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STUDIO:
Matter, Space, Structure

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(Daniel Norell)

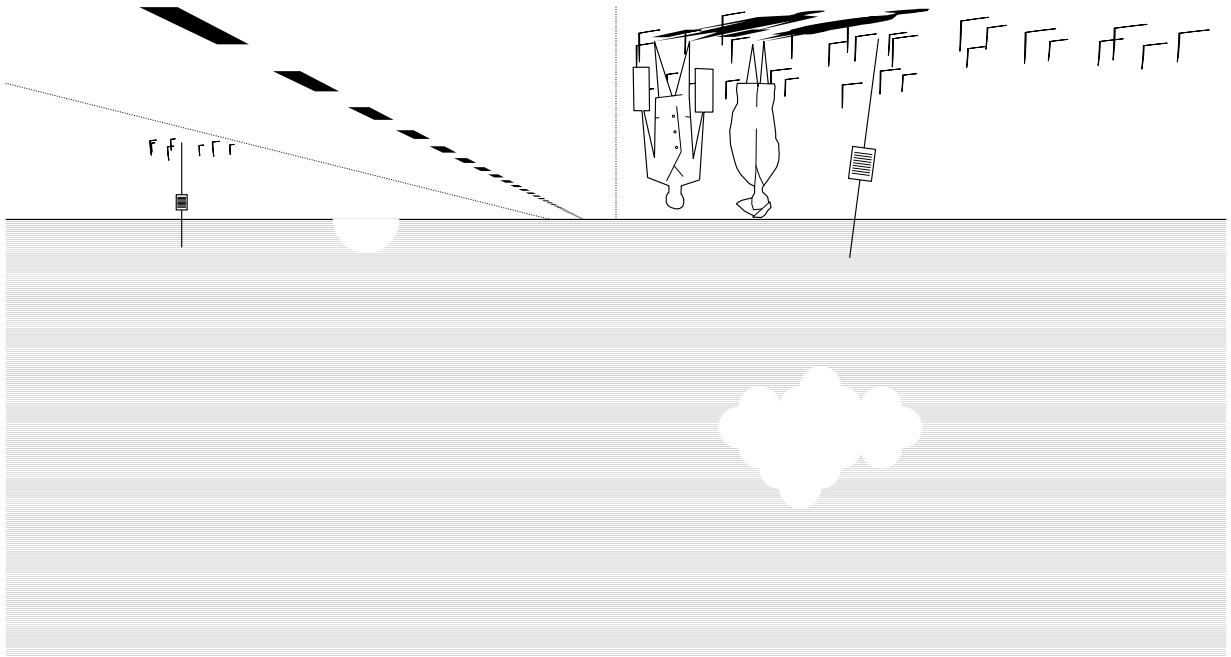
• on waiting

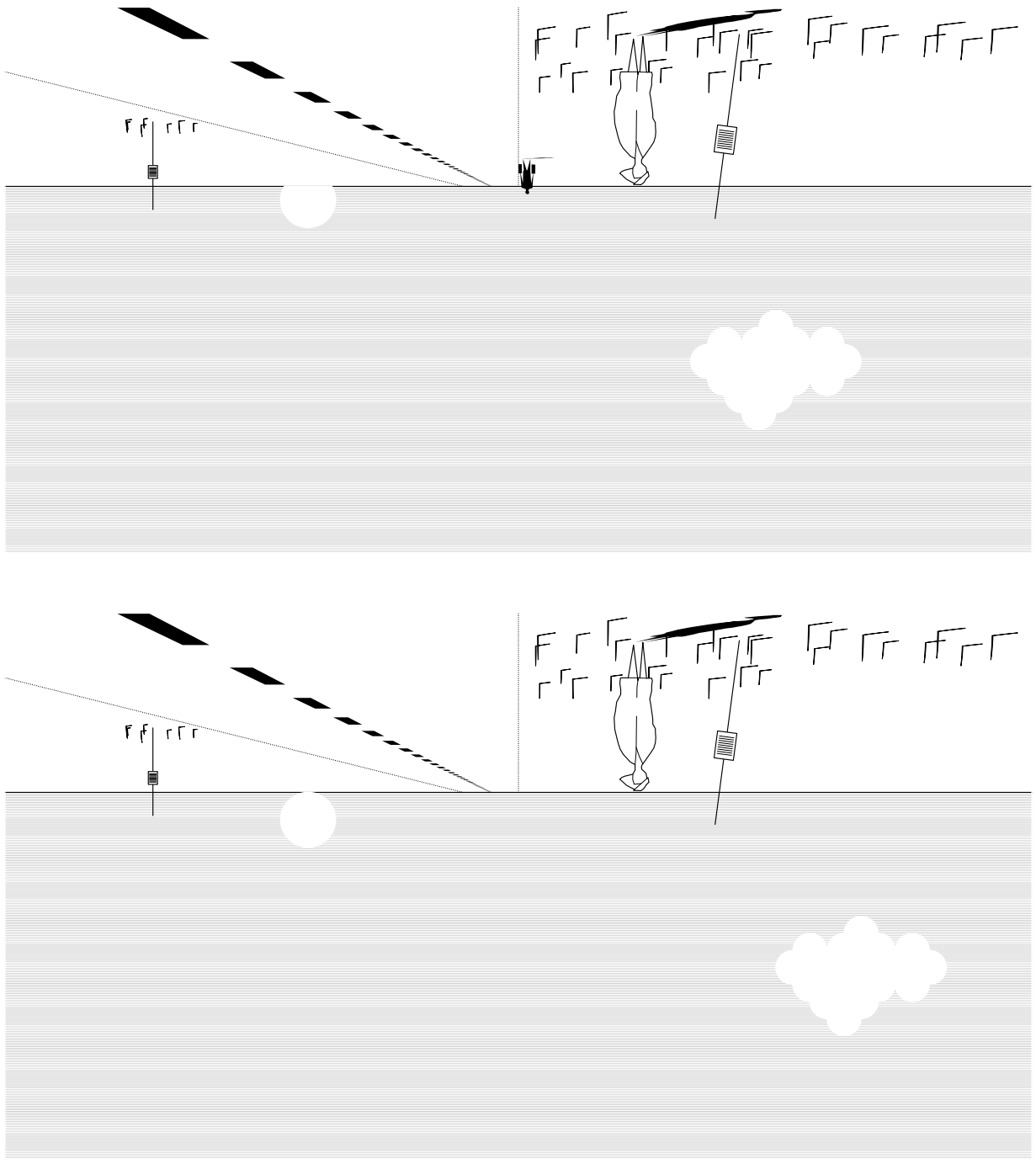
WHAT IS IT that makes a stop a place? At closer thought, no physical artifacts are actually necessary. It could, taken to it's limits, be no more than coordinates and dates. A position in space and a position in time. That would be enough.

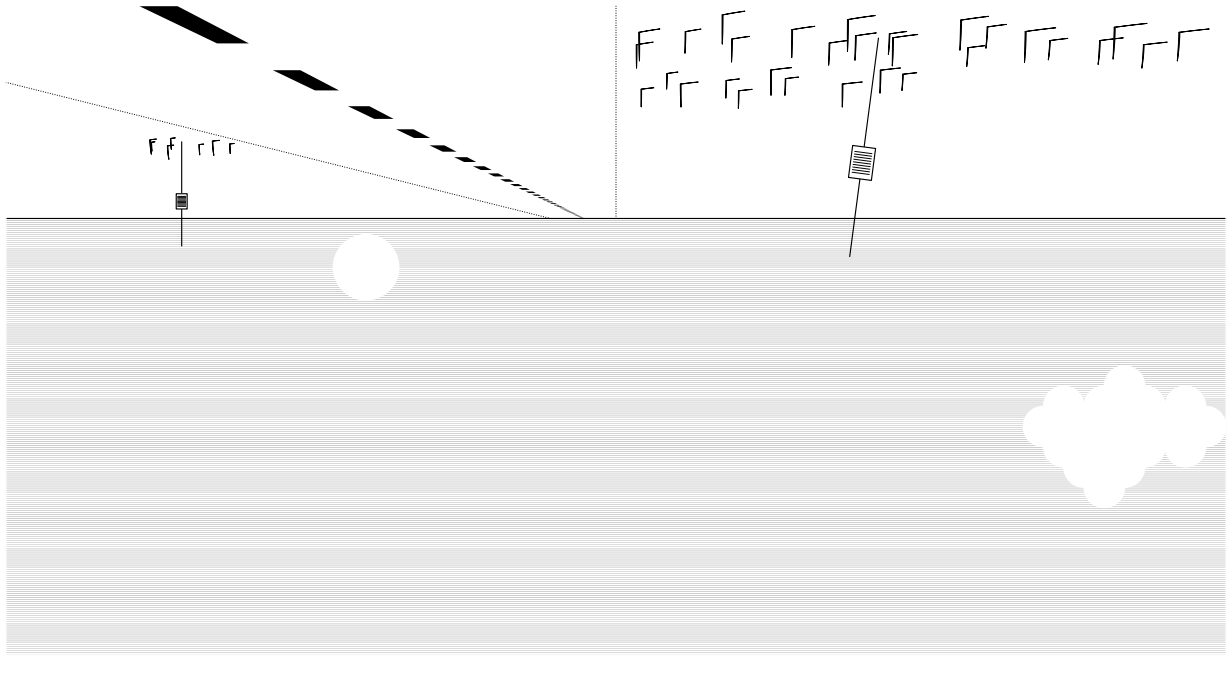
Urban bus stops seems to activate themselves by their business. Cramped in where there is space left, they are kept afloat by a stable stream of people and vehicles. Regularity and generality make them predictable and constant: there is almost always someone there before you. Their walls and roof designates them as spaces per default, as small houses. Their advertisements begging for attention, their time tables constantly updated. From the apartment window you can see the public transportation approaching. Make a run for it! If you miss it, you can walk to the next stop.

In rural or industrial areas the feeling is different. There is an openendedness to location: a few hundred meters in one direction or the other would make little difference. The distance between stops and infrequency of rides make them more unpredictable. Is the bus late? Was it early? Do I have to walk back? Or wait even longer? In order to predict them, more time has to be spent.

Somehow, though, the intensity of place is increased by this unpredictability. You arrive in uncertainty, into vast surroundings and usually alone. Your own presence that sparks the location and unveils it as a place. If the silhouette of a figure appears on the horizon, slowly closing in, the sense intensifies with anticipation. And if the stranger is a fellow traveler, settling to wait in the same spot, the stop immediately becomes an arguably quite strong place.







• archetypes

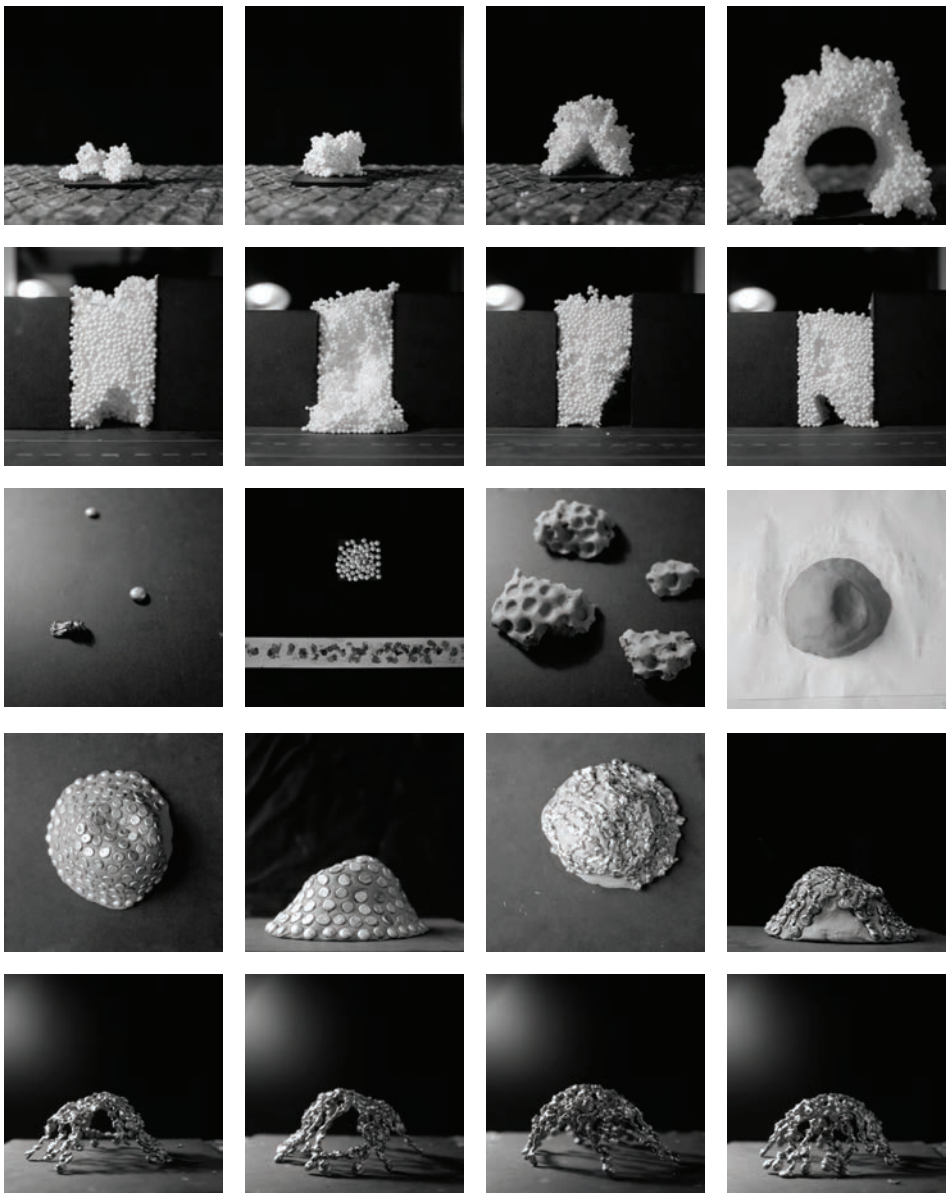
A SERIES OF SKETCHES, looking at bus stops intuitively divided into four archetypical environments:

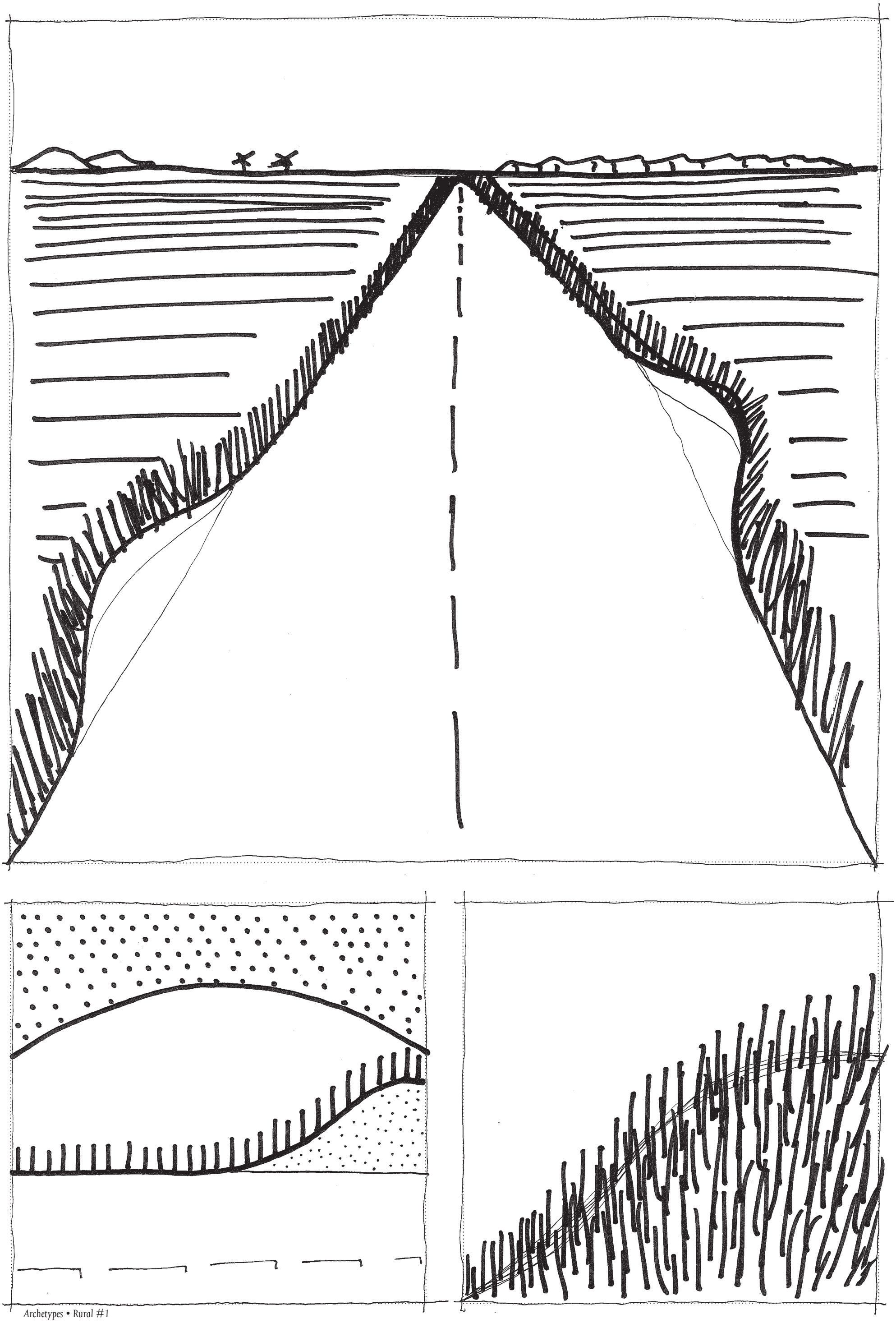
rural • An exposed situation in open landscapes. Given the preconception that there might not be much around, aside from open fields and occasional structures, the stop is developed with what is already there: the symbol, pipes and road signs. A self referential approach that is generally applicable but allows for individual variations. Bending pipes creates shelter and space, also letting the constellations of the signs relate to the specific places.

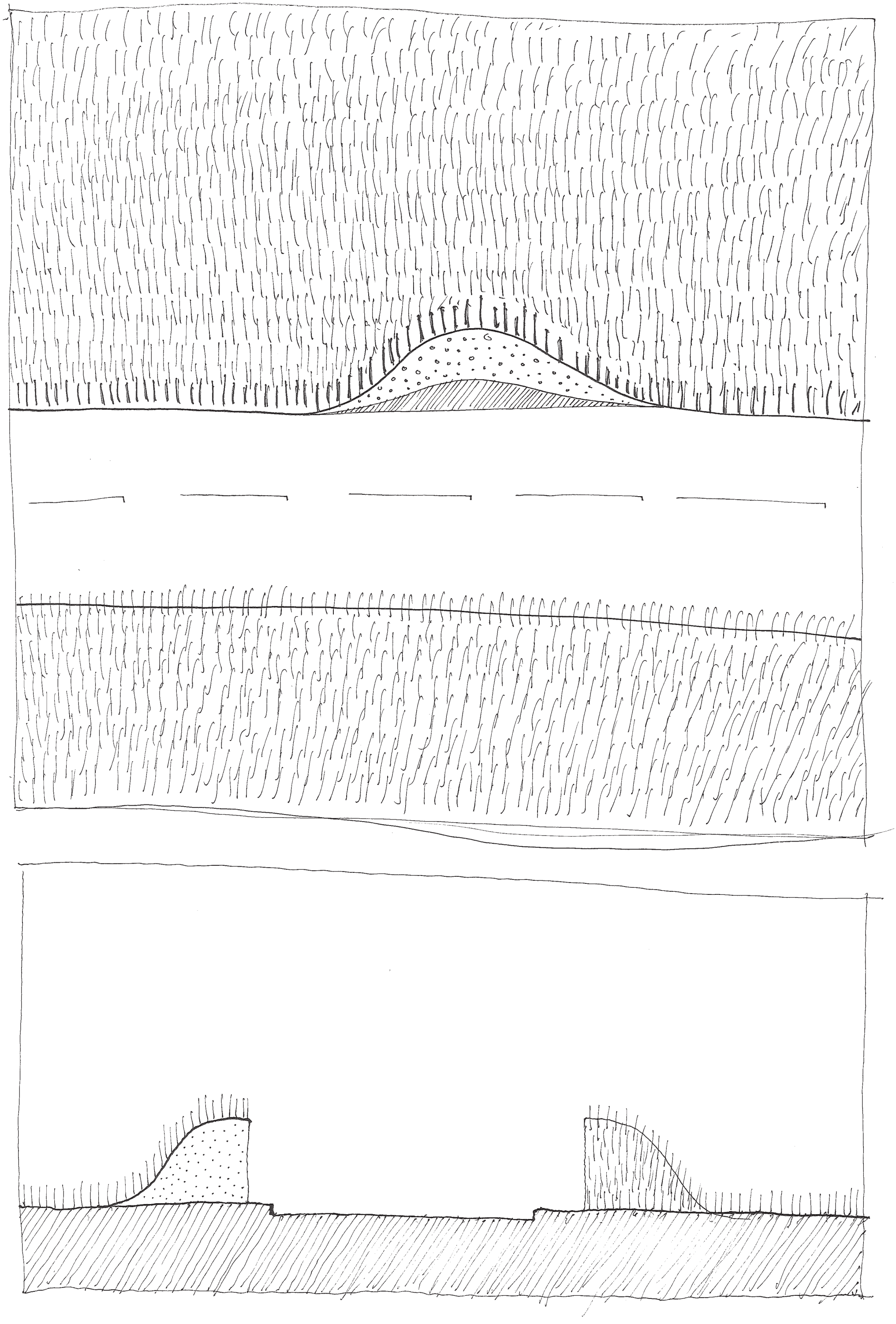
suburban • Neat and ordered environments: mowed lawns, kept trees, houses in rows and straight fences. The stop is a disruption to the pattern, an unapologetic oddity that makes the pattern adjust itself to the addition.

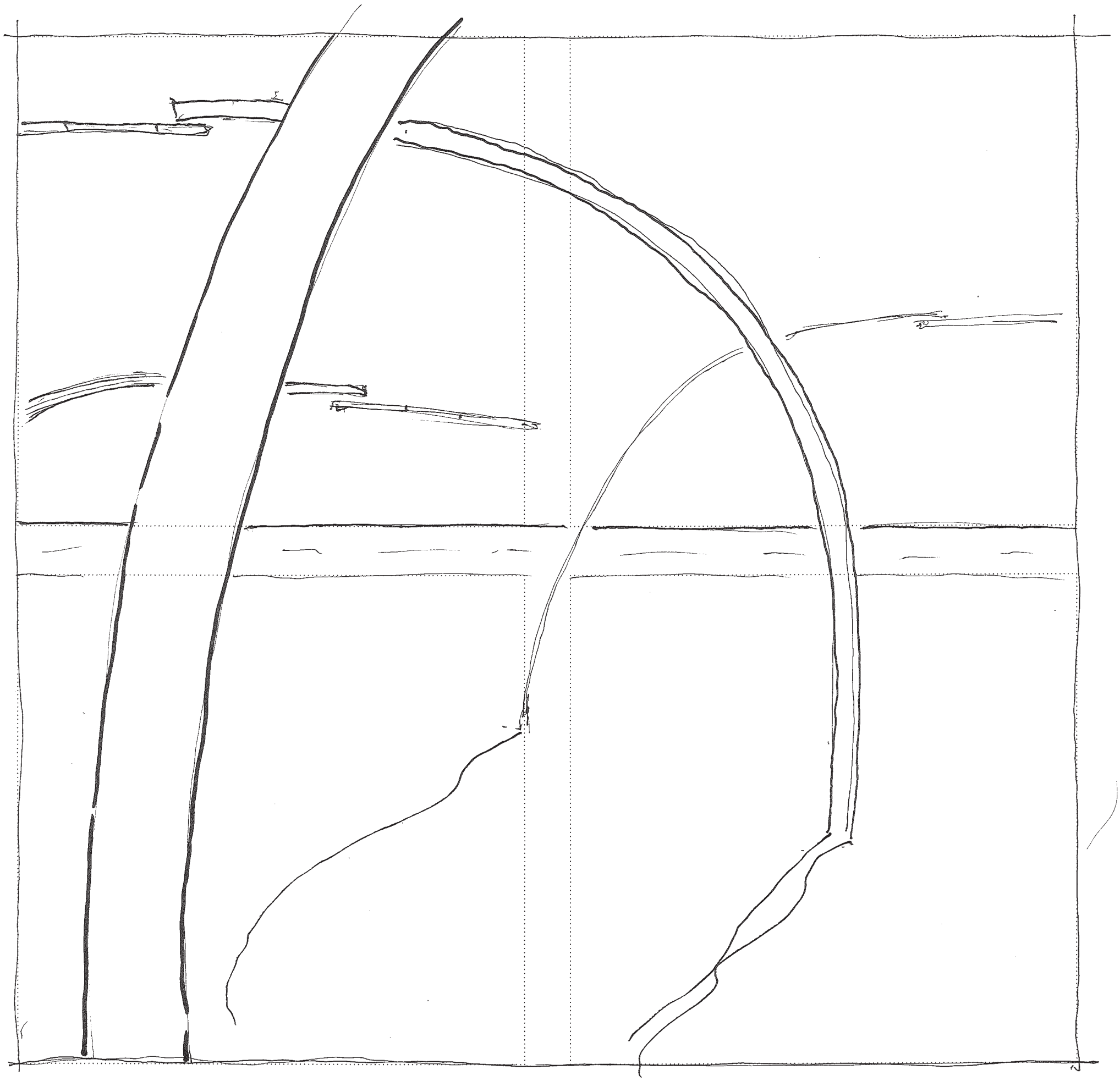
industrial • Related to rural environments: vast and flat fields, low frequency, large but spread out structures. The stop is a concrete installation of figures that keep themselves company when no ones' around, their hairs relating to the wind and visitors.

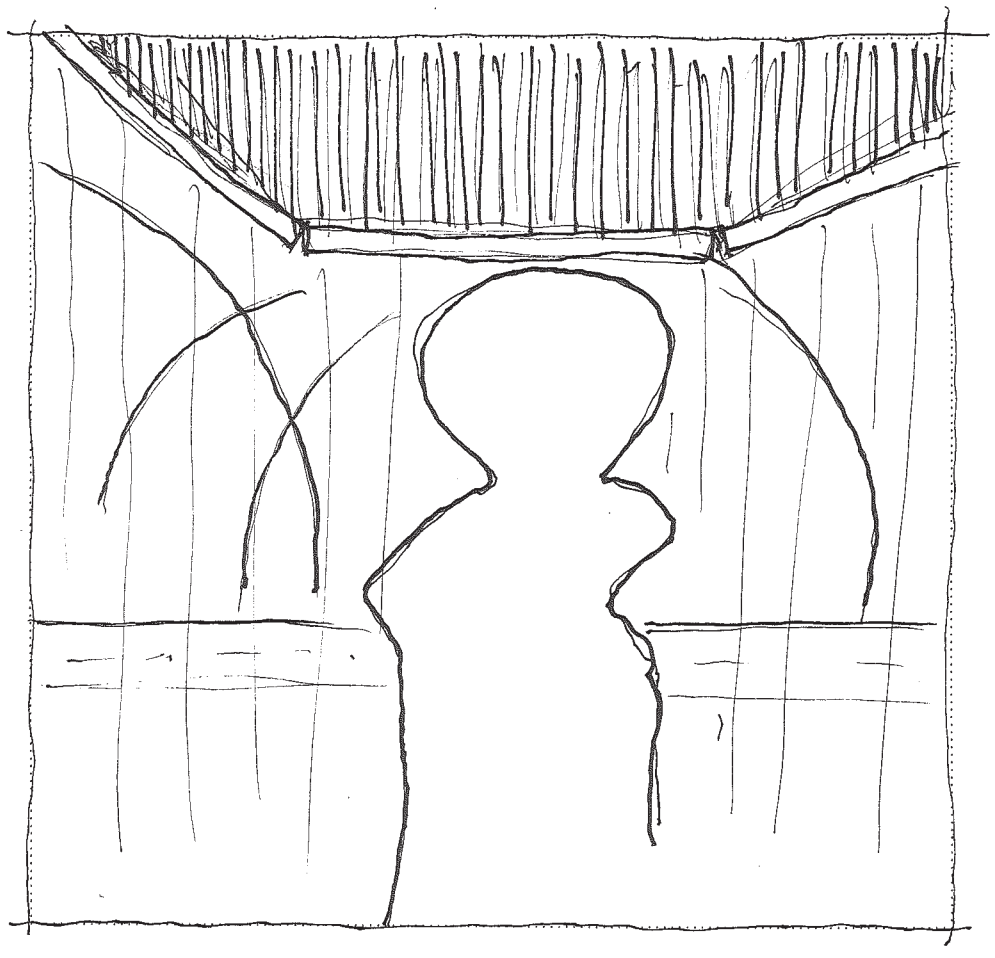
urban • A dense, busy environment with high frequency. The stop exploring and filling and overflowing pockets between structures, creating spaces with variations in porousness. Also a disruption to pattern, but more extravagant.

