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## **Sand harbors and water bodies: an occupation**

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### **Abstract**

The text and the project focuses on the hypothesis of spatial occupation in adverse areas having as intellectual vector the articulation of an ethical, technical and aesthetical action. The reflection parts from the diminished infrastructure in cited areas, which characterizes the limits of this society's social contract, namely our own. It tries to think a project's deployment with emphasis in an infrastructural approach articulated within an optical apprehension of the geography and of the landscape. It takes advantage of the variations of sand harbors contours which variate from craters to lakes. In the planar level of water, the extensive public piers replicate and allow the use of this accented horizontal extension, again enabling the optical apprehension of geography and water.

**Keywords:** ethical, technical, aesthetical, infrastructure, optical apprehension

## Sand Harbors and water bodies: an occupation<sup>1</sup>

“I do not comprehend the poet who is oblivious to the political problem, as it is the politician’s duty to resolve in practice the lyrical proposal that the poet does to the world” Lupe Cotrim<sup>2</sup>

One of the questions that have instigated the presented project, as much as its intrinsic reflection, is the environmental adversity situation that paradoxically becomes a latent potency of project and consequently of city. I refer to the sand harbors as areas of urban occupation.

The irregular occupation of São Paulo’s water bodies gives birth to the paradox of polluting that which supplies us. But not only is this occupation already in place, most of it was recently regularized by the government. São Paulo’s spreading, at the same time into which it takes populations to distant corners, it roots them, by the power of circumstances in these same areas. Considering that the area should receive, preferably in the same place, the removal of population in risky places - those at the margin of waterbodies and above streams and rivers - the placed question is on how to make a city where there is already urbanization without a city? <sup>3</sup> The existing sand harbors spread through the surroundings of the Billings Reservoir, as well as Capela do Socorro’s region, areas of the Project’s study (see figure 2), have polluted the soil and its respective groundwater and at the same time, have contributed in building São Paulo. Some, now abandoned and in the perspective of being treated and occupied - center of our proposal - constitute, thanks to their dimensions (Harbor 1, which shelves the first pilot, has 33ha - see figures 7 and 8) the spatial possibility of building effective fragments of a city in this neighborhood. Wouldn’t this action be a design of coexistence, as brutal as its surroundings may be? Wouldn’t the conceiving of these fragments of a city be, one by one, city inducers? That was our hypothesis.

From the point of view of a wider reflection, the city as a whole possibility for citizens takes place founded in a relation between civilization and culture, where the first realizes and concretizes the invention and the hypothesis of the other. The monumental degradation between infrastructure and urban web in many Brazilian cities and metropolis indicate the limit, and a transfer of situation of this urbanity.

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<sup>1</sup> The Project here presented has counted with the collaboration of the following related professionals: Architect: Anne Marie Sumner, Denise Xavier, Jorge Felix. Structure: Pedro Telecki, Roberto Inaba e Humberto Bellei / Usiminas. Legislation: Angélica Alvim, Paulo Giaquinto, Luciana Varanda Mattos. Sanitation: José Lavrador. Sustainability: Luciana Flores Martins Swan. Consultants for Fire Protection Standards: Valdir Pignatta e Silva / ABNT.

<sup>2</sup> Brasil, U., 2010. A Poesia de Lupe Cotrim tecida com afeto, inquietude e elegância. *Jornal O Estado de São Paulo*. São Paulo. 21 Mar. Caderno 2. p.3.

<sup>3</sup> I first had contact with the term *urbanization without a city*, well disseminated today, in a conference of Regina Méier in the Goethe Institute in São Paulo, in 1993, in a cycle denominated The Collapse of Modernization, which also counted with intellectuals such as Paulo Arantes, Roberto Schwarz, Francisco de Oliveira and Roberto Kurz, among others. The meaning refers to the informal spreading of part of our cities, resulting from constant migrations, whose populations seek work in metropolises and, thanks to perverse logic, end up by settling themselves in places far from the centers and with scarce infrastructure, as is the case in Capela do Socorro’s region (pilot area of the presented project) and in so many other districts in São Paulo’s outskirts. As is well known, infrastructure is considerably reduced in these areas which often don’t even count with a sewage system.

The metropolis is the exacerbated expression of the contemporary city with all its correlated deformations to this scale of exacerbation. Of all contemporary urban conditions, it is also the most complex and from the point of view of knowledge production, it is surely the most provocative.

To think the relation between architecture and metropolis is to provide its infrastructural functionality, which includes, among other things, its decongestion and breathing. But it is also to apprehend it; its tracings, its geography. The sand harbors and the waterbodies all make part of this unrest. How do we think geography and infrastructure in an optical apprehension of the landscape? <sup>4</sup>

Thus, as a multidisciplinary project team, we understand that the articulation between ethics, technique and aesthetics in architectural action is what enables a work at its best. If we think in urban infrastructure, we agree that, at large, the scale and extension of a city's infrastructure provides a measuring of that society's social contract. In other words, the wider and more accessible a city's infrastructure is, the most complete is that society's social contract, i.e., the plainest is the citizenship of its members and the wider is its sociability. And, beyond a better sociability couldn't we suppose that the ethical, technical and aesthetical action would allow the city to make itself into a work of art? <sup>5</sup>

From the point of view of a project's actions the challenge would be in the possibility of, having created the conditions of citizenship, apprehend and make seeing the city in an enjoyable way; to make it feasible to its users, acting directly in the fundamental structures to their performance in the city. Apprehend the city is to apprehend where we are. In high, low, vale, plain, north, south, river, between rivers, hills, rarefaction, densification, outskirts, center. The architecture structures itself in situation, even if it abstracts its surroundings. It's architecture that makes landscape and topography visible, natural or built. It's about a vision. As we said above, *the proposition* from the spatial point of view, in a broader sense, is of establishing perceptual references creating differences in such a saturated city, making it visible in its structure and geography, decongesting it: the unblocking of both the vision and of the

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<sup>4</sup> The term *optical apprehension* was used in my doctorate thesis and proposed in interlocution with Otilia Beatriz Fiori Arantes. It appears in the Preamble, referring to the projects presented in the thesis: "The first project, highly conceptual, is above all a reflection on four urban areas, actually about some key concepts, which are perceptual branches of the optical and experiential questions of the city as opacity (or transparency) and situation (or un definition of place). In a certain way it outlines the *proposal* adopted in the others, namely, the need, even when it comes to infrastructure, of establishing perceptive benchmarks (in the broader sense of a Merleau Porty - eye and spirit) creating differences in a saturated city, without wanting to create fixed pieces of focus, the "monument", the "masterpiece", or even the isolated building, but to make visible the net and its interstices, the topography, allowing its "decongestion": the flow of people and information, the unblocking of not only the vision but also of the road system or the flows of water, and so on. Ultimately, it is about a partial reflection, and practice, on how to make a city feasible to its users, directly interfering on the fundamental structures to their performance in the city" (Sumner, 2002, fl.8). The term is also part of the lineage of pure visibility authors, which observe the differences between an optical and tactile nature of art.

