Section as Cosmogram

From the Heavens to the Earth

Section as Cosmogram: From the Heavens to the Earth
Curated by David Salomon,
Chair and Associate Professor,
AAHA, Ithaca College
August 28 - October 1,
Opening Reception 9/4, 5 - 6:30pm
Gallery Talk: 9/18, 6:00 p.m.
Andean Ecologies, Cosmologies, and Fictions
José Ibarra, Pennsylvania State University
Gallery Talk: 9/25, 5:30 p.m.
*Transect: 31'52'11" N, 111'07'29" **W** to 37'04'42" N, 116'01'49" W*
RTVR Geoffrey Thun & Kathy Velikov, University Michigan
Handwerker Gallery
Ithaca College
9530 Danby Rd
Ithaca NY 14850
Director: Paul M Nicholson
Preparator: Leanna Yatcilla
Gallery Assistants: Caitlyn Argo, Ivana Cvetanoska,
Clare, Jordan, Lee Kreshtool, Meghan Macsuga,
Flora Pierson , Angie Riel, Chloe Wiederhorn
Images c/o the artists and Handwerker Gallery

ITHACA COLLEGE

List of Contributors

- Ants of the Prairie (Joyce Hwang)
- Bureau Spectacular (Jimenz Lai)
- Seth Denizen
- Harrison Atelier (Ariane Harrison and Seth Harrison)
- Ibañez Kim (Mariana Ibañez and Simon Kim)
- José Ibarra
- Ferda Kolatan
- Mélanie Louterbach
- Lucito (Andrew Lucia and Iroha Ito)
- Mathur/Da Cunha (Anuradha Mathur and Dilip da Cunha)
- NaJa & deOstos (Nannette Jackowski and Ricardo de Ostos)
- Ciro Najle
- NEMESTUDIO (Neyran Turan)
- op.AL (Jennifer Birkeland + Jonathan A. Scelsa)
- EMLab/PEG project team – Karen M'Closkey, Keith VanDerSys, Andreina Sojo
- pneumastudio (Cathryn Dwyer & Chris Perry)
- RVTR (Geoffrey Thün and Kathy Velikov with Vanessa Lekaj)
- SCAPE (Kate Orff with Richard Misrach)
- SITE/James Wines
- Smout Allen
  (Mark Smout and Laura Allen with Geoff Manaugh)
- Society of Cartographic Objects:
  (Alexandra Arènes, Soheil Hajmirbaba, and Axelle Grégoire)
- Penny Unni
- Ann Weber Weber (Cornell Landscape Architecture)
- Z4A (Rafael Beneytez-Duran and Ophelia Mantz)

Section as Cosmogram

From the Heavens to the Earth

David Salomon

This exhibition assembles section drawings by contemporary architects and landscape architects depicting the real and imaginary relationships between the heavens and the earth. These two categories are broadly conceived to encompass phenomenon that include: the universe and the underworld, the environment and the economy, the atmosphere and the soil, the microscopic and the mythological, the ephemeral and the eternal, the scientific and the spiritual. In other words, it assembles sections that perform as cosmograms.

A section drawing represents a vertical slice through matter - either physical or ideological – that reveals the otherwise unseen spaces, strata, and structures that all things are made from. These things can be buildings, but they can also be planets, plants, philosophies, cells, cars, and cosmologies. No matter what they cut through, they depict a series of horizontal layers arranged one on top of another. While in architecture they are most often used as technical instruments, sections have a long history of harboring theatrical and allegorical content. The drawings in this show include examples of both, often in the same image.

A cosmogram is an image or object that represents the underlying organization of the universe according to a culturally and historically specific worldview. While they are most often associated with religion and the divine,

they have long taken natural, scientific, and architectural forms. In short, they attempt to imagine what remains unseen and unknown. There are many types of cosmograms. From mandalas to mountains, from cathedrals to caves, from astrolabes to axis mundi, from trees to telescopes, from paintings to planetariums, they always bind the past to the present and link the tangible with the intangible. Far from being independent from religious and spiritual influences they are sublimated within these materialist examples.

In combining section drawings with cosmograms, the work by these designers engages questions that societies have consistently asked, including: What are the forces that govern the relationship between heavenly bodies and the earth? What is the origin and extent of the universe? How have, how could, and how should humans orient themselves within these vast realms? How are natural and human histories intertwined and implicated with one another? These are very old questions, ones with both sacred and secular answers.

Connections between the cosmos and contemporary culture often focus on climatic concerns. Combining sections direct engagement with the earth and atmosphere, and cosmograms allusions to the realms beyond appearances has the advantage of engaging current problems from both a physical and mystical perspective. It recognizes that the unintended side effects of an ethos emphasizing reason, progress, and technology (side effects such as pollution, poverty, and political violence) cannot be undone with just more of the same. The disciplined yet wild drawings on display remind us that in addition to inventing new machines and codes, we need new myths and cosmologies to envision and erect new worlds. They show us that in addition to scientific and social facts, we require new visions and allegories to make our ecological and political futures legible and desirable to our senses and our psyches.

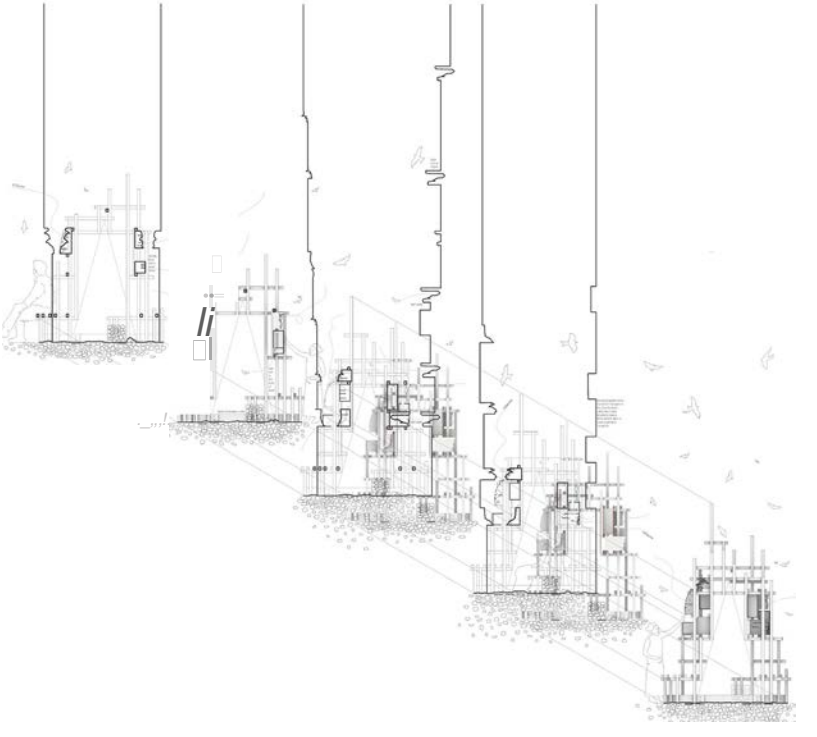
Sections as cosmograms are an ideal medium to engage these issues. As seen here they simultaneously present cultural and natural histories. They are at once technical and theatrical, literal and magical. The variety of forms they come in, including the conventional two-dimensional versions, hybrid types such as chunk models, collages, section-perspectives, section-animations and section-axons allow them to incorporate a myriad of real, imaginary, and symbolic phenomenon in a singular image. Across the exhibition, and often individually, they mix the factual and the fantastic in ways that stretch the traditional section to its limits in order to tell new stories about the Heavens and Earth.

The drawings assembled in this show are grouped according to strata that extend vertically out from the center of the earth through its geological, hydrological, biological, atmospheric and astrological zones. While each area and each drawing emphasize one of these layers, the others are always directly or indirectly present. Their inclusive if not excessive nature speaks both to the cosmogram's desire to capture the entire universe in a single image, and the section's capacity to explain what otherwise remains obscure and invisible. Like a painting by J.W.M. Turner or a diagram by Alexander von Humbolt from the 19th century, the immediacy and everything-all-at-once sensibility of these drawings threatens to overwhelm one's senses. Only after scanning their surfaces multiple times can one decipher and digest their intricate elements and meanings. Like all good cosmograms - scientific, religious, or aesthetic - they seek to capture one's imagination, one's reason, and one's dreams.

David Salomon is Associate Professor and Chair
Art, Art History, Architecture at Ithaca College

Ants of the Prairie (Joyce Hwang)
Shelter of Belonging
2025

Situated on the grounds of Civitella Ranieri, a 15th century Italian castle, the *Shelter of Belonging* is a place of respite that welcomes both human and nonhuman inhabitants. The sections depict the installation, which is a wooden-framed structure that supports a series of habitats for local fauna -- including bats, birds, and solitary bees, as well as smaller terrestrial animals. The habitats reflect moments in the walls of the castle specifically alluding to spaces where wildlife dwell in close proximity to human life. The structures also provide seats for human visitors to rest in a neighborly manner. This drawing uses section cuts through the design model to compose a series of speculative wall profiles. In the way that the installation design was inspired by composing fragments of the castle walls, the drawings here suggest an idea of re-using those same fragments to recompose another series of inhabitable walls.



Bureau Spectacular (Jimenez Lai)
Outcasts From the Underground
2024 (Installation), 2025 (drawing)

Outcasts From the Underground is an outdoor installation at Art Omi, a landscape dotted with many outdoor sculptures.

This project is a stack of industry-standard septic tanks, catch basins, dry wells, basement staircases, frost posts, and other ready-made precast concrete products born to be buried underground. Using the sales catalog from Keeler Precast Concrete, a local company fifteen minutes away, we stacked the objects into an upright monster standing at 30 ft. At Keeler Precast Concrete, most products are built to be buried. Death, waste, seepage, and other matters below ground - the precast parts are the cast of outcast characters we revive back into life.

