SWISSPEARL ARCHITECTURE 3

International Edition – High Profile Buildings

SWISSPEARL®

SWISSPEARL ARCHITECTURE 3

INNOVATION AND EXPERTISE

At all times exacting architects have been in search for something new or something different to express their architectural vision, yet satisfy their clients' wish in line with the function and expression of the building and its setting. The aesthetic changes and new expectations call for other solutions at an increasing pace, also in the architectural field.

Anticipating future needs To ensure outstanding quality, a manufacturer with a long developing process has to anticipate the future trends in order to bring the new optimal answers at the right time onto the market, and to continuously adapt to evolving wishes. Time is of the essence! Eternit Switzerland has therefore kept very close contact with architects and architectural schools since already more than thirty years. Project discussions and exploratory surveys provide early inputs about future challenges and issues. Year after year the dedicated Swiss Research & Development teams have consistently expanded their expertise regarding core and coloration technologies in order to develop exactly the innovative products and systems which architects will need for their upcoming tasks.
Architects interviewed in the mid-eighties strongly expressed their desire to design their façades with authentic materials possessing a distinctive character with rather cool, discreet shades. At that time, only surface coated products with opaque colour were manufactured. The challenge was to develop a revolutionary coloration technology enabling a different aspect, while ensuring a good behaviour of the panels for decades. Three years later, in 1987, the Natura range was launched as a worldwide innovation with its unique aspect of cement structure shining through in subtle shades. Millions of m^2 delivered since then throughout Europe and further improvements are the foundation of the international reputation of reliable long time proven Swiss quality.

Coloration expertise and experience Around 1995 the monolithic material trend came up. Now designers wanted to express their architectural message with through coloured material and new surface aspects. A completely different core and finishing technology had to be developed, first in the laboratory and then in the factory. In 1997 the first big sized Carat Anthracite panels and various Reflex shades were produced in Niederurnen, Switzerland; in 1998 several pilot façades were installed for long time testing. This plays a key role in the Swiss quality management proceedings. Red, white and pale Grey followed the next year with further Research & Development activities to fulfil the requirements of each basic shade.

Colour is part of the architectural language Architects immediately liked the attractive appeal of the two new products: the natural elegance and fascinating expressiveness of Carat and the exciting high-tech Reflex finish are ideally suited for contemporary architecture. That's what designers have been longing for … Initially focused on the needs of North European specifiers, the colour range has meanwhile been greatly expanded to satisfy the designers in other parts of the world. They wished to see shades which represent prevailing National colours and/or more vibrant tones. The result is an impressive palette of colours available in more than 40 nature-inspired shades. Carat and Reflex façade panels offer tremendous design potential to create contrasts and spectacular effects and to blend in harmony with the surrounding settings. To highlight the ultimate product and colour range, a partly new naming was implemented for the Carat shades. Each colour family is a gem and bears a corresponding name.

Technological competence and nature conservation Eternit Switzerland is the only cement manufacturer to pioneer new technologies meeting the architects' anticipated wishes. They have mastered the highly demanding production processes for integrally coloured cement composite panels in such a wide colour variety, while still ensuring high production hygiene and very low environmental impact. Before yesterday, the Research & Development experts have been working on the next Swisspearl product generation and the new technological challenges for the next innovation step. To serve your future needs and creativity.
Anders Holte, CEO Eternit (Schweiz) AG

Colour plays a major part in the Swisspearl product family. Cement composite must be given a sensuous appearance in order to fulfil its architectural mission. For some time now, glazed and opaque shades have been added in the factory, and in recent years colour has been a part of the manufacturing process of cement composite. A great deal of competence and know-how goes into this dynamic development.
At Eternit (Schweiz) AG, chemists carry out daily research into suitable pigments and mixtures in order to enlarge the spectrum. And strict standards are observed as regards durability and weather resistance. The colour series are carefully selected in terms of shade, brightness and saturation in accordance with the market demand. Generally speaking, a matt surface that complies with the mineral character of the material is the objective. Thanks to the delight in innovation of Eternit (Schweiz) AG, their products are available in a wide range of colours.
Interviews: Michael Hanak

COMPETENCE AND DELIGHT IN INNOVATION

Stefan Cadosch, as an architect with Eternit (Schweiz) AG, you decide about the colour definition of the different products. Which colours are most in demand in modern architecture?
There is no absolutely valid colour palette for a specific architectural period. Undoubtedly, great importance is attached to colour nowadays, and ingenious combinations, frequently with "forbidden" colours such as pale green, ochre or even ultramarine, are not unusual. It would, however, be mistaken to derive a colour assortment from this since in architecture it is not so much the colour itself that is important, but the way it is used.

How are the colours selected and determined?
The most important starting point for the development of new colours is direct dialogue with planners and architects. The existing collections and new developments are reviewed and gaps and surpluses exposed. Another yardstick is provided by statistical investigations into the turnover of individual colours. The demands made upon a colour collection are constantly changing, and this, once recognised, influences the product development.

Can an architect determine a specific colour for Swisspearl panels?
All the colours are created in close collaboration with architects. The challenge inherent in the development of the colour spectrum is the ability to assess whether a colour will be widely used or is more suitable for a specific work of architecture. The expenditure for special

Stefan Cadosch, architect with Eternit (Schweiz) AG, helps to decide on the colour definition of the product range.

Presentation of the entire range of Swisspearl Carat colours

colours is immense, but it is always possible to question the standard programme and, if necessary, to bring it into line. Thus every new development is based on considerations relating to market requirements, technical feasibility and architectural application.

Does marketing influence the choice of colour?

Every colour programme represents an attempt to come as close as possible to the basic requirements and demands of the market. Based on market surveys, the choice of colour and its refinement are determined by external committees consisting primarily of architects and colour planners. Afterwards, the innovation is publicised on the market and it is marketing's job to carry out the targeted implementation.

Can the Swisspearl colours be effectively combined?

The possibility of combination is a major criterion for the colour selection at the very beginning. However, the possibility of combination is not a mathematical issue, it depends essentially on the ingenuity of the user. A determining factor in combining colours is the brightness aspect: different colours with similar grey components usually harmonise better than colours with different degrees of brightness. Mass-produced coloured Swisspearl panels acquire a restrained grey look through the high proportion of cement, and this ensures a high degree of compatibility between the various colours.

Do you notice any colour trends in the current architectural scene?

It is fundamentally difficult to speak about trends owing to the long-term orientation of serious architecture. However, architectural history shows that monochrome phases are almost certainly followed by polychrome ones. These alternations are also recognisable today, even though the changing intervals are becoming shorter. I believe that we are currently at the peak of a polychrome phase. At the moment, colour is used with caution, but also with refreshing verve, often in combination with different material aspects. And rich, full colours are becoming increasingly popular, a tendency that would have been unthinkable ten to fifteen years ago.

Klemens Bösch, you are head of the technology and testing centre with Eternit (Schweiz) AG and, together with your team, carry out research into colour options in your capacity as a chemist. How many colours are currently in production?

There is currently a range of over 70 standard colours, which is periodically supplemented and enlarged. In addition, we have produced well over a thousand special colours in recent years. These comprise four colour series known as "aspects": opaque, glazed, pearly and deep-dyed. Each of these families of products contains 10 to 31 standard colours.

How are the special colours determined?

The most frequent impulses come from the architect. He knows his building project and its ambience. The definition of the colour can do a lot to contribute to the character of the building, using the usual colour systems NCS, Pantone, RAL or RAL-Design. Sometimes, however, we are simply given a piece of natural stone, metal, fabric or paper as a specimen. In these cases we put the specimen into our colour testing system and then produce the colours according to the values thus established.

How are coloured prototypes tested in terms of durability and stability?

Only pigments that have proved their durability are used in Swisspearl products. We have a wide range of colour pigments at our disposal, all of which are tested for alkali stability, moisture resistance, frost and UV stability.

Klemens Bösch, head of the technology and testing centre with Eternit (Schweiz) AG, defines the chemical conditions for the colours of the products.

Available Swisspearl Reflex colours

Many market pigments do not satisfy our strict demands because they are not sufficiently weather resistant. Standard colours are always subjected to long-term tests.

Which colours have been particularly difficult to produce up till now?

Unfortunately it's not possible to produce certain pure colours with the necessary longevity. This is not a question of difficulty but of the availability of the appropriate pigments. We don't want to produce colours that do not meet our requirements. We carried out our own extensive experiments on the directional properties of reflecting colours before introducing them on the market.

What support does Eternit (Schweiz) AG offer clients in the choice of their colour palettes?

Usually, we colour the coating according to the client's clear definition. He then receives "his" colour in A4 format and can make his decision with the help of the original. Should the specimen not be so concrete, then we send already produced colour specimens for him to look at. On request, we can also make suggestions about colour combinations.

What aspects require special attention in the choice of colours for façades?

I believe that size is an important issue. The impression made by the colour of a small pattern is many times stronger on a 500 m² façade. The choice of an intensive colour is more probable if it will make a striking impact on a façade. This is largely dependent on the architect's sensitivity.

Do you recognise any trends in the current development of colour?

At the moment, clearly accentuated colours are the trend, such as red and blue and, more recently, green. In spite of globalisation, geographical differences play a part. In the northern countries, for example, black and brown shades are in fashion, whereas white and yellow are popular in the south.

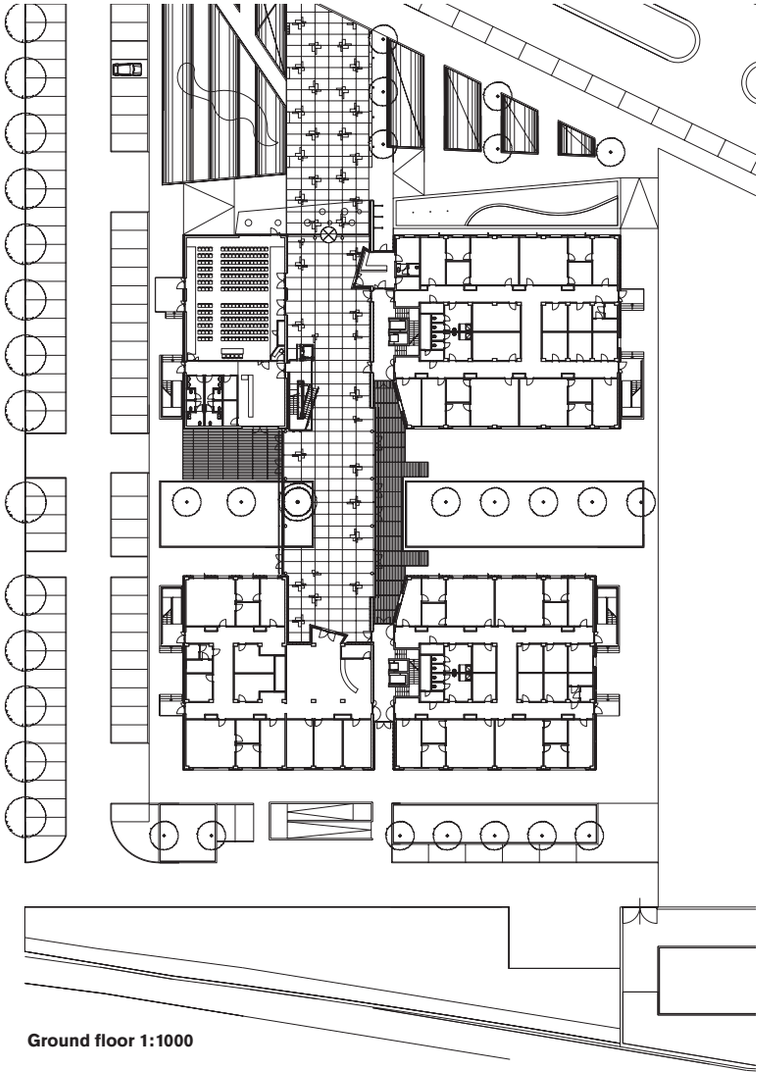
What colours are being developed for future production?

With the increasing expansion of our Swisspearl Carat assortment – our "king's class" – we have reached a new dimension in design possibilities. Here we have a clear advantage over our competitors, and we shall continue to develop this sector because we want to offer our clients the opportunity of fully exploiting the possibilities of colour design.

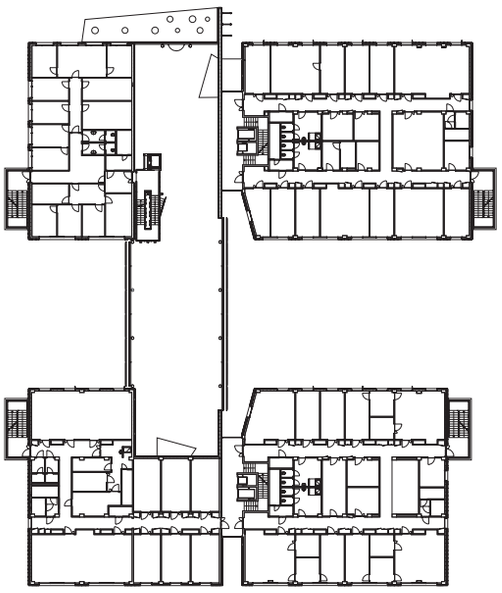
The recently completed research centre in the Parco Tecnologico Padano, a new agro- and biotech cluster near Lodi, consists of two closed volumes with a perforated façade and a glazed volume as a connecting element.

Centro per la Ricerca e lo Sviluppo Tecnologico, Lodi, Italy

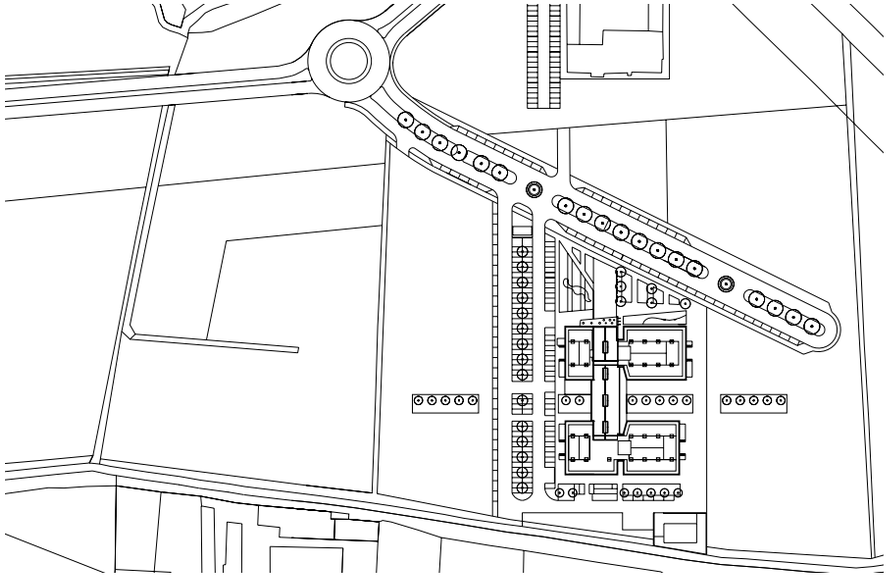
COLOURED OPENINGS IN A GREY MANTLE



Ground floor 1:1000



Upper floor 1:1000



The Po Plateau has been an intensively exploited agricultural landscape for thousands of years. At the same time, it looks back on a rich past in terms of science and research: some of Europe's oldest universities, for example those of Padua and Bologna, are located in this region. And, last but not least, Lombardy with the metropolis of Milan is an important economic and cultural region for the whole of Italy.

This association between agricultural tradition, scientific innovation and economic dynamism was the driving force for the foundation of the Parco Tecnologico Padano in Lodi. The cluster comprises facilities of the University of Milan, private research laboratories, an "enterprise incubator" and a business park, and it is destined to develop into the biggest agro-and biotech cluster in southern Europe. The aim is to exploit the existing potential of the re-

THE ARCHITECTS DECIDED ON A CEMENT COMPOSITE FAÇADE BECAUSE IT PROVIDES AN IDEAL BACKGROUND TO THE COLOURED ELEMENTS AND A CONTRAST TO THE GLASS; ALSO, IT IS EMINENTLY SUITABLE FOR A REAR-VENTILATED FAÇADE.

gion and boost its development; in addition, the concentration of public and private research institutions is intended to facilitate quick reactions to the changes with which the international markets are increasingly faced.