<sup>5</sup> Particularly, as an architect, I do not dissociate the ethic actions of architecture from its aesthetic dimension. In contrast, I always assume that a work will take its best where there is association between ethics, technique and aesthetics. And how not to corroborate with modern art's willingness of relentless association with life, almost as if dissolving in our daily lives? Isn't Modern Architecture, with all its continuity, its equivalences and its contrapositions to classical hierarchies precisely proposing a more egalitarian and aesthetical way of life? With all the utopian implications that such assertions might contain.

infrastructural system of flows and waters. How to detain the eye that does not stop passing? <sup>6</sup>

In the approach of the infrastructural instance of the metropolitan water supply, having us facing with the recently difficult regulation of the area, it is clear that in a certain way, we also deal with a countersense, in the extent that, perhaps it would be desirable that there was no occupation in these water bodies area at all: but that would be another situation in another culture, with another social contract and in another metropolis. In our case, by contrast, given the extensive network of rivers and streams in the various watersheds of the Billings' Reservoir and given the irregular initial occupation practically generalized, (see figures 2 and 3) we can observe that the occupation phenomena is also widespread. The various sand harbors <sup>7</sup> would be precisely designed to accommodate people in these areas of risk. Differently, therefore, from the more usual occupation known through the 10mx25m plot (frequently fractioned in two) that designs the tonic of much of São Paulo cities' outskirts.

These sand harbors - many of which abandoned because exhausted and consequently deactivated - besides being generously sized plots, have another favorable and unusual condition: the craters resulting from the sand extraction have resulted into lakes, which in turn flank the project's buildings and also count with "seas of hills" and the water landscape as surroundings (see figures 10, 11 and 12).

The contemporary idea of sustainability is given as a general posture towards the project, mainly because it is an area of waterbodies. The recovery of the urban area, the construction system adopted which by being steel produces no waste, and the deployment of buildings with large spans that only punctuate the soil, minimize environmental impact. In buildings, specifically, the principles of *green building* are adopted (see figures 5 and 6). The soil would naturally have to be decontaminated, as environmental law requires on the subject, but what seemed like an abandoned situation, contaminated and helpless became the plainest possibility of a worthy and pleasurable occupation: ethical, technical and aesthetical.

The proposed densities are extremely low - 100 hab/ha (see figures 4 and 8) - as it must be in a waterbody area, with an occupation that mixes all uses as a fragment of a city: housing, <sup>8</sup> commerce, services (see figure 9) and institutional uses. The deployment of the buildings that mix residences, services and commerce take advantage of the sand harbor's contours

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<sup>6</sup> In a world with relentless imagery, to apprehend the landscape or the environment has become a difficulty: How to detain the eye that does not stop passing? At the Second International Architecture Biennial in São Paulo in 1993, I presented the *Opacity and Situation* project which brought the unrest over this contemporary metropolis's invisibility. The project published in the *Oculum Journal* contained the following text written by me: "There is no opposition to the landscape be it natural or built. Nor is there willingness to integrate it. Not even a simple evidencing of the landscape. It is all about a common field where one supposes the other. Desert, wall, screens and blades detain the eye that does not stop passing" (Sumner, 1993). Or even in a clear landscape, it's like a pole or a series of them in a plain. In a certain way, they are the ones that makes us see that landscape's horizontality.

<sup>7</sup> In the three sand harbors existing in our area, we have developed the pilot in Harbor 1, having Harbors 2 and 3 only mentioned for constituting themselves as potential areas to the creation of new fragments of city as Harbor 1.

<sup>8</sup> Buildings designed for steel are usually deployed against contours. In average they have a length of 43m and a width of 13m and can develop into multiple floors. The prototype calculated by Usiminas has 3 floors and longitudinal trusses of 43m long and 10m high which allows for considerable support reduction: the building barely touches the ground. In this project such a structure is only volumetrically indicated.

variation which, as outlined, from craters become lakes. Designed against the contours and in an accented horizontal development, the buildings allow for huge landscape openings and prioritize, on the ground floors, merged social activities associated to squares and circulation that interconnect with the other buildings (see figures 13, 14 and 15). The school building above the lake, as an example, (see figure 12), resulting from one of the craters of that harbor, is situated in an island with various catwalks above the waters which links the surroundings. The height development when counting buildings up to 8 floors high are generally defined in consonance with the declivities more or less accentuated.

Given the extension of the waterbody near the urban pilot In Harbor 1, we proposed another pilot with public clubs to the area of Bororé (see figures 18, 19 and 21) where, given the beauty of the area and its occupation restrictions, we proposed huge public piers above the waters with generous dimensioning (each segment has an average size of 100 meters of length per 5 meters of width) creating a sort of mesh over the water to enjoy leisure and nautical related activities (see figures 24 and 25).

Finally, the multidisciplinary team, in the fabric of this symbolic action, workings with pilots of situations passible of replication in large scale, in its various instances sought to create a fragment of a city, imagining it as an inducer of citizenship. It deals with giving this population decent housing conditions seeking to minimize the immense social inequalities, linking social housing with all other urban uses that characterize the city, and preserving the area keeping a low density. The project, still in preliminary studies, appears then involving the constraints of legislation, sanitation, environmental conditioning and sustainable reuse of water and the like.

## References

Sumner, A. M., 2002. *Arquitetura e infraestrutura: um percurso de projeto*. Ph.D. Faculdade de Arquitetura e Urbanismo, Universidade de São Paulo.

Sumner, A. M., 1993. Opacidade e situação. *Óculum*, 04, pp. 38-39.

## Consulted bibliography

Ab'Saber, A., 1957. *Geomorfologia do sítio urbano de São Paulo*. São Paulo: EDUSP. 343p.

Adorno, T., 1974. *Filosofia da nova música*. São Paulo: Perspectiva. 165p.

Adorno, T., 1974. *Théorie esthétique*. Paris: Klincksieck. 347p.

Arendt, H., 1997. *A condição humana*. Rio de Janeiro: Forense Universitária. 352p.

Argan, G., 1993. *Arte moderna*. São Paulo: Companhia das Letras. 709p.

Bloom, H., 1997. *The anxiety of influence: a theory of poetry*. Nova Iorque: Oxford University. 155p.

Derrida, J., 1994. *A voz e o fenômeno*. São Paulo: Zahar. 117p.

Gombrich, E., 2006. *The story of art*. Londres: Phaidon. 1046p.

Goulart Reis, N., 2004. *São Paulo: vila, cidade, metrópole*. São Paulo: Prefeitura do Município de São Paulo.

Hegel, G., 1972. *Estética: a arte clássica e a arte romântica*. Lisboa: Guimarães. 337p.

Jameson, F., 1991. *Postmodernism, or, the cultural logic of late capitalism*. Durham: Duke University. 438p.

