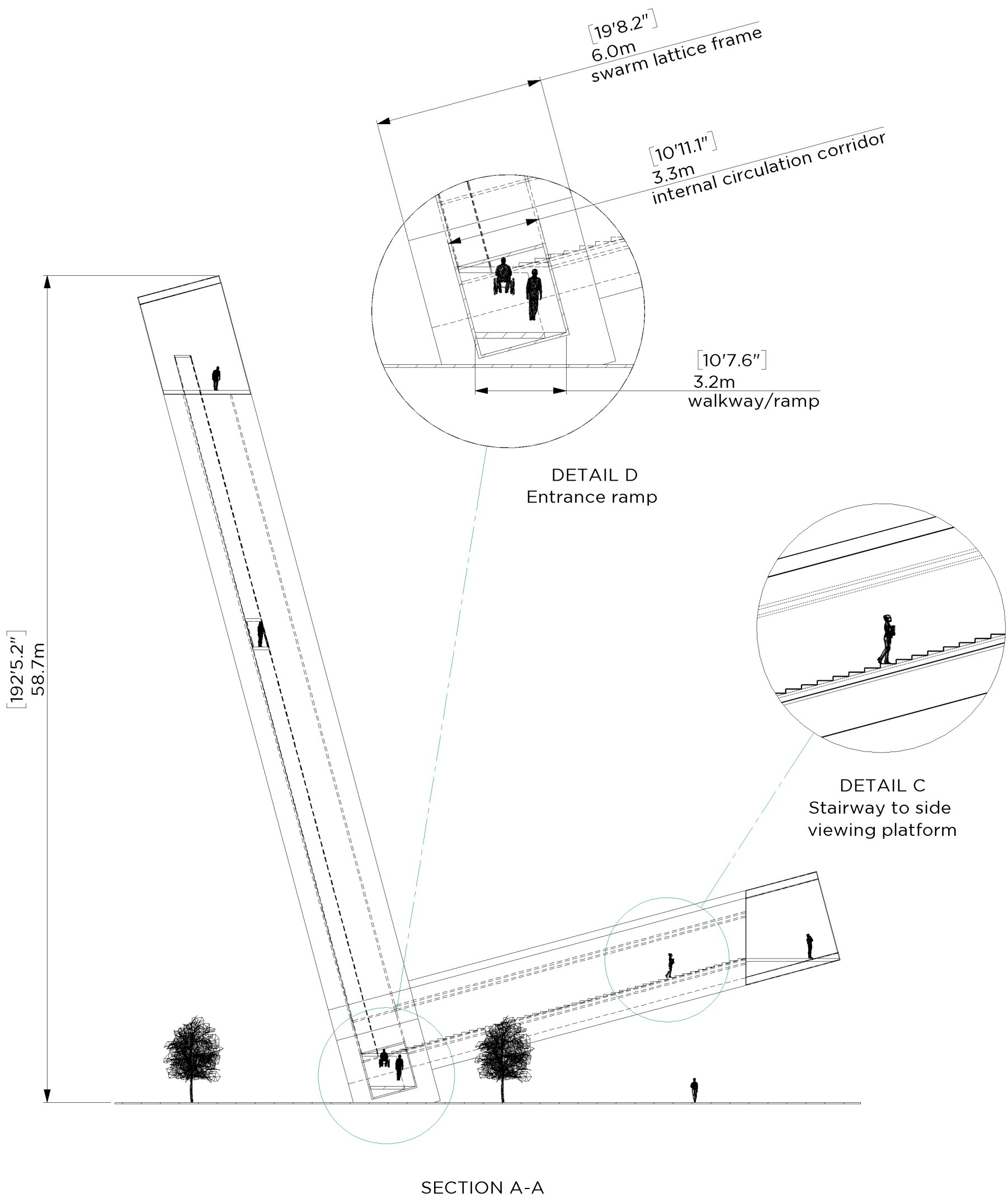
View from inside Arena Green



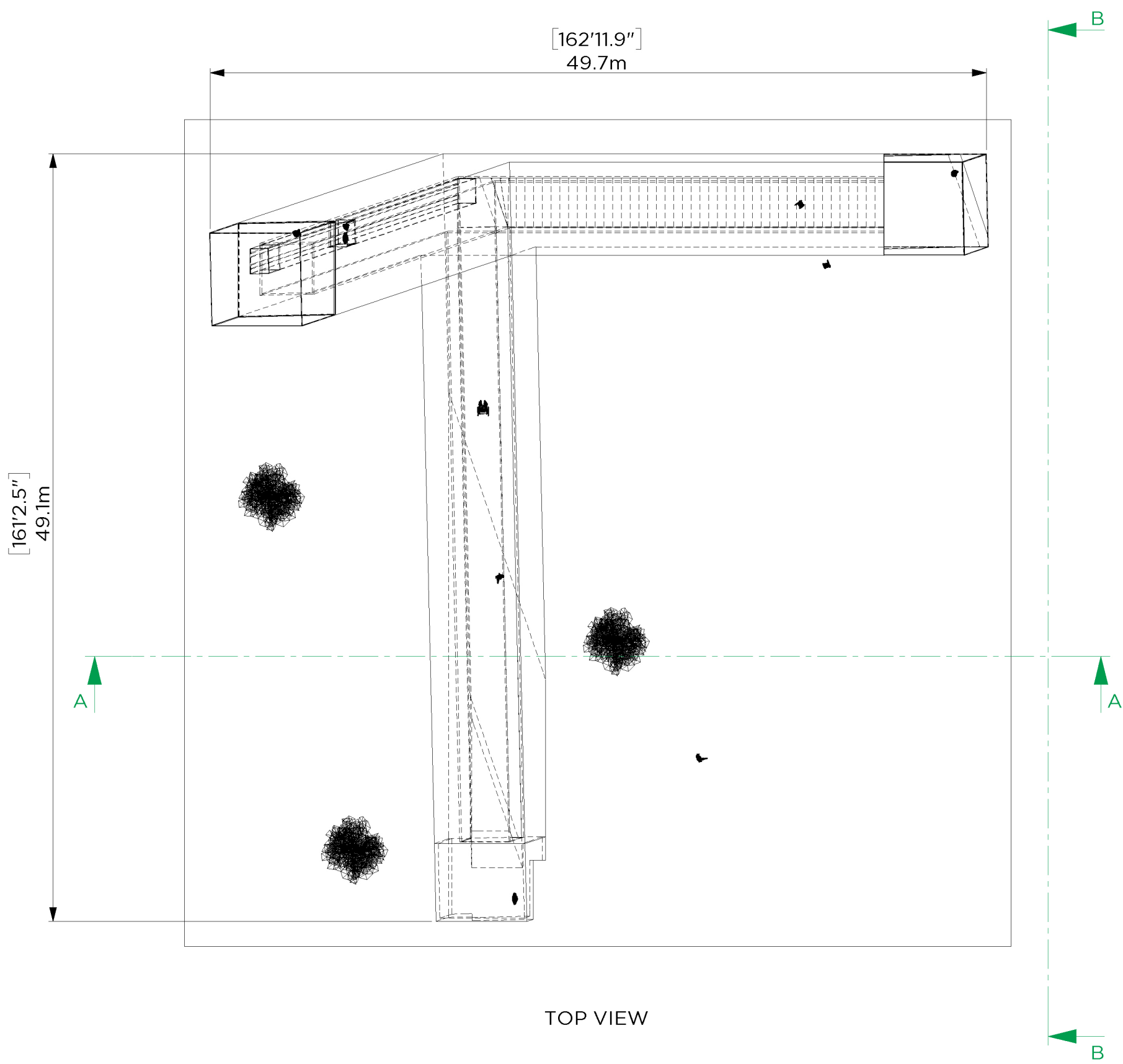
Top viewing platform



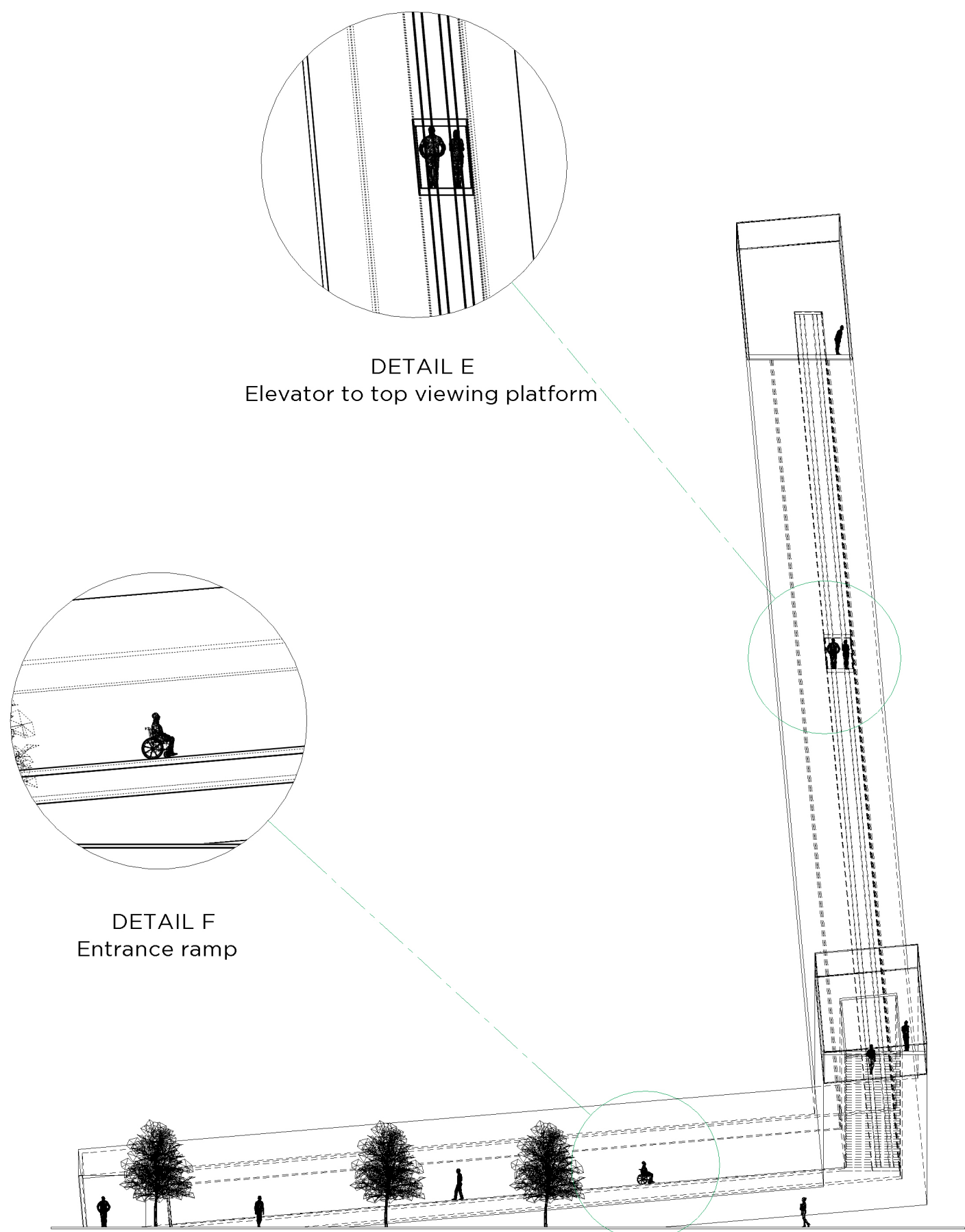