This structure is an upside-down monster, performing the body posture of contrapposto. Septic tanks are designed to contain fluids, hence the tapered walls. However, when the tanks are rotated at 90 degrees, the tapered walls become diagonal lines that structurally turn the monster where the body language is one of slouch, slump, stoop, hunch, loll, sag, and droop.

The logic of a section is the layering of stencils. Cuts, an absolute and impenetrable plane, is a water-proof layer. The planes behind the cut are in themselves a hierarchy of elevation.

Seth Denizen

The Eighth Approximation: Urban Soil in the Anthropocene

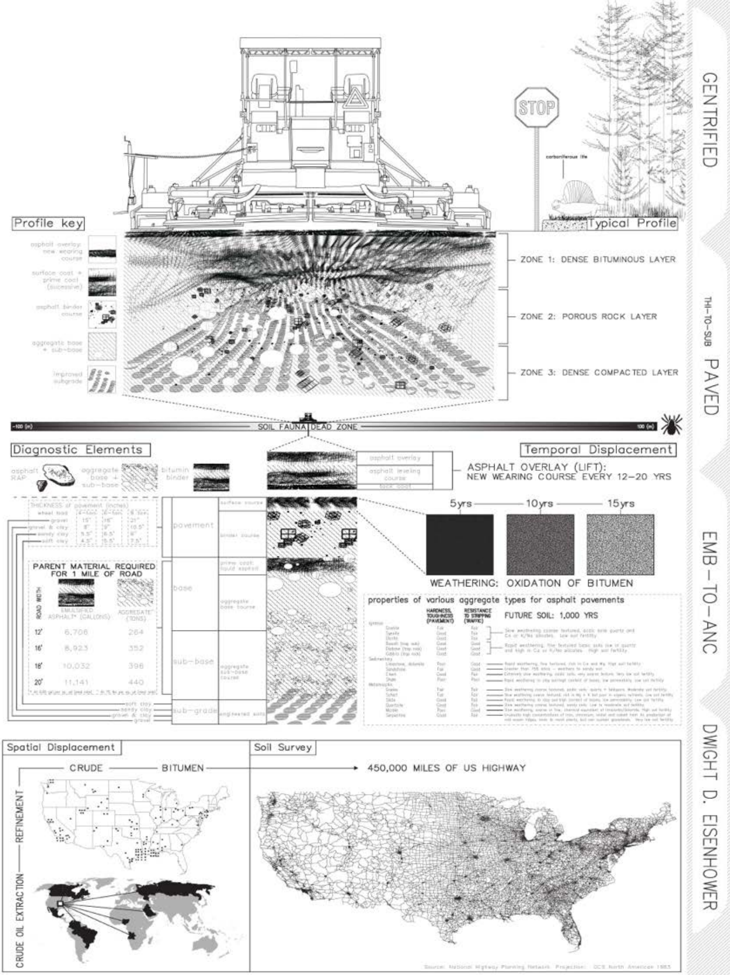
a. Gentrified Thinly-To-Substantially Paved Embryonic-To-Ancient Dwight D. Eisenhower
b. Commodified Substantially Chemically Enhanced Adolescent John D. Rockefeller

2012

In 1960, the United States Department of Agriculture completed the Seventh Approximation, which was a system for mapping and classifying soils that has since been adopted around the world. A limitation of this taxonomic system was that it only classified natural soils. Soils formed as a result of human processes were excluded or generalized as "urban fill," whose chemical and physical properties remained unknown. Today, the majority of people on Earth live on soils that fall into this category. The Eighth Approximation is a speculative soil taxonomy for classifying soils according to the urban processes that shaped their formation. In this project, the unique geosocial history of urban soil is its primary diagnostic feature.

Work completed by Seth Denizen at the University of Virginia Department of Landscape Architecture, MLA Thesis Project 2012

GENTRIFIED THINLY–TO–SUBSTANTIALLY PAVED EMBRYONIC–TO–ANCIENT DWIGHT D. EISENHOWER



Harrison Atelier (Ariane Harrison and Seth Harrison)

BIODIVER[C]ITY

2021

The number of spaces that foster biodiversity are rapidly shrinking under the onslaught of climate change and anthropocentric development. Rural expanses are given over to acres of cloned and pesticided plants, segregating the coherence of preserved spaces; and the relative success of invasive species outcompetes native flora and fauna. Estonia's BioClim report notes shifts in species' distribution areas, citing the negative impact of invasive alien species on biodiversity and the need to "Increase [the] extent of protected areas [for] the maintenance of biodiversity." Can the city provide new types of protected areas, privileging biodiversity on rooftops, greenspaces and vertical gardens?

In this [section], an existing [housing} block is converted into a bioeconomic unit by a comprehensive energy system that generates the necessary heat for biodiversity to thrive. Biofuel production using waste to energy technologies, building heat retention through a façade of hempcrete blocks, and nesting spaces throughout the new scaffold, establish the non-human centric city. This bioeconomic unit also provides biodiversity services in the following ways: 1,934,064 sf of rooftop for 22 native species of plants, 13 local species of birds and insects with the addition of urban green patches around the block (5,375,304 sf).

The circular economy of recaptured waste, water and heat streams from each housing block extends to non-humans by creating zones of managed biodiversity.

Project Team: (Ariane Harrison and Seth Harrison with Yuxiang Chen, Carlos Balza Gerardino, Wei Lin)


BIODIVER[C]ITY

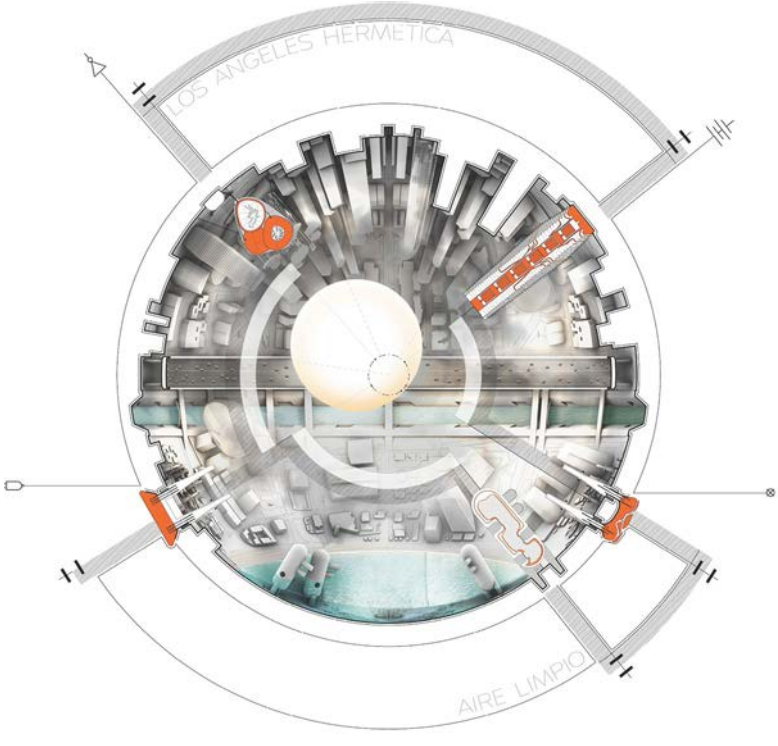
Ibañez Kim (Mariana Ibañez and Simon Kim)
Los Angeles Hermetica: Aire Limpio
2025

The persistence of worlds within worlds is a fascinating one for architects as the idea of interiorities gains ascendance. A uniform global model of modernism qua international style cannot adequately compensate for the diversity of lives ranging among human culture to other nonhuman life. This multiplicity suggests that there are more interior worlds than can be housed within one model. The idea that envelope and space are neatly tethered are now undermined - what is inside may no longer be bound into a single meaningful shell.

Reconceived as a hollow earth diagram, this section shows Los Angeles as a bubble of ecology, among others. When this air and water becomes the central figure, the idea of a boundless horizon or expansive coasts and stratospheres is discontinued. The city - from Downtown to Venice - lives in polluted air and water separate from a larger planet.

Given this closed world, an infrastructural network that cleans / dissipates / and filters this system is introduced. Called *Los Angeles Hermetica: Aire Limpio*, new technologies of bioremediating organisms as well as mechanisms work to offset and sustain life in this city. Downtown has smog-eating or photocatalytic towers, the defunct river is host to new ecologies, cloudseeding microparticles bring rain, and the coast is lined with protozoa, rotifers, and algae stations that cleans the water.

While hollow earths may be fictional, there are dimensions of worlds upon worlds, interiorities, and pequeños mundi that may benefit architecture and urbanism.

