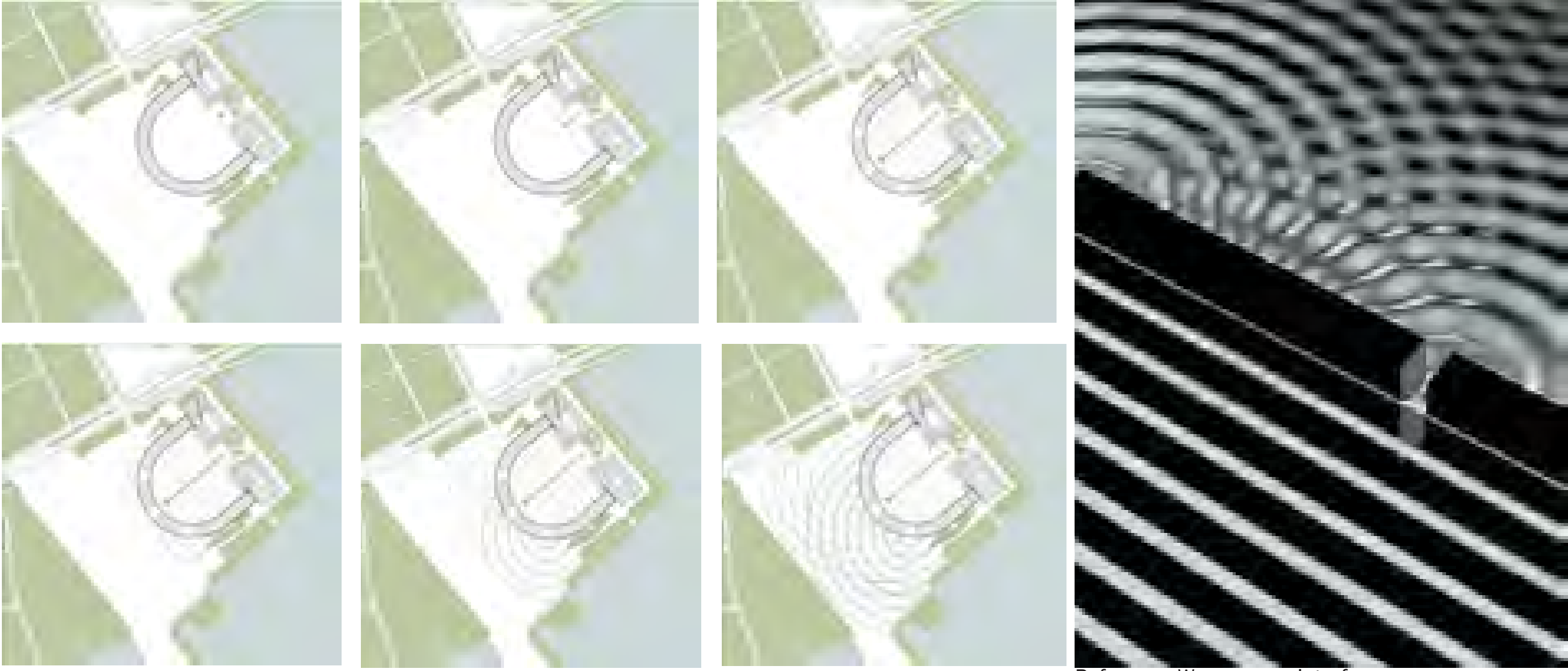


1 MASTERPLAN



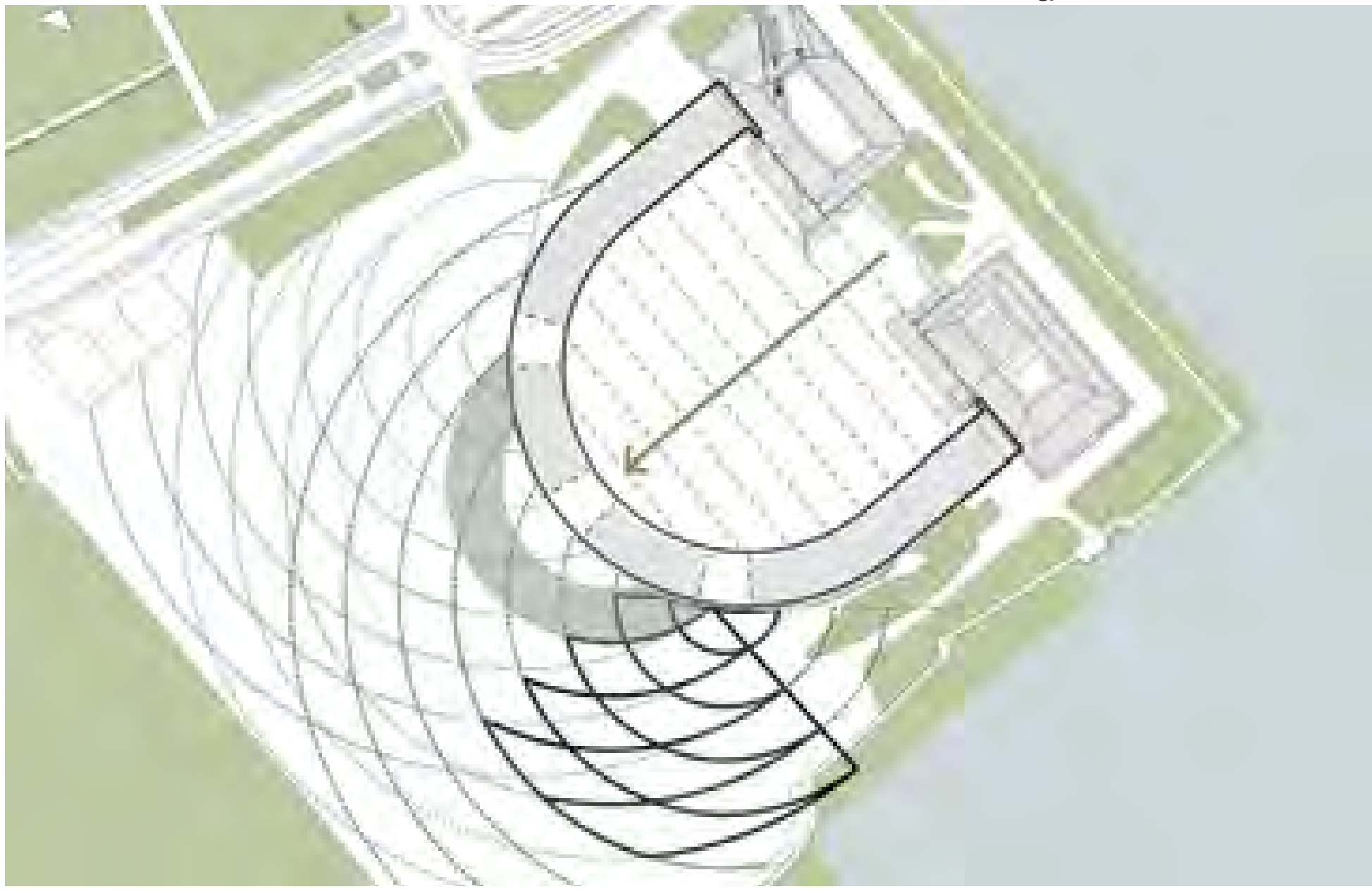
Within this nature propagated "pattern field", the location of the Interim Theater shown herein....

...IS NOT located in the empty hall as that space should always remain empty of people. We propose that the hall is re-wilded as an extension of Duzendteich. Nature should now and forever reclaim that space - symbolically and for biodiversity

...IS NOT located at the outside center axis as the intended but failed hubris of monumental symmetry should be witnessed

...IS NOT located at the outside north close to Bayernstrasse as the our Interim Theater is conceived as a landscape pavilion belongs to the park and elements: Duzendteich, Volksfestplatz...

...IS located at the outside south as it means to draw urban life into the park and activate more life - theater, terraced garden, seating for outdoor event, shelter for festival function, access to view the re-wilded hall