Side viewing platform



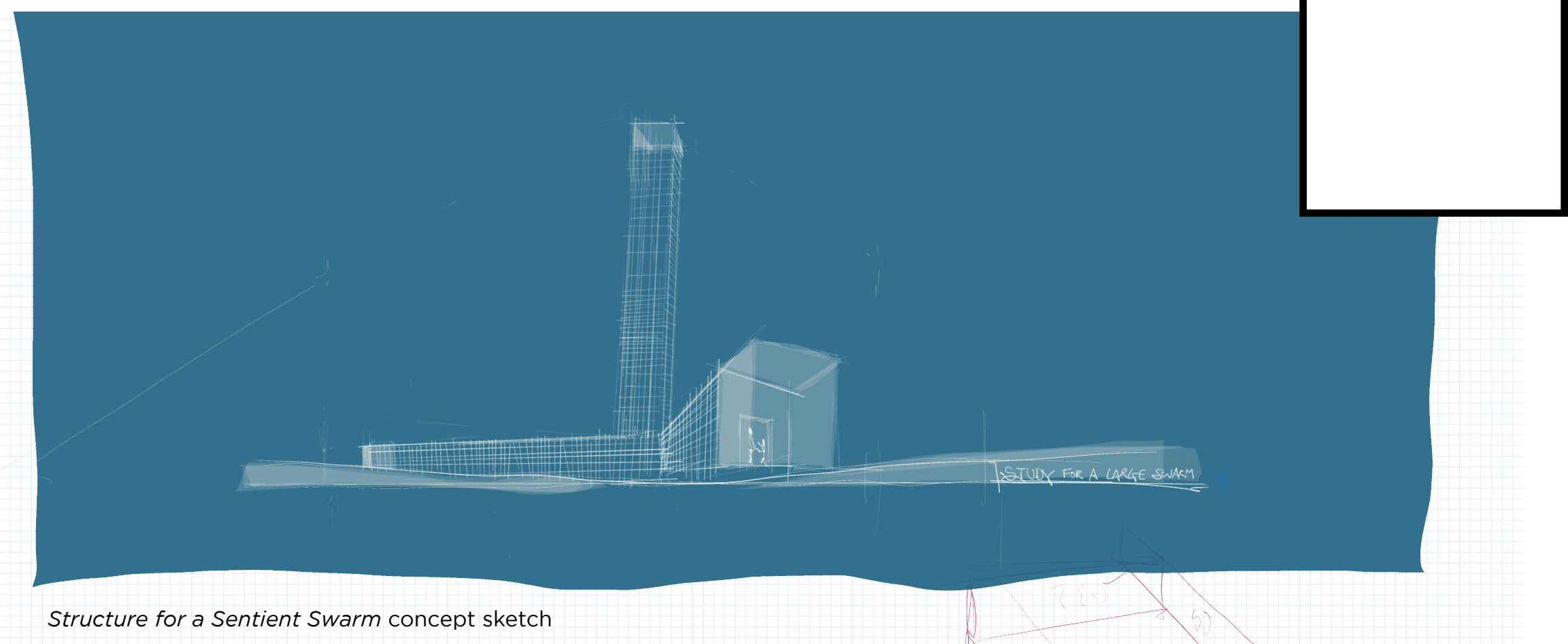
SECTION A-A



TOP VIEW



SECTION B-B



Structure for a Sentient Swarm concept sketch

Energy Consumption

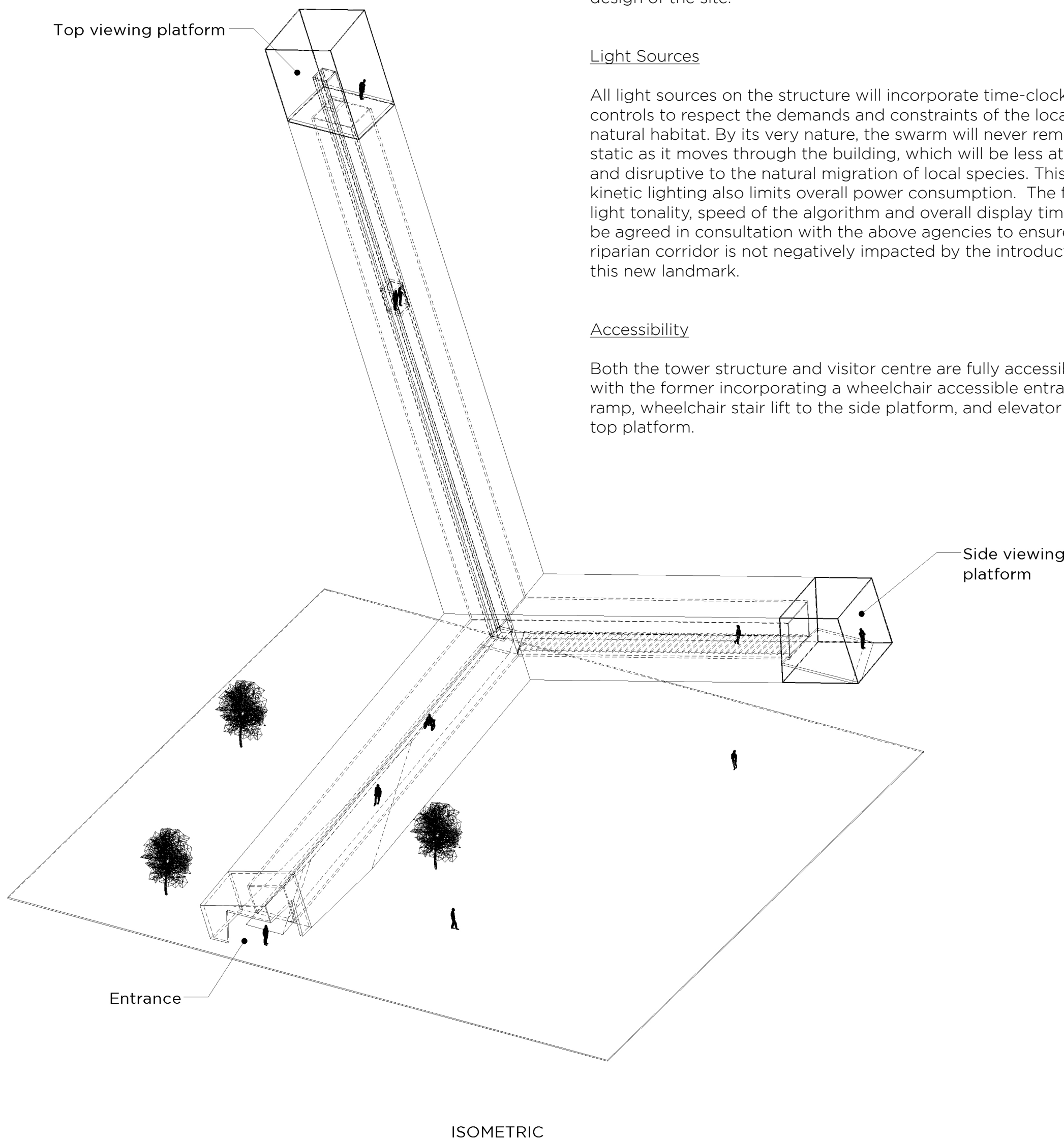
The Structure for a Sentient Swarm will be partially powered by solar panels installed on and around the visitor centre and will rely on renewable energy. The precise number and location of solar panels will be determined during Phase 2 detailing and will be carried out in liaison with the local government agencies and the San José Light Tower Corporation Board of Directors. During this phase we will work with our partners and the agencies to develop a strategy to achieve net-zero energy design principles in the final design of the site.