The "Centro per la Ricerca e lo Sviluppo Tecnologico nel Campo Zootecnico ed Agroalimentare" by the Genovese architects Sibillassociati forms the new cornerstone of the cluster. The new building, located in the centre, consists of two parts: two parallel volumes with more or less closed façades structured by single-wing windows accommodate laboratories, offices and various workrooms and auxiliary rooms; at right angles to this is a glazed wing connecting the two buildings and forming a common gallery, which is used as an encounter room.

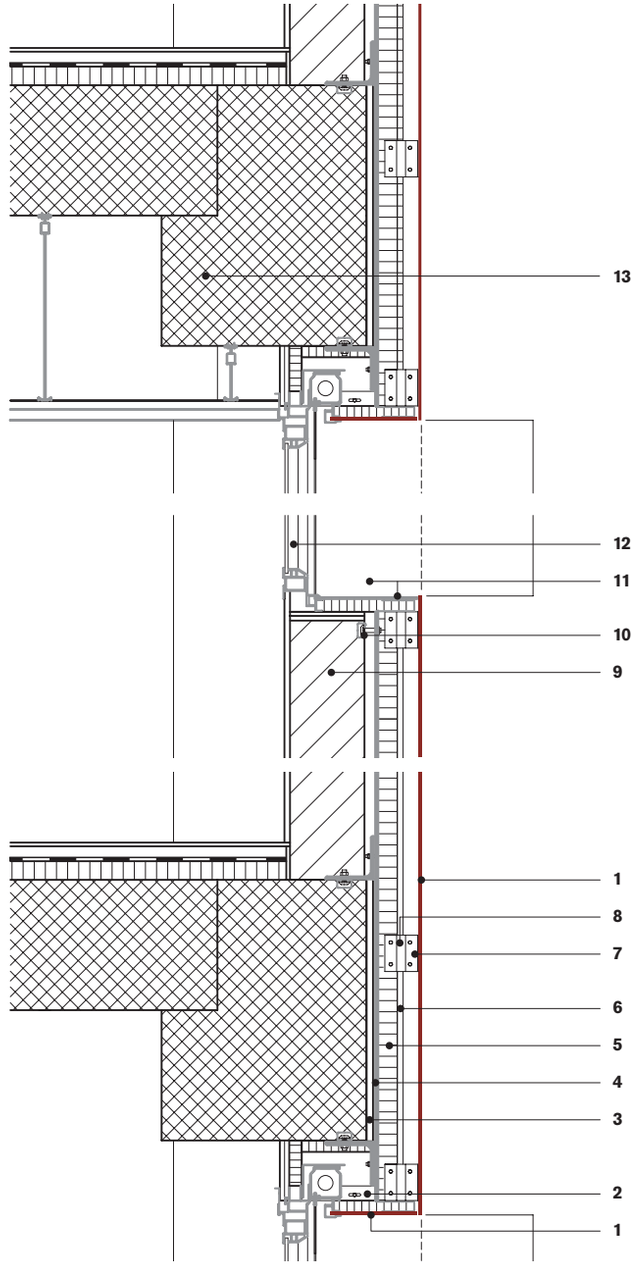
Grey, horizontal Swisspearl panels were used for the façades of the two closed building volumes. The contrast

Client Parco Tecnologico Padano, Lodi
Architects Sibillassociati s.r.l., Genoa
Collaboration U. Arzani, Milena Barucchi, T. Bovone, E. Congiu (director), A. Fuscagni, N. Gallina, A. Gjergji, R. Lavaggi, G. Littardi, C. Pamann
Project management Studio Montanari Partners s.r.l., Milan
Load-bearing structure CeAS Centro di Analisi Strutturale s.r.l., Milan
Technical equipment Serin – Servizi tecnici per l'industria s.r.l., Milan
Building period 2003–2005
General contractor Codelfa s.p.a., Tortona
Façade construction Ven.Ta.Co s.p.a., Barlassina
Façade material Swisspearl® Natura, Grey N 204

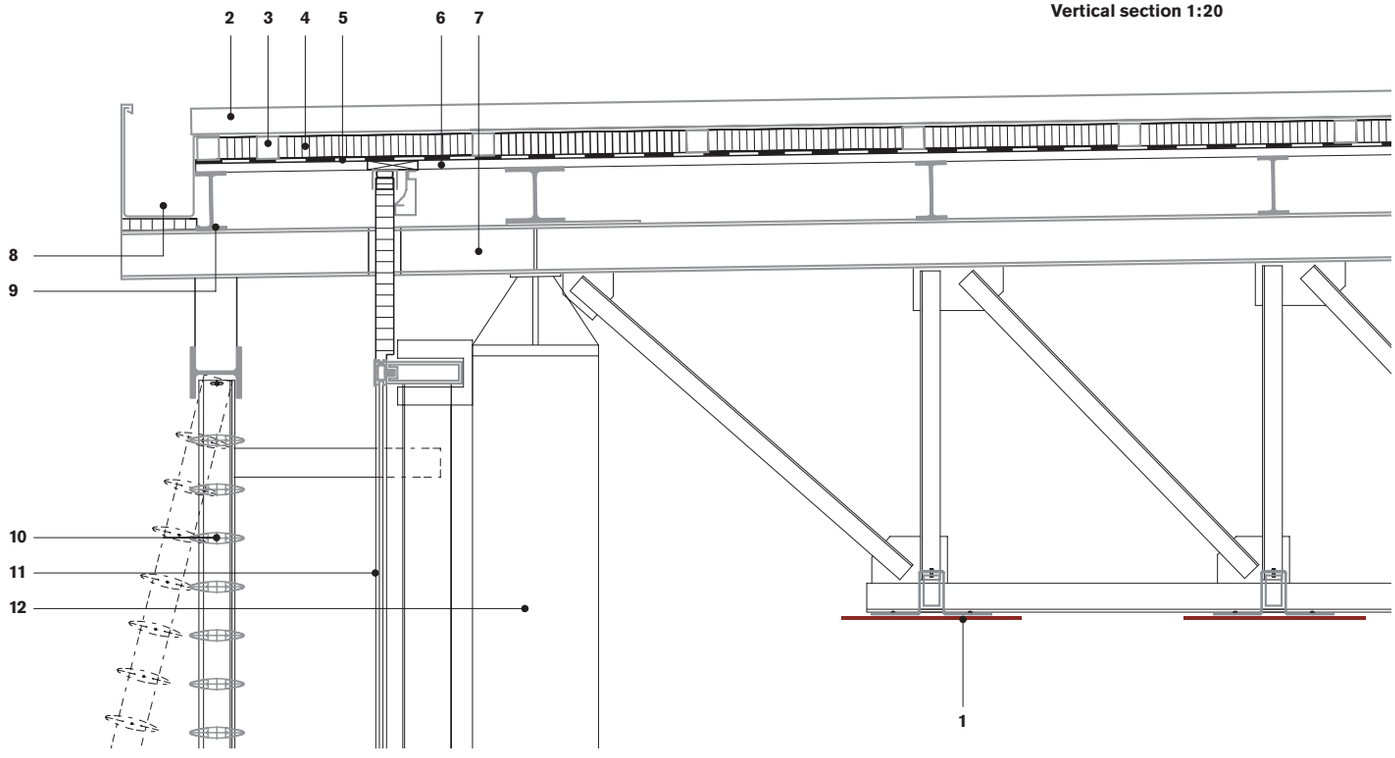
between the matt cement composite surface and the reflecting glass enhances the impact of the ensemble. At the same time, the façades emphasise both the unity of the complex and the variety of the functions for which it is used – a theme that is expressed by the window frames and roof superstructures in different colours. “The Swisspearl façade contributes on the one hand to the aesthetic appeal of the building; on the other, the cement composite is an ideal background for the coloured window frames, which function as a variation within the modular façade. In addition, the cement composite facilitated the construction of a rear-ventilated façade, a technical solution that resulted in a better energy budget for the whole building”, explains architect Antonio Sibilla. *Judit Solt*

1 Swisspearl® cement composite panel
2 Weather resistant outer skin and walkable metal elements
3 Galvanised steel load-bearing spacers, omega shaped
4 Fibreglass resin-coated insulation
5 Sealed polythene dampproof membrane
6 Load-bearing pressed steel
7 Steel lintel
8 Weather resistant sheet-metal gutter
9 Steel girder
10 Sun screen
11 Self-bearing glass window
12 Vertical supporting structure

1 Swisspearl® cement composite panel
2 Space for motorised curtain and insect grille
3 Gypsum plaster panel for fire prevention in the ceiling area
4 Windproof metal structure
5 Insulation panel
6 Vertical galvanised steel structure connections
7 Panel for fixing and regulating the cladding
8 Galvanised steel connecting bracket
9 Face masonry wall
10 Spacer
11 Metal panel
12 Aluminium window, double-glazed
13 Prefabricated reinforced concrete girders



Vertical section 1:20

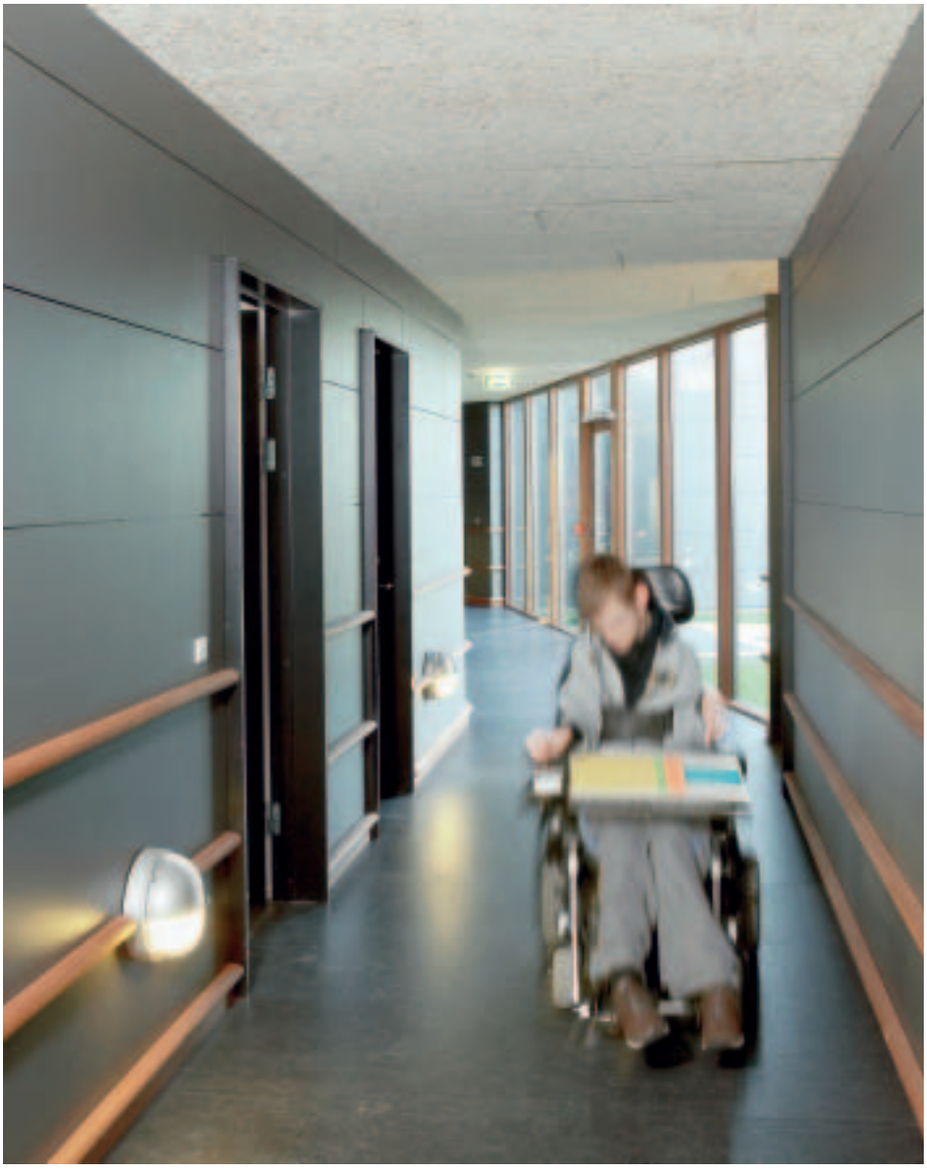


Vertical section roof gallery 1:20

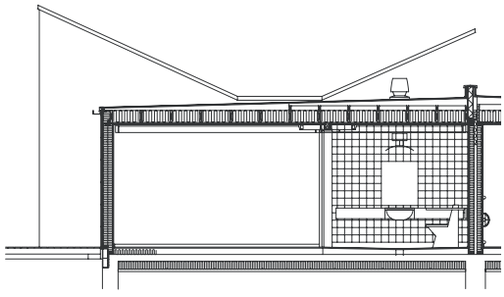
The Vandkunsten firm of architects has enjoyed a reputation in housing and estate construction for many years. Their buildings are distinguished by the inclusion of the landscape in the concept and elemental design. The housing estate for disabled persons in Jyllinge is built in the tradition of Scandinavian modernity and represents a lively, unconventional solution.

The Cones Housing Estate, Jyllinge, Denmark

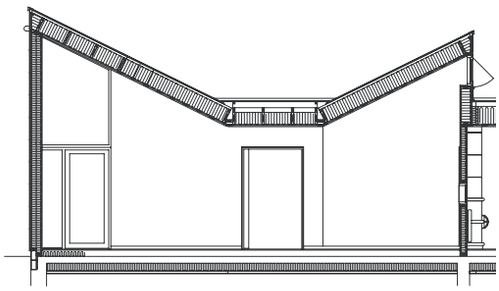
HUMANE, DIGNIFIED AND HONEST



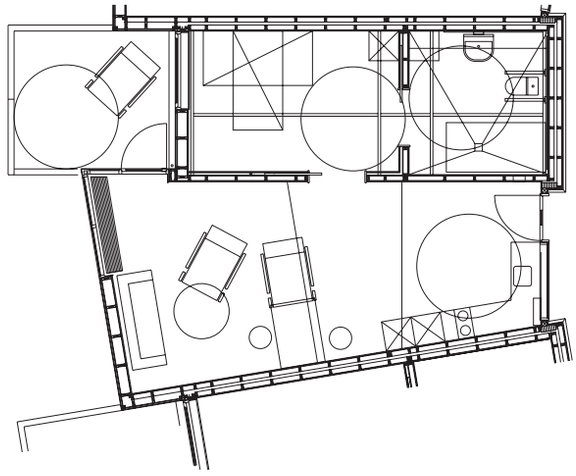
"IT IS THE OBJECTIVE OF THE FIRM TO STRIVE FOR ARCHITECTURAL QUALITY IN ORDINARY RESIDENTIAL BUILDINGS, ESPECIALLY PUBLIC RESIDENCES, WHICH HAVE TIGHT UNDERLYING ECONOMIC AND FUNCTIONAL DEMANDS."
TEGNESTUE VANDKUNSTEN