Reference: Wave energy interference



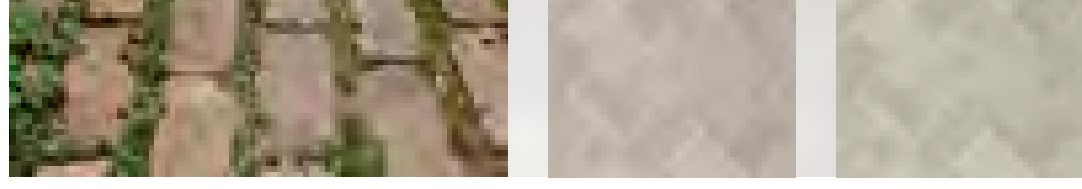
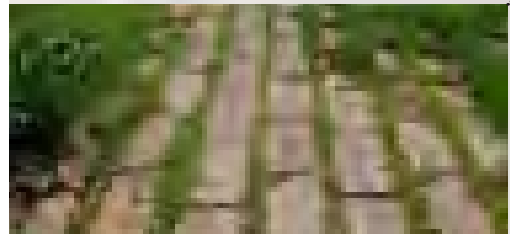
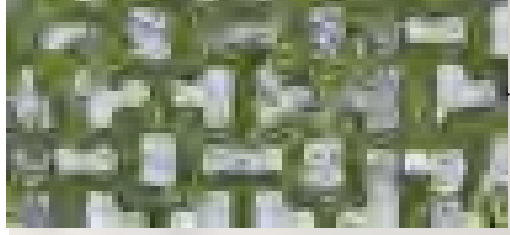
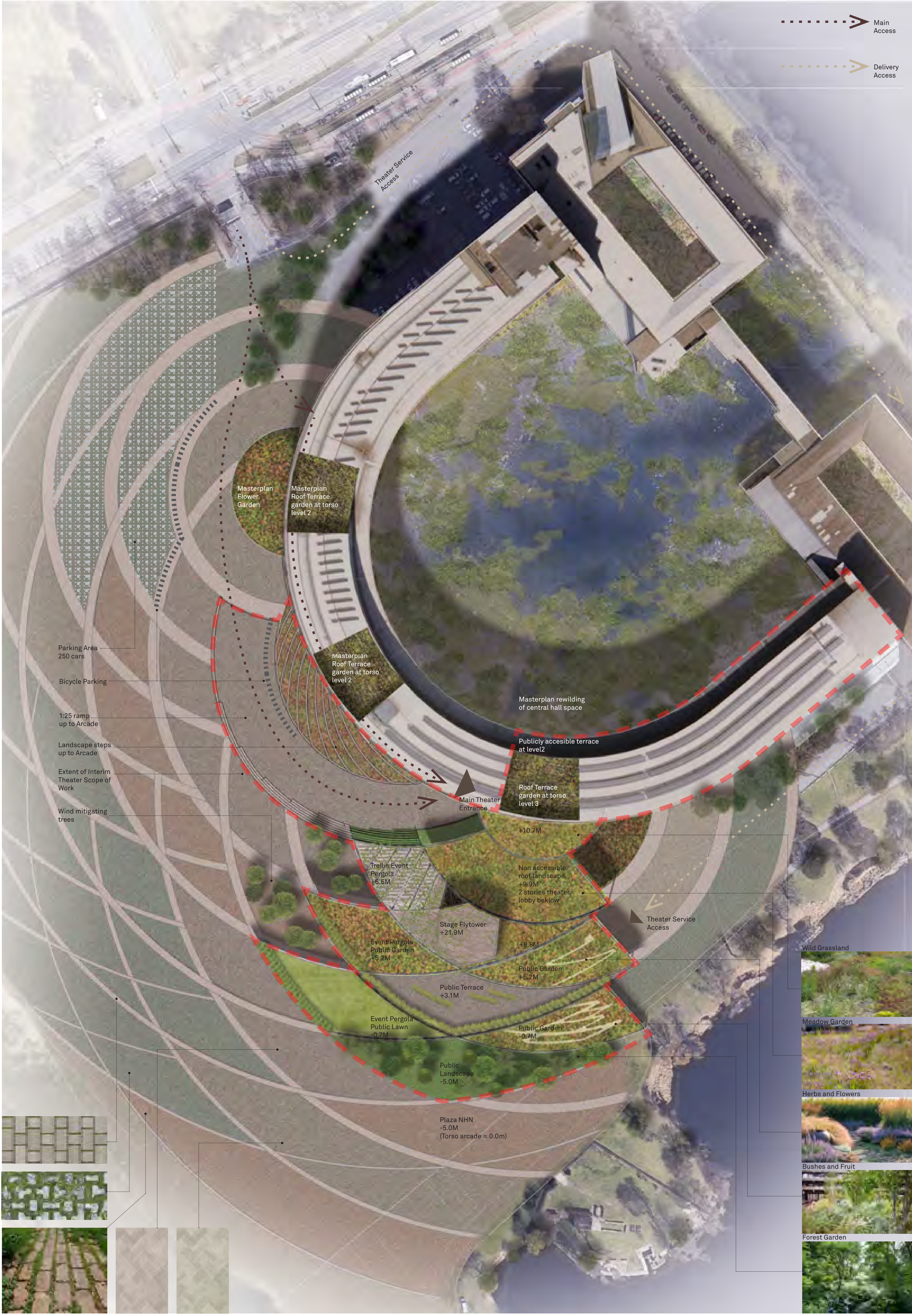
Rewild inner courtyard of Torso



Nature spilling out of the centre of the rewilded torso through garden gaps in the torso



Synergy between nature pattern and events that happen on Volksfest site



Masterplan porous paving types

Main Access

Delivery Access

Wild Grassland

Meadow Garden

Herbs and Flowers

Bushes and Fruit

Forest Garden

Theater canopy landscape types

2 VISION STATEMENT

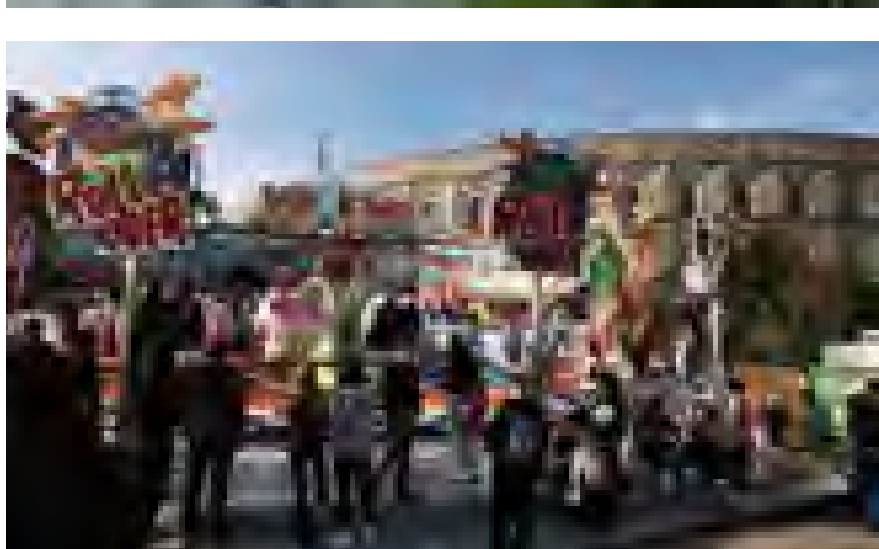
SOCIAL SUSTAINABILITY



Z-Bau: Irreverance and cultural inclusivity over NS history



A PAST
"Location" is defined as "...a condition of being in a particular place." Simple concept. But, in determining a location for the Interim Theater, "condition of being" is overwhelmed by the NS Kongresshalle. What its massive and undeniable presence of the "was" (in history, in memory) overshadows what it and its surroundings "is" (a ruin, an underused space, a cautionary artifact) as well as what they "can be". The "can be" in the context of social sustainability is at the heart of our approach to the interim Theater. Our concept for A Future presented herein informed a masterplan for the whole of the site including the Torso, unfinished hall, and the Folkefestplatz. Our design for the Interim Theater aligns to this masterplan as Phase1.



A PRESENT
The project site is a part of a park system that is loved by a great diversity - flora, fauna, and the full and varied demographic of Nurnberg. It is an environment full of activity, daily and seasonal. The Kongresshalle is too large an object, too valuable a resource, and too relevant a voice to not participate in the present and future park life.

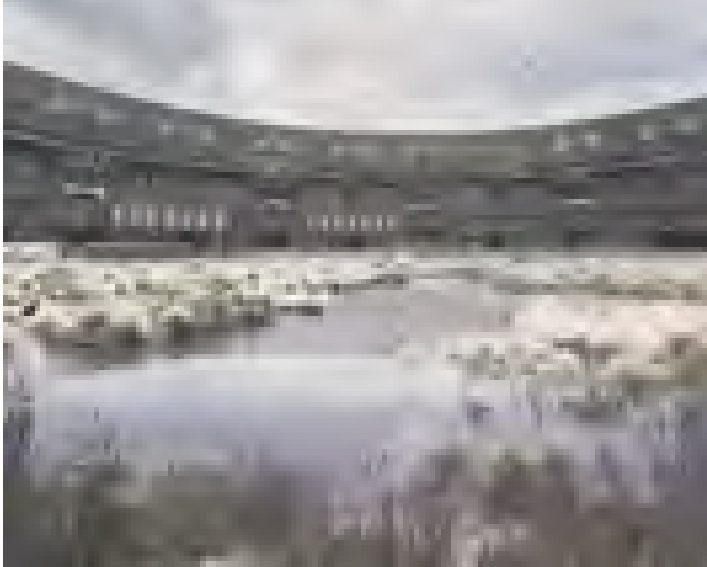
A FUTURE
Our vision for how the Interim Theater can lead the Kongresshalle into full participation with the life of the park starts with a firm belief that the "architecture" of the Kongresshalle should remain in full view and not be formally or structurally challenged by any other "architecture". That is to say, we believe that the extraordinary and difficult to reconcile "condition of being" formed by particular organizations, people, ideas, ambitions... that the massive Kongresshalle architecture now testifies to, should never be obfuscated by other "architectural" message, however well-meaning.

This, however, absolutely should not mean that the Kongresshalle should be made immutable and thereby enshrined. Instead we seek its greater urban integration and participation by modifying the routine building project parts and operations.

From: landscape + architecture + interior

To: landscape + architecture + interior

Our specific design approach to this is to introduce nothing new to the project site, but rather, extend, modulate, re-combine and otherwise improvise with existing site elements that can match the gravitas and meaning of the Kongresshalle.