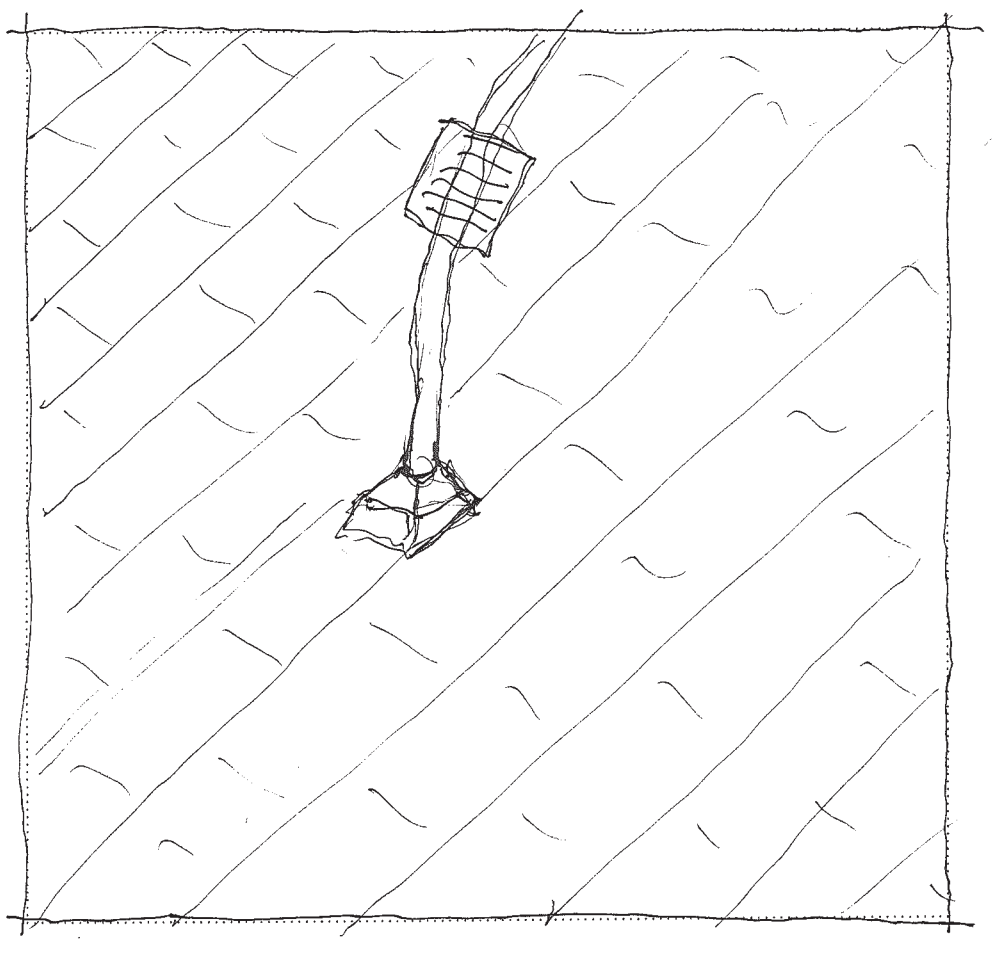


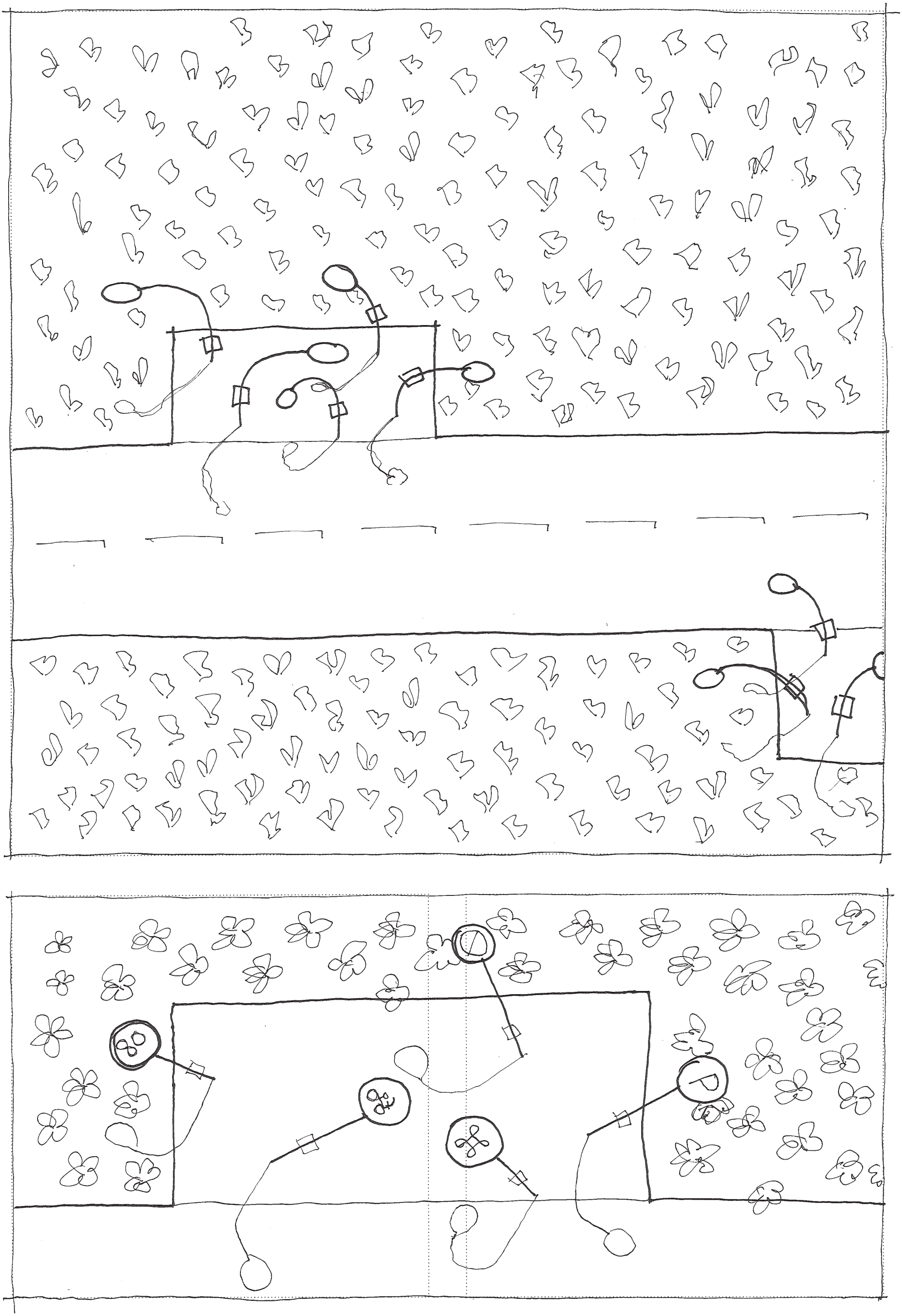


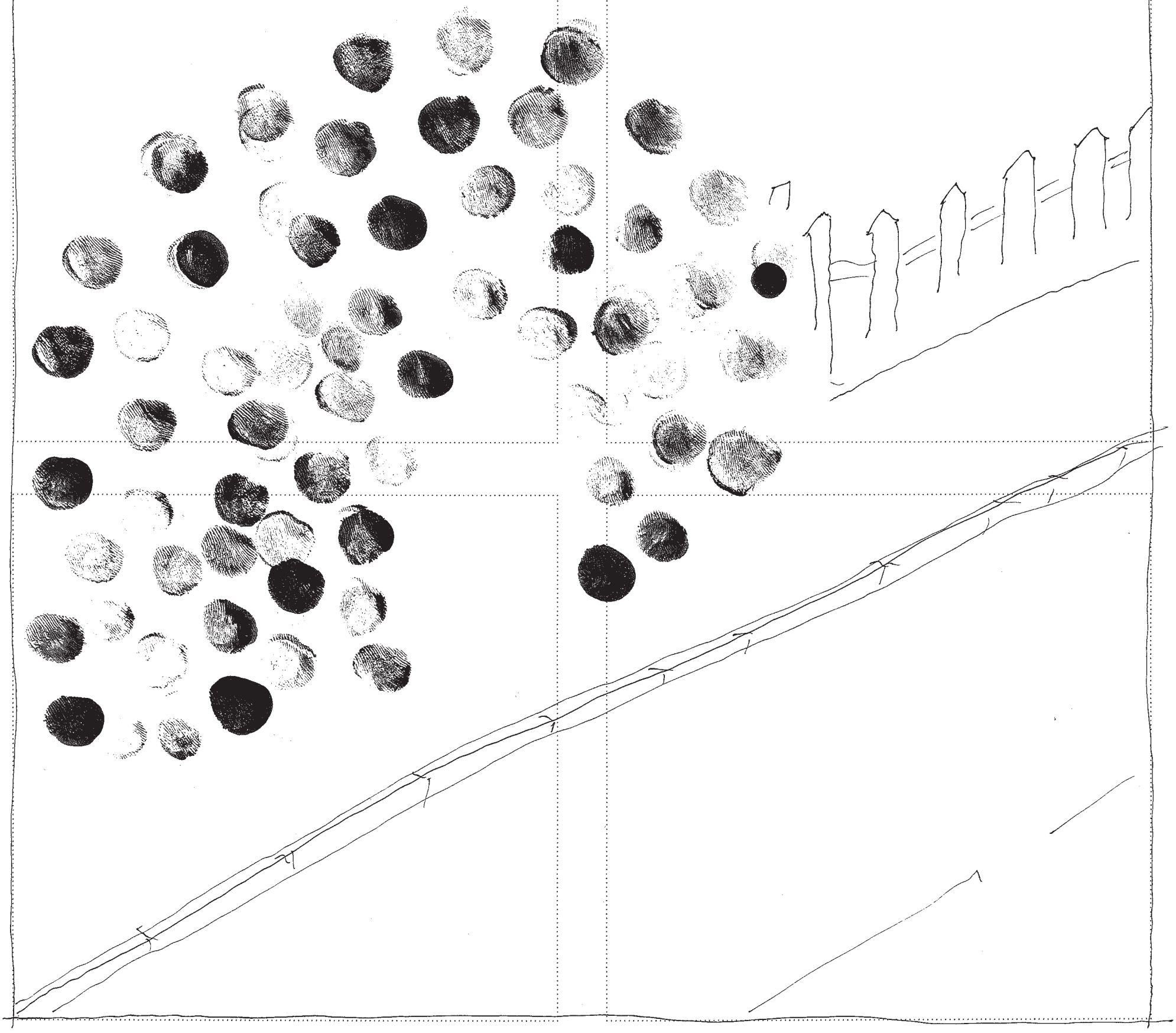


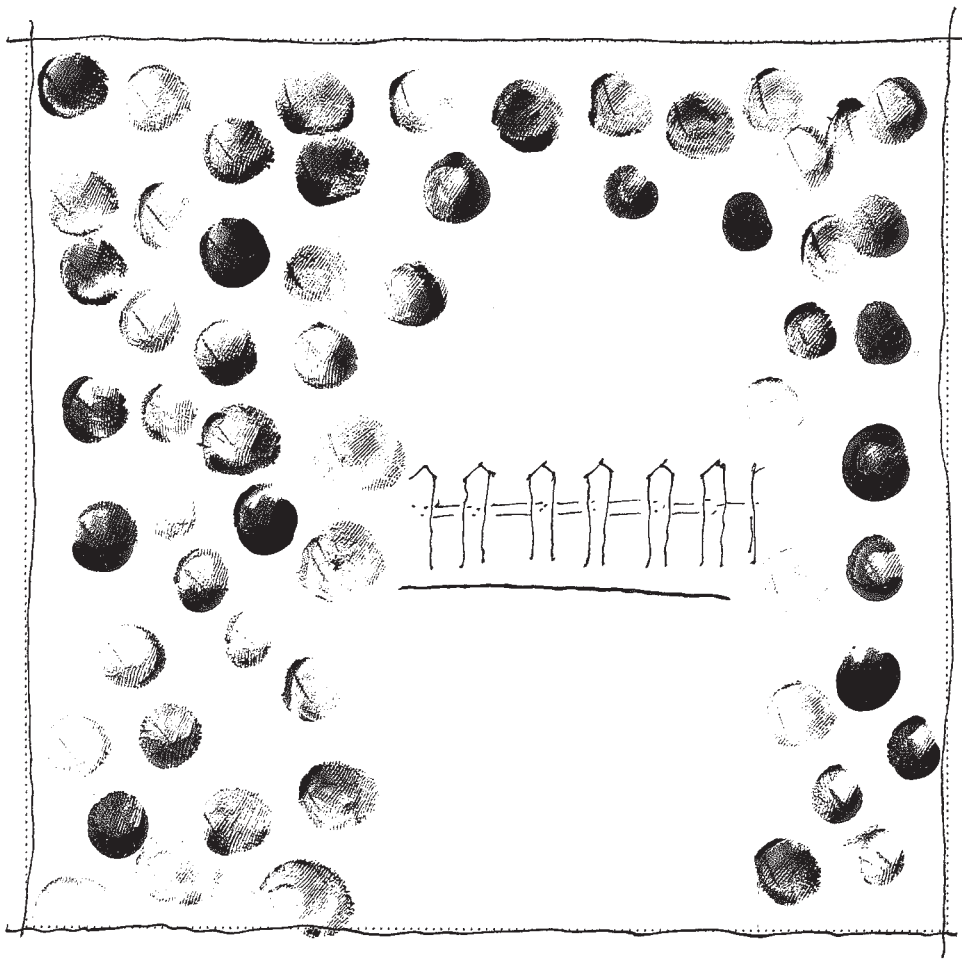


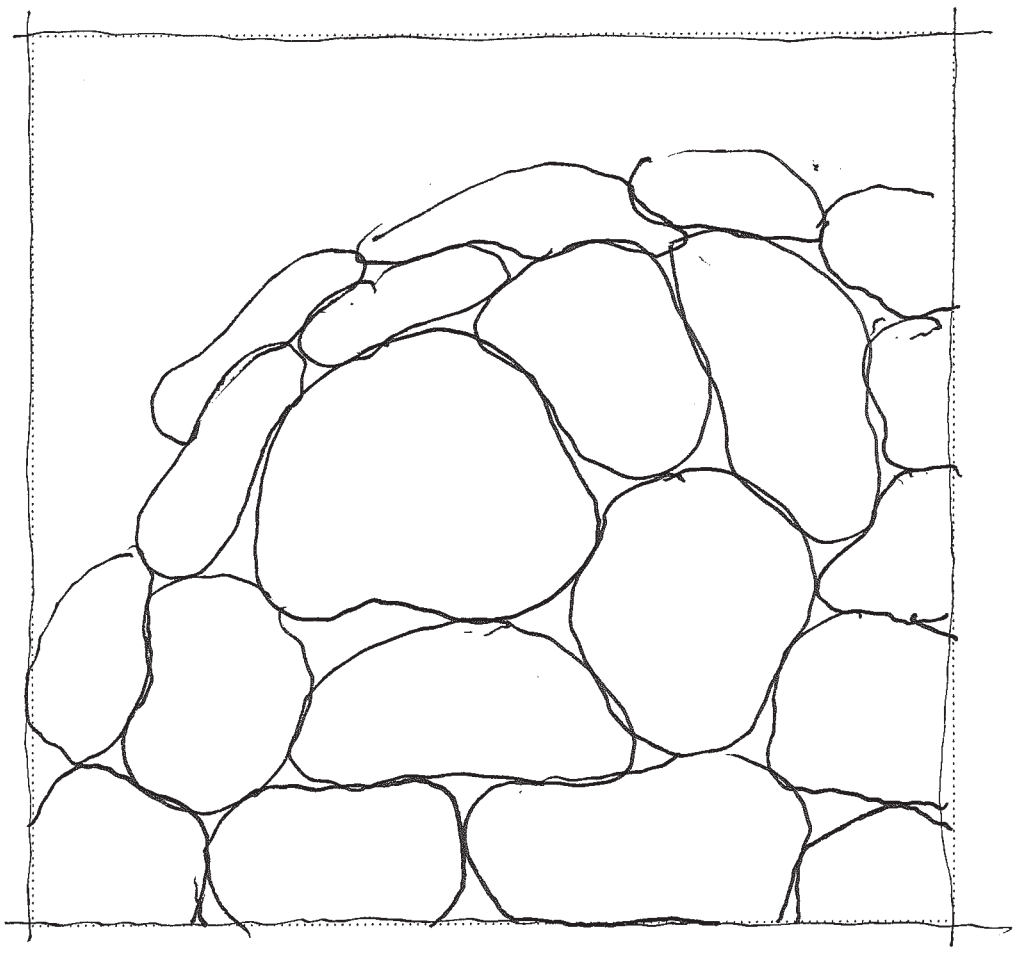


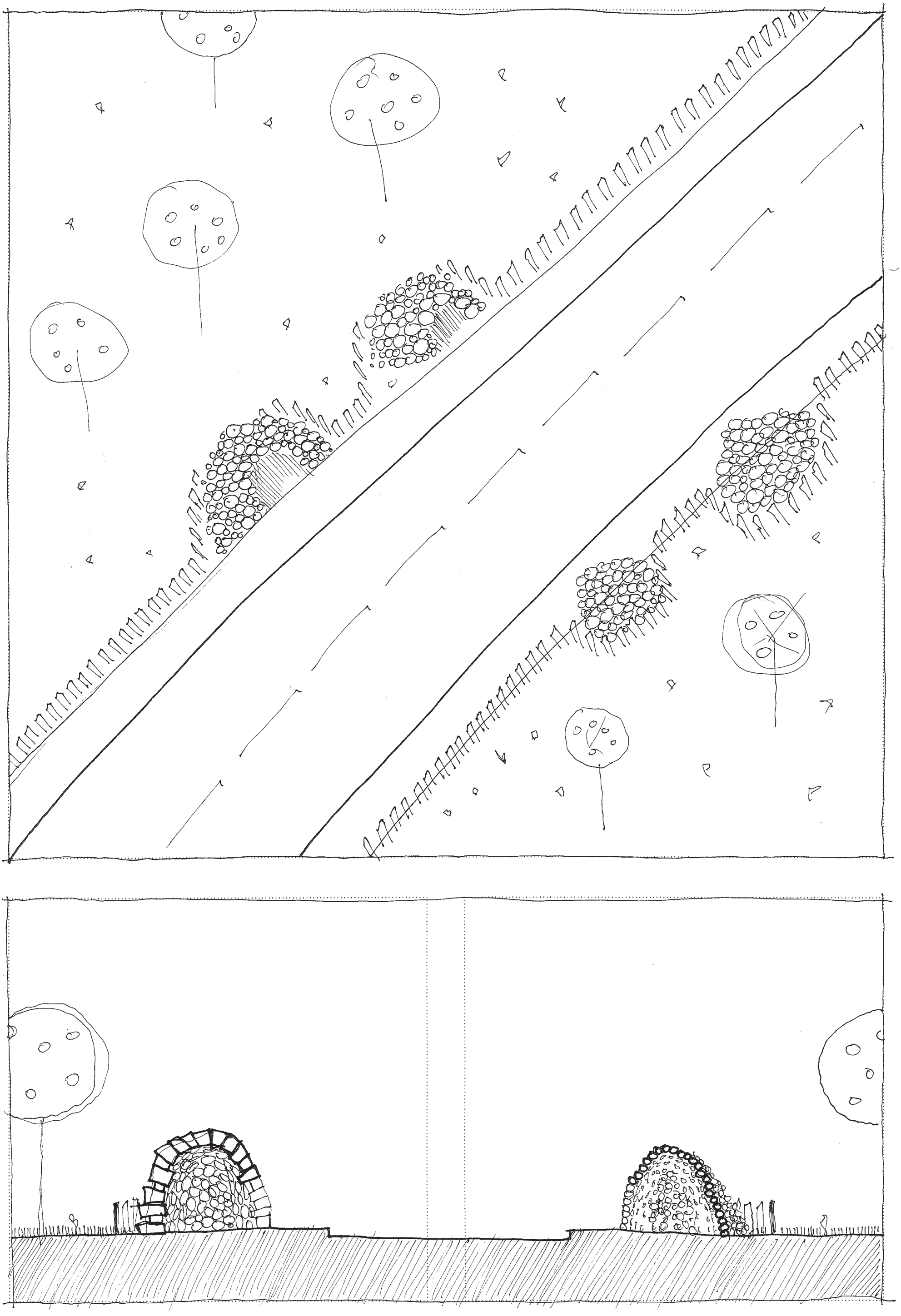


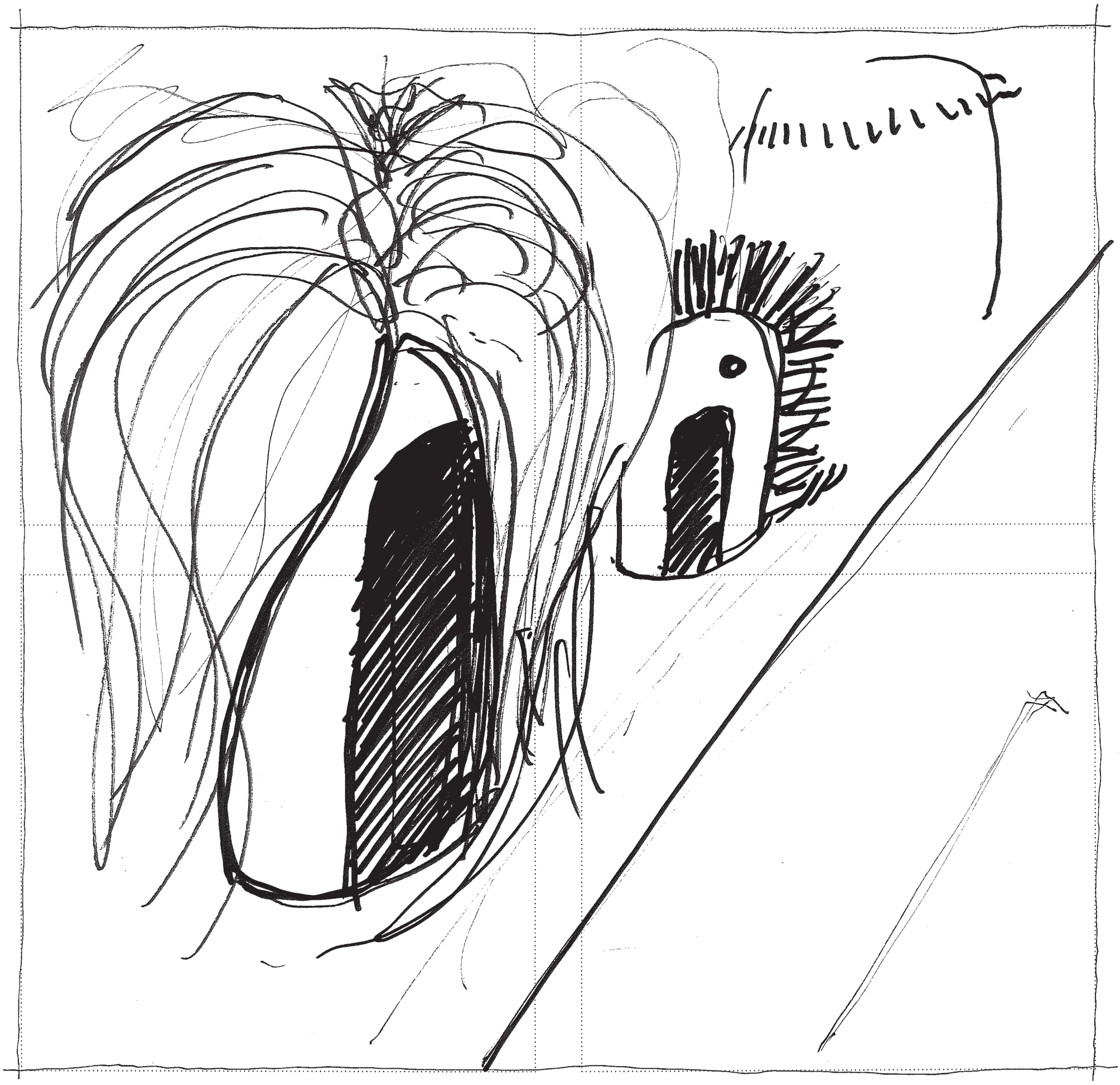


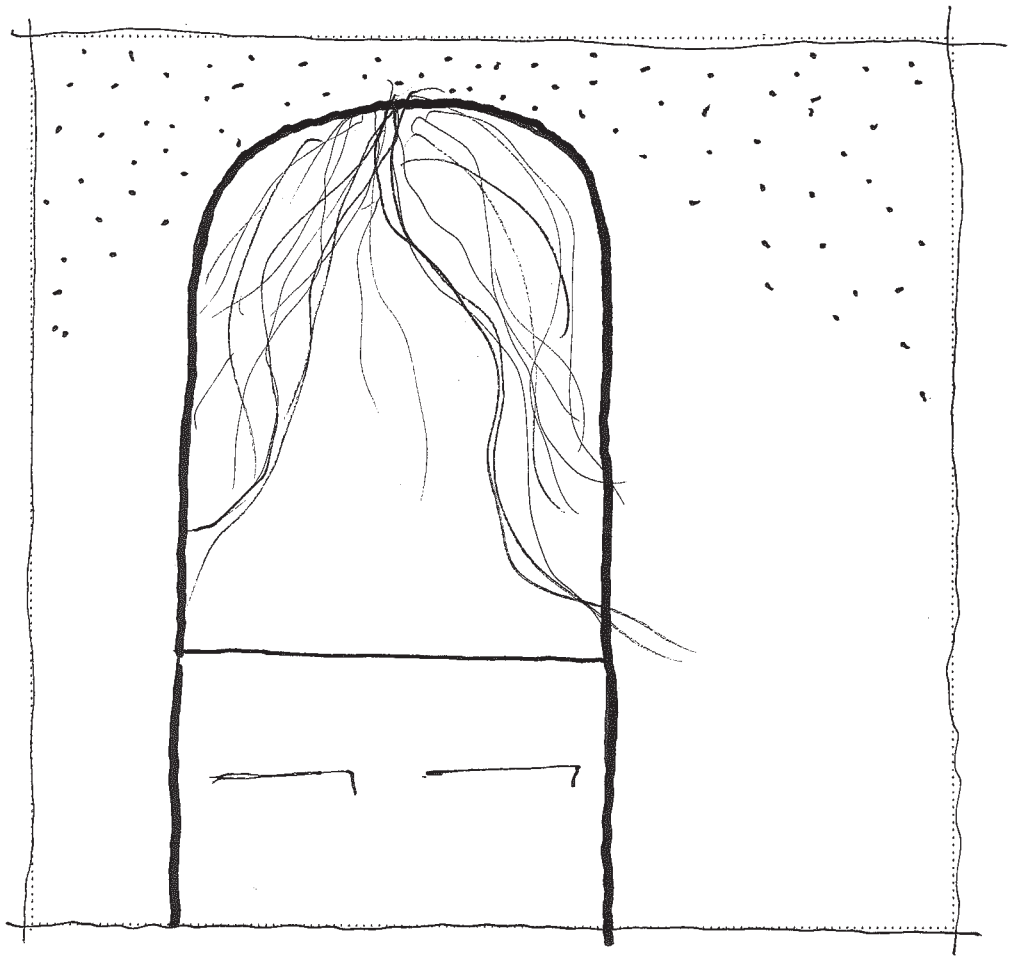


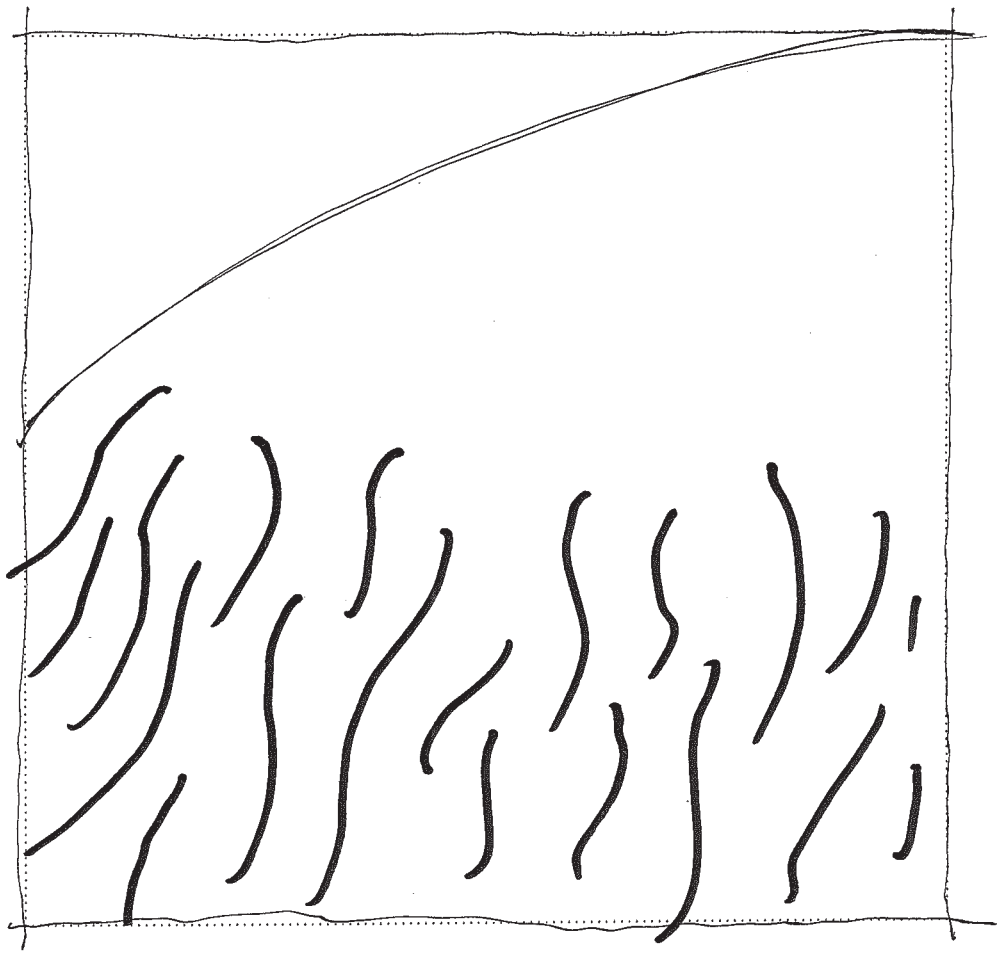


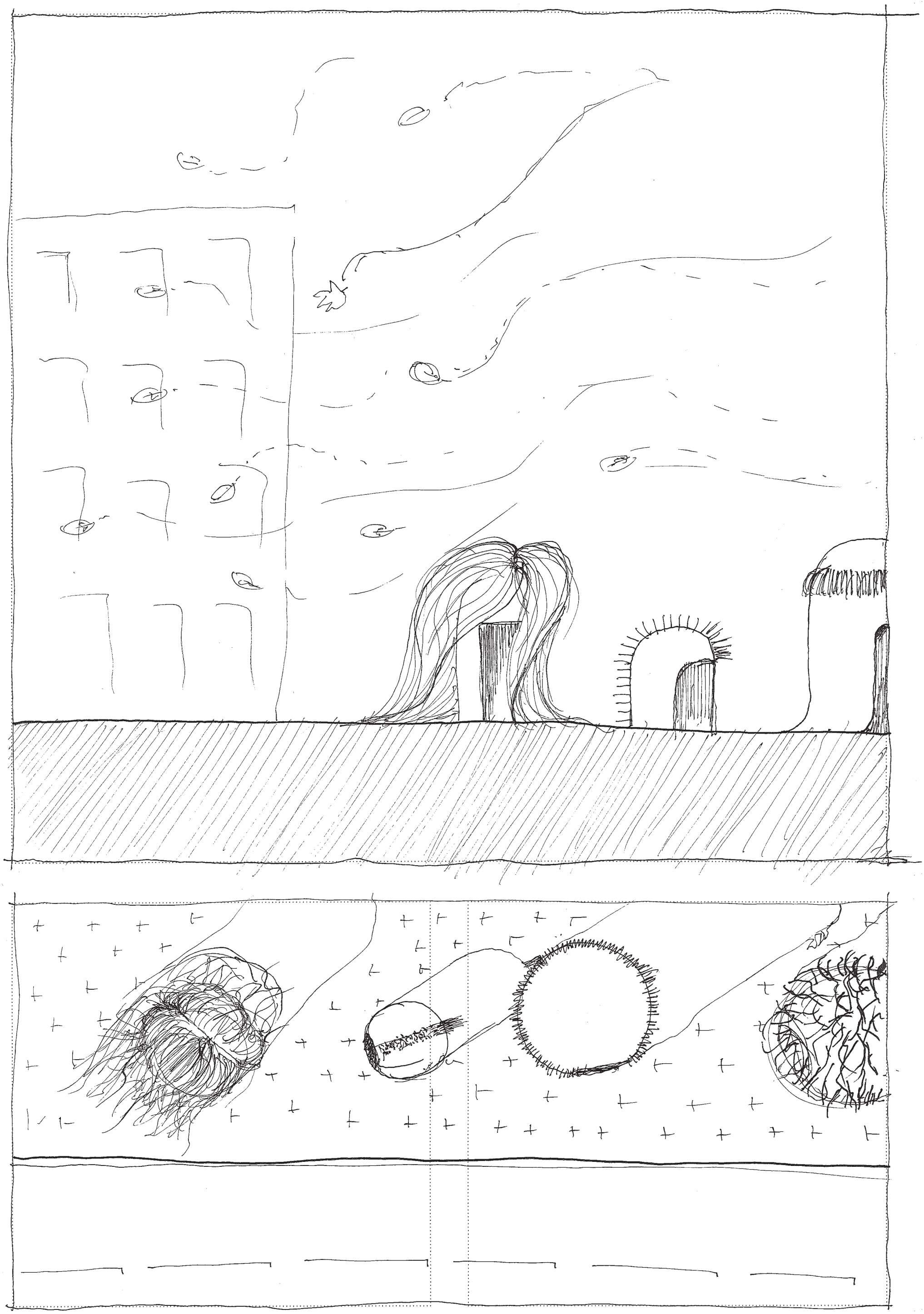


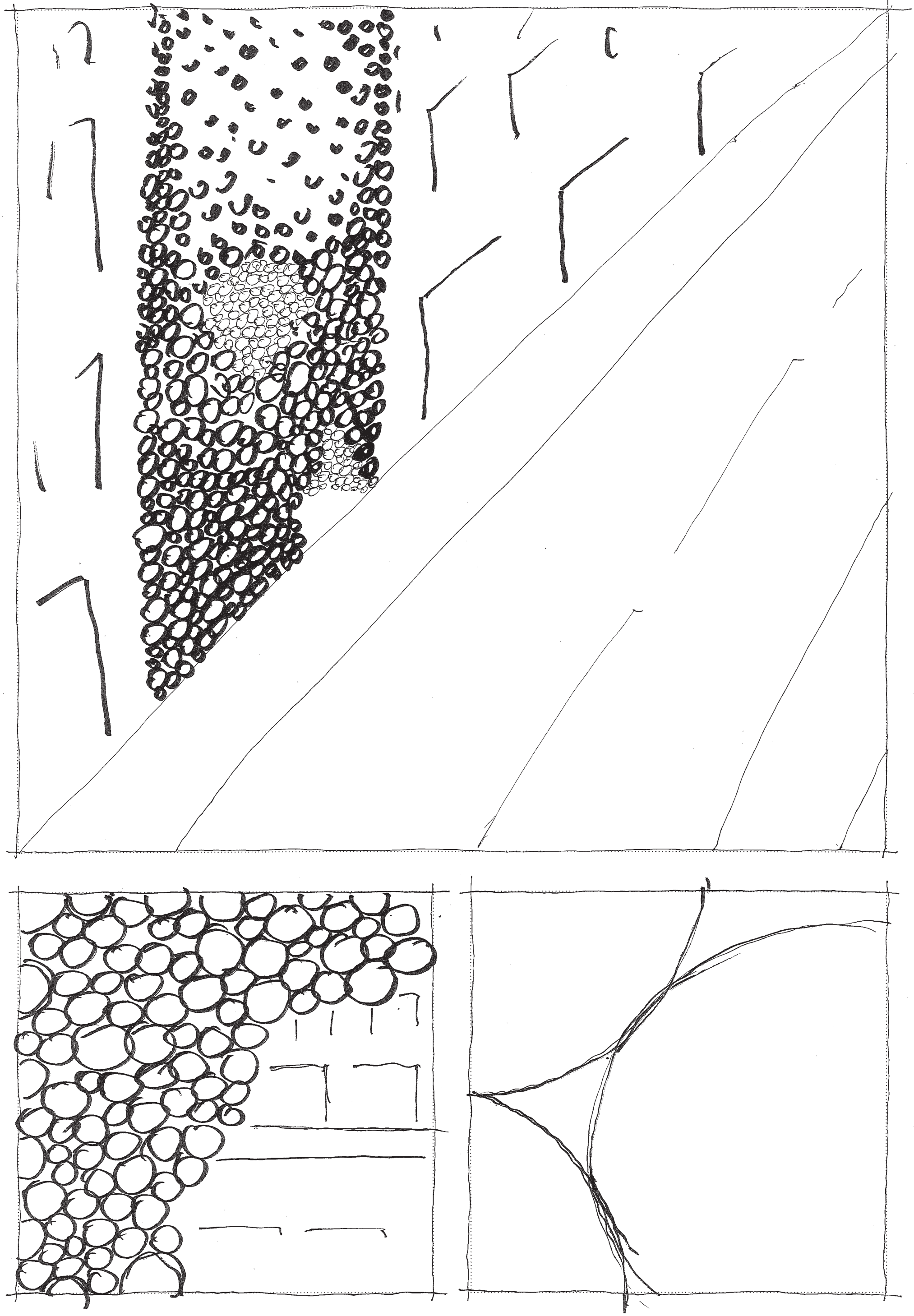


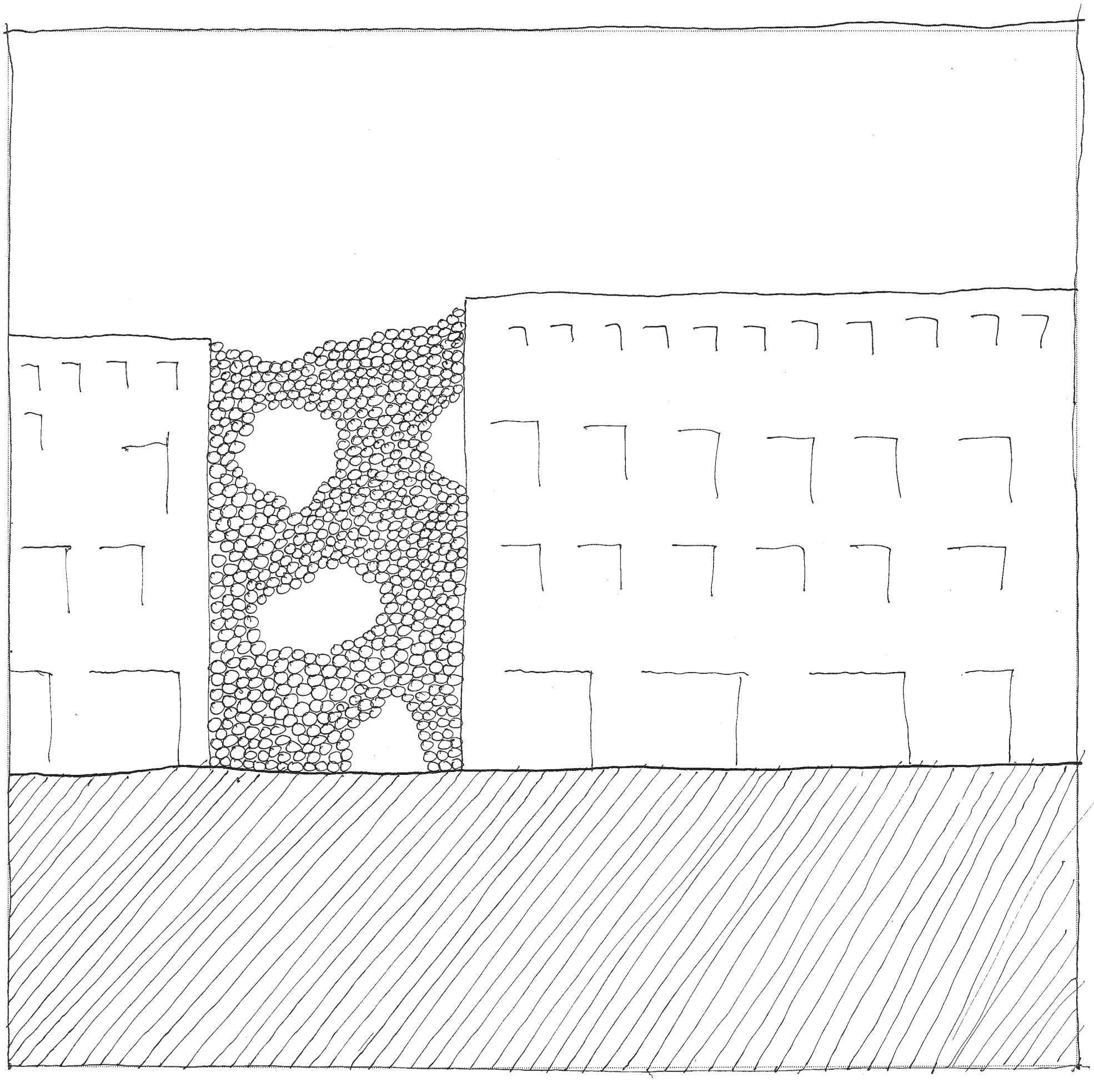


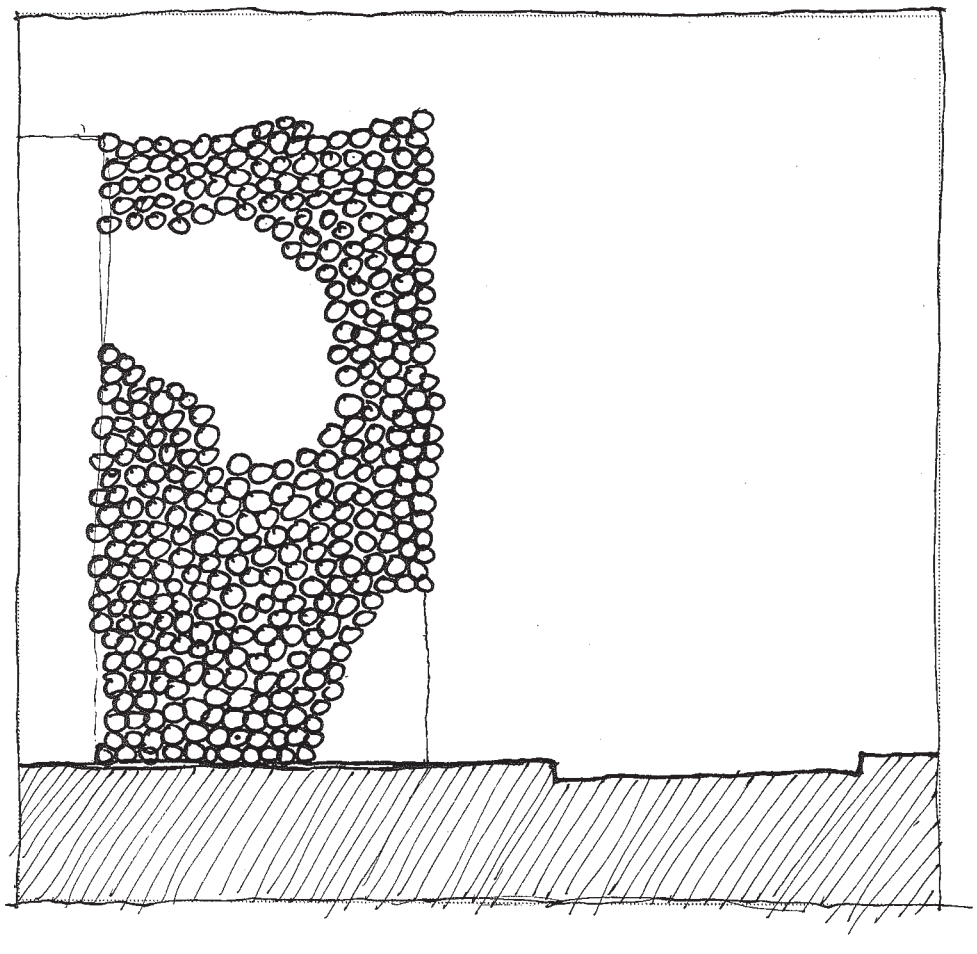


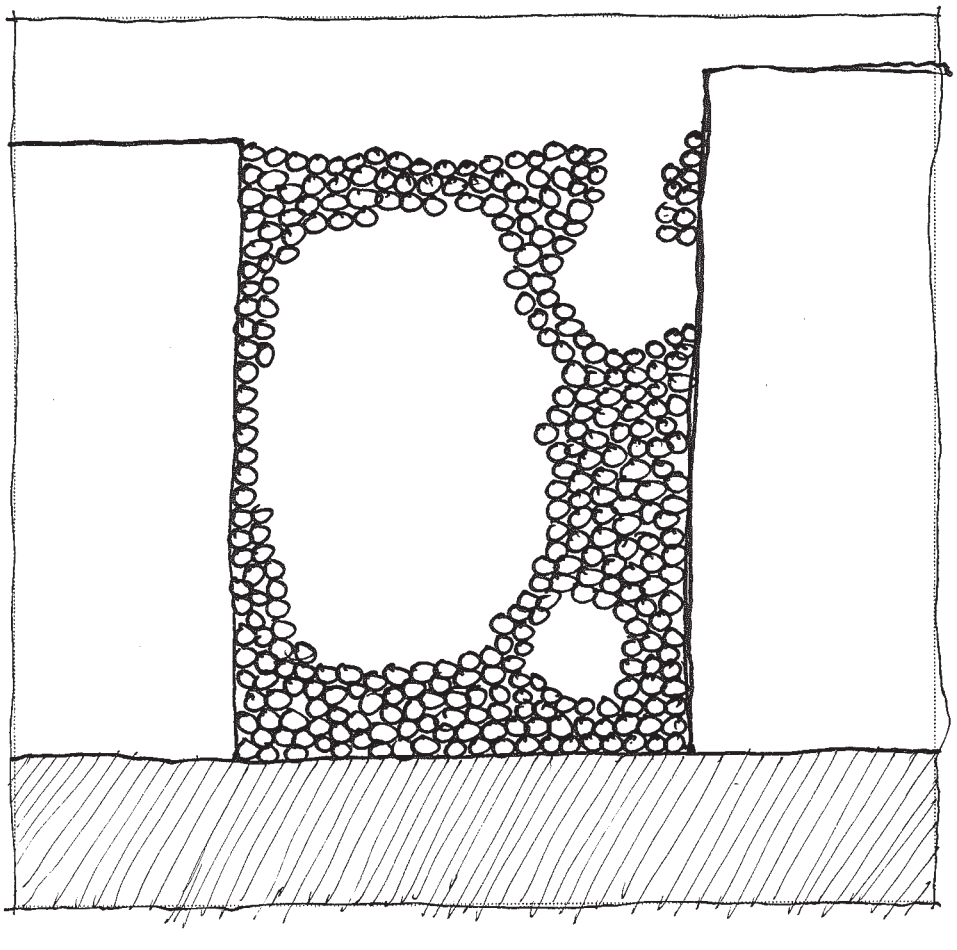




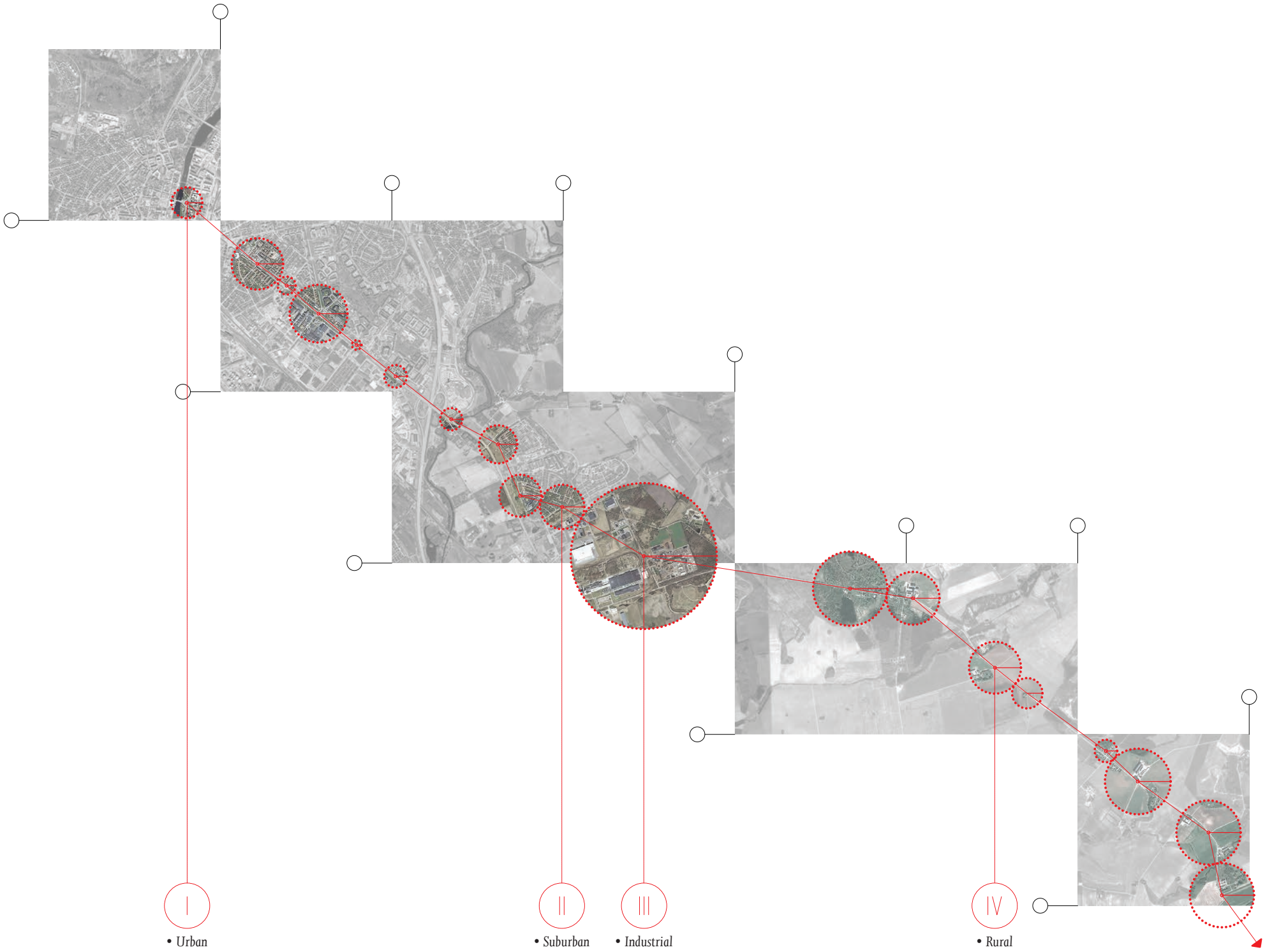








• on stops



IT'S FUNNY what makes a place. An ISO A4 piece of paper on a metal pipe. A series of printed time slots, locations and holidays, the pipe arbitrarily stuck in the soil along the roadside.

One anthropological definition of place is the intersection of infrastructures, of roads, where the movements of people meet and they for that reason decide to stay. If it is for generations, it's a city. If for ten minutes, it's a bus stop.

In 2013 I was working in Halmstad, living 14 kilometers outside the city above a kennel of 25 small terriers. I moved there in winter, to a barn at the end of a dirt road cleaving two rape fields exactly in the middle. Usually, I rode the bicycle from the barn to work, from the pitch black before dawn to the diffuse lucidity of morning, but when the rains were too hard I rode the bus.

Where the dirt road meets Stjärnarpsvägen is the bus stop Tre högar, a typical pipe in the ground by the roadside overlooking an ocean of mud. Most days I stood there alone in the dirt, wearing my rubber boots, sometimes accompanied by a tired, silent teenager waiting to get to school. Waiting in the dark, in the dampness by the metal pipe, made me start to think of the conditions of stops.

Looking closer at bus stops, ranging from the glass boxes of urban centers to the bare metal pipes of the countryside, what ties them all together is a complete sense of the utilitarian. They are part of a general and superimposed system, not really relating to their location nor to human beings. As a place between places, you arrive at a bus stop to get away from it as fast as possible.

Still, a stop is something that carries a lot of meaning. In areas outside dense centers, in a small place like Stjärnarp, they are what ties a number of people and dwellings together. It's the spot that bears the community's name, it's in the middle. On a larger scale, during a entire day, the bus stops of a city collects thousands upon thousands of minutes of travelers' time. But most likely near all would consider this time wasted. How come such an important typology is so thoroughly neglected?

On stops wishes to see something more in bus stops, searching for ways to render them transient everyday places of imagination and care. Also, it's trying to look beyond the lush advertisements and LED-screens of the urban and work with what's at hand in the remote. And to break just a little bit with the purely utilitarian. Because it's fun to make a place.

I

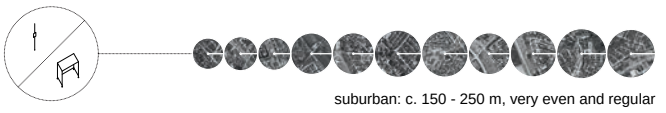
II

III

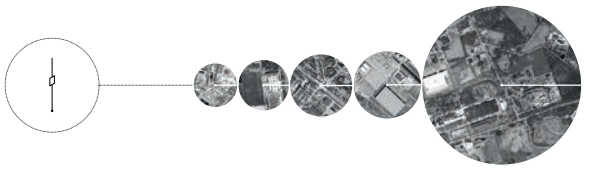
IV

AVERAGE RADIAL RELATIONSHIP BETWEEN STOPS

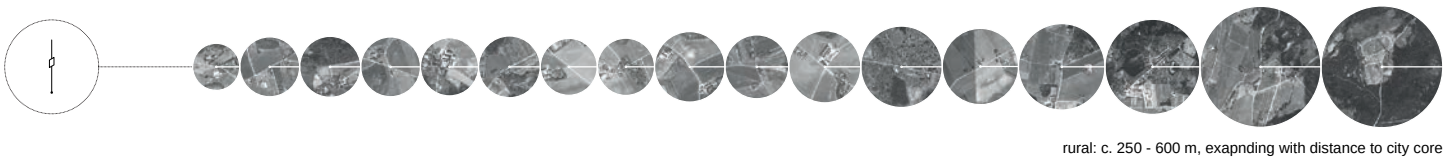
urban: c. 25 - 170 m and irregular



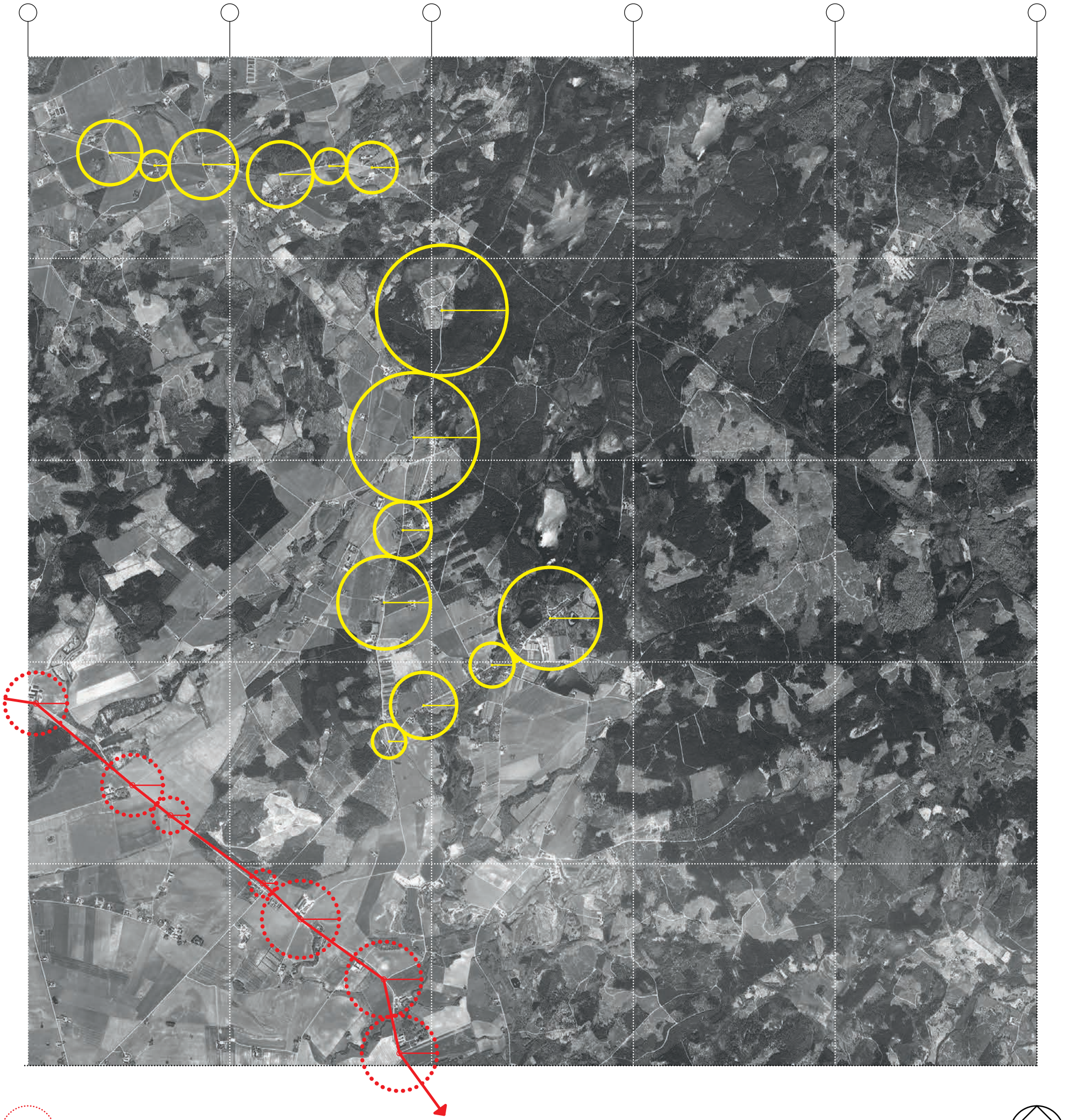
suburban: c. 150 - 250 m, very even and regular



industrial: c. 250 - 800 m, rapidly expanding with critical distance to city core



rural: c. 250 - 600 m, exapnding with distance to city core



BUS 532

SCALE A2 / 1 : 45000

SO, LOOKING CLOSER at the bus network of Halmstad a few things about stops become clear. A comparsion between the average radiuses of the system reveal features of the different archetypes emerge.

urban • Irregular radiuses (c. 25 – 170 m) with the common denominator that all are very small. The frequency is so dense, and overlapping, that the urban environment is a puzzle of circles.

suburban • Extremely even radiuses (c. 150 – 250 m) following the correspondingly even distribution of the typology, like a string of pearls. Commonly an outer layer to the center or close to the ocean. It's woth noticing that they are seldom located directly at intersections.