Section bed room/bath room 1:150



Section living/dining area 1:150

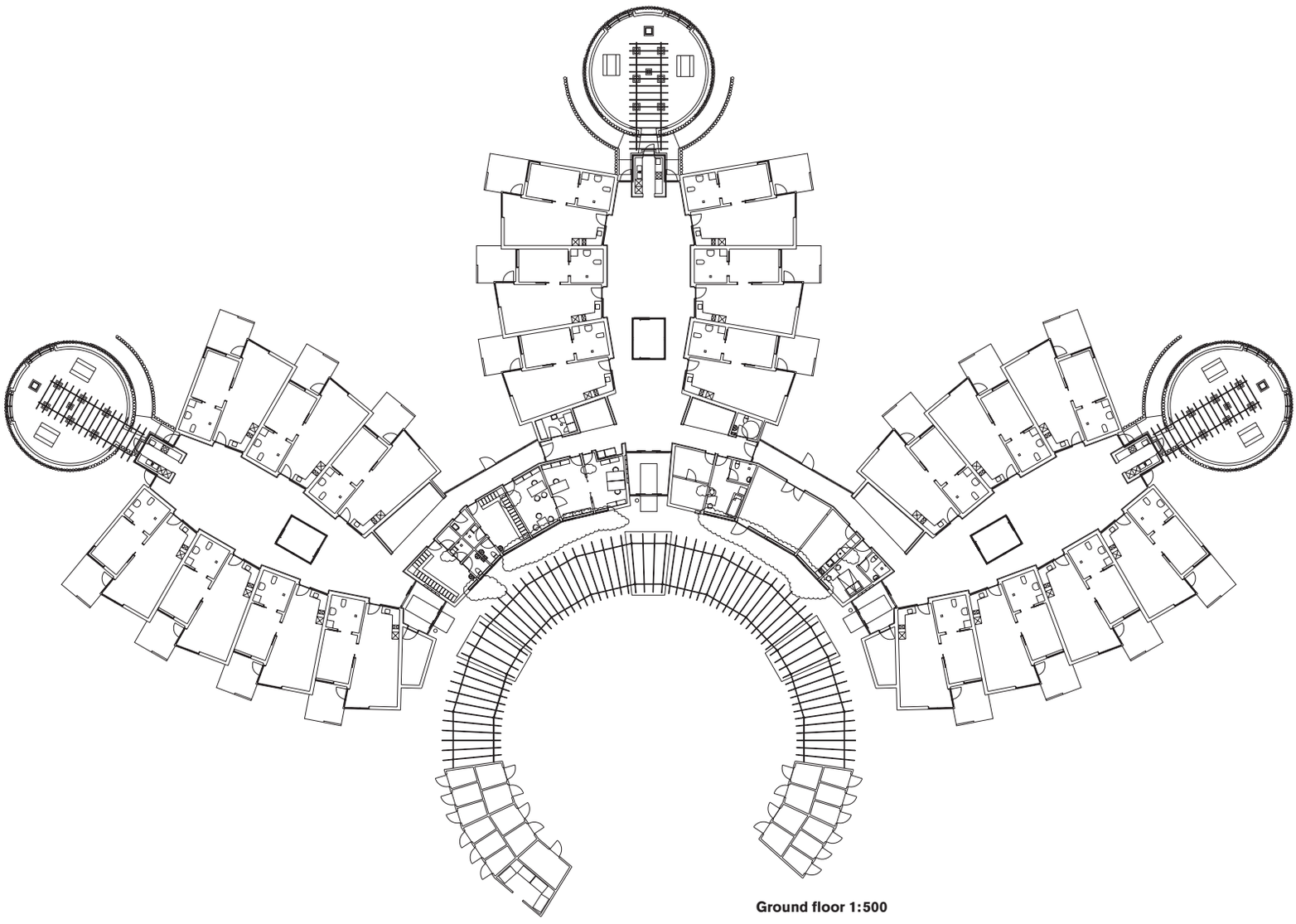


Ground plan 1:150

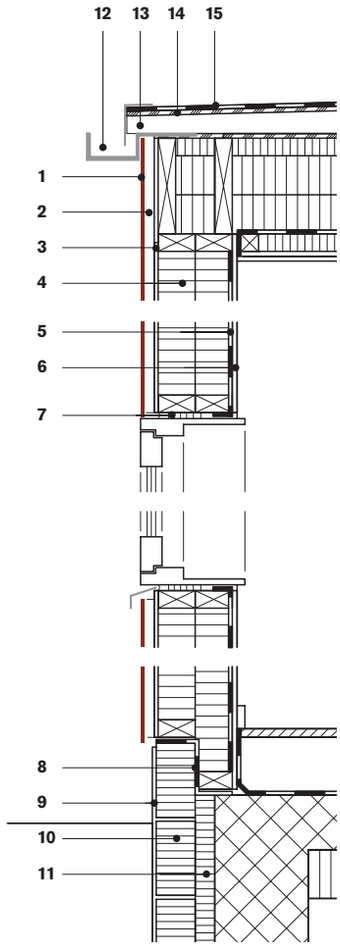
"The Cones" is the name of a lamp designed by the Dane Poul Henningsen. In this design classic, the central light bulb is surrounded by scale-like pieces of metal that reflect the light indirectly outwards. In the case of the design for a housing estate for disabled people, which was to be built within one year near the town of Roskilde on the Danish island of Seeland, the architects looked for a form appropriate to the task. They grouped six to seven apartments organically around a long common area – just like the scales of a cone.

The association with the form of a cone was the starting point for the competition project proposed by the Vandkunsten group of architects. These architects look back on a decade-long experience in housing construction; they have had a significant influence on the Scandinavian approach to low and dense housing estates. This principle is particularly suitable for housing for young disabled persons. All the rooms are arranged at ground level to enable wheelchair users to move freely. The whole complex is divided into three living units radiating from a central forecourt where the administrative rooms are located, a rational disposition that provides ease of access. Each of the twenty small apartments consists of a living/dining area under a steep shed roof, and a bedroom and bathroom topped by a flat roof. The alternating up and down of the roof landscape gives the estate a distinctive appearance. Each apartment has a terrace, thus enhancing the contact with nature. With the organic arrangement into residential groups, the designers pursued the intention of combining the apartments to form a community while avoiding any hint of an institutional atmosphere. A kitchen and outdoor seating facilities with a pergola complete the common zone. The homeliness of the interior day rooms is reinforced by low ceilings and dark walls and floors.

An extremely rigorous policy was adopted for the construction and materialisation using a limited number of easily manageable building materials. The buildings are constructed of prefabricated timber frames and fillings in order to keep the building process short and the cost low. A resilient, honest and unspectacular material was required for the cladding of the walls, and the architect decided on dark cement composite panels for both the interior and exterior walls. On the façades, the long reclining panels accentuate the horizontality of the buildings and harmonise with the flat surrounding landscape. The almost black colour articulates the building complex as an artefact – and reflects the Vandkusten architects' long-

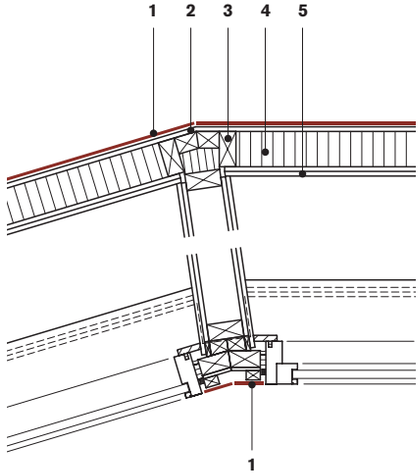


Ground floor 1:500



Vertical section 1:20

1 Swisspearl® cement composite panel
2 Ventilation 25 mm
3 Exterior gypsum board 9 mm
4 Insulation 200 mm
5 Damp course
6 Gypsum board 2 × 13 mm
7 Joint
8 Moisture barrier
9 Base plaster
10 Light clinker concrete
11 Insulation 50 mm
12 Platisol gutter
13 Ventilation
14 Plywood 16 mm
15 Cardboard



Horizontal section 1:20

1 Swisspearl® cement composite panel
2 Gypsum board 13 mm
3 Timber frame 45 x 95 mm
4 Insulation 95 mm
5 Gypsum board 2 × 13 mm

cherished predilection. Yellow awnings give the exterior of the estate a characteristic touch of colour. The walls of the corridors are equipped with wooden battens over the joints between the cement composite panels, which serve the disabled tenants as handrails and buffers. All the doors and windows are constructed of the same timber, namely mahogany. The rest of the interior design is based on the reduction of materials and colour. The apartments have white plaster walls and light parquet flooring, whereas the rest of the floors are covered with black linoleum and the ceilings with light grey wood wool.

"The Cones" housing estate reflects the specific qualities of typical Scandinavian architecture: humanity thanks to a feeling for human dimensions and a homely atmosphere, dignity by means of simple forms and restrained colours, integrity backed by the choice and use of visible, haptic materials. In this project, the architects were successful in achieving a harmony between all these aspects. *Michael Hanak*

Location Skovbrynet 1, Jyllinge, Denmark
Client OK Fonden, Frederiksberg
Architects Tegnestuen Vandkunsten Aps, Copenhagen
Advisory engeneers Lemming & Eriksson A/S F.R.I., Køge
Building period 2004–2005
Façade construction B. Nygaard Sørensen A/S, Lyngby
Façade material Swisspearl® Carat, Black Opal (Anthracite) 7020

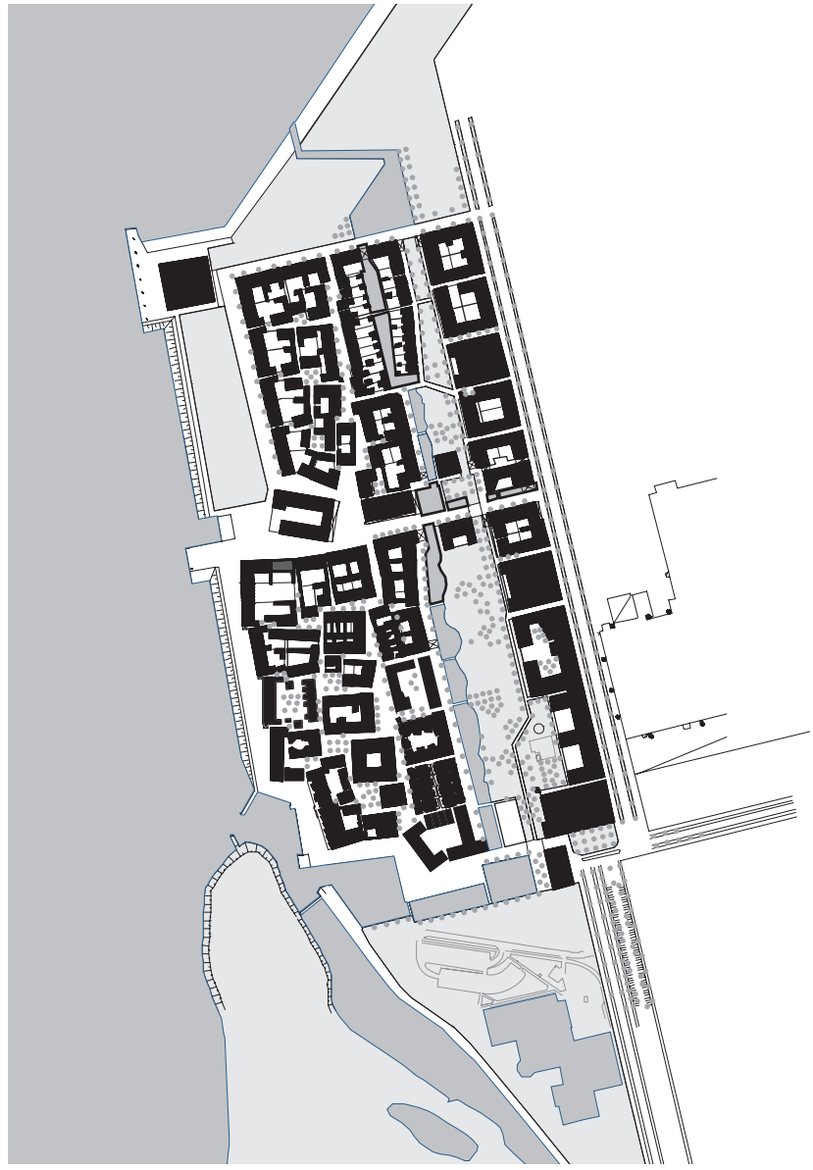
This building is located on the coast in a newly developed former harbour area. Like the adjacent new buildings, the multi-family residence has a pronouncedly cuboid shape and a clear differentiation between the street and courtyard sides. The base and attic floors are plainly indicated on the façades, which are extensively equipped with tall aluminium windows and cement composite panels.

Lillgrund Multi-Family Residence, Malmö, Sweden

THE FOUNDATION STONE OF A NEW URBAN DISTRICT

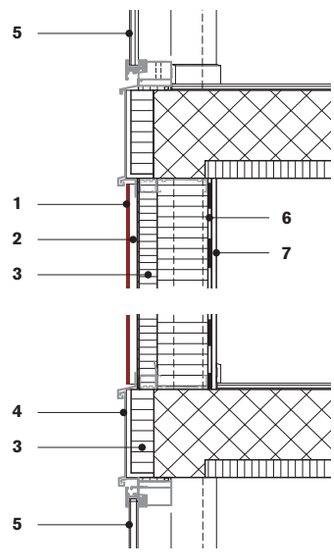
For the past six years, the cities of Malmö and Copenhagen have been connected by a bridge over the Öresund Strait that lies between them. The mighty cable-stayed bridge with huge pylons ushered in a dynamic economic development in this boundary-crossing region. Malmö, Sweden's third-largest city, has been in the throes of a fundamental change from an industrial town to a residential and high school city during the past two decades. The landmark of the structural dynamism is the high-rise building "Turning Torso", completed last year, whose twisted form originated from a design by Santiago Calatrava and which, with a height of 190 metres, is the highest building in Scandinavia. Surrounding it, on the site of the former Västra Hamnen industrial port, a new urban district has developed, situated in the immediate vicinity of the city centre with a coastal location. The new development began in 2001 in connection with the international housing exhibition entitled "Bo01 – City of Tomorrow". The emphasis of the buildings, which were designed by architects from all over the world, lay on sustainable, ecological construction.

Two years after the exhibition, Arne Jönsson, who with Jan Tellving and Mario Campi contributed the entrance building of the trade exhibition site, won a competition for a building with 15 apartments. The building site is on the Scaniaplatsen, in front of the "Turning Torso" tower and at the end of the exhibition buildings situated along the coast. The six-storey block has assumed some of the characteristics of the surrounding buildings: the "box-like" form with horizontal roof edging strips, and the differentiation between the street and courtyard sides. Analogous to the neighbouring building by Ralph Erskine, the structure of the façade was continued in a classical pattern: the base and attic areas are marked by darker façade panels, and the middle area is characterised by white or, on the garden side, red. The window openings are variously and playfully placed: storeywise displacements of one, two or three façade panels are possible. Variation and unity was also a theme of the design of the new urban district. *Michael Hanak*

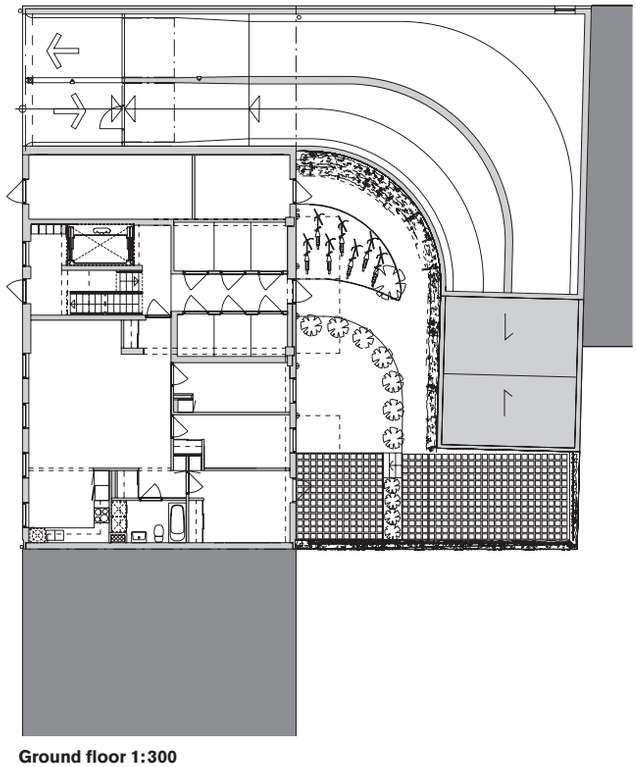


Location Scaniaplatsen 5, Malmö, Sweden
Client Skanska Nya Hem, Malmö; Brt. Lillgrund, Malmö
Architects Arkitektlaget Skåne, Arne Jönsson, Helsingborg
Collaboration Börje Carlén, Frode Sönnergren, Sara Ek
Building period 2005
General Contractor Skanska, Malmö
Façade construction Skanska Nye Hem, Malmö
Façade material Swisspearl® Carat, Sapphire (Titanium) 7060, Onyx (Ivory) 7090, Coral (Ruby) 7030 and Natura (entrances)

