MATERIA Y FORMA VIII

BARCLAY & CROUSSE I BCHO ARCHITECTS I H. FERNÁNDEZ ELORZA I X3M I AMID.CERO 9

MATERIA Y FORMA

VIII JORNADAS INTERNACIONALES DE ARQUITECTURA Y FORMA

BARCLAY & CROUSSE · BCHO ARCHITECTS · HÉCTOR FERNÁNDEZ
ELORZA · X3M | ARHITEKTURA+URBANIZAM · AMID.CERO9

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CEMEX

arquitectura blanca

CATEDRA BLANCA
VALÈNCIA

ESCOLA TÈCNICA SUPERIOR D'ARQUITECTURA

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

BIOGRAPHY

Mas Llorens, Vicente

Vicente Mas Llorens, arquitecto por la Universitat Politècnica de València (1972), y Doctor Arquitecto por la misma Universidad (1983) y Catedrático de Universidad de Proyectos Arquitectónicos desde 2000. Ha sido director del Departamento de Proyectos Arquitectónicos (1994 y 2004), de la Escuela de Arquitectura (2012) y Vicerrector de Cultura de la UPV (1996). Actualmente dirige la Cátedra Blanca de Valencia y En Blanco. Revista de Arquitectura y ha dirigido la revista VLC Arquitectura. Fundó y dirige en la actualidad los congresos CIAB (Congreso Internacional de Arquitectura Blanca) y las Jornadas de Materia y Forma. Ha impartido docencia en las escuelas de Arquitectura de Paris- la Defense, Aachen, Florencia, Venecia y Manchester.

Vicente Mas Llorens has a Bachelor of Architecture from Universitat Politècnica de València (1972) and a Ph.D. in Architecture from the same University (1886) and Professor in the Department of Architectural Design at UPV since 2000). He has been the Director of the Department of Architectural Design (1994 and 2004), of the School of Architecture (2012) and Vice Chancellor of Culture in the UPV (1996). Currently, he manages the *Cátedra Blanca de Valencia* and *En Blanco. Revista de Arquitectura*. He has been in charge of VLC Journal and was the founder of the CIAB (International Congress of White Architecture) and the Conferences Materia y Forma, both directed by him. He has taught in the Schools of Architecture of Paris- la Defense, Aachen, Florence, Venice and Manchester.

Lizondo Sevilla, Laura

Laura Lizondo Sevilla. Arquitecta por la *Universitat Politècnica de València* (2003) y Doctora Arquitecto por la misma Universidad (2012). *Visiting scholar* en la GSAPP, *Columbia University* (2011-2012). Desde 2008 es profesora en el Departamento de Proyectos Arquitectónicos de la UPV y desde 2014 *Managing Editor* de En Blanco, Revista de Arquitectura. Los resultados de su tesis ¿¿Arquitectura o Exposición? Fundamentos de la Arquitectura de Mies van der Rohe¿ han sido publicados en revistas como EGA, ACE, Revista 180, ARQ, PPA, VLC y JSAH. *Visiting researcher* en *Central Saint Martins, University of Arts of London* (2015) con motivo de una segunda línea de investigación centrada en las *Plateglass Universities*.

Laura Lizondo Sevilla has a Bachelor of Architecture from *Universitat Politècnica de València* (2003) and a Ph.D. in Architecture from the same University (2012). *Visiting scholar* in the GSAPP, Columbia University, NY (2011-2012). Associate Professor in the Department of Architectural Design at UPV since 2008 and Managing Editor of *En Blanco. Revista de Arquitectura* since 2014. The results of her dissertation; ¿Architecture or Exhibition? The foundations of Mies van der Rohe Architecture have been published in journals such as EGA, ACE, Revista 180, ARQ, PPA, VLC and JSAH. Visiting researcher in Central Saint Martins, University of Arts of London (2015) in relation with a second field of research focused on Plateglass Universities.

SUMMARY

The eighth architectural conference MATERIA Y FORMA, organised by Cátedra Blanca Valencia, will take place on the 21st and 22nd March 2109 in the Lecture Room of the School of Architecture of Universitat Politècnica de València. MYF,together with the International Congress of White Architecture [CIAB], represent an international meeting point for the architectural debate related to white or coloured. exposed concrete. Thanks to these events organized by the Cátedra Blanca Valencia that began 15 years ago, there is a forum for debate and exchange of experiences through the best concrete buildings made in recent years. In this way, it brings future professionals in architecture to the business world in general, and to the concrete sector in particular. In this edition, architects from Spain,Peru and Korea will show us the latest projects carried out in exposed concrete. The result of each of the conferences is an international architecture publication, which increases the publications created by the Cátedra Blanca.The set of all publications are widely disseminated in university libraries and specialized bookstores and make up a catalogue of specific architecture of exposed concrete, a material that today is considered of great nobility in architecture

Cátedra Blanca began its journey in the Universitat Politècnica de València in the academic year 2000 / 2001 offering, among other activities, a series of conferences that were given by renowned architects and professors and although it was open to the entire school of Architecture, it was assigned to the course of Workshop 2. The results were gathered in the book [CON TEXTOS 1].

The formula was repeated yet again the following year, but in 2002 / 2003 we set ourselves a challenge: focusing most of the conferences offered by Cátedra Blanca in just a few days, in such as way that it became an event, not only in the School of Architecture but the University itself. And so, the first days of Materia y Forma emerged, that has been offering since its celebrated beginning, a panoramic view of the world of forms and constructive solutions related to an architecture that is though and carried out with white or coloured exposed concrete.

Not being satisfied with this, for the following course, we launched a call for an architectural conference in which, in addition to invited speakers that made up the [MYF] conferences, it also included contributions from architects and researchers that were interested in exposed concrete architecture. And so was born [CIAB] Congresos Internacionales de Arquitectura Blanca (International Congress on White Architecture), which has exceeded eight editions.

Thus, the editions of [MYF] are held every odd year and [CIAB] every even. Looking back and reading the publications where each one of the contributions are gathered or visiting the web page http://www.upv.es/catedrablanca/1congresos/congresos.htm where all of the speeches and communications of both conferences can be found, a very complete formal and technical repertoire can be appreciated that supports the designed and built architecture with exposed concrete along with its extension and development over the last 20 years. Lastly, the logical compliment of this training and dissemination labour into the architectural possibilities of exposed concrete, from Cátedra Blanca de Valencia we launched the journal [EN BLANCO. Revista de Arquitectura], which shares the direction and objectives of conferences and congresses but entails a more detailed exhibition of the projects and buildings and a greater impact in the dissemination of the research that is published about them. The EN BLANCO journal, of which we have edited 25 issues, is indexed in the following catalogues: Emerging Sources Citation Index, Avery Index to Architectural Periodicals, EBSCO, Latindex, DICE, RESH, MIAR, ULRICH'S WEB, ERIH PLUS and in the databases of ISOC and Dialnet, in addition to being found in libraries specialised in architecture form around the world.

Meanwhile, the annual contests in designs, intended to be built with concrete, earmarked for all UPV students, the courses of the subject [Proyectar con hormigón blanco] (Design with white concrete), the study trips, the exhibitions and the intensive courses have continued to take place.

I realise that this presentation sounds like a farewell. It is. With this 8th Conference of Materia y Forma my dedication to the management of Cátedra Blanca de Valencia comes to an end. I am sure that the future will result in many successes to this CEMEX and UPV initiative. With this we will all be wiser and happier.

Vicente Mas Llorens
Chair of Cátedra Blanca Valencia
March 2019

This publication is a collection of works presented in the eighth edition of Materia y Forma International Conference of Architecture, one of the most traditional and visible activities organised by the Cátedra Blanca CEMEX and the Polytechnic University of Valencia.

For the promoters it is a challenge to organise such a global event, from the educational point of view- with professionals carrying prestigious international reputations and coming from various continents. It is also of great satisfaction, since it means a meeting point for experts and future architects where both company and university lend a hand.

CEMEX is proud to contribute to the dissemination of knowledge and good practises in architecture, especially in a period where great projects are scrutinised and where sustainability plays an essential role and where concrete continues to be an indisputable construction material. Our commitment with Cátedra Blanca and its dissemination activities of white concrete is firm and we hope to continue supporting this initiative for many more years to come.

This is a rare edition; it gathers a selection of the main projects that are presented in these conferences. In the 2019 call, architects from Spain, Peru, Croatia and Korea will show their latest projects carried out in exposed concrete and will be part of the debates and exchange of experiences that will take place on the 21st and 22nd March with students and professors of the UPV. This unique catalogue of works includes some of the best concrete buildings made in the last few years and they help to understand our colleagues' work as well as delving into the advantages of the aesthetic and structural use of white or coloured concrete. They have all been able to give an original form to the subject and have transformed it into works, which offer a place to feel, enjoy and admire.

CEMEX, as the driving force of Cátedra Blanca, is grateful for the effort on behalf of the organisers of the conference, to the Universitat Politècnica of València and to the School of Architecture, for the important task of disseminating and promoting a material that is considered one of the most noble and sustainable in architecture today.

Javier Fuertes Franco de Espes
Chair of Cemento Blanco of CEMEX in Spain
March 2019

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BARCLAY&CROUSSE

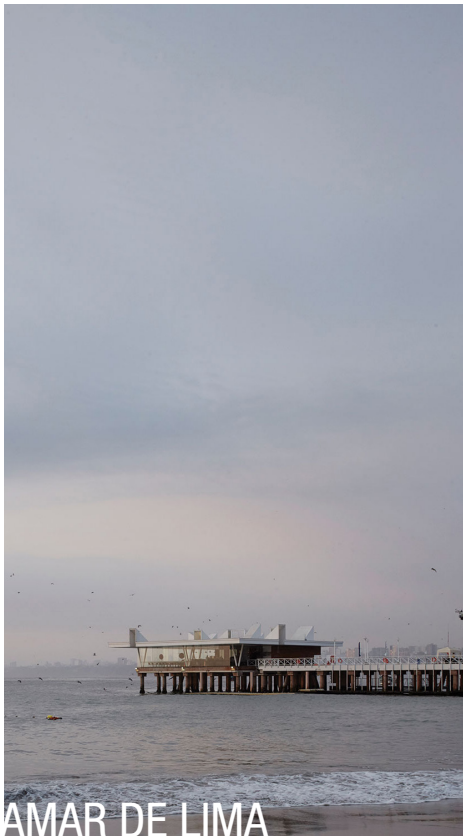
SANDRA BARCLAY · JEAN PIERRE CROUSSE

Founded in Paris in 1994, Barclay & Crousse Architecture has been based in Lima, Peru, since 2006. The studio manages a wide range of programs on a transcontinental basis, leading a design laboratory that explores the bonds between landscape, climate, and architecture. Their work challenges common notions about technology, usage, and well-being that, from specific conditions of developing countries, can inform and be pertinent in a global context.

Barclay & Crousse was awarded the Mies Crown Hall Americas Prize 2018 by IIT Chicago, the Oscar Niemeyer Prize 2016, the Peruvian National Prize of Architecture in 2014 and 2018, and the Latin America Prize 2013, given by the International Committee of Architectural Critics (CICA). It also received international honors at the 20th Pan-American Biennale of Quito (2016), the 4th Ibero-american Biennale (2004), and the 14th Buenos Aires Biennale (2013). Their lecture building for the University of Piura was exhibited at the 16th International Architecture Exhibition at the Venice Biennale, 2018. Barclay and Crousse were curators of the Peruvian Pavilion at the 15th Venice Biennale, 2016, which obtained the Special Mention of the Jury.

Barclay currently teaches at the Pontificia Universidad Católica del Perú and previously taught at the Paris-La Villette School of Architecture. She received the 2018 Woman in Architecture Award from the London-based Architects' Journal and Architectural Review, as well as a fellowships from the Fulbright Foundation and the French Académie d'Architecture.

Crousse is director of the Master Program in Architecture at the Pontificia Universidad Católica del Perú. He has served as a design critic at the Harvard GSD and a teacher at the Paris-Belleville School of Architecture. He was a member of the jury for the Mies Crown Hall Architecture Prize in 2016.



AMAR DE LIMA

MG BUILDING

M6 HOUSE

D3 HOUSE

UN BUILDING

M6 HOUSE

Location: Punta Hermosa, Perú · **Plot area:** 240 sqm · **Project area:** 940 sqm · **Contractor:** Aceros y Concretos S.A. **Project Manager:** Juan Miguel Chinchay & Alfredo Castro **Structural Engineer:** Jorge Indacochea · **Client:** Private· **Project:** March 2011 - March 2012 · **Construction:** May 2012 - March 2013 **Main materials:** Concrete, polished cement, talamoye stone, plaster cement and paint · **Photographers:** © Cristóbal Palma

The house sits a few meters away from the Pacific Ocean, in the traditional beach town of Punta Hermosa, 45km south from Lima. The few old houses of these beach towns are known for the porch that acts as an intermediate space between the living spaces and the sea. This feature is the founding element for the project.

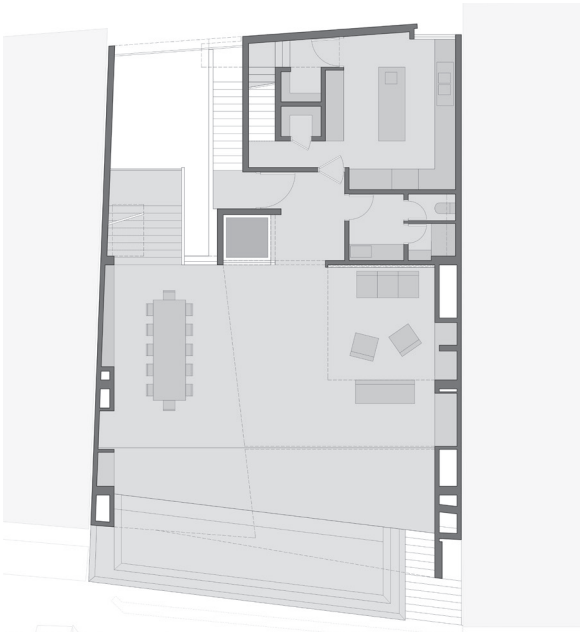
The mild climate of the Peruvian coast allow considering the whole social area as a porch: it is no longer a transitional space: it's the main one: an outdoor, shaded space, framing views on the Pacific Ocean. Space flows freely through the house, as an interior landscape which establish a dialogue with the exterior one. This dialogue is a constant and changing redefinition of each other.

The maximum dimensions allowed by the urban regulation of the plot generates a solid volume, which is later “excavated” during the design process to create the living spaces. Only bedrooms are clearly defined as interior spaces: the great porch, which harbors the living room, the dining room, the terrace and the pool are contained exterior spaces opening towards the sea, and the exterior staircases and circulations open to the sky in unexpected ways.

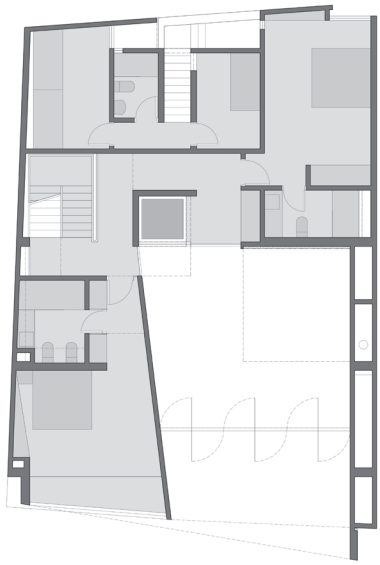
The house is free of columns: the dividing walls and the roof slab form a structural shell from which the volumes hang over the porch, creating interconnected spaces and multiple points of view inside the house. Structure defines the space and shapes the light. where intimacy comes to be. The house is organized in three levels in the vertical sense and in a square angle in the horizontal sense. The vertical organization responds to the program, while the horizontal organization responds to context and orientation.

The service area and ludic spaces are located in the basement, but open to mineral patios connected to the ground floor by ramps. The bedrooms are located in the upper level, framing views over the suburbs. Both levels define a transparent space that defines the social area, opening thoroughly to the green patio.

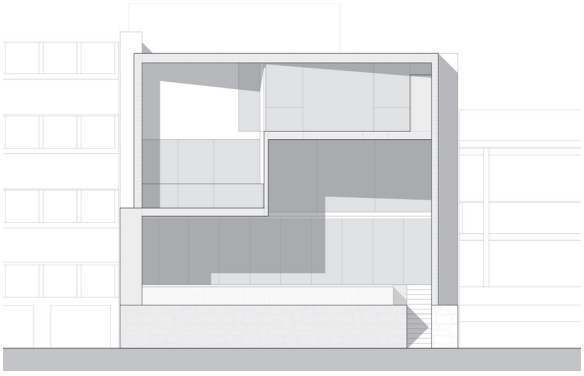
This social level links the mineral and green patios offering many ways to live the house, depending on the time and the weather conditions. These spaces offer a great flexibility and adaptability so to admit evolution in uses and the pleasure of continuously re-discovering your own home.



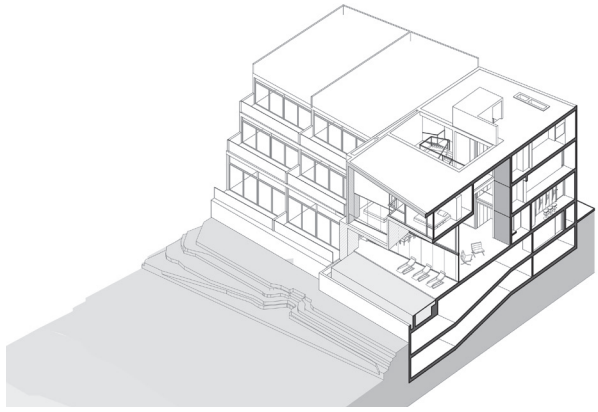
D3 House (2010-2013)
ground floor



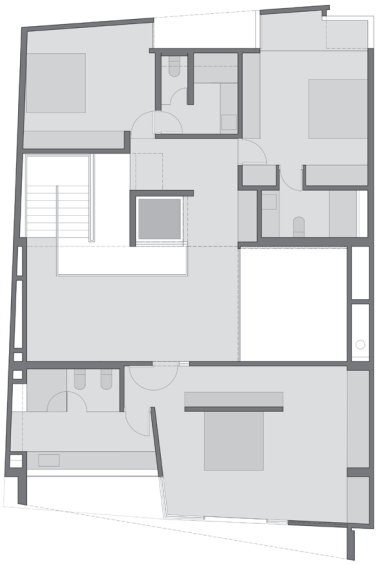
D3 House (2010-2013)
first floor



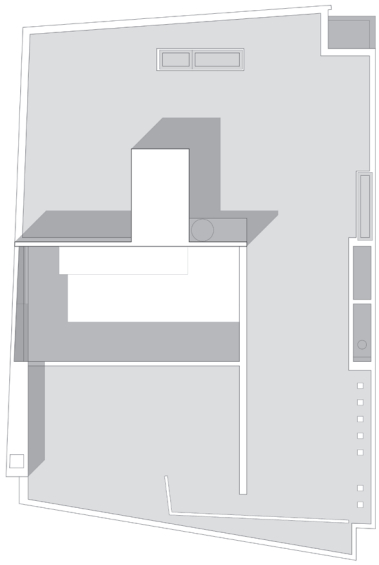
D3 House (2010-2013)
front elevation



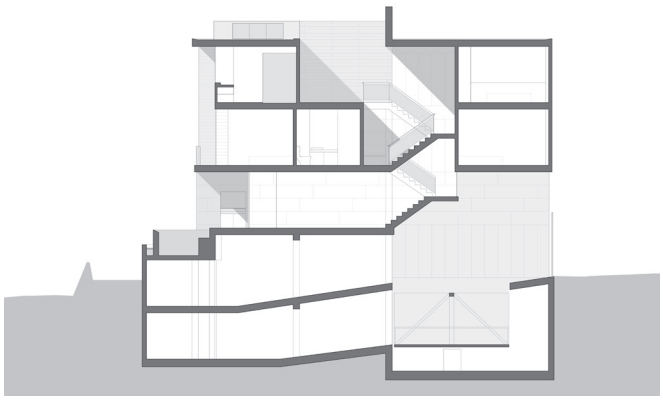
D3 House (2010-2013)
axonometric section



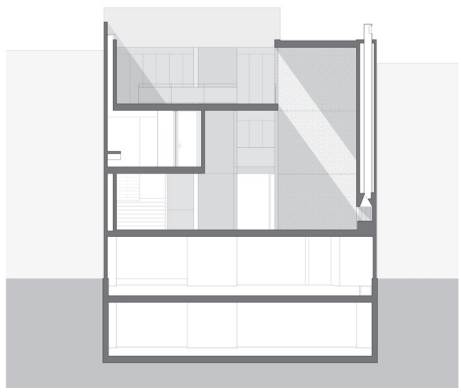
D3 House (2010-2013)
second floor



D3 House (2010-2013)
rooftop



D3 House (2010-2013)
section 1



D3 House (2010-2013)
section 2

D3 HOUSE

Location: La Molina, Lima, Perú · **Plot area:** 1.062 sqm · **Project area:** 856 sqm · **Contractor:** PADIC SAC · **Project Manager:** Juan Miguel Chinchay · **Structural Engineer:** Carlos Salcedo · **Client:** Private · **Project:** October 2010 - September 2011 · **Construction:** July 2012 - March 2013 **Main materials:** Concrete, steel cut, Kaliston marble · **Photographers:** © Gonzalo Cáceres

The project explores the complex relationship between intimacy, domesticity, spatial expansion and transparency, inspired on the traditional limean houses, which respond to an introverted scheme where the street façade, opaque and abstract, give place to a lively courtyard in the interior through a single space called zaguán.

In this project, the apparent opacity and heaviness of the house, seen from the street, is transformed in fluid, transparent and lighted spaces once we get in the interior of the house and the interior garden, treated as a green patio. A multiple storey space defines the threshold where intimacy comes to be. The house is organized in three levels in the vertical sense and in a square angle in the horizontal sense. The vertical organization responds to the program, while the horizontal organization responds to context and orientation.

The service area and ludic spaces are located in the basement, but open to mineral patios connected to the ground floor by ramps. The bedrooms are located in the upper level, framing views over the suburbs. Both levels define a transparent space that defines the social area, opening thoroughly to the green patio.

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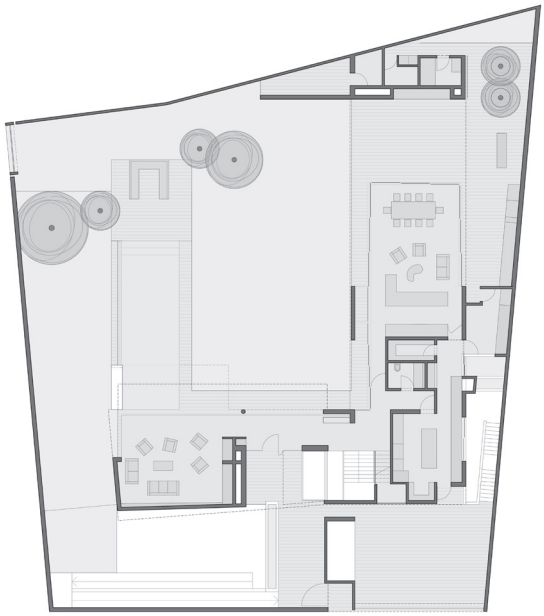
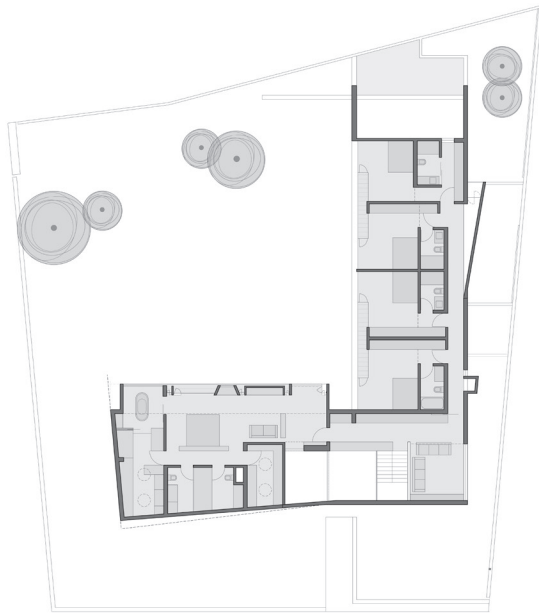
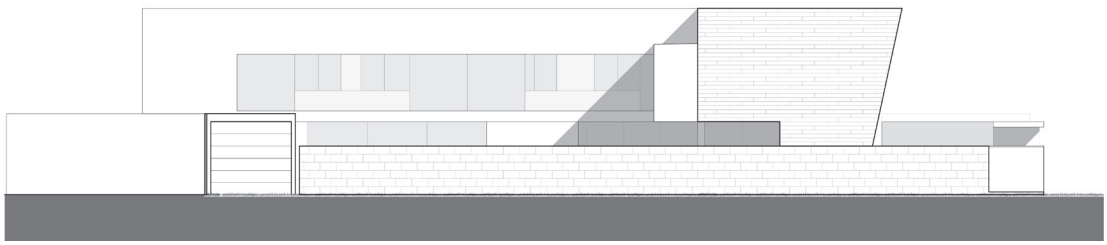


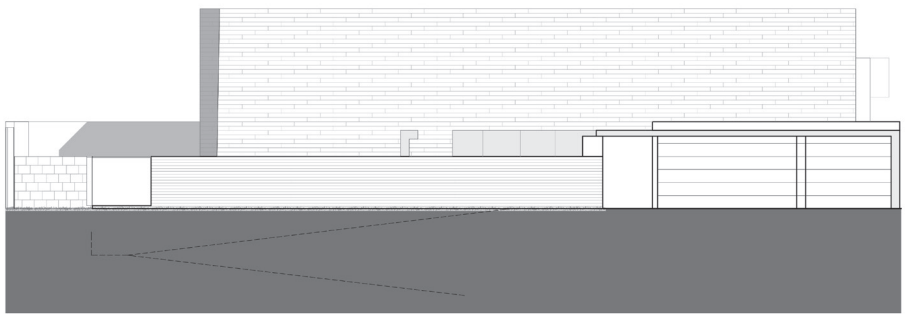
D3 House (2010-2013)
ground floor



D3 House (2010-2013)
first floor

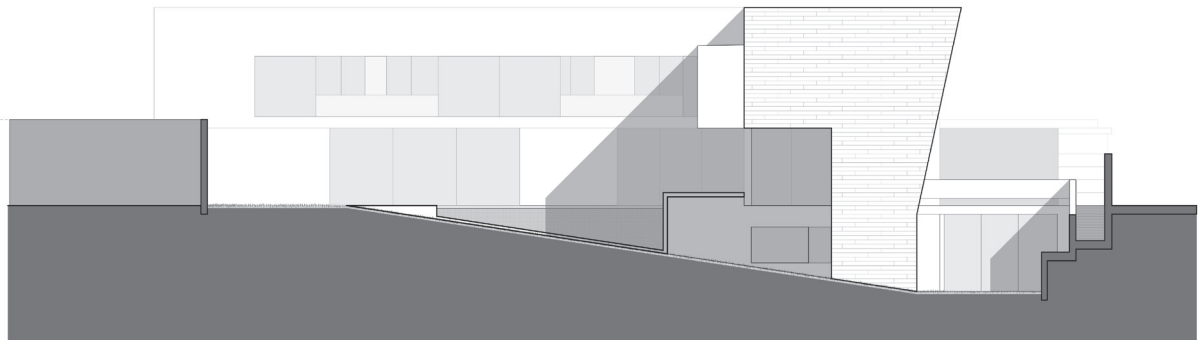


D3 House (2010-2013)
elevation 1

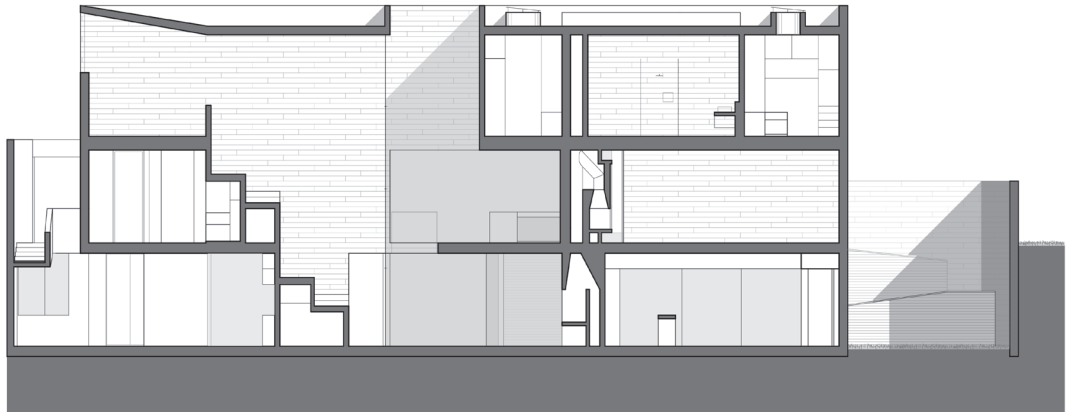


D3 House (2010-2013)
elevation 2

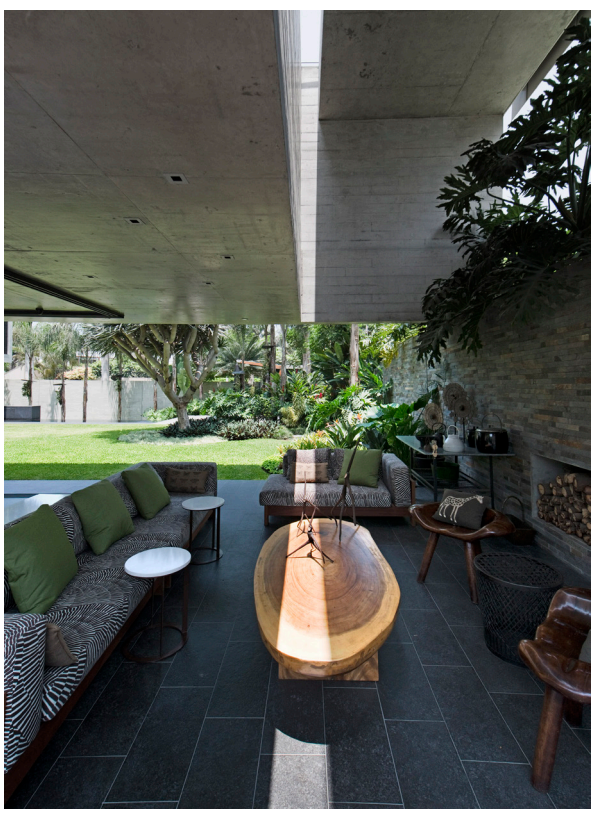
D3 House (2010-2013)
section 1



D3 House (2010-2013)
section 2



D3 House (2010-2013)
section 3



MG BUILDING

Location: Chacarrilla del Estanque, Lima, Perú · **Roofed area:** 3.140 sqm · **Plot surface area:** 960 sqm · **Programme:** Apartment complex with 9 duplex and 2 apartments · **Contractor:** Barclay Consultants · **Assistants:** Alejandro Zamudio & Paulo Shimabukuro **Structural Engineer:** Raúl Ríos · **Client:** Barclay Consultants · **Project:** January 2013 - May 2014 · **Construction:** June 2013 - December 2014 **Art Hall work:** Daniel Barclay · **Main materials:** Concrete, aluminium frames, walls with pebble aggregate · **Photographers:** © Nicolás Saieh

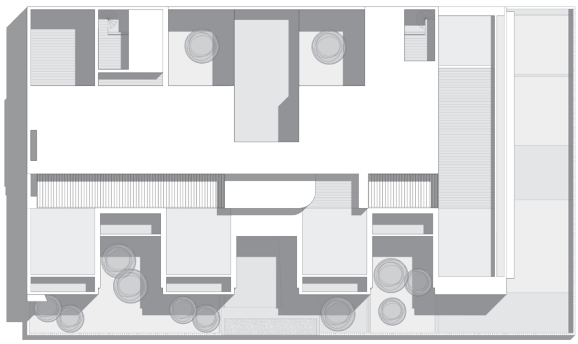
The project proposes an apartment complex program with a variety of types and dimensions of apartments, seeking a mix in the family composition of its occupants. The structure is organised in strips measuring 6m in width and perpendicualr to the longest front of the street. A gap shift is them carried out in plane to genernate a fold of the exterior perimeter and thus naturally illuminate all the spaces.

The volumetric gap creates interior patios and outdoor patios, which have one open side facing the street, which allows maintai-

ning some pre-existing trees and generate intimacy in a relatively narrow street and with a register of neighboring buildings. These courtyards are glazed with tempered glass partitions, defining vertical elements that are opaque towards the street, in reinforced concrete, which produce diagonal views and avoid direct views of the street and the building at the front.

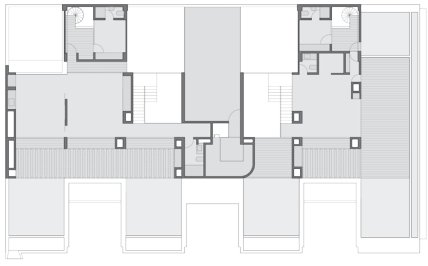
The program is arranged to allow a semi-basement parking, perforated by two patios that bring natural light. This allows the planting of two trees in the parking lot while integrating it spatially to the rest of the building.

On the ground floor, the entrance hall defines an outdoor space covered by multiple heights communicated by an integrated staircase, and gives access to two flats. On the second floor 7 duplexes are installed and on the fourth floor, 2 duplexes with terraces and gardens on the roof.