industrial • Regular and large radiuses (c. 250 – 350 m) up until a point of critical distance to the urban center, from where they expand abruptly. Usually located outside the suburban areas or in central harbor areas.

rural • Gradually expanding radiuses (c. 250 – 600 m) with distance to the urban core. Due to the irregularity of built environment, there can be gaps between radiuses. It is worth noticing that they tie a specific set of houses or farms together and are often located at intersections.

bus 532 • This bus route is one of particular interest, as it moves from the urban urban through all environments on its' way to the neighboring city Laholm.

• mapping place

ALL BUS STOPS are part of the same infrastructural system, but they differ internally according to type and place. Regarding bus stops as place making objects or signs of place, investigating the stops physical features and what's present in their immediate surroundings reveal further common denominators and differences. Referencing the information of abstracted images from the stops with the archetypes provide several statements that might be interesting in this context.

• Structures within the image frame mostly belong to the rural, while buildings in industrial (wide) and urban areas (wide and high) expand outside the borders.

• This has implications for visibility of the sky. A visibility above 60 % of the frame belong to rural and industrial areas (small or long and low buildings) whereas the high typology of the central urban mostly is framed by other buildings.

• Heavy borders, such as metal or high fences, belong to urban and industrial areas whereas the light and quite climbable ones belongs to the rural.

• Commercial messages are part of central urban and industrial areas, and so are services such as mail boxes, shops and museums. In the city you put letters in the adjacent mail box, in the the rural you receive them.

• The city center and industrial is lit by artificial lighting, while the rural is dark by night.

• In the central city and industrial areas, stops are placed between intersections. In rural ones, they seem to preferably be placed at them.

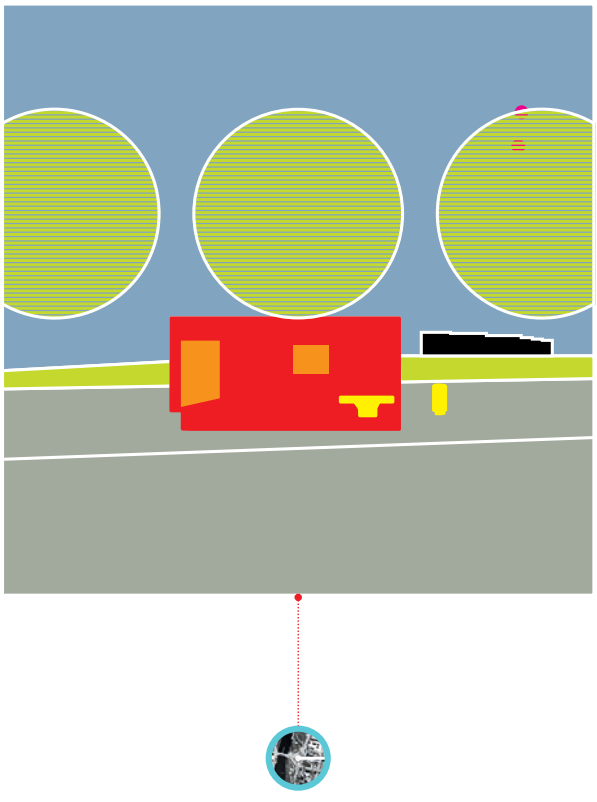
• Unmaintained bus stops are largely absent in central (sub-)urban areas, while the industrial and rural are filled with tilted metal pipes. If a stop is beginning to lean, it's likely to continue to do so.

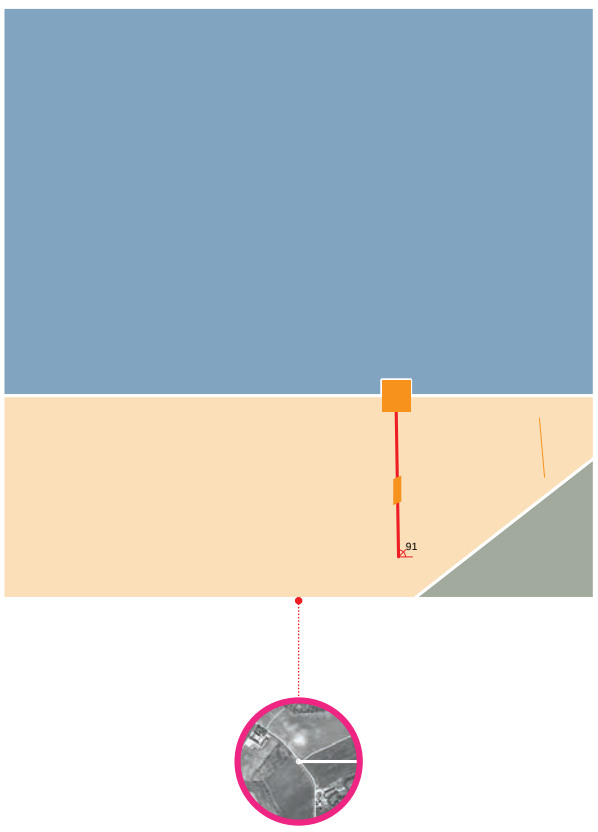
THIS MIGHT BE regarded as natural differences, due to frequency, investment of resources and denseness of population, but given what I perceive as an overall neglect towards bus stops I argue these features should still be brought to attention. Differences may be natural per se, but the divide of care and involvement is not justified. It can be argued that none of them has been attended to as places in their own right.

The surroundings has nothing directly to do with stops, but they influence them as the environments that create them. Advertisements are what enables the high maintenance of central urban stops, as the number of possible recipients of the messages is high. For the same reason, most rural bus stops are set in darkness. Denseness is also the key to services nearby, as well well as the type of borders. More people, in most cases, means greater probability for intrusions.

Though explanations are not strange or hidden, the concrete differences are quite striking. Even if the reason for the physical demise of rural bus stops is simply that there are less people likely to notice it, this is not a reason not to care. Even if it's simple to explain, it is a sign of absence of involvement. Likely, not much care is needed to make a difference where there is none. Central urban bus stops can be claimed to be neglected in the sense that they are cynical, with their commercial emphasis and benches that are deigned for discomfort, while the rural and industrial are neglected because they are simply forgotten.

I find the placement of bus stops in intersections in rural areas interesting. This is of course due to less risk of traffic accidents and reducing distances as much as possible, but it also says something about connections and importance. Even if the pipe marking the place is tilted it is central, tying the parts that belongs to it as tightly as possible.