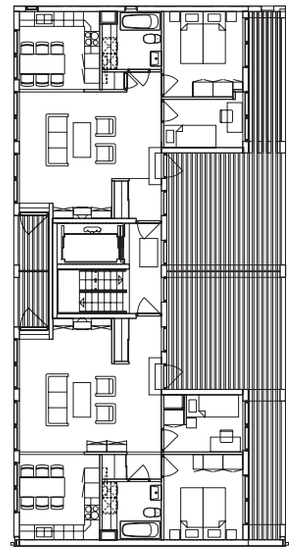
1 Swisspearl® cement composite panel
2 Ventilation lathing
3 Insulation
4 Aluminium
5 Window
6 Damp-proof course
7 Plaster Panel



Vertical section 1:20



Ground floor 1:300

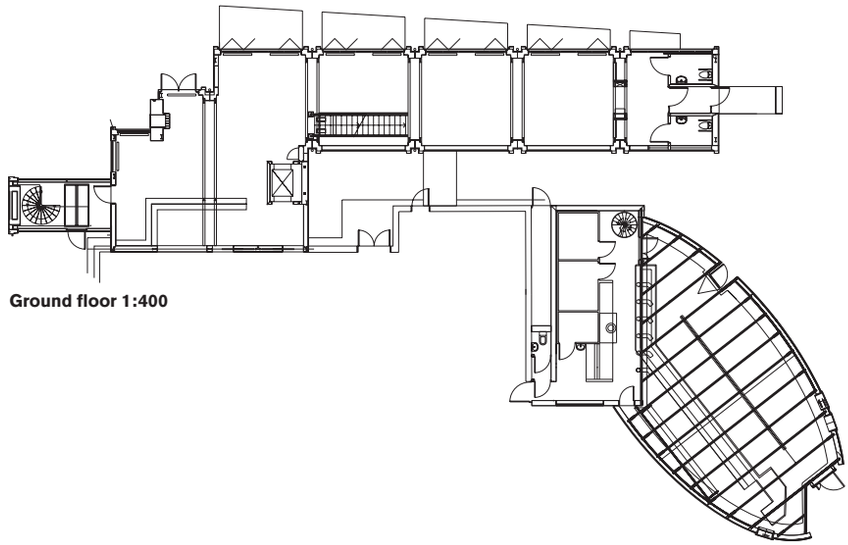


Attic 1:300

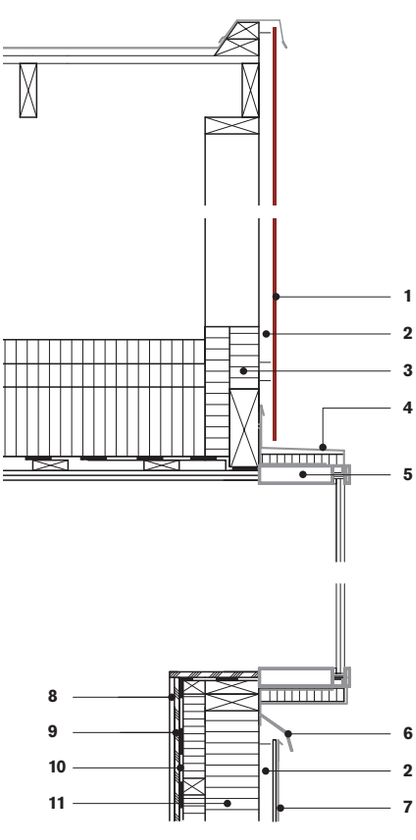
Buhres Fisk AB Fish Shop and Restaurant, Kivik, Sweden

A ship in the harbour

Location Hamnplan, Kivik, Sweden
Client Buhres Fisk AB, Kivik
Architect S.I.T.E Arkitektur AB, Lund
Collaborators Kjell Adamsson, Paul Eriksson
Building period 2004–2005
Contractor Skanska Sverige AB, Ystad
Façade construction Skanska Sverige AB, Ystad
Façade material Swisspearl® Carat, Black Opal (Antracite) 7024



Ground floor 1:400



1 Swisspearl® cement composite panel
2 Air gap
3 Isolation
4 Plate covering for draining of water
5 Profile system (windows)
6 Plate covering
7 U-Plywood 15 mm
8 Gypsum 13 mm
9 Plywood 12 mm
10 Vapour barrier
11 Isolation

Vertical section 1:20

Marinated salmon, sweet-and-sour herrings and smoked eel are but a few of the typical Swedish specialities offered by the Buhres Fish Company in Kivik. The town is located on the Baltic Sea in the province of Skåne in the far south of Sweden. Originally a fishing village with old half-timbered houses, Kivik is renowned for its big traditional market that is held around the harbour in July, and which attracts around 100 000 people every year. The Buhres Fish Shop, which recently enlarged its premises, is situated directly adjacent to the fishing boats in the harbour.

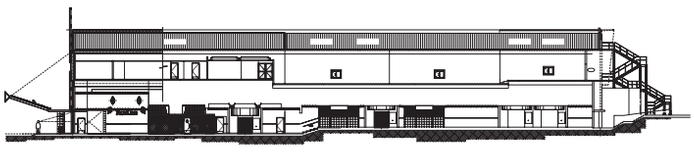
The client's intention was to extend the existing complex by the addition of two functions: a new fish shop and an enlargement of the restaurant. This project comprised approximately 700 m². The architects' idea was to interpret the existing traditional harbour development through new buildings, and at the same time to reflect upon what was to come. The existing buildings were integrated in the new complex so that they would be sure to survive in the future. The architects from the S.I.T.E office explained that "the greatest challenge of the project was finding a spatial order capable of accentuating the function of the new buildings".

The fish shop faces the side access road and, with an elliptical ground plan, links up with the existing building, bearing a deliberate likeness to a ship: the architects gave this building a long, rounded form. The curved façades are planked horizontally with varnished wooden panels, and porthole windows complete the maritime impression. The restaurant was placed on the water's edge in front of the group of buildings, offering the guests a view over the harbour to the open sea from the dining room. This north-facing façade is thus extensively glazed with overhanging balconies added on the first floor. The restaurant and kitchen are accommodated in a series of identical units whose gable roofs and struts make a low-density impression. Rows of gables are common on the Swedish coast, particularly on the typical fish shops and boat sheds. The architects also chose a new interpretation of a building tradition for the materialisation. The shop section is a timber construction clad with warm-coloured oak, and the restaurant consists of steel installed in situ and complemented by wooden stands, clad with large dark grey cement composite panels with grey-painted timber battens at the side.

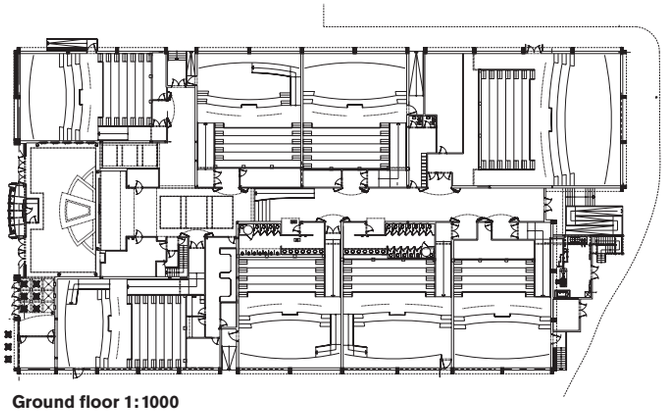
The architecture, which was developed especially for its specific function and complies with the local surroundings, doubtlessly encourages customers and guests to return time and time again to enjoy the local fish specialities.
Michael Hanak

Cinema Complex “La Gran Vía”, San Salvador, El Salvador

A prestigious film temple



Section 1:1000



Ground floor 1:1000

The cinema theatre "La Gran Vía" in San Salvador City belongs to the Cinemark Inc. group, an organisation that runs 3357 film screens in 310 theatres in its country of origin, the United States, alone. Internationally, the company is primarily active on the whole North American continent and has branches in Canada and twelve Central and Latin American states. "La Gran Vía" in El Salvador's capital San Salvador is part of a large shopping and entertainment centre.

The cinema theatre is, however, the only one in the whole of San Salvador that figures as an independent building rather than part of a larger volume. This prompted the architect, Edgar Avilés, to design the new building as a worthy representative of the world of films. A fountain with a round blue pool and jets of various heights, almost reminiscent of Hollywood, stands, centrally positioned, in front of the building.

The "La Gran Via" building is divided vertically into a base floor and a super-elevated main section, the latter consisting of a middle and two side ressaults. The middle section, accentuated and super-elevated by a shallow arch, stands out from the brown side wings which – designed as three horizontal layers – curve outwards at the front and sides. The middle section is entirely clad with ivory-coloured cement composite panels with rear ventilation. A row of panels of these light-coloured middle façade surfaces extends right down to the ground on its outside edges and discreetly incorporates the entrance and box office areas. *Inge Beckel*

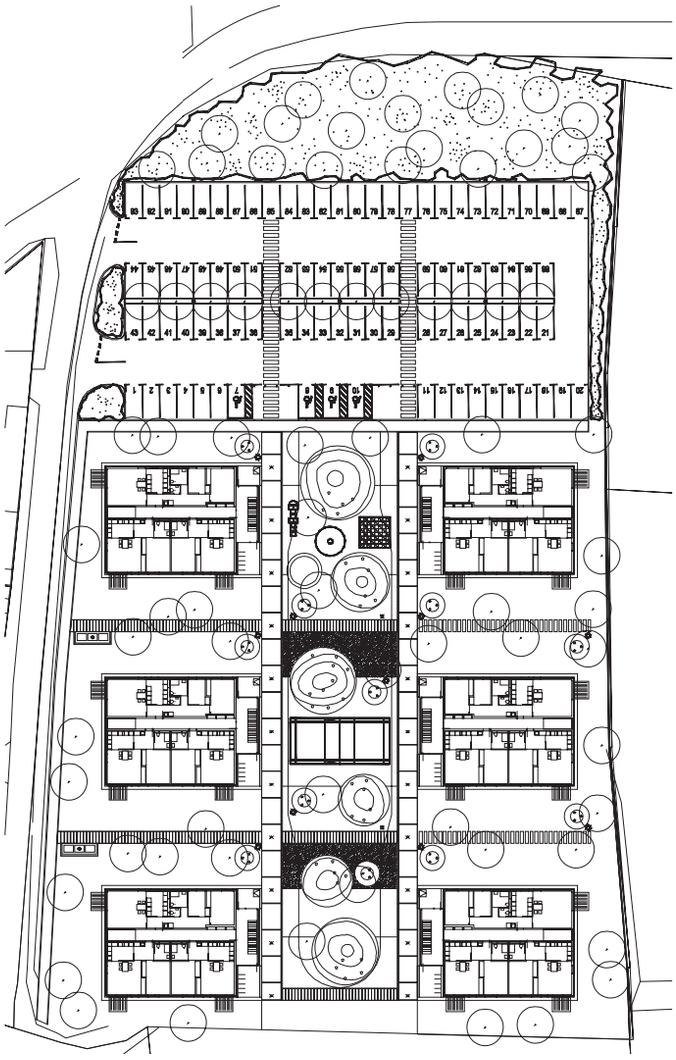
Location Carretera Panamericana, San Salvador, El Salvador
Client Cinemark Inc./Duenas Limitada
Architects Leonel Avilés Arquitectos y Asociados, Edgar Avilés, El Salvador
Building period 2004–2005
General contractor Freyssinet El Salvador, El Salvador
Façade construction Amanco El Salvador, El Salvador
Façade material Swisspearl® Carat, Onyx (Ivory) 7090

According to architect Edgar Avilés, Swisspearl was used because of the quality of its finish, its extensive variety of colours, and its durability and stability in spite of the variable climatic conditions of San Salvador City. He wanted to use different materials with a unique presence and a strong shape that could be appreciated by the spectator in a particular way.

Social housing represents a special challenge for both society and the builders guild. A development in Polje, a suburb of the Slovenian capital Ljubljana, is an example of the fact that a reasonable cost-benefit ratio does not necessarily mean a loss of design quality.

Social Housing Development, Ljubljana-Polje, Slovenia

THE SERIOUS SIDE OF LIFE BEHIND SPRIGHTLY FAÇADES



Site plan 1:1000

THE DIFFERENT FORMATS OF THE SWISSPEARL PANELS, THEIR ORGANISATION AND THE VISIBLE FASTENINGS FORM A PATTERN THAT ACCENTUATES THE CONCEPT OF THE FAÇADE. THE VISIBLE FASTENINGS OF THE FAÇADE PANELS EVOKE OTTO WAGNER'S POSTSPARKASSE IN VIENNA, AND THE RUST-BROWN COLOUR IS REMINISCENT OF THE PLANKING OF THE RAILWAY WAGONS IN THE NEIGHBOURING FREIGHT DEPOT.

With the political changes fifteen years ago social housing almost came to a standstill in Slovenia. The Slovenian government sold off state-owned – or previously state-owned – housing to the town's inhabitants at a symbolic price. The need for low-cost tenant-occupied housing for underprivileged persons nevertheless persisted. One of the newly-founded institutions concerned with this problem is the public housing fund of the city of Ljubljana. In 2005, in collaboration with the architects Bevk & Perović, the foundation succeeded in building a housing development to architectural standards that caused an international sensation. In Slovenia, Bevk & Perović were awarded the country's most important architectural prize, the Jože Plečnik Prize, for this project.

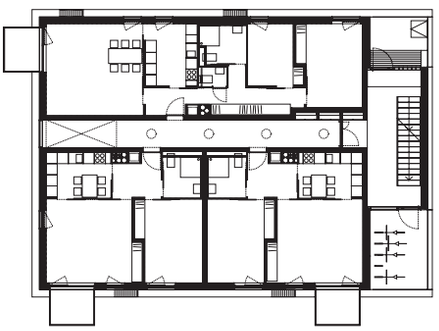
The settlement is located in Polje, a suburb of Ljubljana characterised by its industrial buildings. When the architects were called in, the development plan was already determined with six point-blocks; the height of the buildings and angle of the roofs were also fixed, although these specifications were quite unsuitable for the required purpose, for among other things they did not permit storey heights complying with the regulations on the top floors. The remarkable quality of the final result is due to the well-considered ground plans, the dynamic façade and the meticulous exterior design.

The park between the houses is divided into three different zones with a children's playground, a sports ground and a green area; the entrances to the building open onto this common space. The 78 one- to three-room apartments are accessed by a central corridor – which has, however, nothing dark or gloomy about it. On the ground floor, it leads to a window, and on the upper floors

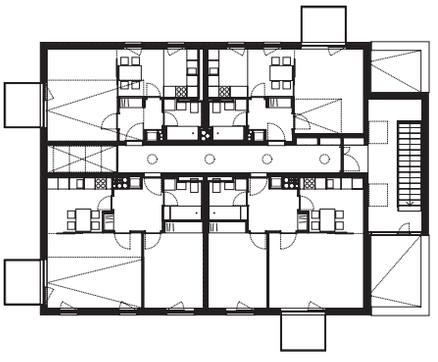
to a light shaft spanning the entire height of the buildings. Gables were added on the top floor in order to give the rooms the required height.

The design of the façades is a particularly eloquent example of Bevk & Perović's ability to turn the need for economy into an advantage. The windows all have the same dimensions, and all the apartments have identical prefabricated suspended balconies; nevertheless, monotony is avoided by the ingenious setting of the openings: none of the balconies are located directly above one another – thus not only optimal in terms of the apartments' daylighting, but also in order to prevent uncontrolled development of the balconies into additional interior rooms by the tenants. The actual outer skin consists of reddish-brown cement composite panels, whose colour would seem to have been inspired by the coaches of the freight trains in the nearby railway siding. The cement composite was chosen not only for aesthetic reason but also because of its long-term economical and low-maintenance character. In addition, the intention was to counter possible vandalism with a kind of architecture that is totally robust.