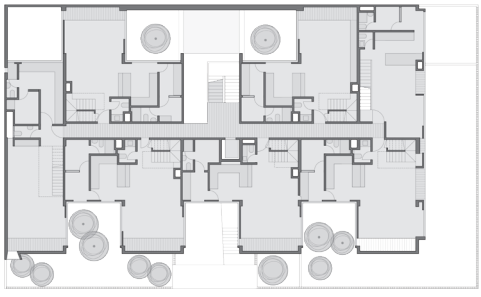


rooftop

third floor

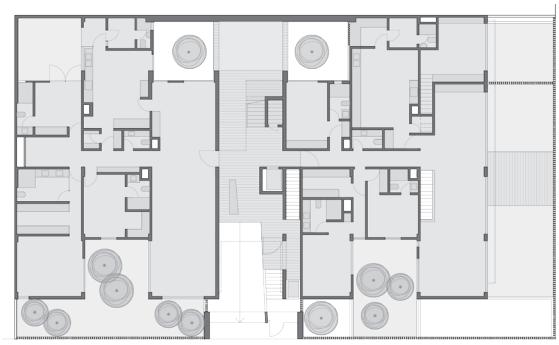


fourth floor

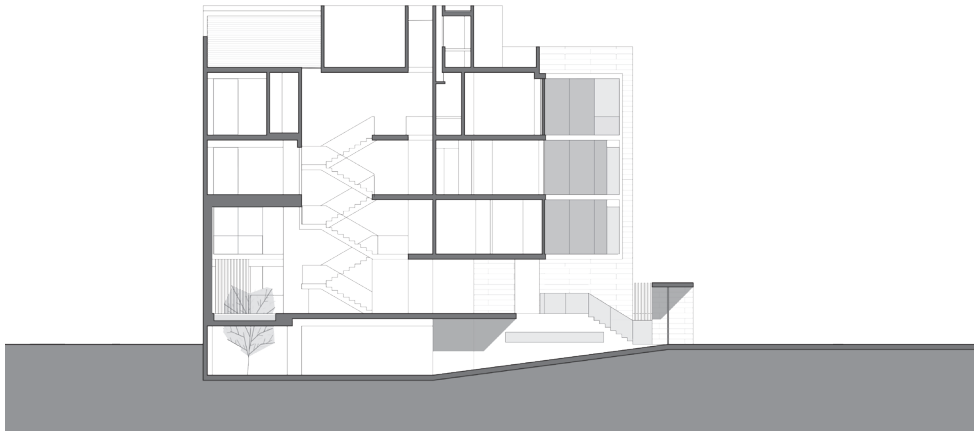


first floor

second floor



MG Building (2013-2014)
ground floor



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MG Building (2013-2014)
side elevation

0 5

MG Building (2013-2014)
side elevation

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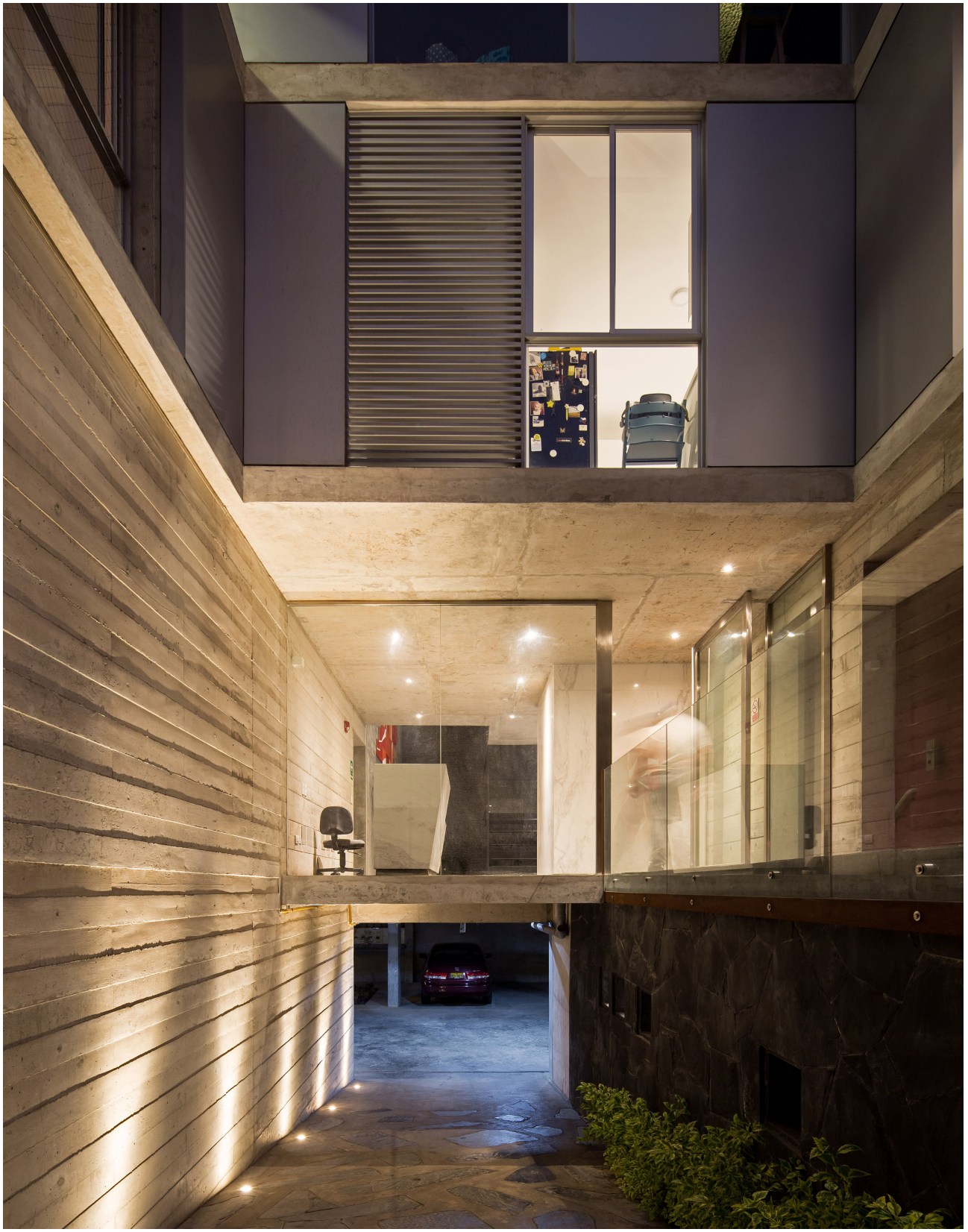
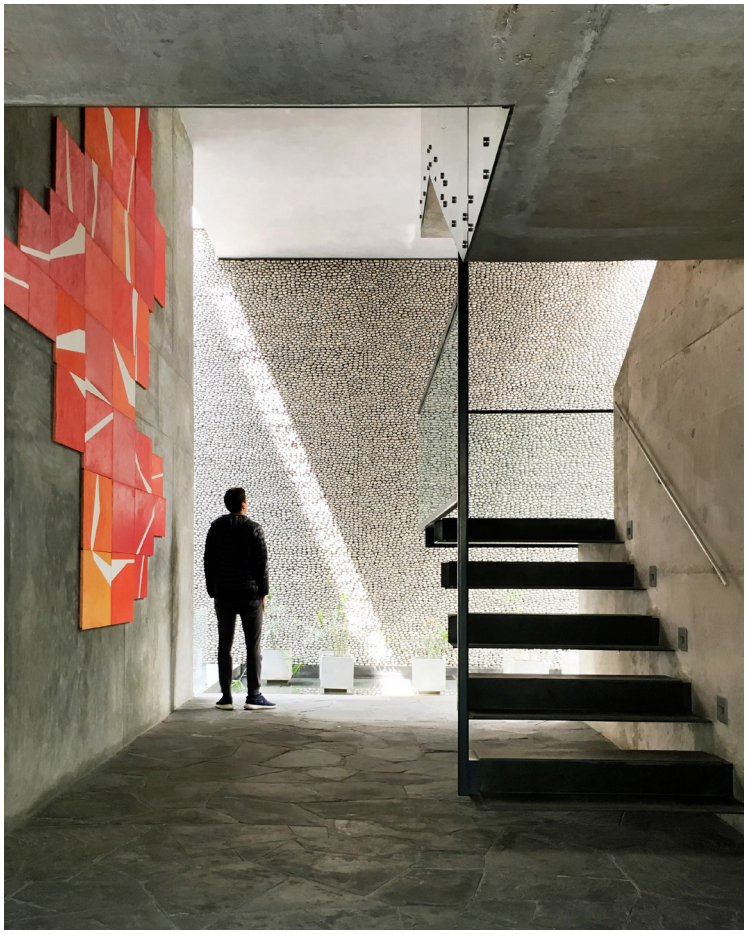
MG Building (2013-2014)
main elevation

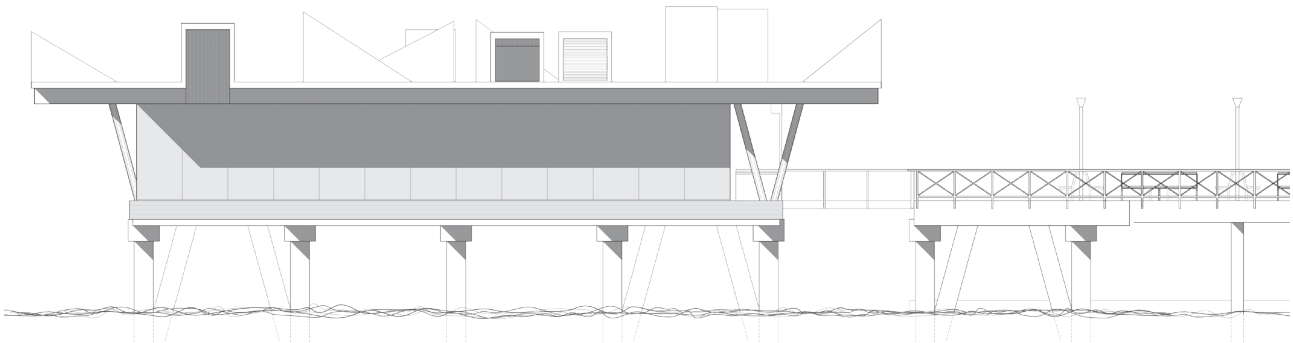




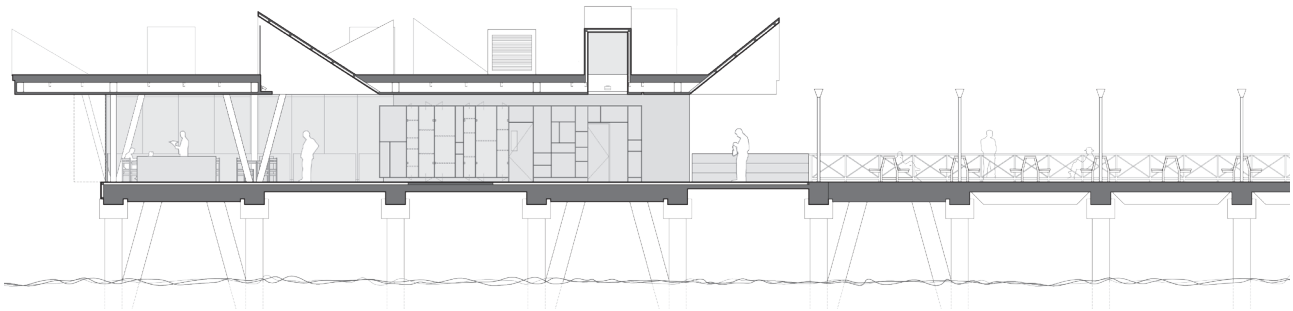
AMARDELIMA RESTAURANT

Location: Regatas Rowing club, Lima, Perú · **Area:** 633 sqm **Programme:** Restaurant · **Contractor:** EITAL · **Assistants:** Diego Torres Paez · **Structural Engineer:** Jorge Indacochea · **Client:** Club de Regatas Lima · **Project:** 2014 - 2015 · **Construction:** 2015 **Main materials:** Tubular steel structure, painted wood in ceiling and roof, natural hard wood in floors and partitions, tempered glass pivoting windows · **Photographers:** © Cristóbal Palma & © Juan Solano

Founded in 1875, the Regatas club is one of the oldest rowing clubs in South America. After the reconstruction of one of the piers, a restaurant that echoes the first rowing building was commissioned to Barclay & Crousse. Amar de Lima restaurant is located at the end of the pier, with an independent platform linked to it through a short bridge.



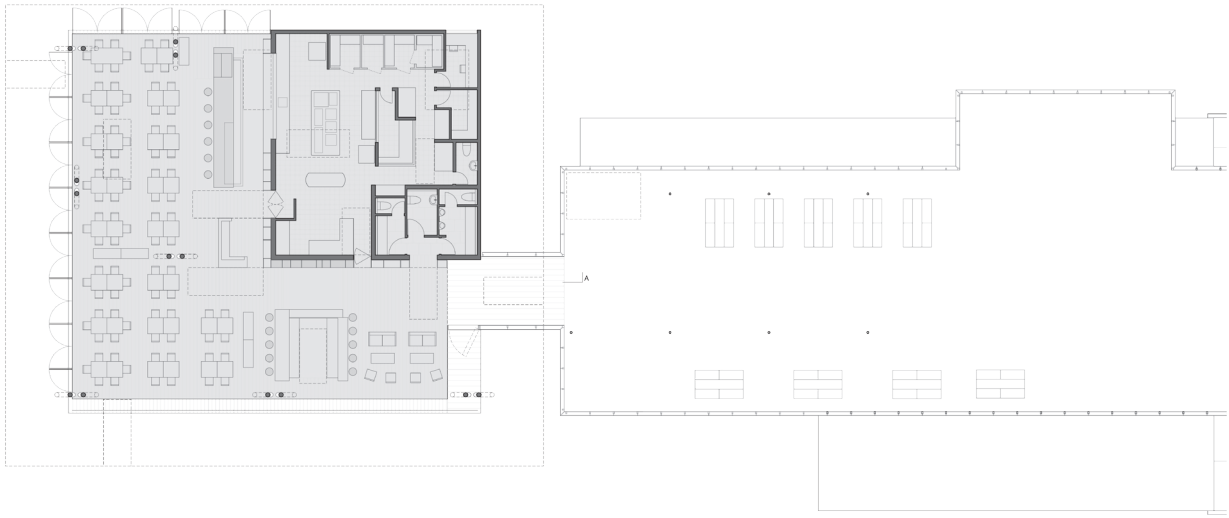
Amar-de-lima (2014-2015)
south elevation



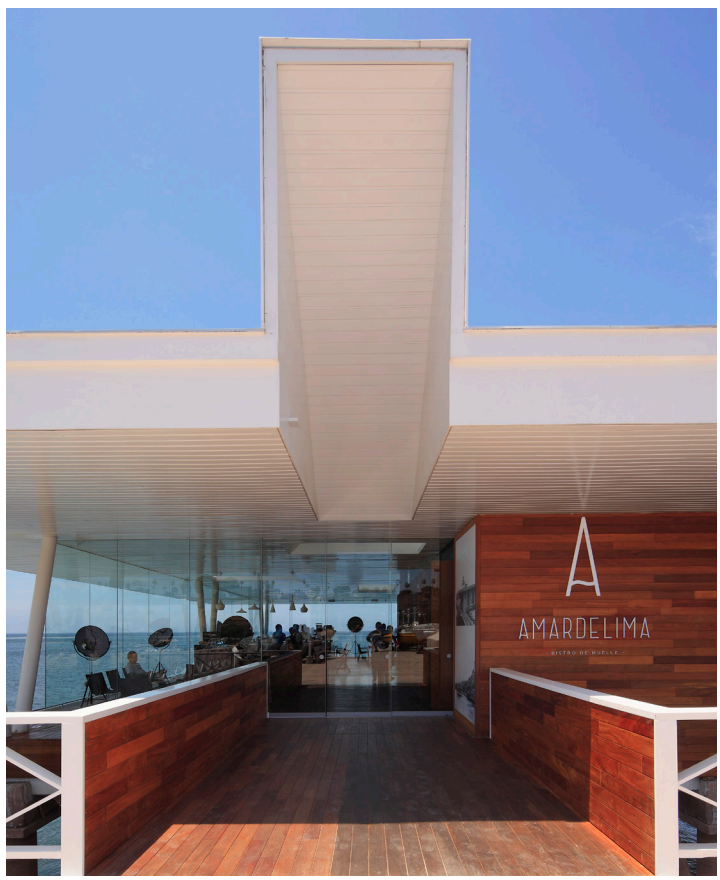
Amar-de-lima (2014-2015)
section

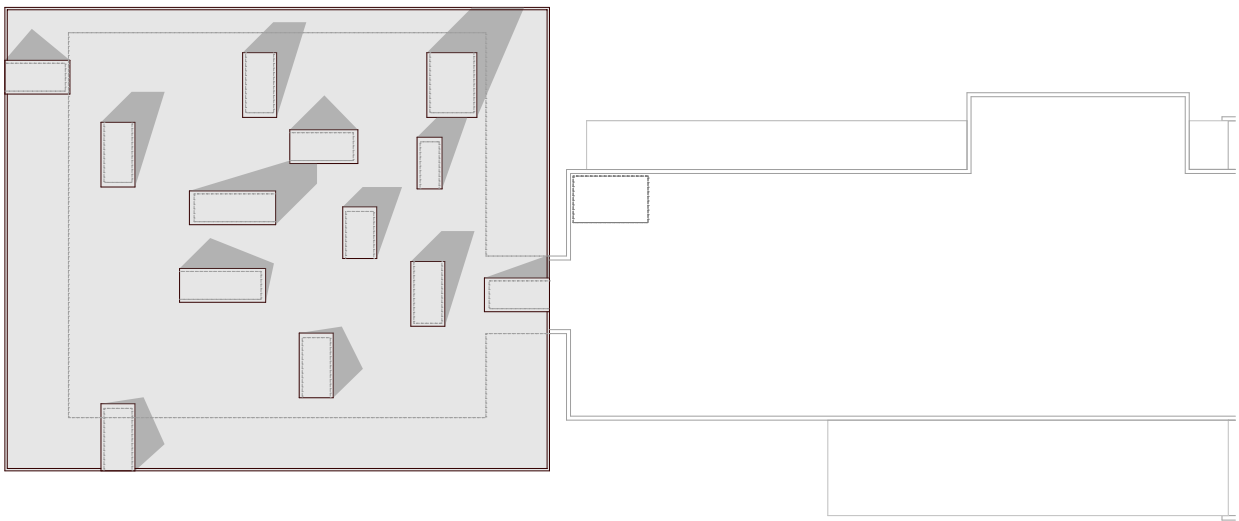
The project reinterprets in a contemporary way key features from the original building as its geometry, skylights, openness and materials as steel and white-painted wood to adapt it to a restaurant which offer unique and compelling sea and bay views of Lima. Large cantilevered roofs ensure protection from the sun, while pivoting floor-to-ceiling windows ensure 360º views and natural ventilation, reinforced by the presence of triangular shaped skylights, inspired from the colonial Limean skylights.

The kitchen is surrounded by shelves, a wine cellar and blackboards advertising the day's specials. Cooks enjoy views over the sea by a long window where their work can be seen by diners and passing fishermen from the artisanal port next to the rowing club.

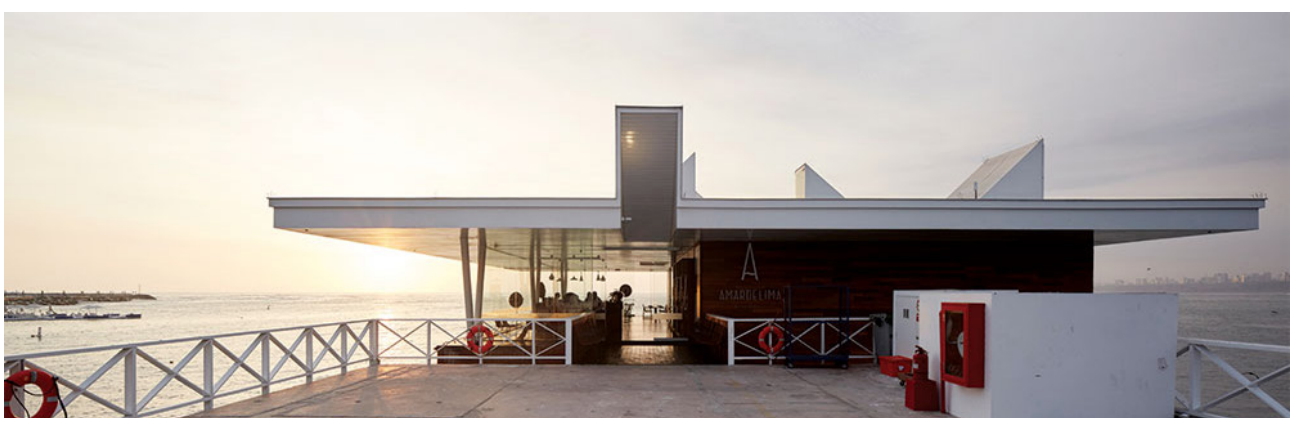


Amar·de·lima (2014-2015)
first floor | restaurant





Amar·de·lima (2014-2015)
rooftop



UN BUILDING

Location: United Nations Park, Lima, Perú · **Roofed area:** 8.125 sqm · **Plot surface area:** 800 sqm · **Programme:** 15 apartments, 2 duplexes, basement parking · **Contractor:** EF Contractors · **Assistant:** María Isabel Pineda **Structural Engineer:** Luis Flores · **Client:** EF Contractors· **Project:** August 2014 - May 2015 · **Construction:** October 2015 - March 2017 **Main materials:** structure and slabs in exposed concrete cast-in-place, sun Louvre panels in Estela Sombra, prefabricated concrete planters, aluminium windows and tempered glass panels, white marble floor, wooden interior floors · **Photographers:** © Cristóbal Palma

The project responds to the privileged situation of an urban land on three fronts to propose a building sensitive to its orientations, regulating the openings and the feeling of intimacy in relation to its views, orientations and sound intensity of the adjacent urban spaces.

The project articulates the relationship between an interior park and the public road, giving continuity between the vegetation of the park and the city through hanging gardens that face the cul-de-sac that allows public access to the park.

The elevations clearly show the stacking of housing levels by means of balconies run on their three fronts, which are thinned at their ends. The different urban configurations and orientations give specificity to each elevation.

The longest front faces the Levante, and the cul-de-sac, where there is a public parking and pedestrian access to the building. The running balconies are slightly curved to signify their condition as the main front. The building is protected with panels of Peruvian marble that function at the same time as sun louvre and as sun guard, protecting from the sun and the register of the bedrooms belonging to neighbouring flats along the front of the building.

The south-facing front with views to the park, completely opens with large glazed surfaces, behind which are the living and dining rooms of the large flats. The wide balcony is the extension of the interior areas.

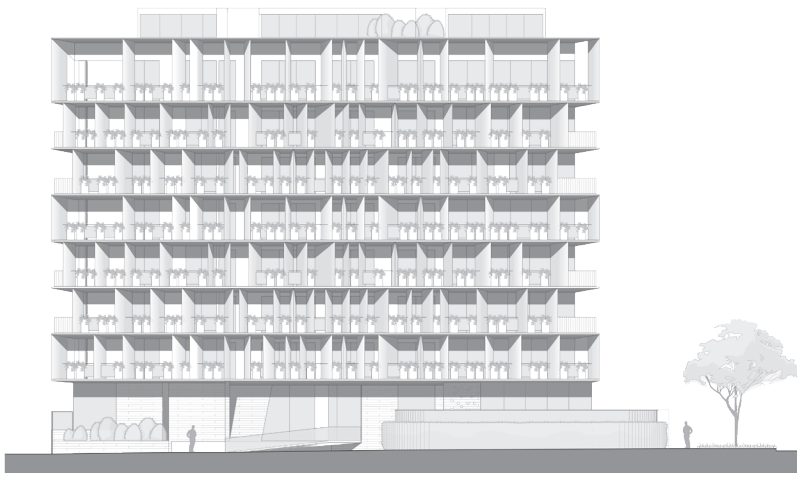
The elevation towards the avenue, oriented northwards, receives the turning of the balconies run from the main front to illuminate the halls of the small flats, and closes with projected to protect the bedrooms from the noise of the street. The vehicular access gives to the avenue, freeing up the ground floor in the fronts of the cul-de-sac and the park.

The building contains two flats per floor, but the distribution allows them to be united in a large house with three fronts.

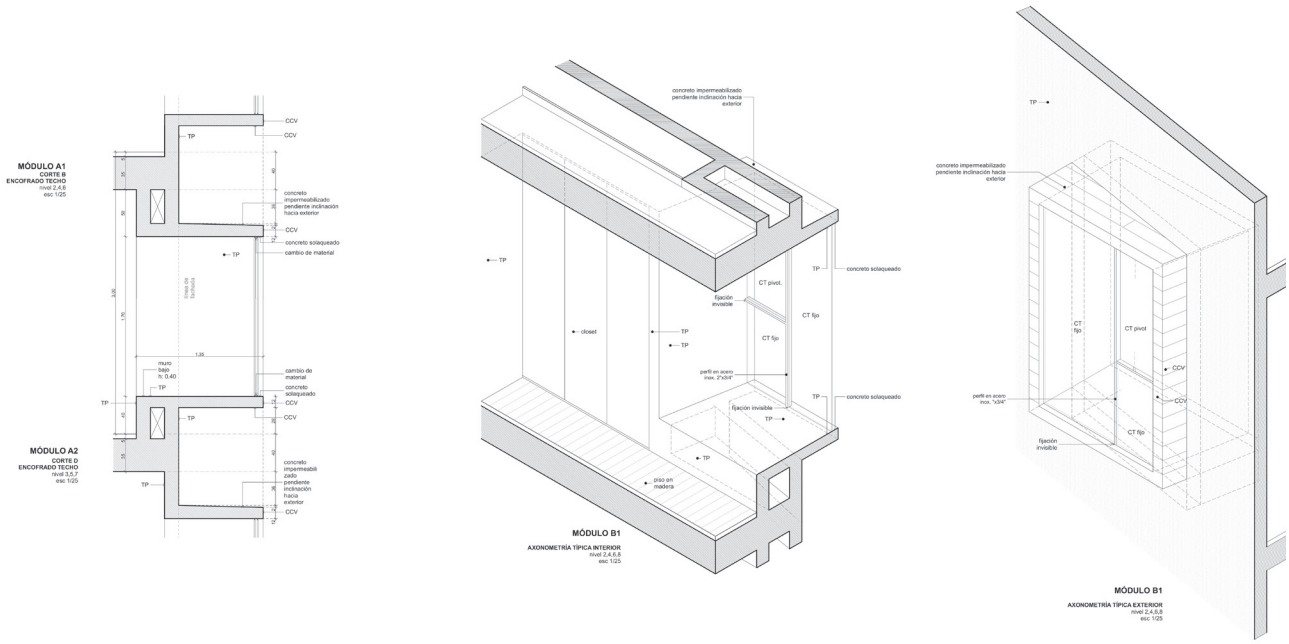
UN Building (2014-2017)
east elevation

UN Building (2014-2017)
floorplan and facades composition

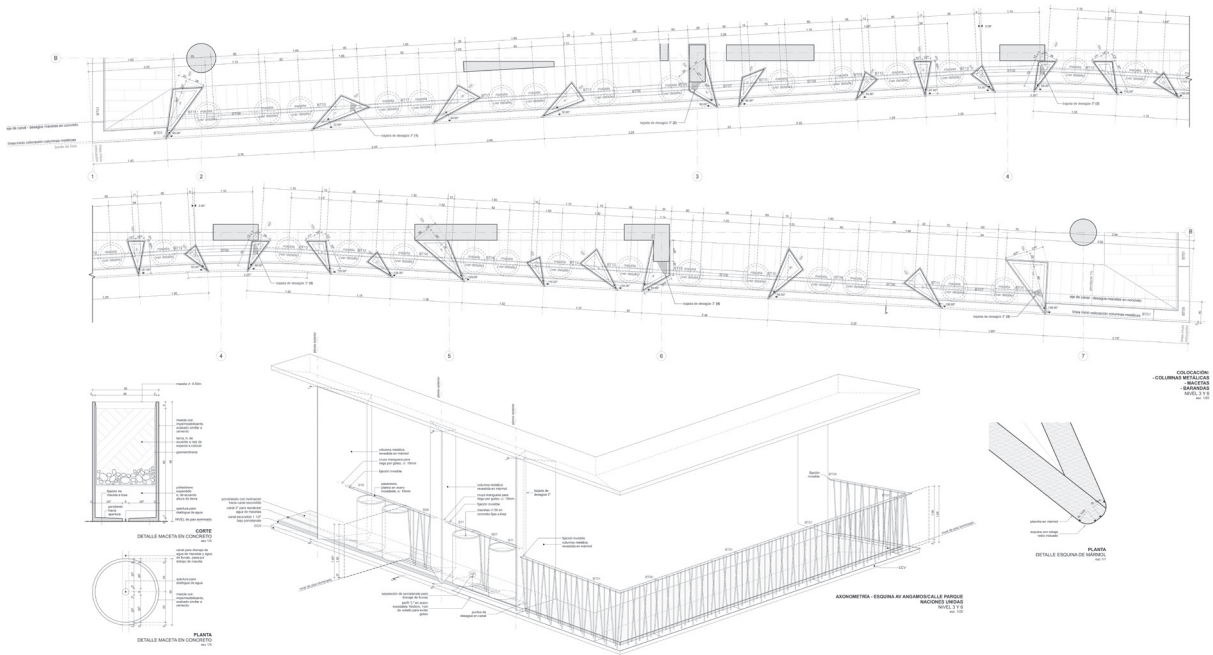
UN Building (2014-2017)
west elevation



UN Building (2014-2017)
main elevation



UN Building (2014-2017)
facade detail | west elevation



UN Building (2014-2017)
balcony details

BCHO ARCHITECTS

B Y O U N G S O O · C H O

BCHO Architects is about twenty to thirty people firm, run by Byoung Soo Cho and two partners, Jihyun Lee and Jayoon Yoon. Founded in Seoul, Korea in 1994, the firm started as a design-build office with a focus on simple structures and strong regard for nature. The design team has been working very closely with contractors and multiple fabrication specialists in various disciplines; including stone masons, product designers, wood workers, potters, and engineers. The firm also has multiple professional collaborators throughout the world in North and South America. BCHO Architects believe that buildings, furniture and art are made, not created. Each architectural project, encompassing various scales and programs, explores the phenomenon of light and space, fabrication and construction methods, recycling and reusing, and a broad sense of sustainability (social/cultural/physical) which uses collective creative energy to reduce the demand for grid energy.

ByoungSoo Cho has taught at various universities including Aarhus School of Architekten, Denmark, Universitat Kaiserslautern, Germany, YonSei, HanYang, GyoungGi and Harvard University.He has received KIA Award, Cri-Arc Award, AIA Honor Award, in Montana Chapter and in N.W.Pacific Regional. His recent works include Shaped Concrete Box House, Ramp building, and be.twixt. His firm has been selected an one of eleven Design Vanguard Firms by Architectural Record (Dec, 2004).

EDUCATION

Harvard University, Cambridge, Massachusetts, USA
1991 Thesis Prize, Finalist
1991 Master in Architecture (M ARCH II)
1991 Master of Architecture in Urban Design

Award/ Activity
1990 Attended Harvard-ETH Student Exchange Program, Zürich, Switzerland
1990 Traveling Scholarship to Turkey, Federal Government of Switzerland

Montana State University, Bozeman, Montana, USA
1986 Bachelor of Architecture

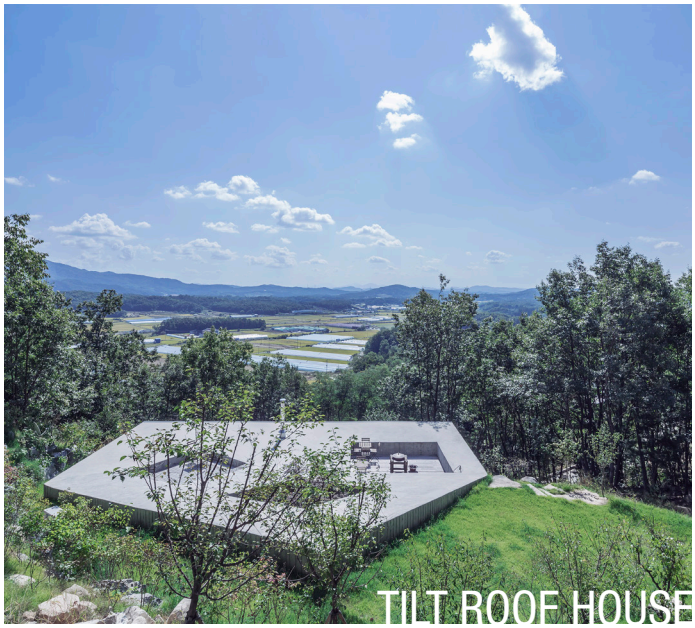
Award
1986 Winner, New Sweden Student Urban Design International Competition

TEACHING EXPERIENCE

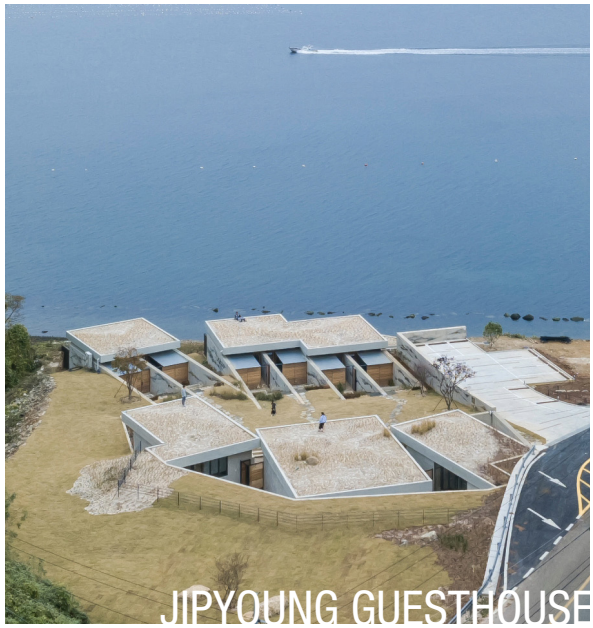
2015 | Aarhus School of Architekten, Denmark
2014 | Aarhus School of Architekten, Denmark
2011-present | University of Hawaii at Manoa School of Architecture, Hawaii, USA
2007 | Columbia University, New York
2006 | Harvard University, Cambridge, MA, USA
1999-2005 | Montana State University, Bozeman, Montana, USA
1997-1999, 2004 | Yonsei University, Seoul, Korea
1998 | Seoul National University, Seoul, Korea
1995-1996 | Universität Kaiserslautern, Germany
1994 | Han Yang University, Seoul, Korea

AWARDS

2018 | KICA, Cultural Space Award, Korea
2015 | Architizer A+ Awards Honored Finalist for the design of Namhae Linear Suite
2015 | AIA Northwest and Pacific Region Design Awards for the design of Namhae Linear Suite
2014 | KIA National Award for the design of Namhae South Cape Owner's Club Linear Suite
2014 | The Pusan Architecture Grand Award for the design of Pusan Kiswire Center
2013 | AIA Honor Award, Montana Design award for the design of Heyri Theater and Hotel



TILT ROOF HOUSE



JIPYOUNG GUESTHOUSE

HANIL CEMENT GUESTHOUSE

NAMHAE SOUTHCAPE LINEAR SUITE

2013 | AIA Honor Award, Montana Design award for the design of L-shaped House
2013 | AIA Honor Award, Montana Design award for the design of Oisoo Gallery
2013 | AIA Honor Northwest and Pacific Regional for the design of L-shaped House
2013 | AIA Honor Northwest and Pacific Regional for the design of Hanil Visitors' Center and Guest House
2013 | AR House Highly Commended for the design of L-shaped House
2010 | AIA Honor Northwest and Pacific Regional for the design of Earth House
2010 | Soo Kun Kim Prize for Earth House
2009 | AIA Honor Award, Montana chapter for the design of Earth House
2009 | AIA Honor Award, Montana chapter for the design of Hanil Cement Information Center and Guest House
2009 | AIA Honor Award, Northwest and Pacific Regional for the design of -D-Shaped Concrete Box House
2009 | KIA National Award, for the design of Hanil Cement Information Center and Guest House

HANIL CEMENT GUESTHOUSE

Location: 77, Pyeong-ri, Maepo-eup, Danyang-gun, Chungbuk, Korea · **Area:** 1.031,2 sqm · **Project team:** Nick Locke · Kang, Young-jin · Nam, Tae-hyun **Programme:** Visitors' Center and Guest House · **Structure:** Reinforced concrete · **Project:** 2009 · **Photographers:** © Yong Kwan Kim & © Wooseop Hwang

The purpose of this project lies in informing the public about the potential of recycling concrete in architecture. In Korea concrete is one of the primary building materials so it is imperative that we begin to re-use, the otherwise wasted, concrete from building demolition. In this respect, the guest house employs the concrete material in different types of construction, casting formwork types as well as re-casting techniques. Concrete has been broken and recast in various materials creating both translucent and opaque tiles. The displays will continue to evolve and change at the Information Center as new techniques are developed. The gabion wall and fabric formed concrete which constitute the main façades of the building, was erected first, and the concrete left over from it was recycled in the gabion cages, on the rooftop for insulation from sun, and as a landscape material at the street and around the factory.

The site is located to the westernmost part of the factory, adjacent to Mt. Sobaek National Park. The existing land had been changed much to facilitate the movement of trucks to the cement factory. First of all, we tried to restore the damaged original mountains and forest. In order to revive the landscape, we brought in earth to fill the courtyard between the two buildings. The flow of the mountains from the west leads to the reception and cafeteria in the inner courtyard of the building. In the in-between spaces we allowed people to experience the mass of the building while watching the building shift around its central courtyard.

While following the linear placement and movement of land and earth, we came up with ideas for the new building façade. We applied canvas-like concrete walls to the east façade, evoking images of the adjacent forest. There are four openings in the eas-

tern wall and long vertical windows have been created in their in-between spaces. Through the windows, one can see how concrete is produced at the factory. Behind the two larger openings, one can see the courtyard of the Visitors' Center and the cafeteria next to the courtyard, which is encircled by a water garden.

Concrete Technical Details

1. Recycled Concrete Wall

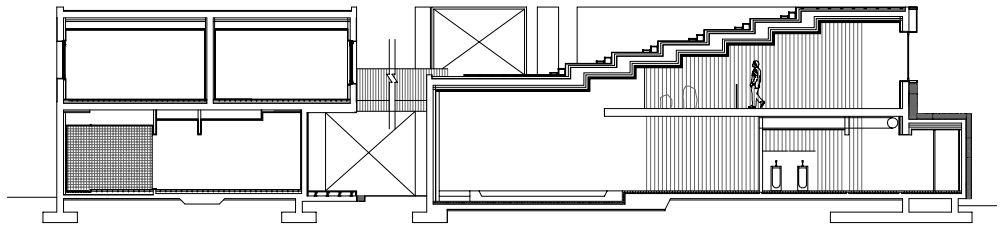
By recycling waste concrete generated in erecting the eastern wall, a new concrete wall was erected on the opposite side. The footing used in erecting the fabric formed concrete wall was cut into pieces of 10-20cm and put into the gabion wire netting to be recycled as exterior finishing material for the southern façade. Recycling of waste concrete not only has eco-friendly and cost benefits, but also offers an antique feel, as dust and moss gather on the concrete with the passage of time.

2. Fabric concrete wall

In order to keep the physical properties of concrete intact and simultaneously express gentle curves, the fabric-formed concrete wall was developed in collaboration with C.A.S.T., based in Manitoba, Canada, after much research and consultations. Concrete moulds were created on the footing; curved forms were set using pipes; and high-strength fabric was placed on top like a mould. After embedding connecting fittings, concrete is poured, and pre-cast concrete is lifted so that it could be installed at the external wall in the east. While producing a non-bearing concrete wall with convex and concave curvatures, we conducted a variety of experiments, departing from stereotyped notions.

