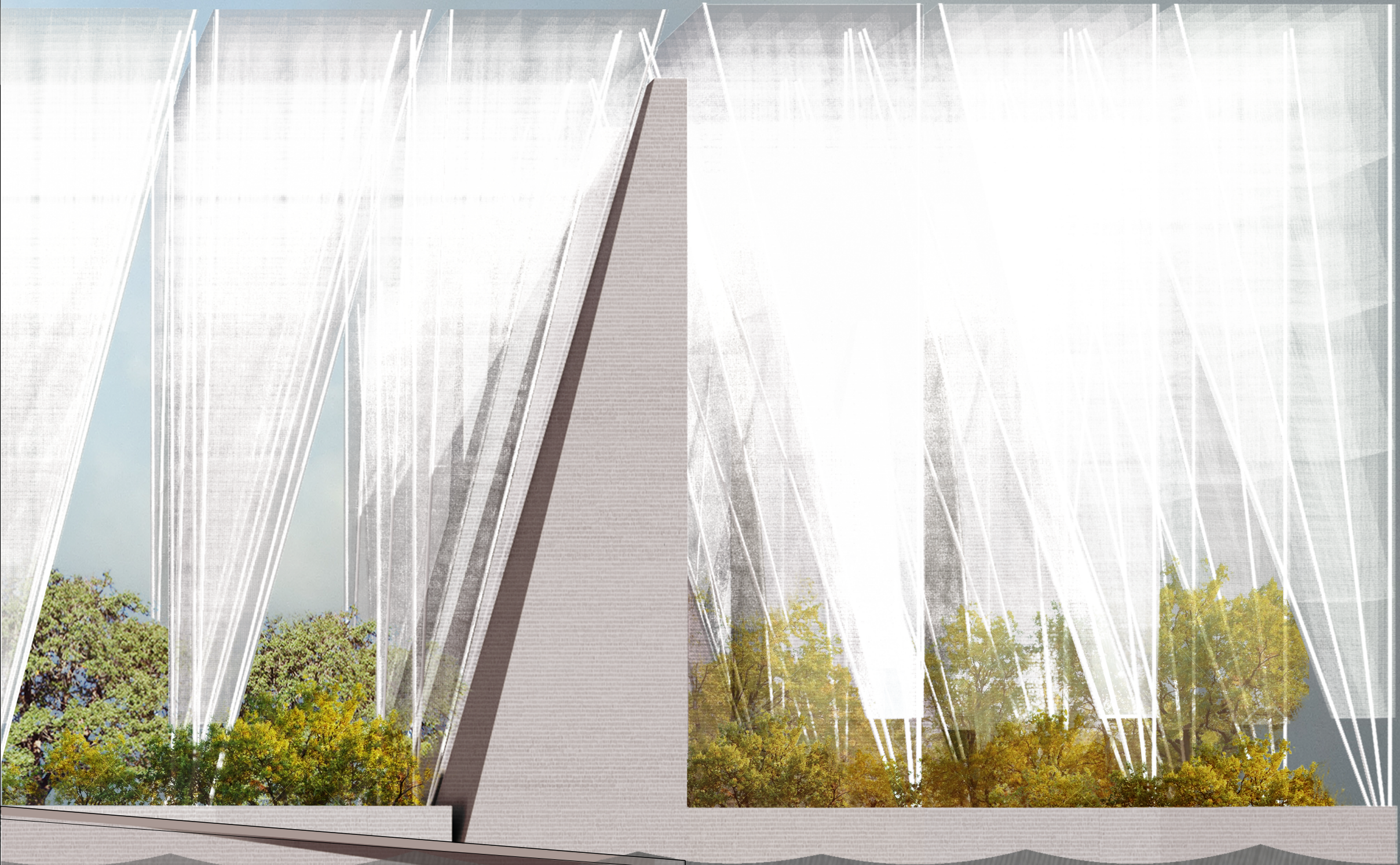
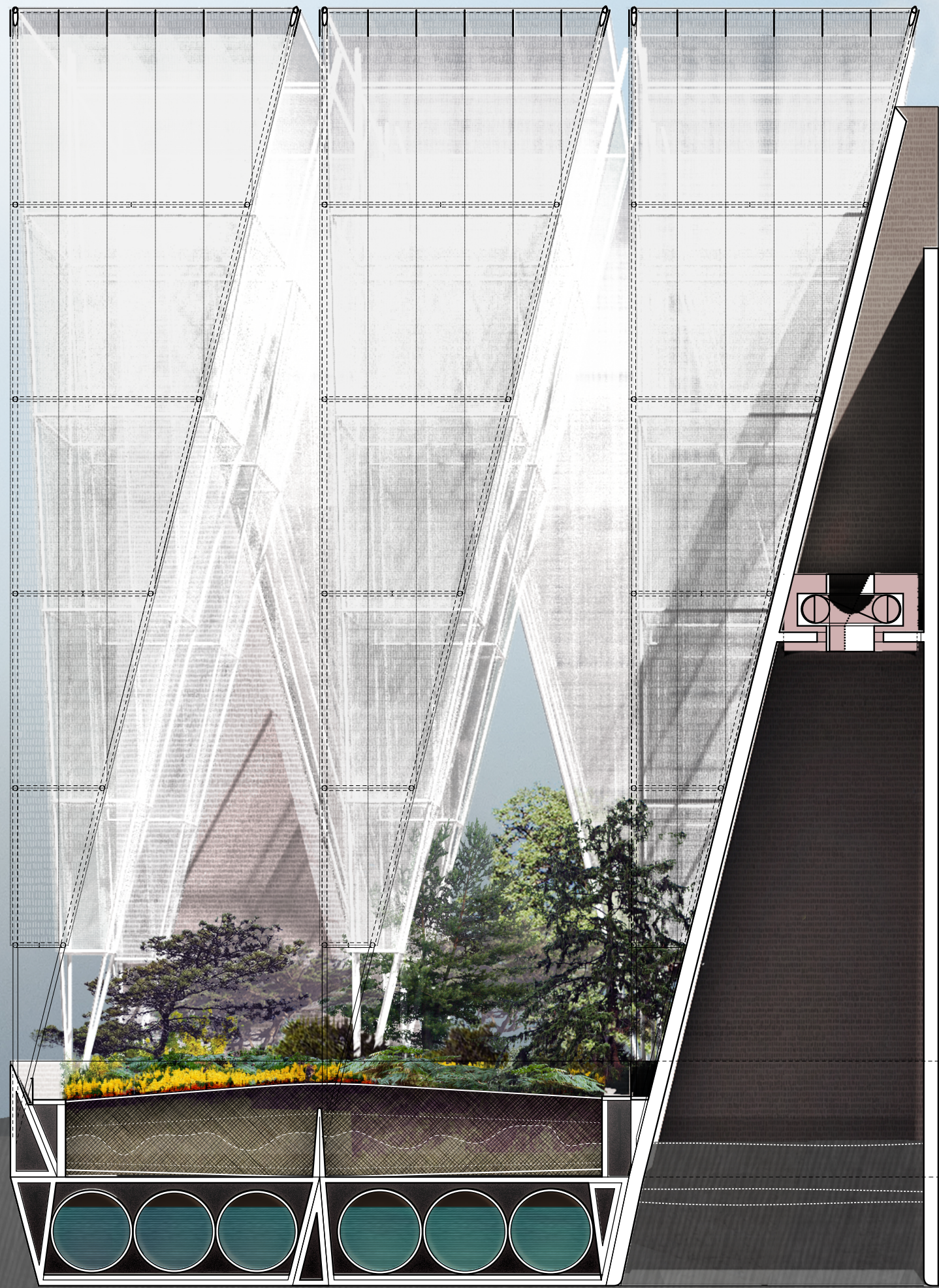