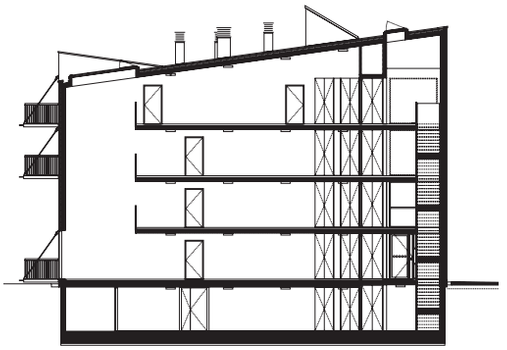
It is interesting to note that the panel fastenings are not concealed but, on the contrary, additionally emphasised with round aluminium discs – a procedure that is probably not entirely coincidentally reminiscent of Otto Wagners Postsparkasse (1906) in Vienna. But this construction is not only a homage to architectural history, it also serves to accentuate the design themes. On one hand, the similar organisation of the windows and balconies is emphasised by the visible fastenings; on the other, the fact that the panels are equipped with either 10 or 15 fastenings according to their size results in an invigoratingly lively



Ground floor 1:400

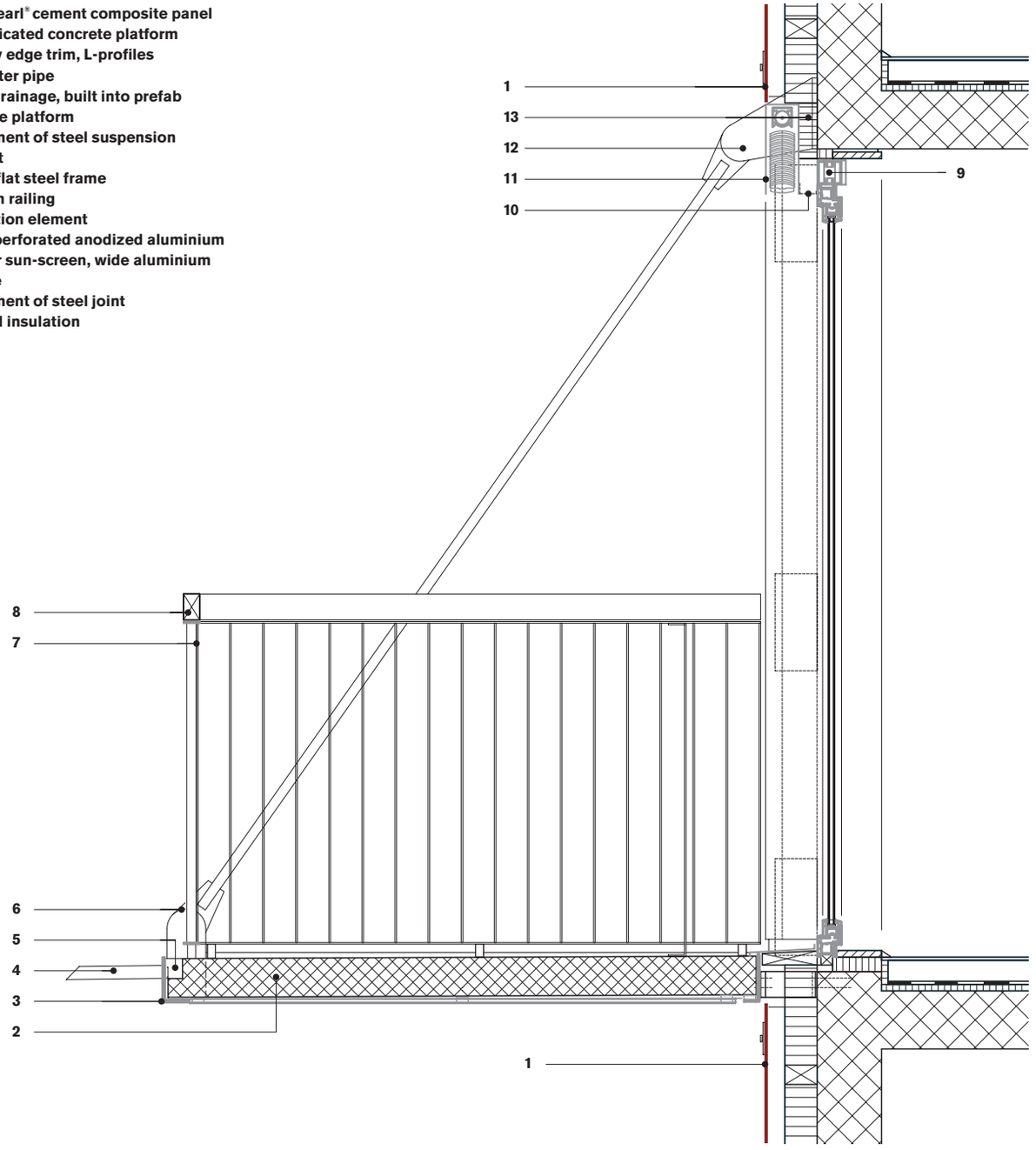


Third floor 1:400



Cross section 1:400

1 Swisspearl® cement composite panel
2 Prefabricated concrete platform
3 Balcony edge trim, L-profiles
4 Rainwater pipe
5 Water drainage, built into prefab concrete platform
6 Attachment of steel suspension element
7 Fence, flat steel frame
8 Wooden railing
9 Ventilation element
10 Cover, perforated anodized aluminium
11 Exterior sun-screen, wide aluminium jalousie
12 Attachment of steel joint
13 Thermal insulation



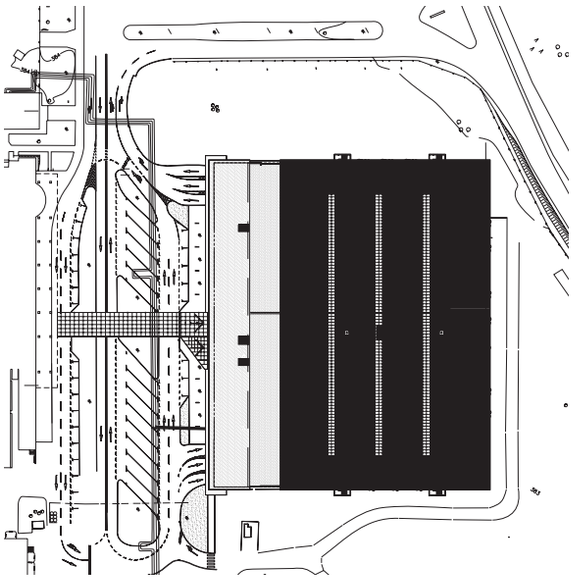
Vertical section 1:20

pattern. The irregular placing of the openings produces closed wall surfaces of different sizes, and this in its turn results in different panel formats. What other architects might have regarded as a handicap was brilliantly interpreted by Bevk & Perović as an opportunity in terms of design. *Judit Solt*

Location Polje 371–376, Ljubljana, Slovenia
Client Public Housing Fund of the City of Ljubljana
Architects Bevk & Perović, Ljubljana; Matija Bevk, Vasa Perović (director), Mitja Zorc, Davor Pocivasek
Load-bearing structure Elea iC. d.o.o., Ljubljana; Angelo Žigon, Jana Pribakovic, Marjeta Gogala
Building period 2003–2005
General contractor SCT d.d., Ljubljana
Façade construction Alufinal, Krsko
Façade material Swisspearl®, Special Colour

Airport Parking Garage with Business Wing, Brnik, Slovenia
A box with a folding roof

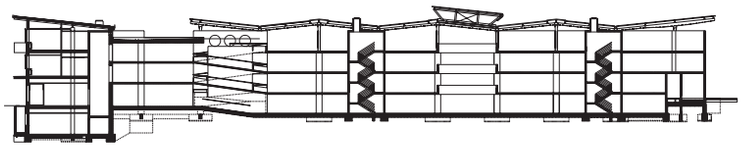
A walkway leads from the four-storey parking garage to the check-in and the aeroplanes. The front of the building consists of a business wing with various public services situated in front of the parking garage.



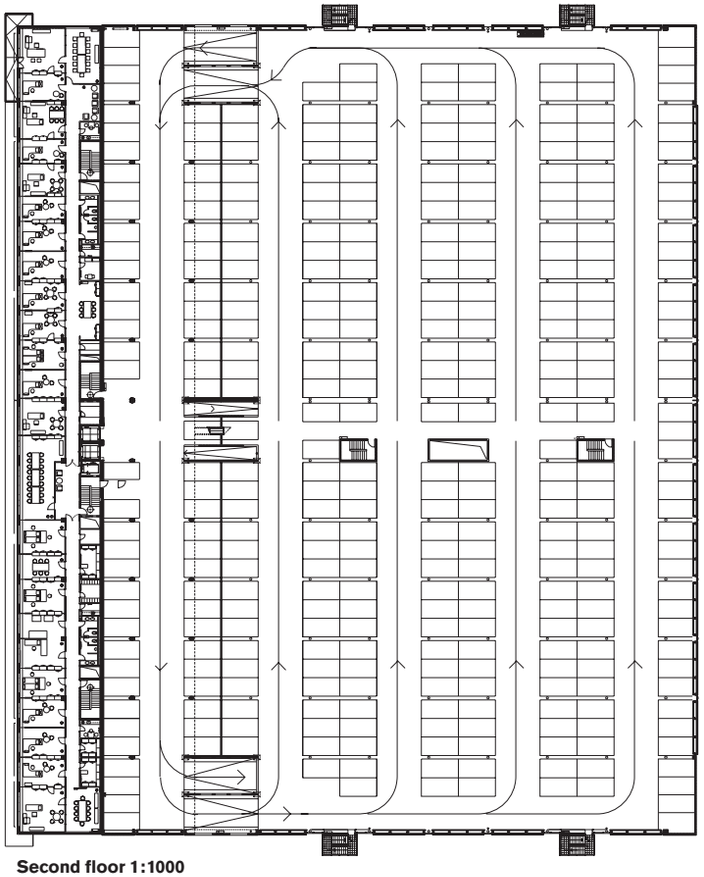
Slovenia has produced a series of excellent works of architecture since its independence in 1991. Last year, a new parking garage set behind a business wing was opened on the site of Brnik airport, designed and realised by the architects Vladimir Koželj, Jagoda Licina and Matej Bartol. Brnik is situated 30 kilometres to the northwest of the capital Ljubljana and is the country's most important airport.

The parking garage accommodates over 1300 cars on an area of 33 400 m² spread out over four storeys. The three-storey business wing is located in front of the parking garage towards the southwest and merges volumetrically with it. The whole volume, which makes a basically flat impression, is covered by a kind of folding roof that protects the rear section of the parking deck, while a spatially separate shed roof, opening towards the airport, covers the business wing. A glazed walkway set at right

Location Brnik Airport, Slovenia
Client Aerodrom d.d., Ljubljana
Architects Eko-Art d.o.o., Vladimir Koželj, Jagoda Licina, Matej Bartol, Ljubljana
Building period 2004–2005
General contractor SCT d.d., Ljubljana
Façade construction Alufinal, Krsko
Façade material Swisspearl® Natura, Grey 204, Red 302



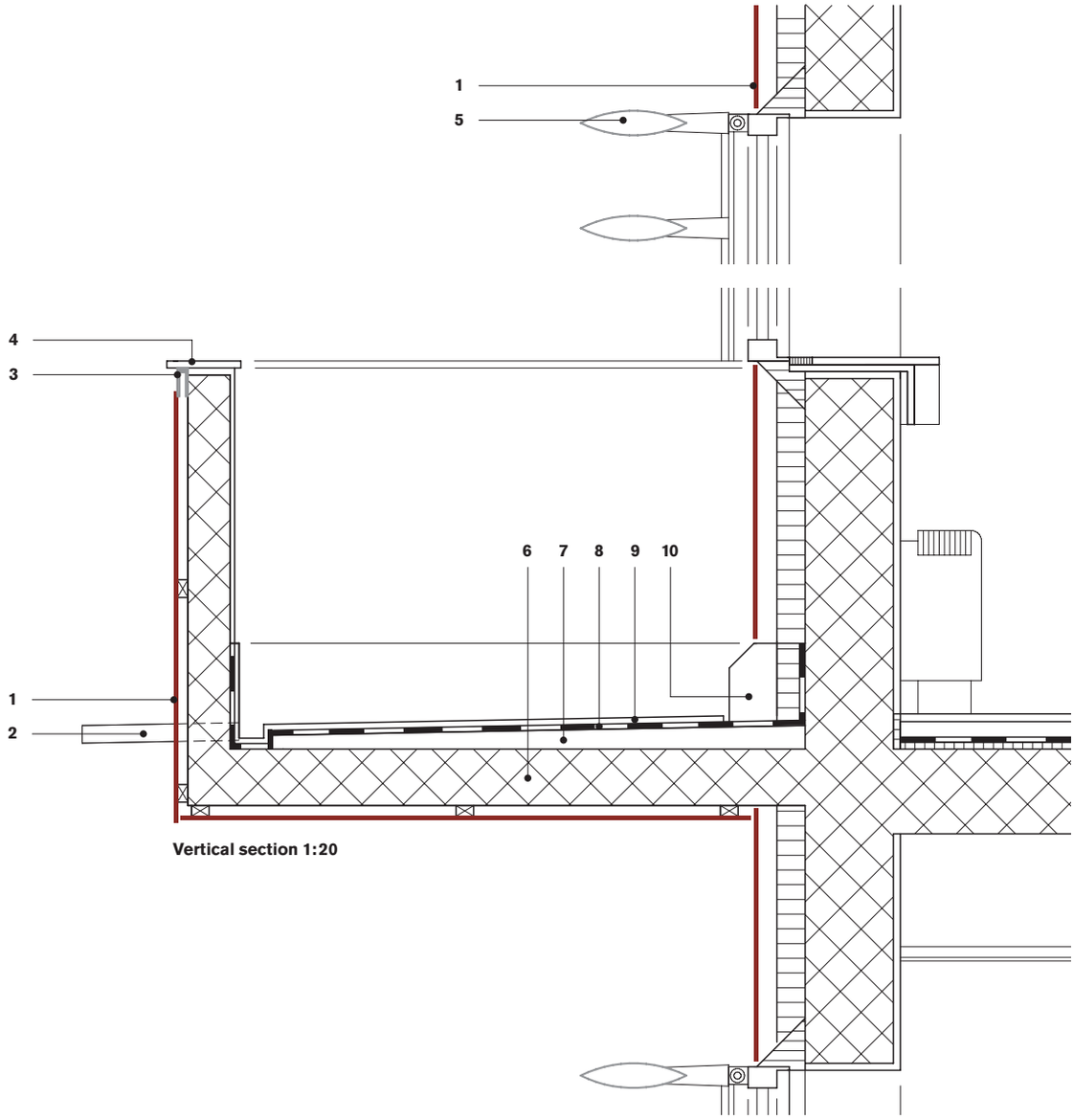
Section 1:1000



Second floor 1:1000

angles to the business wing leads to the passenger terminal. This walkway, along with the stairs, galleries and ramps in the interior of the parking garage, may occasionally serve as a reminder that the journey may also be the destination …

The business wing contains an emergency medical clinic, a conference hall, various offices and premises for rent-a-car providers. The middle section of this representatively designed façade is largely glazed. The corner areas, however, are divided into an open ground floor and a closed superstructure. Whereas the east-facing entrance leads to the parking garage at the rear, the exit is located towards the west. The corners of the building exactly above these parking garage accesses are clad with dark grey Swisspearl cement composite panels. The corner areas and the middle section are formally connected by the projecting shed roof and a canopy spanning the whole length of the façade. The narrow end and the underside of this canopy are covered with red cement composite panels – like the brilliant red balcony that accentuates the west corner of the second floor like a pulpit. The doors on the ground floor also frame brilliant red cement composite panels as a striking signal for arriving visitors. *Inge Beckel*

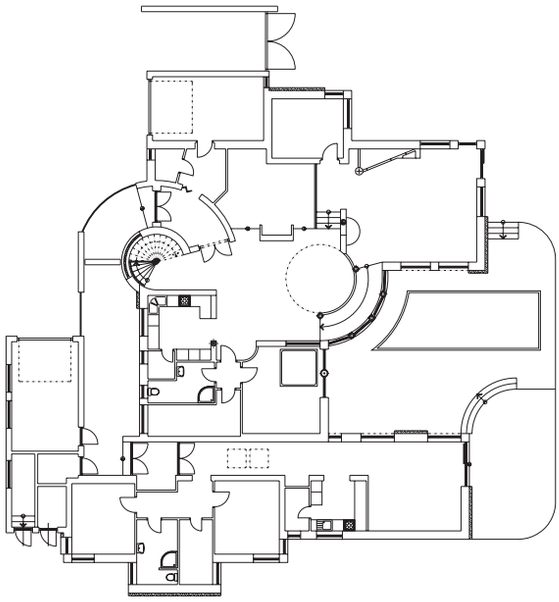


Vertical section 1:20

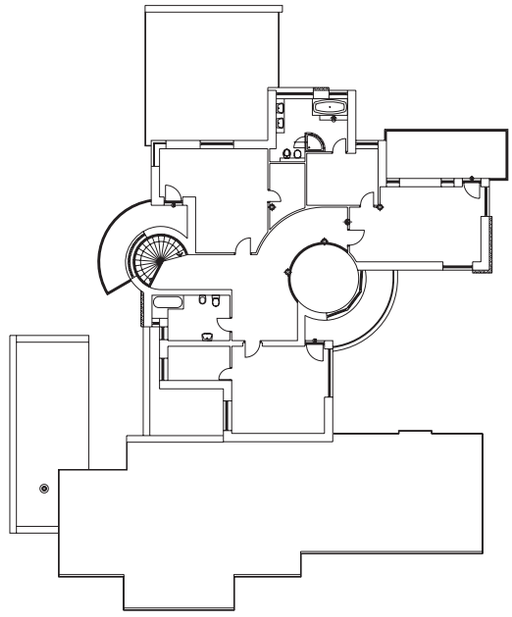
1 Swisspearl® cement composite panel
2 Stainless steel tube
3 Stainless steel profile
4 Stone 20 mm
5 Sunscreen
6 Reinforced concrete
7 Finish coat
8 Waterproofing
9 Stone 16 mm
10 Stone 140 mm × 200 mm

Single-Family House, Ricany, Czech Republic
Interior and exterior complexity

This spatially generous residential building is characterised by its forms, spaces and materials. The façade panels were cut to conform with the irregular geometry of a corner window.