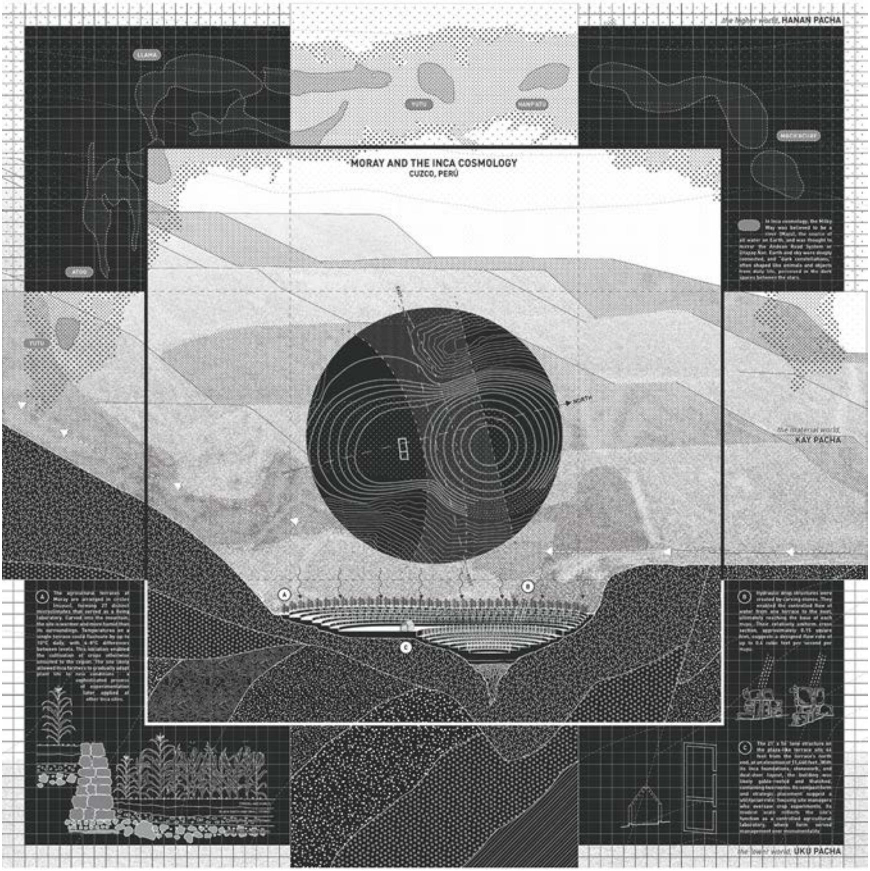

LOS ANGELES HERMETICA
AIRE LIMPIO

José Ibarra

Moray and the Inca Cosmology

2025

Carved into the Andean plateau at 11,500 feet, the concentric terraces of Moray in Cuzco, Perú function simultaneously as ecological instrument and cosmological diagram. The site was engineered to produce 27 discrete microclimates, with daily temperature differentials of up to 10°C. This enabled the Incas to adapt crops across altitudinal and regional thresholds, a sophisticated process of experimentation later replicated across the empire. Hydraulic drop structures regulated water flow between terraces, embedding agronomic practice within a responsive environmental system. Yet Moray also reflects a cosmological order. The Mayu, or Milky Way, was understood to mirror the Qhapaq Ñan, the Inca road system that linked sky and earth. Dark constellations, perceived not in stars but in the voids between them, oriented agricultural cycles and ritual. In this context, section emerges as a medium of relational knowledge, rendering climate, terrain, and myth as interwoven strata. The stepped, axial, and layered geometries within the drawing invite readings that traverse measurement and meaning, experimentation and belief. Moray's terraces cut into the earth while enacting a reciprocal worldview in which cultivation is a form of alignment across matter, cosmos, and time.



MORAY AND THE INCA COSMOLOGY
CUZCO, PERÚ
the higher world, HANAN PACHA
the material world, KAY PACHA
the lower world, UKU PACHA
LLAMA
ATOQ
YUTU
NORTH
In Inca cosmology, the Milky Way was believed to be a river (Mayu), the source of all water on Earth, and was thought to mirror the Andean Road System or Qhapaq Ñan. Earth and sky were deeply connected, and "dark constellations," often shaped like animals and objects from daily life, perceived in the dark spaces between the stars.
A
B
C

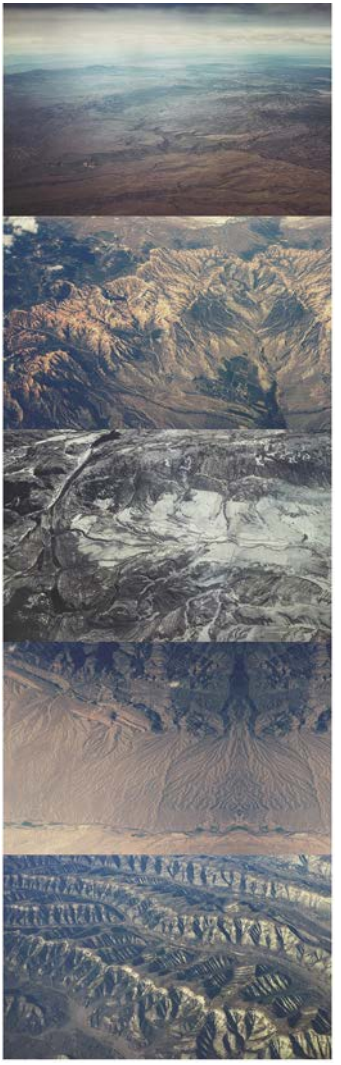
Ferda Kolatan

Ghost in the Garden

2025

Ghost in the Garden is a speculative contemplation on the rapid technological transformation of the American Southwest into a vast energy source serving urban centers. Once mythologized as the "Western Frontier" in literature, paintings, and photographs—and later instrumentalized for the first atomic tests—these arid territories are now increasingly occupied by solar fields, wind farms, data centers, and transmission lines, whose presence often registers only from above, like alien traces inscribed onto the terrain.

This project employs photographic media to visualize this technologized nature – and its historical entanglements as a contemporary iteration of the sublime. Rather than portraying technology as a legible and overt condition, the photographs evoke an estranging affect through subtle image manipulations embedded within the landscapes themselves.



Mélanie Louterbach

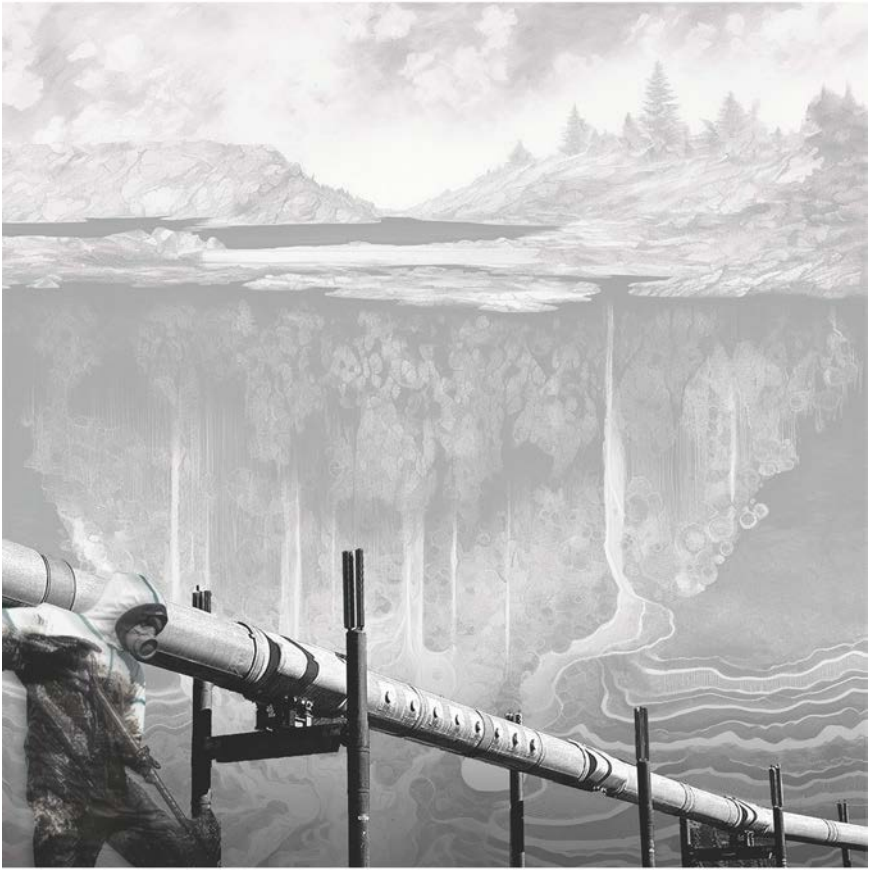
Insurgent Geology in the Arctic: The Trans-Alaska Pipeline

2024

Set in Alaska in 2051, *Insurgent Geology* is a post-oil speculative fiction about hydrocarbons, fossils, power and people. The story blows up pipelines and takes care of the soil and, shifting from deep time to a speculative near future, it calls for Arctic insurrection, environmental geopoetics and social justice. The project critiques geology as an extractive and neocolonial discipline and activity through alternative geosocial practices, mineral kinships, and geoaesthetics in a series of design interventions along the infamous Trans-Alaska Pipeline System.

The Trans-Alaska Pipeline, completed in 1977, symbolizes Alaska's descent into a petrostate, binding its economy and political framework to the fluctuating fortunes of the oil industry. This colossal infrastructure initially spanned over eight hundred miles, featuring elevated sections to protect permafrost, intricate pump stations and a network of roads and terminals facilitating crude oil transport from the North Slope to Valdez town. While it has generated immense wealth, this reckless dependence on fossil fuels came at a steep social and environmental cost, resulting in land dispossession, catastrophic oil spills and exacerbating climate change.

This hybrid drawing depicts an imagined geological section beneath the Arctic landscapes of Alaska, revealing the underground strata—including a reservoir filled with hydrocarbon and seeping toward the surface. It creates a visual link between the subterranean geological realm, surface energy infrastructures, fragile arctic ecosystems and human activity.



Lucito (Andrew Lucia and Iroha Ito)

The Alchemist: 47°28’20”N, 92°57’50” W-46°45’11”N, 92°07’49”W

2025

The life of this Giant is limited and knowingly so, with the eventuality of its own exhaustion and death by mid-Century marking an instance of this historical object. This passing is but a mere transformation of its figure comprising an appearance within its recent past.