Unfinished Hall rewilded for flora and fauna



Roof terrace reference: Le Monde, Paris

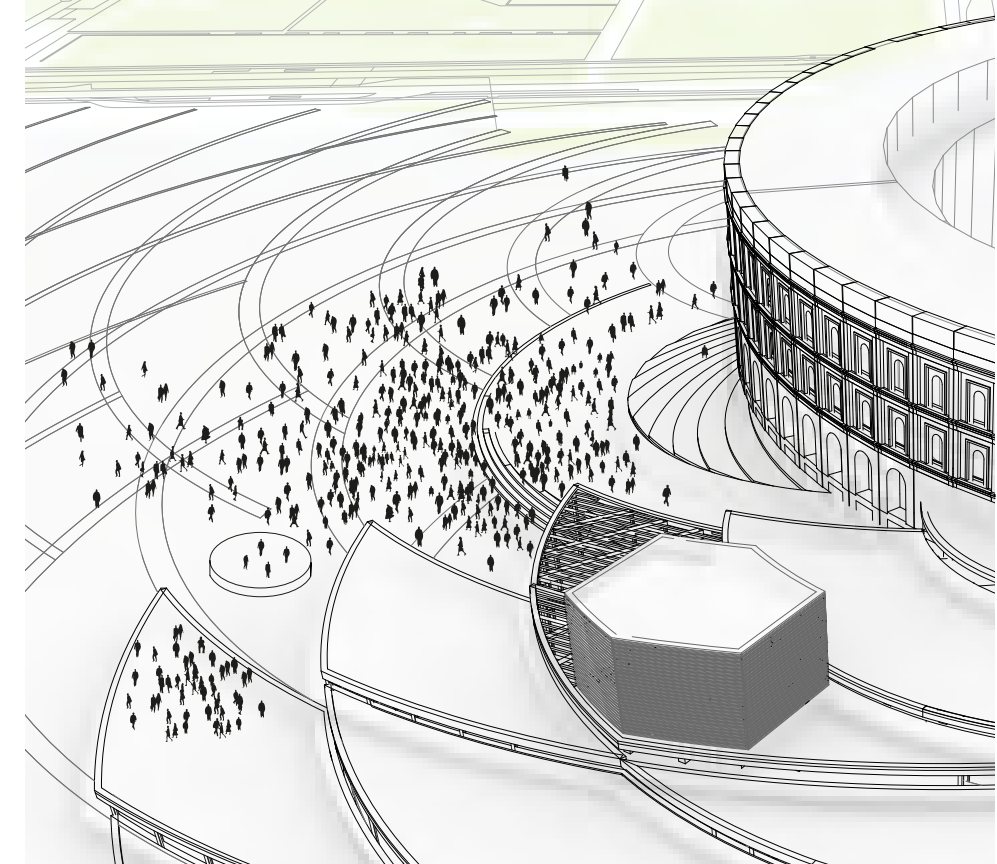


The landscape of Duzendteich is allowed to occupy the hall space, to infiltrate the torso and radiate out to the folkefestplatz. In this way, the surrounding landscape creates shelter for new functions like the Interim Theater, but also shelter canopies for other temporary functions and water-filtrating ground cover and infrastructure for festivals

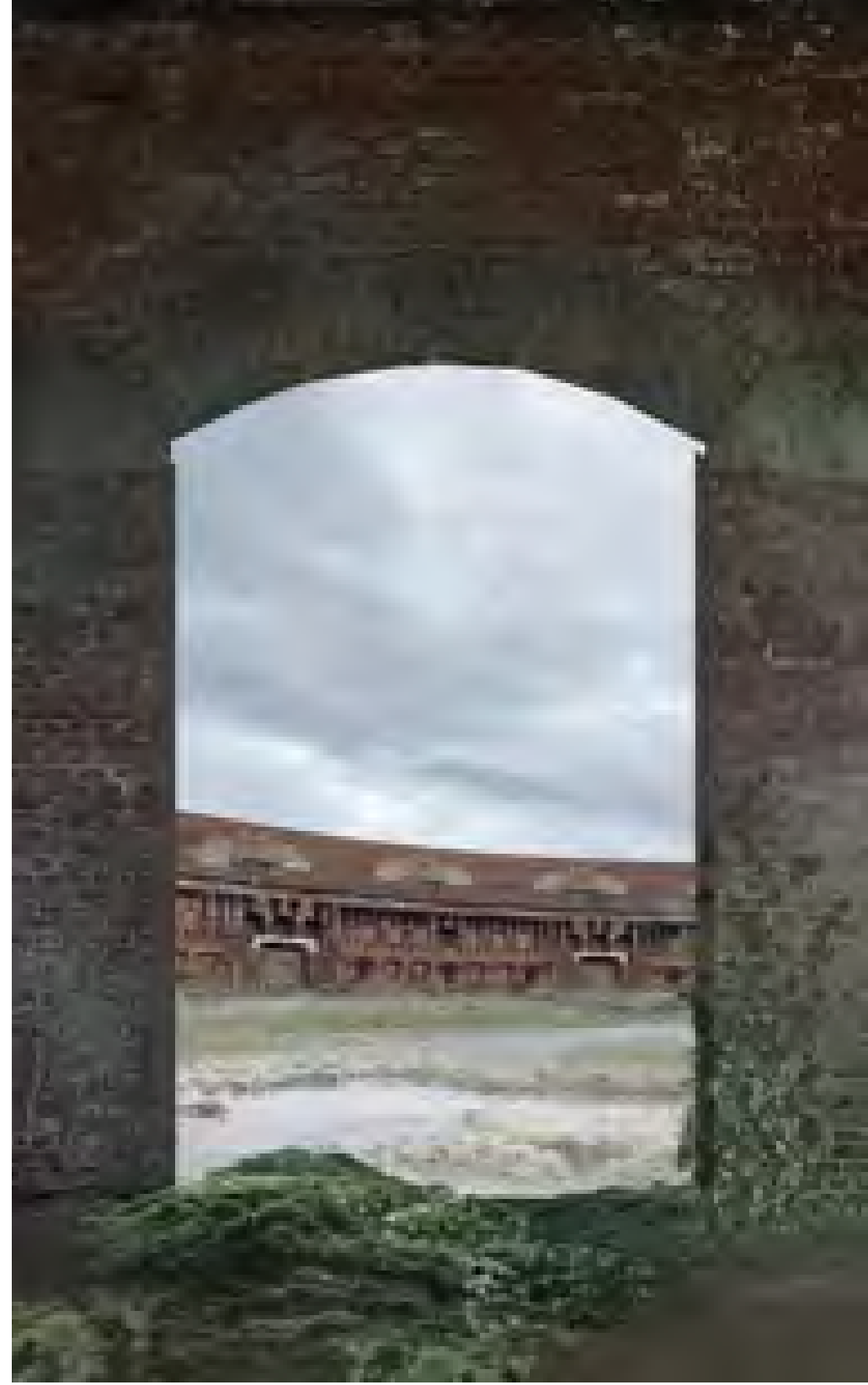
The interior is seen as an extension and expansion of the Volkefestplatz events. By opening up and informing the interior design of the Interim Theater to the activity at the plaza, the theater can reduce the perceived class separation between community festivals and the performing arts. Instead, inclusive community activities can flow around, through, on and in the Kongresshalle