Koolhaas, R. et al., 2000. *Mutaciones*. Barcelona: Actar. 720p.

Koolhaas, R. Mau, B., 1995. *S, M, L, XL*. Nova Iorque: Monacelli. 1344p.

Merleau-Ponty, M., 1992. *O visível e o invisível*. São Paulo: Perspectiva. 271p.

Merleau-Ponty, M., 1980. *Textos selecionados*. São Paulo: Abril Cultural. 260p.

Panofsky, E., 2000. *Idea: a evolução do conceito de belo*. São Paulo: Martins Fontes. 259p.

Rosenberg, H., 1974. *A tradição do novo*. São Paulo: Perspectiva. 210p.

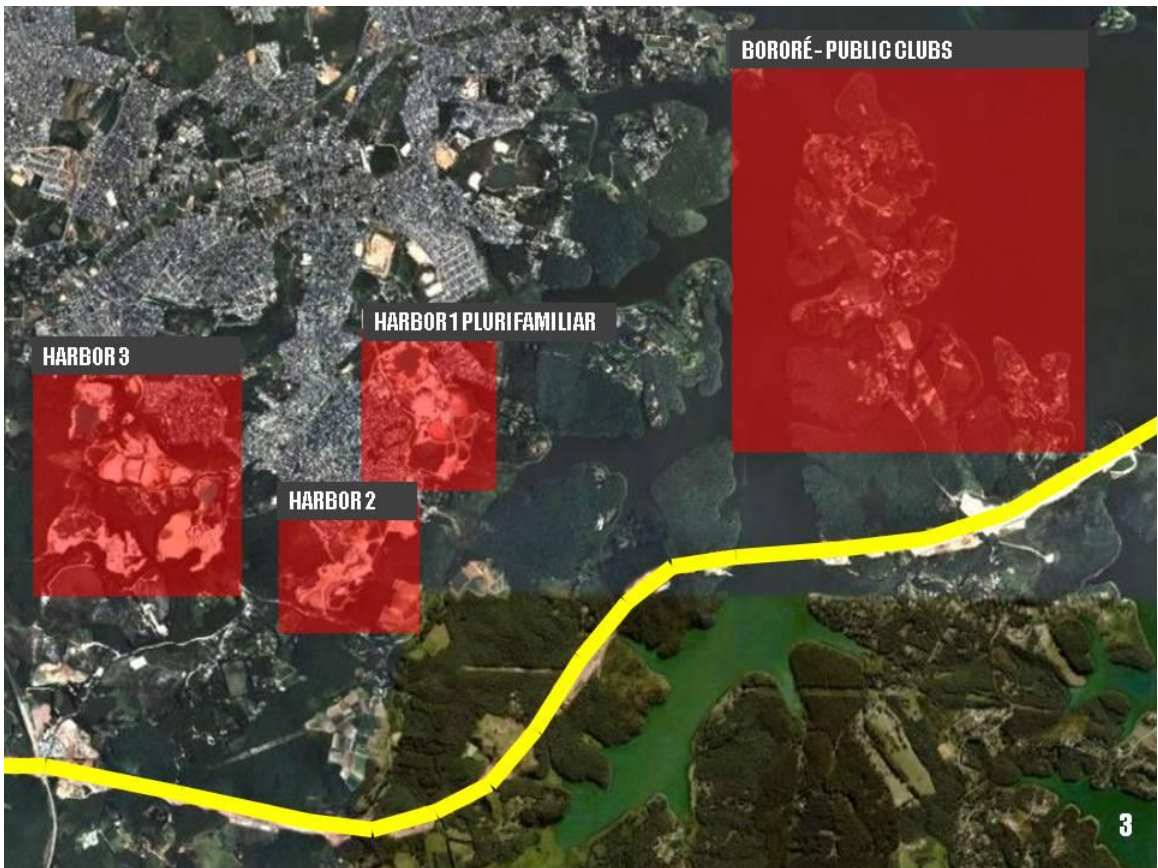
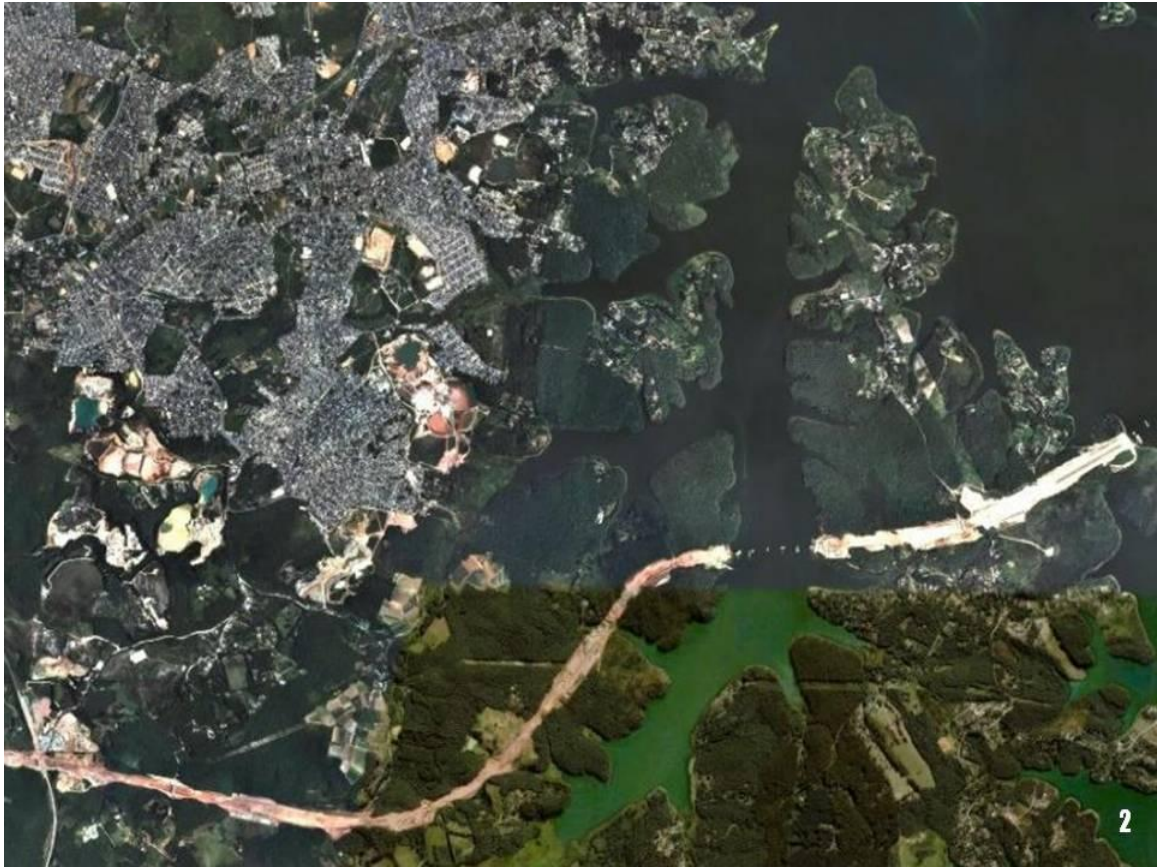
Sumner, A. M., 1988. *Uma arquitetura não adjetivada*. M.Sc. Universidade de São Paulo.