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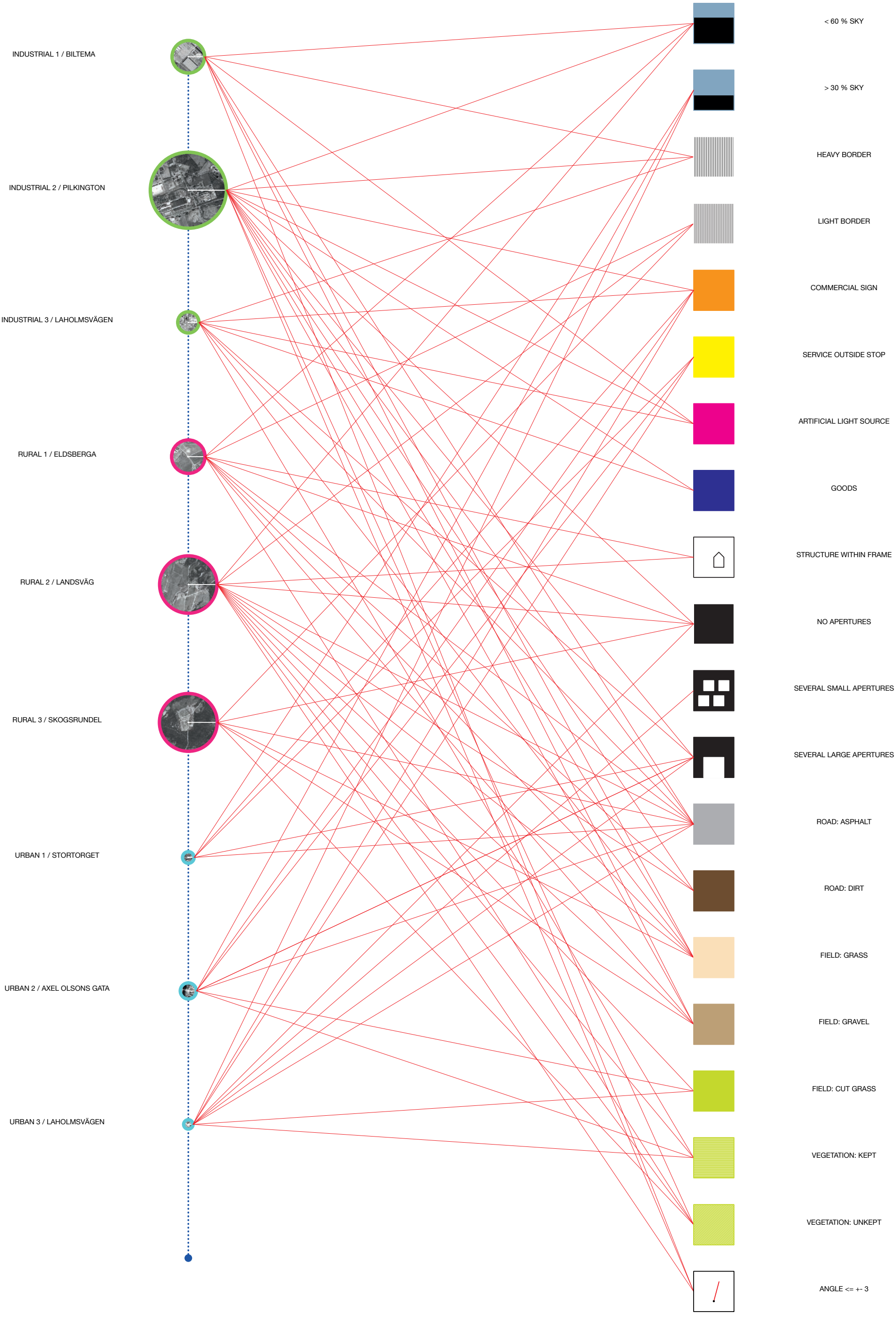
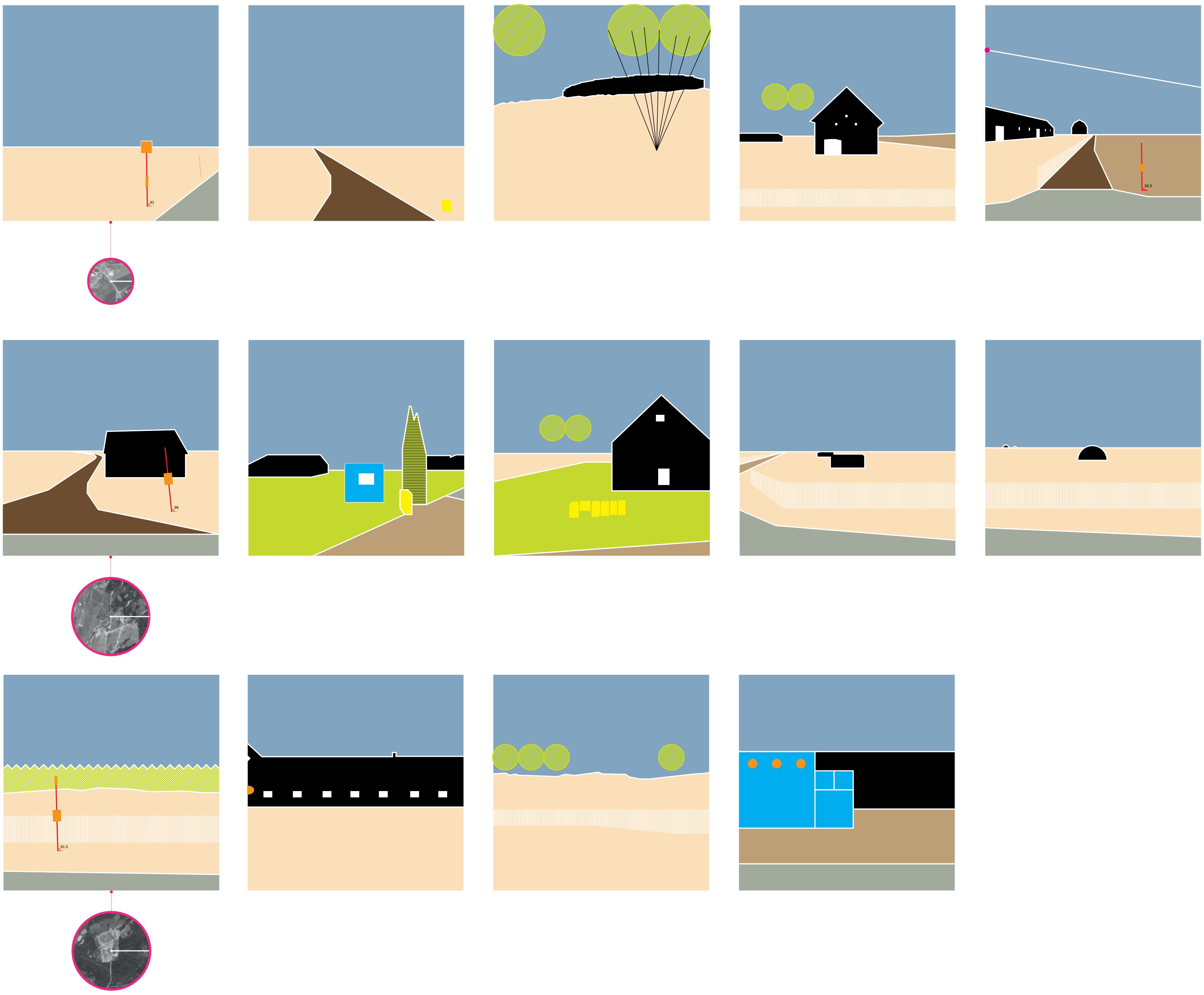


Mapping place • Features cross-referenced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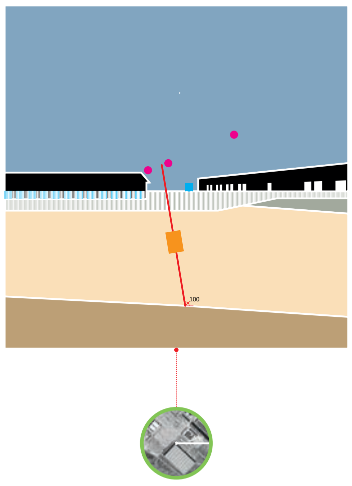
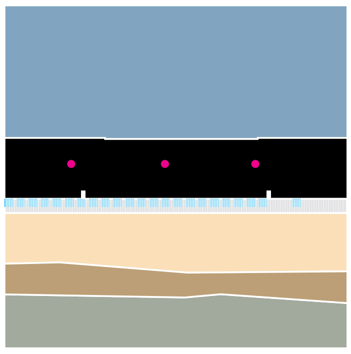
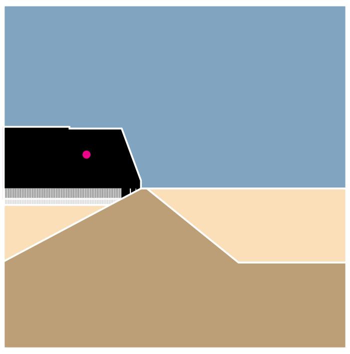
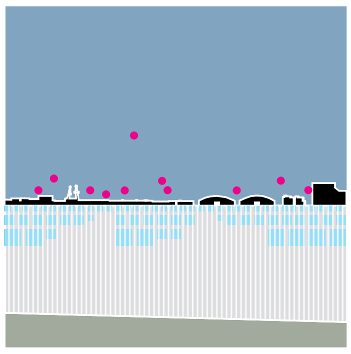
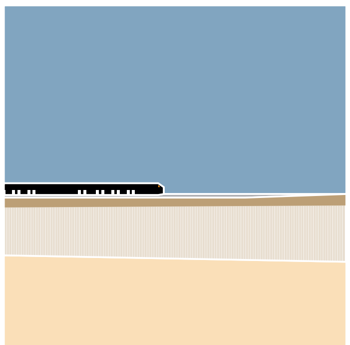
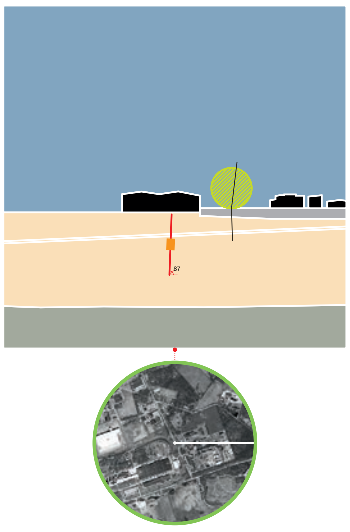
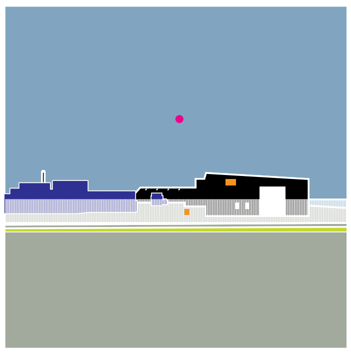
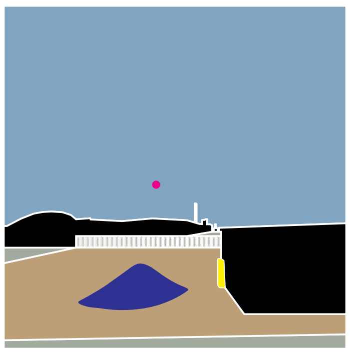
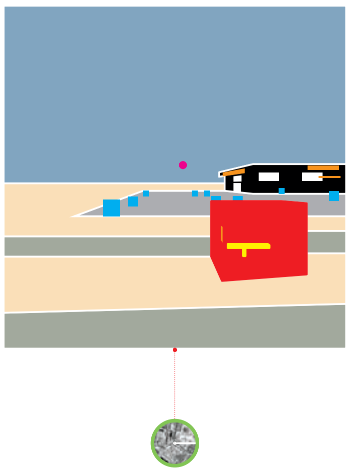
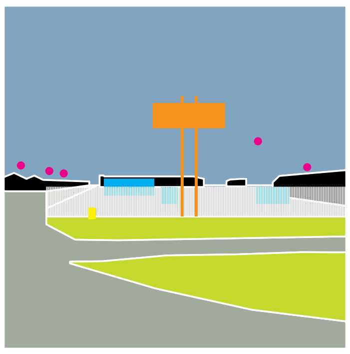
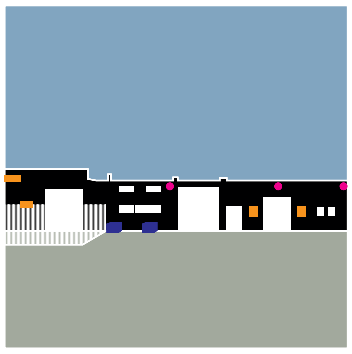








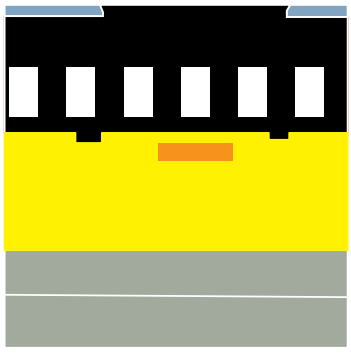
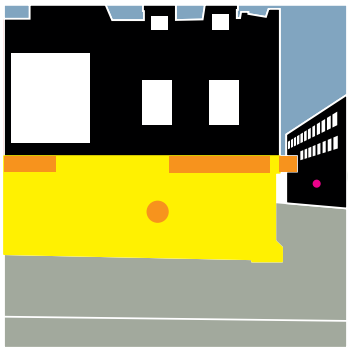
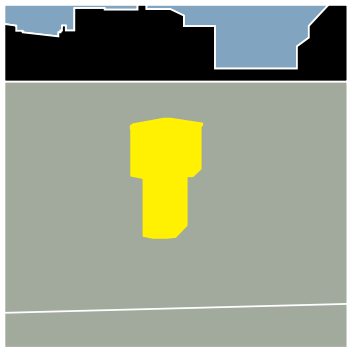
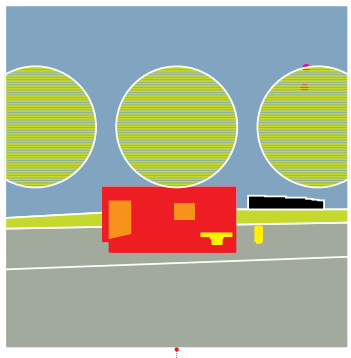


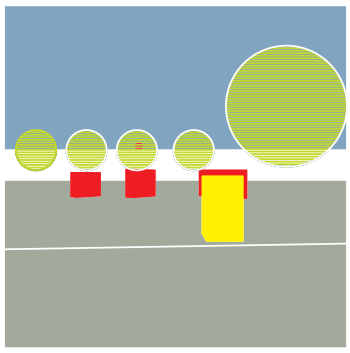


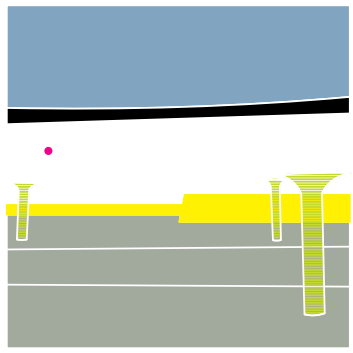
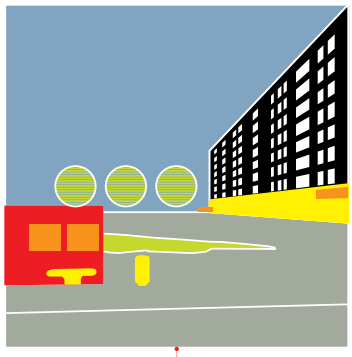




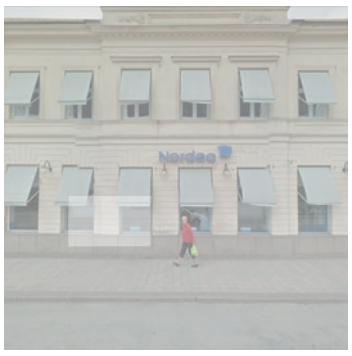

Mapping place • Industrial





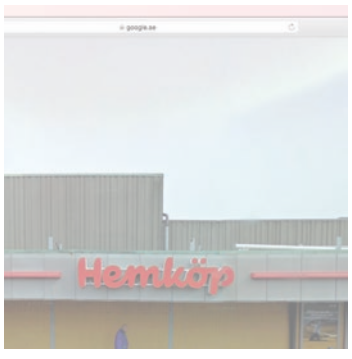

Nordea

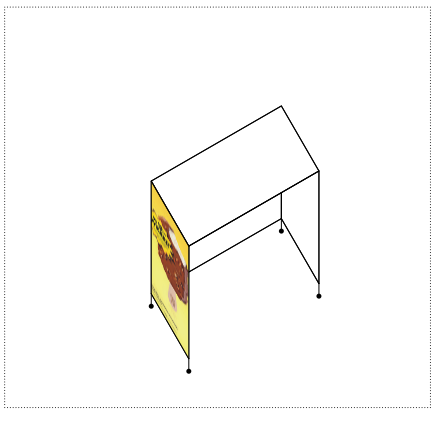
McDonald's

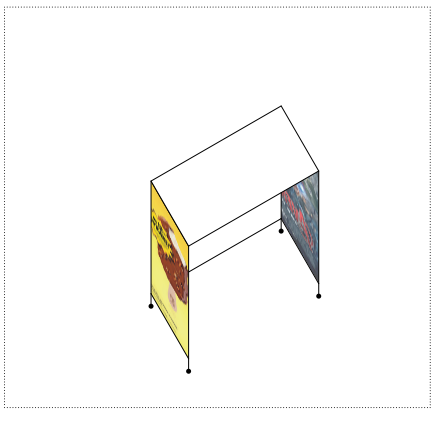


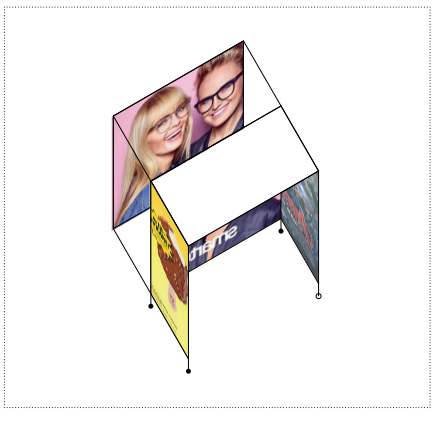


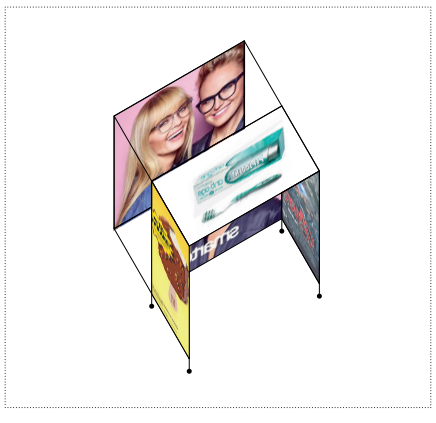


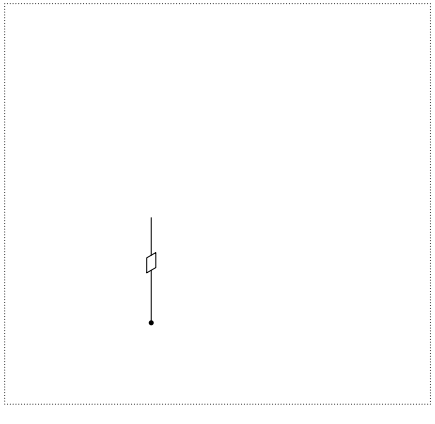

Hemköp

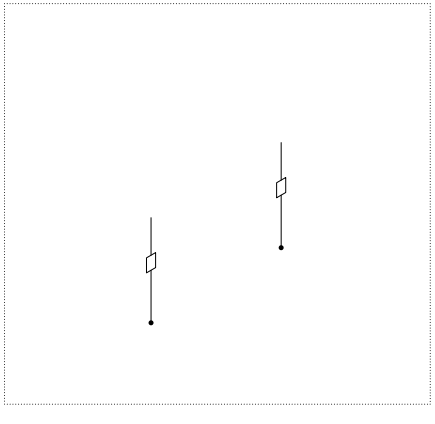



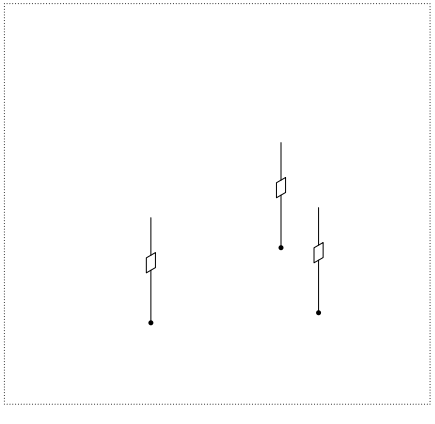


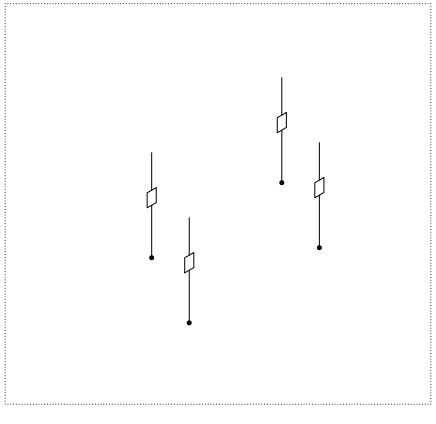


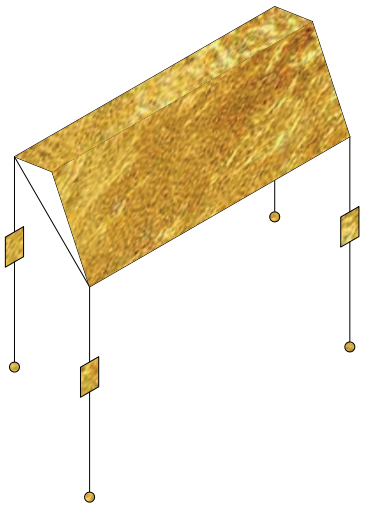










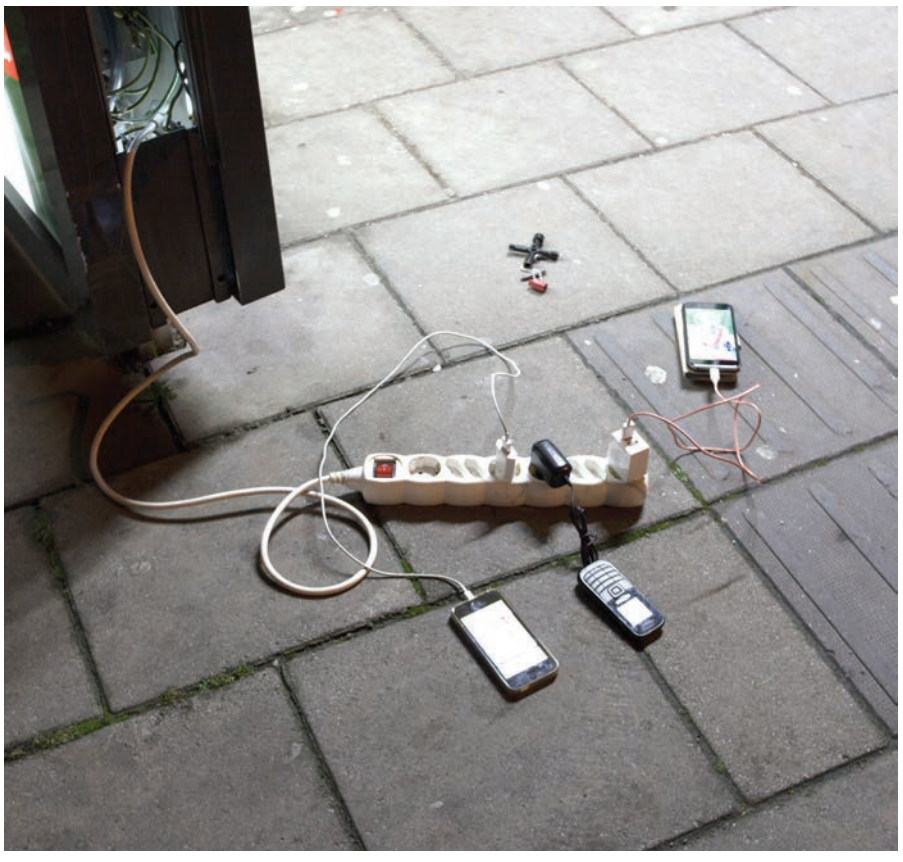


WHAT COULD even out the odds just a little bit between the stops of central and remote areas? Since an abundance of advertising is what's upholding the standard of urban bus stops, one obvious way would be a direct increase. An urban stop has three walls and a roof. They could, in theory and somewhat cynically, one by one be covered with commercials until you have a rural bus stop made of solid gold.

The advertisement light boxes of JCDecaux always glow with light, which could provide a different but related way of looking at the issue. Let's say, for instance, that if you open a light box with a utility key you will find an electrical outlet. This would provide a very convenient way to charge, say, computers or cellphones. Or both. Loosing battery in public space is a dud, usually far from the nearest socket. Bus stops are usually close by, though, and they are sheltered. Let's say, for instance, that parties with interest in targeted advertisement would find interest in paying for the right to provide electricity to bus stops, be it standard, USB or induction, this could also be a means to extend the investment of resources to the remote.

Digital advertisers are dependent on receivers having functional devices and at a bus stop there is not much to do than stay put. charge and receive. The way to advertise digitally in stops is at the moment locked inside the analog one. They could, of course, also house a small party!


JCDecaux

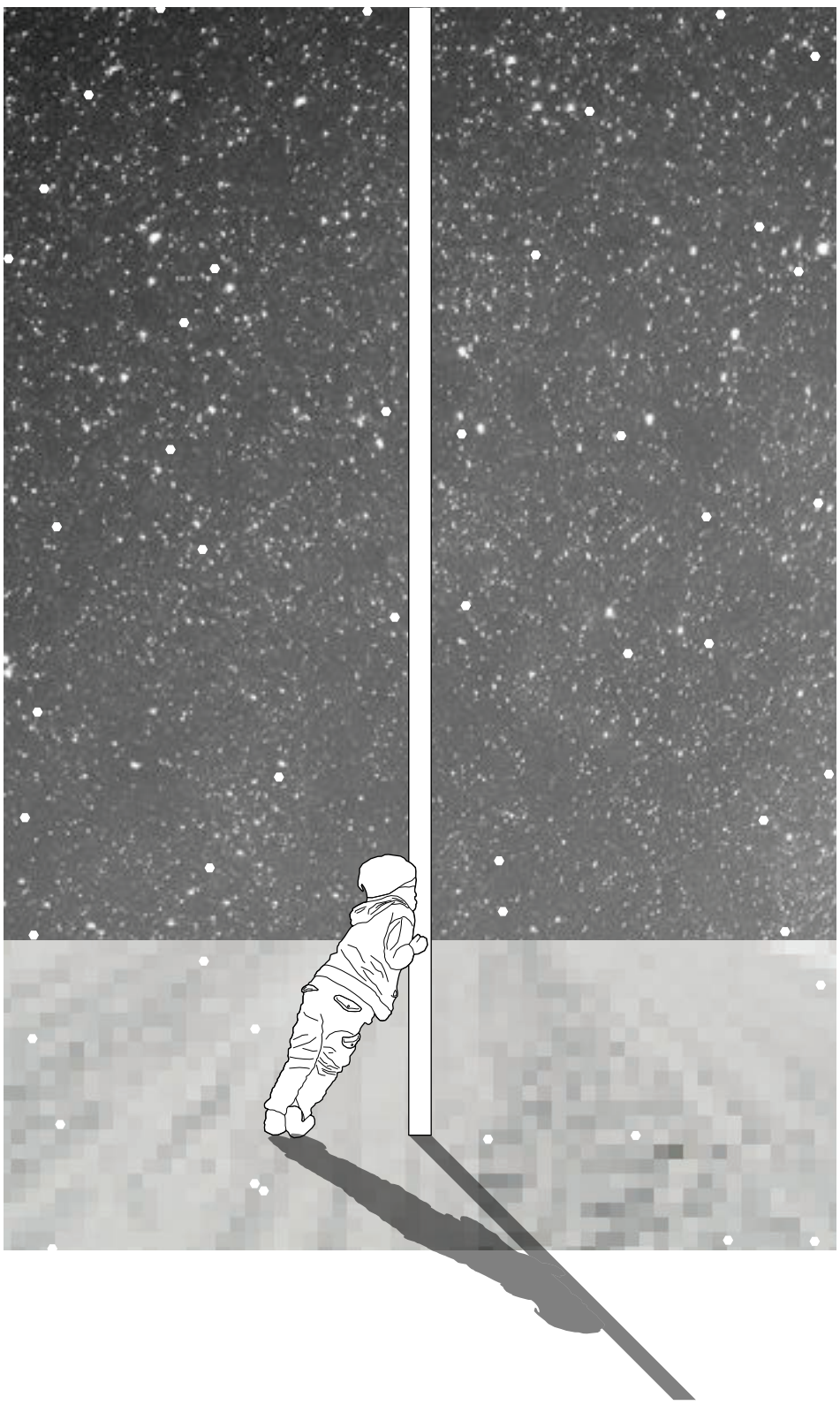


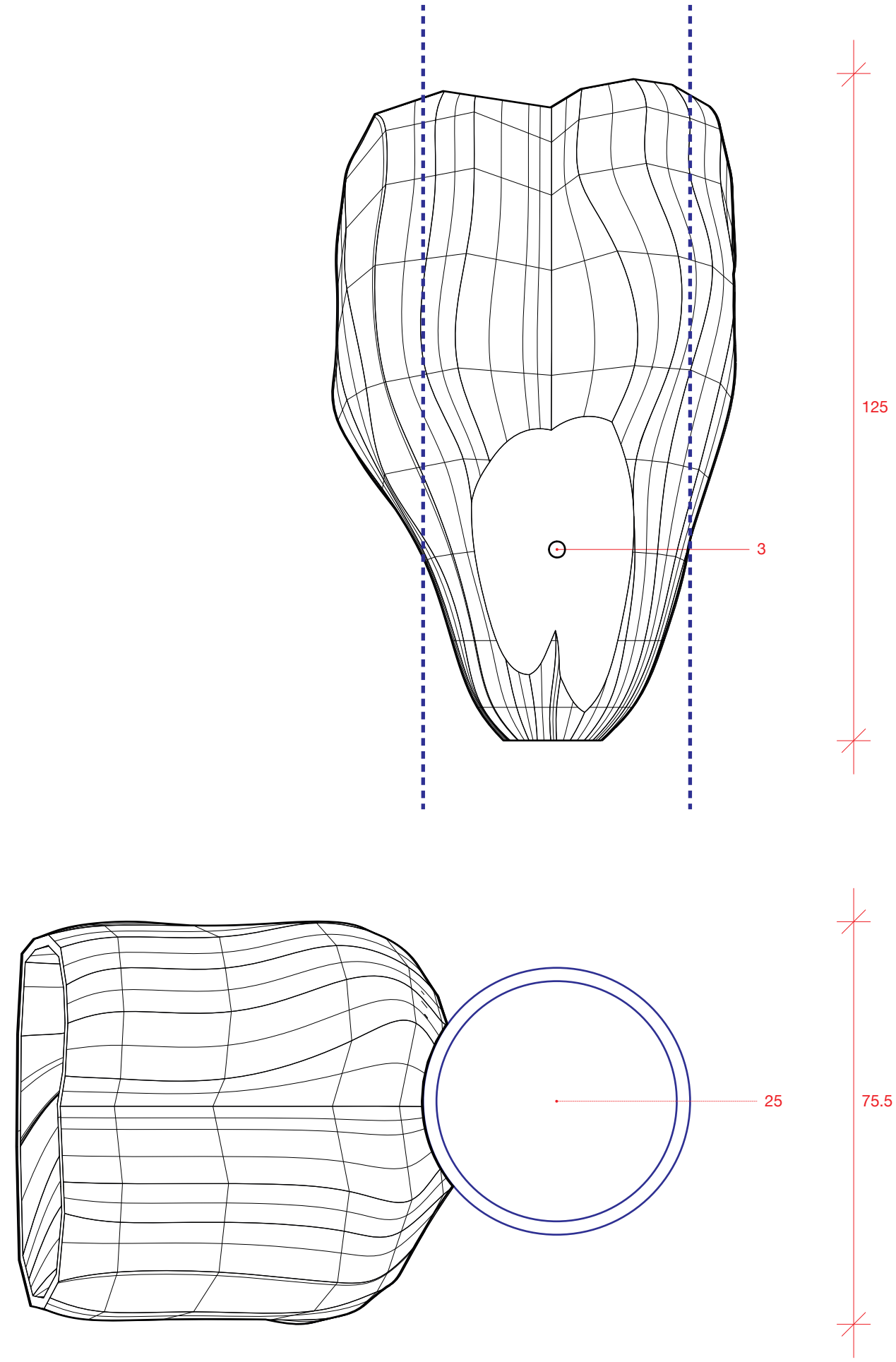
• residues

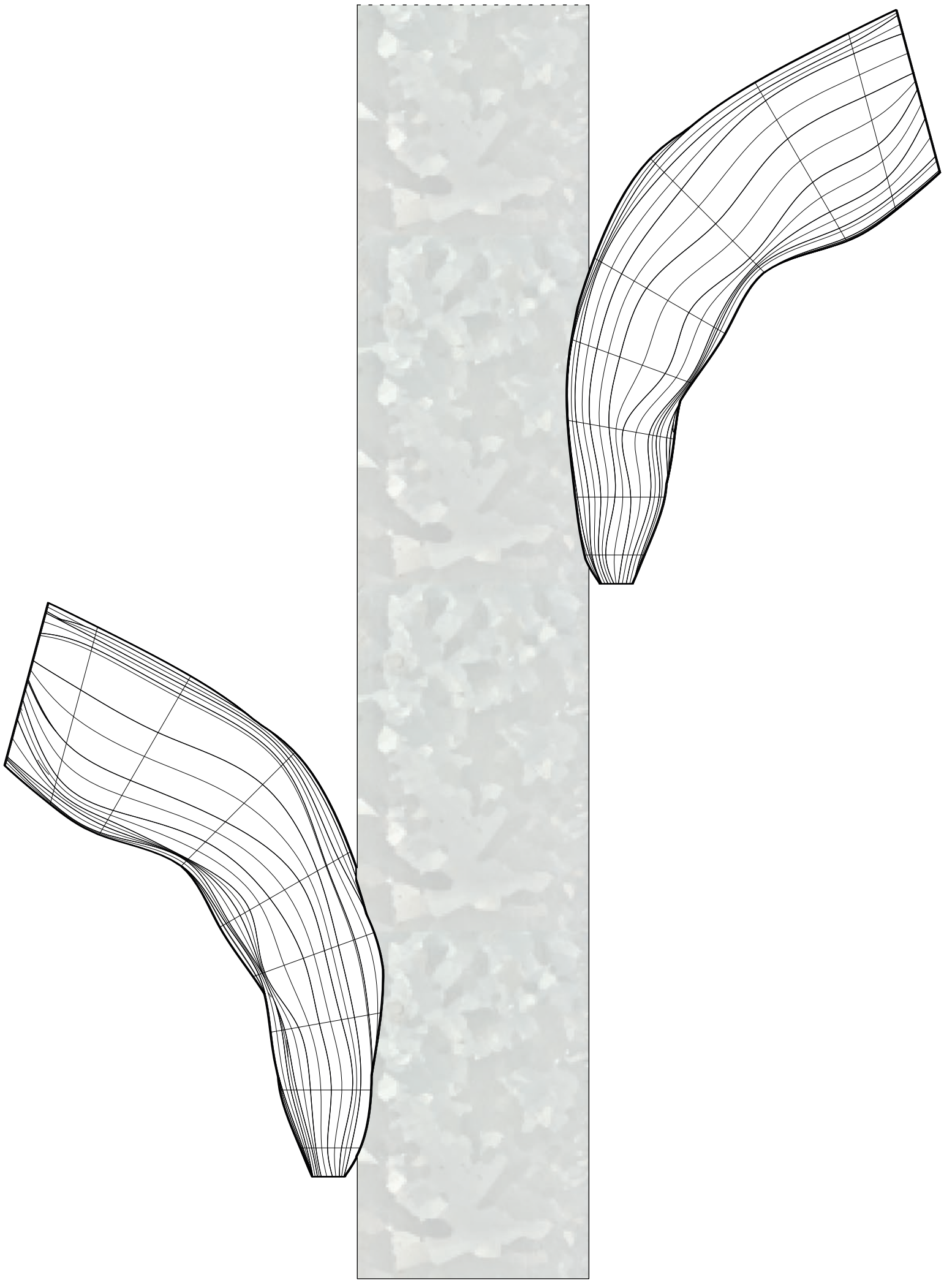
WE'VE ALL BEEN THERE, at one point or another, stuck to a lamp post or bus stop in minus degrees. Taking a stand to work with remote bus stops, looking to imagine how to develop what is held in the lowest regard, the issue of how to work with small resources in vast landscapes arise. Going into the design process, investigating associations and relation to place, one way to find leeway is working with what is already there: metal and pipes.