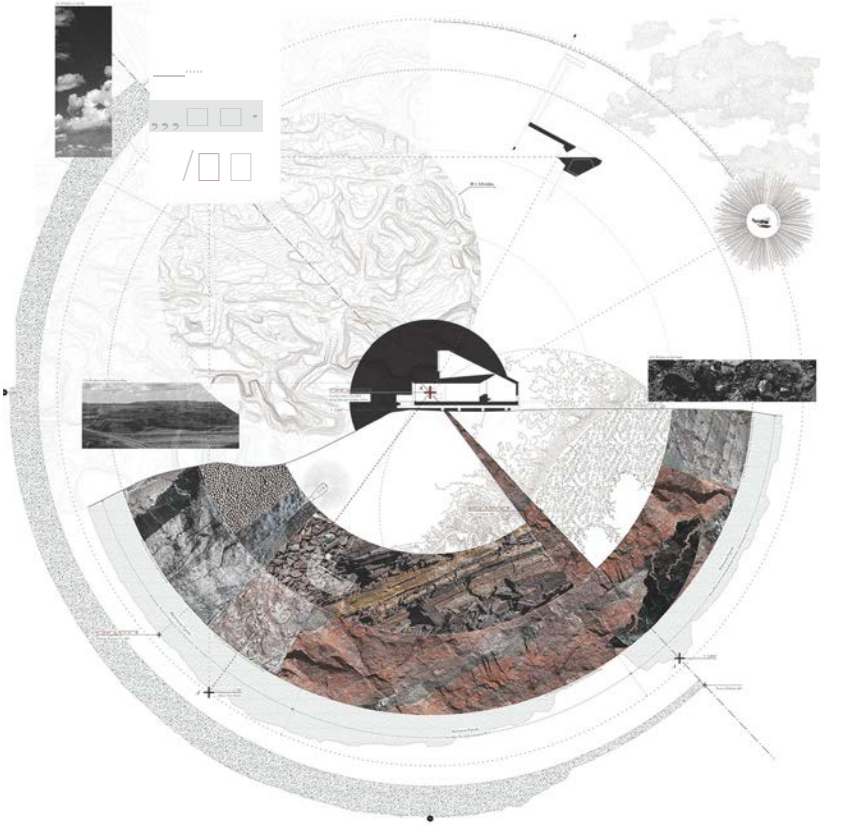
At the active Hull Rust Mine in Northern Minnesota’s Mesabi Iron Range, modern history was prefigured 2 billion years prior as the oxidization of iron in the early oceans[2] and atmosphere[3] formed rich ore[1] deposits.

More recently, the receding belly of the Laurentian Ice Sheet[2] exposed these deposits, scraping the earth[1] while allowing for their discovery and extraction upon the arrival of Western settlers in the late 19th Century. Though now depleted of economically-viable pure ores, extraction continues. A modern-day alchemist pulverizes earth to dust in pursuit of profits; a massive taconite refinery harnesses magnetic energy while vast furnaces[4] transform low-grade ores into profits exported from the Port of Duluth[2] (46°45’11” N, 92°07’49” W).

At the Alchemist’s navel (47°28’20” N, 92°57’50” W) a 3-way totem marks a continental divide and watershed[2], known as the Hill of Three Waters[2] to indigenous people long before Western science confirmed its hydrology[2].

Bisecting these points a belvedere sits atop the Boeing stock-pile[1] (47°26’38” N, 92°55’24” W), so-named after the aeronautics[3] company whose fortunes were tethered to the mineral[1] rights of the land. Here, a building-as-instrument sits, its sectional purpose to focus attention toward the earth[1], skies[2] and beyond[5].

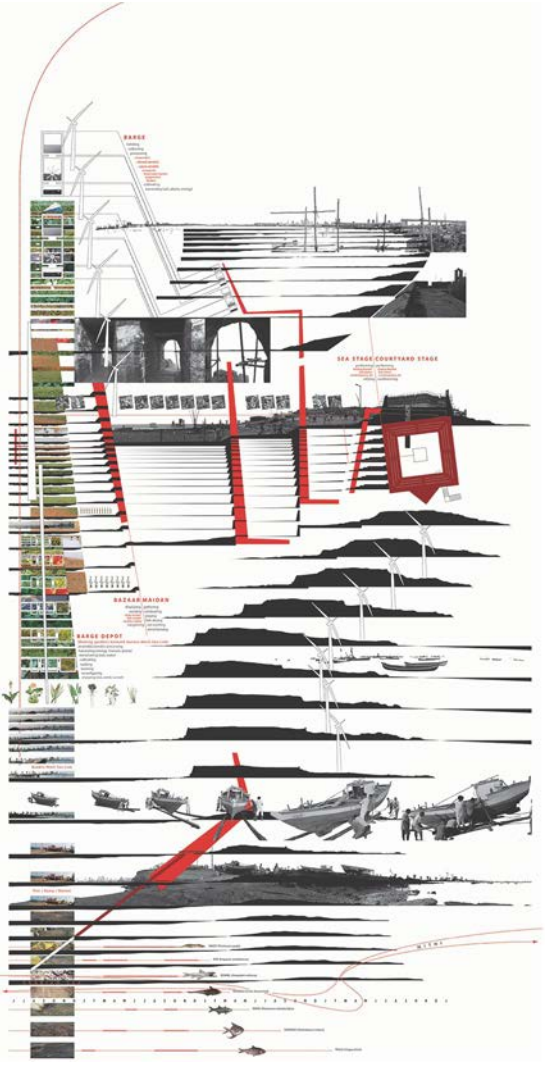
1. Terra 2. Aqua 3. Aer. 4. Ignis 5. Aether



Mathur/Da Cunha (Anuradha Mathur and Dilip da Cunha)
Worli Fort, from Soak: Mumbai in an Estuary:
2009

Soak is a new visualization of Mumbai. It seeks to change the image of Mumbai from an 'island city' once called Bombay to an 'estuary' and further, to an estuary in the monsoon. It does so by changing the terms of discourse and design from spatial land uses to temporal practices, from draining water to holding rain in multiple ways, from separating land and water to negotiating rain and tide. …

The *Worli Fort Project* – shown here as a series of section cuts - appropriates a portion of a ridge that extends north and south as a series of peaks and troughs, defining the western edge of Mumbai. It is the part inscribed by the movements of a fishing community for whom it is and has been for a long time, a spine of daily activity, connecting one of the earliest settlements in Mumbai south of the fort with a boat ramp down to Mahim Bay north of the fort. The project articulates and thickens this spine, constructing new economies and relationships between the people of Worli and visitors to Worli Fort arriving by sea. With its commanding prospect of sea and bay, the fort serves as a staging ground for local theatre and dance performances, such as the *laavni*. A walkway extending westward from it anchors stepped terraces that are appropriated as they are to some extent today, for markets, games and drying fish. The walkway extends to a jetty and a field of bio-treating barges anchored under the Bandra-Worli Sea Link. These barges, which are in the last stage of treatment, configure and reconfigure fields/gardens of performance-oriented plants in the process of their circulation between this anchoring ground and stations at Rewa, Mahim, Vakola, Dharavi and the upper bay-side of the Worli peninsula.

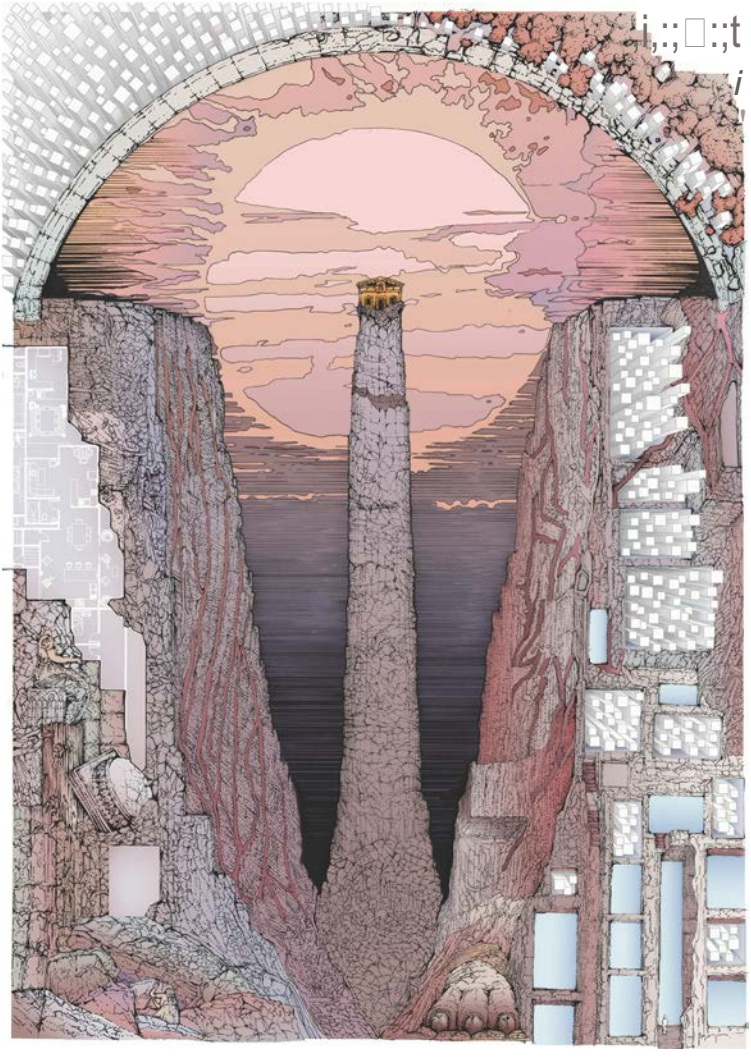

BARGE
SEA STAGE/COURTYARD STAGE
BAZAAR/MAIDEN
BARGE DEPOT

NaJa & deOstos (Nannette Jackowski and Ricardo de Ostos)
Scavengers & Other Creatures in Promised Lands: *Quarry*
2017

The word 'scavenger" is generally used to describe an animal or human that searches for and collects any form of usable discarded waste. Scavengers are frequent characters in the post-apocalyptic genre of fiction, films and television. In Cormac McCarthy's *The Road*, for example, a father and son inhabit a world where infrastructures – road networks, energy supply lines and major cities – are crumbling. Their only way of surviving is to stay on the move and scour the planetary wasteland for supplies. McCarthy presents humanity itself as kind of waste – scattered groups of motorized cannibal hordes and deranged wandering travelers are as dangerous as the desolate environment. On the one hand is the ever-present figure of the scavenger, the lone survivor, in search of food and shelter, and on the other is the grim reality of there being no home to return to, no life to look back on and no memory of a world that offers anything but imminent threats.