Worringer, W., 1983. *Abstraccion y naturaleza*. Mexico: Fondo de Cultura Econômico. 137p.

## Ground plans











## Evaluated Indicators

**1 - Location:** existing infrastructure of access and public transport, high-density urban areas, promotion of the recovery of contaminated areas, protection of habitat and natural resources.

**2 - Rational Use of Water:** AP collect to sanitariums, sewage treatment for use in landscaping, reduced water use through efficient devices.

**3 - Energy Efficiency:** lighting systems and natural ventilation, solar heating for water, clean technologies (photovoltaics, wind power), climatization (air conditioning) without CFCs.

**4 - Indoor Environmental Quality** (during construction and post occupancy): Control of lighting and temperature systems by using natural ventilation, considering wind, air change rates, smoke control, use of materials with low emission of volatile organic compounds (adhesives and sealants, paints, varnishes and coatings).

**5 - Materials and Resources:** recyclable management during construction, materials specification considering origin (distance), mode of production, lifetime and maintenance, reuse of debris, certified wood.

**6 - Process and Innovation:** innovation in design, social focus, environmental education, establishment of recreational areas and public parks or semi - public.

6



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## SAND HARBOR 1

Data:

Total area: 33 hec.

Buildable area: 21,45

Density: 100 hab/hec

Population: 2.145 hab.

Coefficient: 2,0

Perm.rate : 20%

IAV: 8

8

## PORTO 1 PLURIFAMILIAR: TIPOLOGIAS

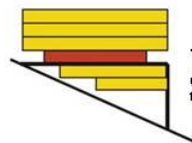
Harbor 1 - Plurifamiliar  
Typologies

Total Terrain Area = 33 hec.

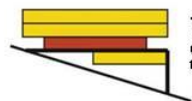
Buildable Area = 21.45 hec.

Maximum Density = 100 hab/hec

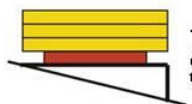
Total population = 2145 hab



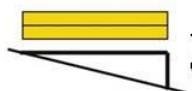
**Type 1**  
(3 residential floors+1 commercial floor)



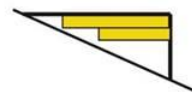
**Type 2**  
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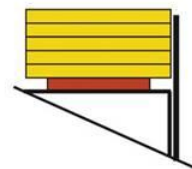
**Type 3**  
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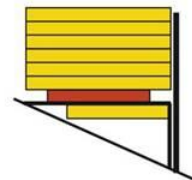
**Type 4**  
(2 residential floors)



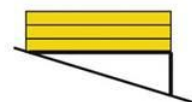
**Type 5**  
(2 residential floors)



**Type 6**  
(3 residential floors+1 commercial floor with elevator)



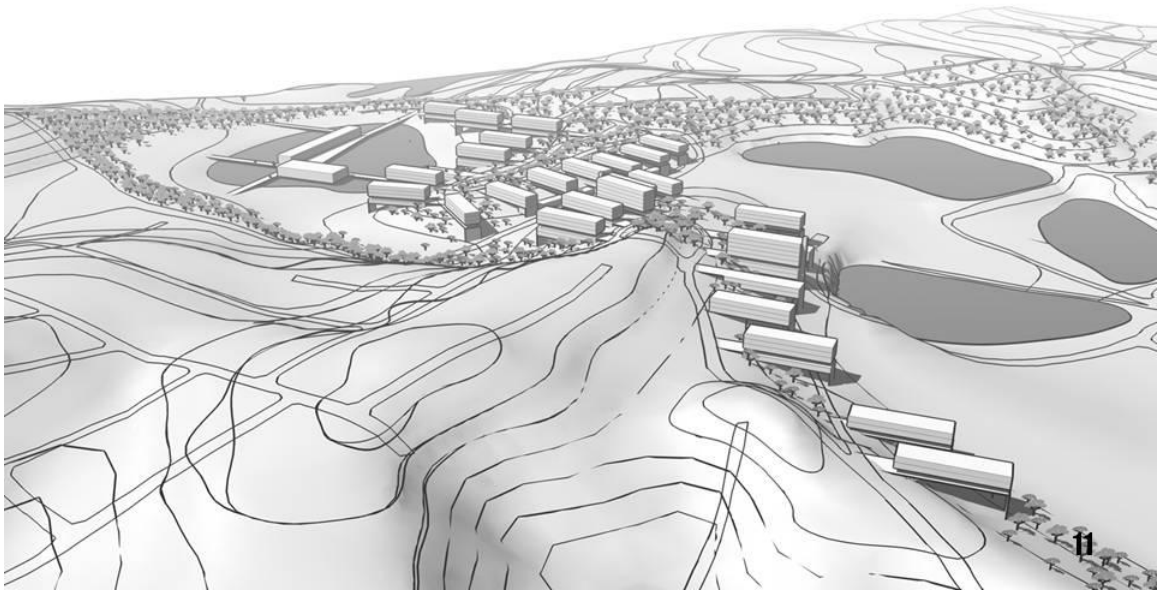
**Type 7**  
(7 residential floors+1 commercial floor with elevator)