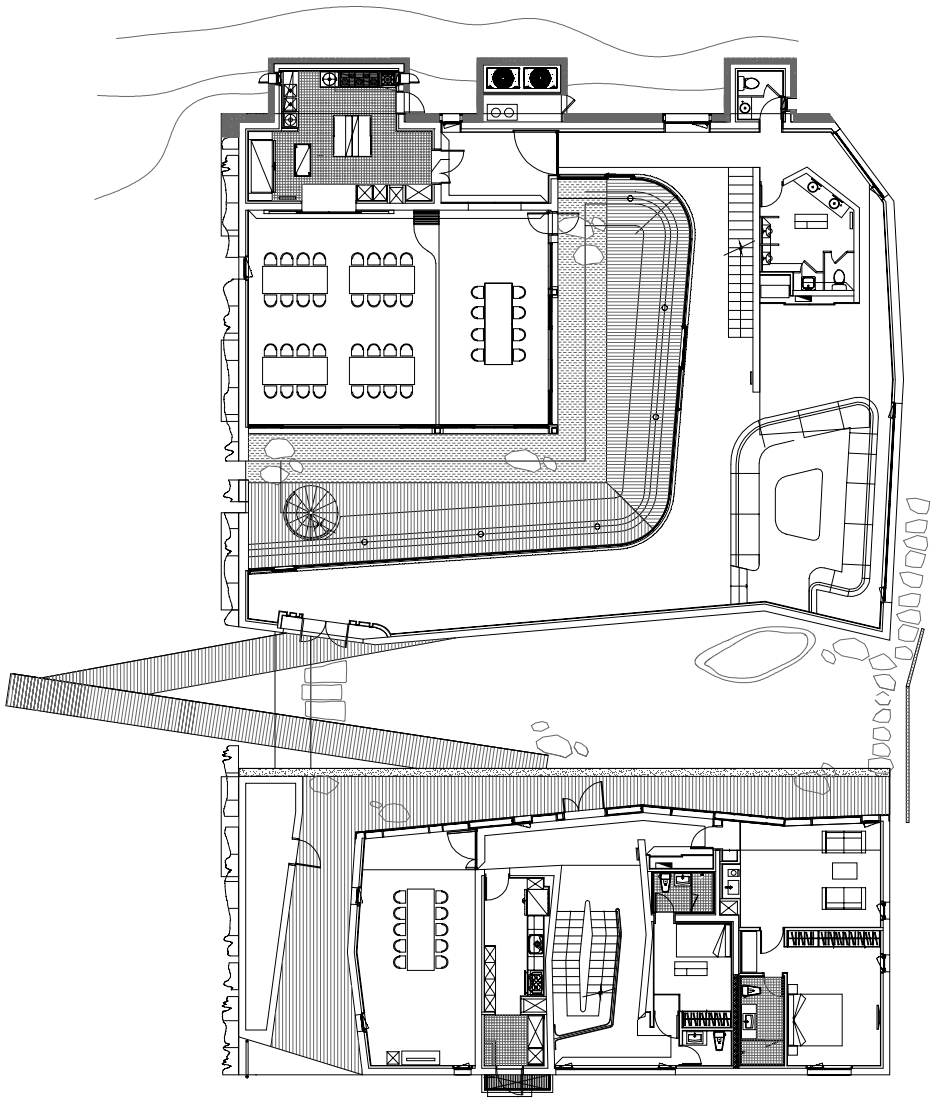

play of shadow & light:
surface


flow of sunny energy
into the space between



0 5m

Hanil cement guesthouse (2009)
section B



0 5m

Hanil cement guesthouse (2009)
ground floor

TILT ROOF HOUSE

Location: Jipyeong-myeon, Yangpyeong county, Gyeonggi Province, South Korea · **Gross floor rea:** 161,78 sqm · **Lot Area:** 658.40 sqm · **Project team:** Byoungsoo Cho, Youngsung Jeon · **Programme:** Residence · **Structure:** Reinforced concrete · **Project:** 2014 · **Photographers:** © Sergio Pirrone

Set amid peaceful mountains and rice fields an hour east of Seoul, Korea, the subterranean Tilt Roof House shows my understanding and consideration of "Ki", which is the traditional term for the universal energy that permeates everything. Tilt roof house tries to respect the natural energy flow of the existing mountains and celebrates a primal relationship between experiential qualities of the surrounding nature and a building.

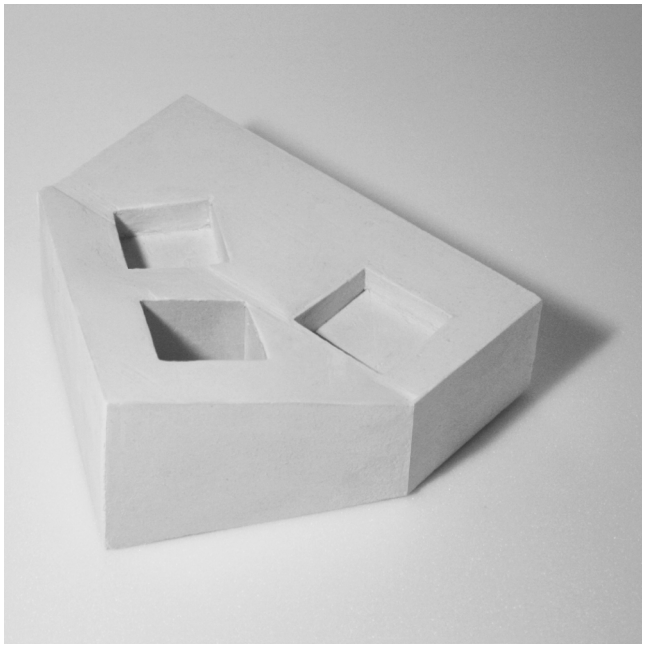
By taking advantage of the steep slope around the site, the house blends with the topography and is partially embedded into the ground while minimizing the excavation of the earth. The roof is tilted to follow the hill's slope while disappearing into the ground. It is built with careful consideration of construction efficiency and the surrounding nature without disrupting the energy flow.

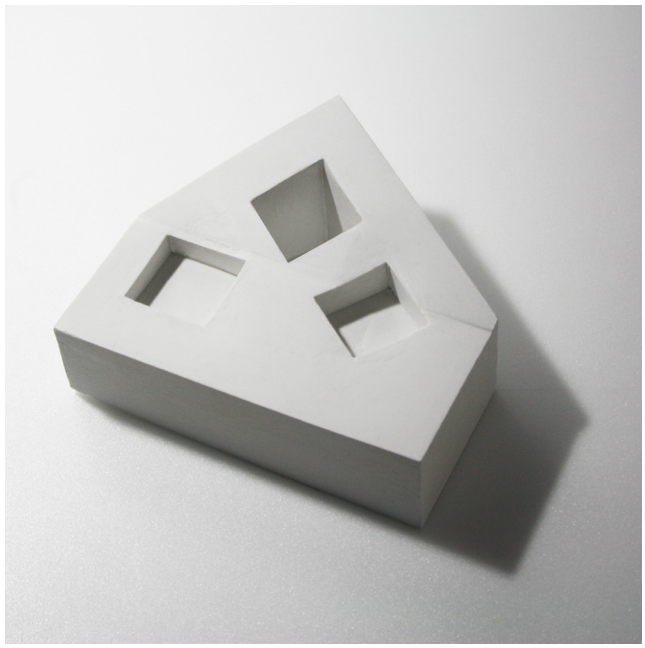
Mass composition of this house, is a result of the adaptation of existing topography line from the north and parallel line of the adjacent street in the main access area. The house also utilizes the sloped roof-top terrace. It is punctuated by three square boxes: two recessed boxes and a courtyard. The two partially recessed squares not only serve as outdoor furniture but also distinguish different programs such as the master bedroom and kitchen underneath the terrace.

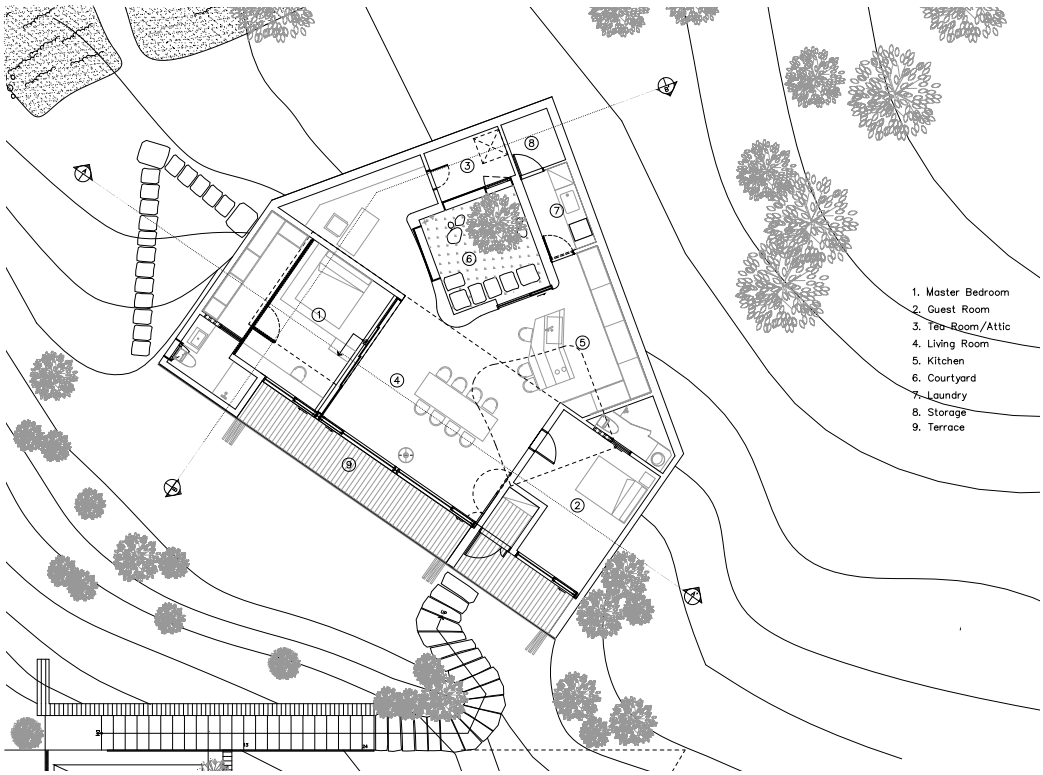
The central courtyard lets in natural lighting and makes the interior space more desirable and breathable. In contrasts to heavy pour-in-place concrete with pressure treated black-stained pine wood exterior, the use of bright yellow birch plywood, allows as much warm light and ambience as possible .The curvature of the interior wall along the central courtyard softens the pointed corners created by the triangular shape from the living room to the reading area. During the summer time, wind blows from south to north, inducing air suction from the courtyard, where kitchen is located. And it helps to cross-ventilate through the space.

Concrete Technical Details

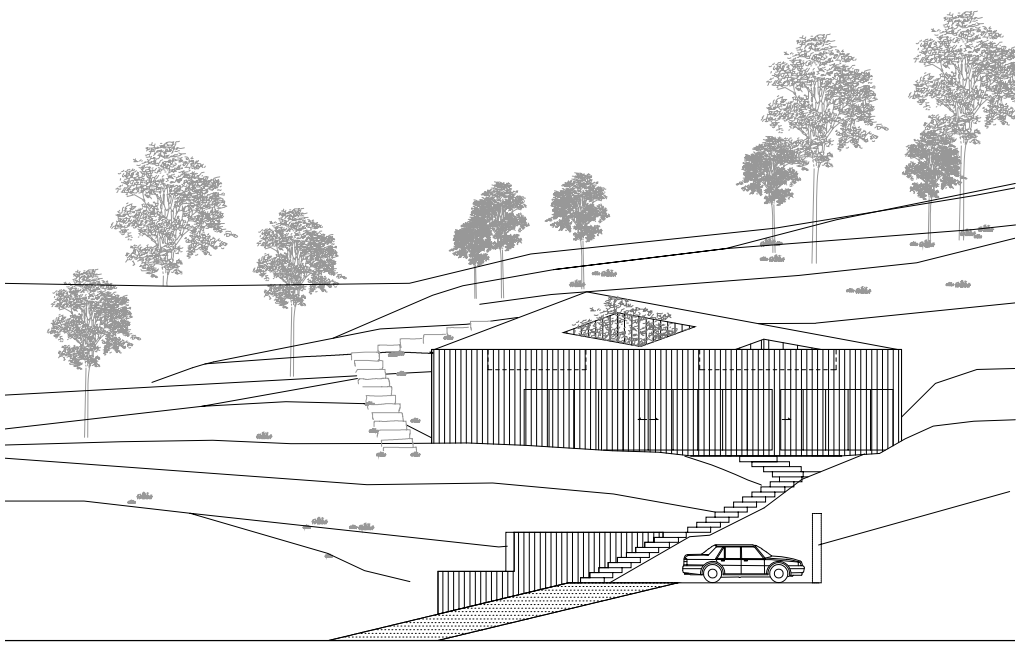
The concrete finish of the Tilt Roof House does not strive for a sense of smoothness, but rather a textural roughness. Not only does the use of board form add a layer of texture to the concrete surface, but it also helps to absorb more water. In effect, this creates a wall of patina and moss, thereby creating a visual integration with the surrounding landscape.



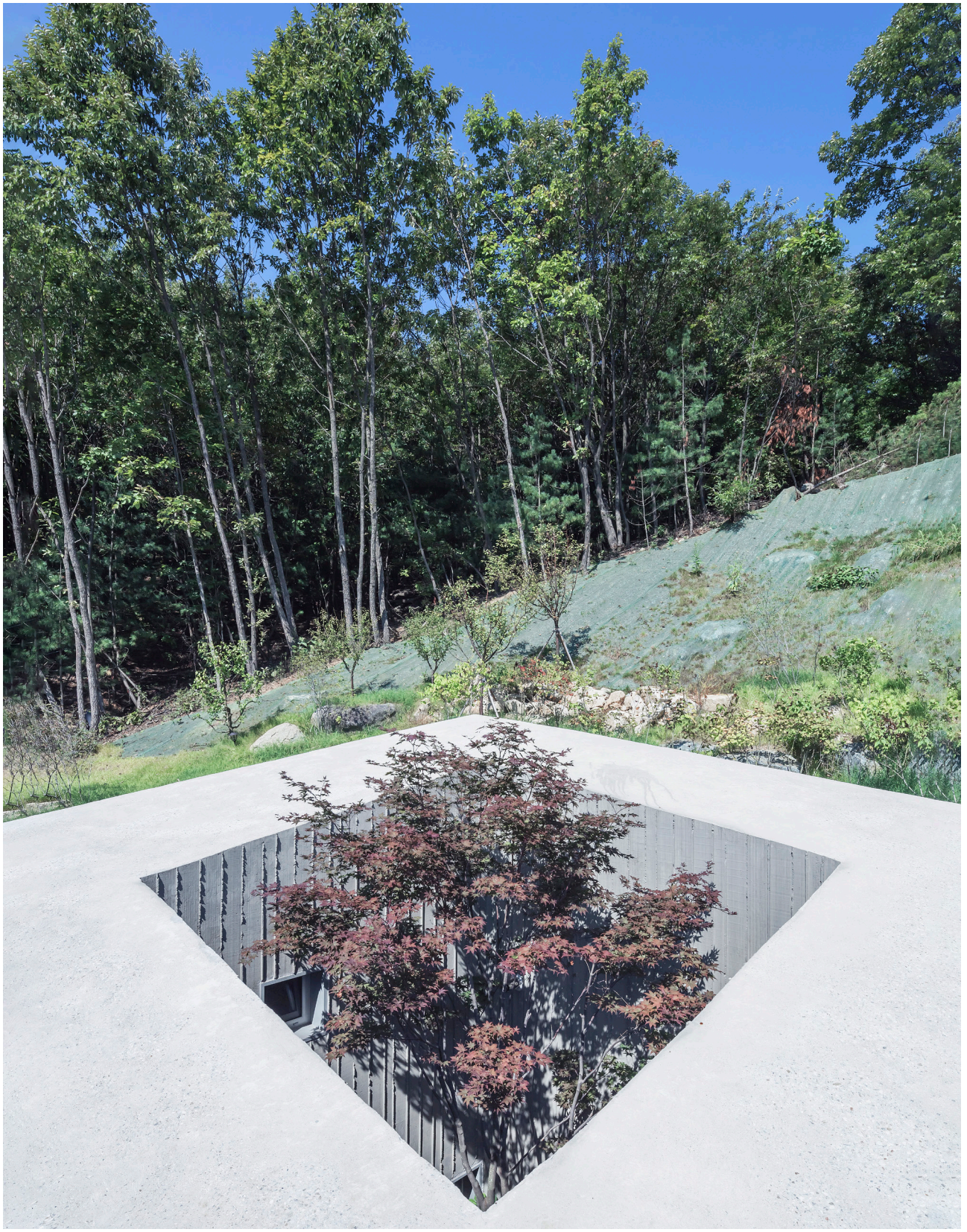


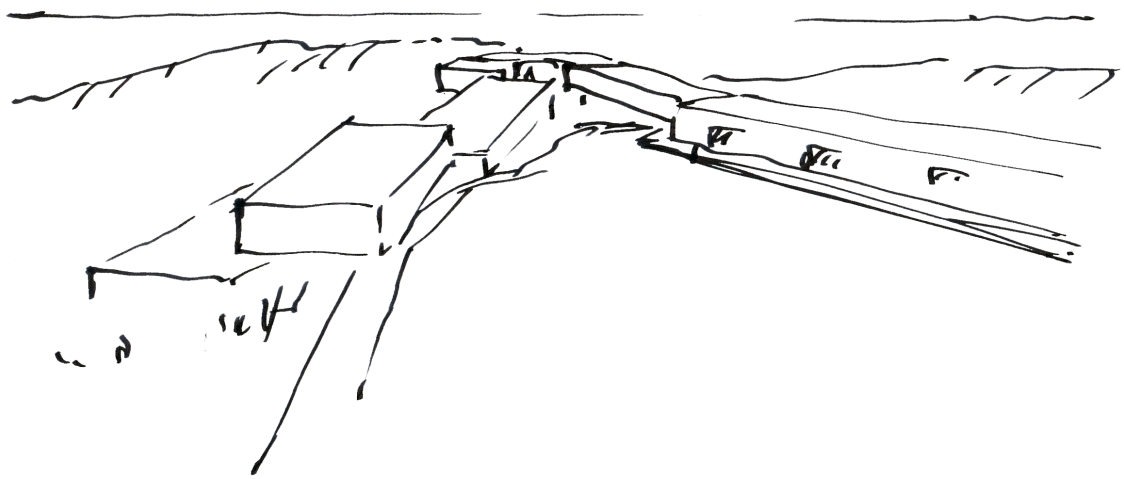


Tilt roof house (2014)
ground floor plan



Tilt roof house (2014)
front elevation





NAMHAE SOUTHCAPE LINEAR SUITE

Location: 321, Jindong-ri, Changseon-myeon, Namhae-gun, Gyeongsangnam-do, Korea · **Gross floor rea:** 6.016,85 sqm · **Project team:** Kang, Woo-hyun · Kim, Sara · Park, Jung-yong · Kang, So-jin Oh, Seong-heon · Bae, Yong-eun · Choi, Sun-yong · Kim, Sook-jung · Nicholas Locke · Angel Tenorio · Allicia Belloescobar · Anouck Foch · **Programme:** Hotel · **Structure:** Reinforced concrete · **Project:** 2014 · **Photographers:** © Yong Kwan Kim

The Namhae Southcape Owners Club Linear Suite forms part of a proposal for this small peninsula, which hopes to include a new golf course, club house, swimming pool, as well as additional facilities and villas. The high end, 49 room hotel intends to strike a harmonious chord with the natural elements of the surrounding landscape, employing simple structures and resolute forms that only minimally detract from the dramatic hills and ridgelines of the island.

Challenging the conventional capacity of a hotel as one large entity, the proposal splits the building into seven units, adapting to the site in a unique way by following the natural contour of the slope. All of the buildings are composed of two linear boxes, kept at an intentionally low level, disappearing into the site to allow for uninterrupted views southwards the beautiful peninsula. These two storey masses are in juxtaposition, cantilevered in order to frame views of the ocean. 40cm deep cantilevered walls provide a depth to the elevation and glass windows towards the hillside.

The architecture subtly recedes into the background like that of an inanimate object, accentuated by the monolithic choice in materials. Smooth concrete is used extensively throughout the interior, while on the exterior concrete becomes a base material to expose grains of gravel and sand used in the construction process. Primitive materials, with an emphasis on their rawness, evoke a sense of space that resonates with the natural, as opposed to the artificial.

Concrete Technical Details

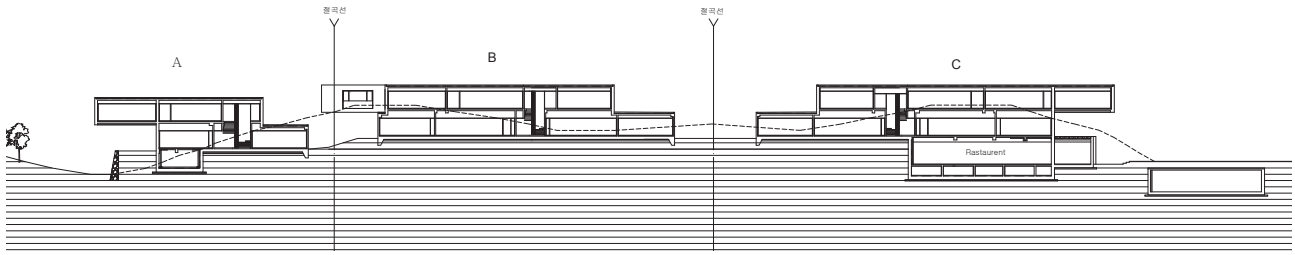
1. Removal of columns

The removal of columns in the Southcape Linear Suite was essential to maximize the effect an unhindered view towards the Namhae landscape. Therefore, each architectural unit in the Southcape Linear Suite is composed as a structural box - its post tension honey comb structure allows for the removal of columns. The stacking of these boxes on top of another whilst maintaining a continuous vertical structural path, also allows for 10m deep cantilevers. The naturally thick 40cm outer walls become design element for the windows by creating a sense of depth in its elevation.

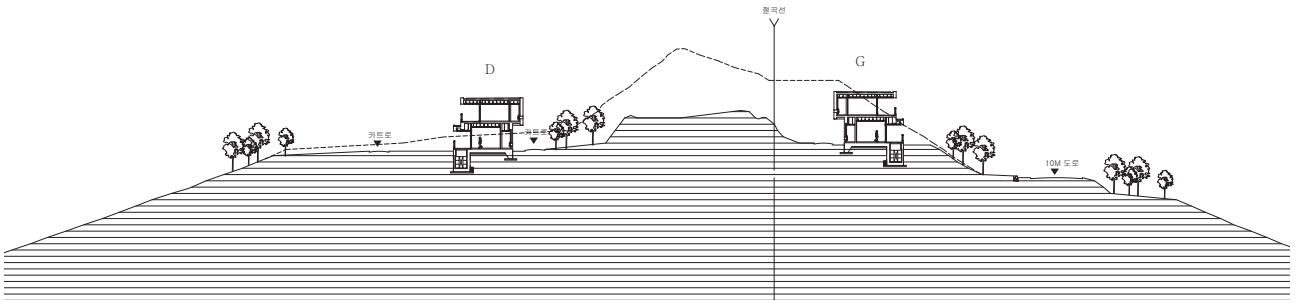
2. Concrete finish

The concrete finish of the Southcape Linear Suite was developed in a way in which the architecture would sit in stark contrast to its surrounding nature. The rawness of the monotone concrete and its sense of a singular heavy mass is emphasized by its light, organic counterpart. The removal of connection lines in the concrete finish and the shallowness of the form tie marks (1-2mm) helps to achieve such visual smoothness and solidity with concrete.

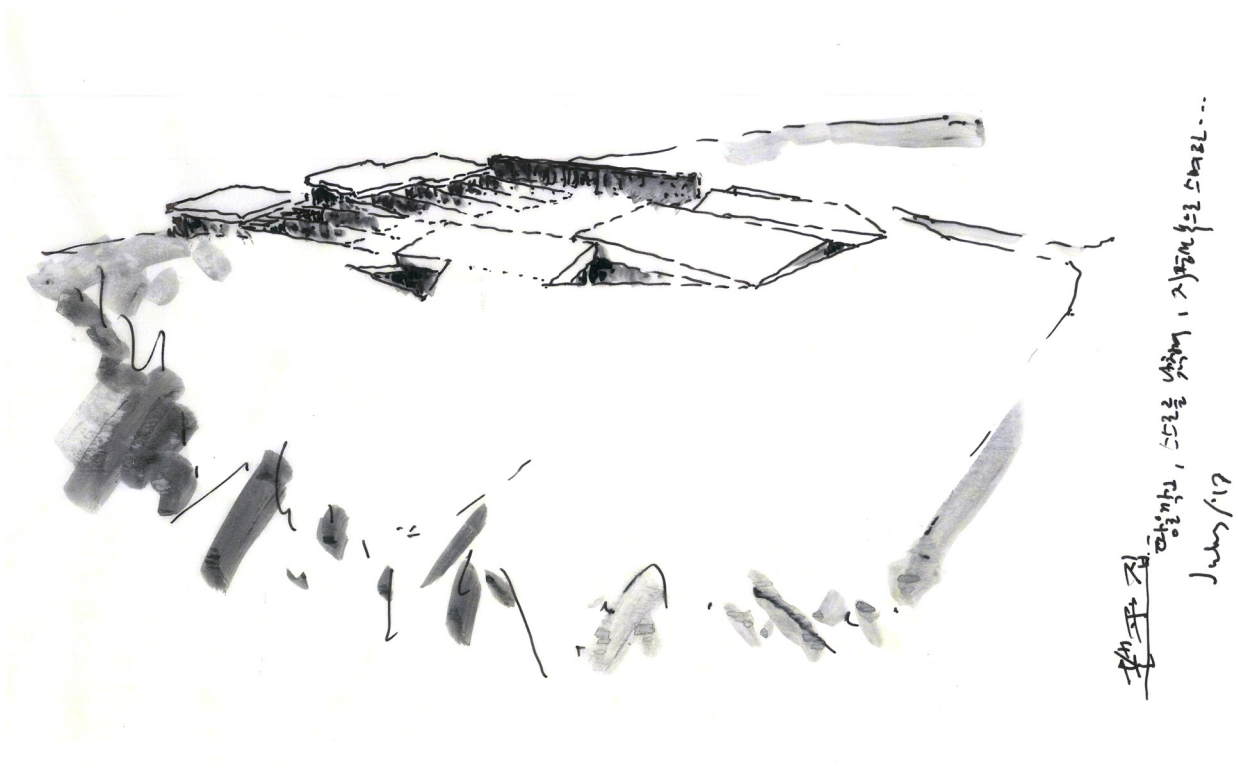
Namhae Southcape linear suite (2014)
general plan



Namhae Southcape linear suite (2014)
longitudinal section



Namhae Southcape linear suite (2014)
transversal section



JIPYOUNG GUESTHOUSE

Location: 1065, Changho-ri, Sadeung-myeon, Geoje-si, Gyeongsangnam-do, Republic of Korea · **Gross floor rea:** 545,57 sqm · **Project team:** Sookjung Kim · Yoojin Jang · **Programme:** Guesthouse· **Structure:** Reinforced concrete · **Project:** 2018 · **Photographers:** © Sergio Pirrone & © Arnold Park (Studio 643)

To cut into the earth, to lower oneself and melt into the horizon

Do we feel the fragility of human life when we see the mountains or the sea? If we get close to the earth, if we submerge ourselves in it, do we sense an essence closer to absolute being? The Geojedo Prairie House, perched beside a cliff along the Southern coast of South Korea, extroverts the experience of a home.

"Jipyoung" literally means "horizon earth" in Korean – its roof flung open and the majority of its mass subsumed into the side of a cliff, the building does not challenge the endless teal sea or crisp costal air but instead humbly acquiesces to the forces of nature around it. Its intention is to respect the extant site conditions and blend into its landscape.

Where the predominant mode of seaside development in Korea has ravaged the natural coastline, this project instead seeks a healing embrace when the building meets the earth. The overall site is submerged, dug into the ground of the cliff, such that when one wakes they directly face the sea, experience the vitality of the nature all around.

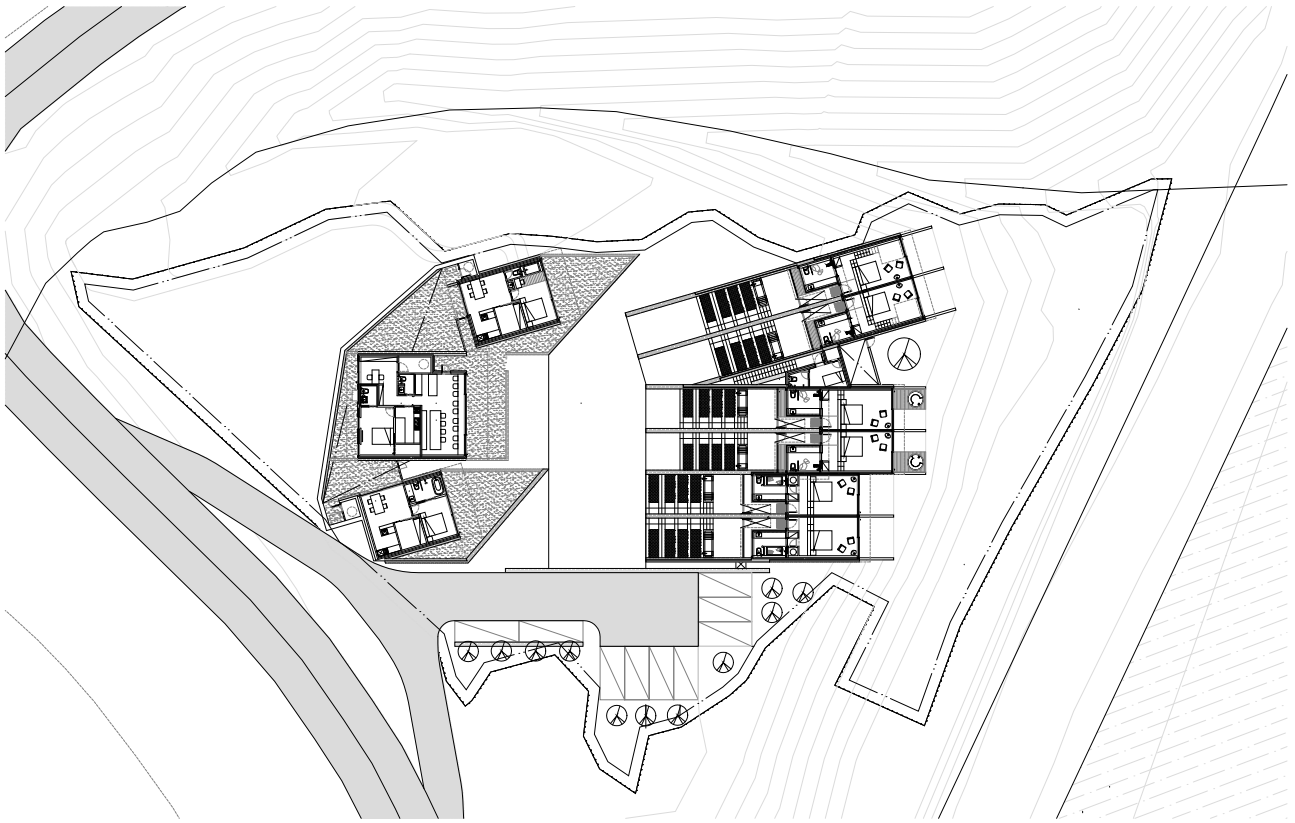
The project nestles between a challenging topography and a winding road, fixing itself into the gully of the hillside. Our hope is to

create a more explicit communication between nature and architecture, a process through which those who inhabit the guesthouses lower themselves into landscape. They immerse themselves in an architecture which melts into the earth.

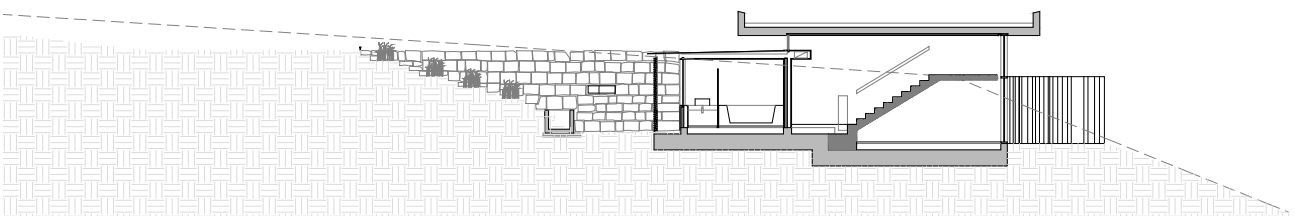
Concrete Technical Details

Along the longitudinal walls which border each guestroom, the concrete is intentionally eroded using water blasting. Yielding high pressure hoses, local artisans carved away at the concrete walls. These efforts slice through the clean surface layer of the concrete to make bare its rough aggregate interior, which, when exposed to the oncoming costal conditions, allows a gentle layer of plant life to grow naturally in each vein. Sunken within the terrain, these walls become a verdant expression of a relationship with nature predicated on humility and softness.

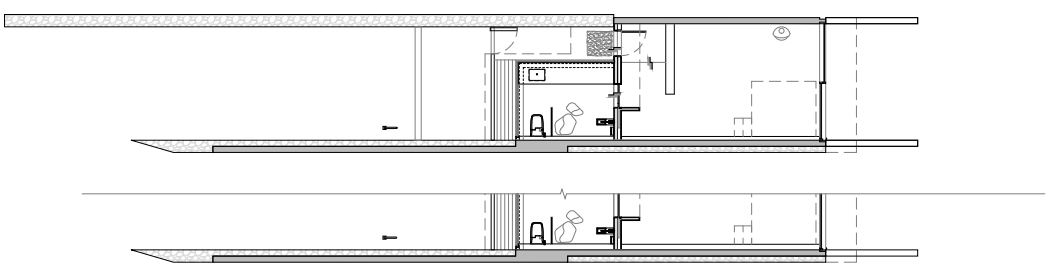
Built for a local mother to accommodate visiting guests from across Korea, the Jipyoung House enacts a simple intervention into an existing landscape that strives at once to disappear into its situation and to become a truly special space of communion with nature. Freed to be introspective, the home proposes that in the spaces between architecture and the earth we might find the beauty of nature and calmness within life.



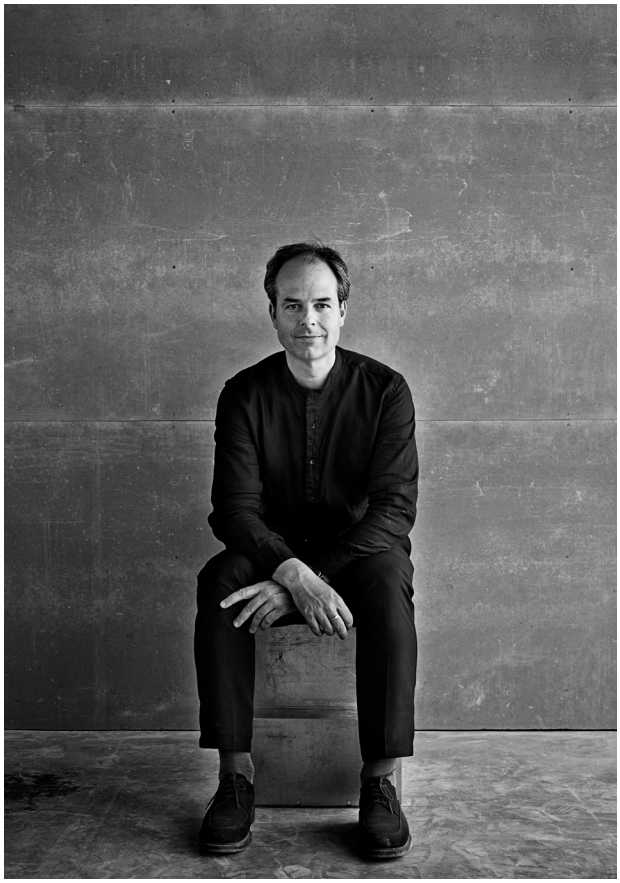
Jipyoung guesthouse (2018)
ground floor plan



Jipyoung guesthouse (2018)
guesthouse unit section



Jipyoung guesthouse (2018)
guesthouse unit floor plan



HFELORZA

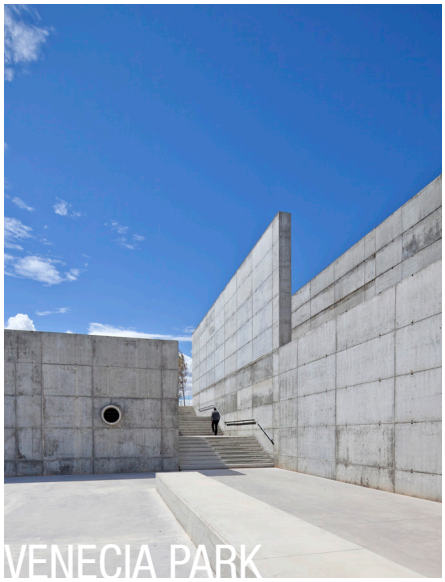
H É C T O R · F E R N Á N D E Z · E L O R Z A

Héctor Fernández Elorza was born in Zaragoza (Spain) in 1972. Architect degree at Escuela Técnica Superior de Arquitectura de Madrid, ETSAM, in 1998 where he, since 2001, is Lecturing Professor in Architectural Projects.

He was awarded the scholarship from the EU-exchange program at Darmstadt Institute of Technology in 1995 and1996 and at Technical Royal Institute of Stockholm, KTH in 1997 and 1998. His postgraduate studies were continued in Scandinavia, awarded grant by the Marghit and Folke Perzhon Foundation in 1999 and 2000. This period was dedicated to his PhD research at the Architectural Museum Archive in Stockholm and the Alvar Aalto Foundation in Helsinki. The Ph.D. studies are currently being finalized at the Escuela Técnica Superior de Arquitectura de Madrid ,ETSAM, with the Doctoral Thesis named "Asplund vs. Lewerentz".

He has been Visiting Professor and Lecturer at the following Schools of Architecture: Escuela de Arquitectura de Zaragoza and ETSAB-Barcelona (Spain), Universitá Di Roma "La Sapienza", Politenico di Milano and Siracusa (Italy), Architecture Nordostniedersachsen Universität Hamburg and Fachhochschule Köln (Germany), NTNU University in Trondheim (Norway), Kunstakademiets Arkitektskole in Copenhague (Denmark), KTH University in Stockholm (Sweden), University of Innsbruck (Austria), Universidad Católica de Rio de Janeiro (Brasil), University of Belgrade (Serbia), University of Budapest (Hungary), Hogeschool voor Wetenschap en Kunst in Brussels (Belgium), the Royal Institute of British Architects-RIBA in Londres (England), and the University of Texas in Dallas and Cooper Union University in New York (United States of America).