…

The consequence of scavenging are not limited to the scavenger. They extend deep into societies and economies, triggering a chain reaction of loss – of traditions, ancestral practices and the sense of belonging to a long generational cycle. In refusing to acknowledge other ways of life, all creative possibilities are lost. We are crippled in our inability to conceive of a different form of living beyond that of the late-capitalist city or global neo-liberal order.



Ciro Najle

The Deep Plan: Sant'Ivo alla Sapienza

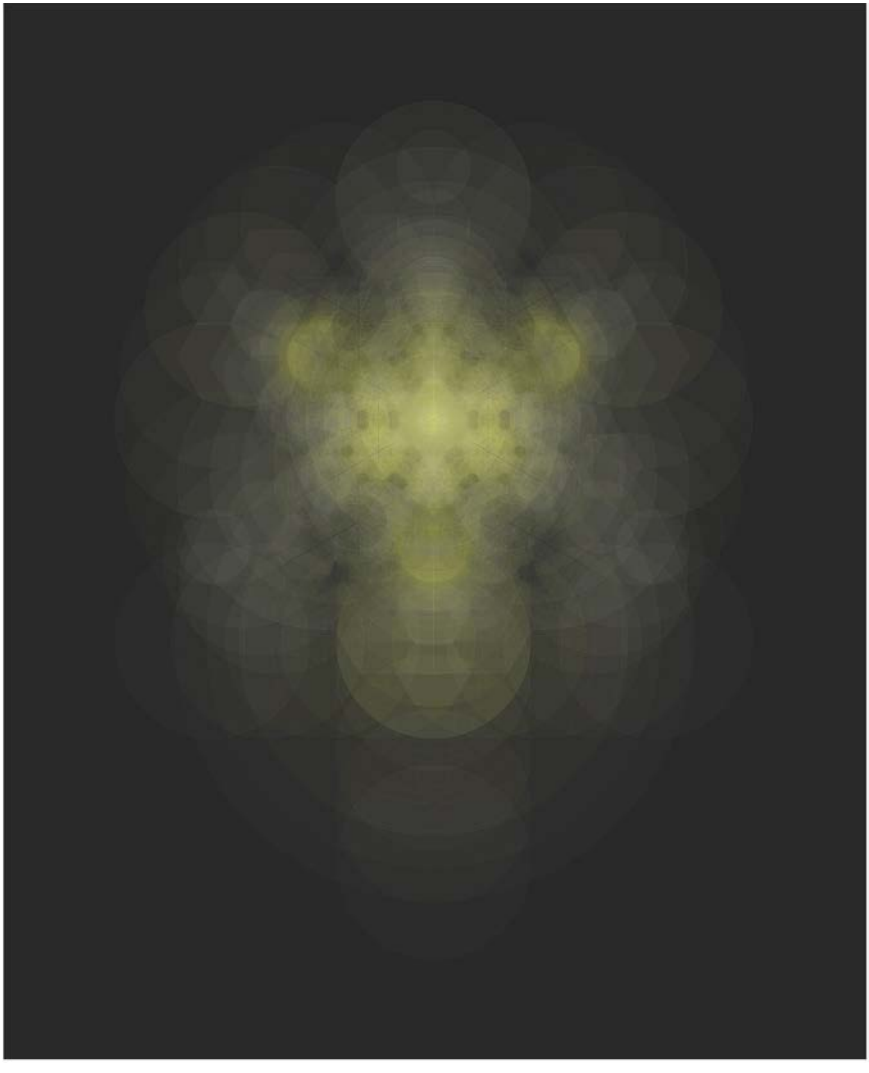
August 2025

The deep plan is the anti-section and the meta-plan. It consists of the sectioning of a building along its vertical vector and the overlay of its plans in a single plane. It bypasses the figuration of the traditional section by absorbing verticality into a plane of virtual coexistence and turns the organizational capabilities of the traditional plan into a plane of consistency that merges its latencies and expands its potential for divergence.

The deep plan is a willfully artificial mystical surface constructed through the flattening of all plans of an architectural organization: an overpowered diagram. Its depth embodies a building by embedding its variations in a single canvas that works as an all-inclusive vessel of spaces and masses. The organizational complexity of a building is magnified by turning the space-mass compound into a flat yet dense object. A hallucinatory atmosphere and a blurry blueprint result of the superposition of spaces and the crisscrossing of the vectors.

The self-similar sequence of linearly dependent centers that cascade down while staying connected in an interdependent network (dome-drum-lantern, courtyard, apses, corner apses, sacristies, and staircases), configures a field of differentiation through the variation of their proliferation, the length, proportion, and rotation of their radii, and the number of vertices of polygons they contain: the complex harmonic order of its *cosmogram* turns into a *uber*-harmonic *caosmogram*.

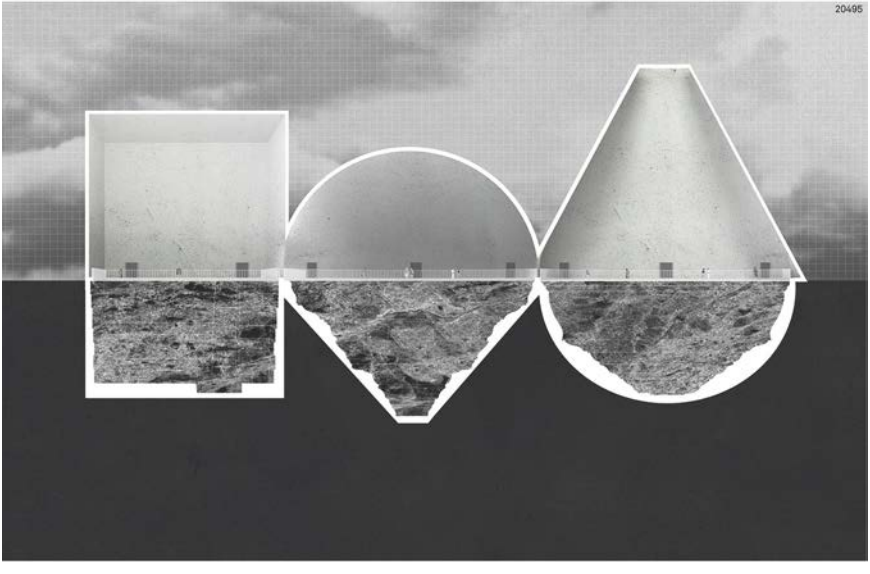
Profoundly materialistic yet secularly mystical, the deep plan merges the transition between underground and heaven in a medium that propagates the organizational power of architecture, in-between and beyond both.



NEMESTUDIO (Neyran Turan)
Museum of Lost Volumes: Rare Earth Cenotaph
2015

Once upon a time in the Zero-carbon Hedonistic Era, the entire world was finally sustainable. Clean-energy technologies were abundant and ubiquitous. Large quantities of energy-efficient light bulbs, wind turbines, electric car batteries and solar panels would come with a price, however. Since all of these clean-energy technologies relied on Rare Earths, a group of seventeen chemical elements and their abundant extraction from the earth's surface, significant worldwide increase in their demand led to the scarcity of these minerals. Nearly all of the Rare Earths were discovered in the 19th century but their use mostly proliferated in the Zero-carbon Hedonistic Era because of their association with green technologies. Not alarmed by the possible tragic outcomes of the further mining of these minerals, the world celebrated their delirious consumption with more car batteries and solar panels until very little of these minerals were available. Soon after the depletion of this precious resource was officially announced, in an attempt to prevent major geopolitical conflicts, the United Council of Rare Earths was established to promote international co-operation regarding this matter.

In its inaugural meeting, the Council members drafted the text of the Declaration by the United Council of Rare Earths, which was signed by all countries. After a long meeting, the unanimous vote was held to ban further Rare Earth mining and to build a museum that would house and preserve remaining Rare Earth mines of the world, and would carry their legacy to future generations. The museum was named as the *Museum of Lost Volumes*.