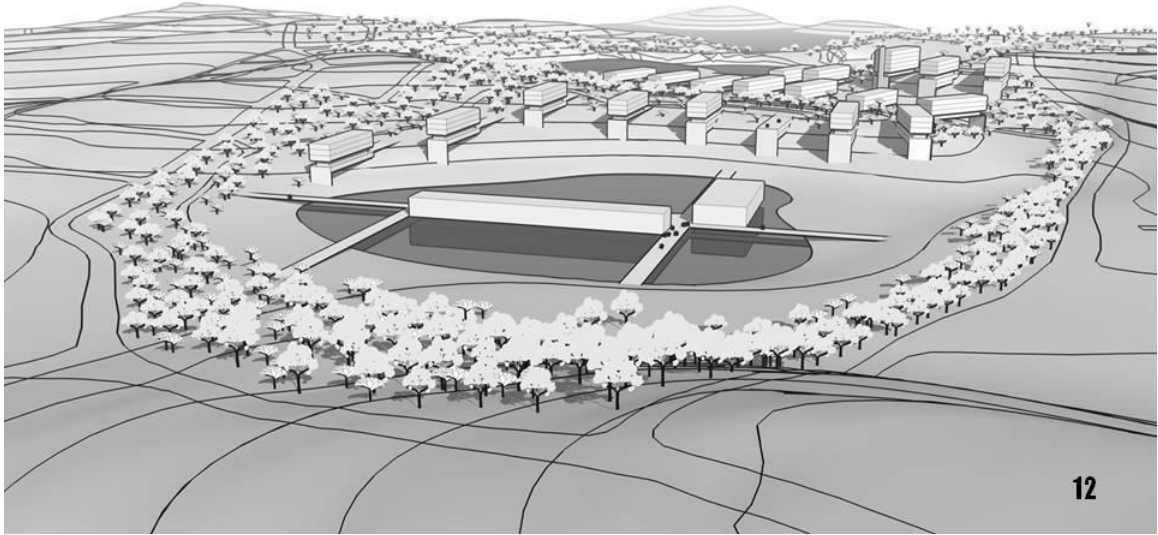


**Type 8**  
(3 residential floors - accessible apartments)

9





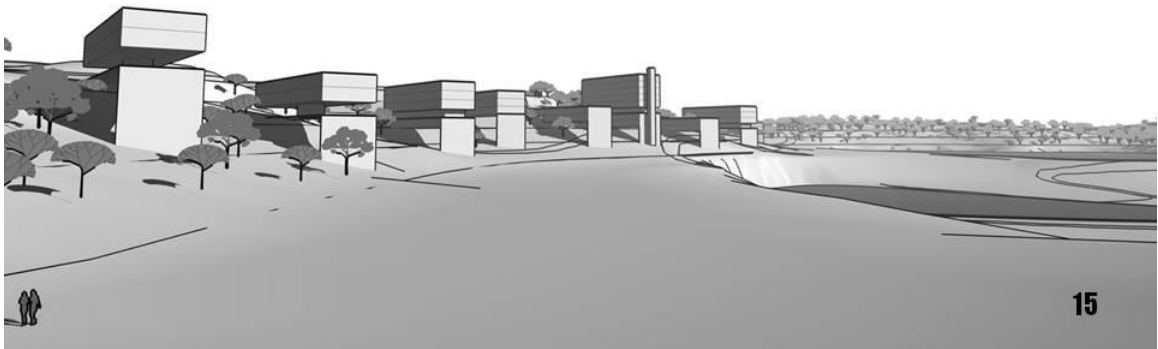
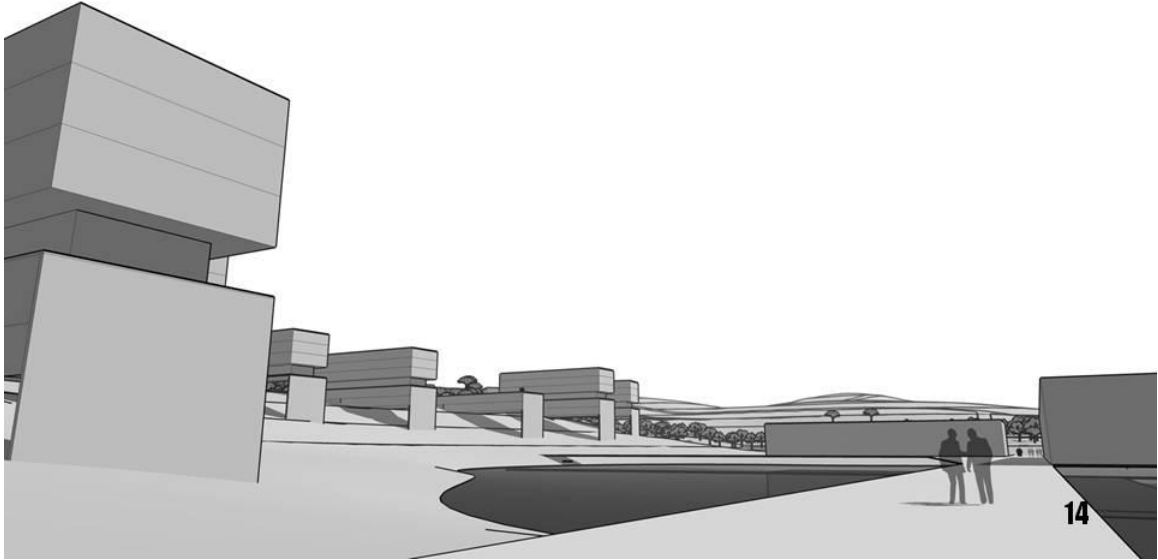