Awarded the Second Prize in the International Competition "Louis Poulsen", Copenhague,1999; First Prize in the Competition "The House of the Third Millennium" Cantú, (Italia), 1999; Second Prize in the Competition "Karhus", Stockholm, 2000; Finalist in the Competition "Leca-Mur", Linköping, (Sweden), 2000; Fourth Prize in the Competition "Stockholm Bostader", Stockholm, 2000. His work "Architectural Documentation Centre in Madrid" was awarded: First Prize in the AR+D PRIZE from the British Architecture Association, RIBA, Finalist



VENECIA PARK

FACULTY OF CECELLULAR AND GENETIC BIOLOGY

TWIN SQUARES

VALDEFIERRO PARK

in the ENOR PRIZE 2005, Finalist in the COSENZA PRIZE 2005, First Prize in SALONI PRIZE 2005 and Finalist in BIENAL DE ARQUITECTURA ESPAÑOLA 2005. Finalist in the GARCIA MERCADAL PRIZES 2007, 2011 and 2012 with the Urban Project "Zuera Sur", "Valdefierro´s Park" and "Twin squares" in Zaragoza; Second Prize in the Competition "The old town of Belchite", 2009. His work Chemical Laboratory Building in Alcala University was awarded First Prize in the ATEG-PRIZE 2010, Second Prize in the BIGMAT PRIZE 2011 and First Prize in the ENOR-MADRID AWARD 2012. In 2000 and 2012 he participated at the Biennale di Architecture di Venezia. The Research project "Stockholm Universal Exposition of 1930" and its publication catalogue, for the Exposition "Arquitecturas Ausentes del siglo XX" was coordinated by him during 2000-2005. In 2010 and 2011 he has been Curator of the International Architectural Congress "Cien años aprendiendo de Roma" and "Architettura e Resistenza" in the Spanish Academy in Rome.

During 2011 y 2012 he has been co-director of Madrid Ceramic Tile Studies Department.

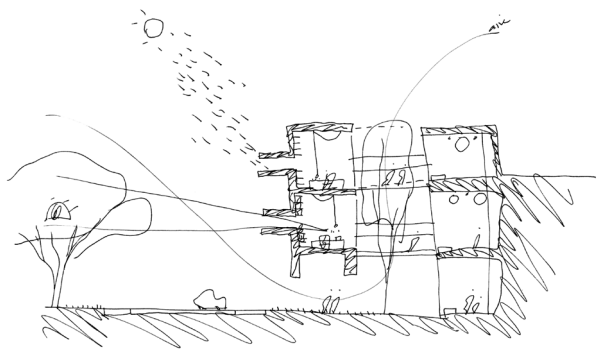
As practicing architect among his works he has projected and built the Mausoleum for the oceanografist Odón de Buen, the San Juan district in Zuera the Main square of Cuarte, (Zaragoza); the Auditorium and Documentation Centre of Contemporary Architecture in "Nuevos Ministerios" (Madrid); the Riding School in Oros Alto, (Huesca); the Agricultural park, Valdefierro´s park (Zaragoza); the Cultural buildings in Jarandilla de la Vera, (Cáceres) and San Esteban del Valle, (Ávila); the Chemical Laboratory Building and Genetic Faculty at the University of Alcalá (Madrid); Venecia Park and Twin squares (Zaragoza).

Author and co-author of the following books: E. G. Asplund, Exposición de Estocolmo 1930; Por si nos encontramos; Piedra , papel y tijera; Babelia; Pensar con las manos and Materia y material, La ortografía del espacio y el alfabeto de la estructura; Cuaderno de viaje; Chicago-Nueva York y Arqueología Contemporánea. His work has been showed widely in Spain and abroad.

During 2009 y 2010 he has been awarded the ROMA PRIZE in the Spanish Academy in Rome.

FACULTY OF CELLULAR AND GENETIC BIOLOGY

Location: University of Alcalá, Campus, Alcalá de Henares, Spain · **Area:** 3.540 sqm · **Architects:** Héctor Fernández Elorza · **Constructor:** J. Quijano Construcciones S.L., Imaga Proyectos y Construcciones S.A. Ferrovial S.L.. · **Collaborators:** Raúl García Cuevas, Ignacio Delgado Conde, Enrique Fernández Tapia, Blanca Moreno, Irene Bodas, Carlos García Fernández · **Client:** Alcalá University - UAH · **Project:** 2006-2007 · **Construction:** Enero 2009 - June 2012 · **Photographers:** © Montse Zamorano © Carlos García Fernández & © Miguel de Guzman



The project for the rehabilitation and extension of the Faculty of Cellular and Genetic Biology of the University of Alcalá was conditioned by two aspects: an existing building that had to be both maintained and extended in order to adapt to the needs and demands of today.

The existing building, originally the first aerodrome building for military use dating from the first half of the twentieth century, had been adapted with some difficulty from the late sixties onwards to suit the needs of the university with the founding of the present-day campus. Following a series of minor renovation-works over the last forty years, the building was in need of refurbishment and lacked the necessary space for the research and teaching required by the Departments of Cellular and Genetic Biology.

There are two roadways running alongside the existing construction from north to south and extensive gardens on the entire western side. The need to maintain the facades and the structure of the original building and at the same time double its surface to adapt it to present-day requirements meant the addition of an upper floor above the existing three-story building as well as the addition of a new bay at the west of the plot.

The program of the current building in terms of the volume capacity of the old construction involved reorganizing the teaching and research laboratories along the eastern front, the common service areas, stairs and access ways to the north and south of the existing volume and the main connecting corridor with the new building to the west of the laboratories. The new bay, to the west, contains the offices, seminar- and meeting-rooms and is separated from the former building via connecting bridges to the main passageway, which in turn bring light and ventilation to this central zone of the new building.

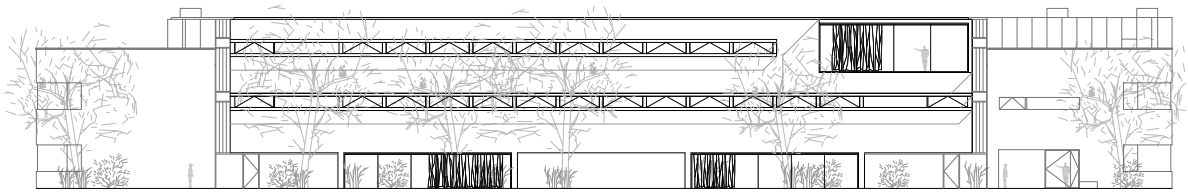
The concrete structure of the original building, its pillars, beams and screeds are all reinforced with a metal structure leaving the required separation zone above the reinforcement of the beams to allow for technical and electrical installations. The upper floor extension is built with a metal structure of beams and pillars and covered with sheet metal. The new bay housing the offices and rooms for meetings and seminars is built entirely in concrete.

The building's electrical and technical installations are all visible both in the laboratories and the offices and are organized from wide openings parallel to the main communications corridor and in connection with the machinery of the roof.

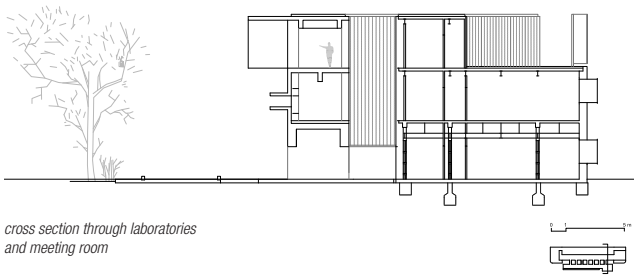
The north, south and east facades of the original construction remain intact except for the configuration of their apertures. The openings no longer required are closed up with large galvanized metal plates. The openings on the south and east facades are constructed with deep loopholes also in 8 mm galvanized steel, providing homogenous light inside the laboratories, wash-rooms and changing-rooms.

The only façade modified is that of the west of the original building, which is transformed into a polycarbonate facade thus uniformly illuminating the corridors. The facades of the fourth floor extension are covered with a finish of black plaster and deployé without any wall-openings thanks to the skylights illuminating this top floor from the roof.

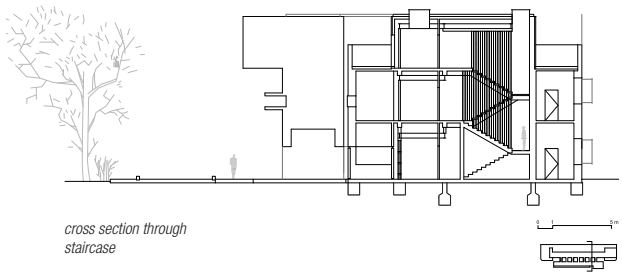
The building looks onto the extensive gardens on its western side. The concrete bay housing the offices of the teaching staff and boardroom stands on four piers and a structure of thick girders with cantilevers at the ends permitting visual connection from the common areas on the ground floor. The ambience of the tutorial rooms and corridors which are enclosed with glass at this level extends via a continuous concrete pavement outwards to the garden which is non-hierarchical in relation to interior and exterior. Similarly the offices and boardroom look out onto the trees and are protected from the uncomfortable glare of sunlight from the west. Fitted with eye-level openings and enjoying the protection of the deep brise-soleil of the floor above on one side and furnished with homogenous and uniform light by the large windows of the opposite side the offices and boardroom have become a privileged spot from which one can observe the different seasons of the year reflected in the trees outside.



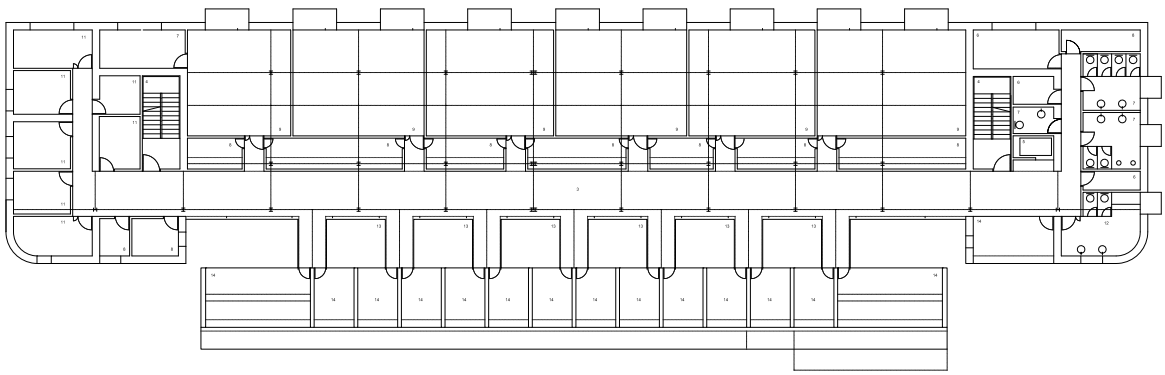
Faculty of cellular and genetic biology (2006-2012)
west elevation



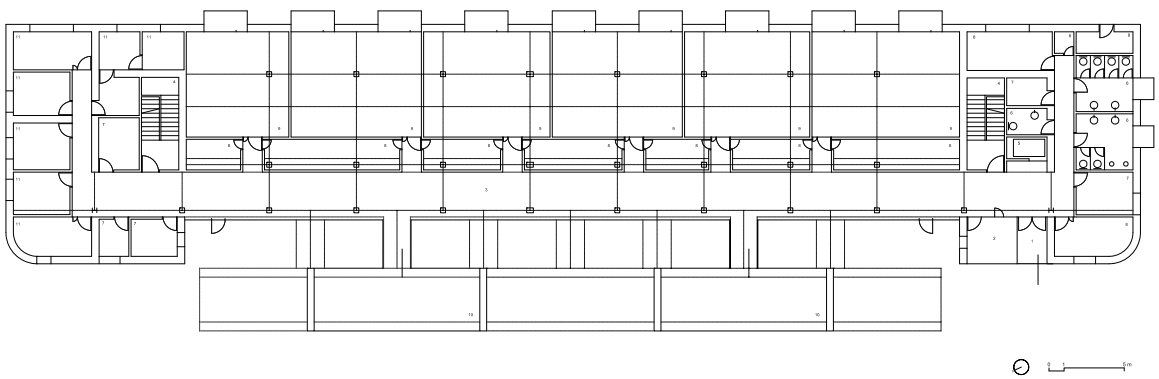
cross section through laboratories and meeting room



cross section through staircase

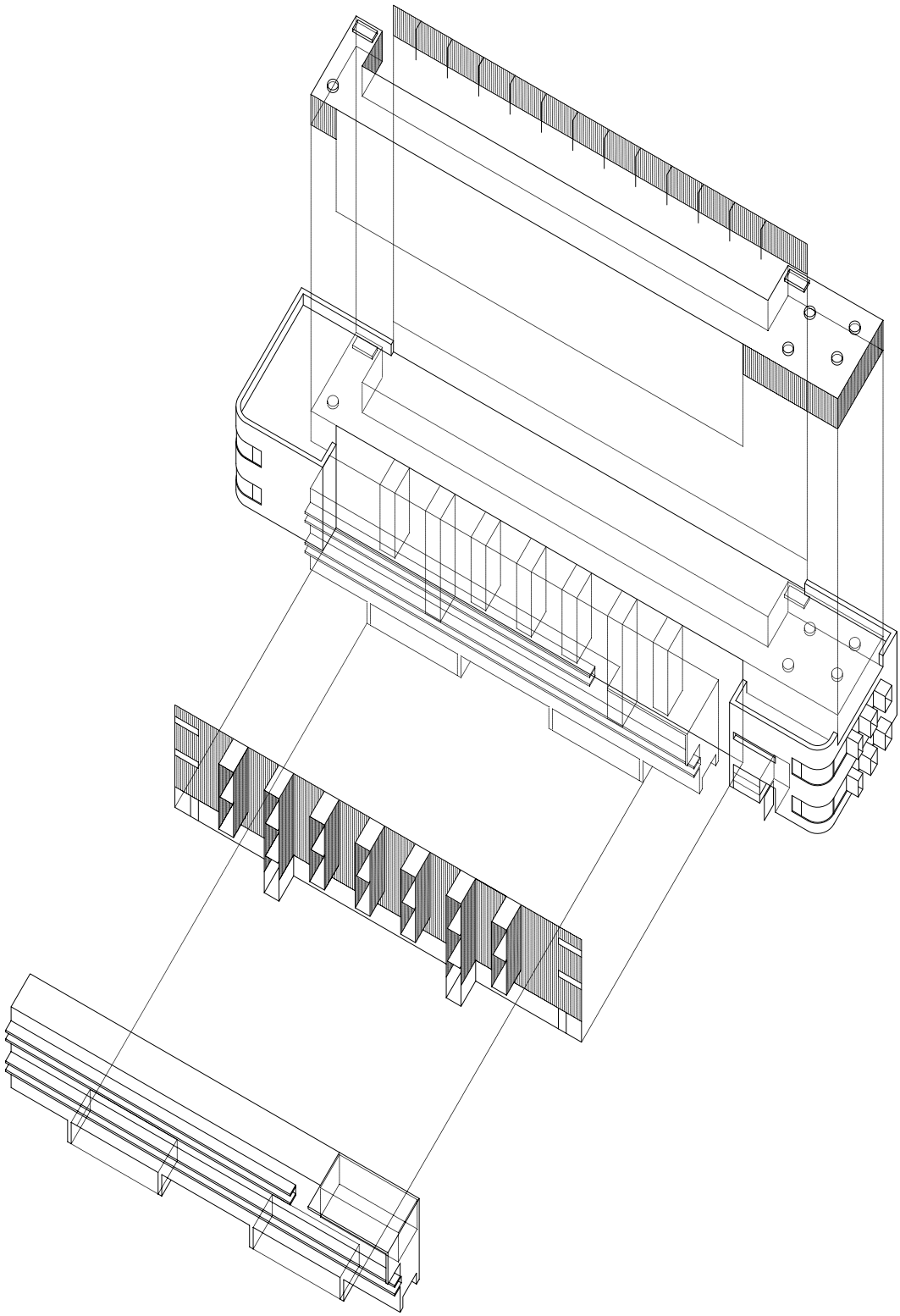


Faculty of cellular and genetic biology (2006-2012)
first floor

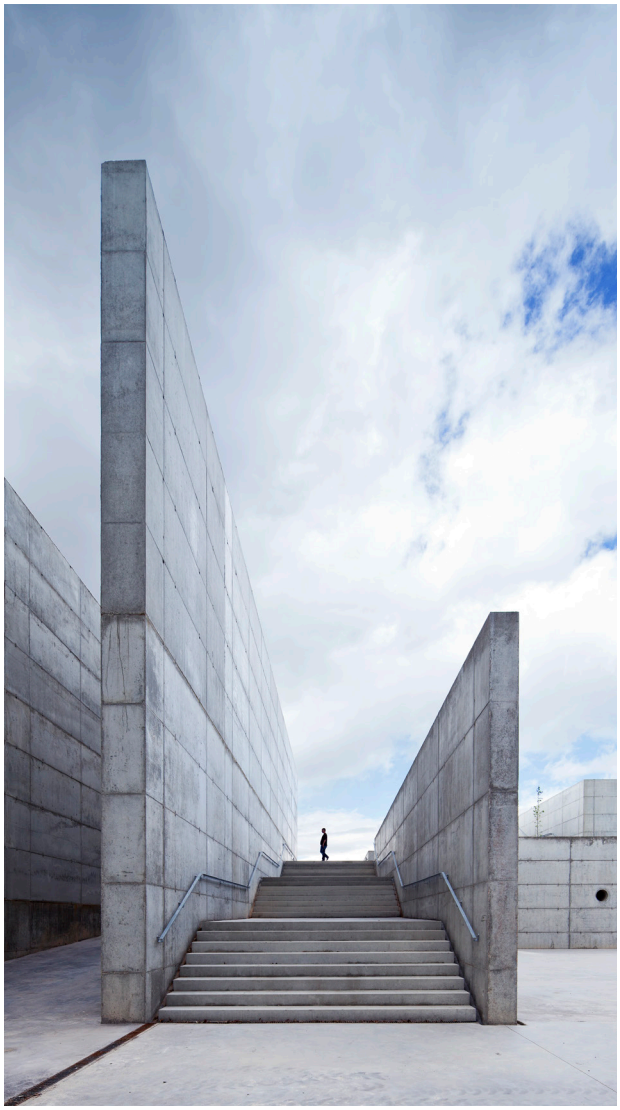


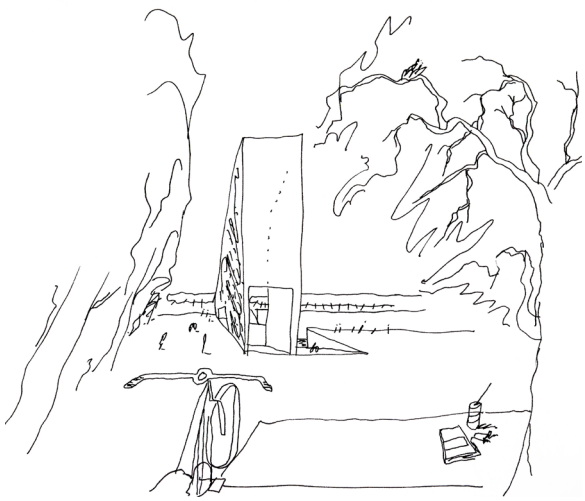
Faculty of cellular and genetic biology (2006-2012)
ground floor


SALIDA



Faculty of cellular and genetic biology (2006-2012)
perspective





VENECIA PARK

Location: Sector 88/1, Pinares de Venecia, Zaragoza, Spain · **Area:** 2,5 Ha · **Architects:** Héctor Fernández Elorza & Manuel Fernández Ramírez · **Constructor:** IDECON S.A.U. **Collaborators:** Félix Royo Millán, José Antonio Alonso García, Antonio Gros Bañeres & Beatriz Navarro Pérez · **Client:** Junta de Compensación del Sector 88/1 · **Project:** 2008 · **Construction:** July 2009 - December 2011 · **Photographers:** © Montse Zamorano & © Carlos García Fernández

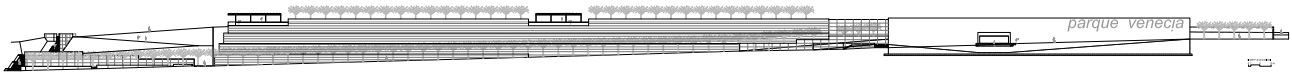
The green space within sector 88/1, known as Venecia Park, is located at its north-western limits, running parallel to the Ronda Hispanidad Avenue between the Calle Zafiro Roundabout and the historic channel of the Imperial Canal of Aragón. The project encompasses a linear urban infrastructure, averaging 415 meters in length and 60 meters in width: a surface area of approximately 2.5 hectares. It was required to address three issues: the resolution of an acoustic problem, the evacuation of rainfall deposits and the question of topography.

The sound issue caused by road traffic on the Ronda Hispanidad (Third Ring Road) affecting neighbouring dwellings, requires the establishment of a sound barrier to include the whole north-western border of the park. The existing topographical ground level difference between ground-level of the new residential quarter and the ring road reaches a maximum height of 14 meters, where the containment of the terrain is resolved by means of a system of reinforced earth walls. This is made up four steps set apart from one another by 1.50 meters, composed of a galvanized steel mesh and large gravel stones, thus forming a sound barrier that will protect future residential developments in the area.

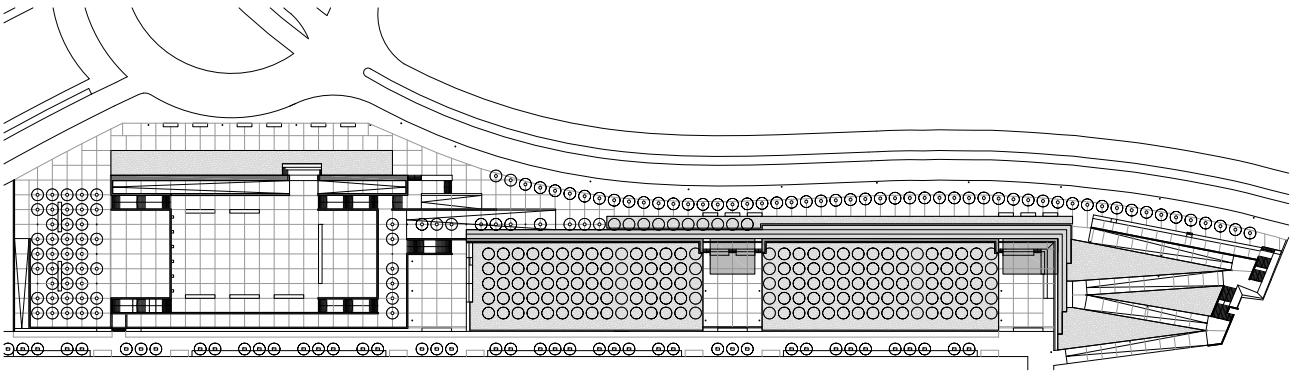
To the far south-west of the park, where no significant topographical difference is noticeable, the issue of sound containment is resolved by means of a Cyclopean wall 100 meters long with a maximum height of 10 meters. This wall is moreover conceived as an icon that characterizes the new neighborhood and also provides access to the underground square or mill basin situated in its extrados.

This laminar flow basin is designed to cope with the intense rainfall that affects the area, thus preventing floodwaters from emptying into the municipal network, whose diameter and capacity are insufficient to deal with such heavy quantities of rainwater. This compound with its large surface area (3,150 m2), whose use as a laminar flow space will be conditioned by the frequency and intensity of local rainfall, has been conceived and designed as an urban space or pedestrian square for most of the year and a welcome area of shelter from the unpleasant Cierzo wind which blows in this upper area of the city. Four stairs situated at the corners provide access to the underground square, connecting with the adjacent neighborhood and the city level. The incorporation of sufficiently wide ramps situated within the sound barrier wall gives access to service and maintenance vehicles and a more ample use of the compound.

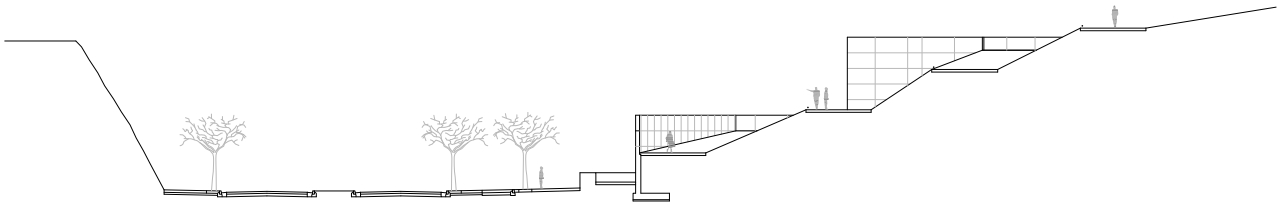
Finally Venecia Park is a carefully planned topographical operation that complements the acoustic functions and flow-forming processes described above in addition to providing green spaces to the city. All this is structured spatially over the Ronda Hispanidad by means of staggered interconnecting platforms in a linear or extended link-up of little squares (hard and soft), viewing points protected with light metallic pergolas, extensive groves of pines and pedestrian ramps leading to the historic heritage site of Aragón's Imperial Canal.



Venecia park (2008-2011)
north elevation

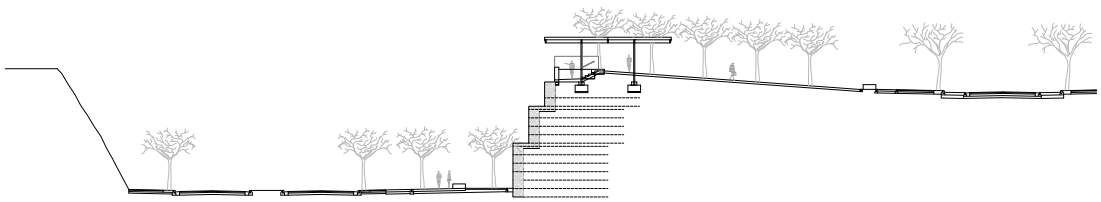


Venecia park (2008-2011)
general plan



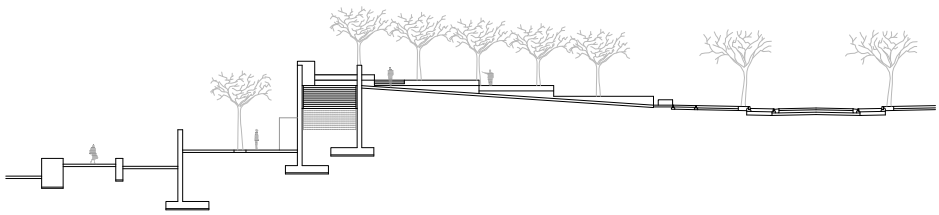
Venecia park (2008-2011)
section through river's ramps

0 1 5 10 m



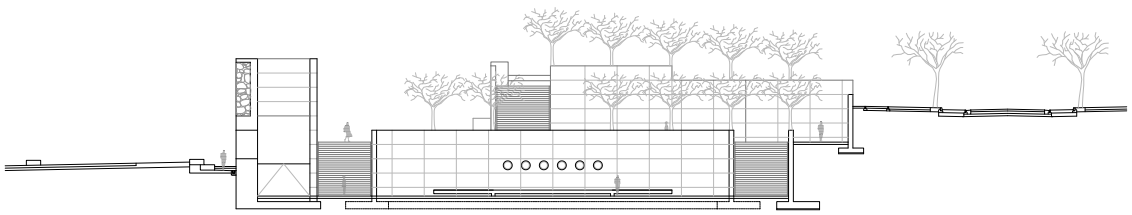
Venecia park (2008-2011)
section through shelter

0 1 5 10 m



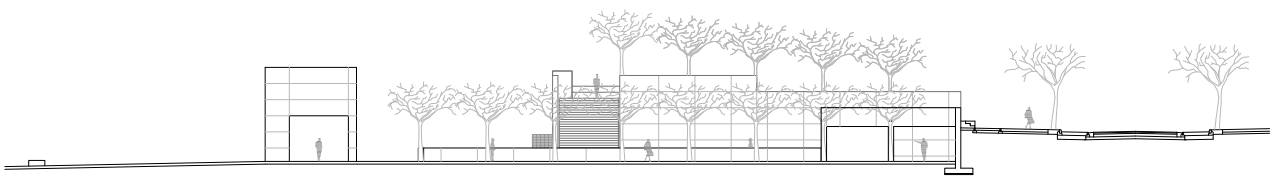
Venecia park (2008-2011)
section through staircase

0 1 5 10 m



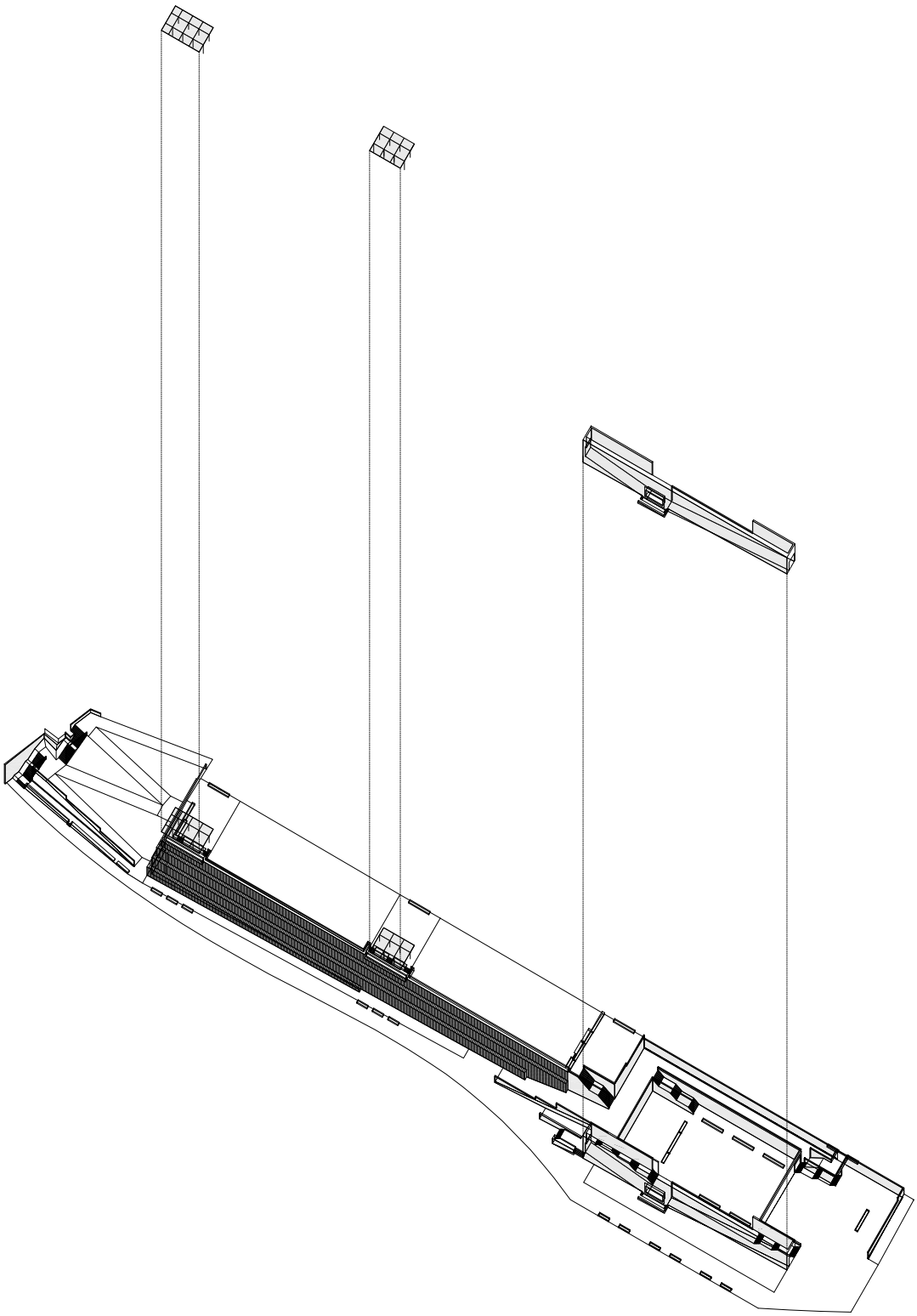
Venecia park (2008-2011)
section through acoustic wall

0 1 5 10 m



Venecia park (2008-2011)
section through the entrance square

0 1 5 10 m



Venecia park (2008-2011)
axonometric

TWIN SQUARES

Location: Sector 88/1, Pinares de Venecia, Zaragoza, Spain · **Area:** 5 Ha · **Architects:** Héctor Fernández Elorza & Manuel Fernández Ramírez · **Constructor:** IDECON S.A.U. **Collaborators:** Félix Royo Millán, José Antonio Alonso García, Antonio Gros Bañeres & Beatriz Navarro Pérez · **Client:** Junta de Compensación del Sector 88/1 · **Project:** 2008 · **Construction:** July 2009 - March 2011 · **Photographers:** © Montse Zamorano & © Carlos García Fernández

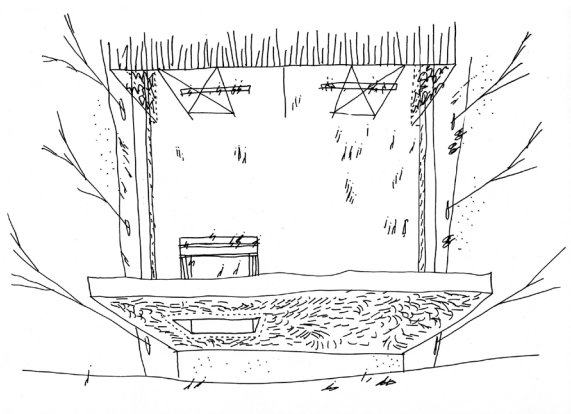
Two squares: with all the inconvenience that the number implies and the rules of the game defined by a pair. Working with two of anything leads to comparison, defining similarities and differences; compared virtues and defects that not only define the two parts but also characterize the ensemble.

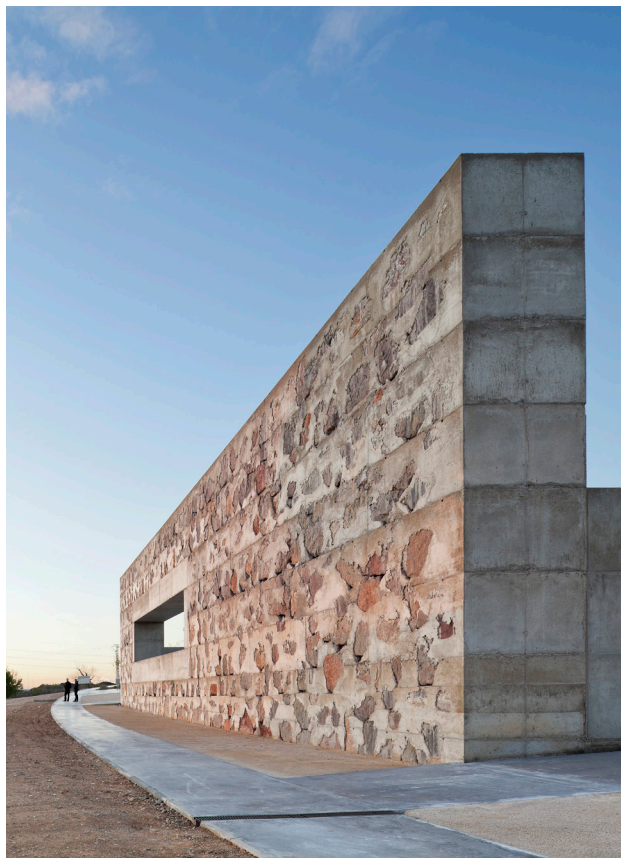
Such is the case of the two squares within sector 88/1, in Zaragoza. Squares construed as a pairing, similar, but at the same time with their differences. In other words, twin squares, but not identical.

Within the symmetrical layout of the road network of the sector, the two squares break with the prevailing order with their north eastern side overlooking the Imperial Canal of Aragón and the privileged views afforded by this upper part of the city and to the Pyrenees beyond on a clear day. One to the north and the other to the south of the sector, the two squares are surrounded on the remaining three sides by the buildings of the adjacent newly built neighborhood. Constructions that will all bear the hallmark of the new established order, but will inevitably not all be the same.

Because of the configuration of these public spaces within the new district, the different positioning of the same elements that make up one and the other square predicates that they do not end up the same.

So while the two squares are equally wide, each measuring 40 meters, the southern square, 280 meters in length, fits the available space defined by the roads bordering two of its sides, while the northern



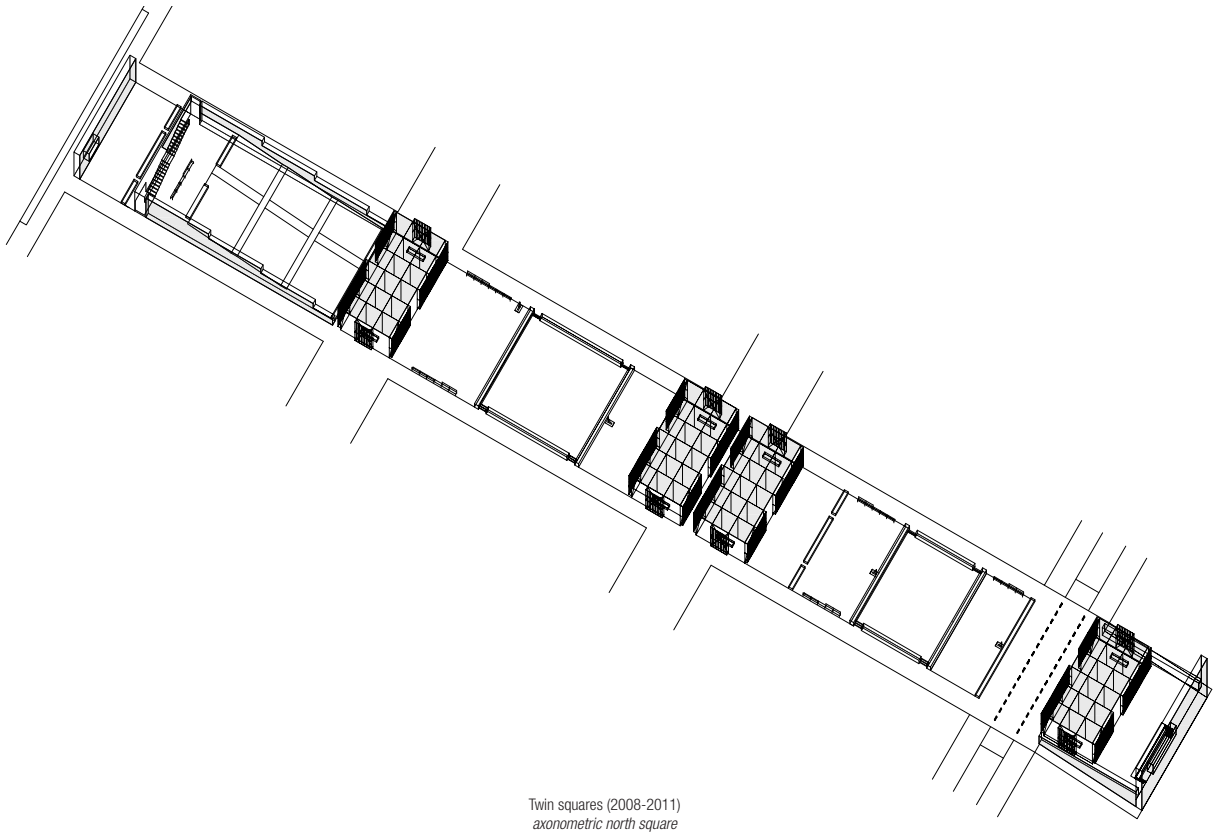


square is set astride the northeastern road as far as the green belt of the Imperial Canal, a total of 330 meters in length. While the southern square is set back from the Canal Imperial and its ground level is 5 meters above the adjacent street, the northern square is at the same level and opens onto the embankment beside the canal where its northern flank is bounded by a Cyclopean wall. While the southern square is set back and raised to underline the views to the far-off Pyrenees, the northern square takes a step forward with a large window in its boundary wall to frame its views to the adjacent Imperial Canal.