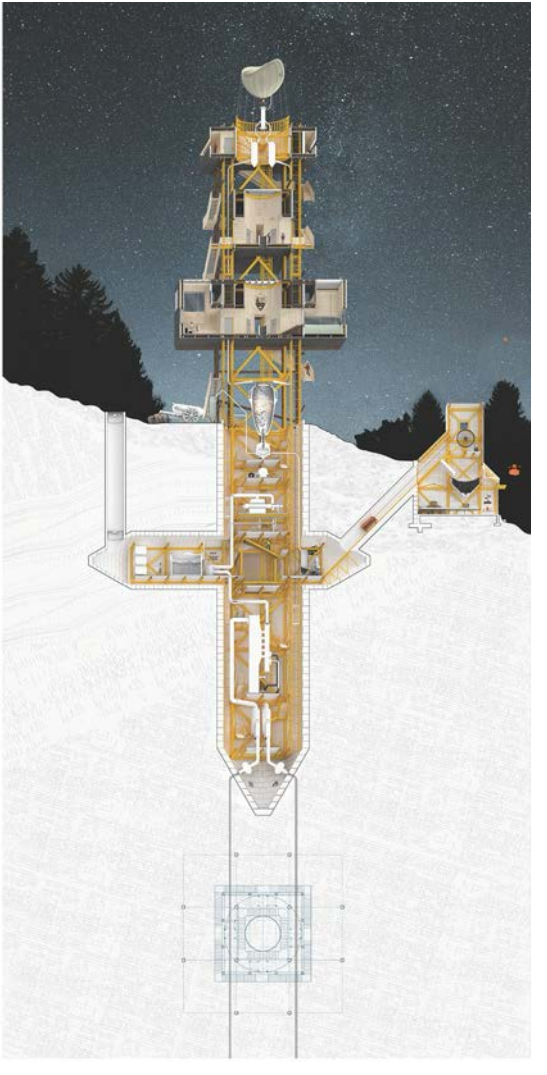

20495

op.AL (Jennifer Birkeland + Jonathan A. Scelsa)

Sogo Bia's Pyre/Energy Redistribution Hub in Yellowstone

2025

Our carbon-based existence touches all of our earthly spheres. Human extraction of energy has transferred our world's carbon into the atmosphere, the geosphere, and the hydrosphere. This anthropogenesis has in turn prompted us to defend unspoiled territories as Eden on earth. The Shoshone, of modern-day Wyoming, had a mutualistic subsistence with that land's iconic megafauna, representing a different circularity with their mother earth. *Sogo Bia's Pyre* informs a new type of conservation for Yellowstone National Park, that reconnects the contemporary traveler with an energy practice between the celestial and the terrestrial. Borrowing from past forest management practices, the station re-deploys the firewatch tower to house a Methane Pyrolysis reactor, lodged in the earth's crust. Powered by the geothermal energy of the super- volcanic mantle below, the reactor processes methane, flown by air from the Bison rutting grounds of Lamar Valley, where their excrement is gathered, scrubbed, and anaerobically digested. The fires cleanly separate that gas into its two elemental compounds of liquid hydrogen carted away for Park energy consumption, and solidified carbon, distributed as bio-char back to the forest ground by drone. Sitting above this modern hypocaust are saunas and baths, where the eco-tourist is immersed in both machines and nature. Crowned with a panoramic ribbon window lookout, *Sogo Bia's Pyre* provides our viewers a new type of watch, one that allows for the bathing in our Edenic landscapes, infernal delights, and the heavens above.



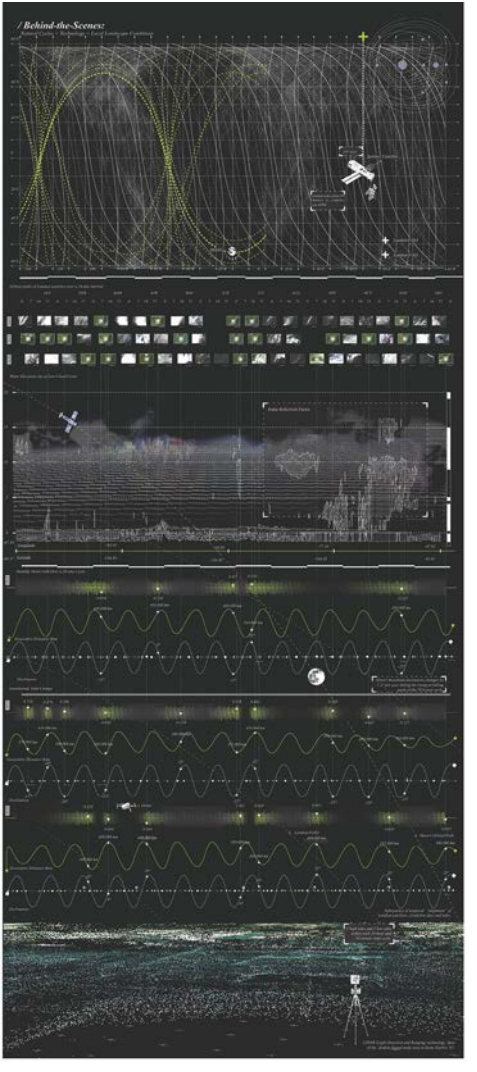
EMLab/PEG
(project team - Karen M'Closkey/Keith VanDerSys/Andreina Sojo)
Behind the Scenes
2025

[Mediation] is not the neutral process of the interaction of separate forms, but an active process in which the form of the mediation alters the things mediated, or by its nature indicates their nature.

– Raymond Williams

The land-water boundary depicted on maps does not exist as a fixed point in space or time; however, it serves as a crucial reference for measuring changes, especially in the context of rapid climate change. Land-water datums are established through a combination of on-site measurements (such as tide levels), statistical analyses of these measurements over time, and interpretations of satellite and aerial imagery. This is a fraught exercise given that everything is in continuous motion. The cycles of tides, influenced by the moon's orbit, do not synchronize with satellite orbits. Clouds obscure the satellite's gaze. Variable gravitational forces, resulting from the relative positions of the Sun, Moon, and Earth, cause tides to fluctuate to levels much higher or lower than recorded averages, which are themselves statistical conventions that obscure the "outliers."

Sited in Jenkins Sound, New Jersey, this drawing depicts the temporal alignments and misalignments between natural processes and the technologies we use to understand them.


/ Behind-the-Scenes:

pneumastudio (Cathryn Dwyer & Chris Perry)
eden.exe
2025

eden.exe explores the idea of a deep cross section drawing as 'cosmogram' by imagining a not-too-distant future in which biology, geology, and technology conspire in the artfully cannibalized repurposing of a posthuman world. Living things here seem foreign, from the iron and phosphorus-rich red soil layer transported by trade winds from Africa's Sahara Desert, to the peculiar vegetation inadvertently seeded by centuries of pirates existing alongside the curiously native pink flamingo *Phoenicopterus ruber*.

The Bahamas are built on a carbonate basement formed during the rifting of Pangea, where basins filled with sediments made of disintegrated coral reefs and shells. The basin was then uplifted in a presently ongoing oblique east- northeast collision between North American and Caribbean plates at a rate of ~20 mm a year. The refiguring of this Bahamian paradise, a youthful 150 million-year-old carbonate landform (a holey platform topped by younger wind-born dune sediments) begins with rainwater and its dissolved atmospheric CO^2 slowly carving underworld realms. *eden.exe* was developed from a 3D scan conducted via drone of a site on the island of Eleuthera.

The drawing combines a digital rendering of the site topology blanketed in the polka-dotted peeling bark of the native *Gumbo limbo* tree, ecologically staged with collage elements from 18th century biology and geology natural history texts. Species include both real specimens (bioluminescent *Pholas dactylus)* and mythical ones (the cave-dwelling *Hydra lernaea*), a gatekeeper to the Underworld whose capacity to infinitely regenerate heads inspired an ancient Greek expression "**Ὄδραν τέμνειν**" used to describe tasks that are hopeless or endlessly futile.

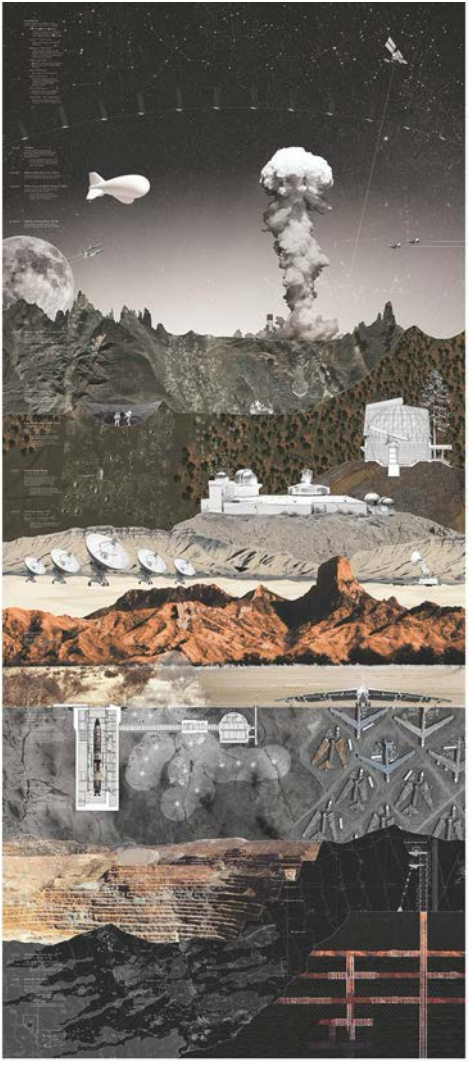

Greetings from
THE FUTURE

RVTR (Geoffrey Thün and Kathy Velikov with Vanessa Lekaj)

Transect: 31°52′11″ N, 111°07′29″ W to 37°04′42″ N, 116°01′49″ W, 31.5″x72″

2025

This work assembles a layered transect through sites distributed across Arizona, New Mexico, and Nevada, spanning the Sonoran, Chihuahuan, and Great Basin deserts of the southwest US. It reveals the occupations of desert lands, underlands, and skies by scientific, techno-industrial, and military agents, by sites of extraction, surveillance, experimentation, and planetary control. From the deep extraction of copper resources necessary to advance the electric systems undergirding this complex, we pass through a series of composite hybrid section/elevations: Intercontinental Ballistic Missile silos, surficial displays of airfortress disassembly, the Very Large Array scanning the heavens for life, the Starfire Optical Range defending against aerial attack, landscapes manipulated via detonation to shape proving grounds for off-world exploration, observatories built to discover new planets and sites for terraforming, and the test sites where atoms were split and from which radioactive ash was distributed across the territory. As the full moon rises, aerial choreographies unfold: mechanical raptors traversing training routes and operations areas, the hovering and tethered Aerostat system scanning for low level movements and crossings, and the now ubiquitous Starlink network controlling digital airspace. Above, the ancient constellations trace mythic rivalries, militaristic symbols, and encoded surveillance.