Ground floor 1:400



First floor 1:400

The single-family house that the architect Petr Šulc realised last year in Ricany, a small suburb to the southwest of the Czech capital, looks back over a long period of development. The project design originated in 1998, and the ceramic brick carcass as well as the prefabricated roofs were completed in 2002. Some of the central design elements were not integrated in the design until later on, for example the rear-ventilated Swisspearl façade elements for which the architect decided in January 2005, four months before completion.

The skin of the building is an amalgamation of four different materials combined according to purely aesthetic points of view. The anthracite-coloured Swisspearl panels on the upper part of the front wall contrast with the white plaster lower down. The same applies to the rear of the building where the garden and swimming pool are located. On the side walls, the dark façade elements are combined with white exposed brick masonry. The windows and balcony elements are made of stainless steel.

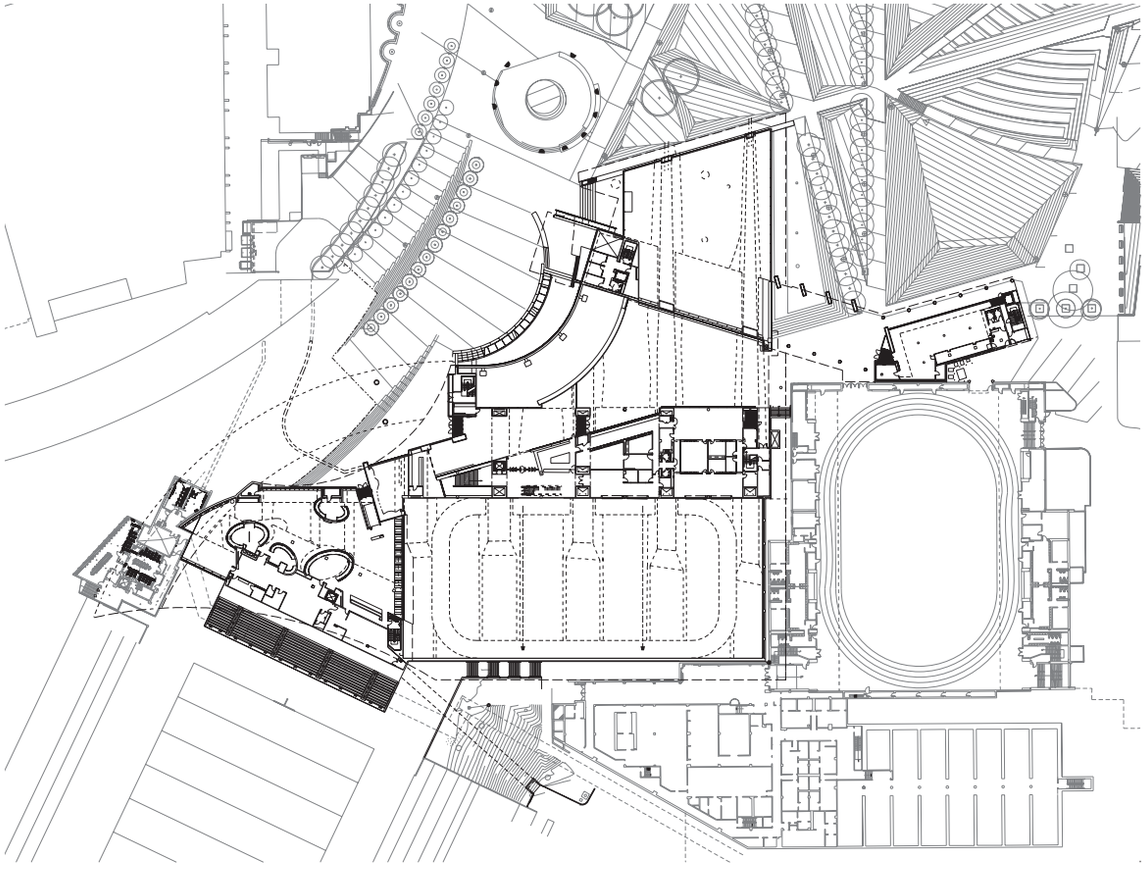
The building consists primarily of a two-storey main building and an adjacent single-storey separate apartment to the north. The rooms of the main building are accessed by a generously proportioned central entrance area in the style of the upper-class Gründerzeit homes. As well as the kitchen and bathroom, the ground floor accommodates a spacious living room and a bedroom. Four more bedrooms are located on the first floor, which is accessed by a spiral staircase. A circular opening in the floor opens up a view of the ground floor. The fact that the building has to manage without a cellar made it necessary to organise storage space wherever possible in the house. The building is characterised by complex, encapsulated rooms with numerous niches and auxiliary rooms. Only two rooms in the whole house have a rectangular ground plan. The rooms of the separate building are accessed by a corridor leading into an open living room. Both the bathroom and the kitchen face north. *Patrick Zamariàn*

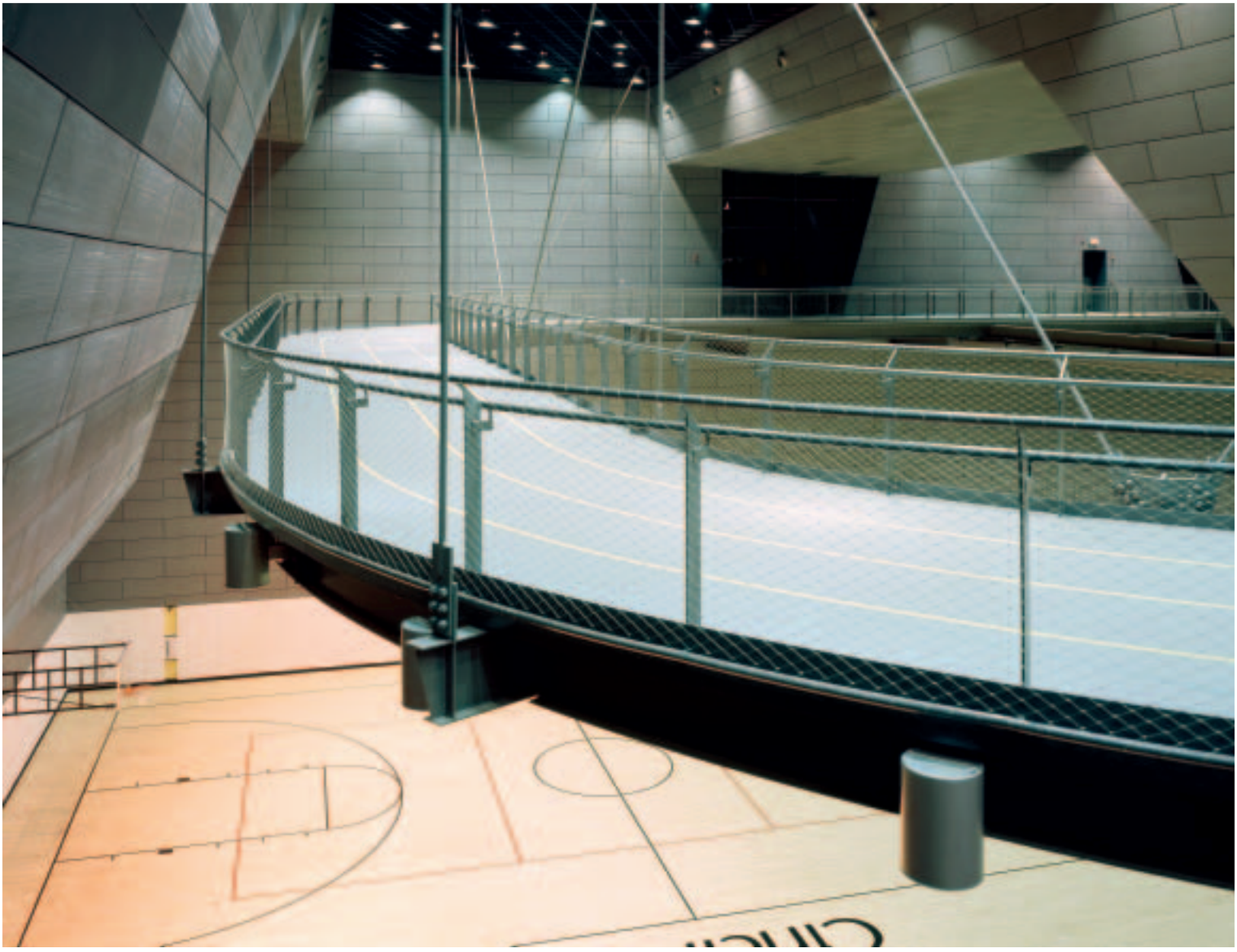
Location Ricany, Mittelböhmen, Czech Republic
Client Private client
Architects Projektis, Petr Šulc, Dobroslav Douša, Kladno
Building period 2001–2005
Façade construction Klempířství Vobecký, Petřvald u Karviné
Façade material Swisspearl® Carat, Black Opal (Anthracite) 7020

Student Recreation Center at the University of Cincinnati, USA

IN THE ENTRAILS OF A WHALE

The recently completed 113 million-dollar new building of the Recreation Center in Cincinnati, Ohio, by Morphosis comprises diverse extensive sports facilities, a canteen and a students' home. The building complex is clad with metal panels on the outside, while cement composite panels dominate in the interior. The inner rooms of the large, expressive, sculptural structure are dramatically staged. The protective cladding embraces the irregular form.



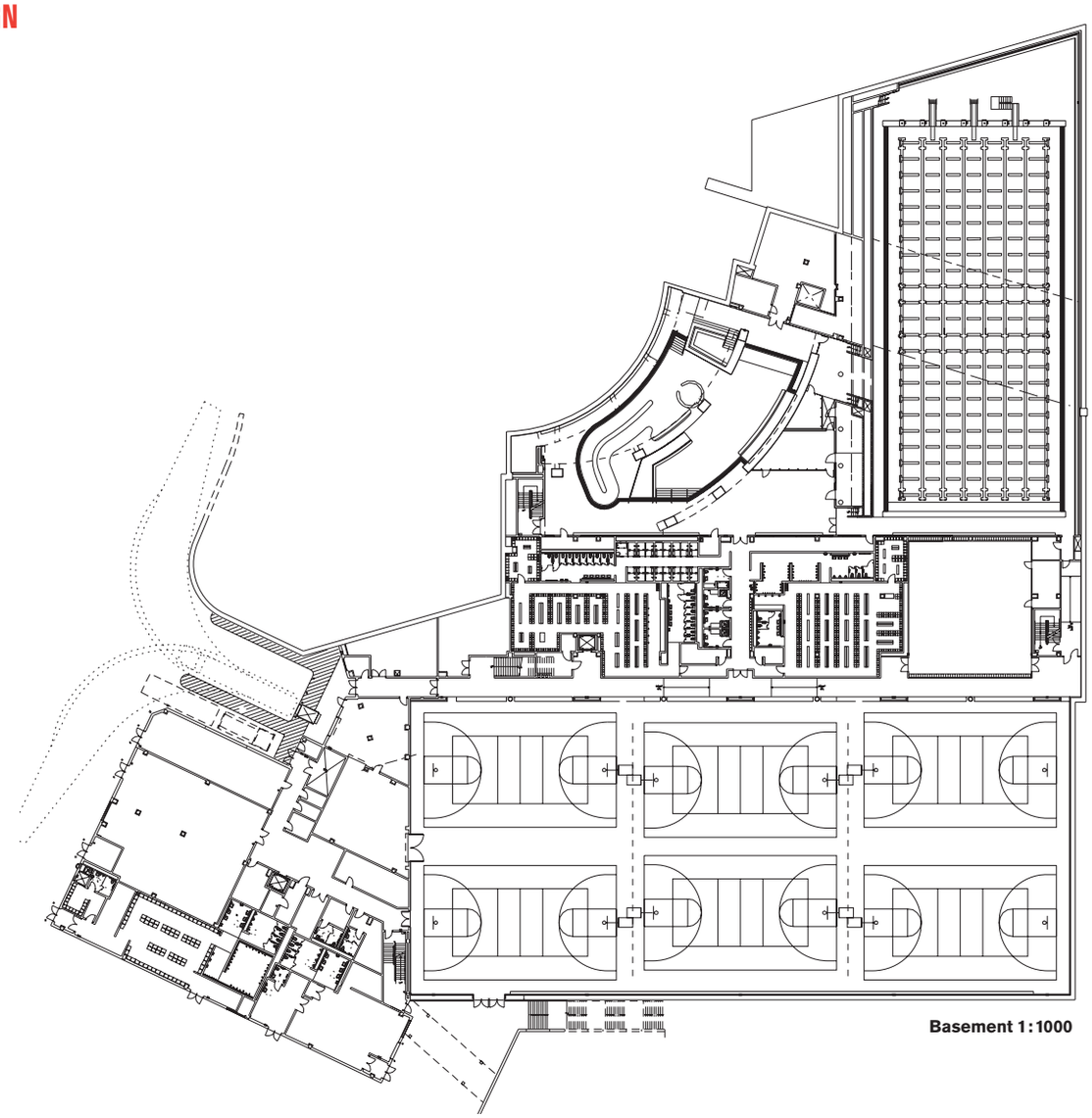


"WEAVING AS A MEANS OF ESTABLISHING FLOW TO RESOLVE THE SITE'S DISPARATE STACCATO OF EXISTING BUILDINGS AND EDGES INFORMS THE PRINCIPAL STRATEGY FOR THE UNIVERSITY OF CINCINNATI MASTER PLAN." MORPHOSIS

Cincinnati is situated in the southwest corner of the North American state of Ohio, immediately bordering on Kentucky and Indiana. The city is an important industrial and trading centre – today's global company of Procter & Gamble was founded there in 1837 – and is sometimes known as the "Queen of the West". But the city is also attracting an increasing amount of interest in the cultural field, and a number of buildings designed by internationally renowned master architects have been opened there in recent years. These include the Aronoff College of Design (1996) by Peter Eisenman, and the Rosenthal Center for Contemporary Arts (2003) by Zaha Hadid, which is evidently already part of the compulsory programme of architectural tours through the Midwest. Thoroughly in keeping with a tried-and-tested American tradition, the university campus in particular contains some excellent buildings: the Vontz Center for Molecular Studies by Frank Gehry opened only last year and was followed recently by the Student Recreation Center by Thom Mayne and Kristina Loock from the Californian firm of Morphosis.