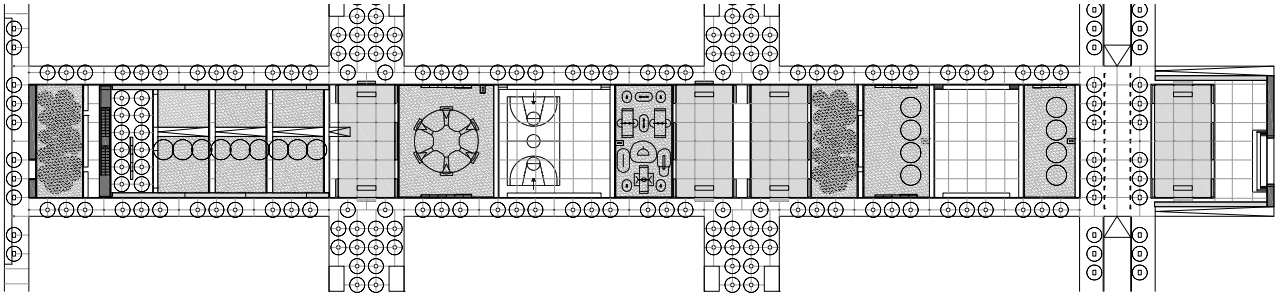
It is the combination of the various elements: the Cyclopean walls, the fountains, the canopies, the elevated platforms, the solarium, the stair-walls, the green walls, the “hard” squares, the sports facilities and the children’s’ playgrounds that organizes the distribution of the two squares into strips of varied depth and equal width.

Thus the south-eastern sides of both squares are closed off to the city by two Cyclopean walls of equal length and width, 1,80 meters, but of differing height. Both squares hide a pair of fountains: double pairs differently positioned and therefore variable in their relationship. In the two squares the difference between street-level and the elevated platforms is resolved by various reinforced concrete stair-walls of varying height and 3 meters in width accommodating an Italian ramp in the shadow of the interior. Light canopies in galvanized steel are distributed singly or in pairs across the squares from one long side to another and continuing on into the urban district. Apart from the trees along the length of the squares, vegetation is limited to the sloping panes of the solariums and the vines whose growth is protected by the mesh cages and stainless steel cables surrounding the canopies. In this way maintenance levels are kept to a minimum but with maximum visual effect through the use of vegetation on both vertical and sloping planes.

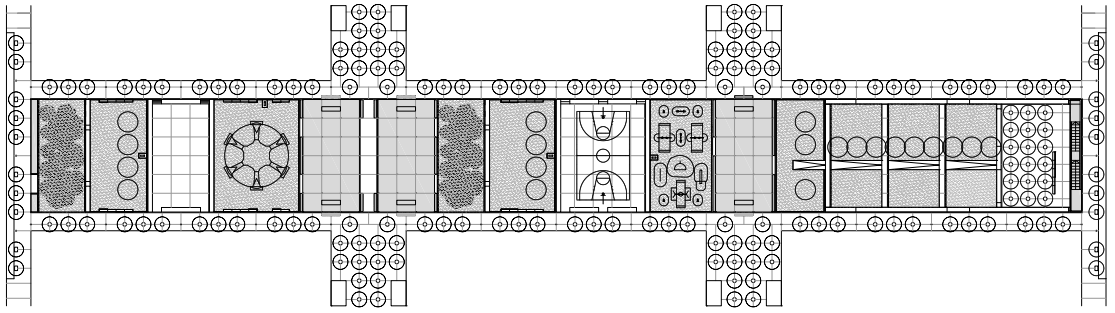
The strips for distinct activities are separated from one another by concrete benches of the same length as the width of the square. The same benches provide seats for children beside their playground area, the old man under the shade of the tree or young people taking a rest from their game of basketball: daily activities in pairs.



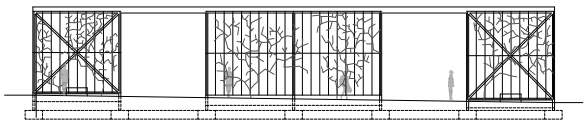
Twin squares (2008-2011)
axonometric north square



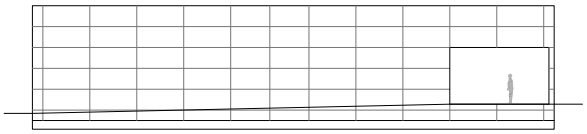
Twin squares (2008-2011)
north plan



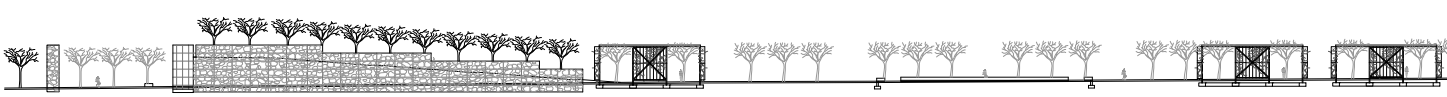
Twin squares (2008-2011)
south plan



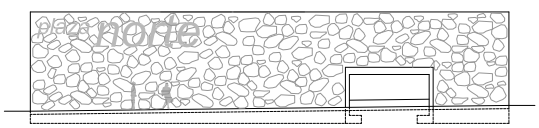
shelter façade



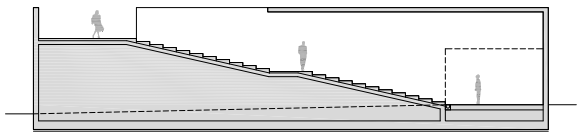
wall-staircase façade



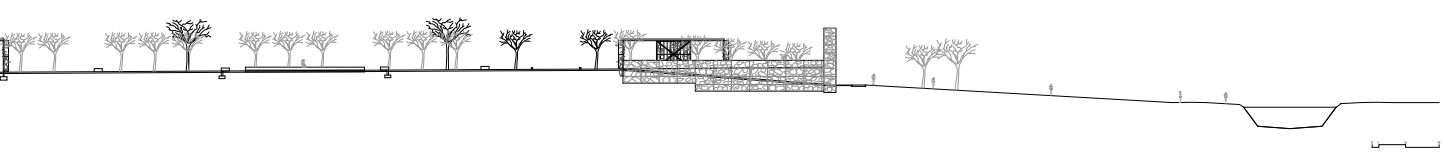
north square - south elevation



west cyclopean wall façade north square



wall-staircase section



VALDEFIERRO PARK

Location: Sector F-57/8, Barrio de Valdefierro, Zaragoza, Spain · **Area:** 11 Ha · **Architects:** Héctor Fernández Elorza & Manuel Fernández Ramírez · **Constructor:** Construcciones MARIANO LÓPEZ NAVARRO, SAU **Collaborators:** Félix Royo Millán, José Antonio Alonso García, Antonio Gros Bañeres · **Client:** Sociedad Municipal ZARAGOZA VIVIENDA, SLU · **Project:** 2008 · **Construction:** July 2009 - December 2011 · **Photographers:** © Montse Zamorano & © Carlos García Fernández

The major decisions concerning the Valdefierro Park Project in Zaragoza were determined by the opportunities afforded by the context of the site itself.

On the one hand, the soil where the park was to be situated was considerably degraded. An L-shaped strip of land covering 11 hectares, bordered to the north and west by the rear of the Valdefierro district and to the south by the Imperial Aragón Canal had been used for years as a gravel-pit and later as a land-fill site, mainly for waste from building works in the city. The clean-up, transfer and recycling of the existing debris in such a large area of the site would have required substantial investment, disproportionate to the volume and budget of the proposed work.

On the other hand, the topographical context is quite pronounced. Almost 9 metres of difference separated the height of the Imperial Aragón Canal from the level of the nearby buildings of the neighbourhood; a difference that caused the riverbed to appear more distant than it really is.

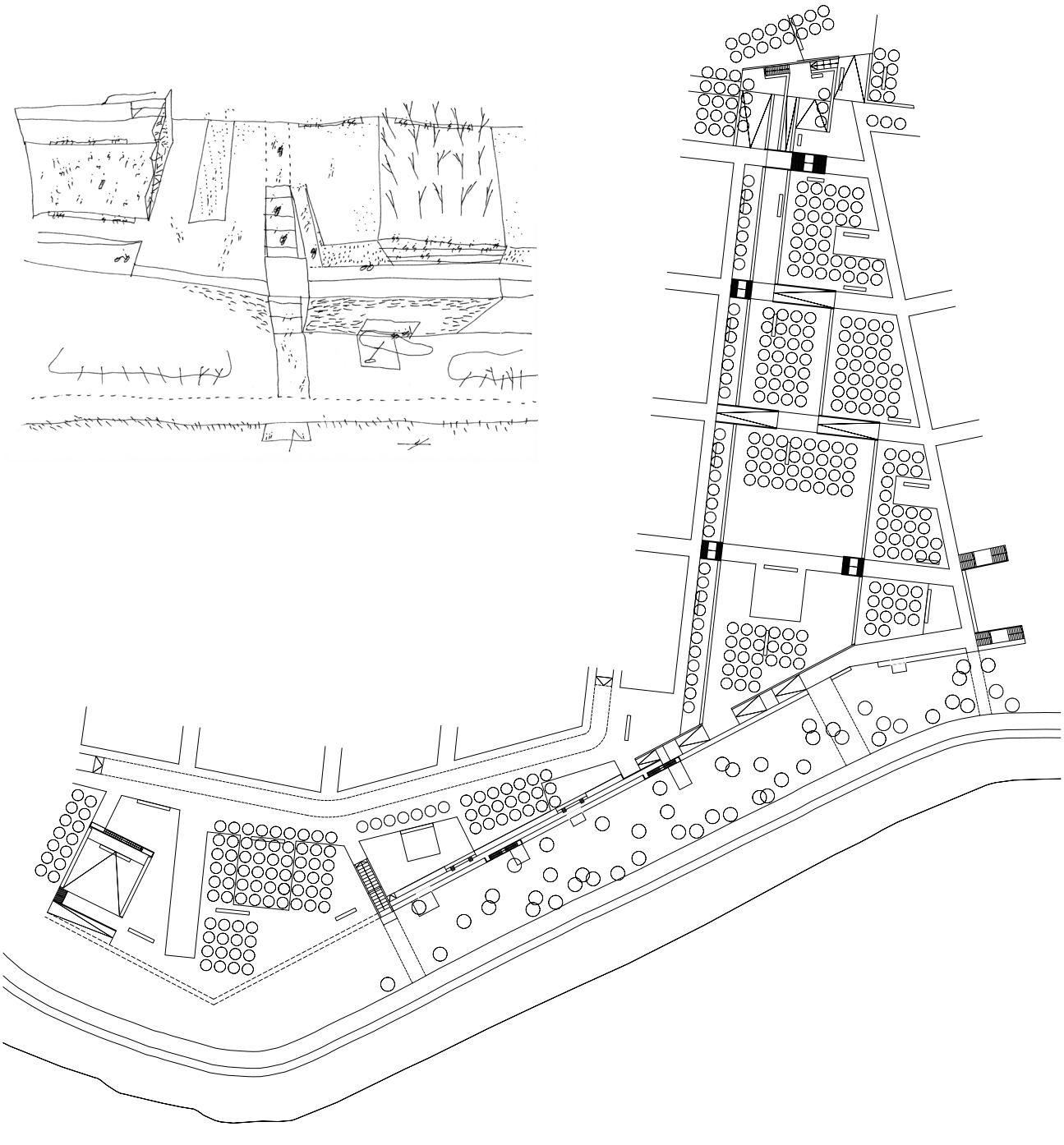
Such determining contextual factors: the gravel-bed debris (with those large gravel stones which at the time nobody wanted to use as gravel), the land-fill site (composed mainly from the rubble of former construction works in the city) and the pronounced topography of the site, led us to construct the project with the geometry of a system of walls.

The gravel and rubble were mixed with cement to construct very thick Cyclopean walls. These unreinforced walls, which on account of gravity vary in depth according to their height, distribute the layout of the site into terraces and determine the topography of the park. Thus the initial contextual problems are turned around to favour the design itself.

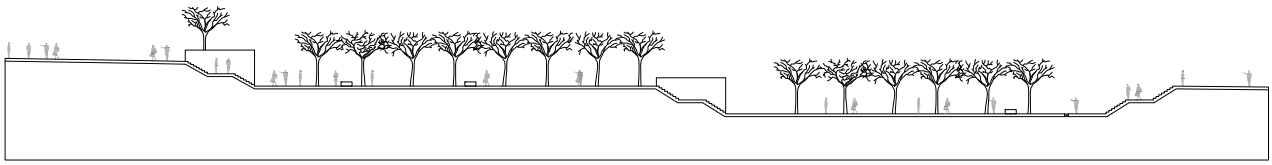
The remaining layout is resolved geometrically. The proximity of the Imperial Canal and its link-up with the southern end is built with just one drop in level: a Cyclopean wall 210 metres long, 1.80 metres thick and 9 metres tall resolves the connection between park and river. The neighbourhood thus benefits from a public space that is optimally placed and serves as a backdrop underlining the canal landscape, while at the same time the depth of the walls allows for the stairs, ramps and benches providing greater accessibility to the canal to be hidden within the construction. Conversely, the extent of space available on the eastern side of the site of the site allows for this area of the Park to be distributed into three terraced levels ; three terraces of variable geometry that adapt to the terrain by means of a double row of Cyclopean walls 1.25 metres in depth and 4 metres tall.

If the defining Cyclopean walls outlining the topography are constructed from the very stone and soil of the site, the transversal pedestrian connecting areas (ramps and stairways), from the Park to the neighbourhood, in continuity with the existing street network, is resolved by means of reinforced narrow concrete walls. Two different skins with a very different function. The slenderness of the reinforced concrete wall sections is both compensated by and in contrast with the chunky aspect of the Cyclopean masonry. The smooth, polished texture produced by the metallic casting of the moulded sections contrasts with the rough surface of the thick Cyclopean walls, whose internal texture has been revealed by the abrasive action of a rotary crown gear.

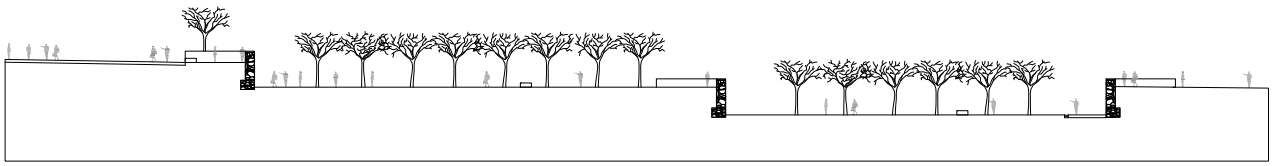
In short, the Park has been built in terraces, on which the recently planted trees will easily grow, protected from the harsh north wind. The horizontal terraces are designed so that local residents will adapt their activities and needs to the layout of the Park. These same residents will move about between the different levels using the stairways and ramps built between the reinforced concrete walls that continue on into the streets of their neighbourhood; they will sit on the benches carved into the Cyclopean masonry or they will make their way through the interior using the various stairwells and ramps. These earthen walls will provide protection from the wind and at the same time receive the welcome rays of winter sunshine; they will highlight the trees and surrounding nature, framing the landscape through their various openings; returning the ball to a child playing or providing shade to an elderly resident. Climbing plants will grow on its walls, insects and birds will make their nests here and graffiti will make its appearance. These infinite artisanal walls, like giant carpets, interweaving with the warp and weft of cement and stone, will serve as a backdrop for conversations, and discussions or as a secret hiding-place for first kisses.



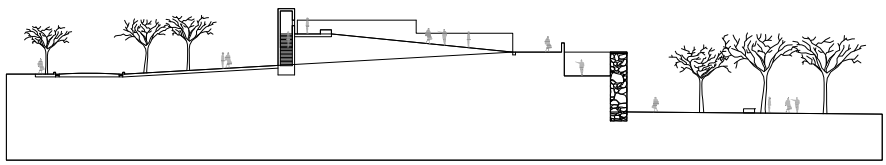
Valdefierro park (2008-2011)
south plan



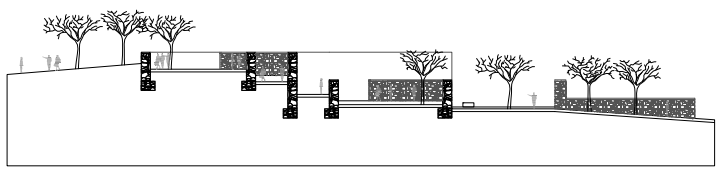
Valdefierro park (2008-2011)
east-west section through the staircase



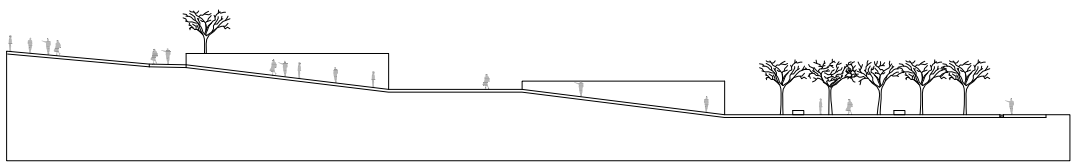
Valdefierro park (2008-2011)
east-west section through terraces



Valdefierro park (2008-2011)
north-south section through the lookout



Valdefierro park (2008-2011)
east-west section through the entrance ramp



Valdefierro park (2008-2011)
east-west section through the ramps

x3m | arhitektura+urbanizam

MIRELA BOŠNJAK · MIRKO BUVINIĆ · MAJA FURLAN ZIMMERMANN

x3m : arhitektura + urbanizam is a Croatian Zagreb-based architecture studio established in 2003 by architects Mirela Bošnjak, Mirko Buvinić and Maja Furlan Zimmermann. They graduated from the Faculty of Architecture of the University of Zagreb in the late 1990s, and have received various awards and recognitions both for works built and competition projects ever since. Their office is a small practice where the three partners are also the only employees. Nevertheless, they design and manage all their projects fully in-house. Almost all of their commissions and constructed works are the result of winning the first prize in an open design competition.

Built projects (selection):

Campus Cafeteria & Restaurant, Rijeka (2010) – Viktor Kovačić 2011 Award[1] nomination

University Residence Hall Trsat, Rijeka (2016) – 2018 International CEMEX Building Award – 3rd place

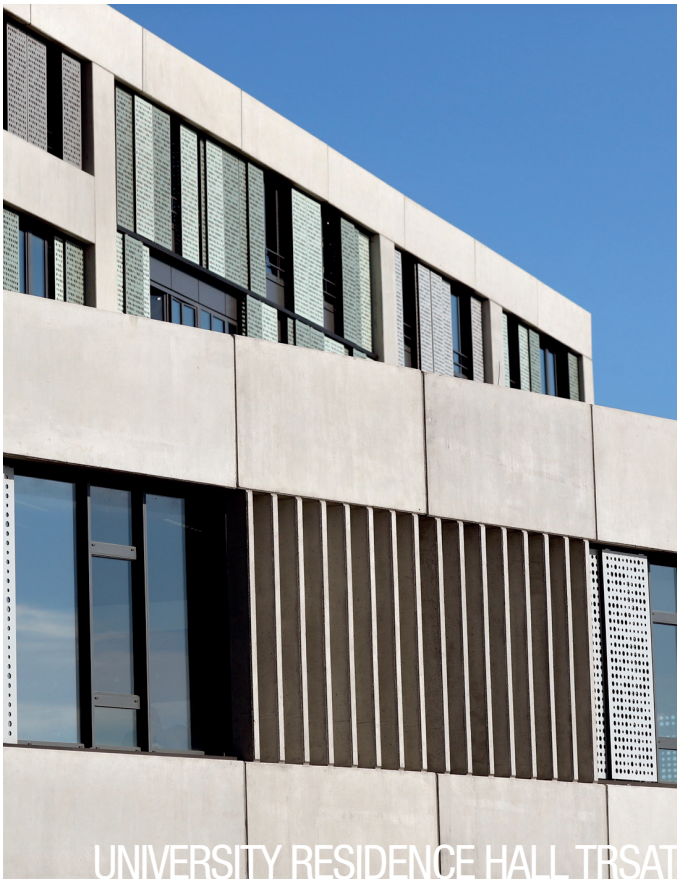
The Homeland War Monument, Crikvenica (2017)

'Žnjan - Pazdigrad' Primary School (2017) – Viktor Kovačić 2018 Award; Vladimir Nazor 2018 Award[2]; 2019 EU Mies Award nomination

1 annual Croatian Architects' Association award
2 annual Croatian Ministry of Culture award

ŽNJAN - PAZDIGRAD PRIMARY SCHOOL

ONE MONUMENT·THREE LOCATIONS

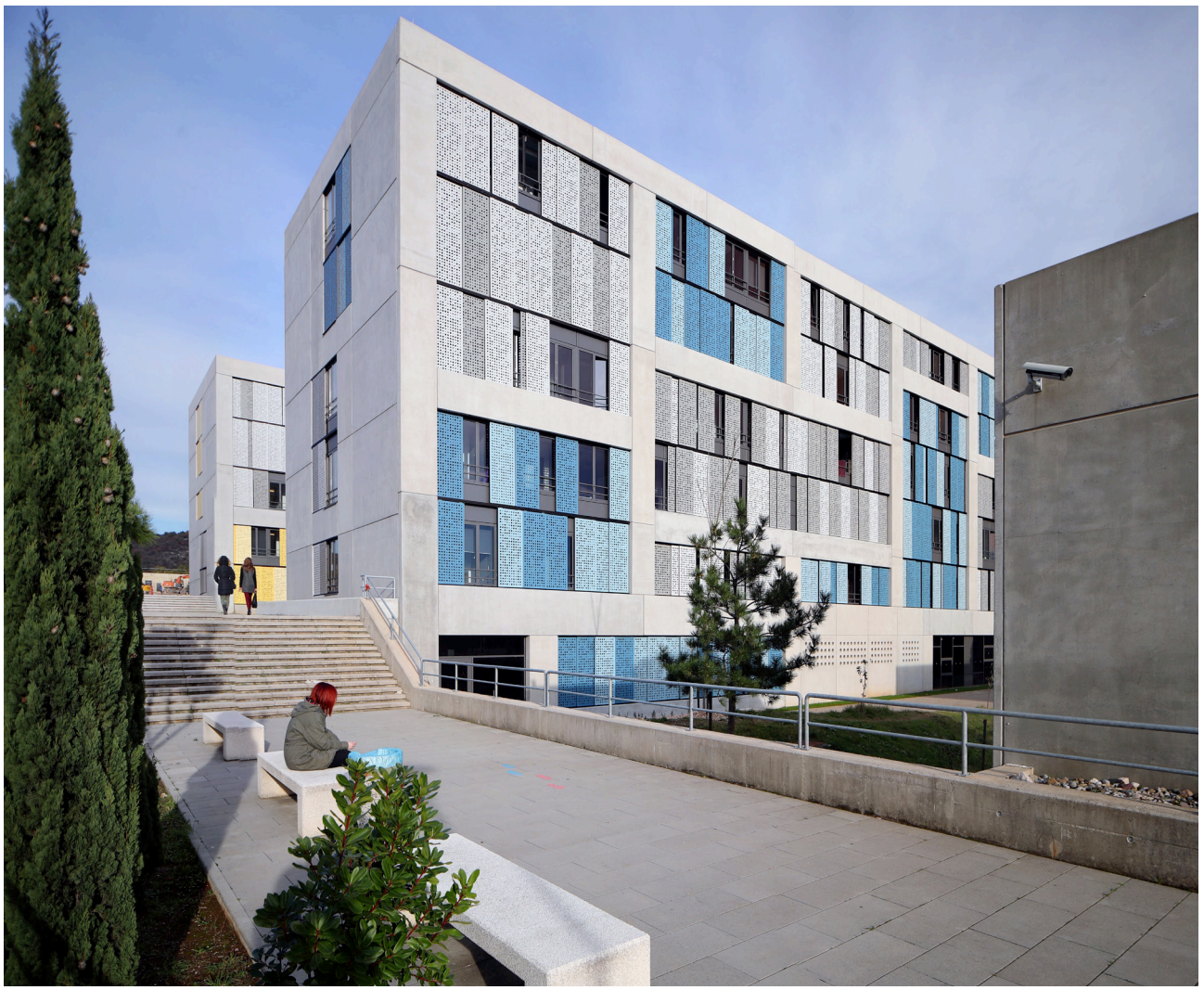


UNIVERSITY RESIDENCE HALL TRSAT

UNIVERSITY RESIDENCE HALL TRSAT

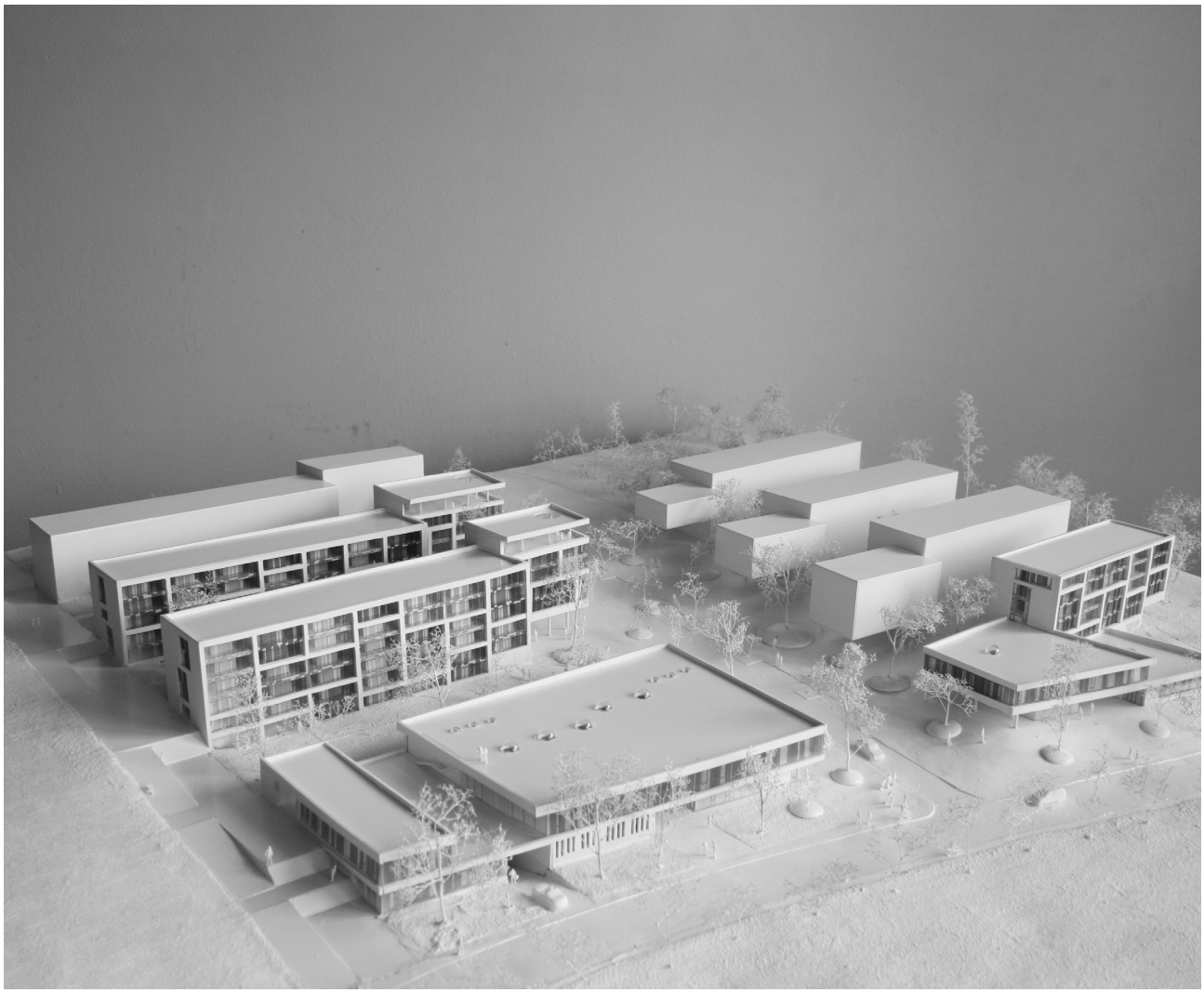
Location: Rijeka, Croatia · **Site area:** 23.500 sqm · **Built area:** 4.205 sqm **Gross floor area:** 18.670 sqm · **Architects:** Mirela Bošnjak, Mirko Buvinić, Maja Furlan Zimmermann, Ivan Galić · **Structural engineers:** Eugen Gajšak, Marija Šarac, Marijan Bračun, Ivan Dolovčak · **Typographical interventions:** Nikola Đurek · **Client:** University of Rijeka · **Design competition:** 2004 (FIRST PRIZE) · **Project:** 2006-2012 · **Construction:** 2015 - 2016 · **Photographers:** © Domagoj Blažević

Three buildings of the university residence hall with 238 apartments and the Student Centre facilities are part of the construction project of the University Campus Trsat in Rijeka and have been built in accordance with the first prize winning project in the 2004 architectural design competition for the student canteen and 7 dormitory buildings with a total of 1.600 beds. Given the lack of resources and infrastructure, only the campus canteen was built in the initial phase and since it was opened in 2011 the University Campus operated without student housing. Finally, in September 2016, students moving into the first three 'blocks' marked the beginning of a new era in which the Trsat Campus experienced a significant transformation.

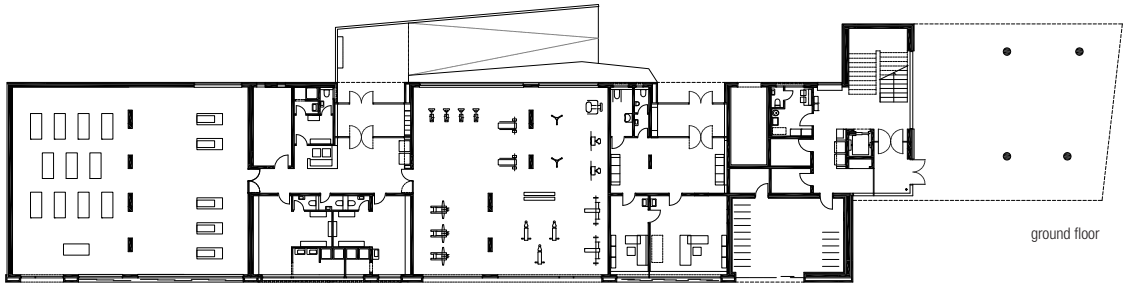


As the detailed urban plan of the University Campus strictly prescribes the height and mandatory construction lines, the shape of the buildings and their location on the plot are a direct reflection of the plan provisions. The residential buildings provide accommodation for 754 people, of which the majority are 4-bed apartments which consist of common areas (entrance, kitchen, bathroom, toilet, and loggia) and two double bedrooms. In addition, Block 1 holds 32 small studio apartments for students and Block 2 has 24 apartments of higher standard for guest lecturers. 10 studio apartments are accessible for people with disabilities.

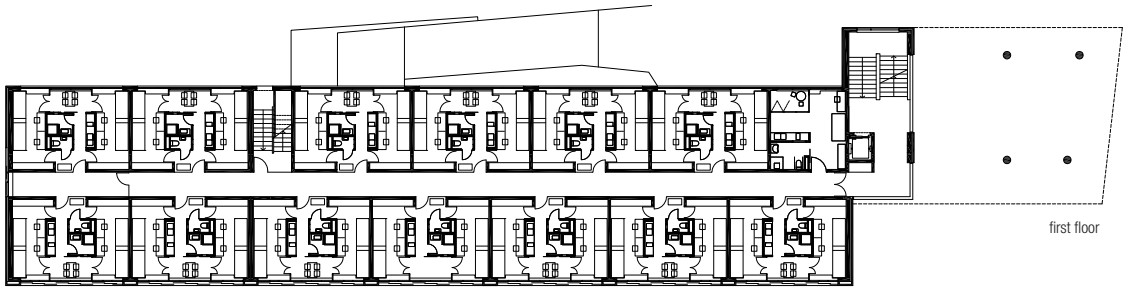
The design of each type of accommodation unit was given great attention to make the best use of the available space, which is why the furnishing was almost as important as the construction, and the designed furniture was fully adapted to specific situations. Also, despite the strictly defined parameters, the goal was to create quality common spaces which are situated on ground floors (study room, doctor's office, gym, etc.) and the highest floors (common room with a kitchen and a terrace). Entrance spaces of the 4-bed apartments open towards the hallways through large semi-transparent glass windows that provide partial view into the flats and transform the space of communication into a space of interaction and socialization.