Light Sources

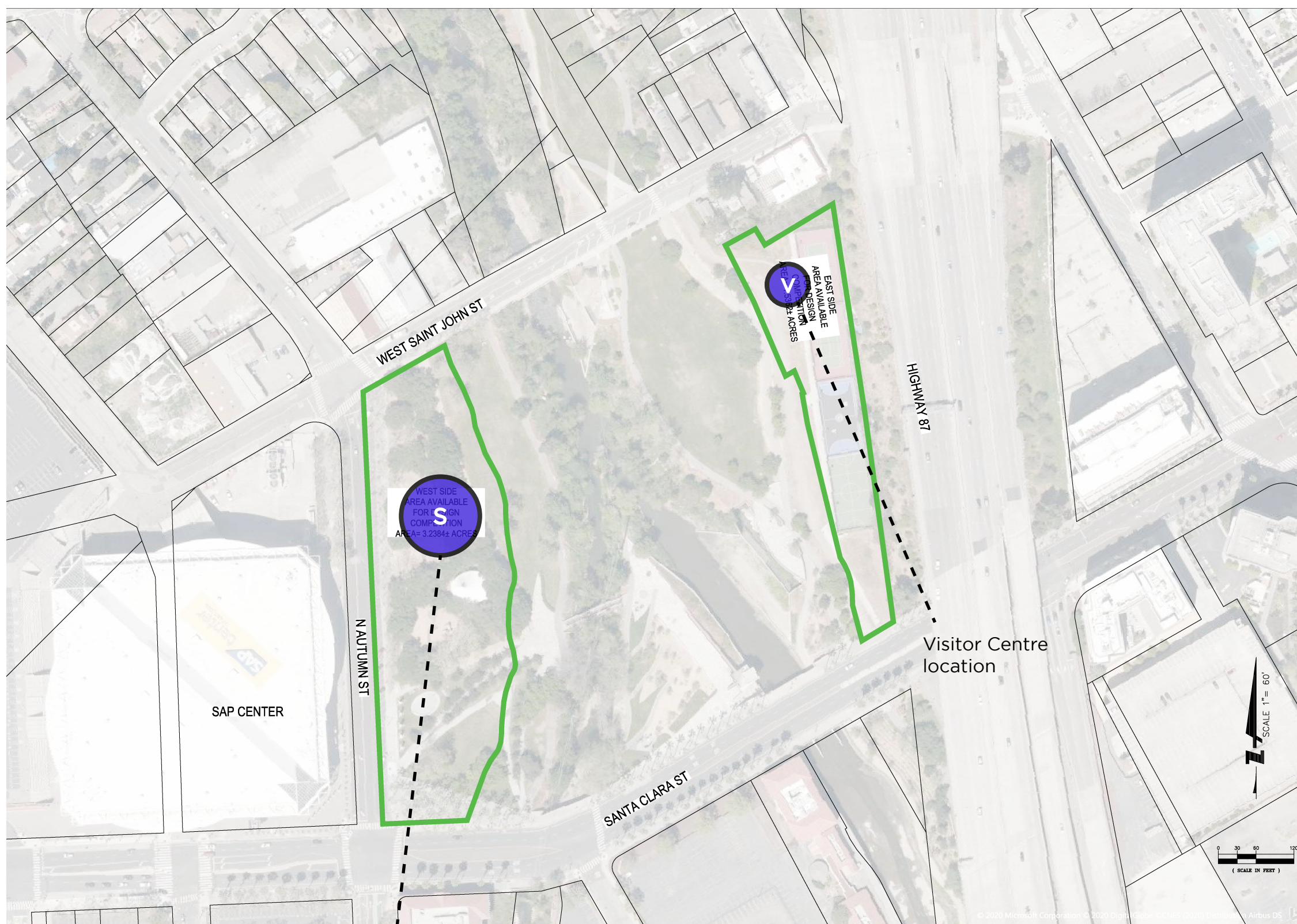
All light sources on the structure will incorporate time-clock controls to respect the demands and constraints of the local natural habitat. By its very nature, the swarm will never remain static as it moves through the building, which will be less attractive and disruptive to the natural migration of local species. This use of kinetic lighting also limits overall power consumption. The final light tonality, speed of the algorithm and overall display times will be agreed in consultation with the above agencies to ensure the riparian corridor is not negatively impacted by the introduction of this new landmark.

Accessibility

Both the tower structure and visitor centre are fully accessible, with the former incorporating a wheelchair accessible entrance ramp, wheelchair stair lift to the side platform, and elevator to the top platform.



ISOMETRIC



Structure for a Sentient Swarm location