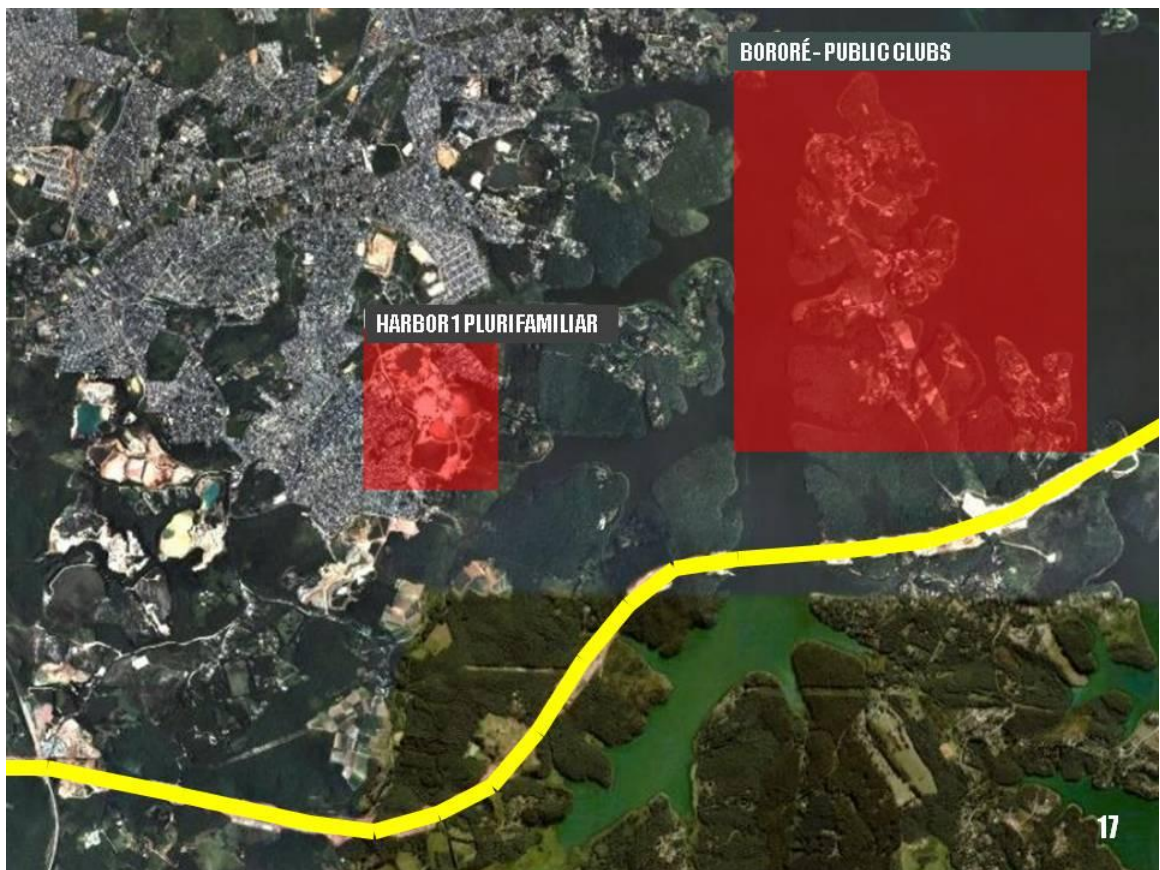
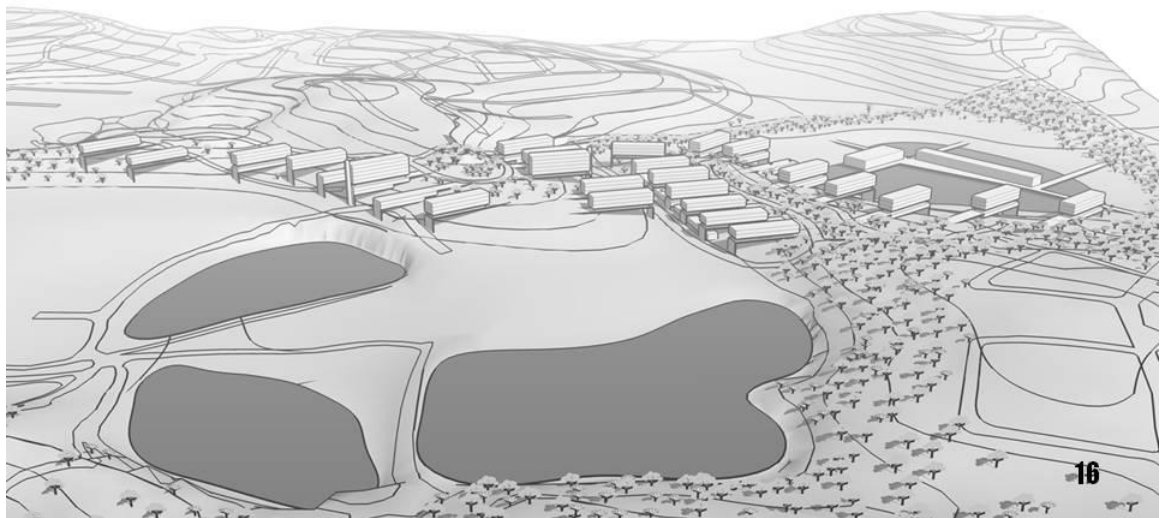
12



13









## BORORÉ

### PUBLIC CLUBS:

Data:

Total area:  $\approx$  300hec.