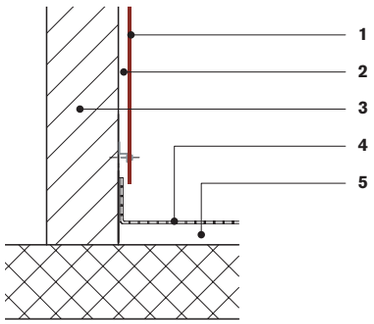
The site of the Student Recreation Center is characterised by urbanistic grids aligned in opposite directions, which the architects deliberately allowed to overlap; furthermore, they arranged the structure in a shape that sometimes reminds the observer of a stranded whale. It is a folded volume composed of formally and spatially different structural fragments. A total area of more than 32 500 m² provides room for a food-court, a home for 225 students, a wing with six classrooms, a swimming pool and a large gym or sports hall. The central access channel is designed as a slightly winding line that provides a place

«WE WERE ALL AMAZED AT THE SPEED OF INSTALLATION AND THE QUALITY OF THE PRECUT PANELS. OF ALL THE SKIN MATERIALS APPLIED TO THE INTERIOR AND EXTERIOR OF THIS WORLD CLASS FACILITY THE SWISSPEARL PANELS WERE BY FAR THE BEST LOOKING AND EASIEST TO INSTALL."
DALE BEELER, KZF DESIGN



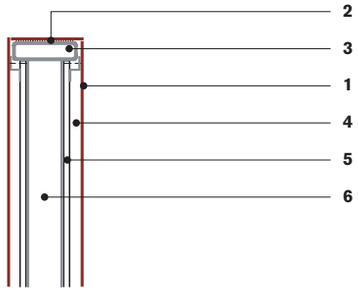
Basement 1:1000

1 Swisspearl® cement composite panel
2 Furring channels, aluminium "Z"
3 Interior wall partition
4 Ceramic floor tile
5 Mortar base



Vertical section 1:20

1 Swisspearl® cement composite panel
2 Top sill panel and end panels on sealent bed
3 Continuos aluminium coping channel
4 Aluminium furring channels
5 Gypsum board (water resistent at pool walls)
6 Aluminium tube framing



Vertical section corridor wall 1:20

of social encounters in this area where the flow of students concentrates. Spatially, the complex holds views and perspectives that are often unexpected. At the main entrance to the students' home, for example, the visitor is suddenly confronted by a group of windows opening onto the large swimming pool; and it is possible to watch the action on the climbing wall while having a drink at the juice bar.

All the halls are complex spaces, some of them with walls inclining slightly inwards – a phenomenon that evokes the association of the gullet of a whale. The showpiece is the gigantic sports hall, which covers an area of 3345 m². The hall is structured by huge girders bearing a four-lane running track suspended sideways over the playing field. The runners can be observed from the foyer area. All the walls of the foyer, the sports hall and the swimming pool, and especially in the area of the roof

"THE NEW RECREATIONAL FACILITIES ARE TUCKED BENEATH A CURVILINEAR PLANE OF LANDSCAPE – A FIELD OF UNDULATING MATS, PUNCTURED WITH LIGHT OPENINGS." MORPHOSIS

landscapes, are clad with cement composite panels. Unlike the Hypo Alpe-Adria-Centre (see Swisspearl Architecture 2), realised by Morphosis in Klagenfurt, Austria, the architects used the pale grey panels only in the interior of the Cincinnati building. They did not attempt to illustrate the actual lines of force by panels. On the contrary, the cement composite is uniform and independent of the slant or the geometry of the surfaces around the girders and creates the impression of being folded around the edge of a girder, almost like a sheet of paper. Thus the architects used the cement composite panels as both protective and decorative elements. *Inge Beckel*

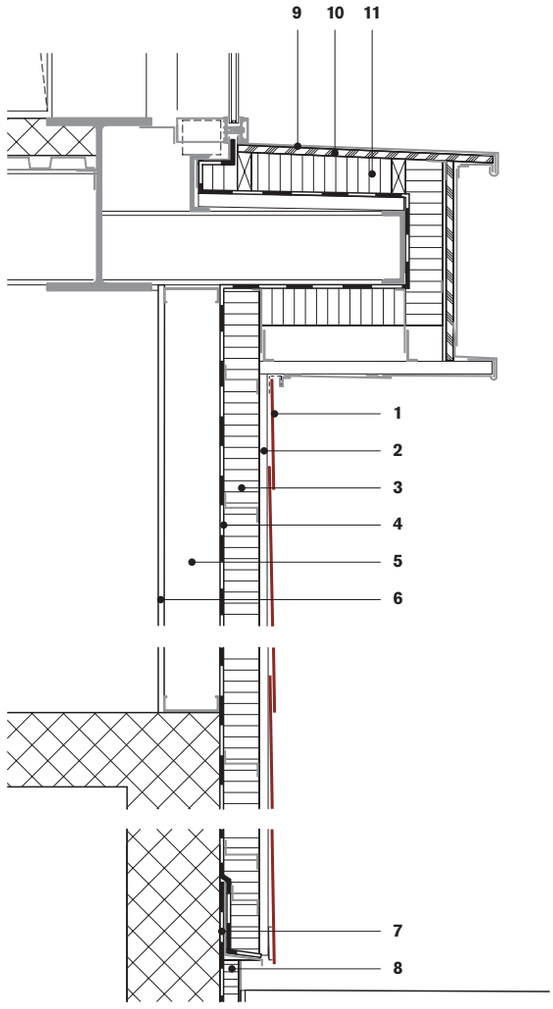
Location University of Cincinnati Main Street Student Recreation Center, Cincinnati, Ohio, USA
Client University of Cincinnati
Architects Morphosis, Santa Monica/KZF Design, Cincinnati
Structural engineers Ove Arup & Partners, Bruce Gibbons, London/New York
Building period 1999–2005
General contractor Turner, Cincinnati
Construction manager Messer Jacobs, Kevin English
Installer OK Interiors, Cincinnati
Interior cladding Swisspearl® Carat, Sapphire (Titanium) 7060

The ecologically exemplary new building of the University of Toronto features a merging of interior and exterior spaces by means of interpenetrating structures. This spatial continuity is accentuated by the uniform cement composite surface of one of the wings, whose weather-side façade becomes an interior partition wall through the intersection with the second volume.

Student Centre, University of Toronto, Scarborough Campus, Canada

INTERPENETRATION OF INTERIOR AND EXTERIOR SPACES

1 Swisspearl® cement composite panel
2 Galvanized steel vertical subframe
3 Galvanized steel sub-girts, insulation between sub-girts 100 mm
4 Vapour barrier
5 Cold-formed metal framing 152 mm
6 Gypsum wall board 16 mm
7 Damp-proofing
8 Perimeter insulation with concrete facing
9 Titanium cladding
10 Plywood 19 mm
11 Insulation



Vertical section 1:20

"FROM A TECHNICAL BUILDING ENVELOPE PERSPECTIVE, CEMENT COMPOSITE IS A MATERIAL WHICH IS CONSISTENT WITH 'RAIN-SCREEN' DESIGN PRINCIPLES AND LIGHTWEIGHT FOR EASE OF INSTALLATION. BECAUSE OF THE LATTER, IT GAVE US THE OPPORTUNITY TO USE THE SAME CLADDING TRADES AS WOULD BE ON SITE CONSTRUCTING TITANIUM PORTIONS OF THE BUILDING ENVELOPE." DATHE WONG, ASSOCIATE, STANTEC ARCHITECTURE LTD.

After a construction period of nearly one and a half years, the new Student Centre on the Scarborough Campus of the University of Toronto was opened in October 2005. The user is the Scarborough Campus Student's Union, to which all the undergraduates belong. The building by Stantec Architecture is situated in a prominent position at the main entrance of the campus and is intended to develop into a place of identification for the students.

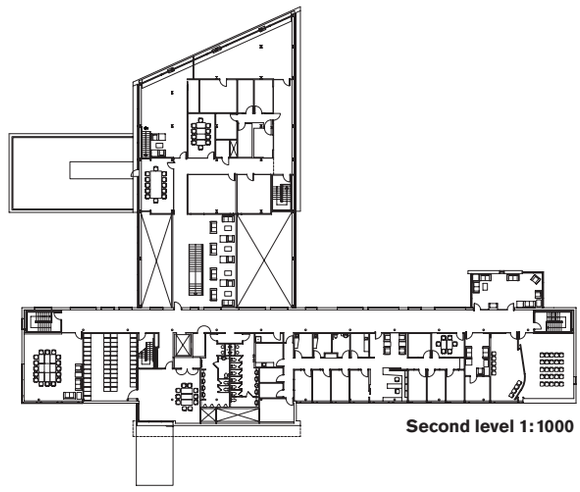
The new building consists of two interpenetrating volumes. A long "bar" building accommodates premises for the students including offices, health care service, prayer rooms, club and encounter rooms, and a bookstore. The rooms are placed along a corridor, an arrangement that provides a high degree of flexibility of use and optimal daylighting. Outside, the bar building is clad with dark grey, horizontally arranged Swisspearl panels that, along with the appropriate window formats, emphasise the length and horizontality of the volume. As a contrast, the façade of the second, more compact volume is constructed of gleaming titanium with large openings; this accommodates the public rooms such the restaurant/pub and lounges. There is a large open area with seating facilities at the interface of the two volumes.

The materials of the two wings are appropriate to their use and functions: "Compositionally, the bar building functioned as a 'container' for the more pragmatic uses of the building while the cantilevered part of the building housed the more active and public functions. The cantilevered part of the building was clad in titanium – with dynamic colour changes depending on time of day with a generally highly reflective surface. The cement composite in contrast had a muted surface quality and a colour tone

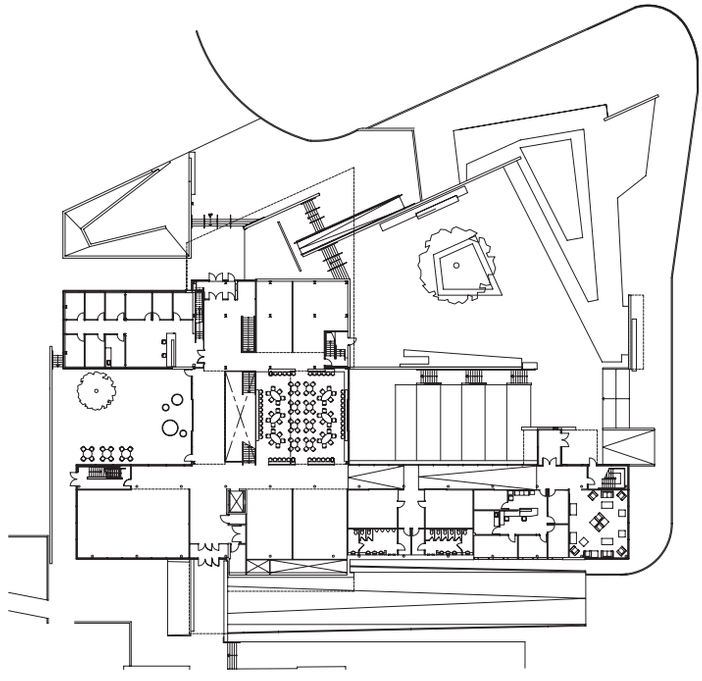
appropriate for 'backdrop' to titanium", explained Dathe Wong, Associate with Stantec.

One of the architects' aims was to give equal prominence to the exterior and interior spaces defined by the interpenetration of the two volumes. This complies on the one hand with the status of the building, which serves as a gateway to the whole campus so to speak and mediates between the interior and exterior; on the other, it emphasises the building's reference to nature and the ecological aspects. Environment-friendly architecture was given priority from the very beginning of the planning: "It is our hope that more educational institutions follow the University of Toronto's lead and begin to incorporate environmental sustainability features into their campuses", says Stephen Phillips, project principal with Stantec, quoted in the *Canadian Architect*. Among other distinctions, the new building received the 2005 Award of Excellence for Green Design of the City of Toronto.

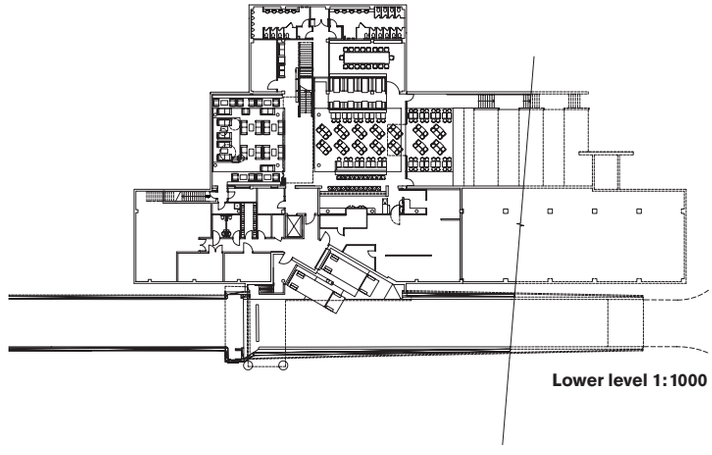
Every effort has been made to integrate the architectural design with structural, mechanical and electrical systems to reduce resource usage such as energy and water consumption while achieving a high level of occupant comfort. Thus 18 tons of structural steel originating from the demolished Royal Ontario Museum were built into the Student Centre. The use of Swisspearl panels for the façade of the bar building is also an aspect of this intention. On the one hand, the cement composite is a long-lasting, low-maintenance and harmlessly destructible material; on the other, the panels can be used both inside and outside, a fact that in this case supports the superordinated concept – the interpenetration of interior and exterior spaces. The cement composite skin spans the whole bar building and covers it even at the points where interior spaces result from the intersection with the second volume: the façade becomes a partition wall, the windows inner openings. The thermal borders consist of extensive glazing, affording uninterrupted views of the campus along the long, uniformly clad wall. *Judit Solt*



Second level 1:1000



Ground level 1:1000



Lower level 1:1000

Location 1265 Military Trail, Toronto, Canada
Client The Governing Council for the University of Toronto
Architects Stantec Architecture Ltd., Toronto; Project team: Stephen Phillips (Principal), Tom Kyle, Dathe Wong (associates)
Building period 2003–2004
General contractor Walter Construction Corporation, Oakville
Façade construction Ebart Roofing and Sheet Metal, Scarborough/Walter Construction Corporation, Oakville
Façade material Swisspearl® Carat, Black Opal (Anthracite) 7020

"CEMENT COMPOSITE IS A MATERIAL WHICH IS VERY FLEXIBLE TO CUT AND SHAPE TO SUIT THE PROPORTION APPROPRIATE TO SCALE AND RHYTHM OF THE BUILDING. IT WAS THE APPROPRIATE MATERIAL TO ACCOMMODATE THE VERY GRAPHIC PATTERN OF WINDOWS USED ON THE FAÇADE." DATHE WONG, ASSOCIATE, STANTEC ARCHITECTURE LTD.

Commercial Centre Paseo San Pedro, San Pedro Garza García, Mexico

Structural unity and formal variety

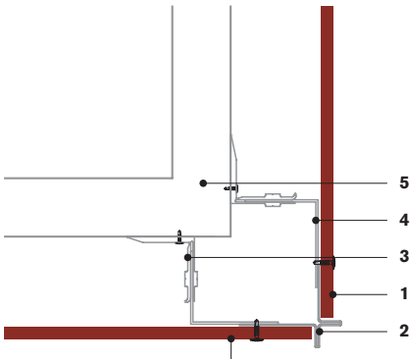
The firm of SMA (Sordo Madaleno Arquitectos) was founded in 1937 by Juan Sordo Madaleno, an employee with the legendary Luis Barragán, and became established as one of Mexico's leading architectural firms under the direction of his son Javier. For the El Palacio de Hierro chain of department stores, whose headquarters in Mexico City he also built, the architect designed a shopping centre in San Pedro Garza Garcia with an integrated cinema and five-star hotel. The two-storey shopping mall, which takes up the main area, and the hotel are accessed from the east by two separate entrances marked by an arched projecting canopy. To the left of it, in the southeast corner of the site, is the entrance to the underground car park and the deliveries area. In between, an arcade-like corridor leads to the cinema located behind the hotel. The actual department store is situated in the northeast corner of the site. All these sections of the building tower above the roof of the mall, giving the impression of three separate volumes with very different dimensions and connected to one another by a common passage.