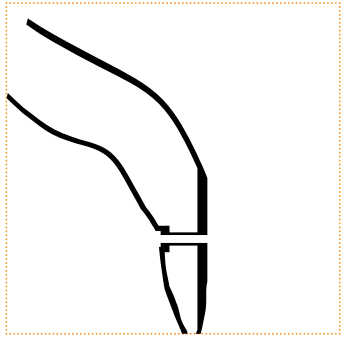
The presence of company is a strong place making mechanism. When company is absent, the traces of company can fill a similar role. Residues have no immediate functional purpose, they might be used to hang your bag or rest against. In a larger scale, they can provide a seat. What they are, are something that holds associations of people and their relation to bus stops. A remainder that someone has been there before, and as an object that someone has put care into the place. In this way, they are a meaningful decorations.

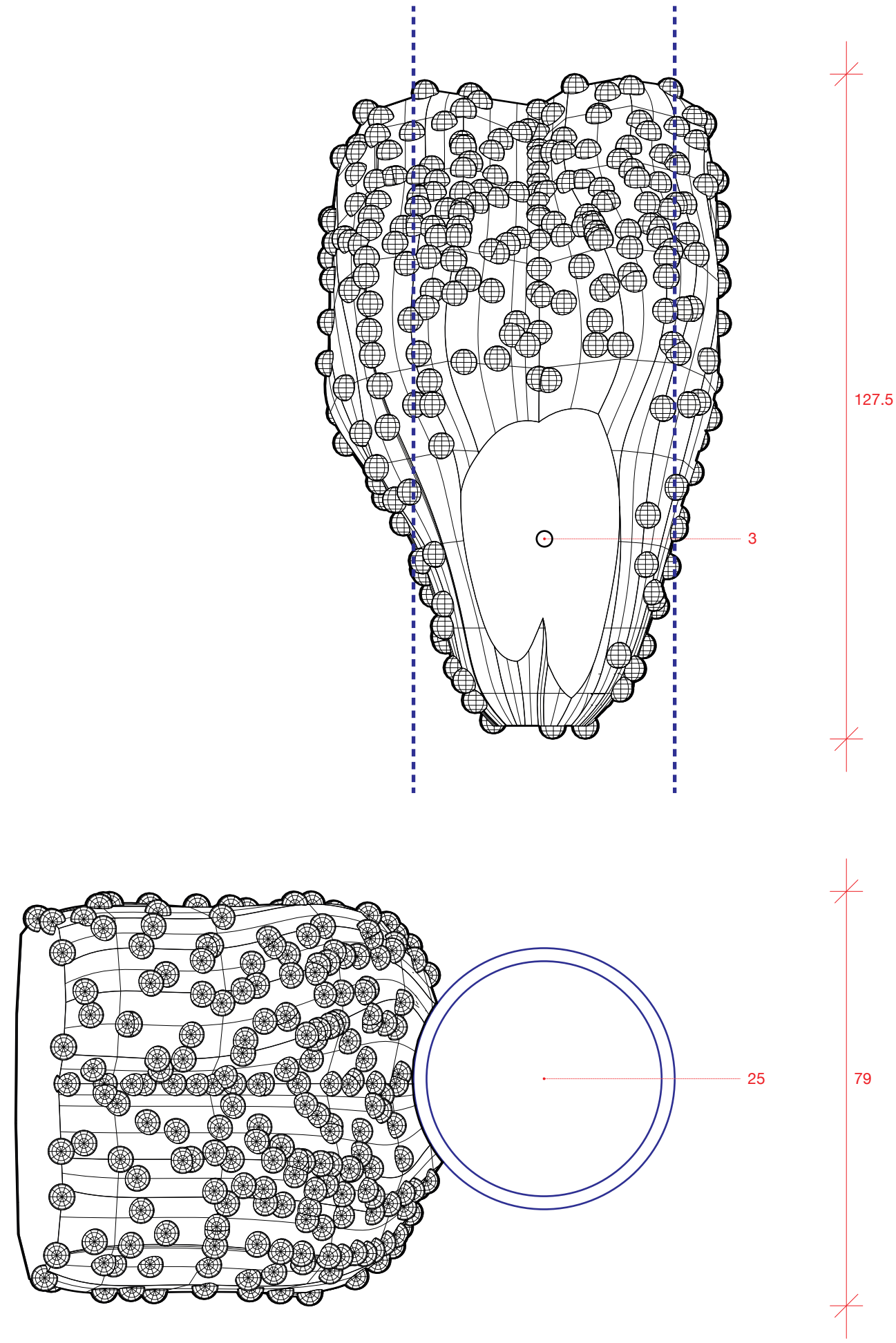
The tongues are produced in metal by EBM, a method of additive manufacturing where the material is melted by a high powered electron beam. 3d-printing is often associated with prototyping, but printing in industrial quality materials also makes possible production of building parts with material efficiency, seriality and possibility of individual adjustments. This provides a way to create highly detailed objects of high quality with very little cost.




125
3
75.5
25



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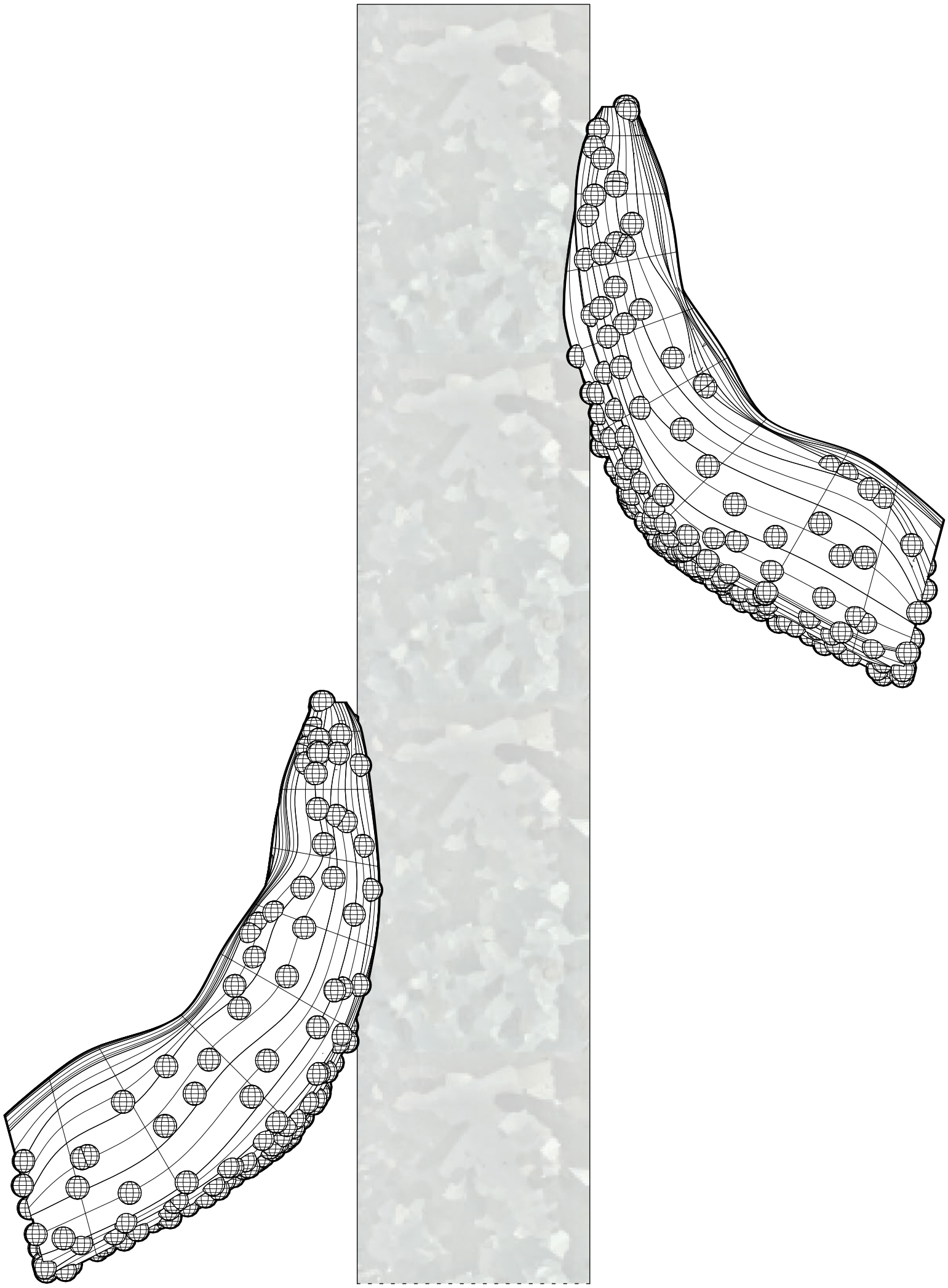
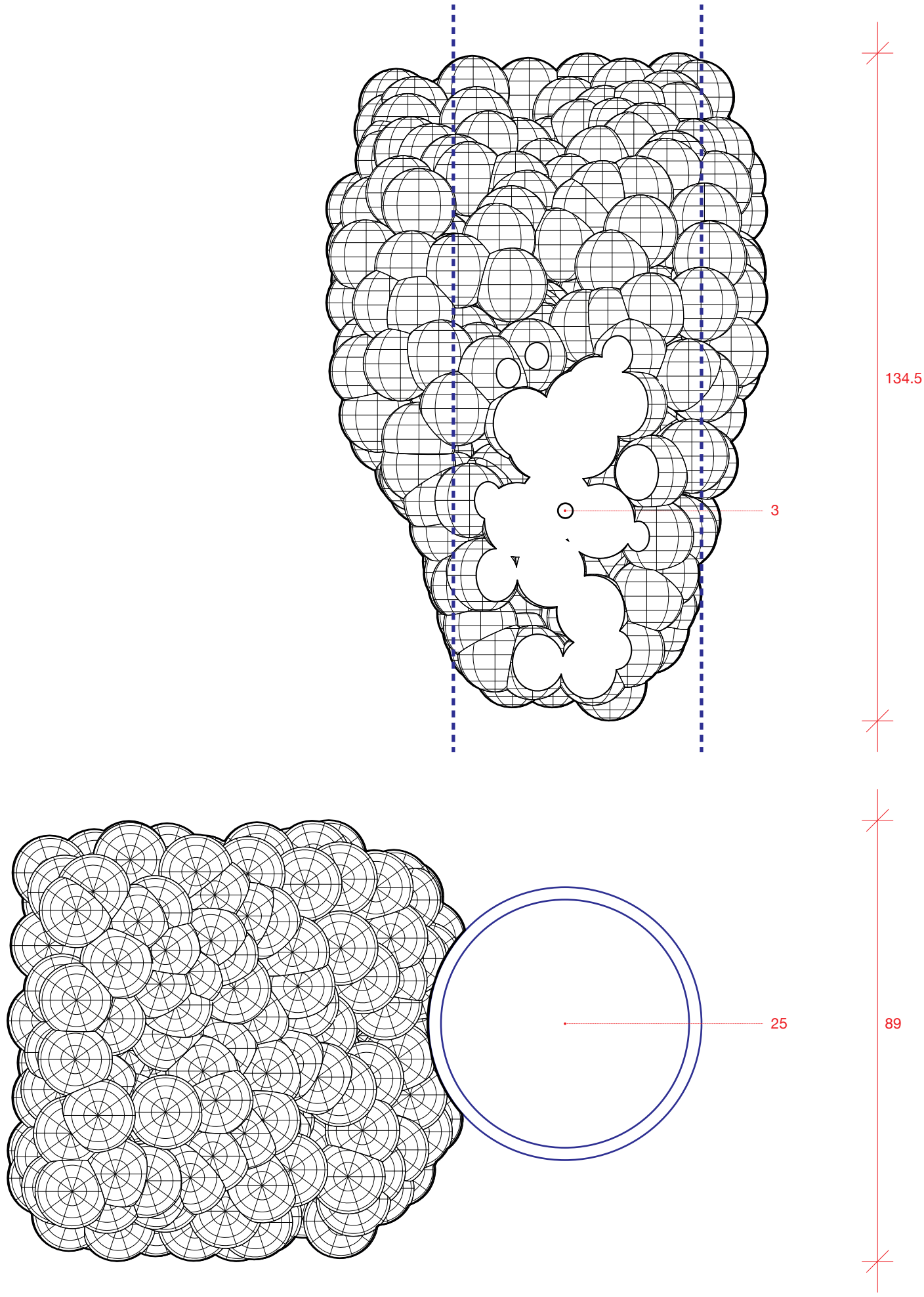
3
25
79

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3
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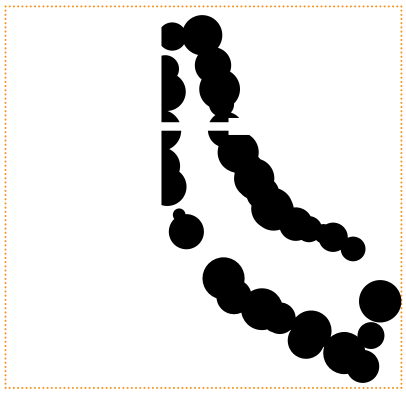
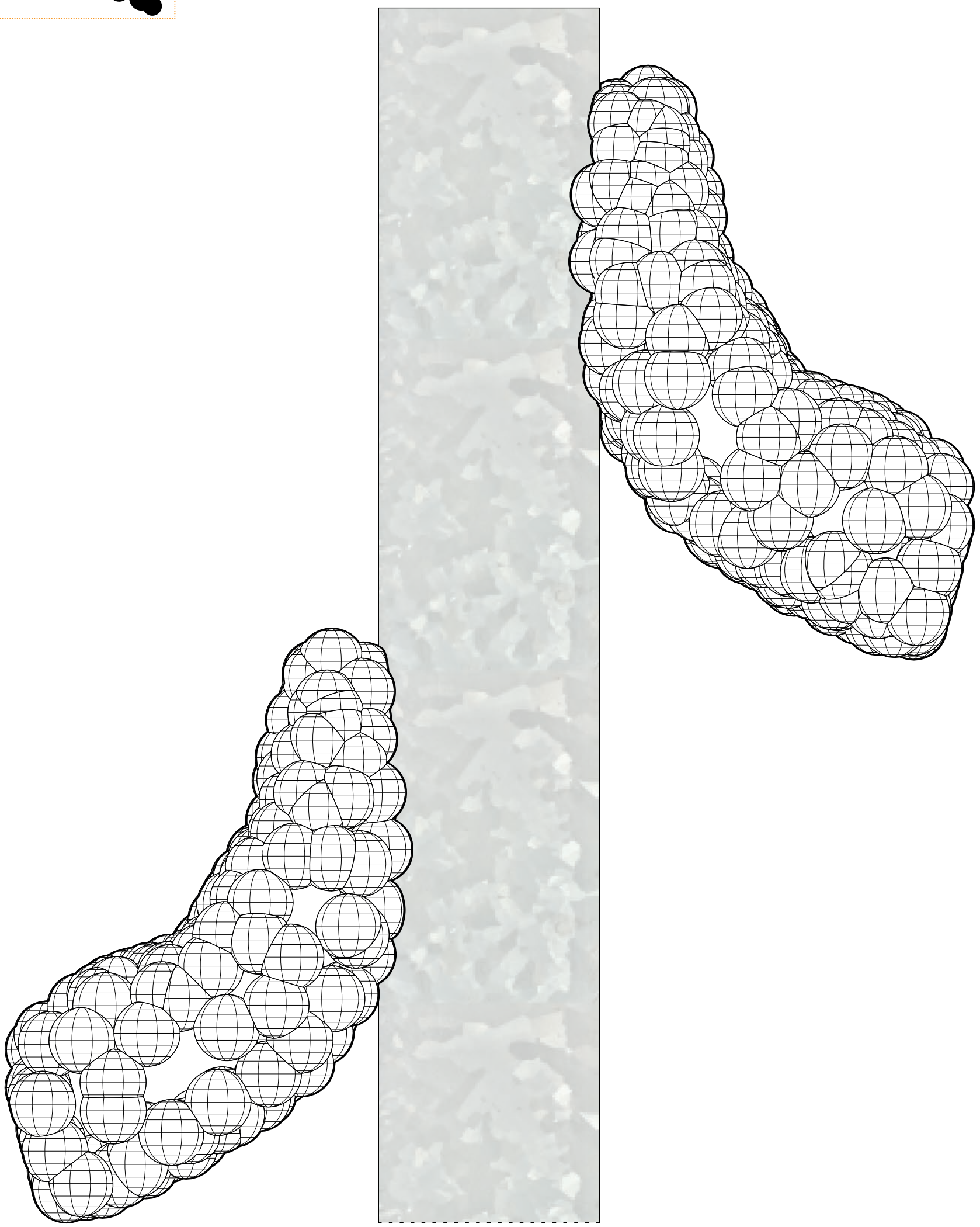
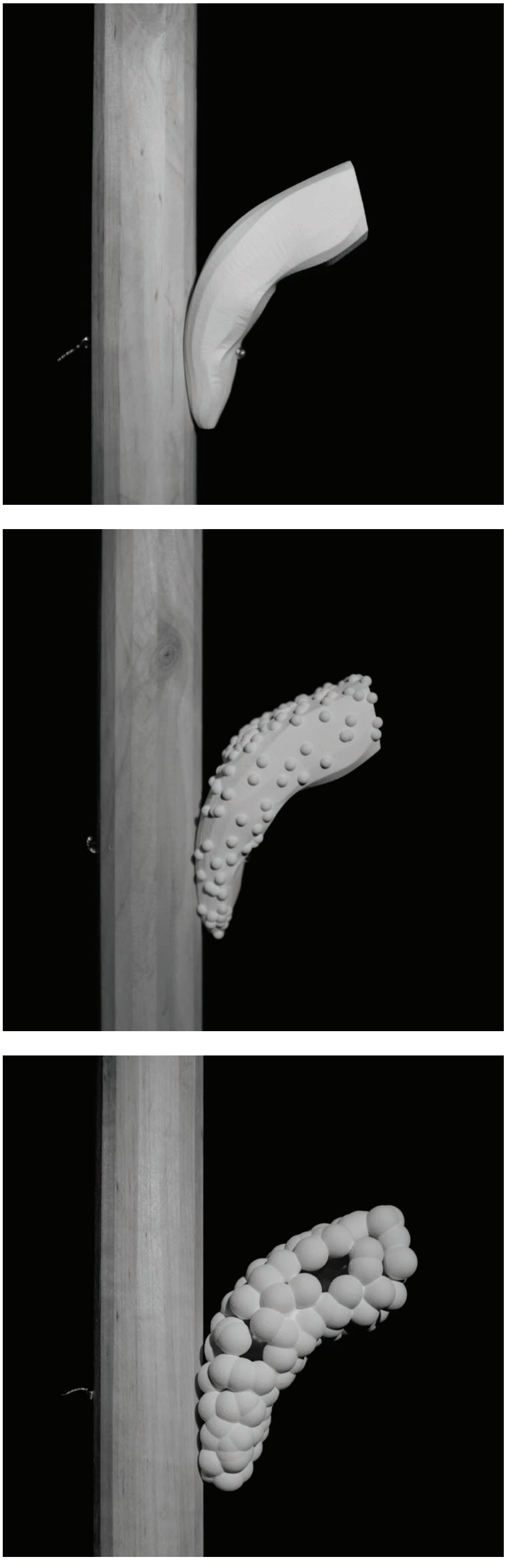
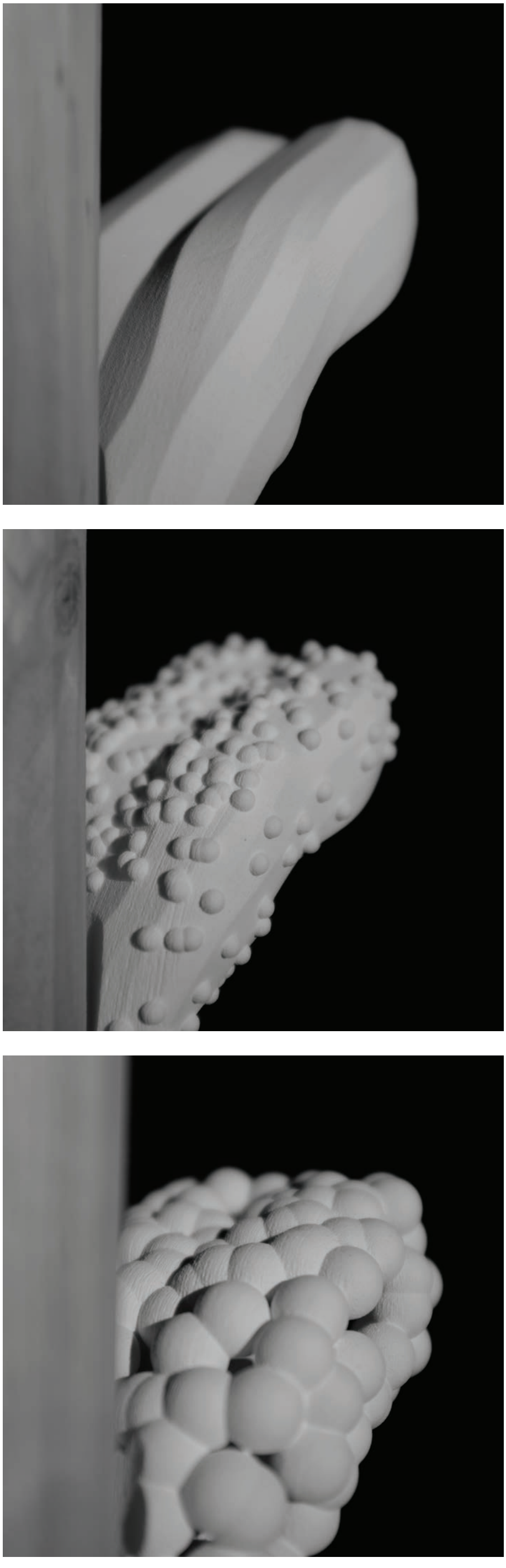






Views • Side



Views • Detail

• pipes

BROADENING THE SCOPE further, a possibility for designating a place is making the pipes themselves come alive and relate to their surroundings.

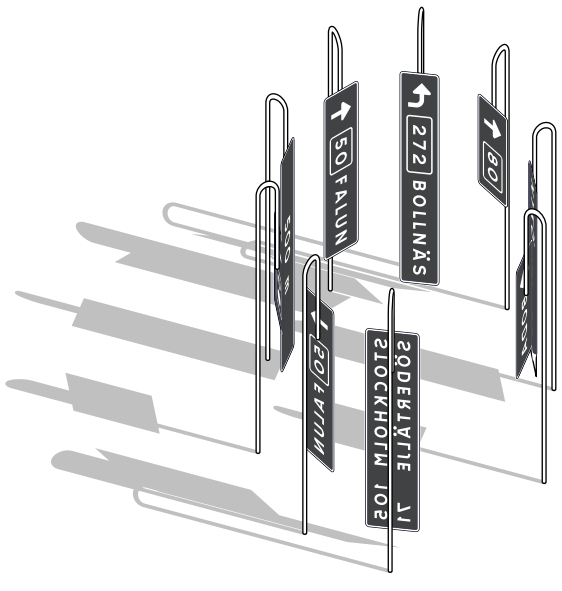
• sign and symbol
Experiment one emanates from the downhearted tiltedness of bus pipes, trying to turn it into a purposeful feature. The pipes are bent in different angles, waving or crouching or reaching out, with standard road signs attached to their ends. The signs loose their purpose by this, but find new ones in shelter for rain or wind, making space for seating or backrests.

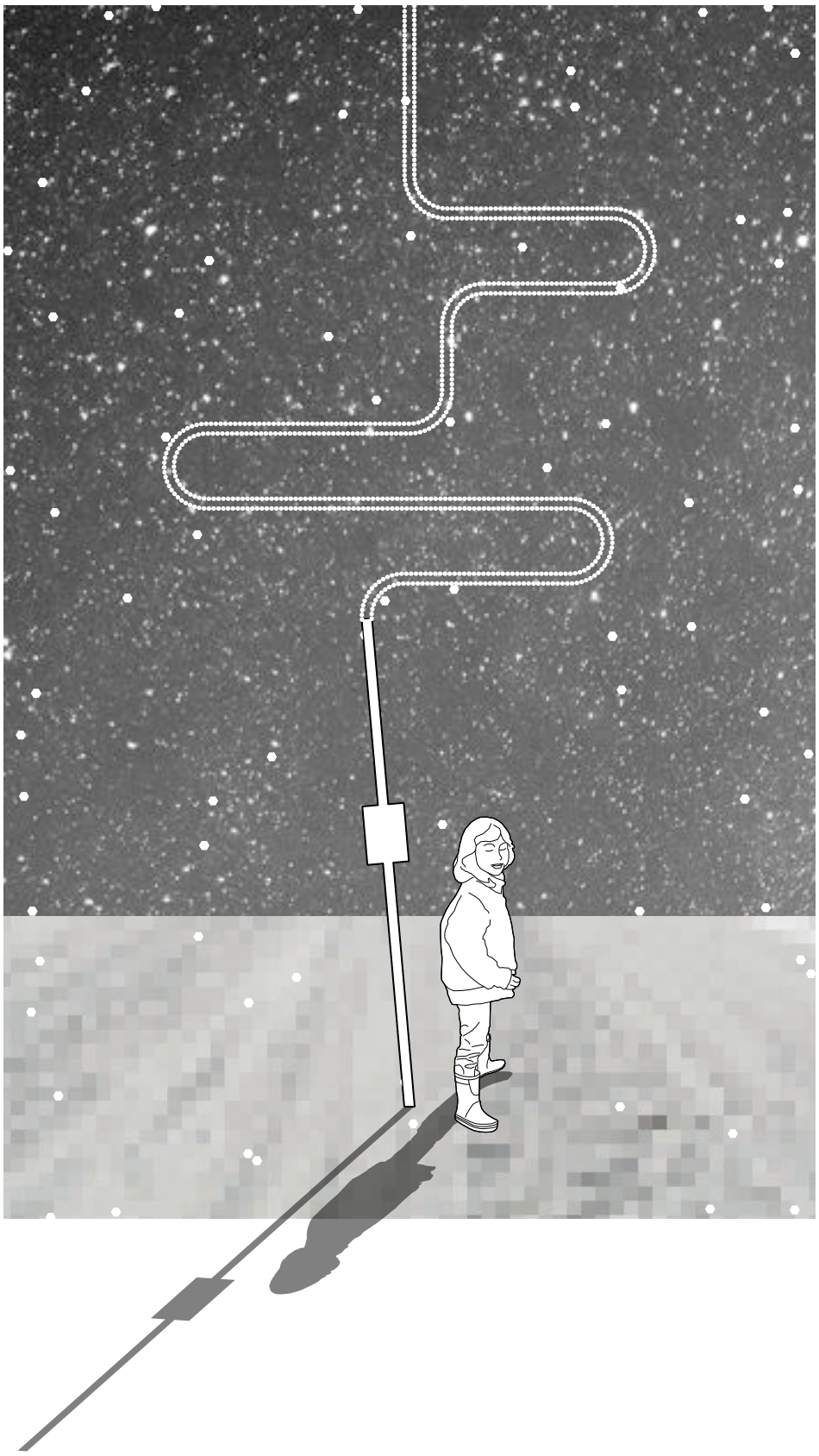
As a closed system of signs, they may appear just a little bit too self referential and introvert. By applying this along several stops, they might create a new kind of monotony.

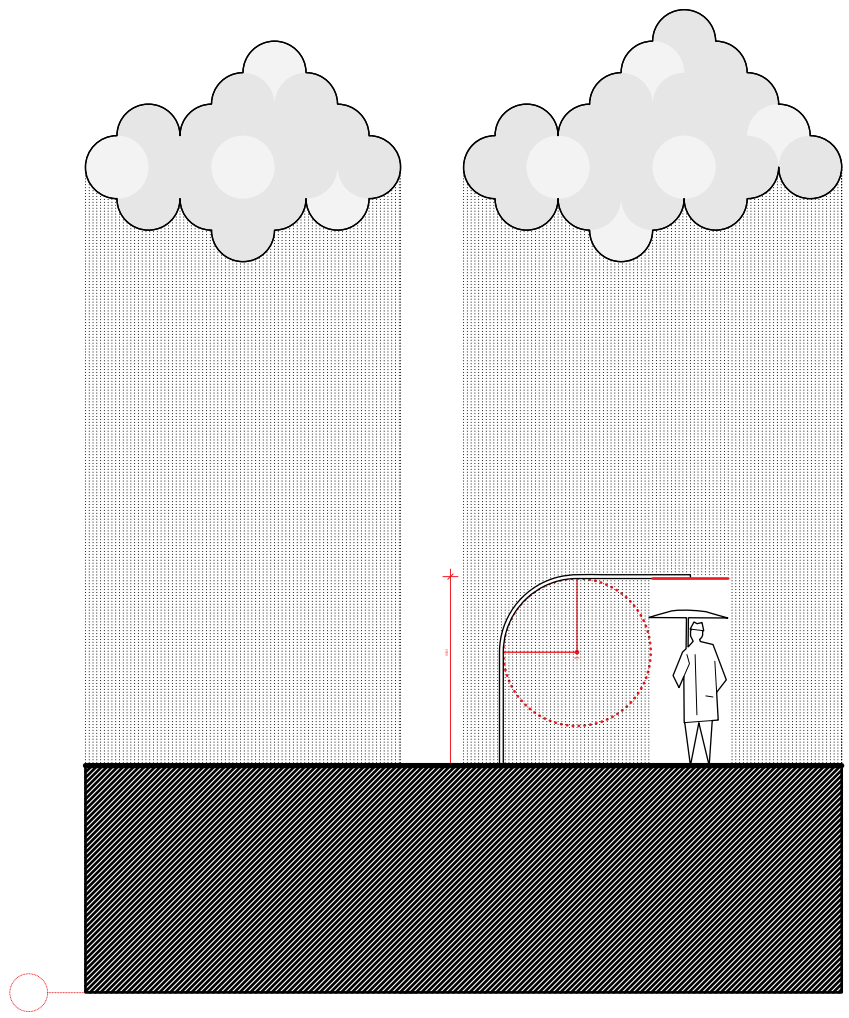
• place impersonations
In an effort to relate further to their environment, and to reach outside of self reference, the pipes grab hold of their surrounding and imitate it. This might be a structure, a tree, a stone wall, moving water. Whatever is around. From certain angles, they appear as a metal massing. From the road, they shape a clear silhouette.