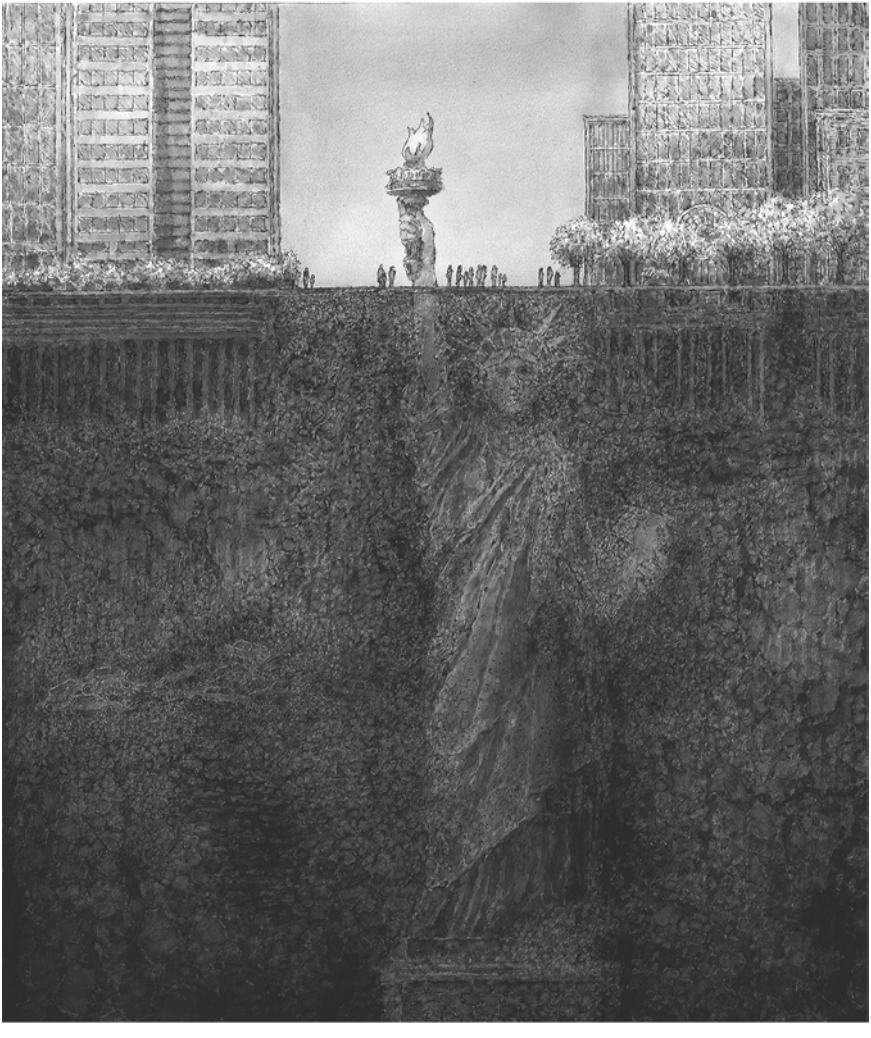


SCAPE (Kate Orff with Richard Misrach)
Petrochemical America: Earth to Sky
2012

Petrochemical America represents a unique collaboration between photographer Richard Misrach and landscape architect Kate Orff. Presented in two parts, the first features Misrach's photographs of the Mississippi River industrial corridor, stretching from Baton Rouge to New Orleans—one of America's most industrialized places, and a region that first garnered public attention as "Cancer Alley" because of the unusual occurrences of cancer in the area. The second part … integrates these photographs into a series of visual narratives created by Kate Orff and her office, SCAPE, and unpacks the complex cultural, physical, and economic issues of the region. A Glossary of Terms and Solutions for a Post–Petrochemical Culture brings together case studies, tools, and practices that offer models for change. Ultimately, this joint enterprise offers an expansion of both disciplines, a richly researched and concretely visualized study of the issues facing the petrochemical industry—and our society, which has become inextricably intertwined with its output.

SITE/James Wines
Liberty Landfill Plaza
2017

This work, entitled *Liberty Landfill Plaza*, shows the graphic section of a hypothetical commercial development proposal for Lower Manhattan. The landfill required to construct this project envelopes the Statue of Liberty; but allows her torch to remain above ground as the centerpiece sculpture of a new public space. The drawing is also a special commentary on the Trump era's impact on American culture and environment.



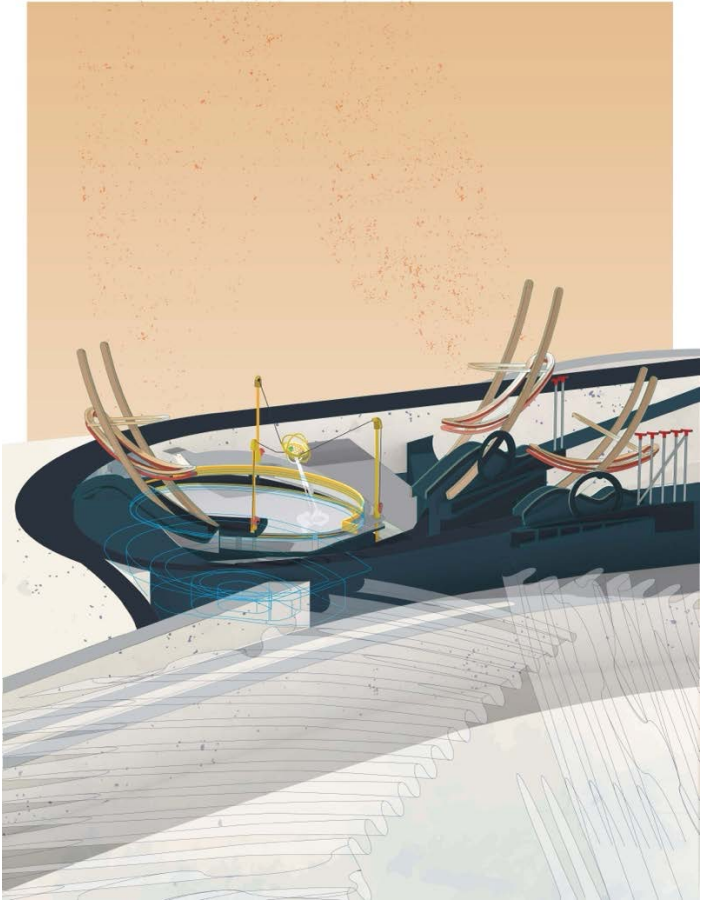
Smout Allen (Mark Smout and Laura Allen with Geoff Manaugh)
LA Recalculated: Astrolabe
2015

Los Angeles is a city where natural history, aerospace research, astronomical observation, and the planetary sciences hold outsized urban influence. From the risk of catastrophic earthquakes to the region's still operational oil fields, from its long history of military aviation to its complex relationship with migratory wildlife, Los Angeles is not just a twenty-first-century megacity.

L.A. Recalculated is a distributed cartographic drawing—part map, part plan, part deep section—that takes conceptual inspiration from the book *OneFiveFour* by Lebbeus Woods. … Twenty-first-century Los Angeles has inadvertently fulfilled Woods's speculative vision. It is less a city, in some ways, than it is a matrix of seismic equipment and geological survey tools used for locating, mapping, and mitigating the effects of tectonic faults. This permanent flux and lack of anchorage makes Los Angeles bathymetric, we suggest, rather than terrestrial, oceanic rather than grounded.

Seen through the lens of this expanded context, Los Angeles becomes an archipelago of scientific instruments often realized at the scale of urban infrastructure: densely inhabited, with one eye on the stars, sliding out of alignment with itself, and jostled from below with seismic tides.

Through sites such as Griffith Observatory and the telescopes of Mt. Wilson, the history of Los Angeles is intimately connected to the rise of modern astronomy. The city's widely maligned landscape of freeways and parking lots has been narratively reinvigorated through the installation of gates, frames, and other architectural horizon lines, aligning the city with solstices, stars, and future constellations.

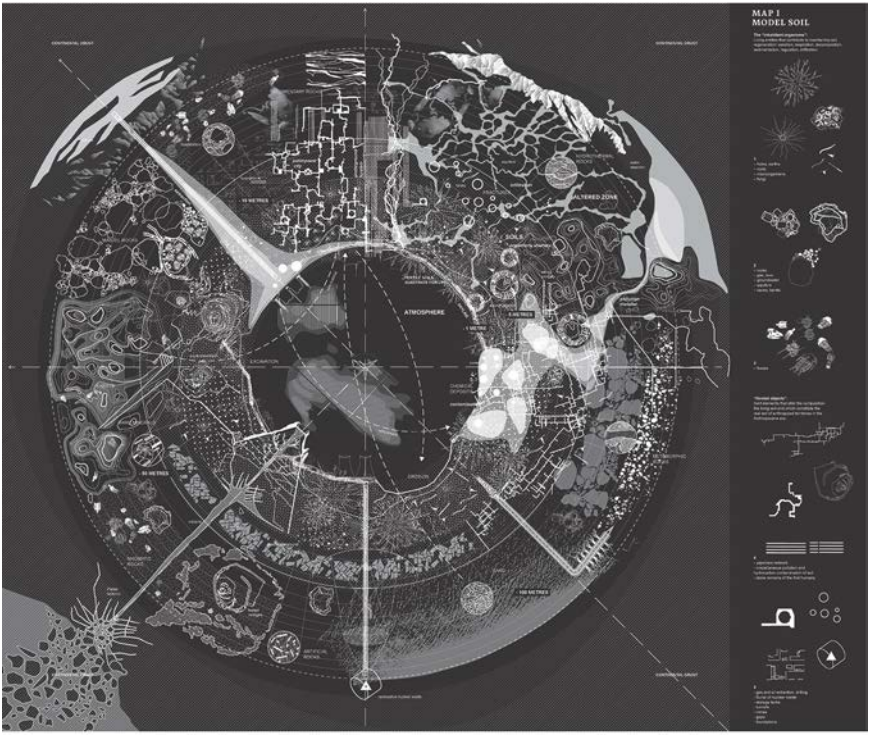


Society of Cartographic Objects
(Alexandra Arènes, Soheil Hajmirbaba, and Axelle Grégoire)
Terra Forma: Model Soil
2019

The Soil Map … aims to understand the thickness of the Earth, the strata, and the Earth's layers; it is a representation of the subsurface of the Earth rather than its surface. Through a thought experiment, the map visualizes a reversed globe: what was external, the atmosphere, is now at the center, suddenly confined in a closed, reduced, and narrow space; and what was the deepest strata is now arranged in concentric circles that move outwards toward the edges of the map. In this way, the entire map focuses on the Critical Zone, i.e., the thin layer around the Earth where water, soil, subsoil, and the living world interact, and where human and nonhuman life and the resources that sustain it are concentrated.