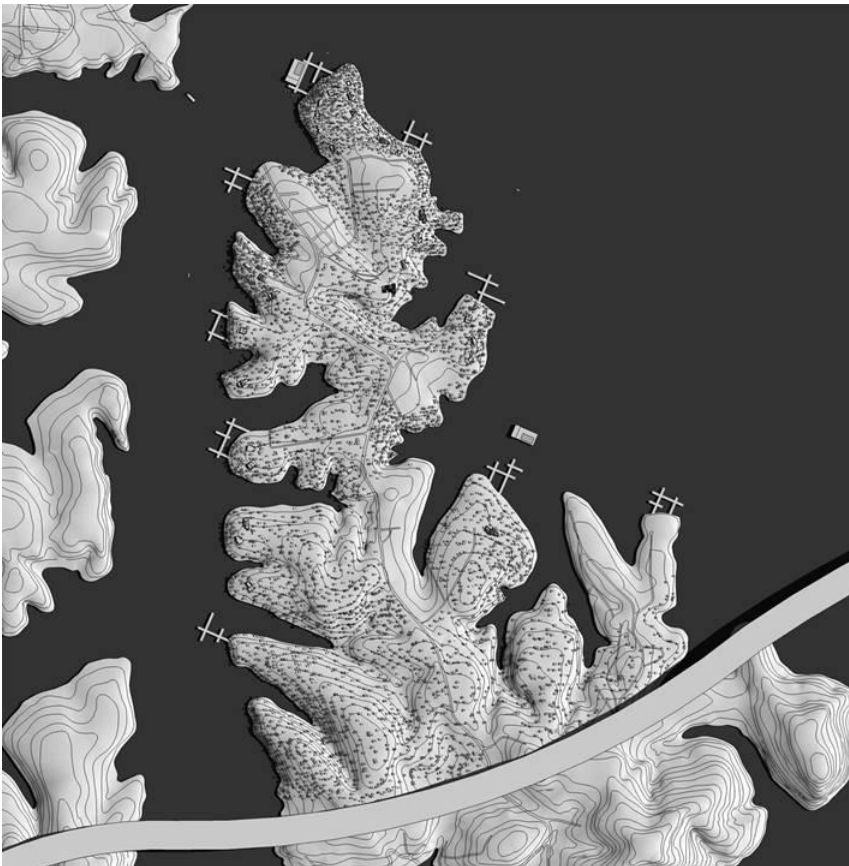
Minimum lot: 5.000m

Max coefficient: 0,2

Perm. rate: 90%

IAV: 45%

18



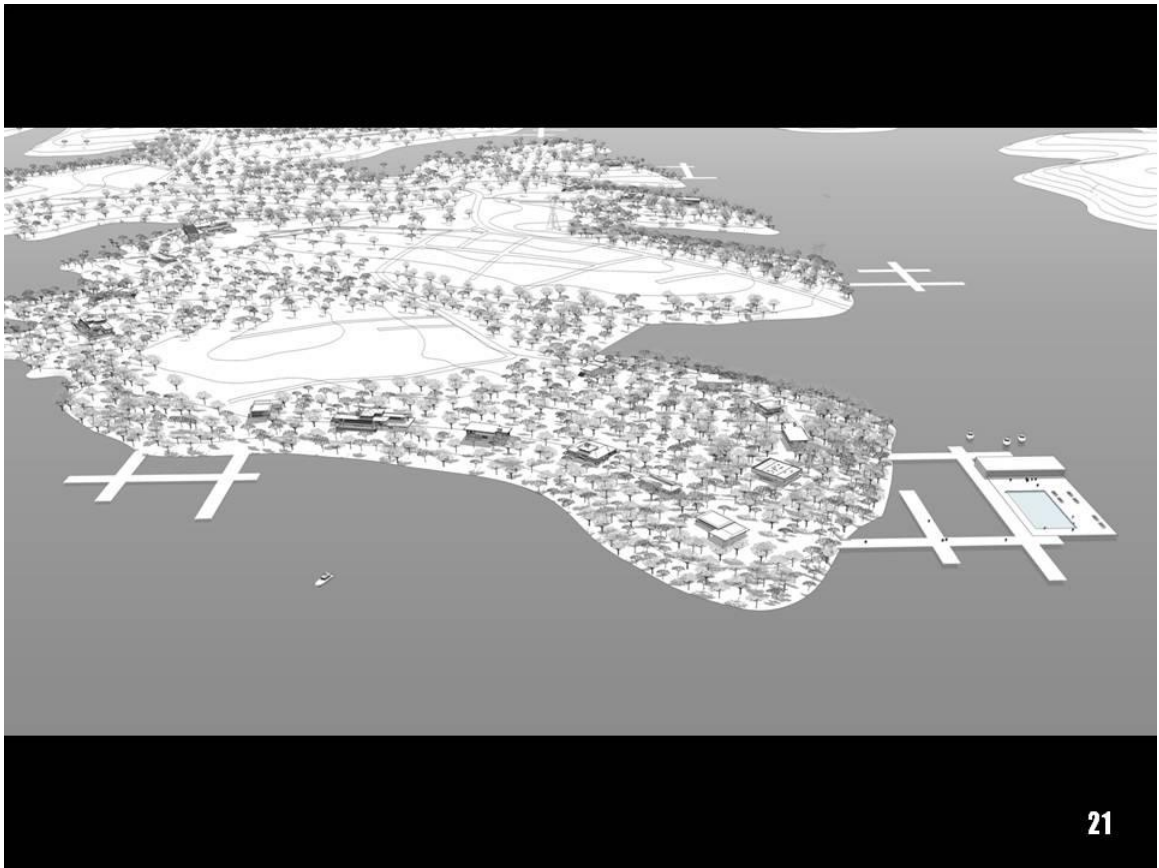
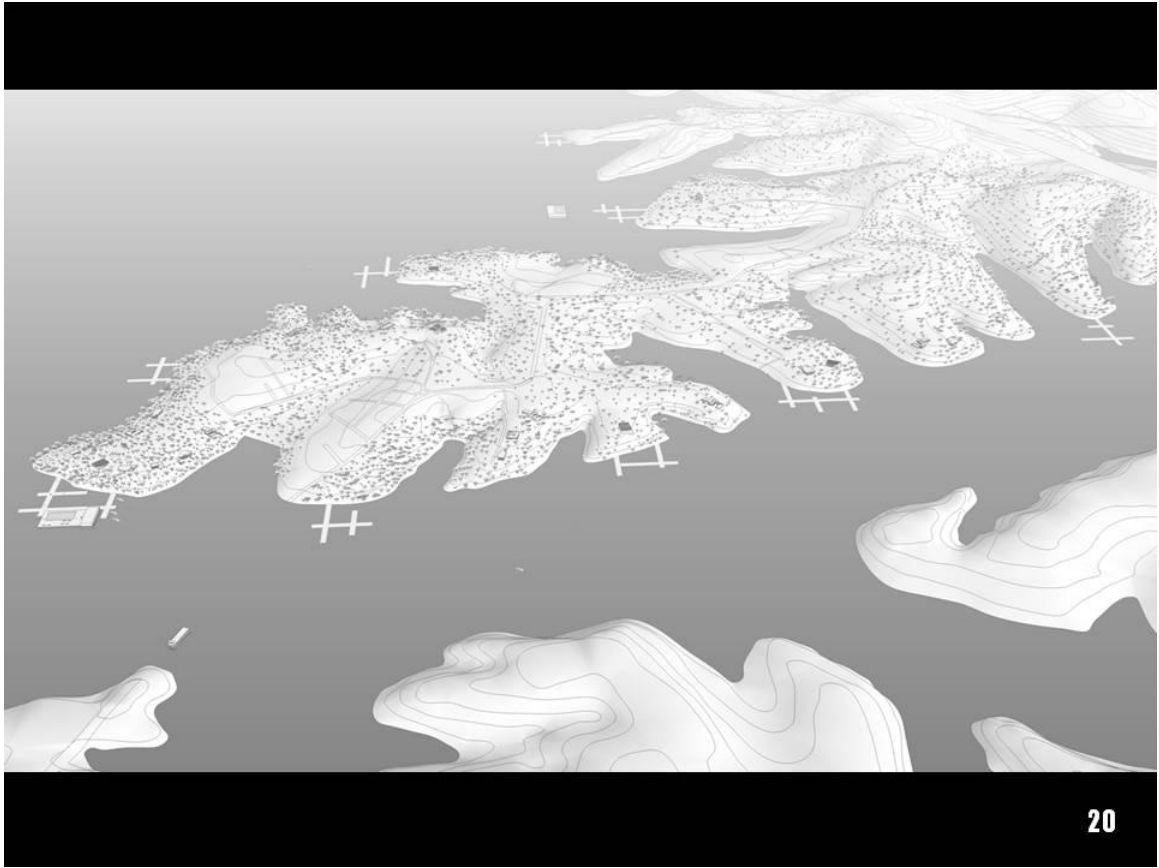
## BORORÉ