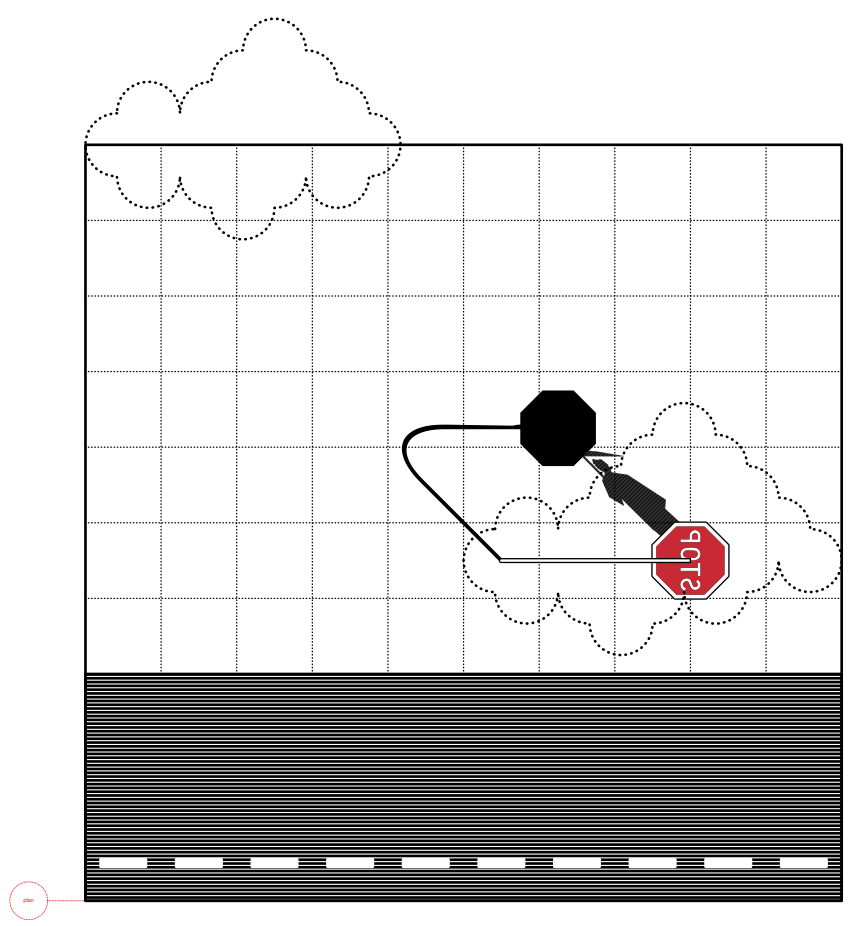
• surge and movement
When there's nothing but open space, a seemingly feather light structure can expand over the void. Experiment number three is investigating place making with tensegrity structures, held together as they reach out into and over the environment by tension cables.

I find experiment number three the most interesting, as it has the ability to create both vast or small objects, highly modifiable, with very little means. They also take root in some of the significant features of remote bus stops: the great openness, the stillness and the high sky. As it moves for its' surroundings, using the open sky as a backdrop, it still very much remains a thing in itself :somewhat alive, reacting to the environment as the wind grabs hold of it. Or someone touches it and sets it into vibration.

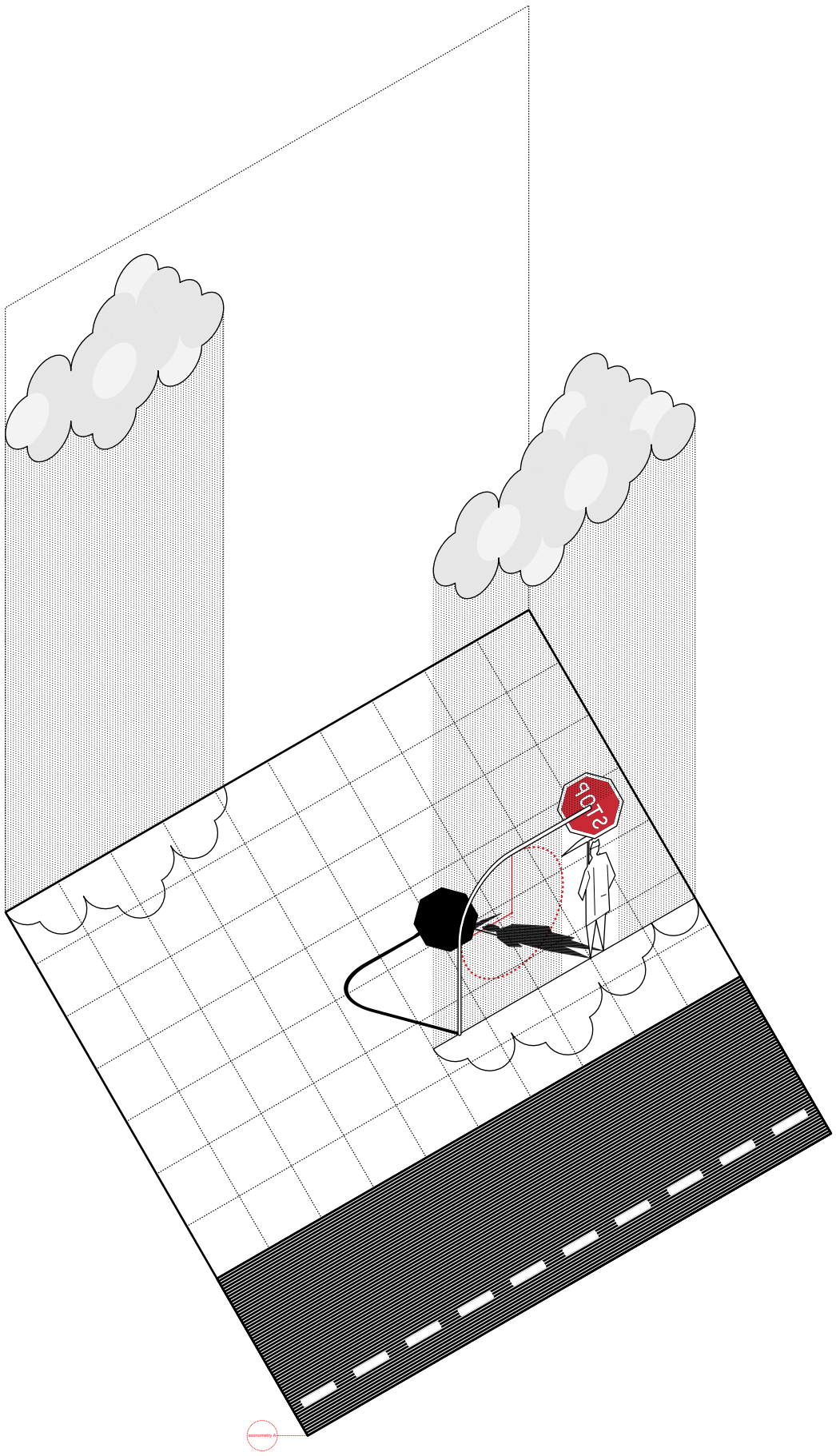




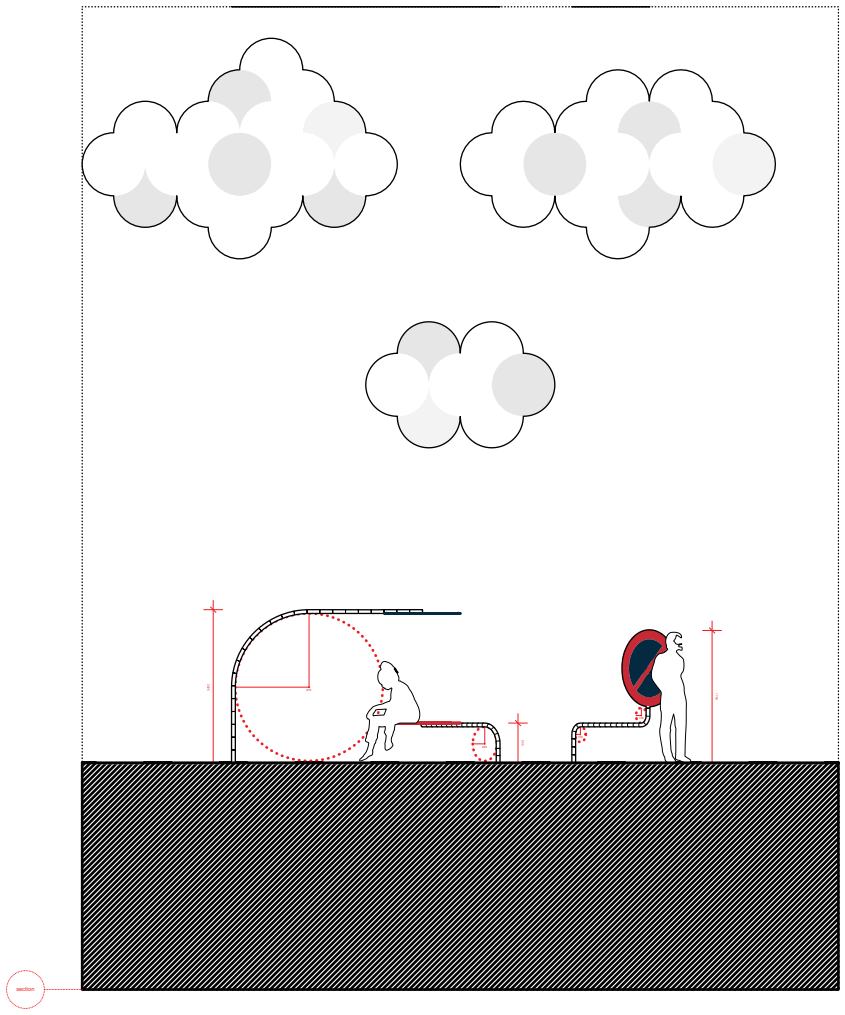


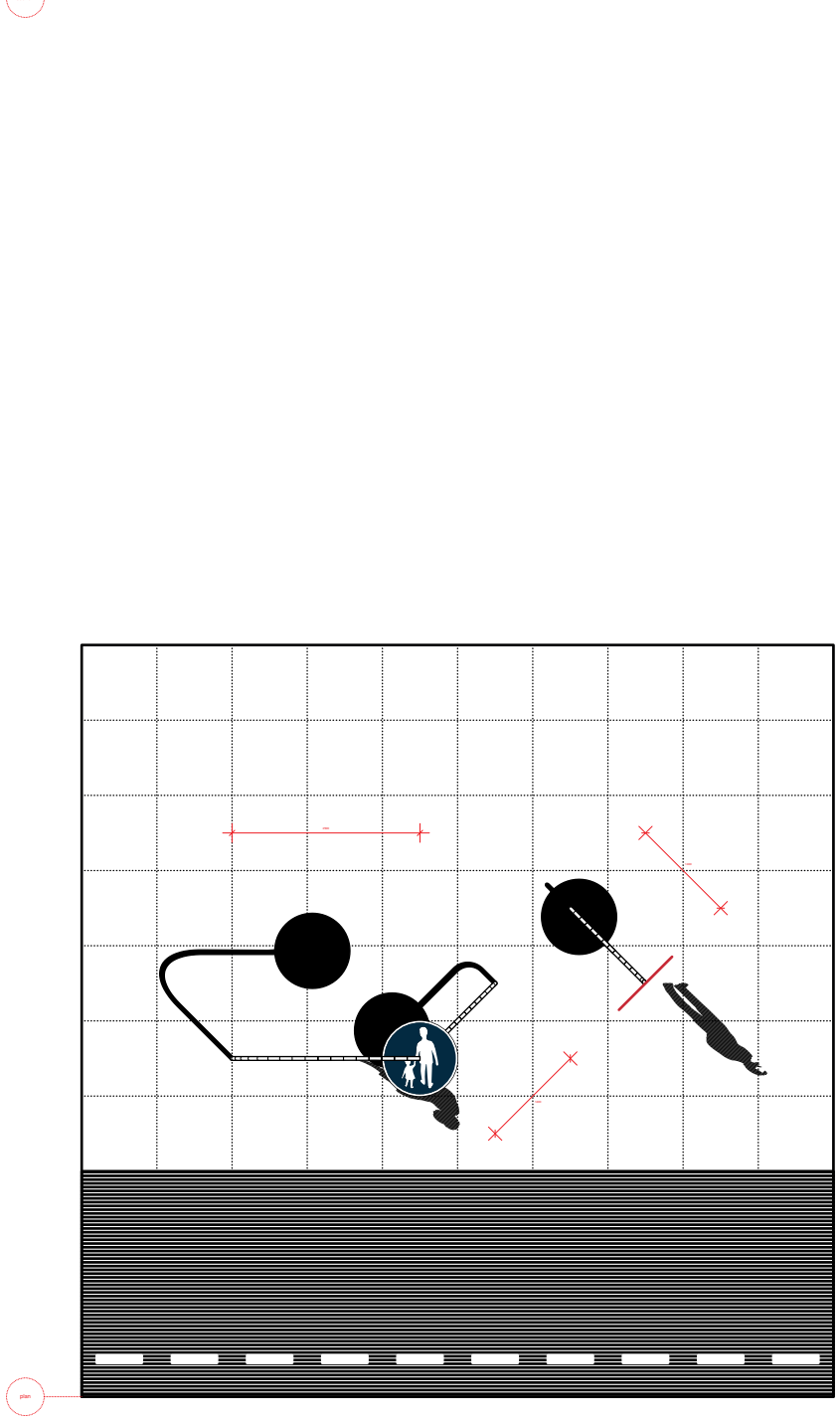


Sign and symbol #1 • Plan and elevation • A3 / 1:100

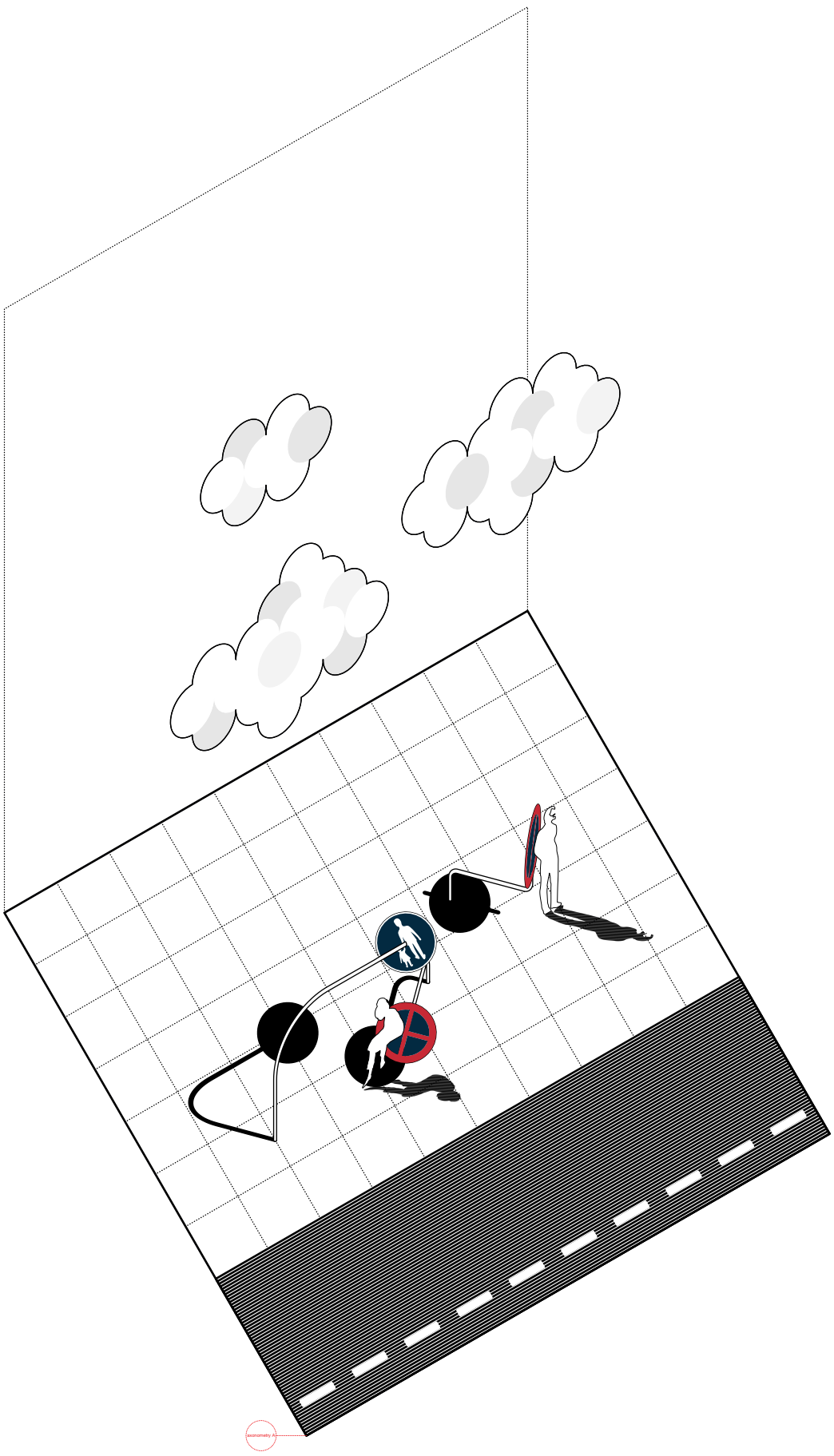


Sign and symbol #1 • Axonometry • A3 / 1:100





Sign and symbol #2 • Plan and elevation • A3 / 1:100



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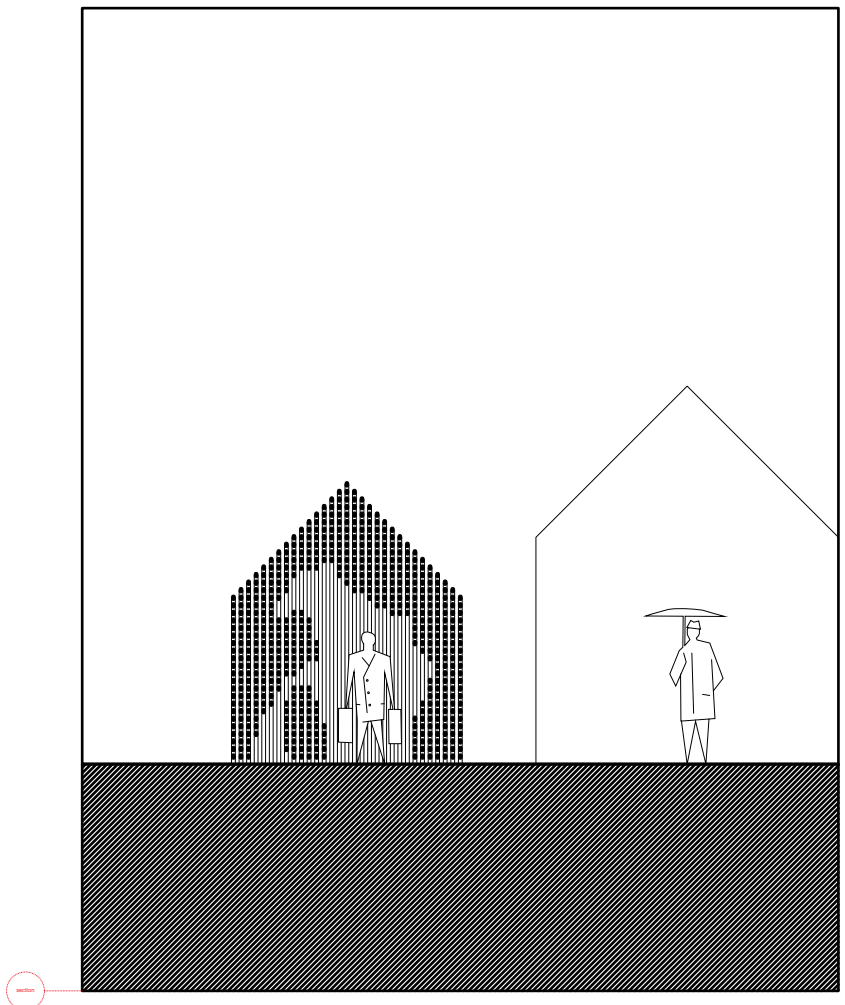
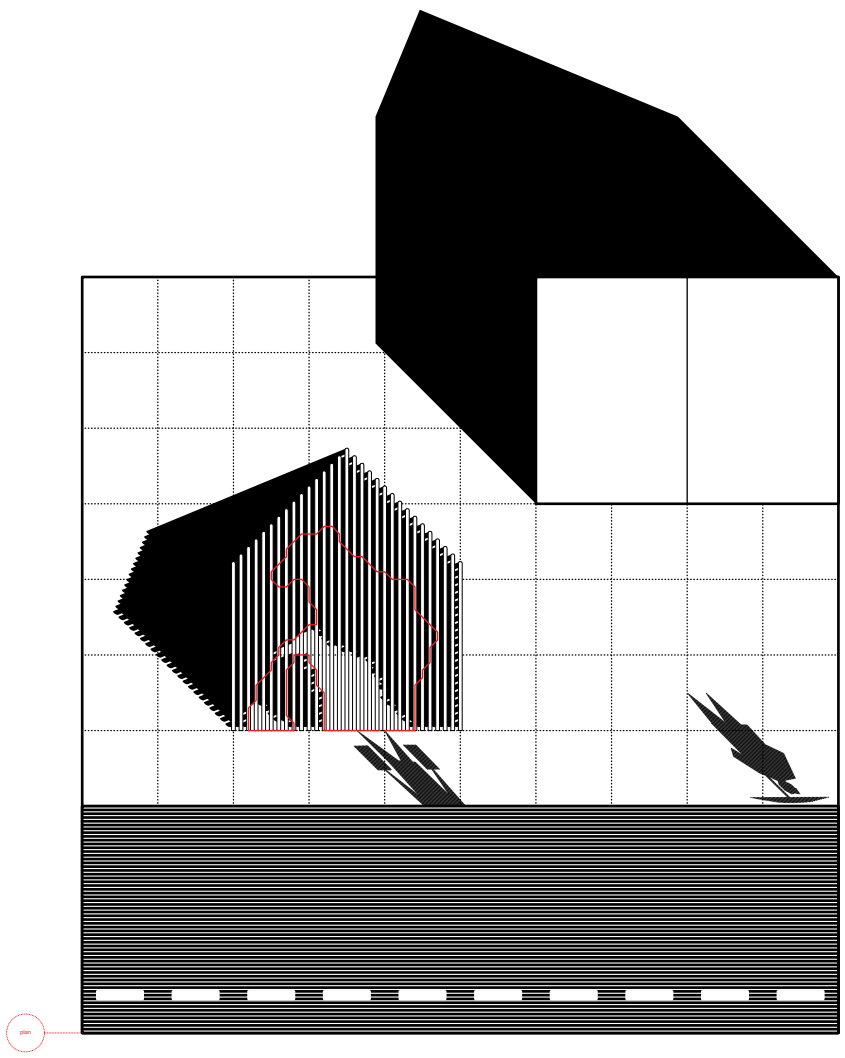
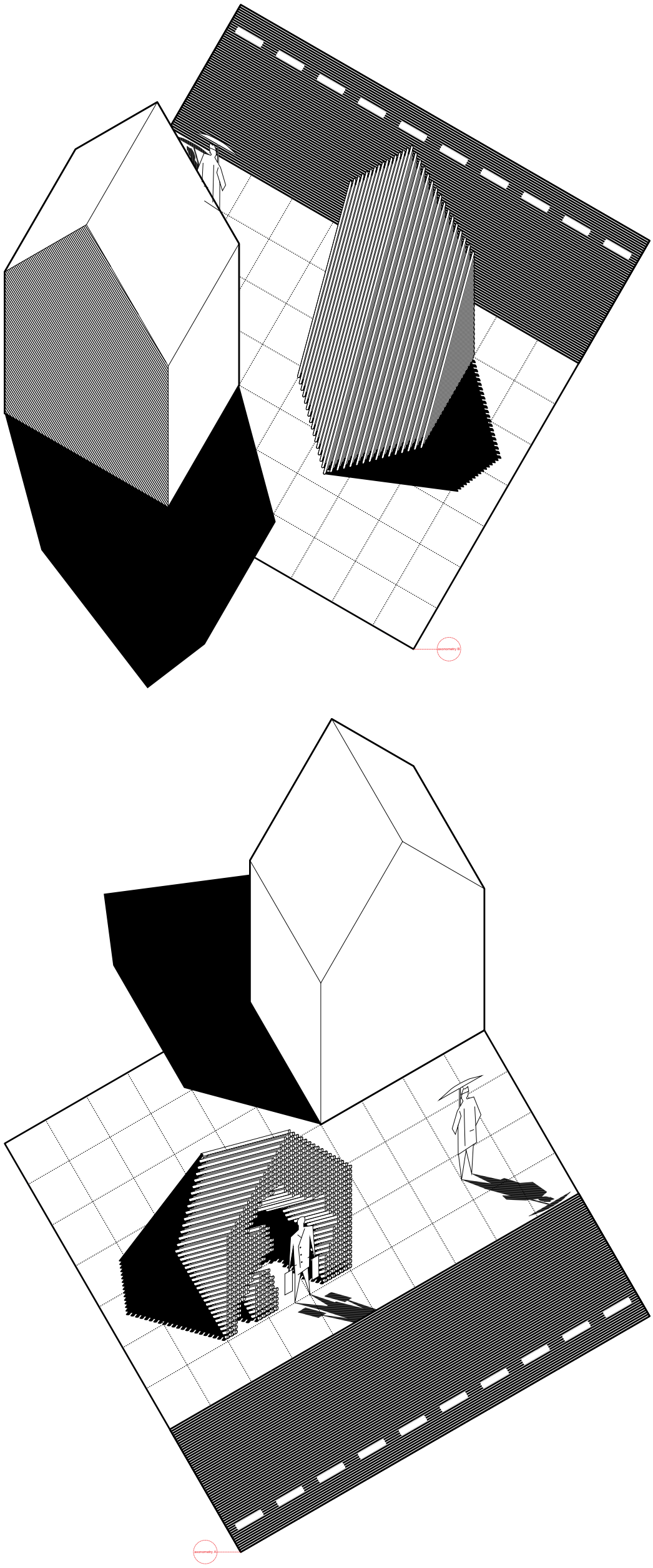
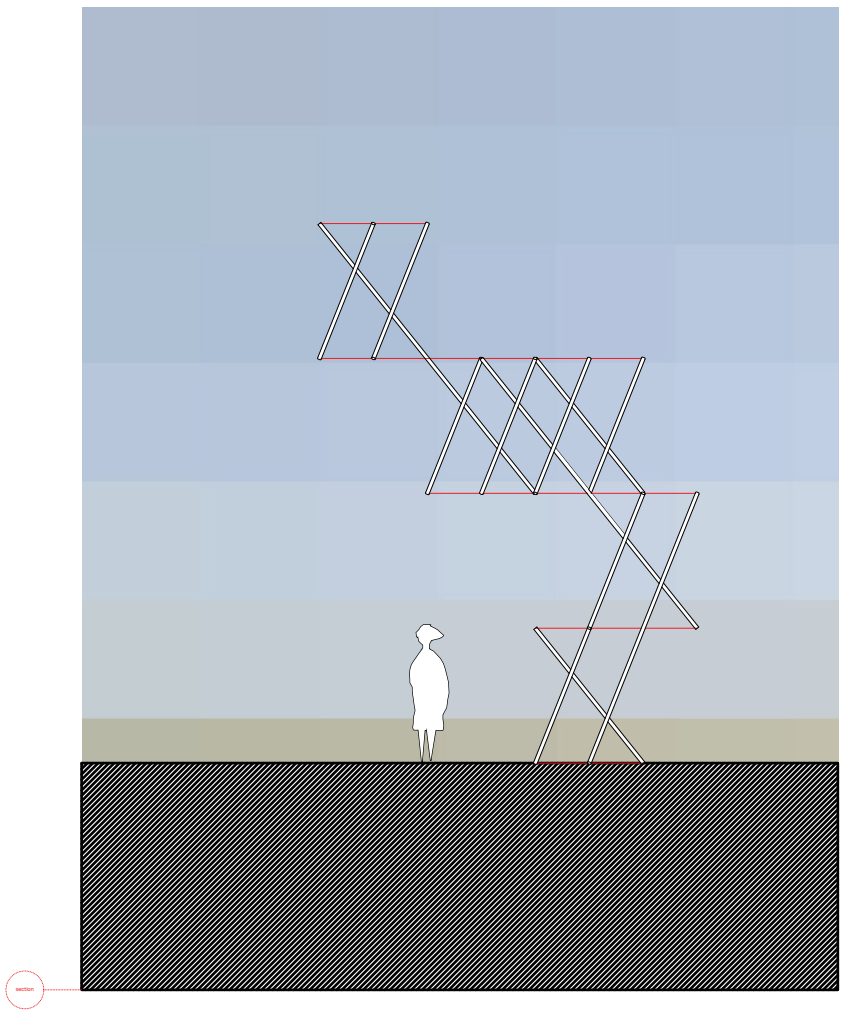