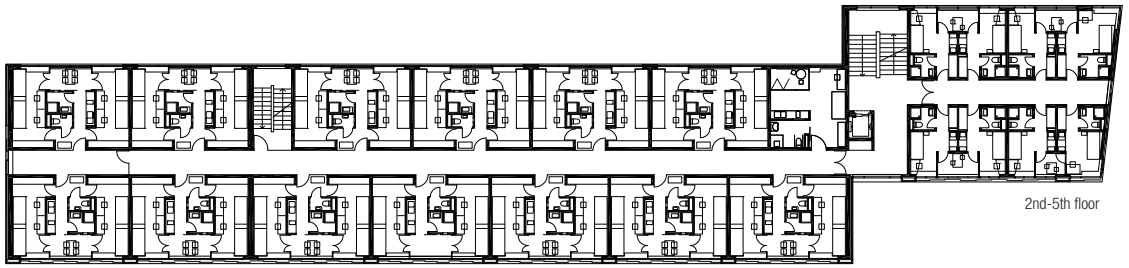

2



ground floor



first floor

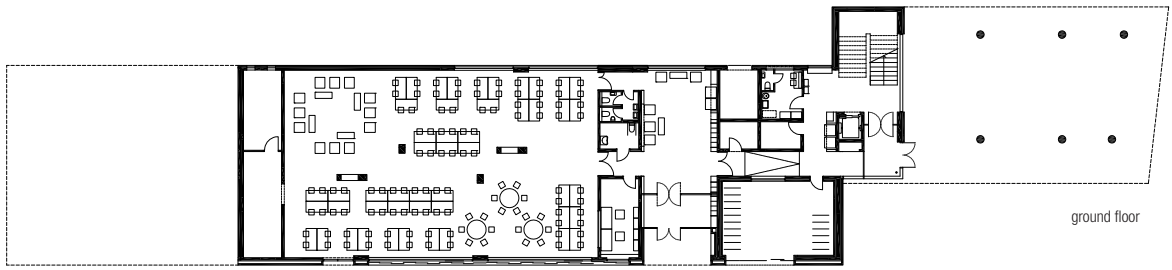


2nd-5th floor

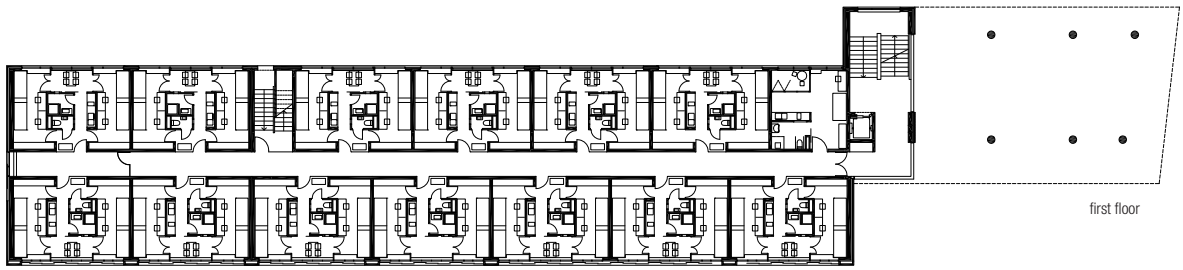
south elevation

University residence hall Trsat (2004-2016)
block 1

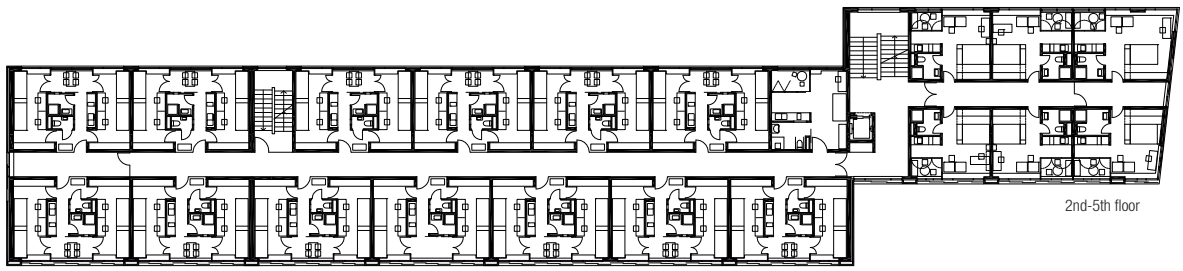
N 0 5 10 20



ground floor



first floor

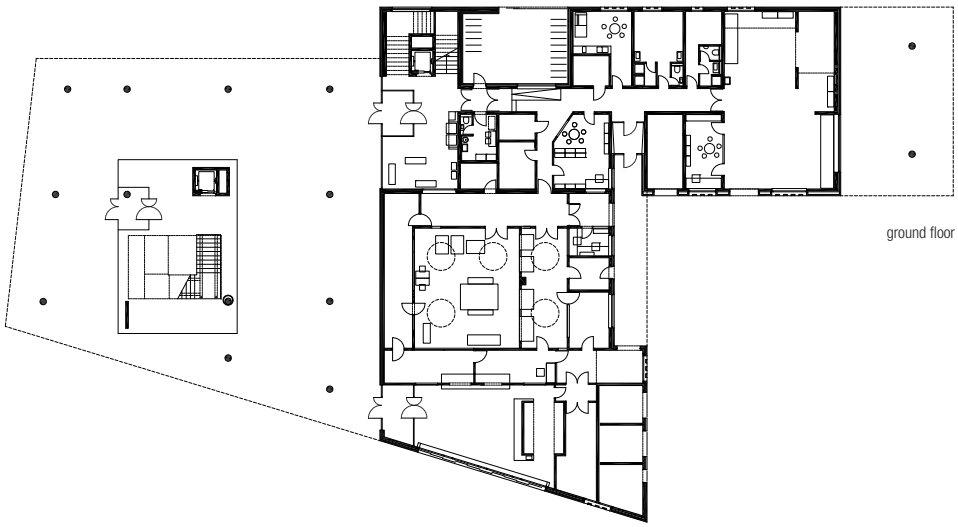


2nd-5th floor

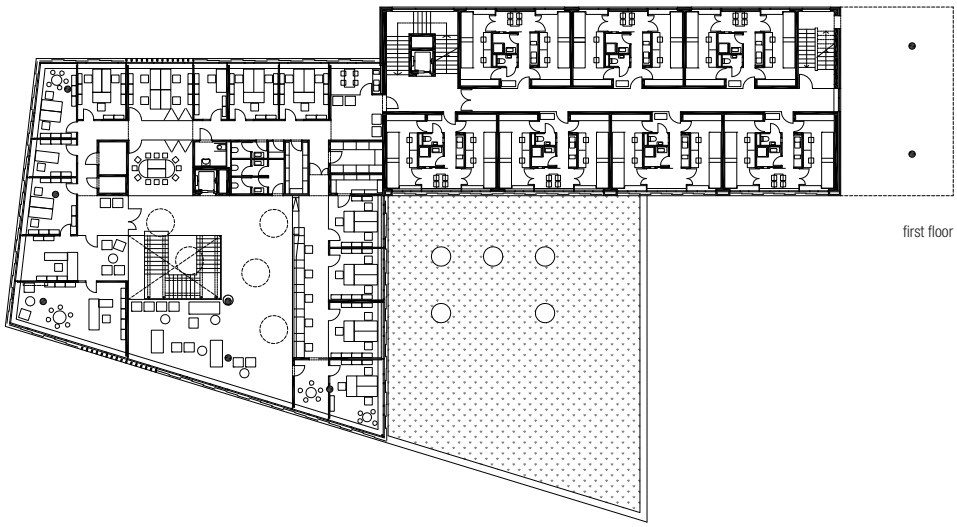
south elevation

University residence hall Trsat (2004-2016)
block 2

N 0 5 10 20



ground floor



first floor

north elevation

University residence hall Trsat (2004-2016)
block 4

N 0 5 10 20

ŽNJAN - PAZDIGRAD PRIMARY SCHOOL

Location: Split, Croatia · **Site area:** 11.600 sqm · **Built area:** 5.225 sqm **Gross floor area:** 7.830 sqm · **Architects:** Mirela Bošnjak, Mirko Buvinić, Maja Furlan Zimmermann · **Structural engineers:** Eugen Gajšak, Marija Šarac, Marijan Bračun, Ivan Dolovčak · **Typographical interventions:** Nikola Đurek · **Client:** City of Split · **Design competition:** 2009 (FIRST PRIZE) · **Project:** 2010-2011 · **Construction:** 2015 - 2017 · **Photographers:** © Bosnić+ Dorotić

The project is located on the outskirts of Split, in an area that has for at the least 20 years been in transition from agricultural suburbia to a 'proper' residential quarter. Due to a lack of public amenities and spaces in the nearby vicinity, the school is designed not just as a place of education, but also as a collective space for the entire neighbourhood.

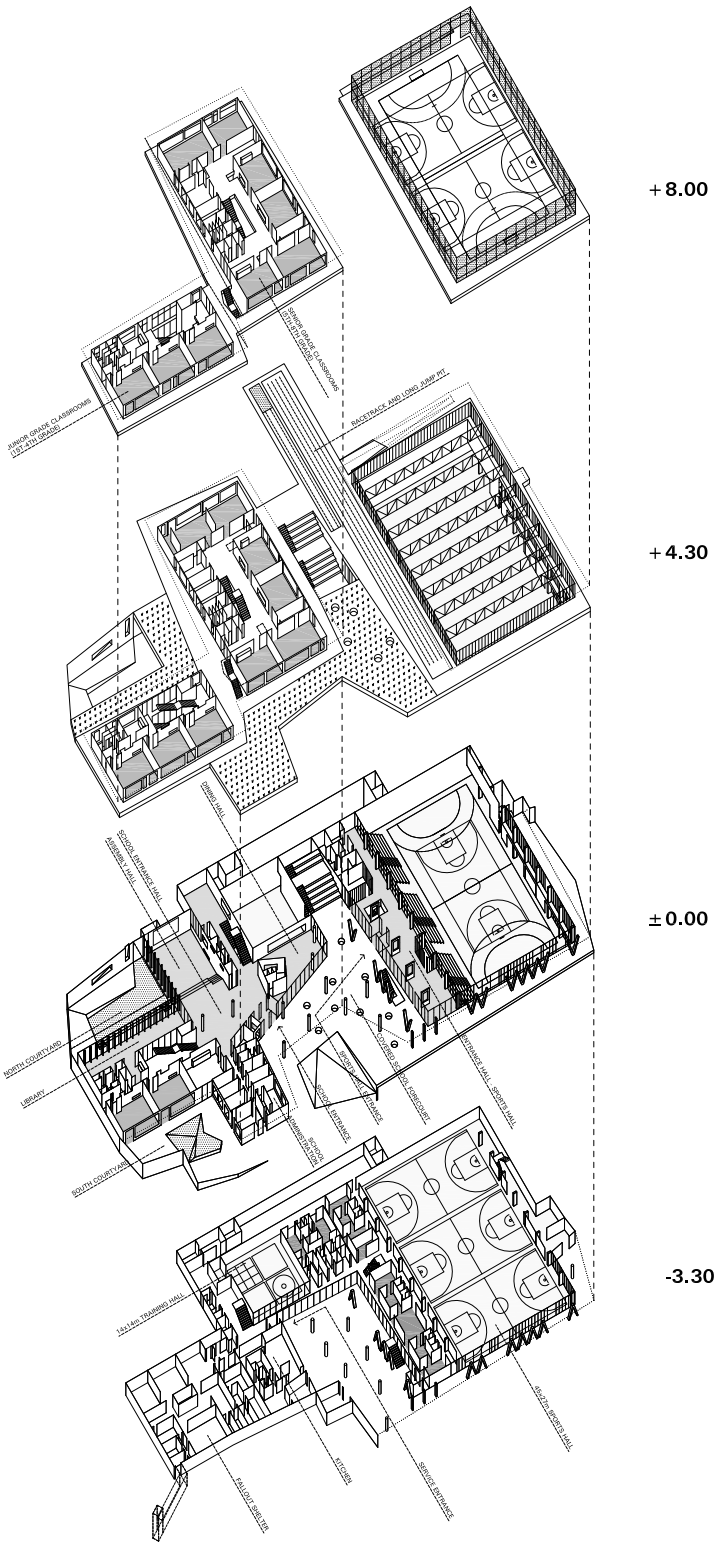
The project comprises an extensive educational programme for 720 pupils: 8 class-teaching (1st-4th grade) classrooms, 12 subject-teaching (5th-8th grade) classrooms, an assembly hall with a stage, a library, a dining area and kitchen, a large and a smaller sports hall

for physical education accompanied by outdoor playgrounds and an athletics field.

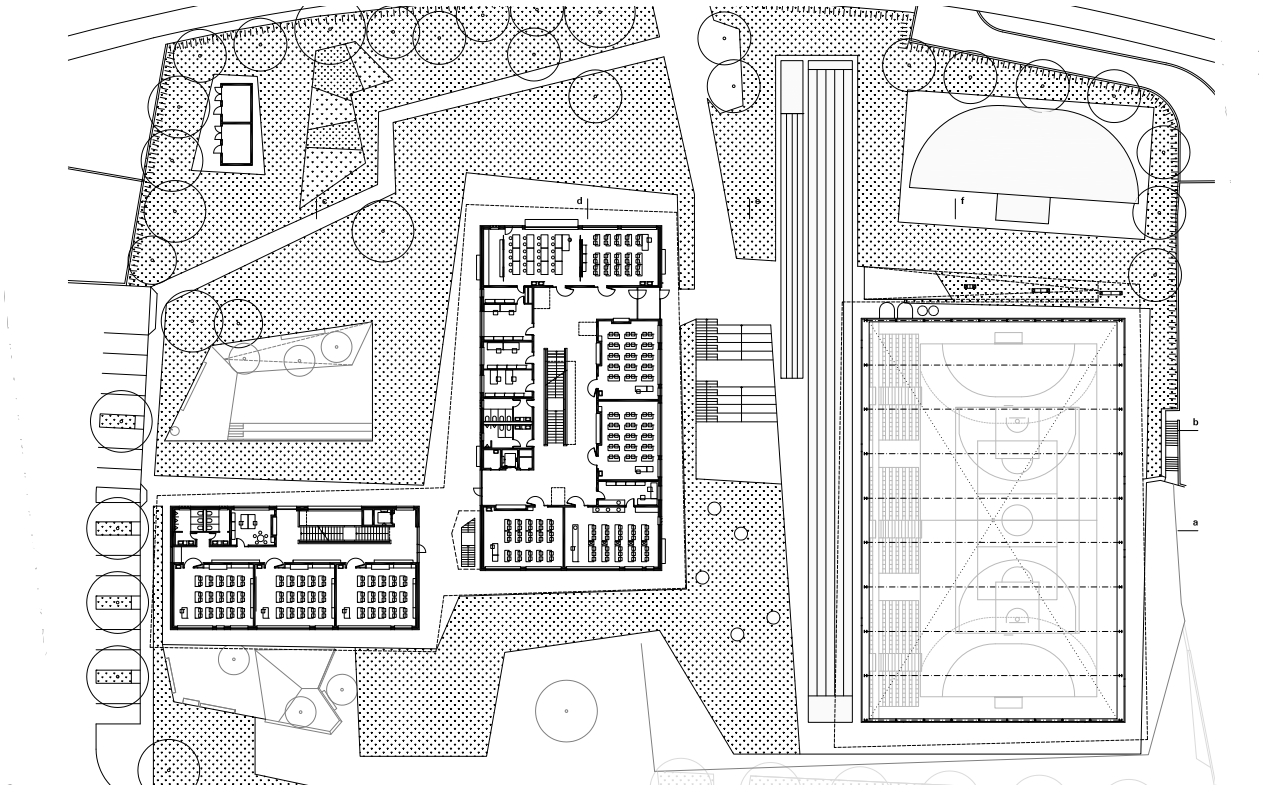
The site, located on a steep and descending terrain, was too small to facilitate the required programme, so a new topography was created to multiply the available space. A series of platforms (‘decks’), one above the other, enable the school areas and sports facilities to intertwine with open, multipurpose spaces and ambiences, while the whole spatial structure serves as a generator of indoor and outdoor activities and experiences. Through the design process, the public space area obtained has become larger than the entire site area.

The project design is based on exposing the structure: columns, slabs, brise-soleils and walls simultaneously support the building structurally, and act as its façade and most important interior element. Exposed concrete dominates the overall appearance, in the interior complemented with polished terrazzo, oak wood and acoustic ceilings. The colour accents in an otherwise rather neutral environment are the indoor and outdoor sports hall floorings, coupled with the finishes in servant spaces.

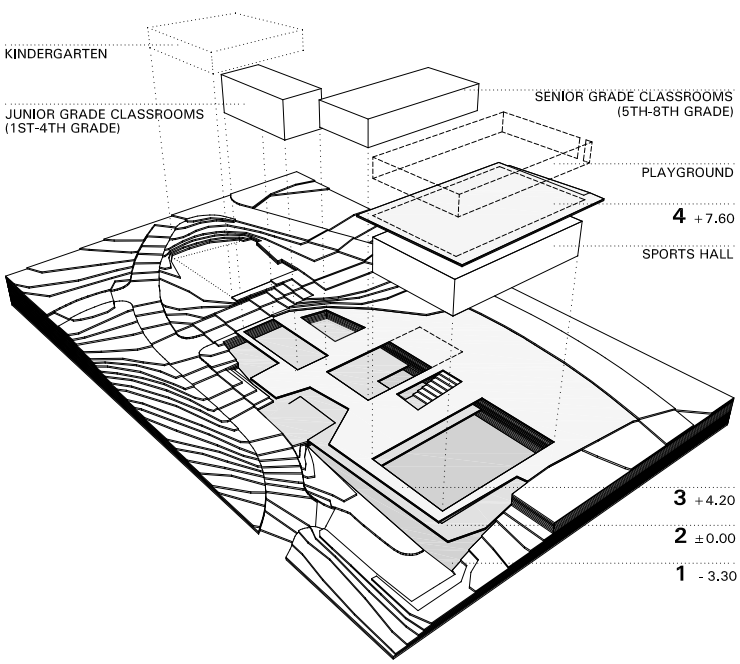
Nikola Đurek’s typography intervention on the façade provides an additional semantic layer and serves as a protection ‘skin’ for the ‘intentional unfinishedness’ of the project.



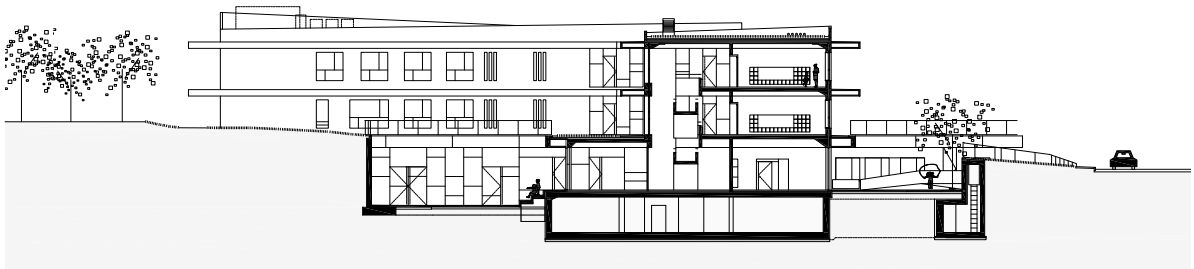
Žnjan-Pazdigrad primary school (2009-2017)
axonometry



Žnjan-Pazdigrad primary school (2009-2017)
first floor

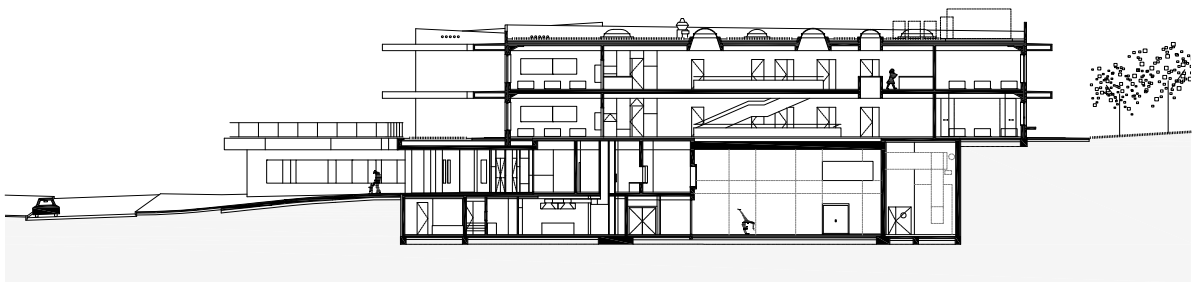


Žnjan-Pazdigrad primary school (2009-2017)
programme and topography



Žnjan-Pazdigrad primary school (2009-2017)
section c-c'

0 | 5 | 10 | 20



Žnjan-Pazdigrad primary school (2009-2017)
section d-d'

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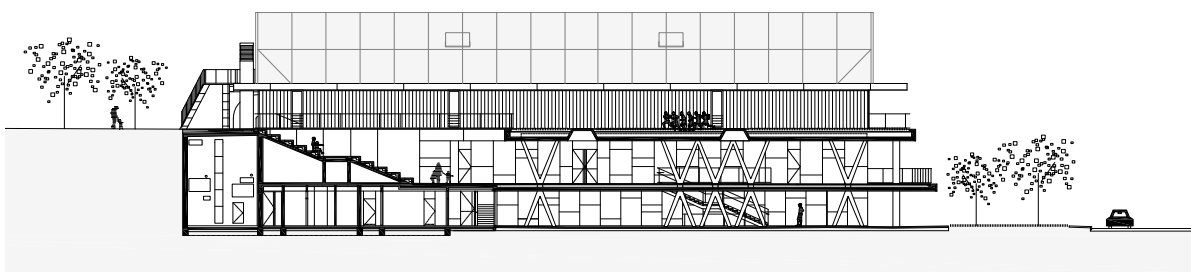

Žnjan-Pazdigrad primary school (2009-2017)
section e-e'

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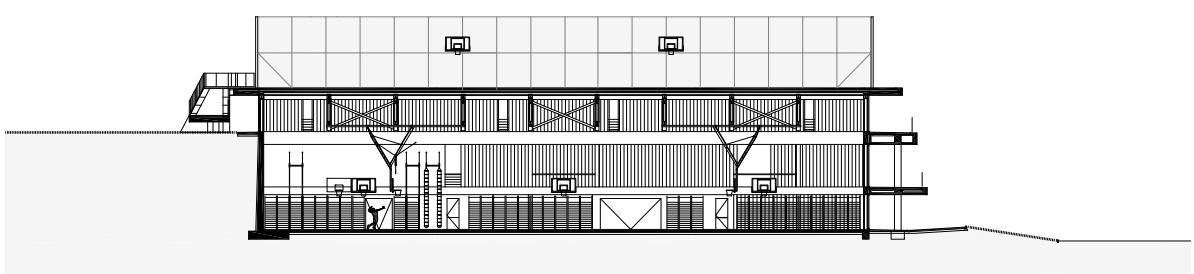

Žnjan-Pazdigrad primary school (2009-2017)
section f-f'

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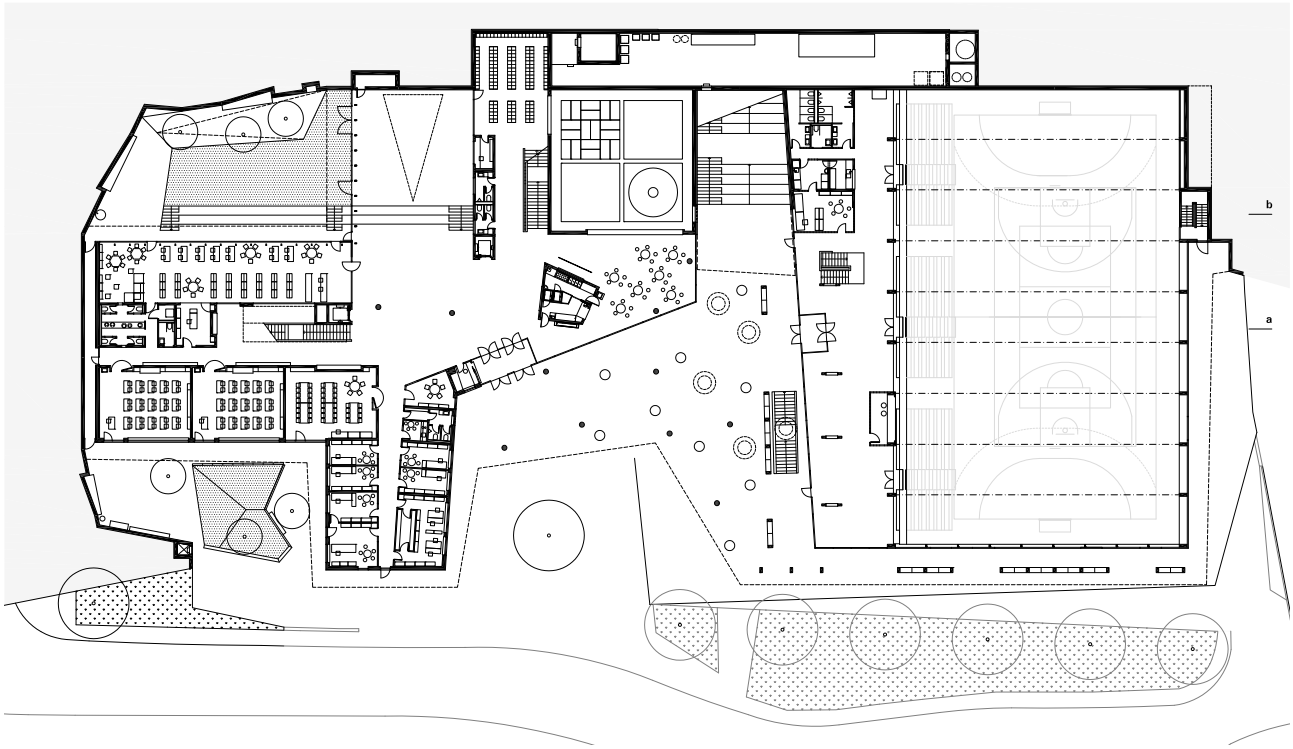
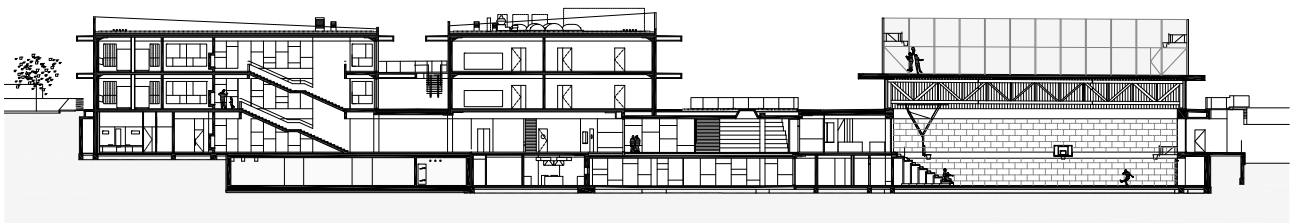
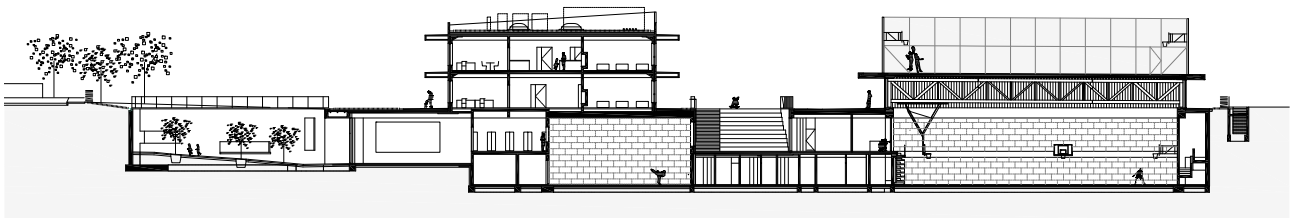


Žnjan-Pazdigrad primary school (2009-2017)
ground floor



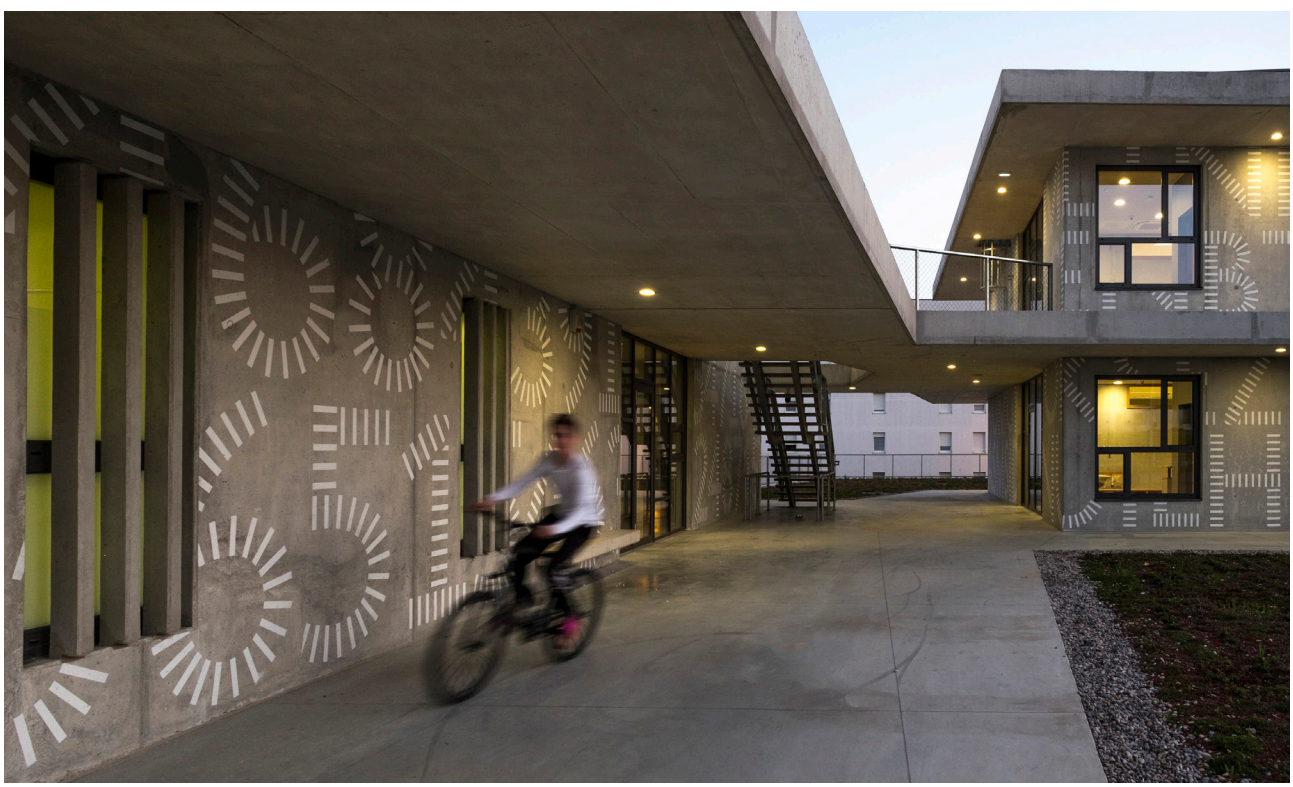
Žnjan-Pazdigrad primary school (2009-2017)
section a-a'

0 5 10 20



Žnjan-Pazdigrad primary school (2009-2017)
section b-b'

0 5 10 20



ONE MONUMENT · THREE LOCATIONS

Location: Tupale, Sinac | Gračani, Zagreb | Boričevac (Croatia) · **Site area:** 4.855 sqm | 220 sqm | 1.770 sqm · **Area of intervention:** 621 sqm | 54 sqm | 77 sqm · **Architects:** Mirela Bošnjak, Mirko Buvinić, Maja Furlan Zimmermann · **Structural engineer:** Eugen Gajšak **Inscriptions design and typography:** Nikola Đurek · **Client:** Ministry of Croatian Veterans · **Design competition:** 2013 (FIRST PRIZE) · **Project and construction:** 2013 | 2015 | 2017 · **Photographers:** © Bosnić + Dorotić & © *x3m*

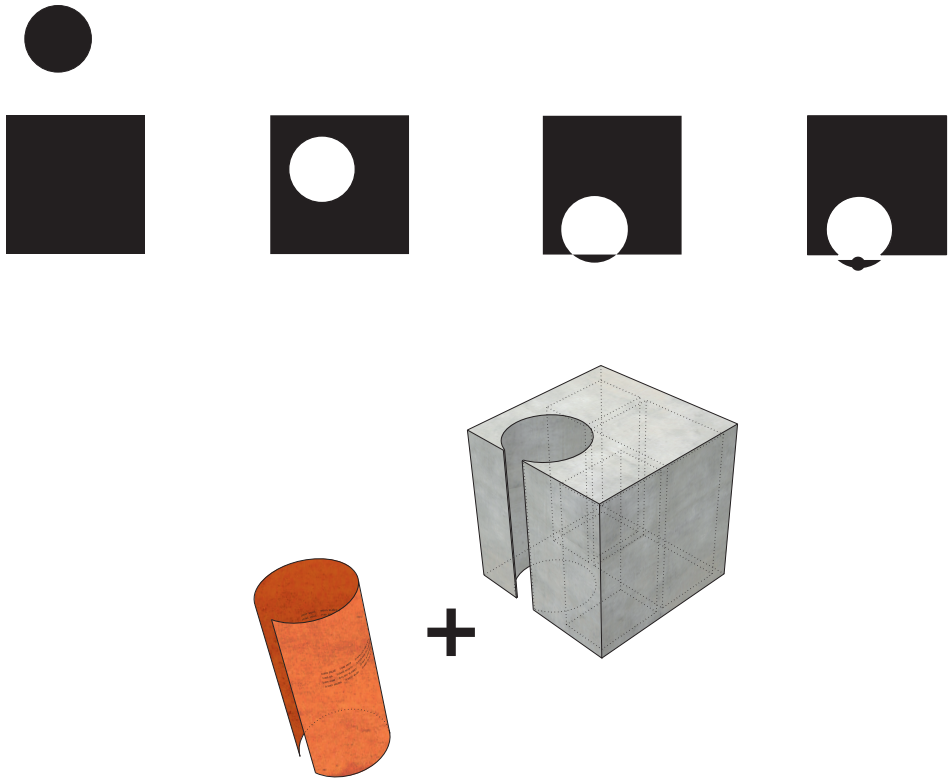
While matter is matter even without people, symbols without people are just plain signs. The idea that a sign transforms into a symbol can only exist in the human mind. Therefore, if we want monuments to become symbols, we need to intrigue the *Observer*: we must create bounded in *free*, rational in *natural*, *elusive* in concrete, *imaginative* in real...

The project was awarded with the first prize in the competition for the standardized design of the Monument for the commemoration of the mass graves of the (post) WWII victims in 2013. To date, three monuments were constructed. As a standardized solution, the monument itself (reinforced concrete solid with cylindrical void 'dressed' in the corten steel) needs to apear the same on all locations. Therefore, contextualizing stems from the monument placement and the design of the inscriptions which are re-imagined in each particular situation.

The first monument in Sinac near Otočac, is set in a field that is sometimes flooded in the spring when the snow melts down. Long gravel path connects the commemoration area to the closest road. The monument, a tiny spot of *regularity* in the natural expanse, opposes the subtle curves of the mountains that *frame* the area in the distance.

The second location is situated in the nothern part of Zagreb in the bottom of the Medvednica Mountain, relatively close to the nearby houses, but still 'in-the-woods', next to the hiking trail and the forest service road. Monument and its stone paved surrounding create a small island of *solidity* in the overwhelming green(ery) that slowly but steadily absorbs everything.

The third monument in Boričevac, a village that is almost without resident, is located on a meadow next to the recently renovated church from the 19th century. The path, the bench under the tree and the monument itself compose a notion from some other space. Two times a year, a large number of people gather at the site, while the rest of the time this abandoned space is left to itself and to its own rhythm.



One monument-Three locations (2013-2017)
competition drawings and sketches

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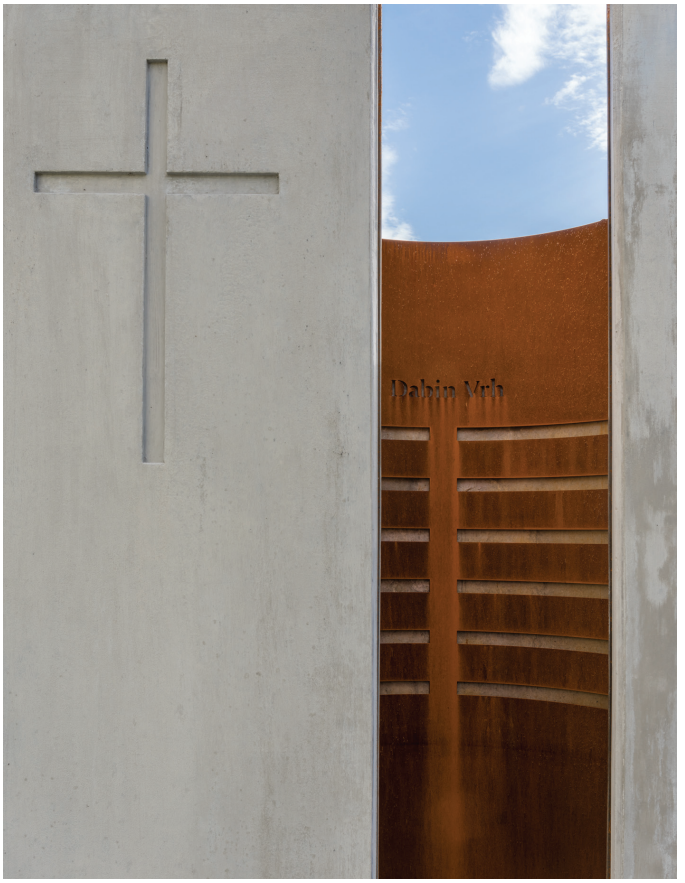