F - Rewilded Inner courtyard for Flora and Fauna

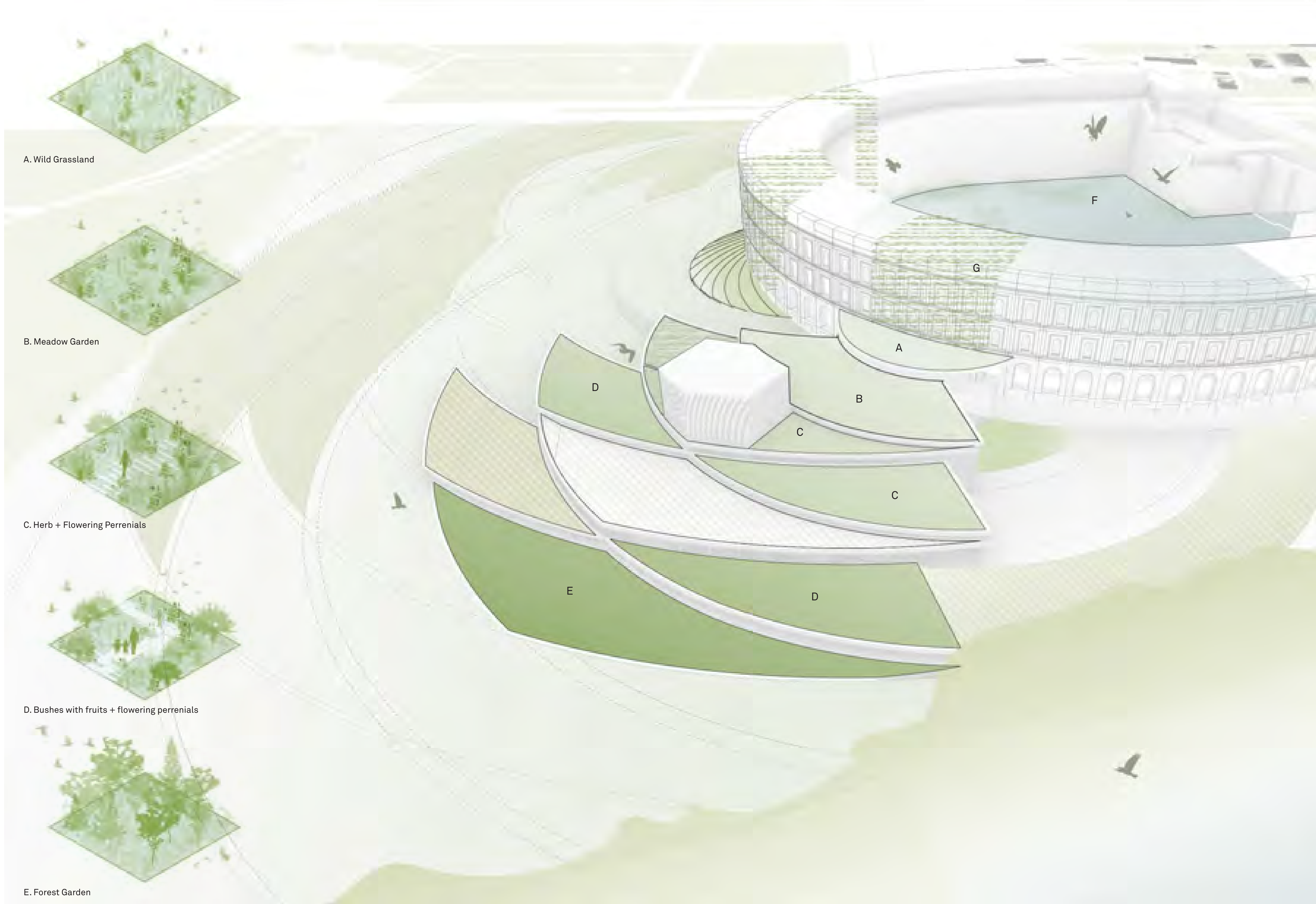


Proposal provides infrastructure for outdoor events to occur



View through to rewilded inner courtyard

ECOLOGICAL SUSTAINABILITY



BIODIVERSITY

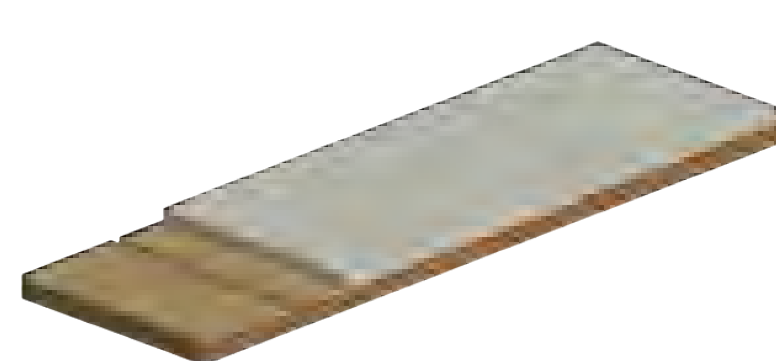
The extension of Duzendteich is as much about form-giving as activity and diversity generated across flora, fauna and the public. The hall space, re-wilded as marsh and only occupied by flora and fauna, is the focal point of the masterplan. People can see it but not occupy it. From there, the existing Arcade is connected to a public vertical garden. Here Kongresshalle itself is host to flora, fauna and public. The canopies that radiate out from this garden make room for the interim theater under and host a variety of micro-conditions as shown here

ECONOMIC SUSTAINABILITY

The canopies are built up by a steel roof structure resting on steel columns. The roof structure consists of welded main beams with a span of 8-28 m and a structural height of 500 mm to 1500 mm, which is optimized in relation to the span. The steel structure is covered by a secondary structure for which a timber-concrete-composite slab is proposed. It allows the transfer of the high loads introduced from the green roof and takes over the diaphragm action of the roof while in the same time self-weight and embodied carbon is reduced (in comparison to other slab-systems).

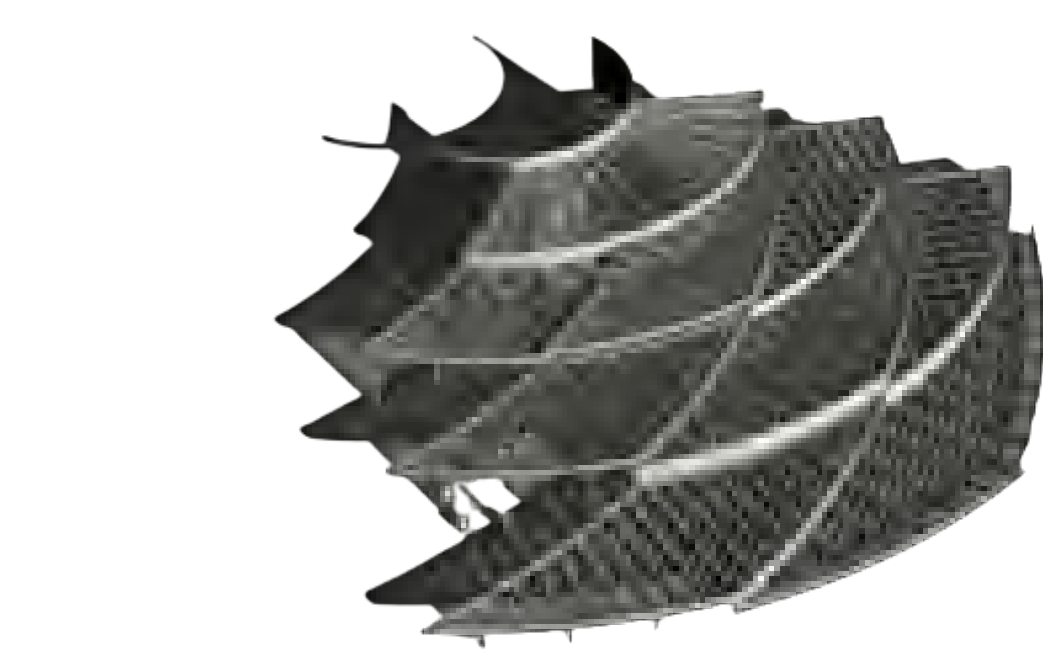
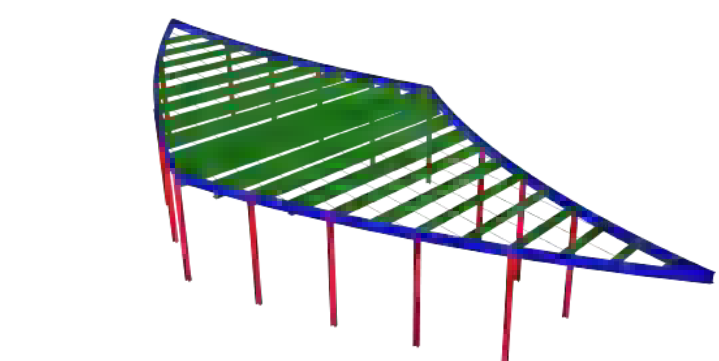
For the lateral load take down, the canopies are connected to the concrete walls of the new structure. For the smaller canopies, the steel columns can also be connected rigidly to the foundations or act as frames together with the main beams. Therefore, cross bracings between the columns can be avoided.

All steel connections are designed reversible so that the structure can be decomposed and reused or recycled at the end of its life cycle. Considering the large spans and flexible use, high loads of the green roof, as well as the option to be designed for disassembly, steel is the most beneficial material. At a later design stage, it is intended to investigate the feasibility of a pure timber structure by reducing spans.