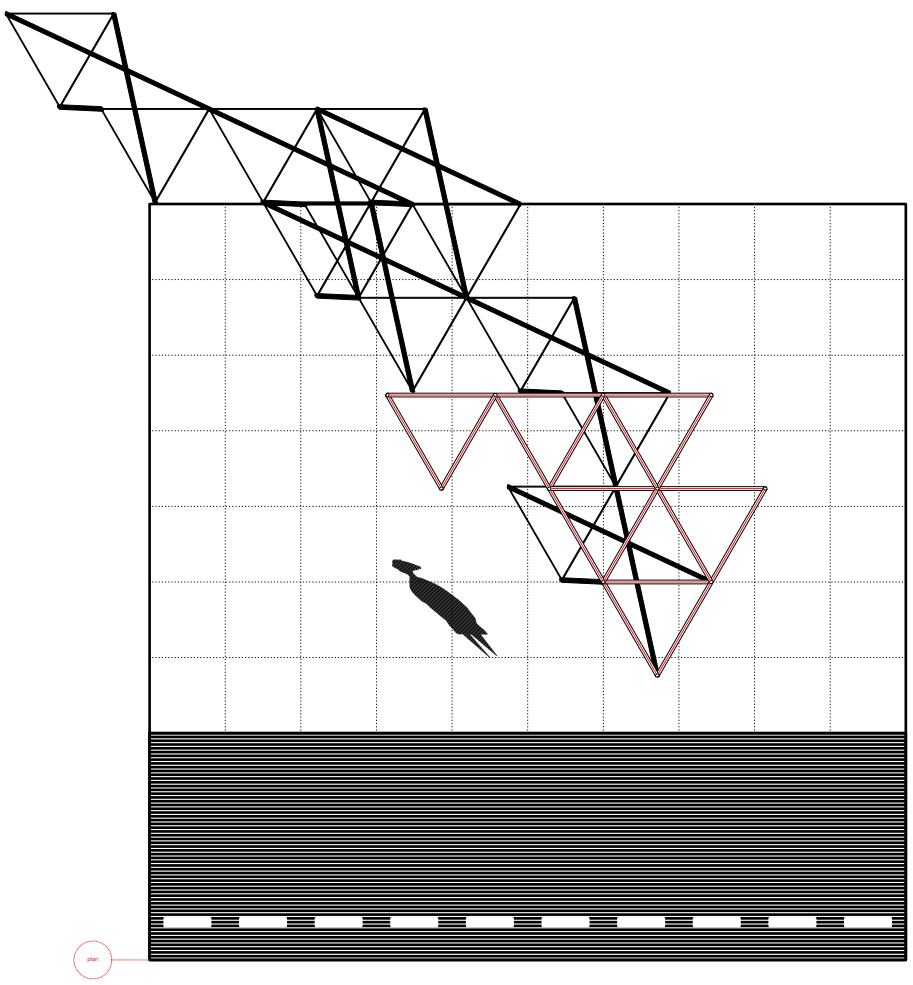


Place impersonations • Plan and elevation • A3 / 1:100

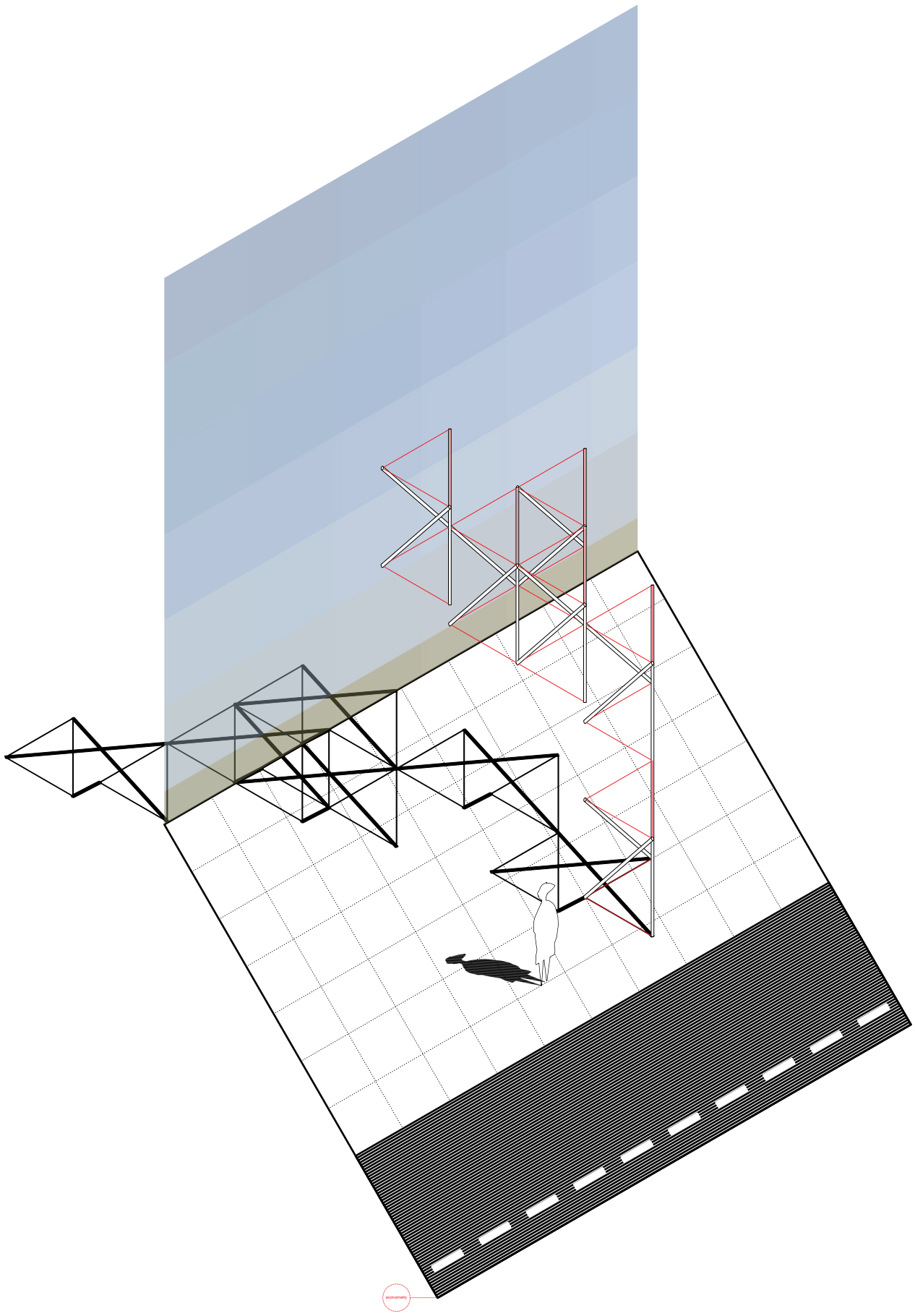


Place impersonations • Axonometries • A3 / 1:100





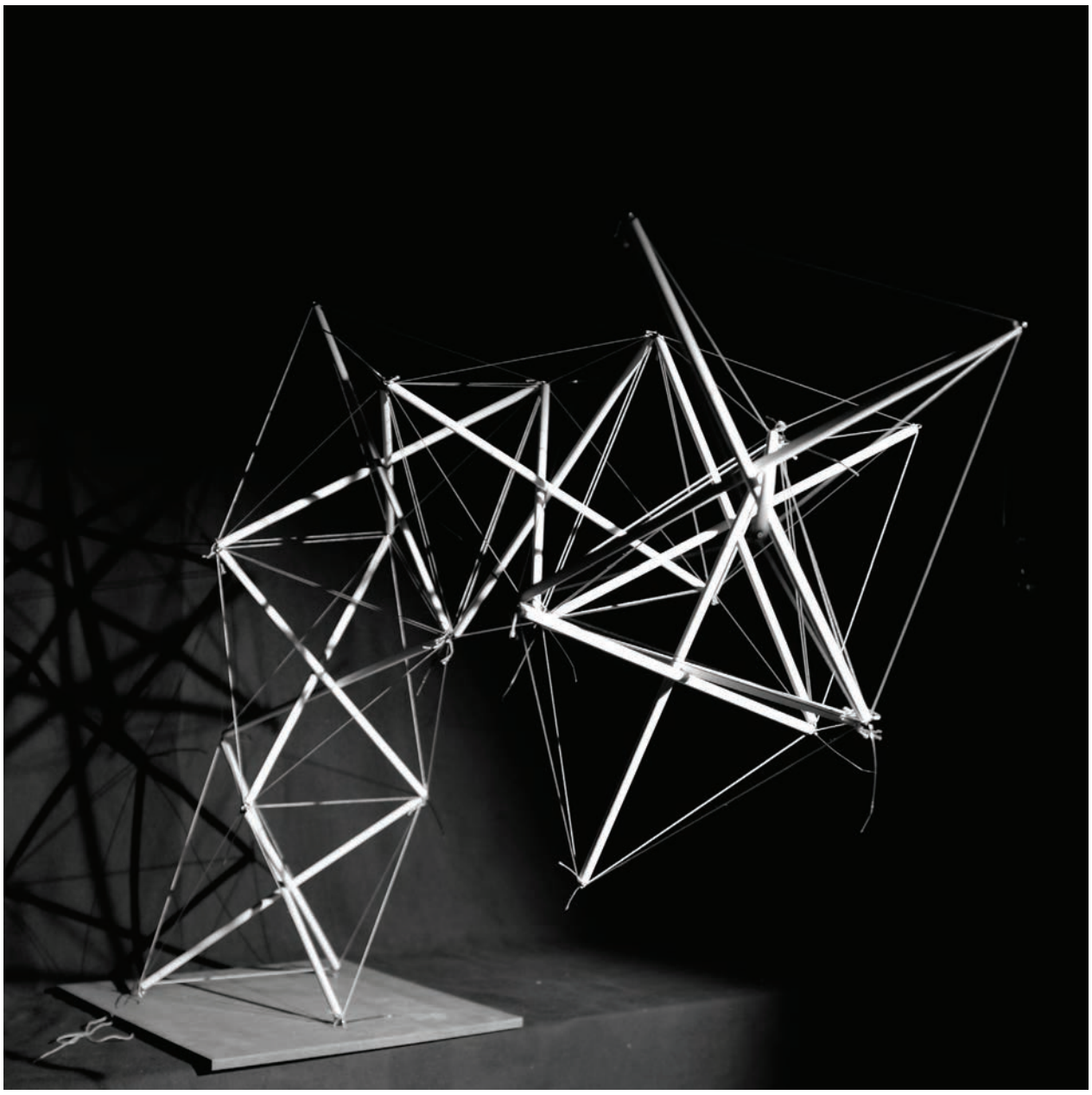
Surge and movement • Plan and elevation • A3 / 1:100



Surge and movement • Axonometry • A3 / 1:100

Surge and movement • Detail view #1

Surge and movement • Detail view #2



Surge and movement • Object view #1

Surge and movement • Object view #2

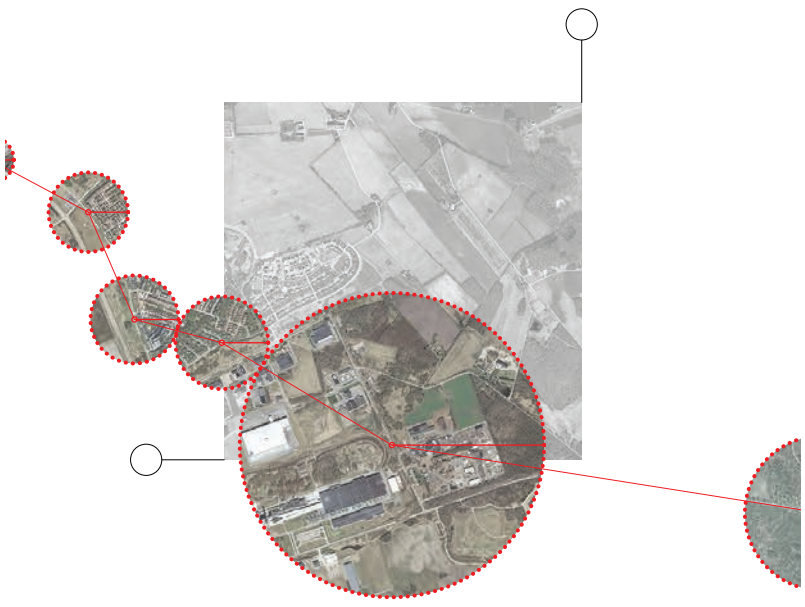
• pilkington stop

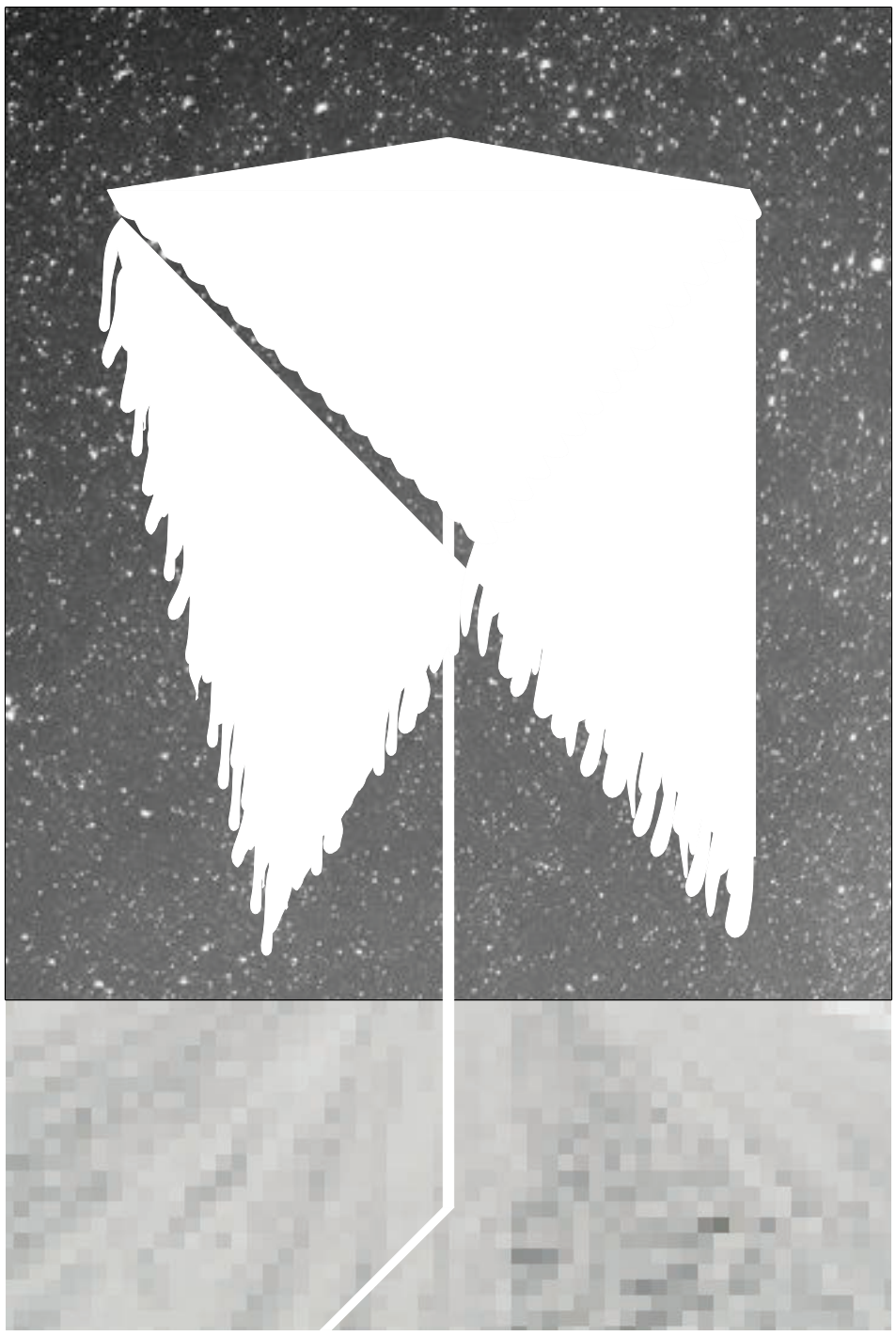
MOVING BACK to the route of bus 532, five stops from the crossing of Stjärnarpsvägen and the dirt road is the Pilkington bus stop, set in between a former glass industry and a recycling yard. Seen from the city, this the transition point. This is where sheltered boxes and artificial lighting stop, after Pilkington the world goes into complete darkness after sundown.

The stop itself is a metal rod, strangely placed 2.5 m from the road and a couple of meters from a tree in a field of high grass. The oddness of this place, and the fact that it is the transitional stop between central and remote, lay the ground for Pilkington as the setting for the first instance of what I imagine is a series of remote stops, each picking one feature of the specific stop to develop it into a basis for intensifying place.

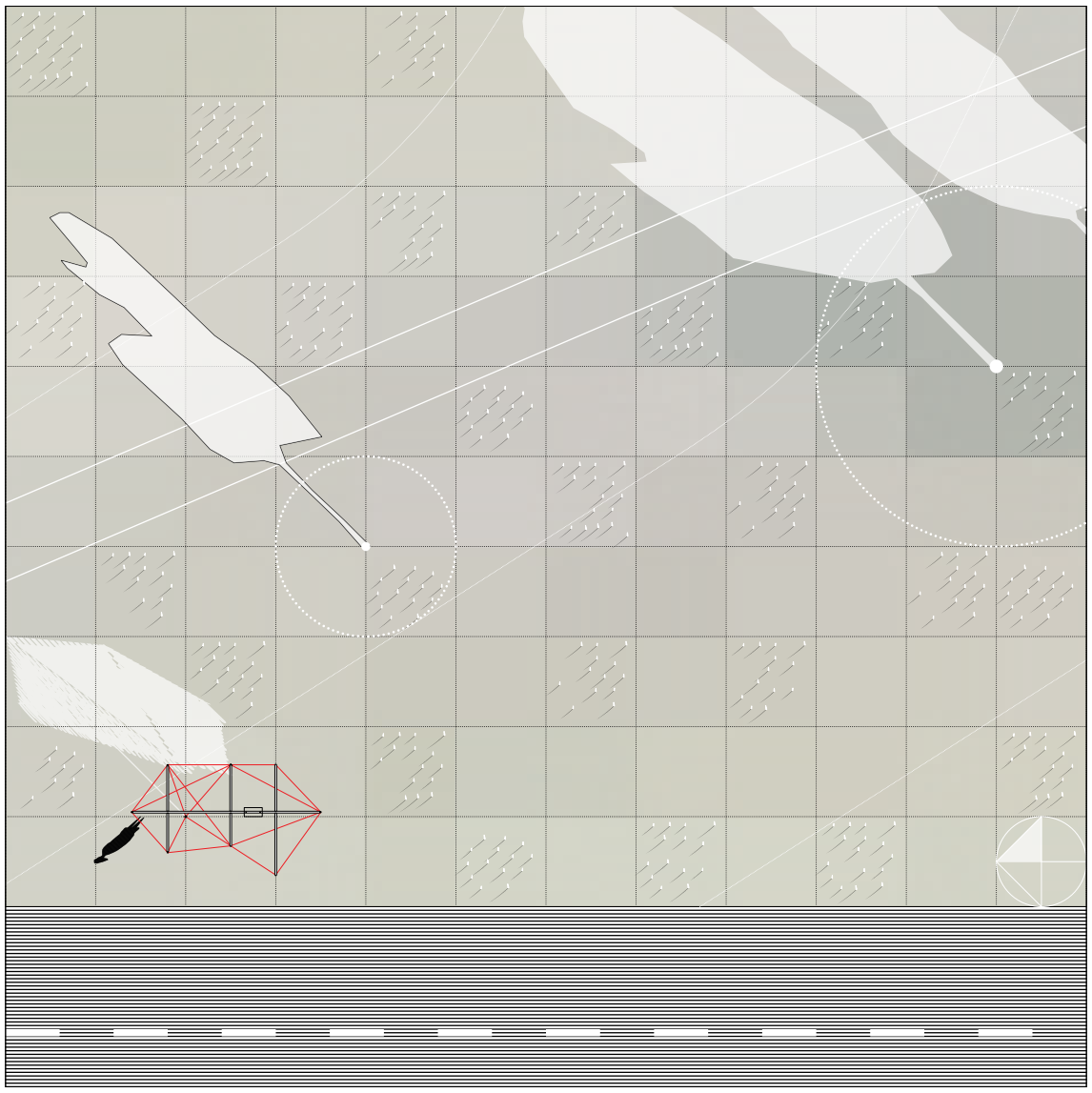
At Pilkington there's grass and wind. So, I imagine the pipe just ends in an explosion of textile chimes, creating a soft roof space that moves and sounds with it. Overlaying a tensegrity structure, most surfaces are a textile plastic weave. I once stood at a sidewalk, looking at a construction site at the top of a hill. The scaffolding around the housing project was covered in blue protection net, and as the sun was setting it got stuck in the textile setting it aglow. This is one of the most beautiful things I have ever seen, most likely more beautiful than the building itself. So this is it, this is the main material. The rest is rubber scales, as protection from rain.

From within, the stop is a space of soaring movement, light and sound. From outside, it's the company of a creature that has moods depending on weather.



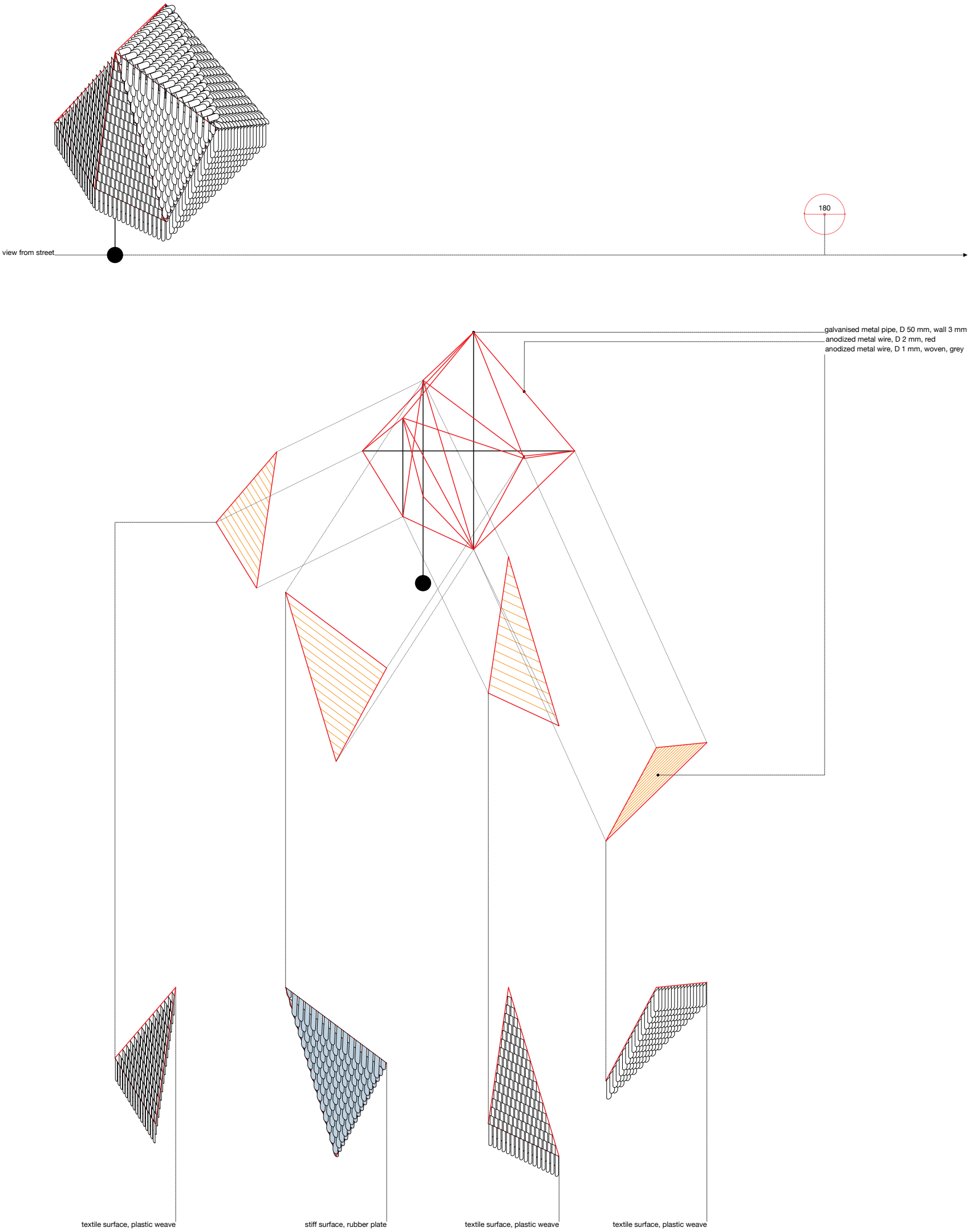


Pilkington stop • Detail view



Pilkington stop • Site plan • *A3 / 1:200*

Pilkington stop • Site plan • A3/1:4000



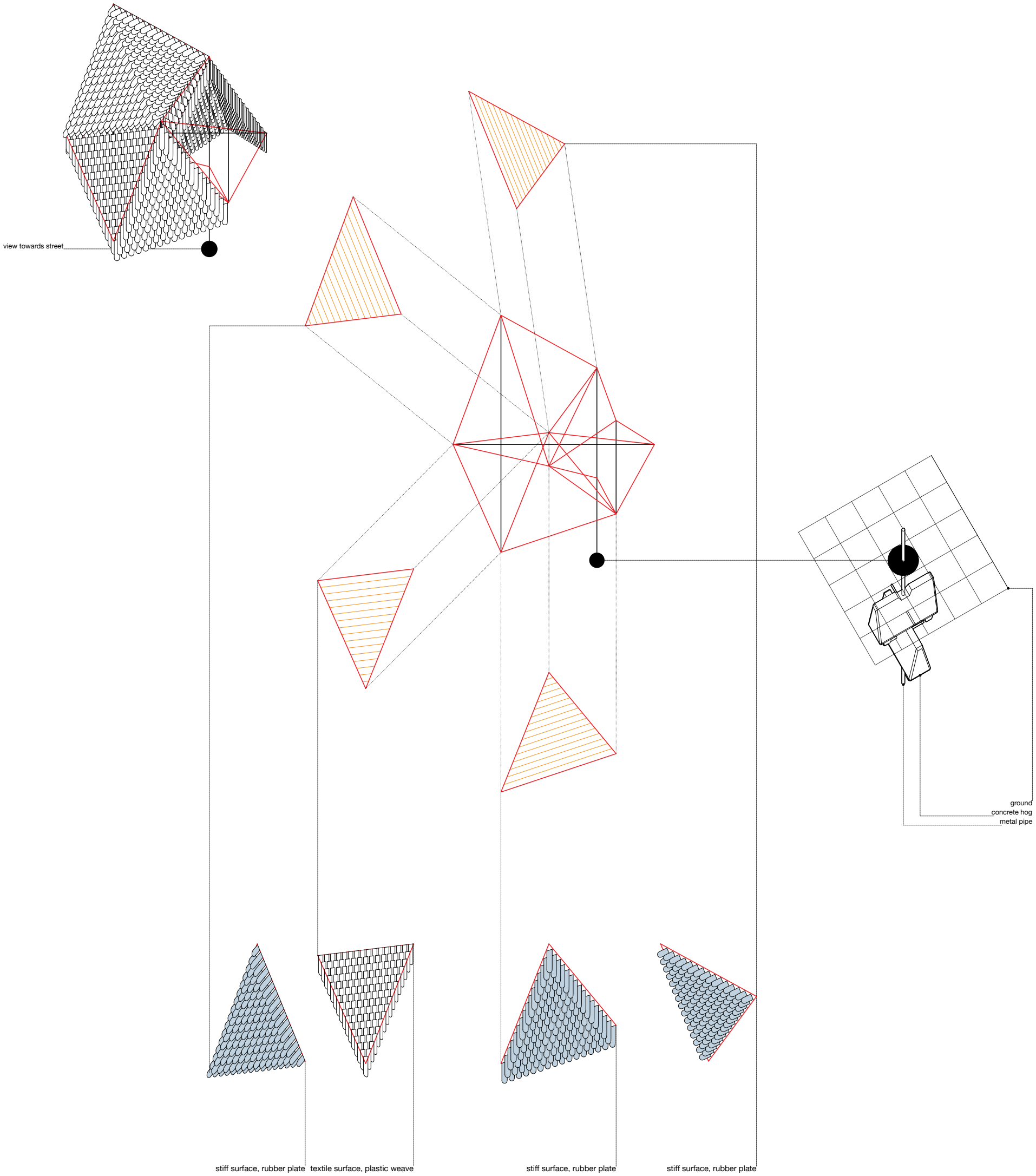
• 5 m metal pipe, raised from concrete foundation

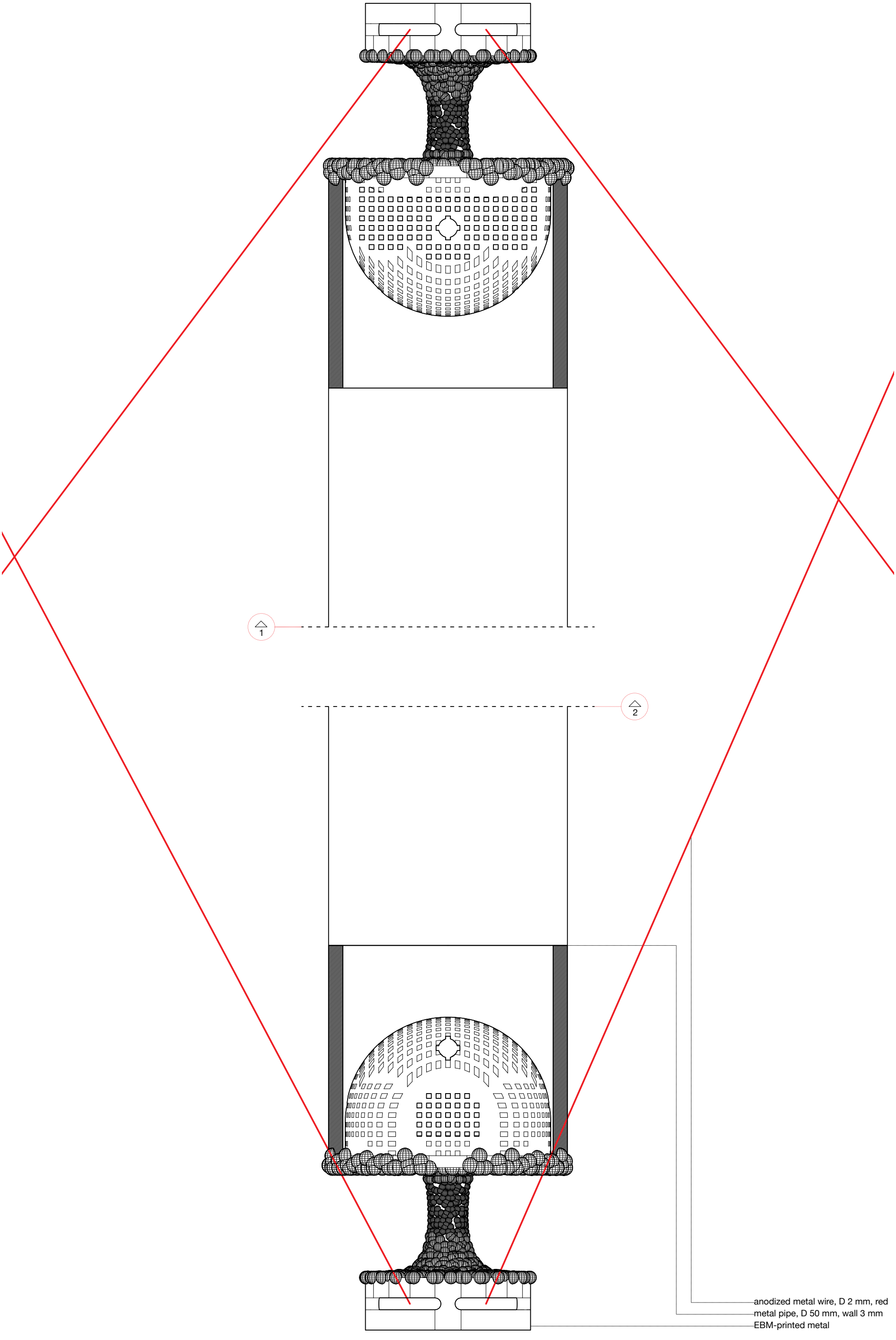
• The pipe is expanded into a tensegrity structure, using additional pipes and 2 mm metal wire.

• Joints between pipes and cables are additively manufactured in electron beam melted metal, reducing the meetings between them to a point.

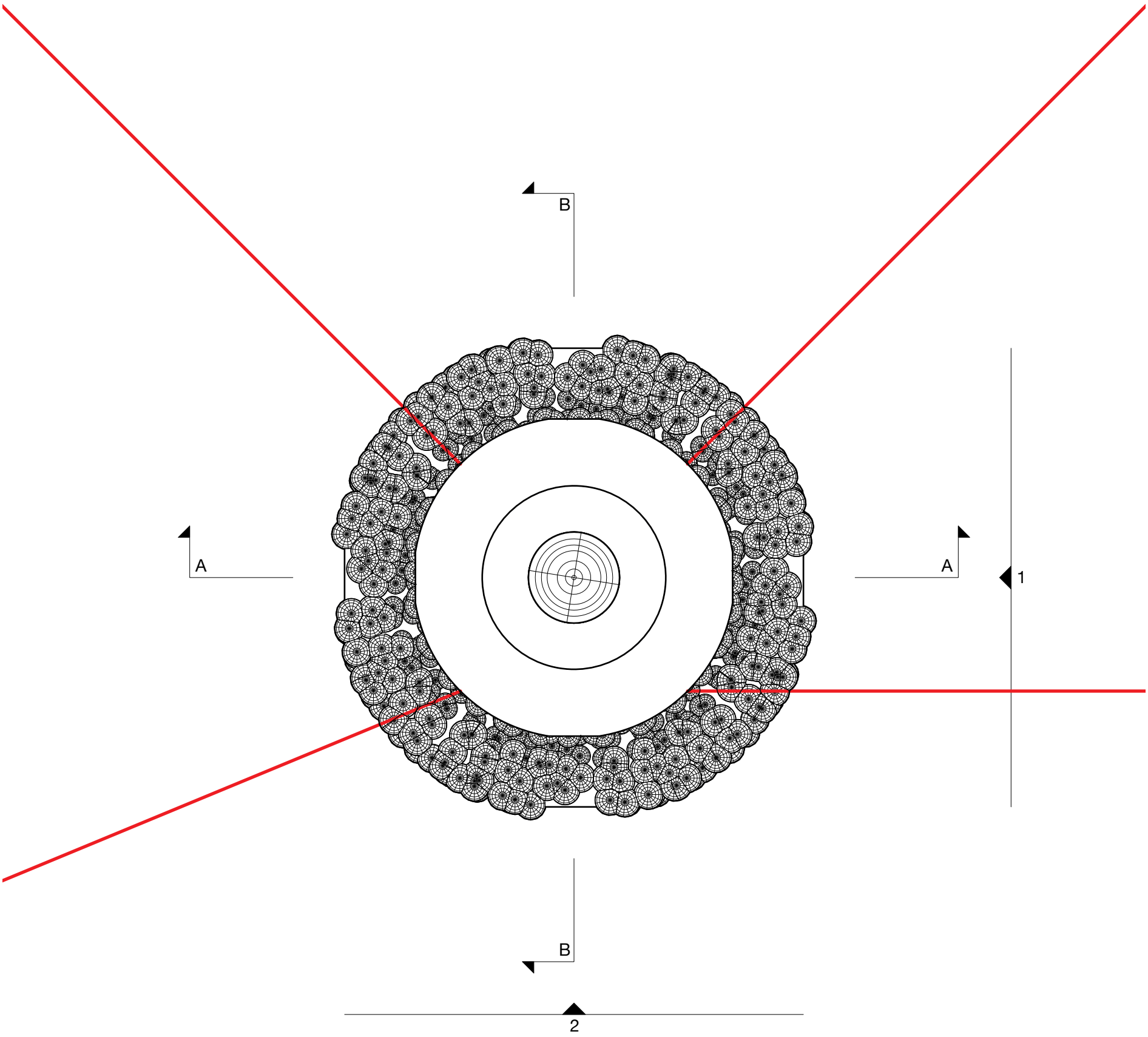
• Each flat, triangular surface between the wires is further subdivided by a weave of 1 mm metal wire.

• To each subdivided triangle a rubber scale or a plastic textile chime is attached, respectively creating a protecting surface or a moving field.