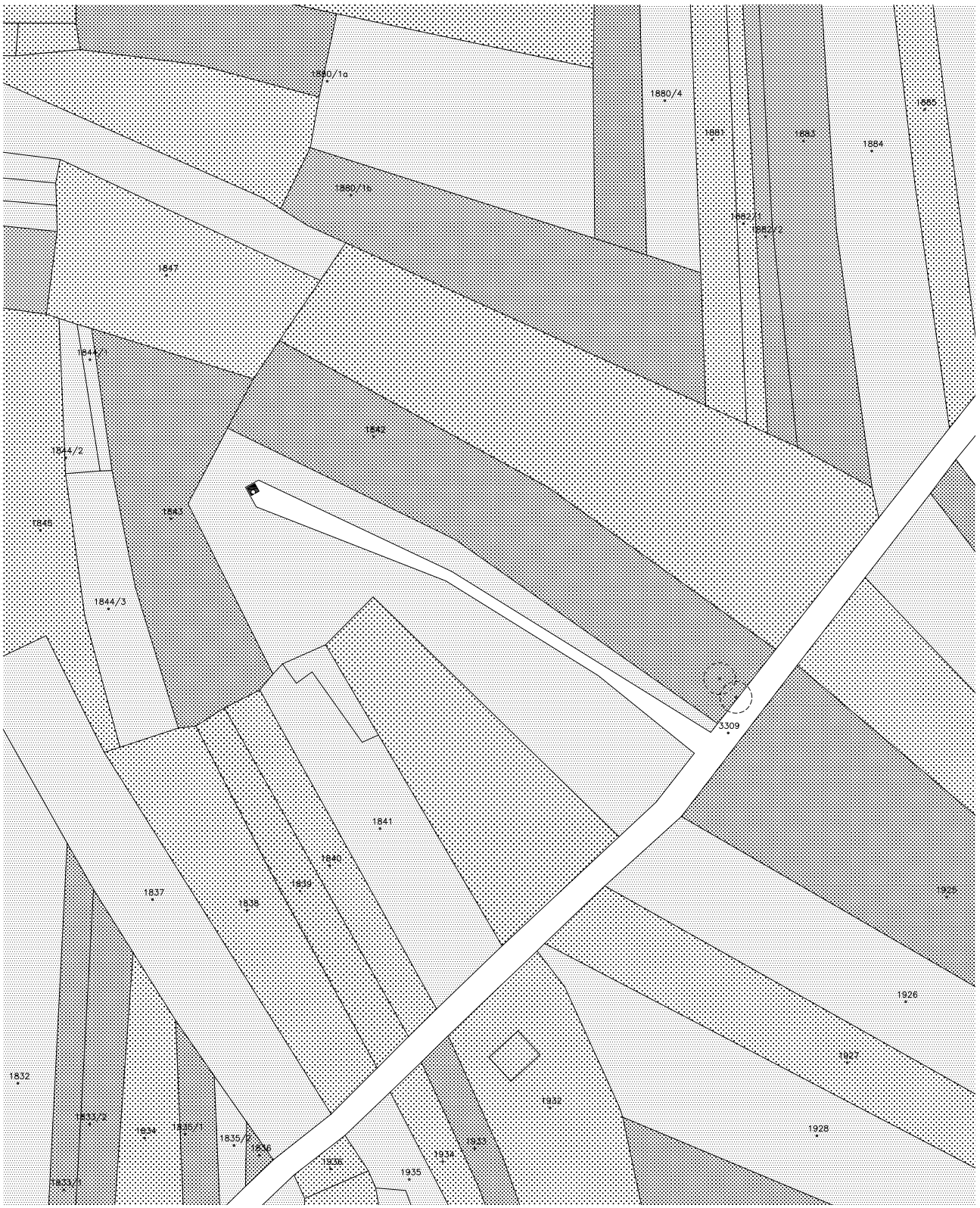

One monument-Three locations (2013-2017)
first location site plan: tupale, sinac

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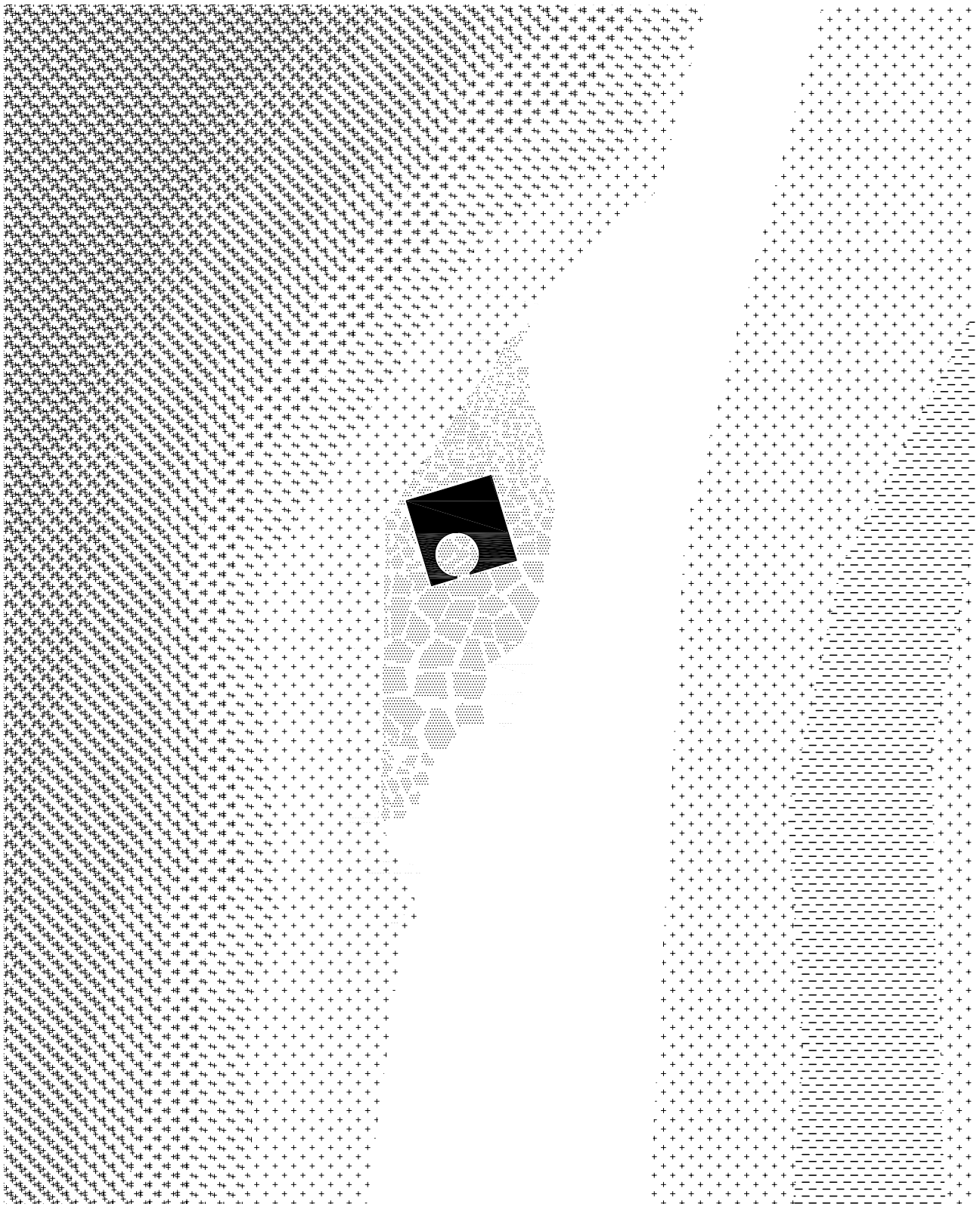
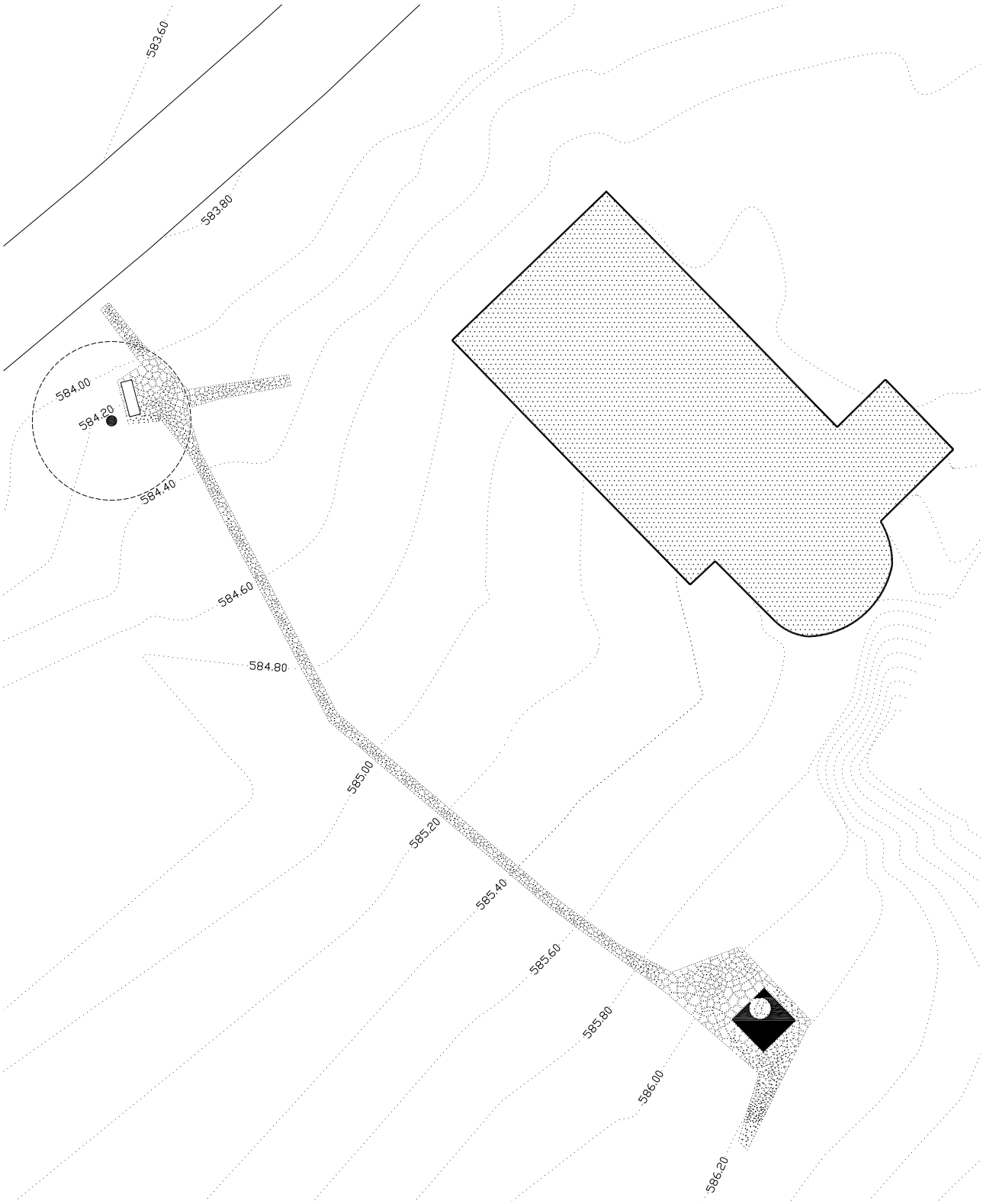


One monument-Three locations (2013-2017)
second location site plan: graćani, zagreb



One monument·Three locations (2013-2017)
third location site plan: dabin vrh. boričevac

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CRISTINA DÍAZ MORENO · EFRÉN GARCÍA GRINDA

Cristina Díaz Moreno and Efrén García Grinda hold a MArch (E.T.S. de Arquitectura de Madrid, Universidad Politécnica de Madrid) degree and are co-directors and co-founders of amid.cero9, an experimental architectural practice based in Madrid. They are currently Visiting Professors at the Institut für Kunst und Architektur, Akademie der Bildenden Künste IKA, Vienna, Diploma Unit Masters at the A.A. School in London since 2009 (on leave during the 2018-2019 academic year) and Visiting Critics at SOA, Princeton Universtity since 2017.

Recently they have been Design Critics in Architecture and co-directors of an Option Studio at the GSD (2015-2017), Harvard University and Visiting Professors and Unit co-directors in the SAC StädSchule Architectural Class (2016-2017), Frankfürt StädSchule. Previously they have been Visiting Critics in Architecture in the AAP School, Cornell University, New York; Visiting Critics, in the EAPM, École d'Architecture de Paris –Malaquais, Paris; Associated Professors in Project Design in ETSAM, UPM, Madrid; Associated Professors in Project Design, Architecture and Art School, Universidad Europea de Madrid, UEM; Visiting Associated Professors in Project Design in the Universidad Politécnica de Alicante; Visiting Associate Professors in the School of Architecture, ESARQ Universidad Internacional de Catalunya, Barcelona. Their work is part of the Permanent Collection of the Pompidou Center in Paris and has been exhibited in the Biennale di Architettura di Venezia in the Official Section in 2010, 2004, 2000, in the Spanish Pavillion in 2014 and 2002 and in the Greek Pavillion in 2014, among others.

Their projects have been widely disseminated and they have won more than 40 prizes in national and international competitions. The projects and writings of their first fifteen years were documented in 2014 in a publication entitled "Third Natures, a Micropedia" and an exhibition at the AA, London. Recently a monographic issue about their works have been published in El Croquis nº184, as a continuation of the several publications in El Croquis as collaborators and as AMID.cero9 architects.

amid.cero9 cultivates a post-digital, afterpop approach to the contemporary notion of space that enlists sociology, technology, media, politics and representation in projects ranging from architecture (Cherry Blossom Pavilion in Jerte Valley, Spain, shown at the 12th Biennale di Venezia, Giner de los Ríos Foundation in Madrid, Diagonal80 Industrial Pavillion in Madrid) to design (ESA Pavillion), ecosystemic studies (The Magic Mountain in Ames, We as a plague in Rome, TRP in Venice) and hybrid urban projects (Aijalaranta in Jyväskylä, or Hhouse in Balearic Islands).

BEING A GARDENER IS TO BUILD THE EXPERIENCE

"In 2004 we applied to the restricted competition for the headquarters of the Giner de los Ríos Foundation in Madrid, which gathered the legacy of the founder of the legendary Institución Libre de Enseñanza, and established upon his death in 1915, pushed by the fascinating history of the Institution and its enormous influence on intellectuals, artists and scientists before the Spanish Civil War. With all the freedom of those who believe themselves without any possibility of winning, we explore and develop a series of subjects that served to articulate the proposal and that were in some way a common territory between the history of the Institution and our subjective and conceptual interests. At that time, we were convinced of the relevance of the architecture project as a cultural practice and as a knowledge tool. We were obsessed, and still are, about how to provide with meaning to each practical, formal or technological decision in architecture, in such a way that the definition of our environment scapes from the banalizing loop that the revision of the vanguards based on pure subjectivity, historical revisionism and existential and material drift had plunged the discipline in the years before the turn of the century.

The institution itself and the same project of its headquarters offered us a series of problems and opportunities that were clearly outside our usual area of work. Born out of the modernizing impulse of a series of University professors expelled to defend academic freedom, the Institución Libre de Enseñanza was founded in 1876 with the aim of renewing morally, culturally and scientifically a country in deep decline. Convinced of the need to do so through education, perhaps the most brilliant generation of Spain in the last centuries was educated in its garden and pavilions and all kinds of scientific, educational and artistic institutions were generated sprout out from it, which transformed cultural and scientifically the country. The intellectual roots of the founders of the Institución Libre de Enseñanza were really broad, back to the mid-eighteenth century with all kinds of links with pedagogues, philosophers, scientists, writers, poets and artists, mainly in Europe and, its pedagogy did not stop at a mere transmission of knowledge, but it encompassed all kinds of vital aspects. Hence, people directly linked to the Free Institution had a strong sentimental and personal relationship with the headquarters, and a peculiar common way of thinking and acting. Somehow, the project was about working with a material as sensitive and difficult to manage as a common identity, and with an institution that had stopped its activity during the years of the dictatorship, and whose links were projected fundamentally towards the past.

The intervention in Materia y Forma will be a choral recount, with many voices from different authors, places, scientific disciplines and moments of history but also a partial one, which gathers some of the main topics of concern and study that gave rise to

'AN ESCAPE, AN ALTERNATIVE TO THE REAL WORLD ON A REDUCED SCALE'

the project of headquarters of the institution, anchored both in our own personal concerns and in the intellectual connections of the Institution, with the aim of projecting the intellectual legacy of Giner de los Ríos towards the future. Years before approaching the competition, the seminal article of the founder of the ILE, Francisco Giner de los Ríos entitled Paisaje, surely one of the few Spanish contributions to modern landscape studies, came to our hands. This short text, is almost the only written testimony of Giner's thought on the landscape, but it had a profound influence on the later generations of Spanish poets, artists and scientists and then became the guide through which to explore the intellectual and emotional territory of the institution. The landscape and by extension nature, are for Giner not a subject of unique appreciation, alien to human activity, but as a set of interrelated elements, in which man and culture are an integral part. The landscape for him can be defined as a natural entity of multiple interrelated components (vegetation, relief, water, atmosphere, form) subject to constant interaction with human populations,resulting in a strong interdependence and mutual influence.

This notion of landscape, embodied in the seminal article of the founder of the ILE, the collective walk as a pedagogical tool and its connections with Henry David Thoreau (1817-1862), Friedrich Nietzsche (1844-1900) and Jean-Jacques Rousseau (1712-1778)), the recreation of the historic garden through the idea of microcosm, the ideas of distance, depth and associationism derived from the first experiments that gave rise to the English landscape garden in the first two decades of the 18th century, the idea of meandering path, the work with the glance in movement, the perceptive experiments of the lattice of the garden based on the stereopsis, and finally the notion of cosmography and the techniques of representation based on the works of Horace-Bénédict de Saussure (1740-1799), Alexander von Humboldt (1769-1859), and Franz Schrader (1844-1924) will be examined through the connections of the Free Institution of Education project and different amid.cero9 projects from the period between 2004 and 2015.

These projects and the cosmographies from which they are born, make explicit a way to look, to perceive and see the world, and therefore a way to make visible an understanding the human and natural orderings that shape it. Through them, we understood that our obsession with the different levels of reading in architecture, for the architectural project as a way to discover the world around and to define, based on conscious decisions, small alternative worlds, was actually an attempt to build cosmographies that could be inhabited. That is, to define small microuniverses that could reflect a particular understanding of the world and establish real links with objects, people and natures, incorporating them physically, or interacting virtual with them, to assemble and constitute new material entities in the real world; and in doing so, they proposed not only a new way of looking at the world, at their natural and social orders, but also an escape, an alternative to it on a reduced scale, as the gardens and pavilions of the ILE were from 1876 until the Civil War."

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FRANCISCO GINER DE LOS RÍOS FOUNDATION IN MADRID

Urban Planning, Demolition Project, Project and Restoration and Renovation Project for the Headquarters of the Francisco Giner de los Ríos Foundation. Competition 2004 (First Prize)

Location: Paseo General Martínez campos 14, Madrid, Spain · **Area:** 5.200 sqm · **Programme:** Educational and Cultural Foundation · **Client:** Fundación Giner de los Ríos (Private) · **Project:** 2005-2010 · **Construction:** 2010-2015 · **Photographers:** © José Hevia & © Photographer *amid.cero9*

The Institución Libre de Enseñanza (Free Educational Institution) was set up in 1876 as a constantly evolving experimental laboratory for new teaching methods. Its founders were a group of university professors convinced of the need to reform society through education. Alongside the foundation's intellectual and material heritage and its links with other institutions, there is the intense sentimental projection of a group of people associated with this physical, living fragment of Spain's intellectual history. The working material – their collective identity – is just as sensitive, just as difficult to define and assess as is its spirit, which stands for a special way of feeling and thinking.

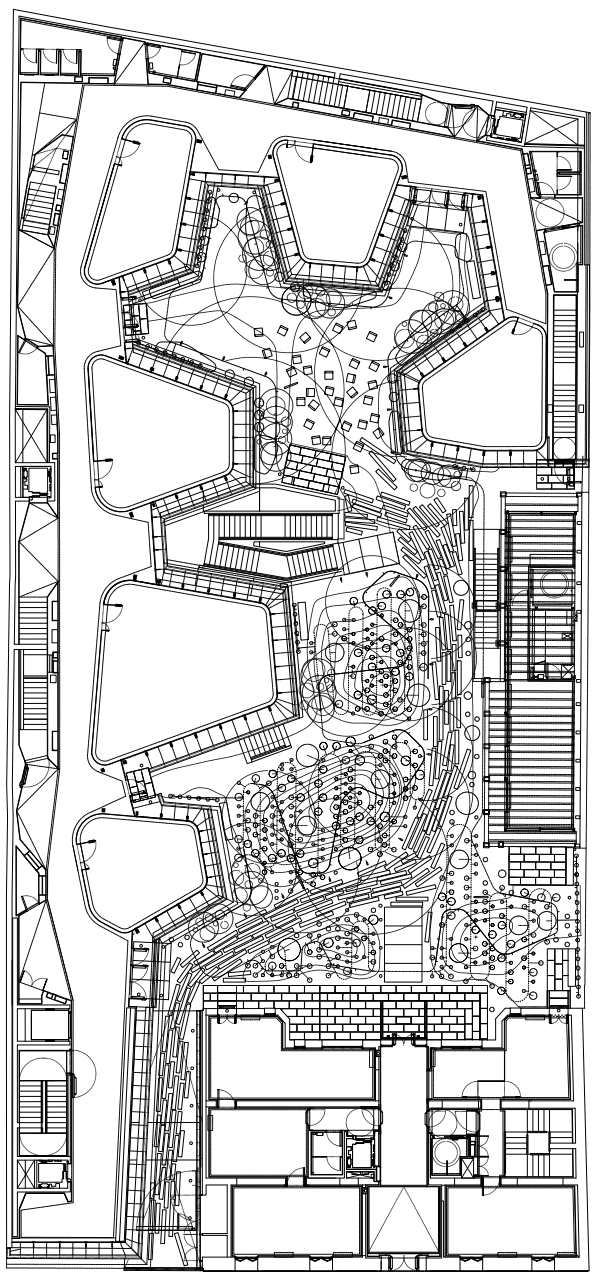
The range of initiatives implemented on this site strive to reflect Francisco Giner de los Ríos' vision of the landscape and the natural environment – a multisensorial, egalitarian approach. He understood the landscape both as an educational resource and as one of the main products of culture. The project recreates the spatial organisation of

the historic site, in the form of an inner garden surrounded by small pavilions. A series of interconnected but perceptively independent pieces are 'surrounded by a girdle of greenery', in keeping with the institution's guiding principle of getting 'as utterly close as possible to life outdoors' and providing 'each child with at least one cubic metre of air'.

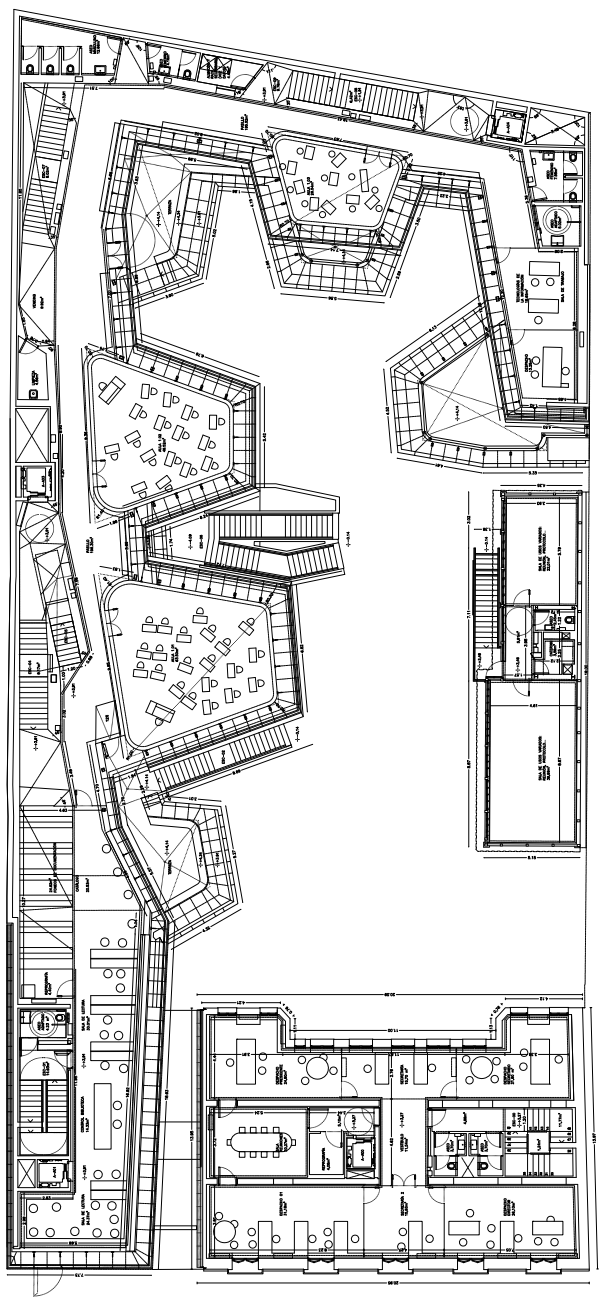
There is thus an inversion in the goals: the garden becomes the space to be determined and defined via the rest of the actions. The proposed spatial system is a series of rooms, some enclosed and others outdoors, which redescribe the existing garden. A system of 'clear, winged halls', connected by a vertical communication system, stretches along the site boundary.

The new garden is proposed as a year-round work in progress rather than a frozen final image. The result is a simple garden free of geometry and figures, whose main interest derives from evolving changes in the course of the year. This garden, like the Castilian plateau in Giner's eyes, is not green but purple, coral and silver; defined not only by the changing colours of the plants but by the changing filigree of the cladding and the overlapping succession of leafy envelopments – the vegetation, the outer wall, the reflections in the glass, the bearing structure, people in movement, the stairs and the permanent exhibition system.

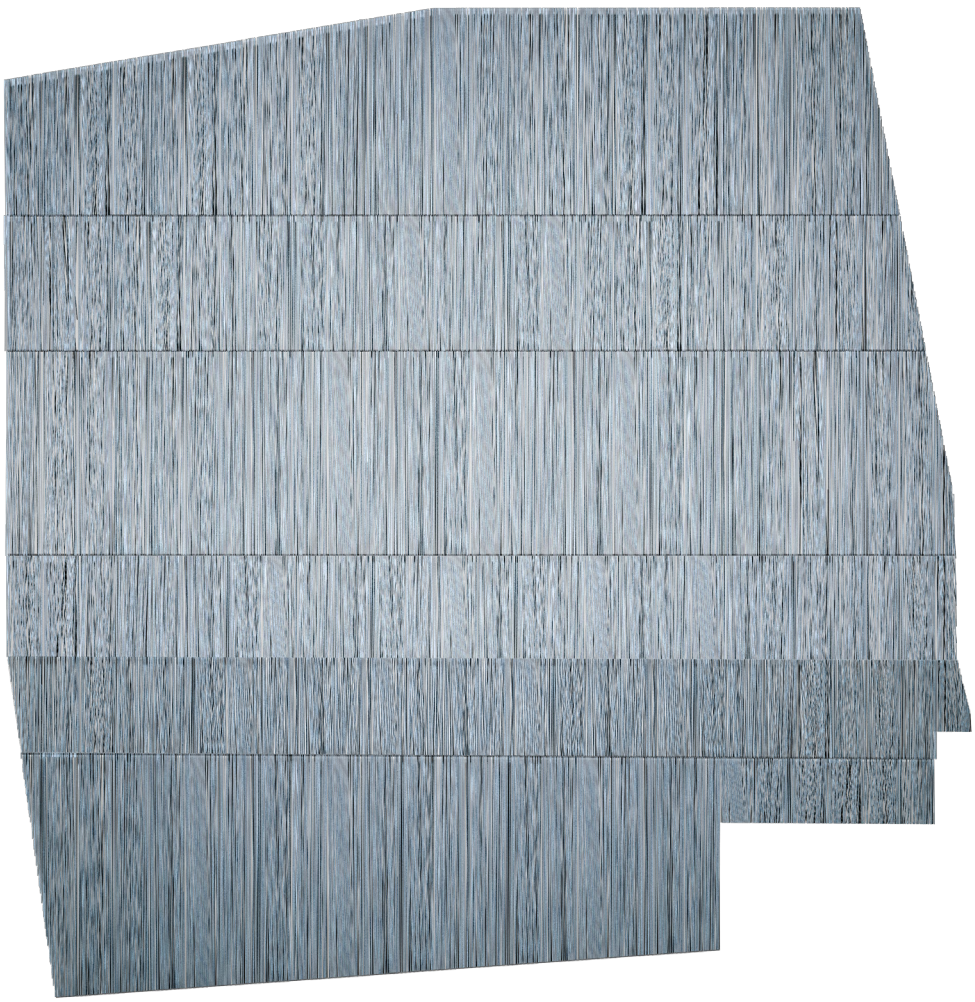
The size and position of the rooms is defined by our moving eyes, based on a precise study of the lines of sight of the new route inside the garden. If we regard our eyes as projectors, rather than screens for capturing information, then we can use them to shape the diagonals, the overlaps of the different planes of the garden.

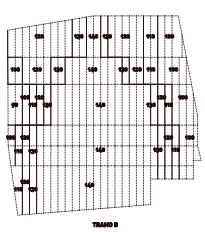


Giner de los Ríos (2004-2013)
ground floor



Giner de los Ríos (2004-2013)
first floor





Giner de los Ríos (2004-2013)
stretch B elevation

EXHIBITION, PRODUCTION AND OFFICE BUILDING FOR DIAGONAL 80 IN MADRID

Project and Construction for an Exhibition, Production and Office Building for the company DIAGONAL 80

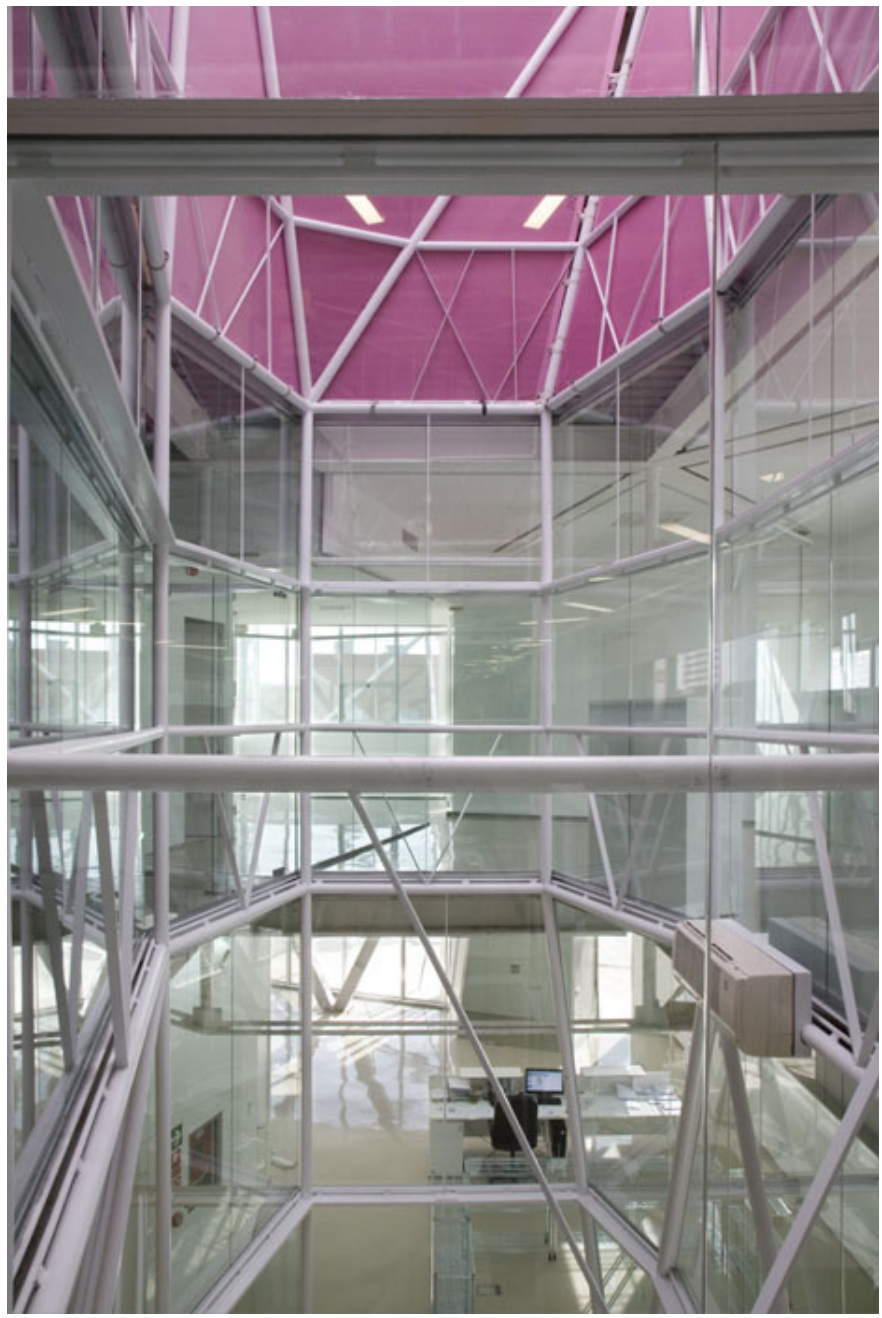
Location: Polígono Industrial Norte, San Agustín de Guadalix, Madrid, Spain · **Area:** 2.350 sqm · **Programme:** Production, exhibition and offices for small or big sized digital printings · **Project:** 2006 · **Construction:** 2008-2009
Photographers: © Andrea Illán & © Ignacio Bisbal

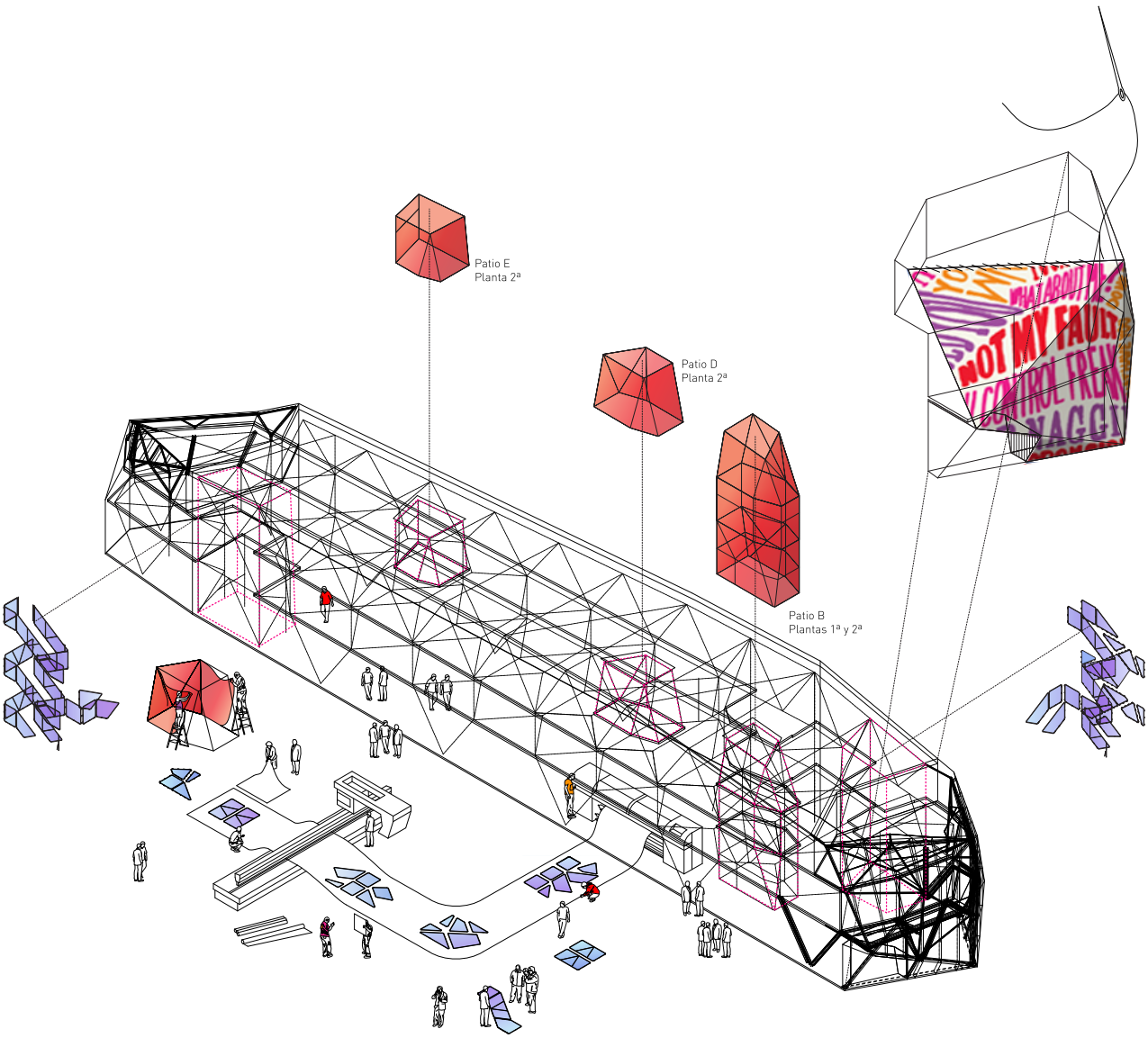
A building is normally understood as a final product in which the users are merely the consumers of that space. Rarely is a building a mechanism that is constantly updated, with every step of its transformation becoming a material snapshot of an informational and geometric system. Diagonal 80 is a company that converts digital files into physical objects of all sizes and materials. It is a paradigm of the new firms in the digital world: medium-sized, continually updating its technology, offering flexible working and 24-hour service. To bring together these elements outside the city, the new building is a hybrid of an industrial pavilion and tertiary space. In spite of ithe industrial dimensions and finishes, the interior lighting and environmental conditions are fully controlled to preserve the company's sensitive equipment.

Four main groups of components make up the spatial system: a bearing system linked to its tension and geometry; an exhibition system for company products (printing on canvas, vinyl and stiff backing materials); interior climate-control machinery and ducts; and the outer skin – a conventional metal enclosure system without a substructure. A common geometric system governs this suite of components and the overall spatial configuration.

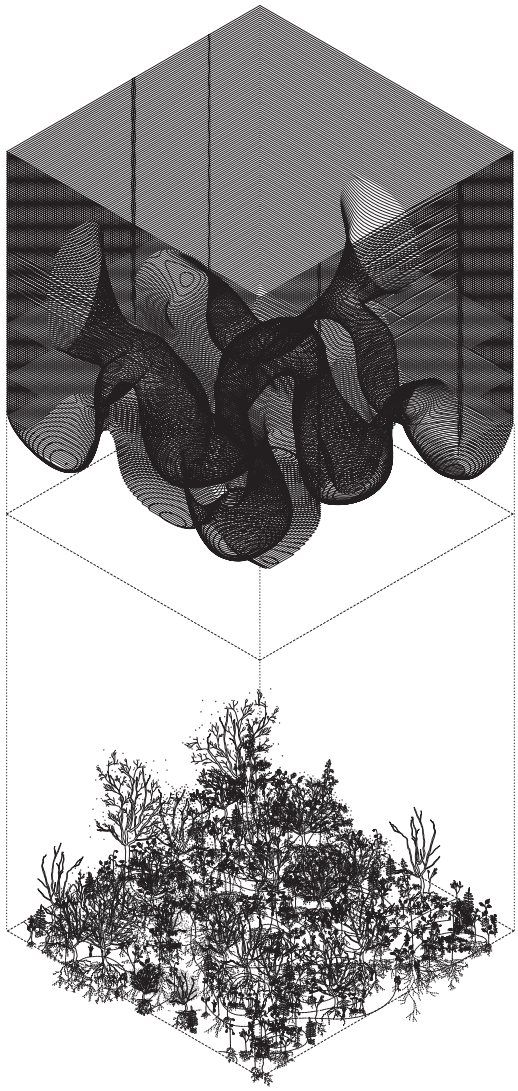
The work started with the idea of building a geometric, spatial infrastructure that would allow the firm to reconfigure its building using its own printing system to produce any sort of material finish. The basic principle was to use the three-dimensional nature of the structure to make its geometry identify with the space and allow it to become a backing for any kind of finish. For this purpose, we chose pre-stressed beams with tendons set in a double-Y configuration, connected by pillars which replicate the plan organisation in elevation. In the industrial factory for Diagonal 80, complex knots – double Y-shaped pieces – play a fundamental role in the three-dimensional structure, coordinating the geometry and dimensions of the bars and joining them selectively from the mechanical point of view. To resolve the joins of different tubes of different lengths set at different angles, the knots are produced by digital manufacturing, directly from 3D files. The building thus becomes a kind of hybrid between an industrially built artefact and a digital construct generated directly from a digital file.

Their factory building can therefore be seen as a three-dimensional *fabject* which in turn provides support for printed *fabtecs* and mechanical parts, in a constant updating process governed by the geometry of the bearing structure.