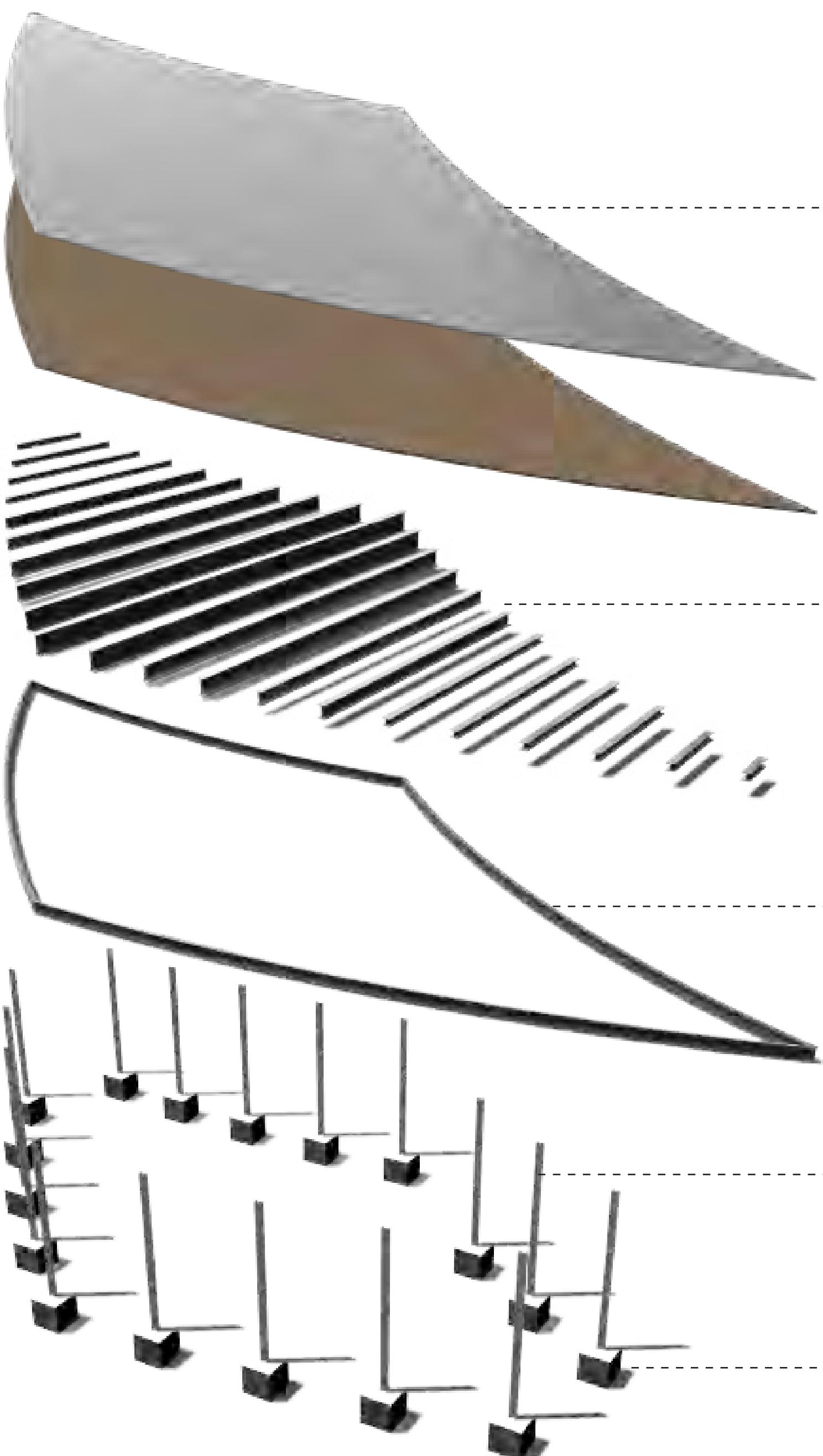


Hybrid timber concrete slab (CLT) h= ca. 250 mm

Structural Model



CONSTRUCTABILITY - Canopy Structural System



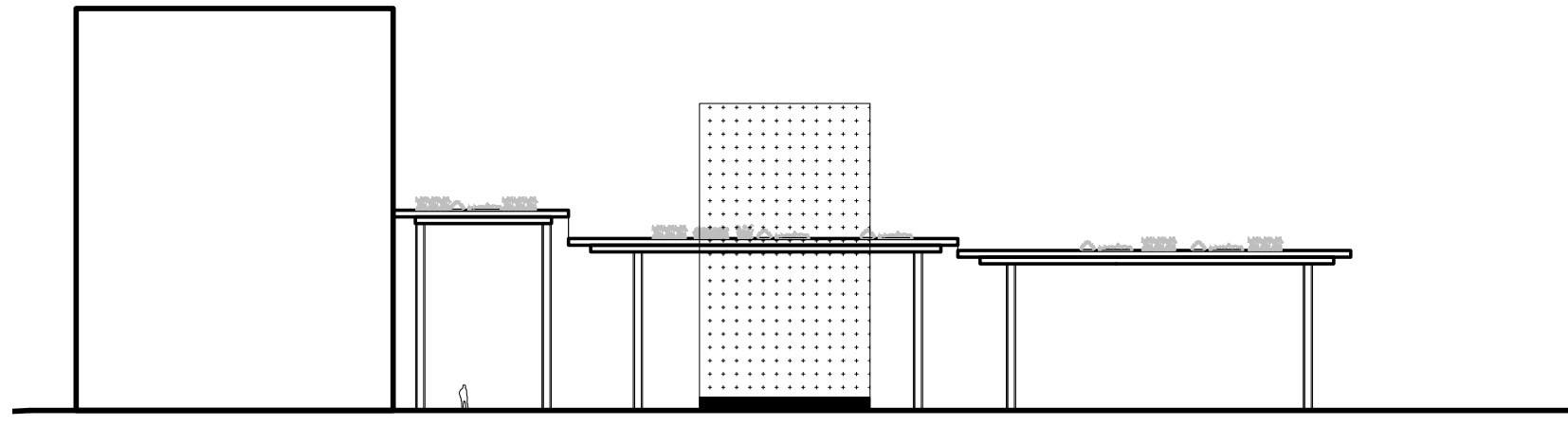
Hybrid timber concrete slab CLT + C25/30 h = ca. 250 mm

Main beams steel S355 h=500 mm - 1500 mm

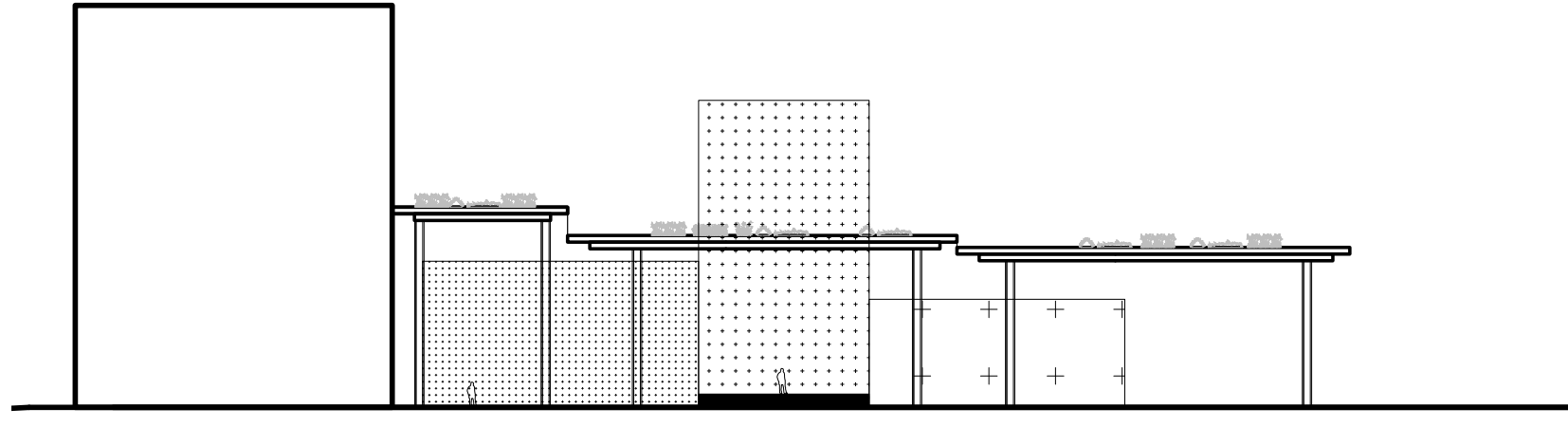
Edge beam steel S355 h = variable

Columns steel S355

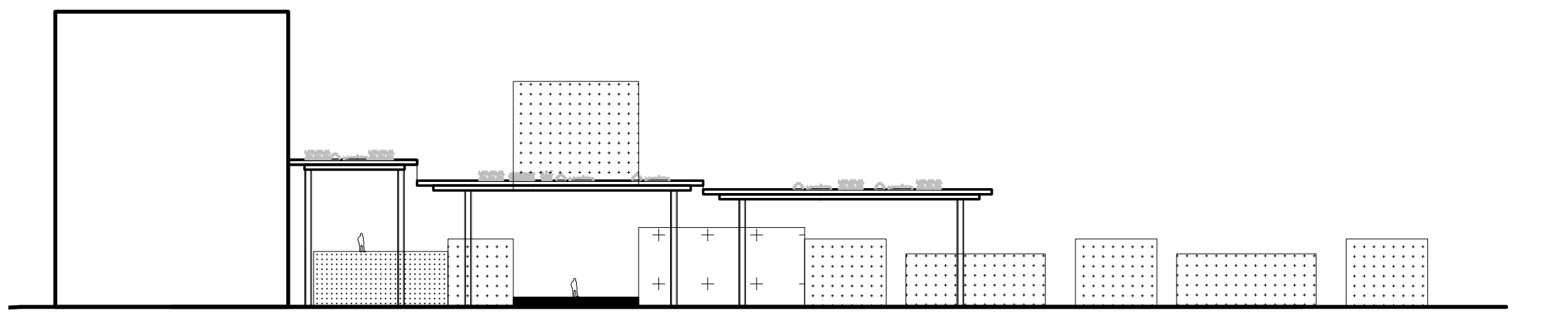
Single foundations



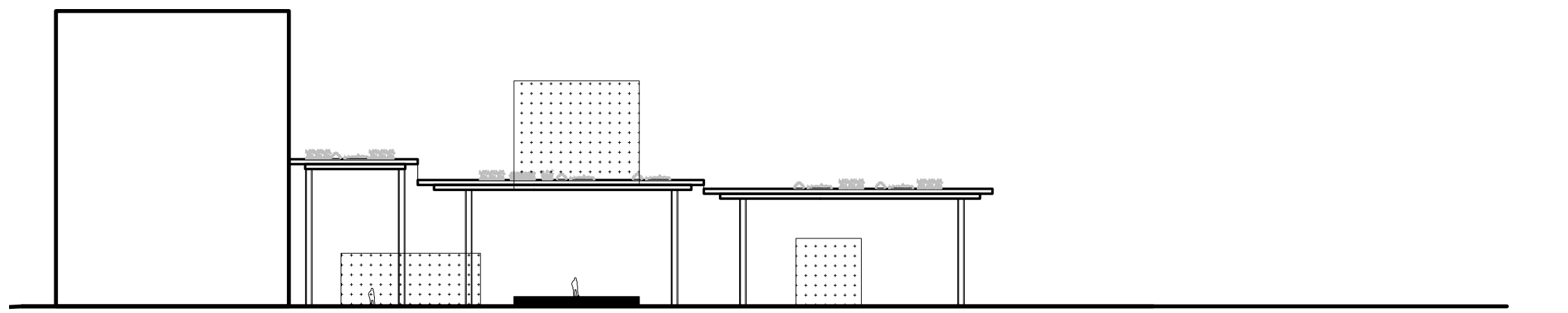
The canopy structure plus the fly tower and stage are proposed to be the most permanent elements and therefore having the highest initial carbon and monetary cost. Amortized over time, these costs are mitigated by making these elements as adaptable and usable as possible for as long as possible