### PUBLIC CLUBS

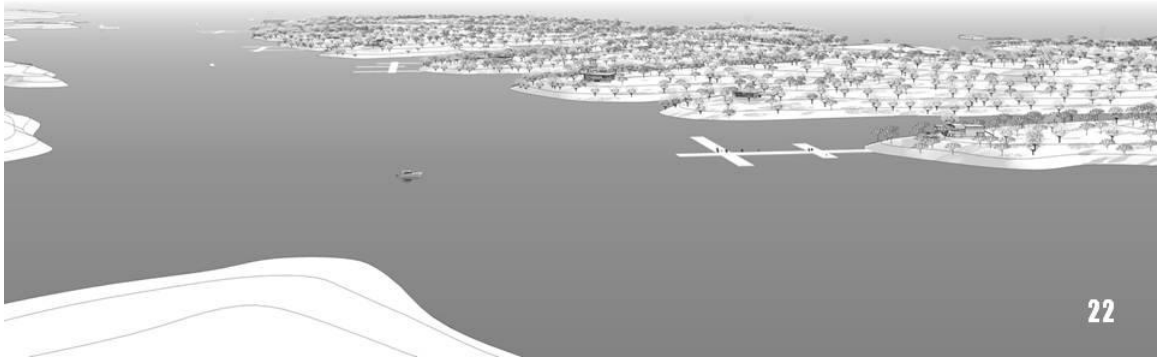
deployment

19

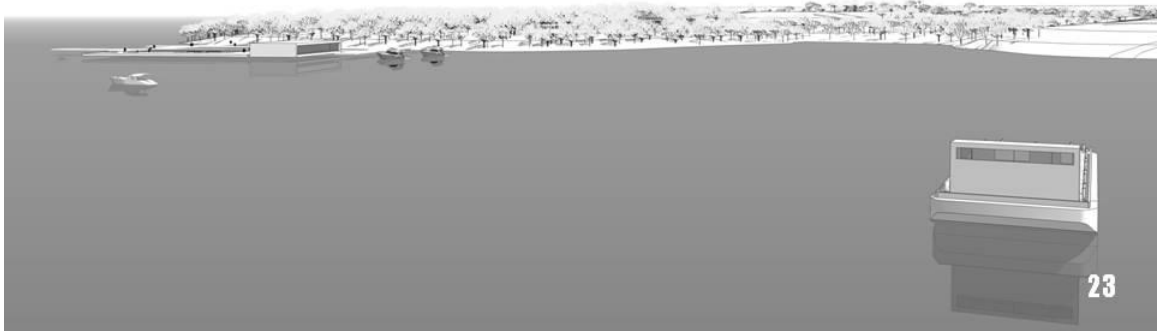




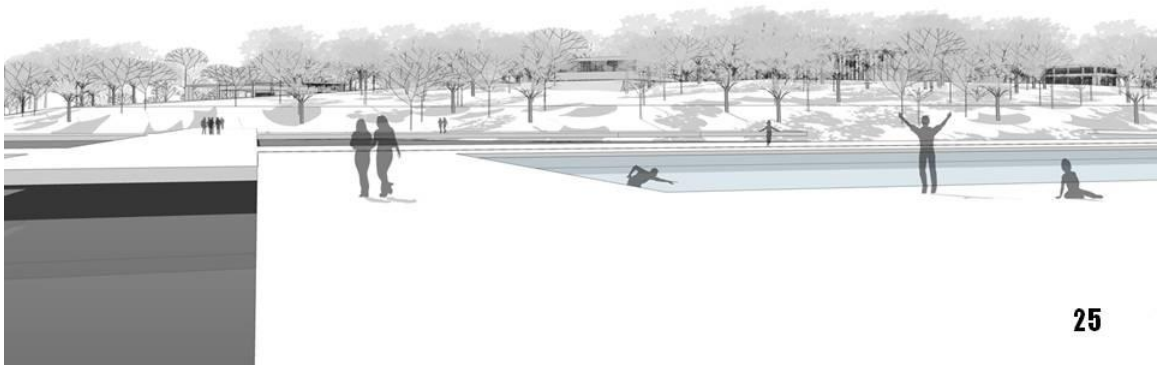
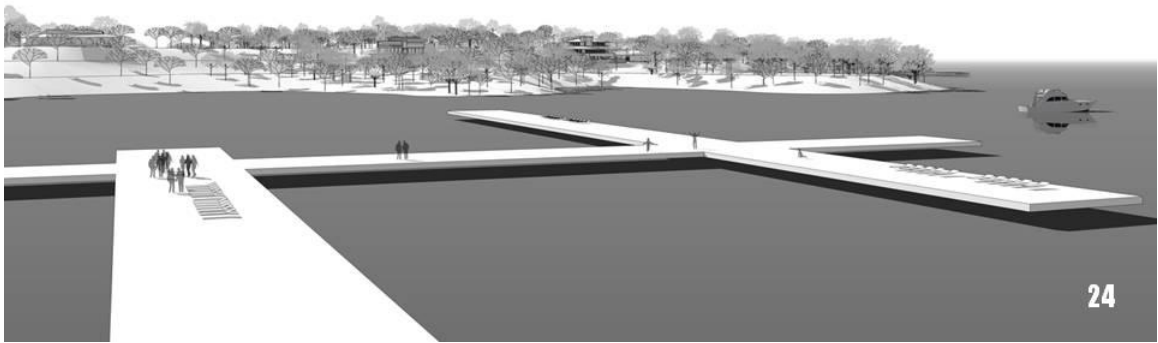


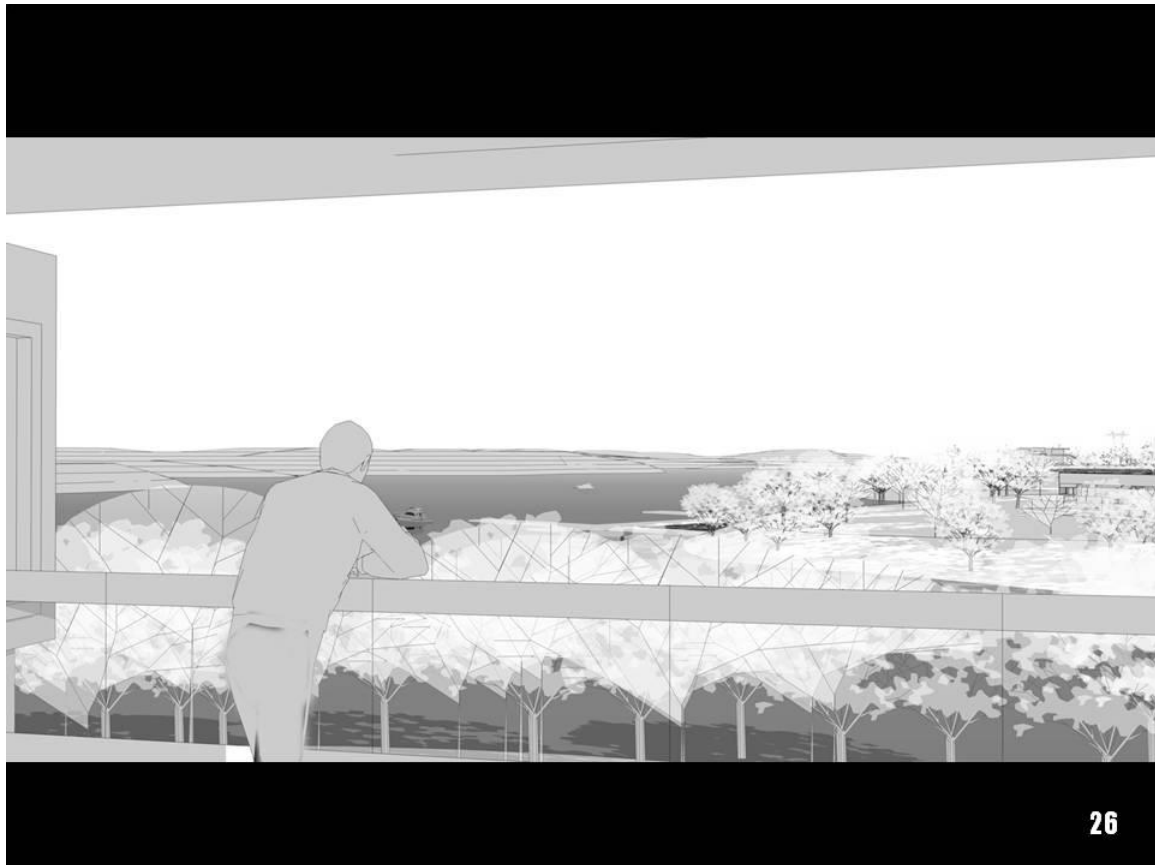


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