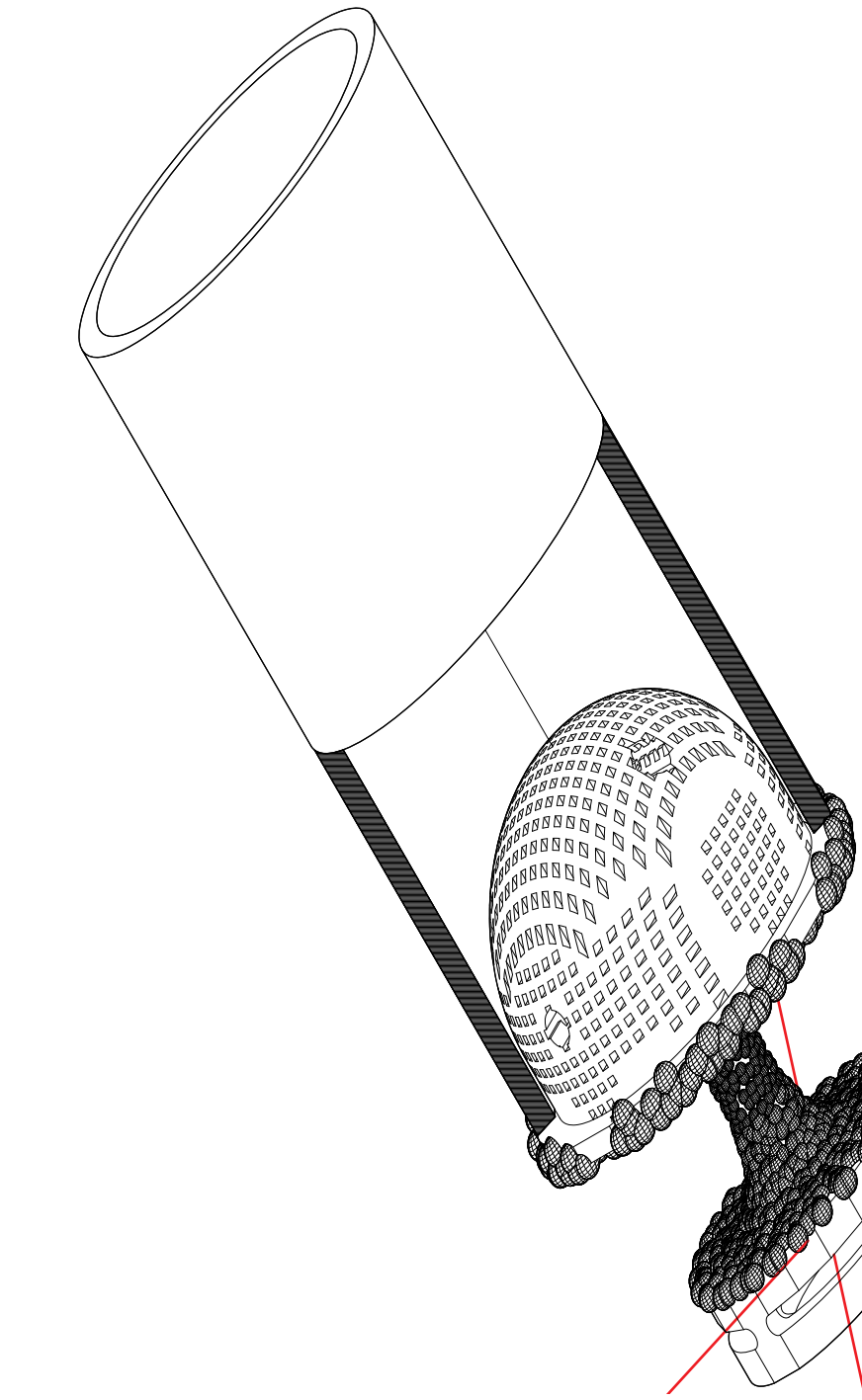

view towards street
ground
concrete hog
metal pipe
stiff surface, rubber plate
textile surface, plastic weave
stiff surface, rubber plate
stiff surface, rubber plate

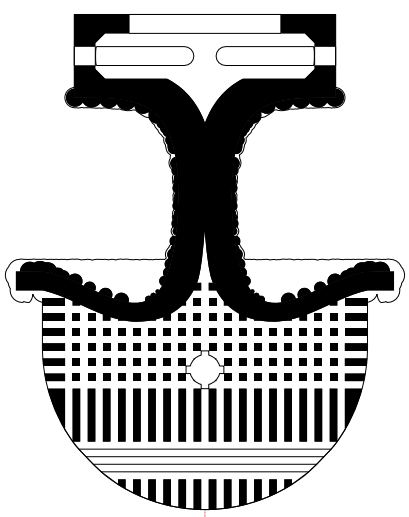


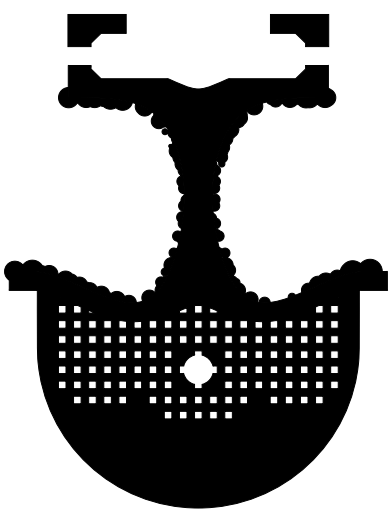
Pilkington stop • Joint • Side views • A3 / 1:3

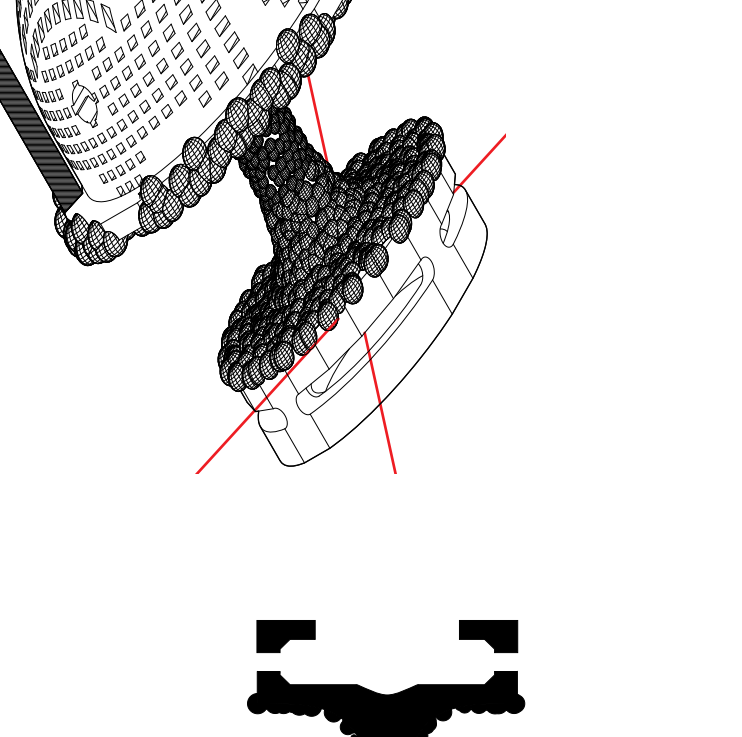


Pilkington stop • Joint • Top view • A3 / 1:2



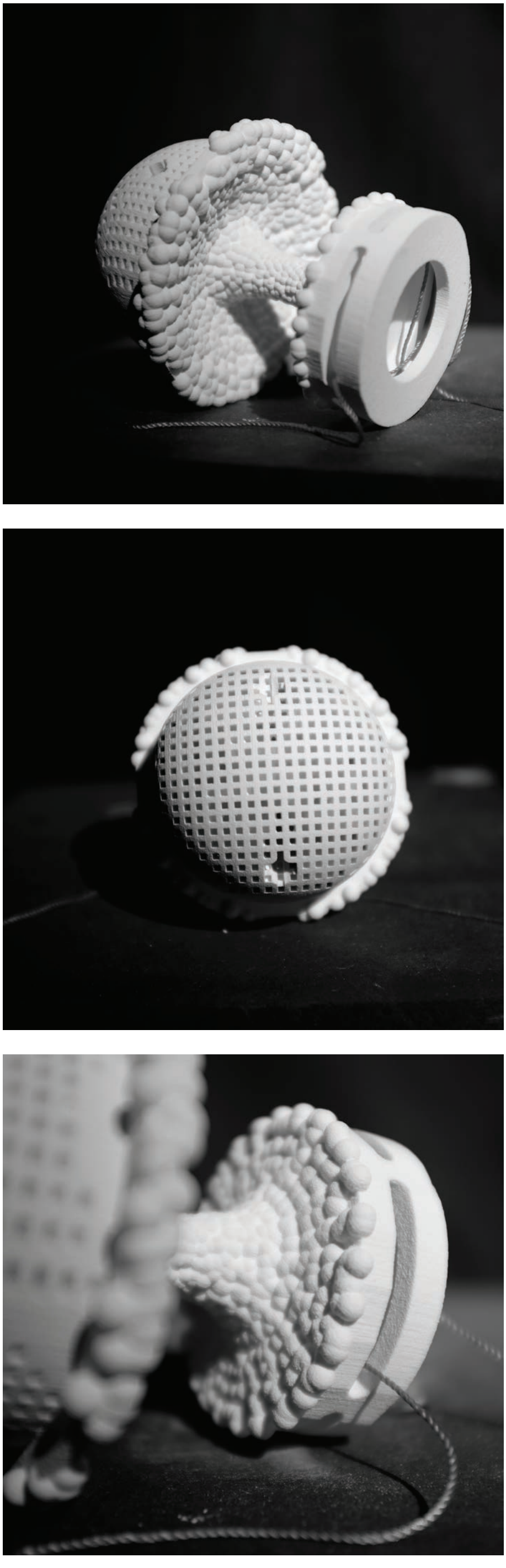




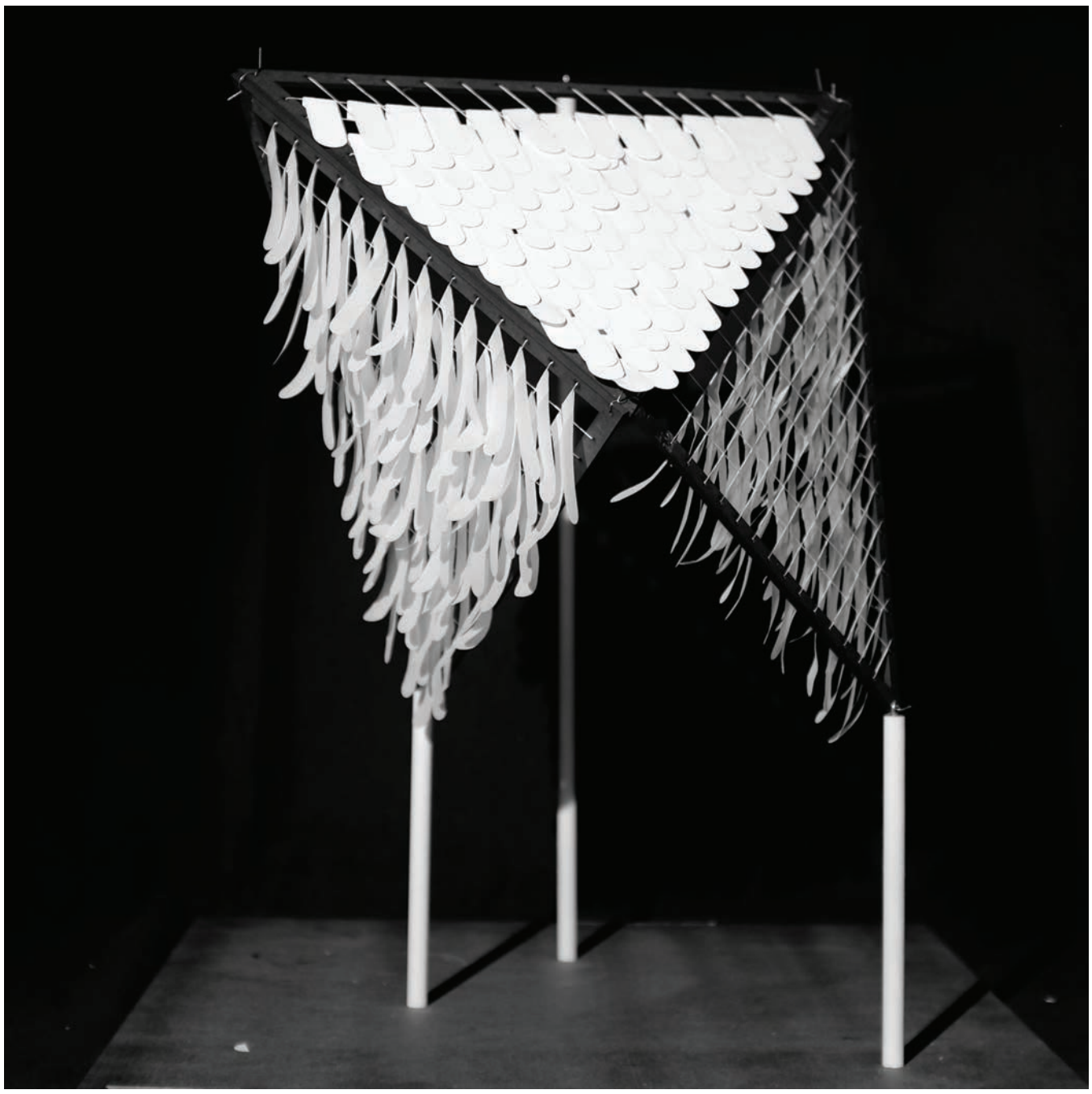


Pilkington stop • Joint • *Mass sections* • *A3 / 1:4*

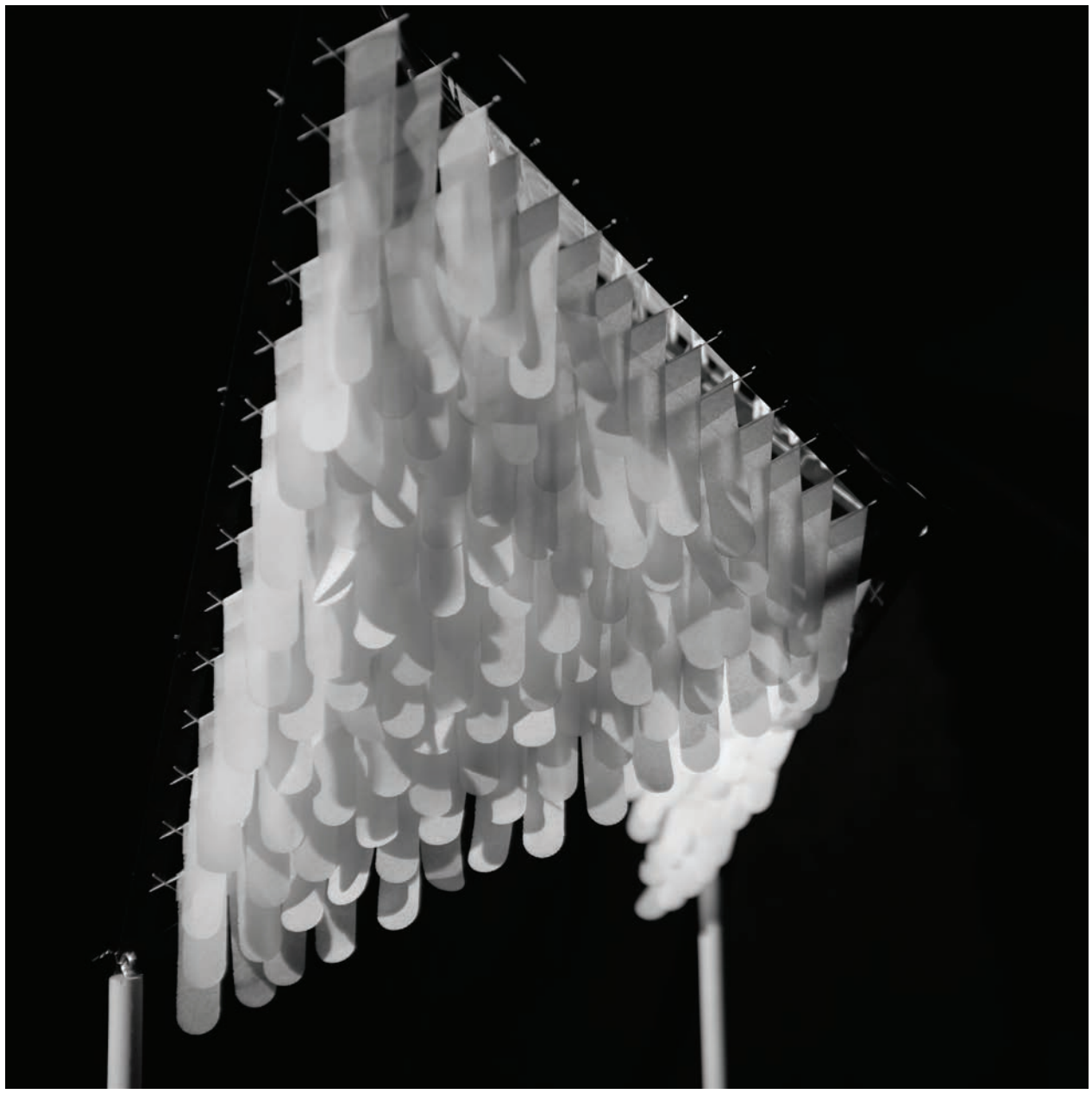
Pilkington stop • Joint • *Axonometry* • *A3 / 1:4*



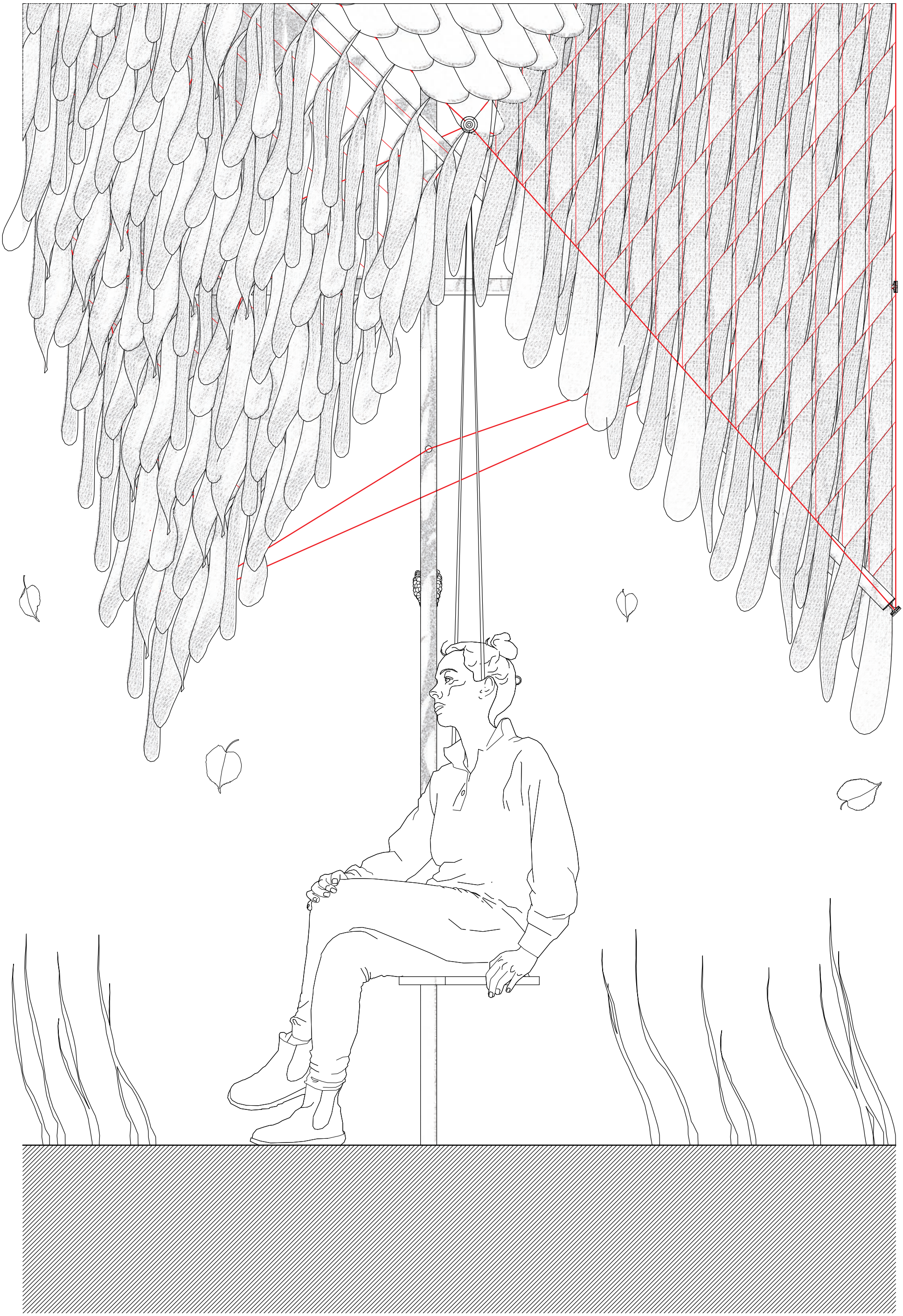
Pilkington stop • Joint • Various views



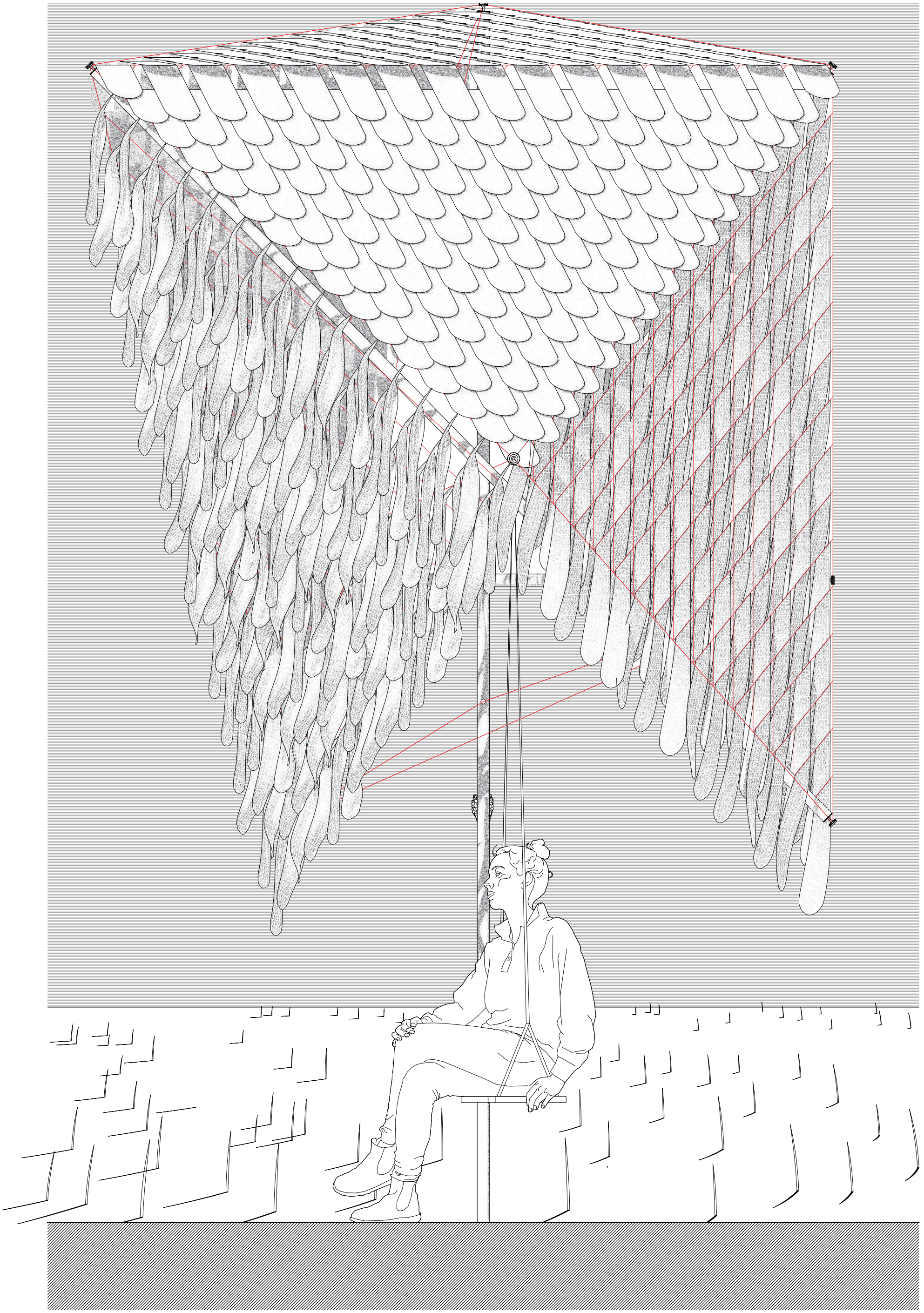
Pilkington stop • Object view



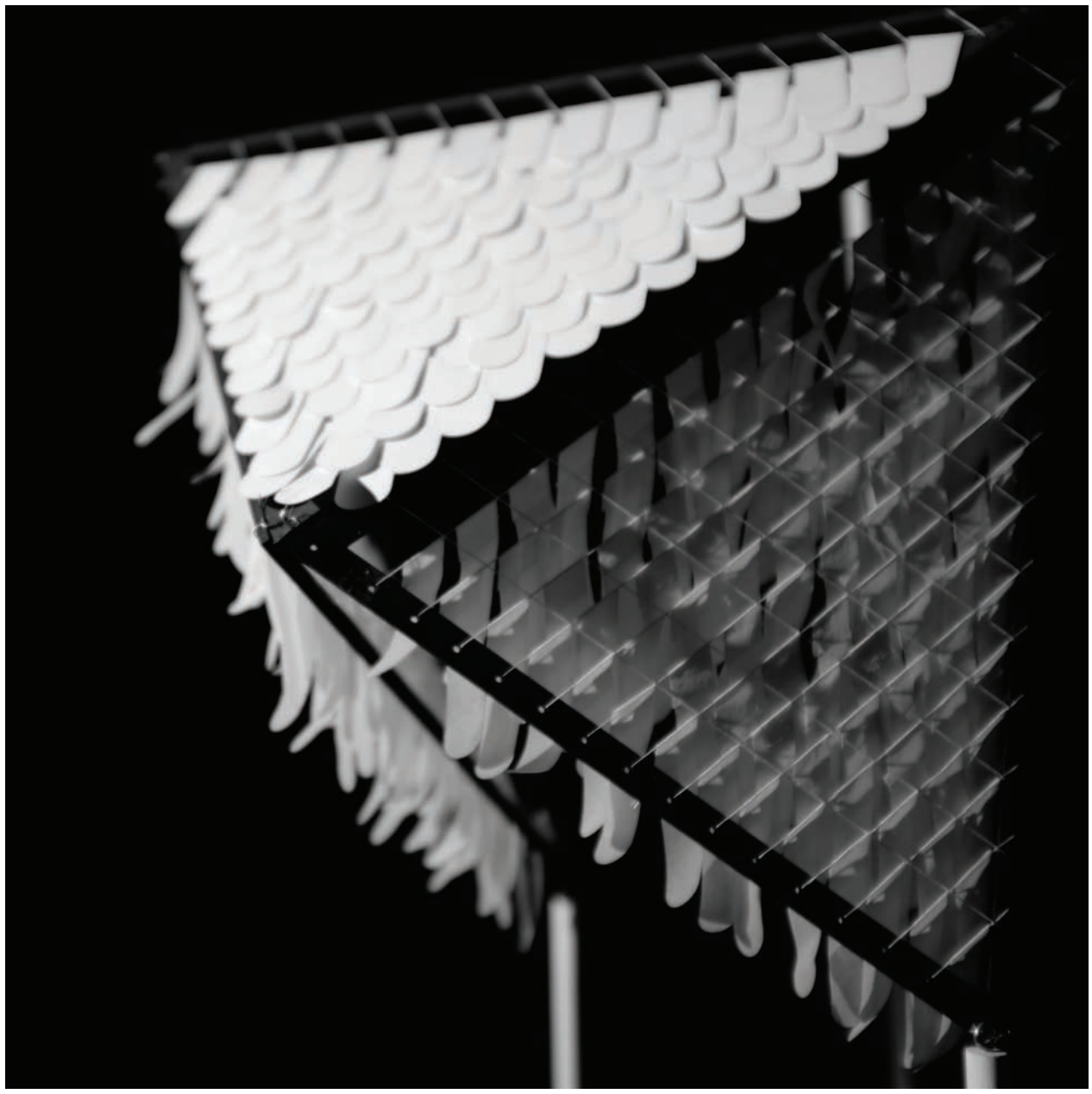
Pilkington stop • Detail view



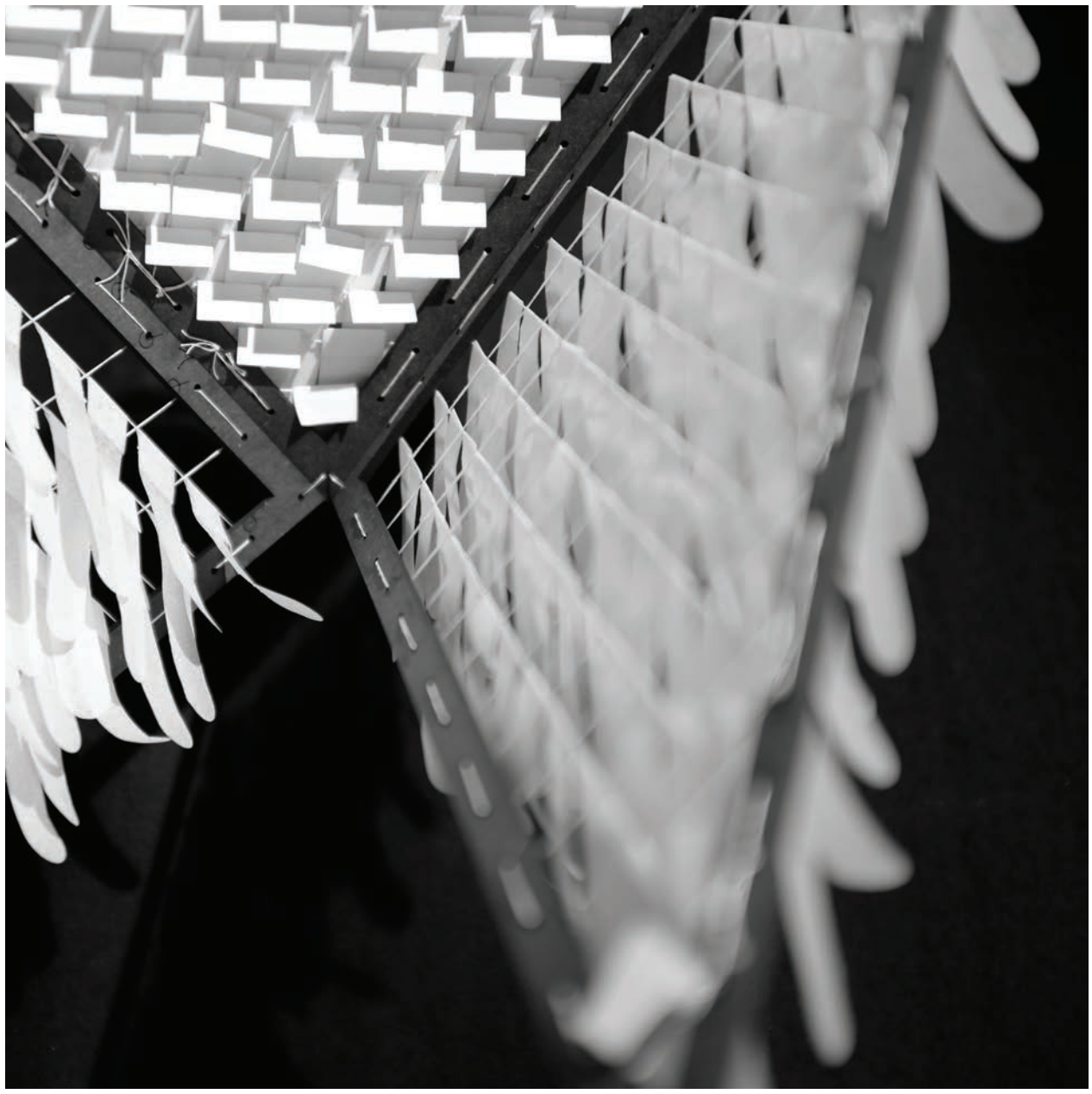
Pilkington stop • Stop • Side view • A3 / 1:10



Pilkington stop • Stop • Side view • A3 / 1:30



Pilkington stop • Object view



Pilkington stop • Interior view