All of the construction around the fly tower and stage required to accommodate the Interim Theater is proposed to be efficiently constructed of the lowest carbon material and high modularity for fast pre-assembling, de-assembling and installation. Expected carbon and cost accounting to be the occupancy of the Theater



Mobile or temporary installations are foreseen to be hosted by the canopies, in addition to the Theater program to expand functionality and use



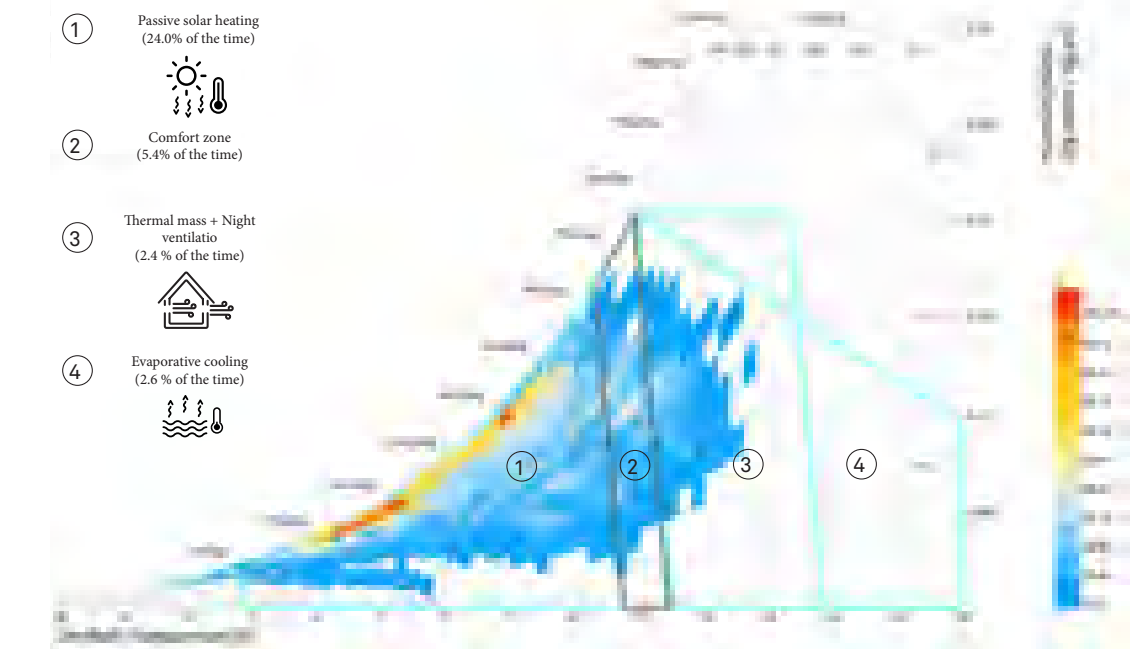
When the Nuremberg State Theater returns to their permanent home, and the modular theater construction is dismantled, the canopies and fly tower remain to new occupants while continually being used as park landscape and amenity

RE-USABILITY: Section Diagrams Strategy for Life-cycle, circularity and carbon cost

COMFORT AND ENERGY

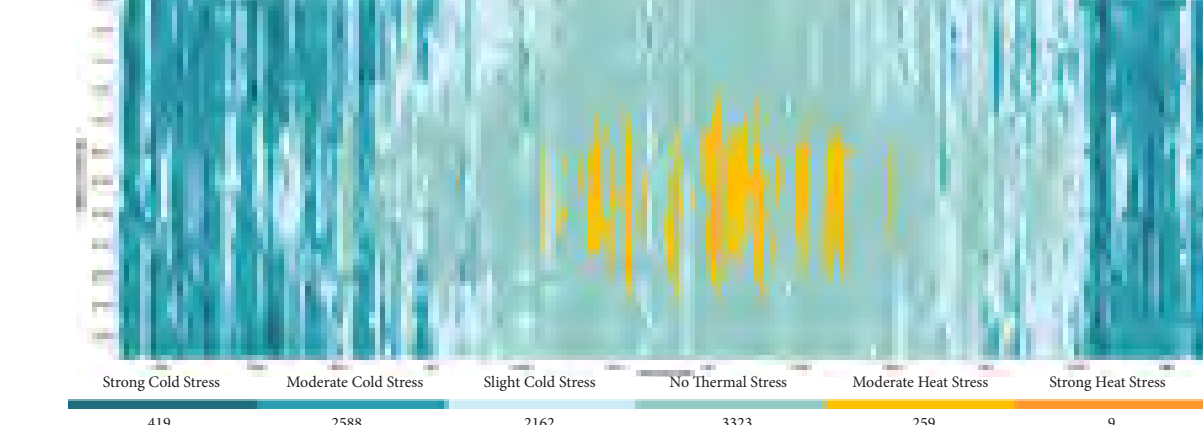
Our sustainability approach for Nurnberg Interim Opera departs from the idea of working with the climate, utilizing the natural resources available with the intention of improving the thermal comfort conditions during the entire year. By doing so, the outdoor user experience is enhanced, while the indoor spaces are climatized saving energy and hence, operational carbon emissions.

Departing from the analysis of the project's local climate, and the original comfort conditions through a preliminary Universal Thermal Comfort Index (UTCI) analysis, the need for passive strategies to increase the thermal comfort zone is assessed. The UTCI analysis shows frequent strong and moderate cold stress caused by cold temperatures during January, February, March, November and December, worsen by prevailing strong breezes coming from the west. By the introduction of wind protection elements (by means of wind barriers and vegetation), the perceived comfort is significantly increased. Moreover, our open canopies and reintroduced vegetation provide sun shelter eliminating strong heat stresses during June and August.

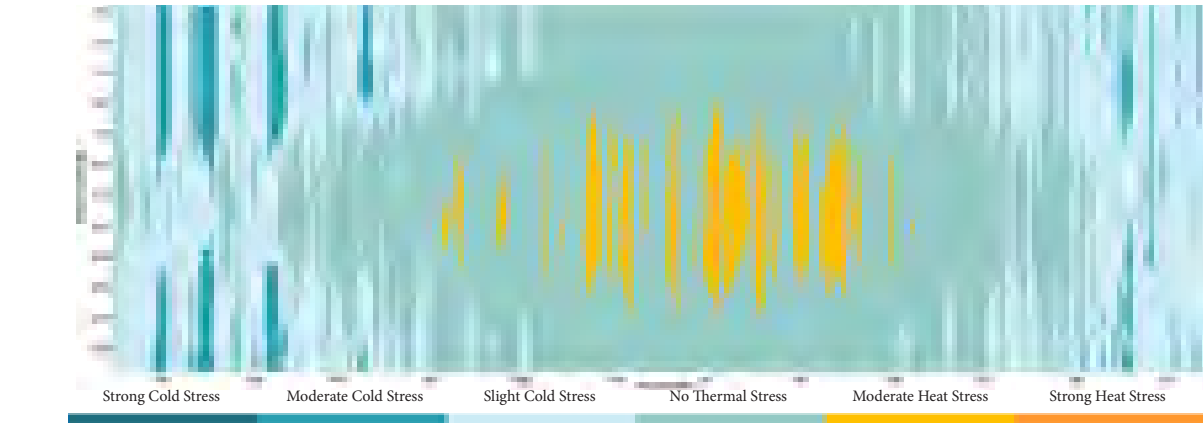


The effectiveness of different passive strategies is then evaluated through a psychrometric chart. This analysis proves the implementation of Passive Solar Heating, Thermal Mass combined with Night Ventilation, and Evaporative Cooling, as the most effective passive strategies for Nurnberg's climate. By implementing the aforementioned measures, the thermal comfort zone can be increased from 4.5% of the annual hours, to a total of 34.4 %. This means a considerable improvement of indoor and outdoor comfort conditions throughout the entire year without any extra cost or energy use by means of active energy systems.