Diagonal 80 (2006-2009)
full axonometric of the proposal



Energy National Museum (2009)
axonometric of the proposal

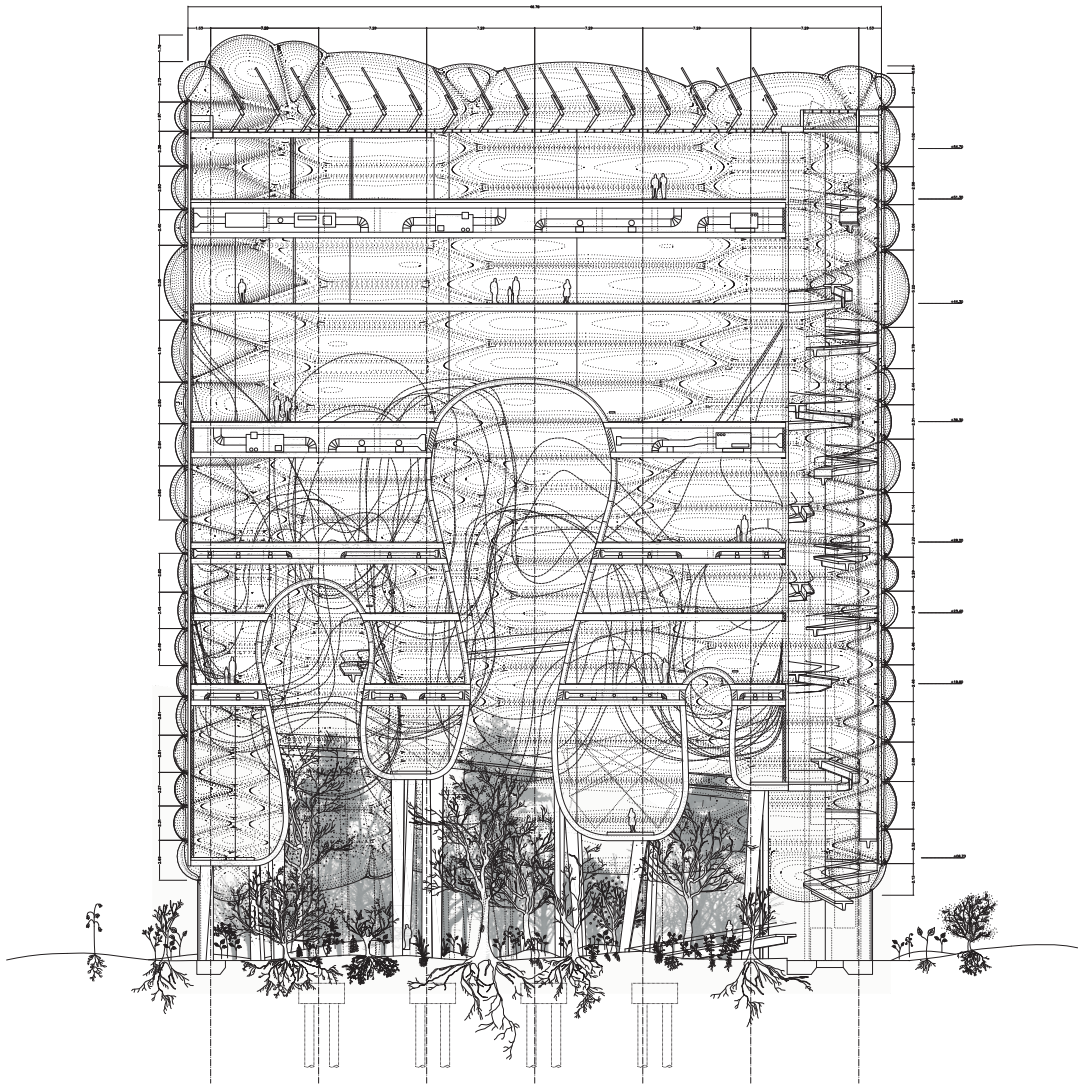
ENERGY NATIONAL MUSEUM IN PONFERRADA

Location: Ponferrada, León, Spain · **Area:** 18.000 sqm which correspond to the area of the new building plus the area of the restoring of the old Thermal Power Station · **Programme:** Energy Museum (exhibition halls, concert halls, store, public space and administration spaces) · **Client:** Ministerio de Industria y energía (Public)· **Competition** 2009 (Runner up)

As institutions, museums seem to have become ubiquitously worn out. Initially designed as static repositories for objects collected on the basis of personal interest, with a cultural and scientific curiosity as their inner driving force, their character now drifts towards the institutional consecration of obsolescence and an arbitrary policy of historicism and trivialisation of their educational role.

Compostilla power station, in Ponferrada, is to be converted into the National Energy Museum. The difficulty of creating such a museum begins with the lack of definition of the subject, energy, usually associated with an intangible sort of matter.

Instead of striving for a seductive appearance, then, the central museum piece concentrates on the way energy is handled. The



Energy National Museum (2009)
section

new extension is divided into vertically superimposed rooms – each associated with an intermediate climate production chamber – interconnected by a system of lifts, stairs and ramps on the east and north sides. The primary space is an immense atrium – essentially a greenhouse – that draws in pre-treated air from the distribution galleries and the large subterranean halls of the old power station. The resulting air pools work together with the thermal inertia of the floor and the reinforced concrete walls to regulate the inside temperature. The roof of the atrium is shaped to accelerate the air rising from the underground galleries. The solid volume is then eroded virtually by upwelling flows – produced here by air instead of water – generating an inverted geology that feeds the air into the large lateral apertures and the various intermediate chambers on each floor. The interior domes act as massive chimneys, their pressure difference triggering kinetic suction. Wrapping around the prismatic volume of the exhibition rooms is a black inflatable jacket – a thermal blanket that serves to pre-treat and heat the air, which is then mixed in the intermediate chambers. This second greenhouse reflects the position of the interior domes in the geometric pattern generated by the necessary fragmentation of the surface.

The geology of dams and concrete domes in the lower floors rests on a system of slender pillars that raise the structure off the natural ground level and allow plants to grow as if this were an outdoor area. The entrance room is halfway between a climatic hall and a new sort of greenhouse, an ecosystem containing large specimens, acting as a mediator between the landscape in the exhibition rooms on the lower levels while playing an active role in the interior climate treatment process.

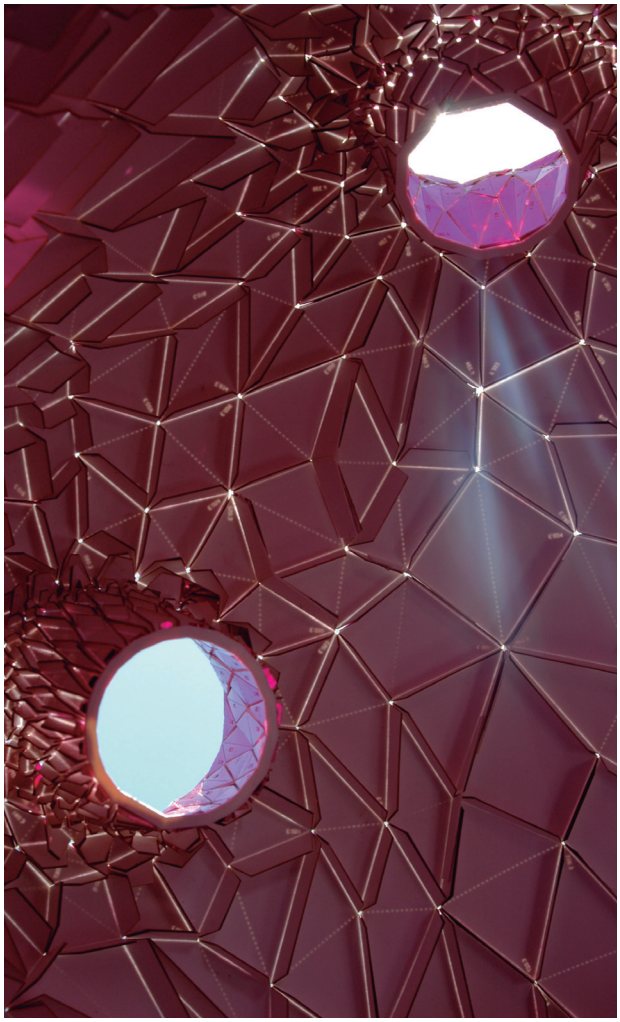
CHERRY BLOSSOM PAVILION IN THE JERTE VALLEY

Location: El Cabrero, Jerte Valley, Cáceres, Spain **Area:** 950 sqm **Programme:** Pavilion for the celebration of the events on the Cherry Blossom period · **Client:** Junta de Extremadura (Public)· **Competition** 2004 (First Prize)· **Project:** 2009 · **Under Construction** · **Photographer:** © Photographer *amid.cero9*

Almost the whole of the Jerte Valley is covered by single-species cherry orchards that grow on stone-walled terraces – each wall spanning the width of a single tree. Each year, in early spring, this landscape is briefly transformed by a natural spectacle: a continuous blanket of white cherry blossom covers the whole valley, drawing throngs of tourists who sit in traffic jams in this surreal, oneiric landscape, amid the flowering cherry trees. The Cherry Blossom Festival is halfway between a traditional procession, a rave and a pagan, Dionysian celebration of the fruits of the Earth.

For the Cherry Blossom Festival, we propose the construction of a modern chapel – a building that forges an intense bond with the landscape through its presence, its position, its volume and its material; an assertive building which uses its scale to establish a point of reference for the entire valley; a church for processions, a secular chapel floating in the midst of the landscape, raised off the ground, making the ascent towards it a perceptive spectacle and a tool for the appropriation of the surrounding landscape. We propose a hybrid of a cave drilled through by big holes, where light filters through the flowering cherry trees, and an interior space defined by its structure and light; a rock with biological and natural associations, placed in the midst of a specialised landscape of terraces and cherry trees; a building that can remain closed for months.

The building space is defined by a family of five elements: the concrete ambulatory ring (facing the interior with a continuous, convex surface), the steel and mixed membrane shell (covering the concrete ring like a skirt), the basement (composed of series

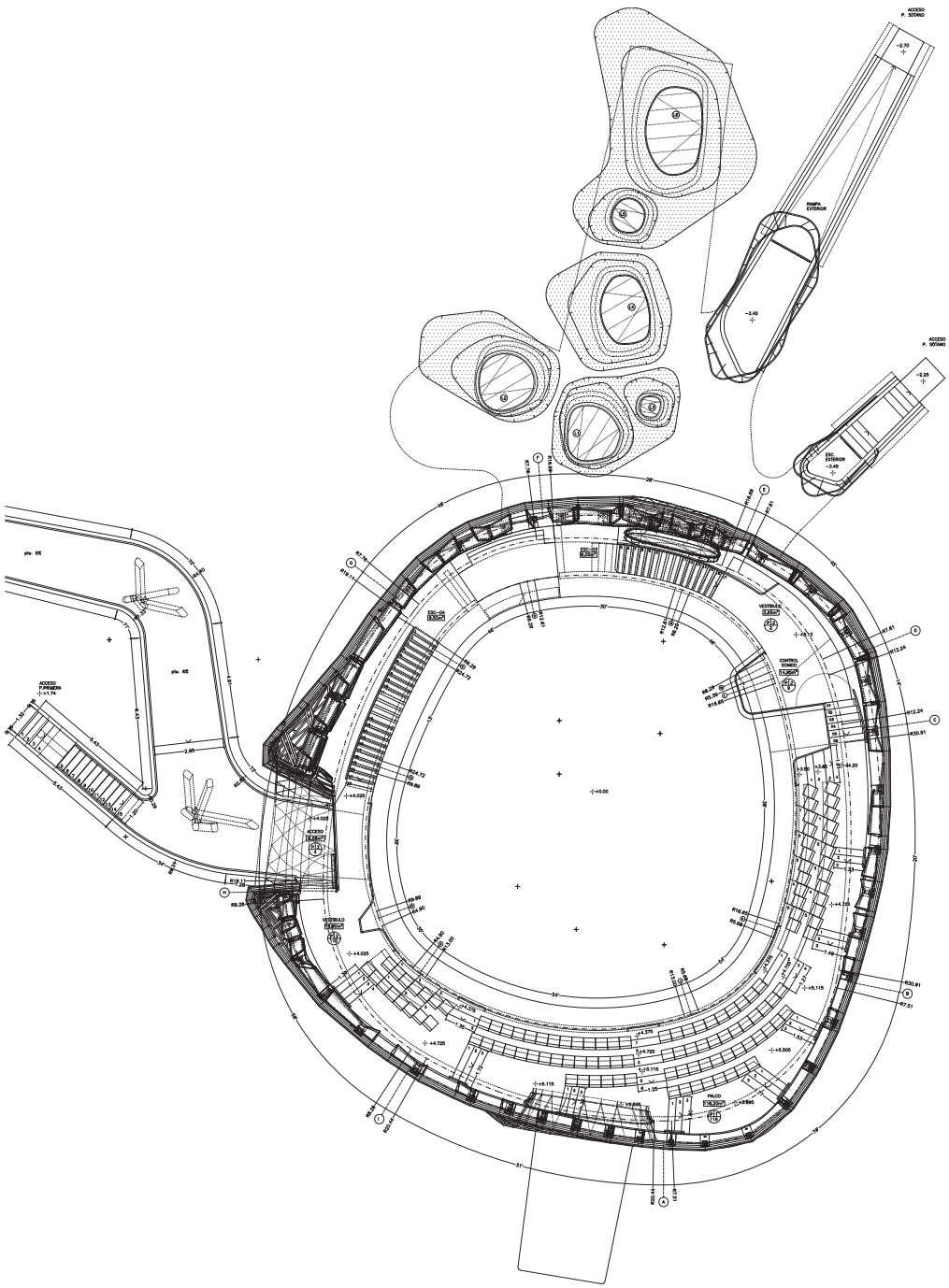


of underground rooms defined by a curved concrete wall around the spaces) and the concrete ramps and stairs (which link the basement and the amphitheatre to the surrounding spaces).

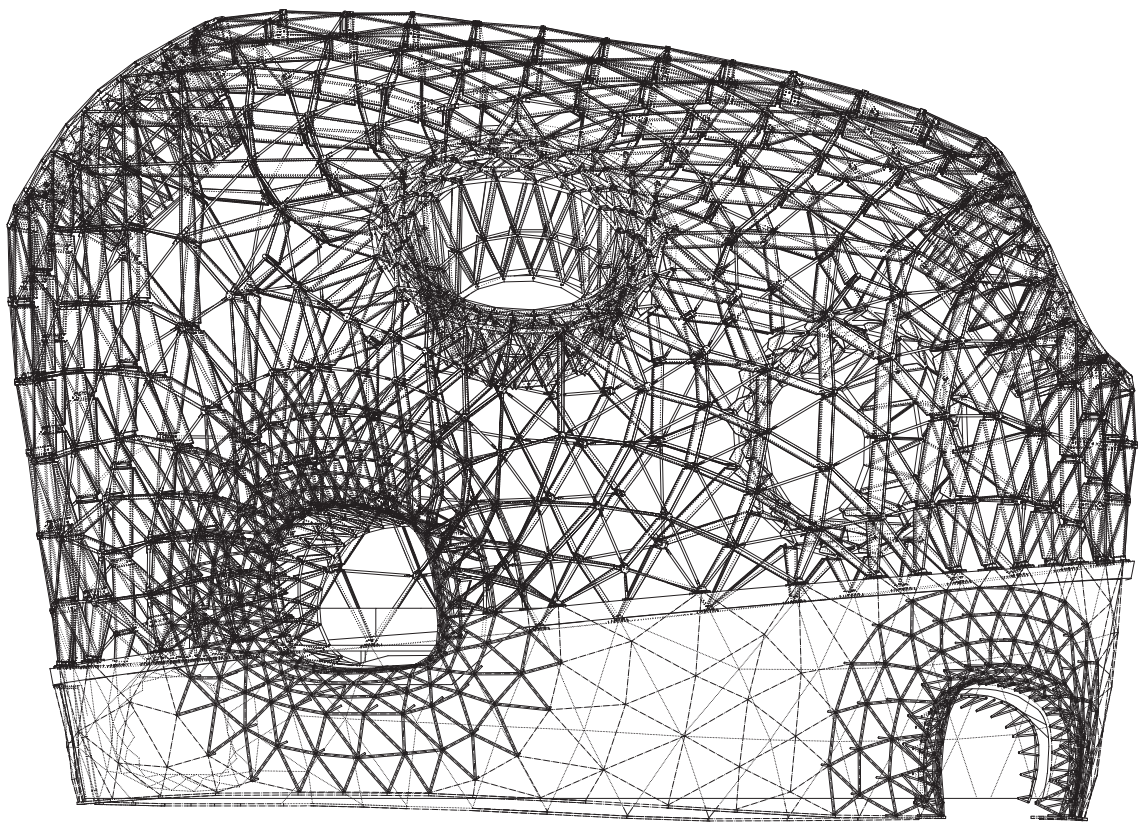
A floating item amidst a landscape of cherry trees, oaks, stone terraces and fog, where we can work with issues that now have a poor reputation: an ambiguous but intense relationship with history, with interior space as a perceptive chamber, with qualities taken from the world of objects, form and figure, as tools used to relate to the landscape. In this valley, where the colours change in the course of the year, we propose the construction of a building with a two-toned skin, tessellated, tense and continuous, which will overcome the fog with its sheen, contrasted with the chromatic changes in the landscape, from green to white via red.

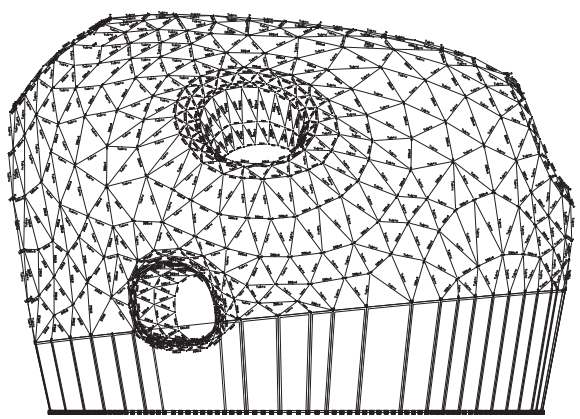
The shell is a three-dimensional structure that behaves like a dome and is made of slender interwoven steel components that form rhomboids, triangles and pentagons. Its cladding is a continuous three-layer membrane which adapts to the initial geometry using differently sized tesselates, depending on the curvature of the surface.

Moving inside, this organisation is replicated to form a faceted surface that facilitates the fine adjustment of the hall acoustics. Initially based on two tetrahedrons joined on one side, the dome surface is perforated at seven points for the entrance, light and views of the valley landscape. After a process of relaxing the surface geometry to optimise its structural performance, the tesselation geometry is warped by the inclusion of these discontinuities until we arrive at variable patterns, arranged in a strangely continuous way. At the points of discontinuity, the surface turns back towards the interior, thickening and forming large open vessels which reinforce the surface on the edge of the apertures. These large-format elements, bathed in red paint on the inside, are suspended from the space, feeding light and views of the valley into this camera obscura.

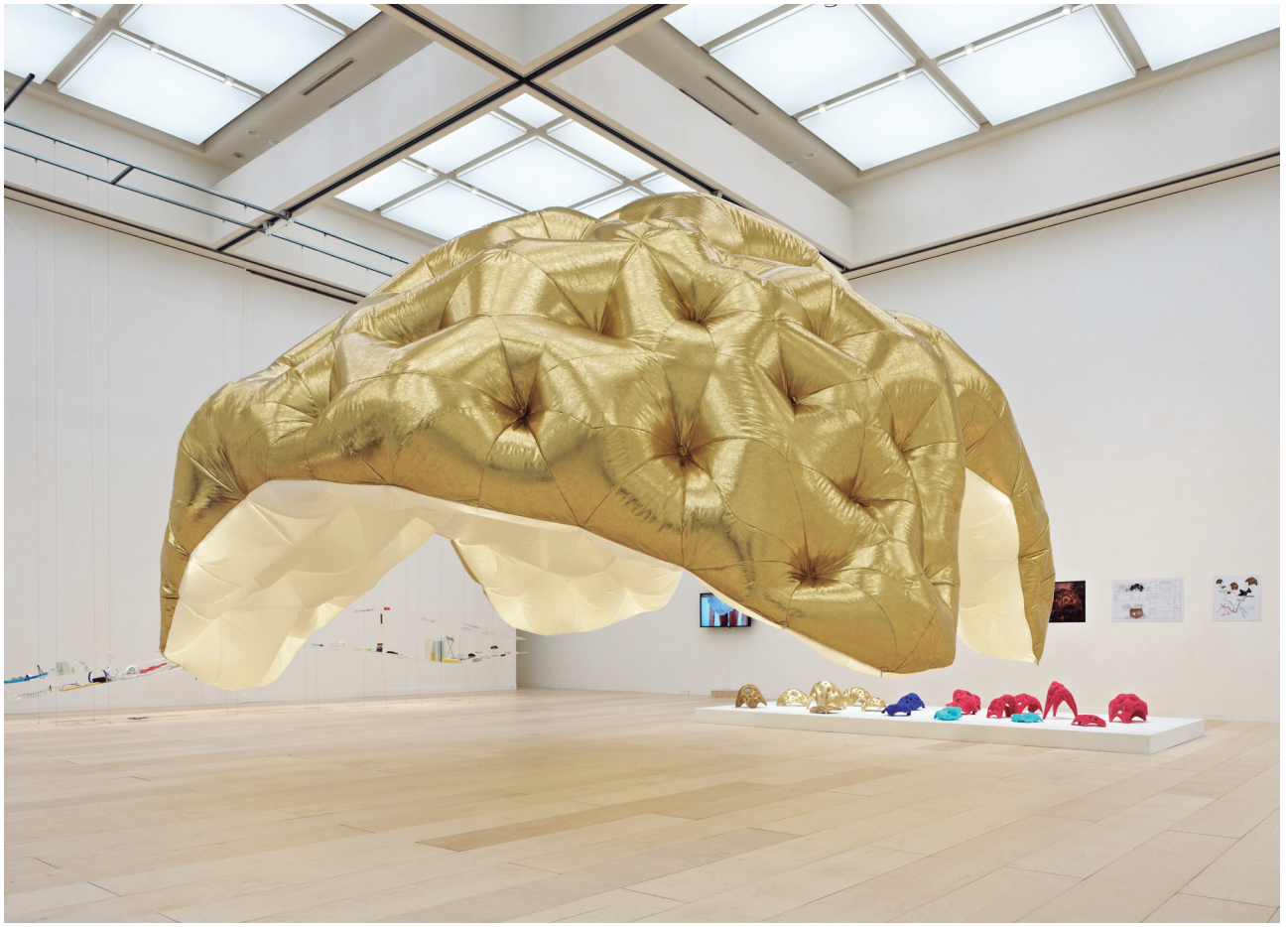


Cherry Blossom Pavilion (2004-2009)
floor plan





Cherry Blossom Pavilion (2004-2009)
elevation



THE GOLDEN DOME

"Pavillon Speciale" at MOT, Museum of Contemporary Art, Tokyo and the Ecole Speciale d'Architecture in Paris. Competition: 2010 (First Prize), Completion: 2011

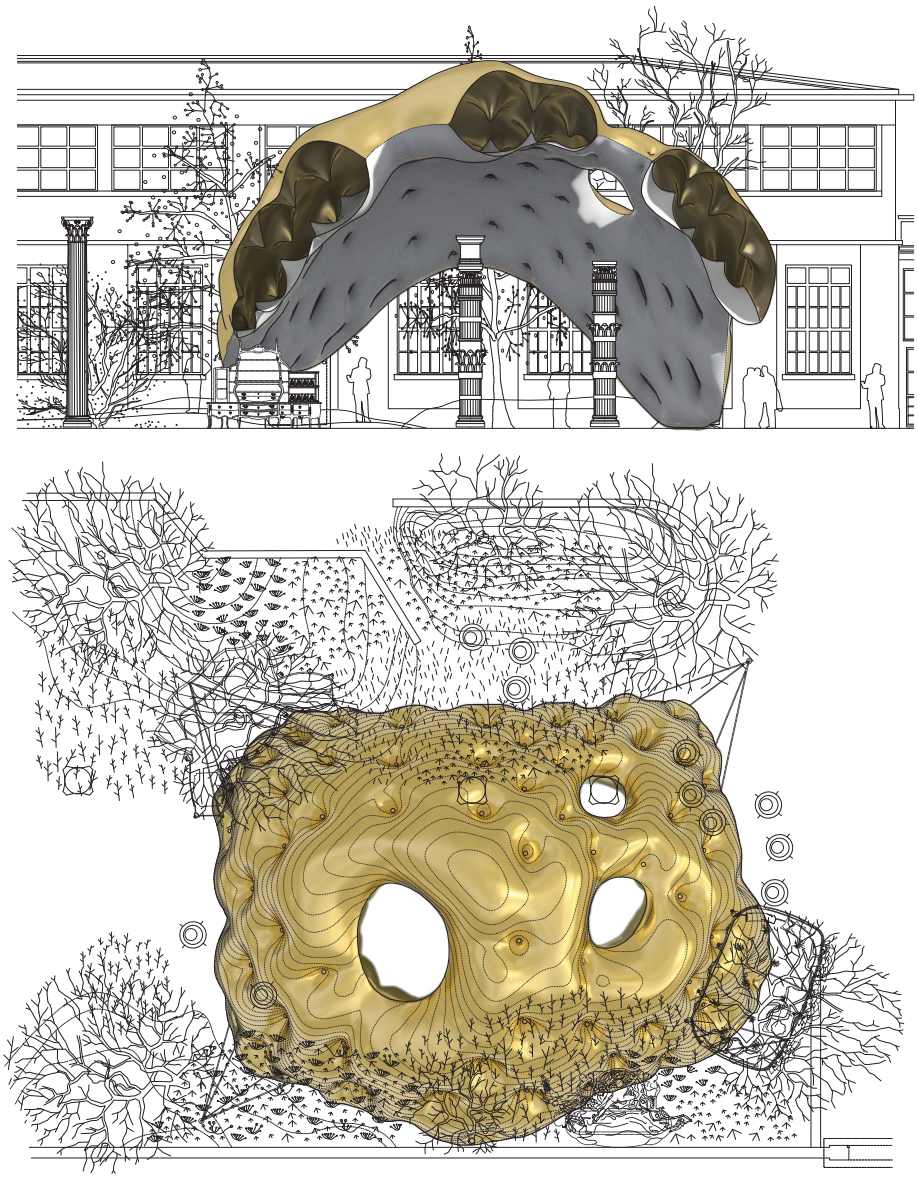
Location: Second version, Museum of Contemporary Art, Tokyo and First Version, Ecole Speciale d'Architecture, 254 Boulevard Raspail, Paris · **Area:** 350 sqm · **Programme:** Temporary Pavillon to be constructed in the courtyard of the ESA and constructed to scale 1/5 in MOT · **Client:** ESA and MOT
Photographer: © Daici Ano

Robert and Charles Montgolfier, the sons of a paper manufacturer, flew a spherical apparatus of cloth covered with paper and driven by hot air. They gave the first public demonstration of free flight in their hot air balloon in 1783. From that moment on the flotation of hot air balloons began to be associated with events and festivities. The displacement of balloons became pure spectacle, the main protagonist in events of an official nature.

Between 1769 and 1783, some years before the Montgolfier brothers' adventures, some 1,200 oil lamps were installed in the streets of Paris, using a patent developed through a public competition. The lighting disrupted circadian rhythms, turning night into day. Paris became the City of Light and thus all kind of nocturnal activities emerged, as the counterpoint of everyday life.

The pavilion for the courtyard at the ESA in Paris is an infra-light building conceived as a pleasure machine for the festive transformation of the school, a shelter for events and parties, a vehicle for catharsis, carried out in a ritualised way.

The shape of this floating building is the direct result of generating a buoyancy of gas between its two membranes – the inner one translucent and the outer one shiny and golden – so as to resist tensional forces in an optimal way. The position of the membranes' binding points and seams adjusts the geometry of the balloon and



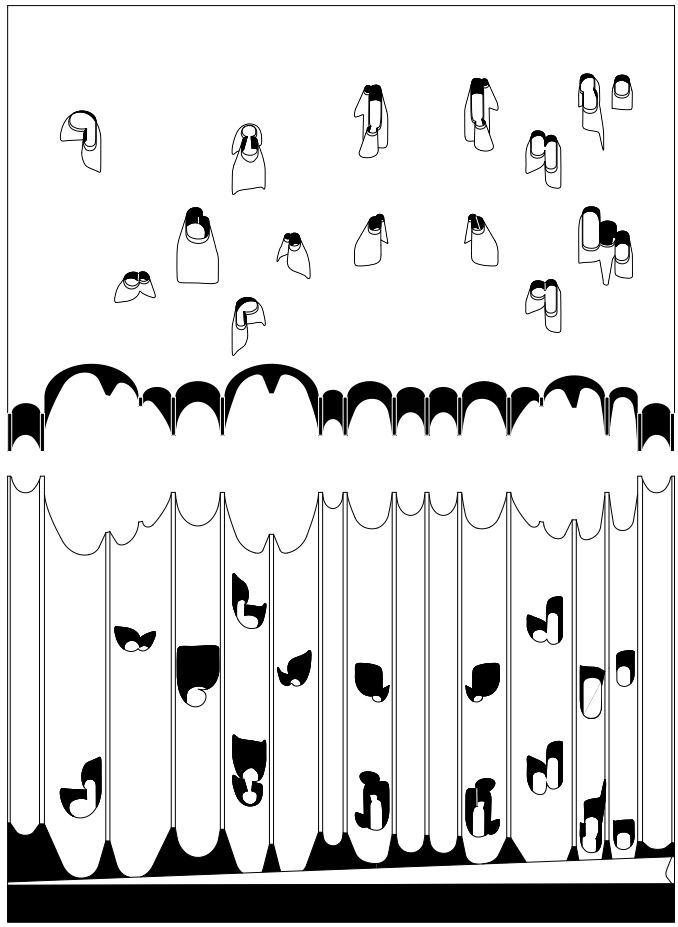
The Golden Dome (2010-2011)
floor plan and elevation

with it the volume of gas contained in each point. This changes the lift force and the local deformation of the membrane.

Rather than build concrete or water counterweights, as is usual with conventional balloons, we propose to convert these elements into the assets of the public space of the dome. The ballasts are transformations of indoor furniture, but transposed in scale, manipulated and taken out of the private realm.

Seen from the street, the pavilion appears as a weird golden dome floating among the trees and buildings. Internally, the inflatable structure configures a white space defined by its points of contact with the ground, its openings related to entranceways from the surrounding buildings and large apertures that selectively let in light. The inner gas and lower translucent membrane of the dome serves to diffuse the light from halogen lamps contained inside the inflatable, a perpetual spring of high-intensity light with soft, almost non-existent shadows.

The pavilion is an infrastructure for days without night, for holidays, and also for the endless days of submissions. The Ecole Speciale: the perpetual day. The artist of the space is a programmer of sensorial experiences.



Clvnia Archaeological Centre (2015)
top and bottom projections

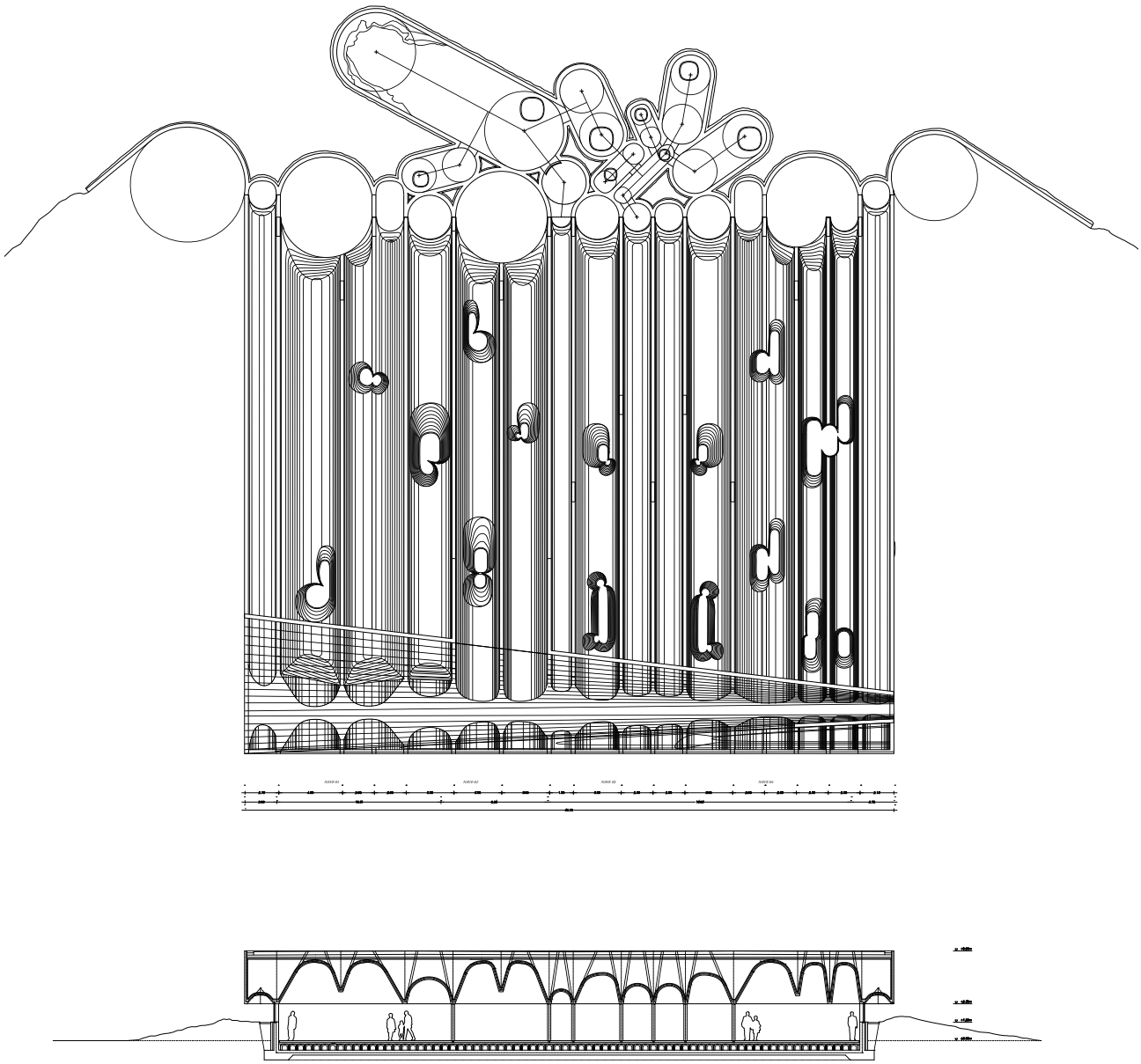
CLVNIA ARCHAEOLOGICAL SITE VISITOR CENTER

Location: Peñalba de Castro, Burgos, Spain **Area:** 1.500 sqm · **Programme:** Visitor Reception Centre and Entrance to the Archaelogical Site · **Competition:** 2015 · **Photographer:** © Photographer *amid.cero9*

This Visitor Reception Centre sits on a slope running off the mesa that holds the ruins of Clunia Sulpicia, a Roman administrative capital and one of the largest cities of imperial Hispania, abandoned since the 3rd century AD. This gateway to the site is close to the symbolic gateway to the Roman city, a huge theatre overlooking the flat Castilian landscape, now partially excavated.

We want to respect power of this theatre and construct with almost no presence, without adding anything that might be identified as a building to the unfortunate series that defines the current entrance, using the appropriate scale, strength and clarity for a relationship with the landscape and the excavations. For this purpose we propose a simple, specific strategy defined by three obviously tectonic and perceptive actions. The first one involves the construction of a thick horizontal slab rising slightly off the ground to contain a set of parallel vaulted rooms with a planted roof. This slab floats above a large excavated vessel that defines the level protected by vaulted retaining walls, which in turn support the roof beams. In the third action, we empty a large entrance space that directs the visitor's gaze out towards the landscape, crossing the rooms from one side to the other like a visual cone, materialized in a concrete slab that supports the laminated beams inside.

The roof slab covering the series of vaults goes almost unnoticed from the access road. The reduction of the building's perceived height to its three metre edge converts it into a silent, abstract line on the town's hillside that does not compete with the presence or scale of the Roman theatre.



Clvnia Archaeological Centre (2015)
refelcted ceiling plan and cross section

From the entrance, subtle gestures announce its nature as a threshold to the city: the abstract monumentality of its lateral walls, the slit that widens as it is crossed to become an open, roofed entrance threshold, and the shadow defined beneath the slab as it rises from the ground, readying visitors for their entrance to the city. From above, the planted roof blends into the hillside, simply an extension of the surrounding landscape. It is only distinguished by the circular courtyards defined by the retaining walls and the slightly raised roof level, perhaps resembling an archaeological excavation of a partly-buried building. The building is perforated by the path that traverses it on the way to the theatre, turning into an outdoor space covered by a gilded dome that is interrupted as it reaches the ground to permit a panoramic view of the landscape. From the entrance slit, the visor widens gradually towards the west, projected towards Alto del Cuerno, the site of the original Celtiberian settlement, Clunico. The material continuity of this large visual cone is only interrupted at the intersection of the two vaults above the entrance foyer, which announces the set of rooms inside the Centre.

The roofing for these rooms is defined by a set of vaulted laminated reinforced concrete beams in varying widths, which work like large-span girders, reducing the number of support points to a mini-mum. They define a set of parallel rooms of different sizes which can be joined to generate large floor spaces occupying almost the entire building. The laminated roofs descend to the height of the move-able partitions, outlining a horizontal interior land-scape of parallel beams whose line is defined by the viewer's eye level, permitting a panoramic view of the rooms and the surrounding countryside. The vaults run longitudinally, dotted by skylights set parallel to the flat sides of the vaults, shedding strange figures of light on the floor.

These vaults follow the geometry of their bases, opening onto light wells that feed light into the large floor area. At the point of contact with the ground, the beams rest on the top of the arched retaining walls that define the courtyards. The building is thus little more than an excavation and containment of the hillside and the roof structure, drawing a powerful abstract line in this dry, rugged landscape.