…

Turned inside out like a glove, the ground suddenly reveals an alternative cosmology: a subarchitecture with "inhabiting organisms." The soil that was thought to be homogeneous and solid is, seen from below, moving, porous, liquid, composed of particles and agents that constantly have an imprint and modify its structure and shape. The skin of the Earth and the multiple agents that produce it are visible through this lens, indicating the almost equal contribution of human and nonhuman actors. Indeed, biogeochemistry teaches us that the boundary between animate and inanimate matter is a naturalistic classification. This is why we suggest exploring the Earth as earth—soil, humus—rather than as globe.


MAP I
MODEL SOIL
ATMOSPHERE
ALTERED ZONE
SOIL
EXCAVATION
50 METRES
100 METRES
CONTINENTAL CRUST

Penny Unni

After the Floods

1. Dam as Temple
2. Dam as Bulwark
3. Dam Underwater

2022

After the Floods contemplates hydroelectric dams in southern India as culturally relevant architectural objects at the confluence of technological achievement and the enchantment of myth. What powers these gigantic infrastructures are not only chimeric notions of technological progress but mythic storylines embedded in local culture that are used as tools to legitimize their construction, despite their role in causing recent intense flooding.

This region is known as 'Gods Own Country,' perpetuating an Indic notion that landscape is the medium to manifest divinity. Builders construct dams alongside priests to evoke temple architecture and utilize the symbols and stories of Indic myths to write and reinterpret the history of its sacred landscapes, in which dams emerge paradoxically as places of divinity.

These sections speculatively capture moments of the story of our global future through a single object, from now until extreme flooding occurs, from deep below the river's surface to the firmament. Myths and their characters belonging to sacred landscapes are remade around the dam, as architectural and programmatic aspects of its construction encounter the divine, earthly symbols of divinity, human and nonhuman actors, and other natural resources.


ദേവീ ശ്രീകോവിൽ

Anne Weber & Students, Cornell Department of Landscape Architecture

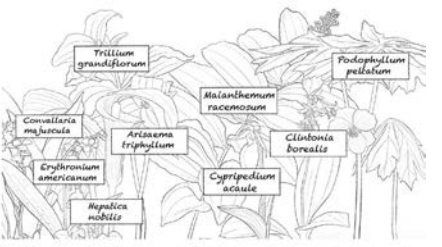
Notes from the Underground: Deep Drawings of the Wallkill River Valley

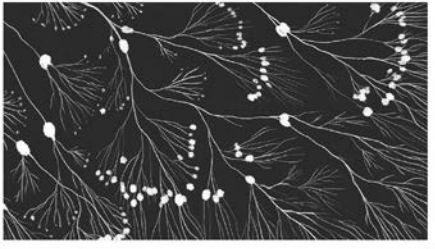
2023

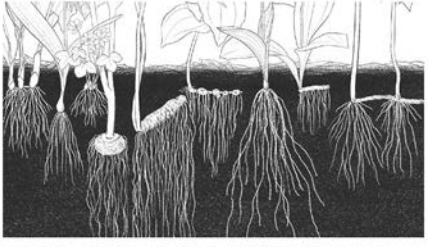
Notes from the Underground: Deep Drawings of the Wallkill River Valley compiles student work from an advanced graduate landscape architecture studio at Cornell University from the Fall 2023 semester. The animations result from the first project, in which students researched typical ground conditions across the Wallkill River Valley in southeastern NY, from the compacted urban soils of downtown Goshen, the buried stream of Middletown, the suburban developments in the uplands, to the drained, agricultural muck soils of the Black Dirt Region. After drawing a specific 'ground' at a 1:1 scale, students used animation to speculate on the processes, inputs, outputs and exchanges between surface and subsurface, from the emissions of carbon dioxide, the leaching of nutrients, the impacts of mowing and pesticides, the accrual of leaf litter and decomposition, to mycorrhizal exchanges within the subsurface jungle of the rootzone. Rather than depicting ground as a static object, their work explores how to represent ground as an assemblage, a living, changing entity, using animated sections to explore the agents and temporal processes that create and alter ground, as well as how it co-creates and is co-created by what lies above.

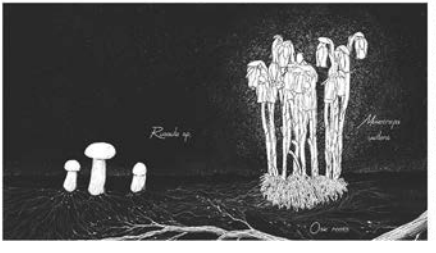
Student Work:

Stephanie Belbeck, Kate Chesebrough, Tiffany Fong, Yuqing Guo, Yandong Hua, Huanran Li, Xinyun Li, Sulaiman Meriles Demry, Changyuan Wan, Yike Xu, Xizi Yu, and Ziyuan Zhang


Trillium grandiflorum
Podophyllum peltatum
Maianthemum racemosum
Convallaria majuscula
Arisaema triphyllum
Clintonia borealis
Erythronium americanum
Cypripedium acaule
Hepatica nobilis

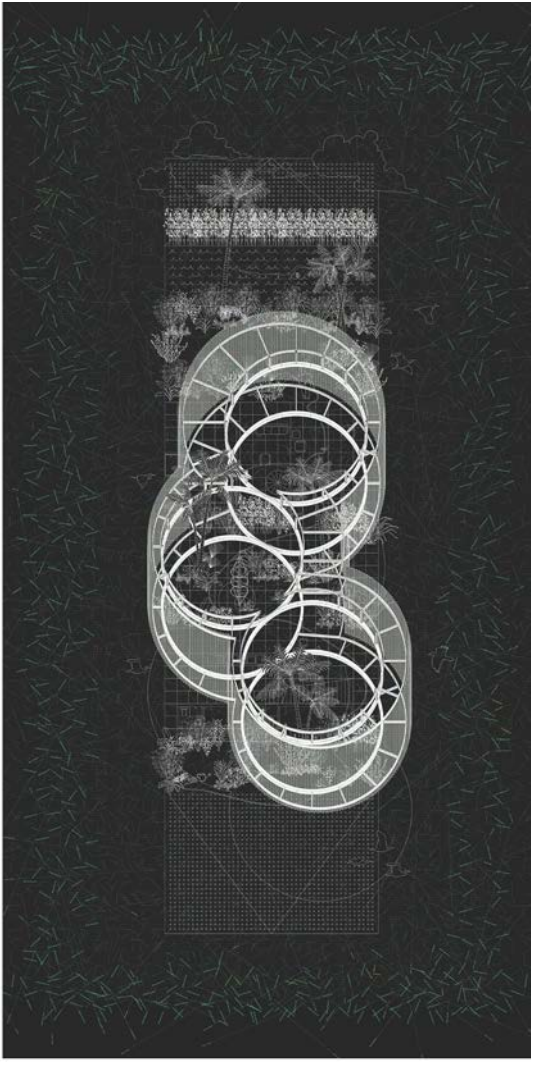





Russula sp.
Armillaria tabescens

Z4A (Rafael Beneytez-Duran and Ophelia Mantz)
Tobogán House
2025 (2016)

Herein lies a series of collapsed infinite sections of the Tobogán House, designed by Z4A. In the fossil-fuel age—where air is increasingly saturated with long-term plasticizers (we called them polypropylair)—the drawings of the Tobogán House depict the landscape not merely as a setting, but as a consumer: a black ground ready to digest the carbon emitted by domestic life. Plants appear as silhouettes, forming a kingdom of photosynthesizers through which the house, now acting as a Gaia device, sinks the carbon dioxide generated through the production and acquisition of domestic goods and emissions. The graphics depict more garden than building. The structure is designed with a fully recyclable membrane composed of steel, aluminum, glass, and wood. It is a white prosthetic—merged with the ground—that mediates between the garden and the air. As a result of this airy prosthesis, the building's material opacity is low. The increased solar radiation hitting the grass, along with the garden's capacity to retain water, supports the ongoing cycles of oxygen release and carbon fixation through photosynthesis. More importantly, however, the house teaches its users that—even if a Gaia device introduces new architectural-environmental equations—its techniques and aesthetics still rely on the participation of the domestic inhabitant. Living within this architecture means engaging with the interdependencies of the six spheres –atmosphere, lithosphere, biosphere, hydrosphere, criosphere and technosphere- that now define the Earth System.




HANDWERKER
H
GALLERY