Passive Solar Heating alone applied to Nurnberg's climate can lead to an increase of 24.0 % on the yearly comfort zone. By adding evaporative cooling effect outdoors, by means of the proximity to the river, and thermal mass combined with cross ventilation in indoor spaces, the comfort zone can by increase in 2.6 % and 2.4 % respectively during the summer months.



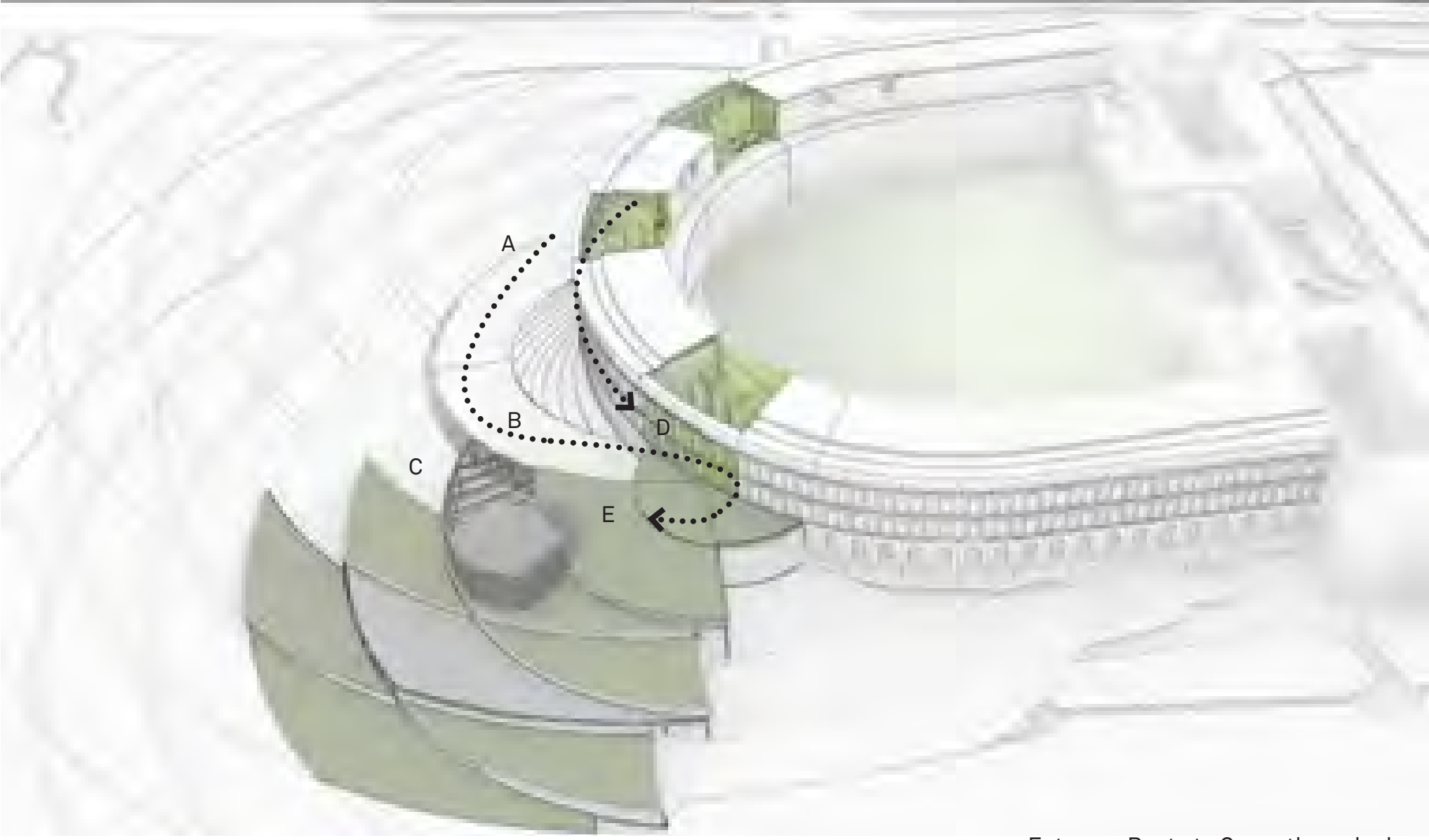
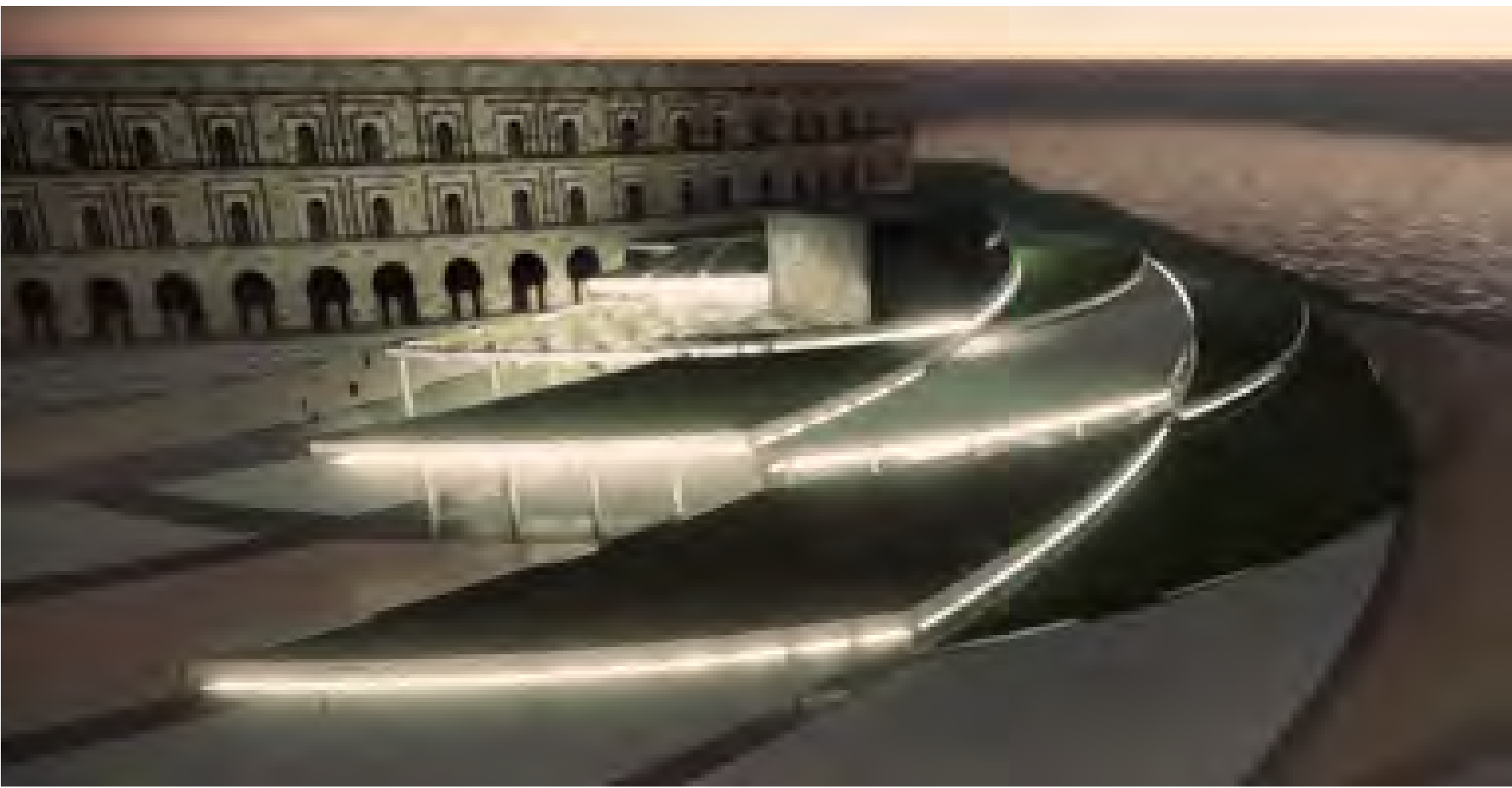
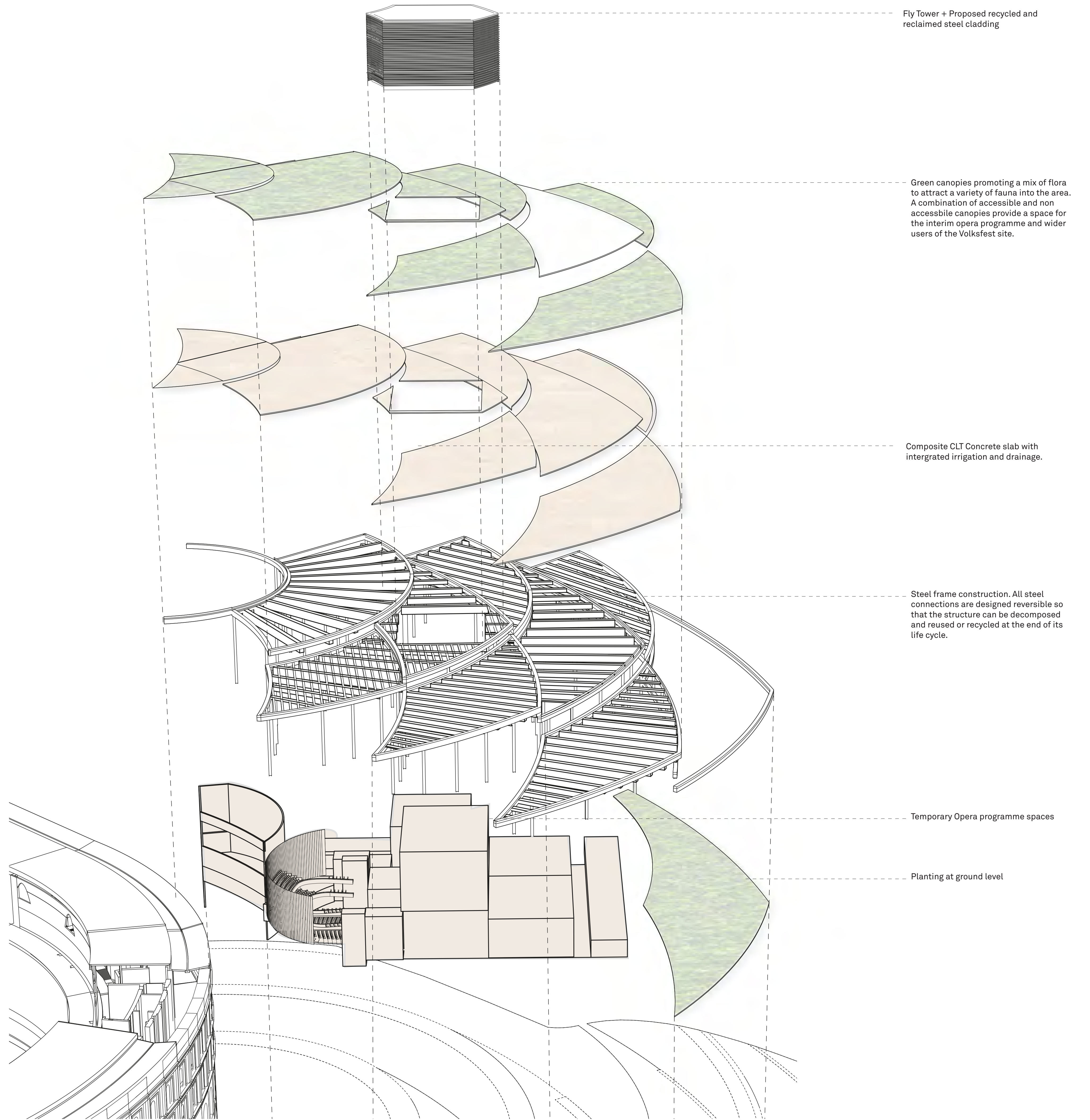
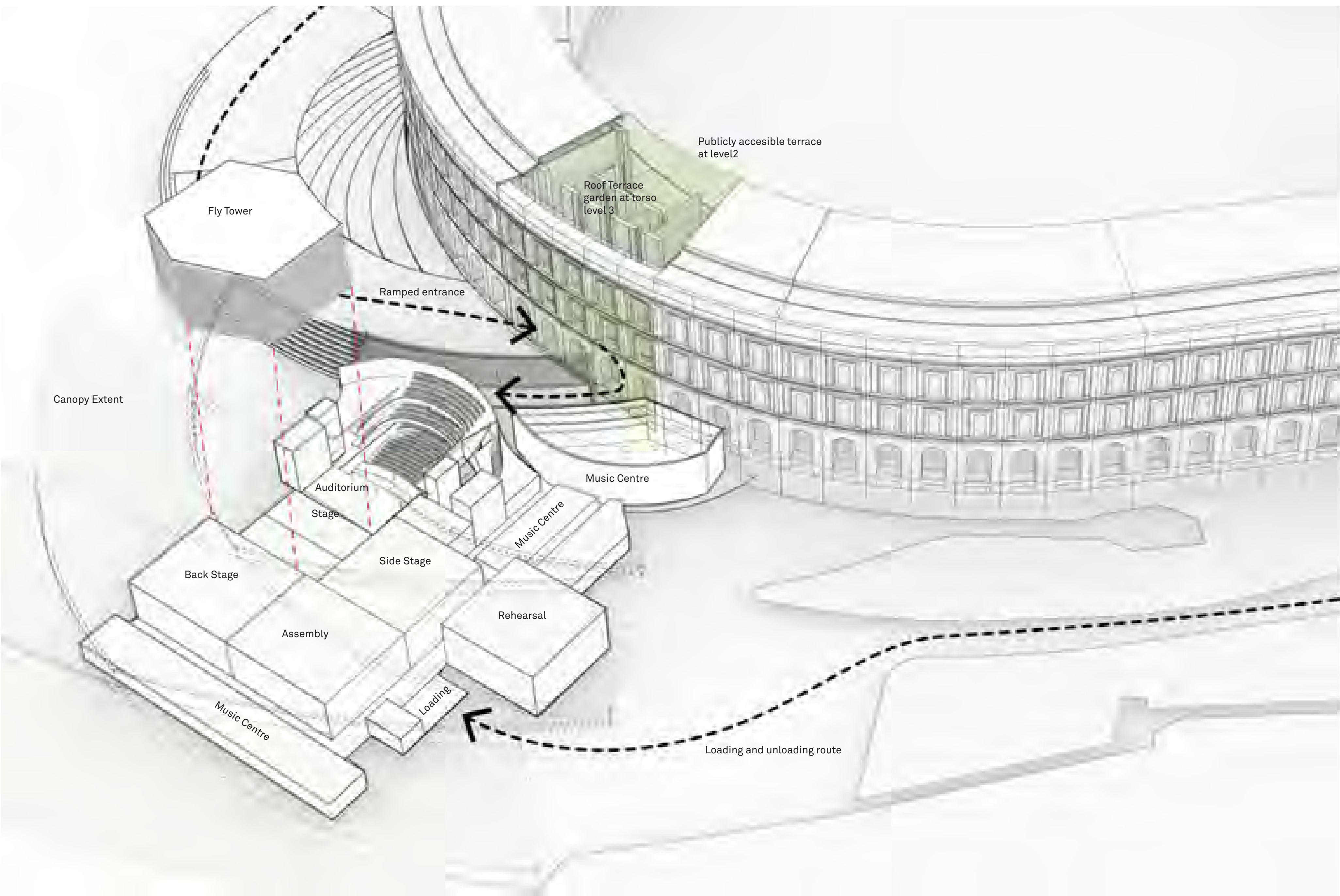
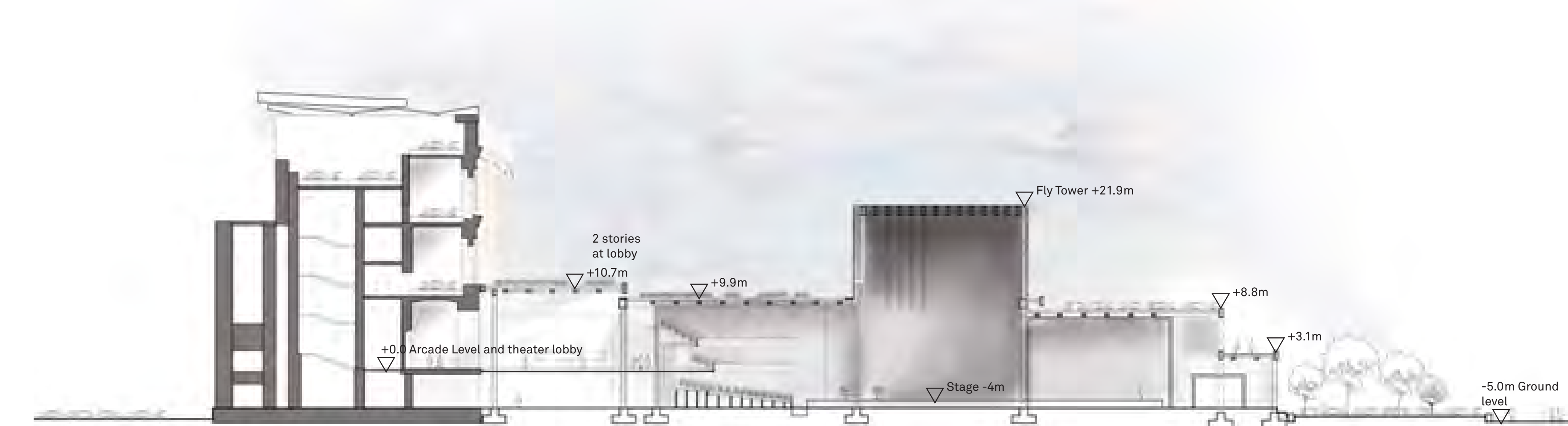
UTCI Nuremberg, No passive strategies applied



UTCI Nuremberg, Passive strategies applied

In relation to the selection of construction materials, highly durable materials that can be exposed to climate elements with low maintenance needs have been prioritized in the design and decision-making process. Moreover, a design-to-disassemble approach has been implemented in the canopies and temporary program so that when the building is disassembled at the end of its life cycle, the materials and construction elements can be reused, reducing the building's global warming potential by means of a cradle to cradle approach to design.

3 THEATER EXPERIENCE



Entrance Route to Opera through plaza



A- Approach to Opera via plaza ramp



B- Approach to Opera via plaza ramp



C- Covered Pergola



D Arcade green cut through



E Opera auditorium approach