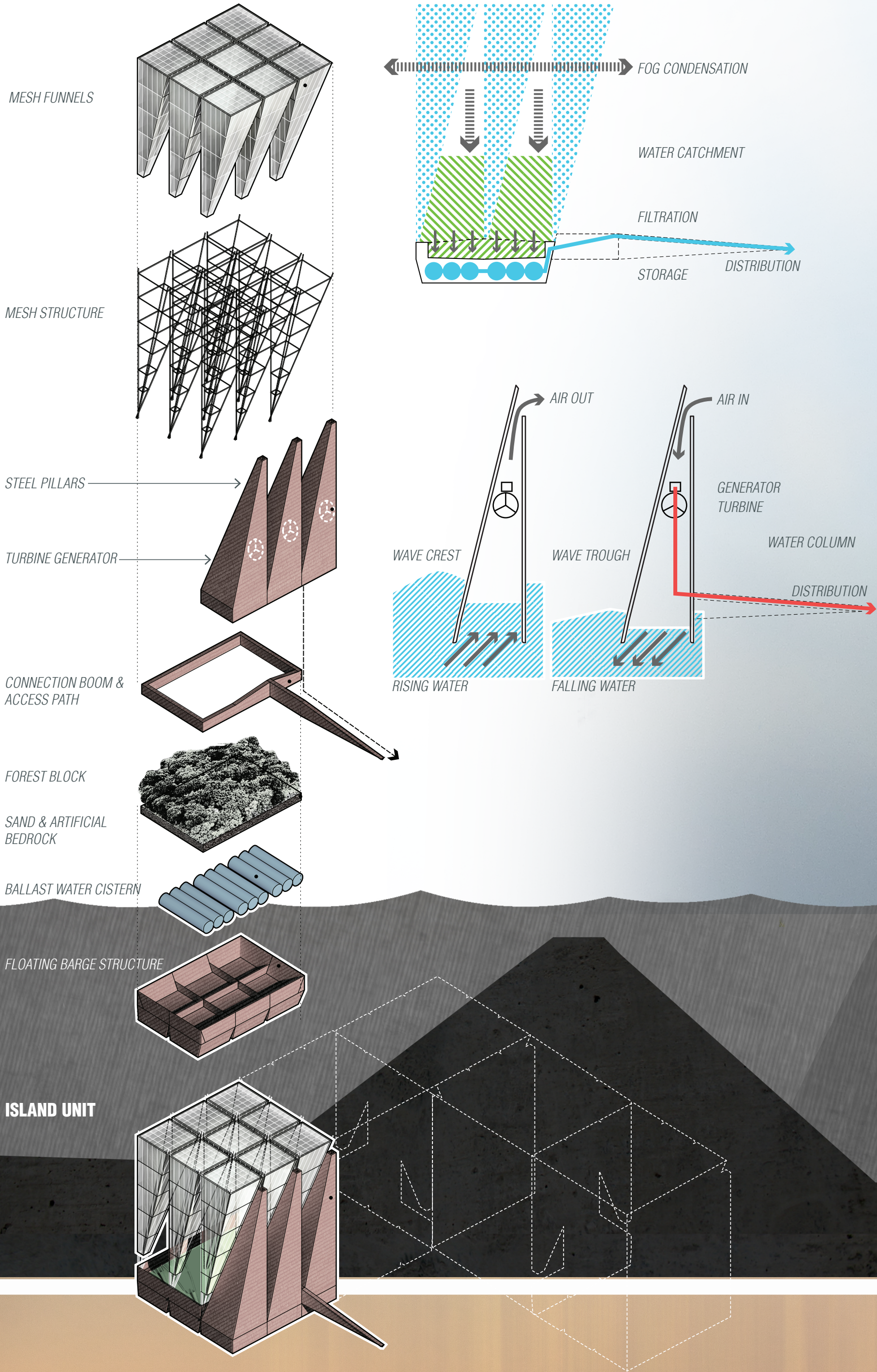


COASTAL RESERVOIR

GATHERING WATER, ENERGY AND BIODIVERSITY



TOWARDS AN ECOLOGY OF ENERGY AND WATER:

Fog is an important dimension in coastal California's native ecosystems. Coastal Reservoir is not intended to provide a native habitat, but it is expected to provide optimal habitat. The vegetation and animals thriving within this machine begins from the concept of the Third Landscape, a genetic reservoir, but evolves into a New Nature, an environmental sublime.

POWER CAPACITY: 2 MW

Oscillating Water Column (OWC) energy generation technology was first developed in the 1940's, and today are one of the simplest methods for extracting power from wave energy. The technology consists of two parts: a collector chamber and a self-rectifying fan turbine. The system has no moving parts in the water so has little impact on underwater wildlife. Based on similar technologies in similar conditions, we have calculated, a power output of 44kW per chamber, 132kW per unit, or 2 MW across the full assembly. Some of the generated energy will be stored in on-board fuel cells. Each island is also equipped with an articulated boom to and attachment mechanism to deliver electricity (and water) directly into the grid.

WATER COLLECTION: 4 MILLION GALLONS

Coastal Reservoir piggybacks water collection onto the OWC column and ballast structure. Fog harvesting is an established practice in off-grid areas and offers great potential in the foggy coastal climate of Santa Monica. Each of island unit contains 9 collection funnels constructed of corrosion-resistant 1/2" industrial wire mesh on a steel-tube frame. Fog harvesting yields vary greatly, but conservative estimates in similar climates suggest 10L/day/m2, or a raw potential of 13,000L per island per day. The full assembly can calculate a 123,000 L' across the cluster during a foggy day, or 12.3 mega-litres (3.25 million gallons) per year. Rain is also collected, filtered and stored and each island would collect 180m3 of water, or 2.7 mega-litres (710,000 gallons) in a year. The water storage capacity for Coastal Reservoir is over 8 million gallons.