The architect's renderings reveal his efforts to soften the dominant position of the hotel, which is still under construction and will assume height of over sixty metres. Thus, in the immediate vicinity, the mirrored canopy and the brilliant red arcade capture the observer's attention and relegate the hotel into a visually background position.

An actual counterpoint to the hotel is provided by the department store which, with its expressive design, stands out clearly from the other parts of the building and is accessed by two separate entrances. The façade panels in broken white, which are used in all parts of the building, are additionally covered by panels of glass at this point.

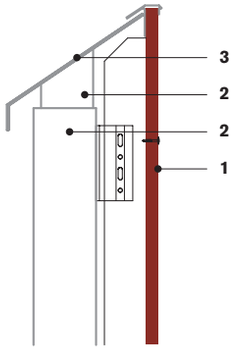
The building complex comprises a shopping mall with a department store and a cinema and a hotel. The white Swisspearl panels are common to all the building sections and, in the case of the department store, they are additionally clad with panels of glass.

1 Swisspearl® cement composite panel
2 Cross corner profile
3 Aluminium bracket
4 Aluminium profile
5 Steel structure



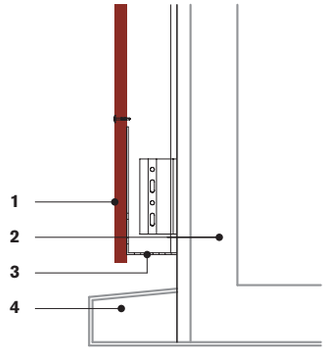
Horizontal section 1:5

1 Swisspearl® cement composite panel
2 Steel structure
3 Steel flashing



Vertical section 1:5

1 Swisspearl® cement composite panel
2 Steel structure
3 Ventilating profile
4 Upper window detail

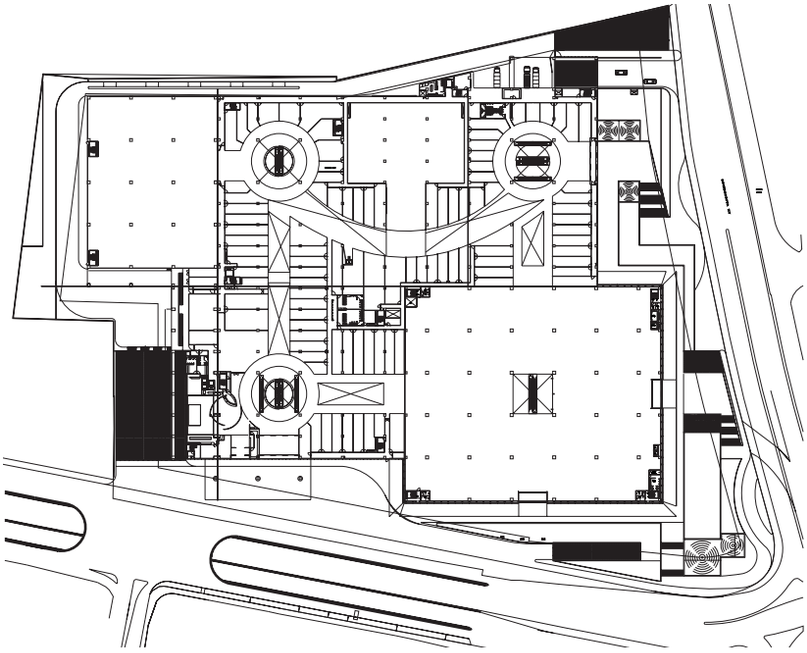


Vertical section 1:5

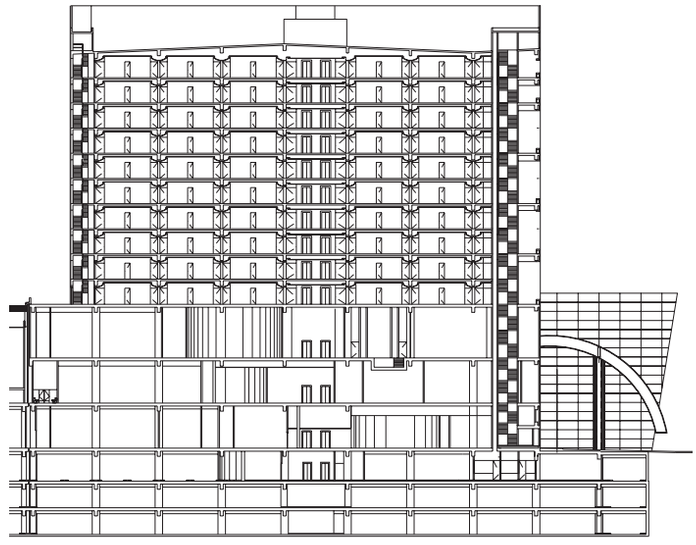
The glassy façades, leaning slightly forwards, on which the large department store logo is emblazoned, give the impression of an over-proportioned jewellery box and leave the observer in no doubt about who instigated the building's construction. The bold formal design of the Palacio does not fail to produce an impact, and, with the open corner situation, the architects themselves cleverly exposed their façade spectacle. Nevertheless, the connections of the inclining walls of the Palacio with the vertical structures of the mall – even though they are expertly crafted – clearly reveal the conceptional dilemma resulting from the decision to treat the department store as a solitaire even though it forms a structural unit with the other parts of the building. In terms of construction, it is a single frame building with a universal support grid. The different parts of the complex are, when all is said and done, variously tall areas of one and the same building. The architect developed a formal field of tension between the unified structure and the varied appearance.
Patrick Zamarián

Location Av. Vasconcelos Esq. Gómez Morin, San Pedro Garza García, Mexico
Client Grupo Palacio de Hierro México City & Inmuebles Nuevo León, Monterrey
Architects Sordo Madaleno Arquitectos (SMA), Mexico City
Collaborators Javier Sordo Madaleno, José Ma. Zarazua Loyola, Humberto Mendoza Ramirez (Project Manager), Francisco Llorens Vargas (Site Supervisor)
Building period 2005–2006
General contractor PMP Consultores, Monterrey
Façade construction Industrias Aluminio Constructa S.A. de C.V., Guadalajara
Façade material Swisspearl® Carat, Onyx (Ivory) 7090

The hotel is still under construction.



Main level 1:3000



Section of the hotel 1:1000

The fashionable suburb on the coast of Lisbon is the scene of a new ensemble of apartments and business premises. Whereas the two parts of the building are distinguished from one another by their colours, they are united by a monotone joint base floor in a different shade. The architects worked with various nuances of colour and clear volumes, resulting in an impression of unity in diversity.

Residential and Business Building, Estoril, Portugal

VOLUMETRIC VIRTUOSITY

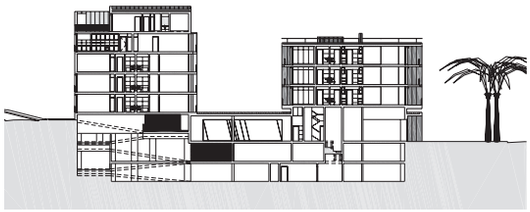
The two sections of the building are distinguished by red and pale grey, held together by the base floor clad in opal black. The upper end of the building, clad in titanium zinc, creates an additional material and colour nuance.

Estoril is probably one of Portugal's most important seaside resorts. From an architectural point of view, the noble suburb of Lisbon offers a large number of villas from the 1930s and a well-preserved, picturesque Old Town. Not far from the Old Town, on the Avenida Aida, the Lisbon architectural firm HRA constructed a residential and business building featuring virtuoso volumetry and playfully colourful façades.

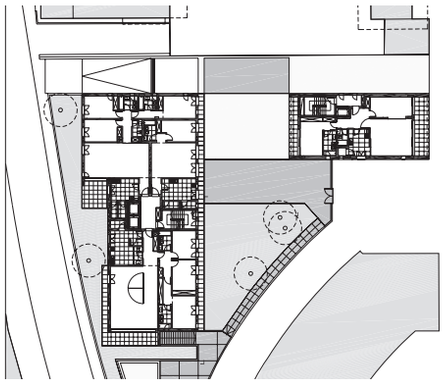
The visitor enters the L-shaped ensemble of buildings via a kind of inner courtyard bordered on the one hand by the unifying base and on the other by an existing concrete outer wall. In order to mark the uninterrupted base and isolate it from the rest of the highrise building, the entrance floor is clad with the façade element Swisspearl Carat in opal black extending up to and including the ceiling slab. The façade cladding panels of the base, which are darker and larger than the other façade panels, add visual importance. The entrance gate is equipped with the same panelling, thus providing a smooth transition between the concrete wall and the façade.

The two upper floor volumes, which are set at right angles to each other, relate to the base floor in completely different ways. Whereas one of them joins with it in a lighter shade of grey (sapphire), the red clad volume stands out from it as an independent cube. The break is further accentuated by a setback façade detail in the intermediate area. The compact, autonomous expression of the cube results on the one hand from the identical treatment of the cladding of the first floor ceiling slab, roof and north and south façades, on the other from its strict east-west orientation.

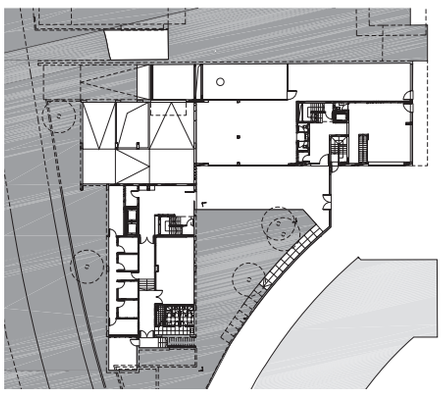
The larger volume, clad in sapphire grey, features different themes of façade design, whereby the blurring of the effect of the material and the unfailingly flush outer



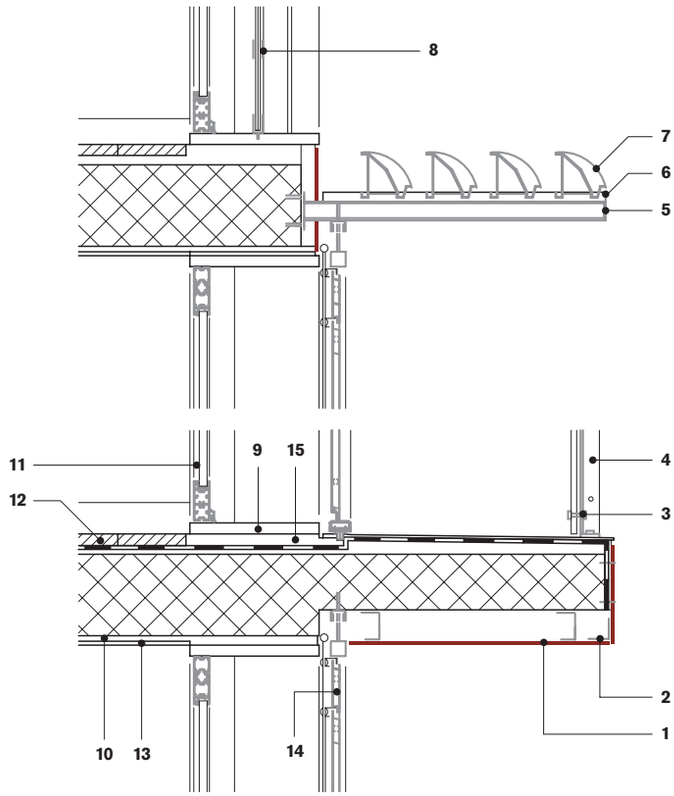
Section 1:1000



Upper floor 1:1000



Ground floor 1:1000



Vertical section 1:20

skin are important elements. This can be seen not only in the base area, but also in the transition of the façade on the attic floor. The second attic floor is clad in titanium zinc, analogous to the chimneys and ventilation superstructures. The difference between the pale grey Carat slab and the titanium zinc is barely noticeable except when the sun shines on them at an angle. Unlike the red volume, the balcony zones here are placed in front of the actual façade. The glazed parapet nevertheless opens up onto a view of the rear level. The windows and shutters comply with the slender dimensions of the façade panels and fit in with the general picture without a transition.

This project by the architects of the HRA firm shows how an interesting element of tension can be achieved with different façade designs without the whole ensemble falling apart. The nuances offer variety, and the constant use of the same material provides unity. *Anita Simeon*

Location Avenida Aida 153, Estoril, Portugal
Client Parque Urbano SA, Estoril
Architects HRA Arquitectos, Lisbon; Humberto Conde
Collaborators Paulo Figueiredo, Helena Ramos, Leopoldo Calhau
Building period 2001–2005
Façade construction Urbecaste SA, Cascais
Façade material Swisspearl® Carat, Coral (Ruby) 7030, Black Opal (Anthracite) 7020, Sapphire (Titanium) 7060

1 **Swisspearl® cement composite panel**
2 **Aluminium corner profile**
3 **Glass banister infill, partially fixed onto T-profiles**
4 **Flat steel handrail 10 mm**
5 **Sun screen bearer profile 50×50 mm**
6 **Sun screen ornamental profile 26×16 mm**
7 **Sun screen lamella**
8 **Glass banister infill, partially fixed onto quarry stone frames**
9 **Quarry tiles 30 mm**
10 **Interior plaster**
11 **Aluminium window, anodised surface, natural colour**
12 **Glued wood lining in the attic**
13 **Sprayed-on sculptor's plaster**
14 **Sliding shutters as aluminium sun screen lamella, anodised surface, natural colour**
15 **Mortar base**

Residential Building Zwinglistrasse, Winterthur, Switzerland
A blue protective mantle

The brilliant blue of the new building shines out from behind the neighbouring structures, making an independent impression and in no way attempting to merge in with its surroundings. It is set back from the street in a backyard situation, surrounded by housing developments that characterise this part of Winterthur. The urban orientation of the owner-occupied apartments is derived from the proximity of the old historic part of the town and the favourable transport facilities.

The project began with the vision of the blue colour. The architect's source of inspiration was the cobalt-blue villa belonging to the French artist Jacques Majorelle in Marrakech. The intention was to translate the Mediterranean intensity of colour into the Swiss environment. The architect envisaged using large cement composite panels and, by a lucky coincidence, the blue Carat panels were just in the process of being developed during the course of land and purchaser acquisition.

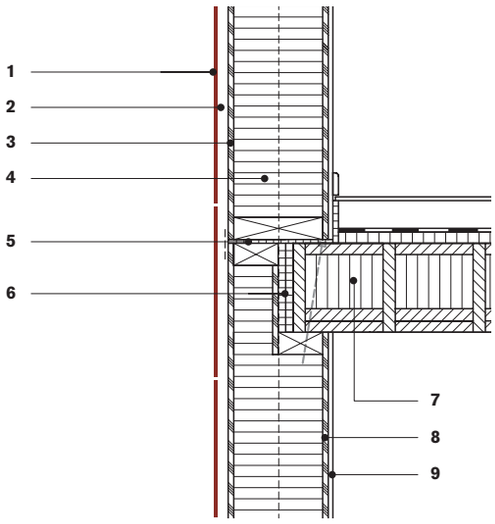
The building contains four apartments located on staggered floors in the two halves of the building. One side of the building has a saddle roof in the interest of a more advantageous utilisation, the other is topped by open roof terraces.

The basic blue colour is structured by black and white areas in order to make the units more legible on the façades. Dark grey stripes form vertical connections between the windows and horizontal links between the parapets. In addition, the gable area of the saddle roof is clad with white Swisspearl panels.

The panels of the exterior skin conceal a post-and-beam construction. The choice of timber was determined by ecological and economical considerations, but without the intention of giving the building a wooden look. The timber is in fact only visible on the ceilings of the inner rooms. Cement composite was used for the façades, a fact that made the weatherproofing usual for timber unnecessary. *Michael Hanak*

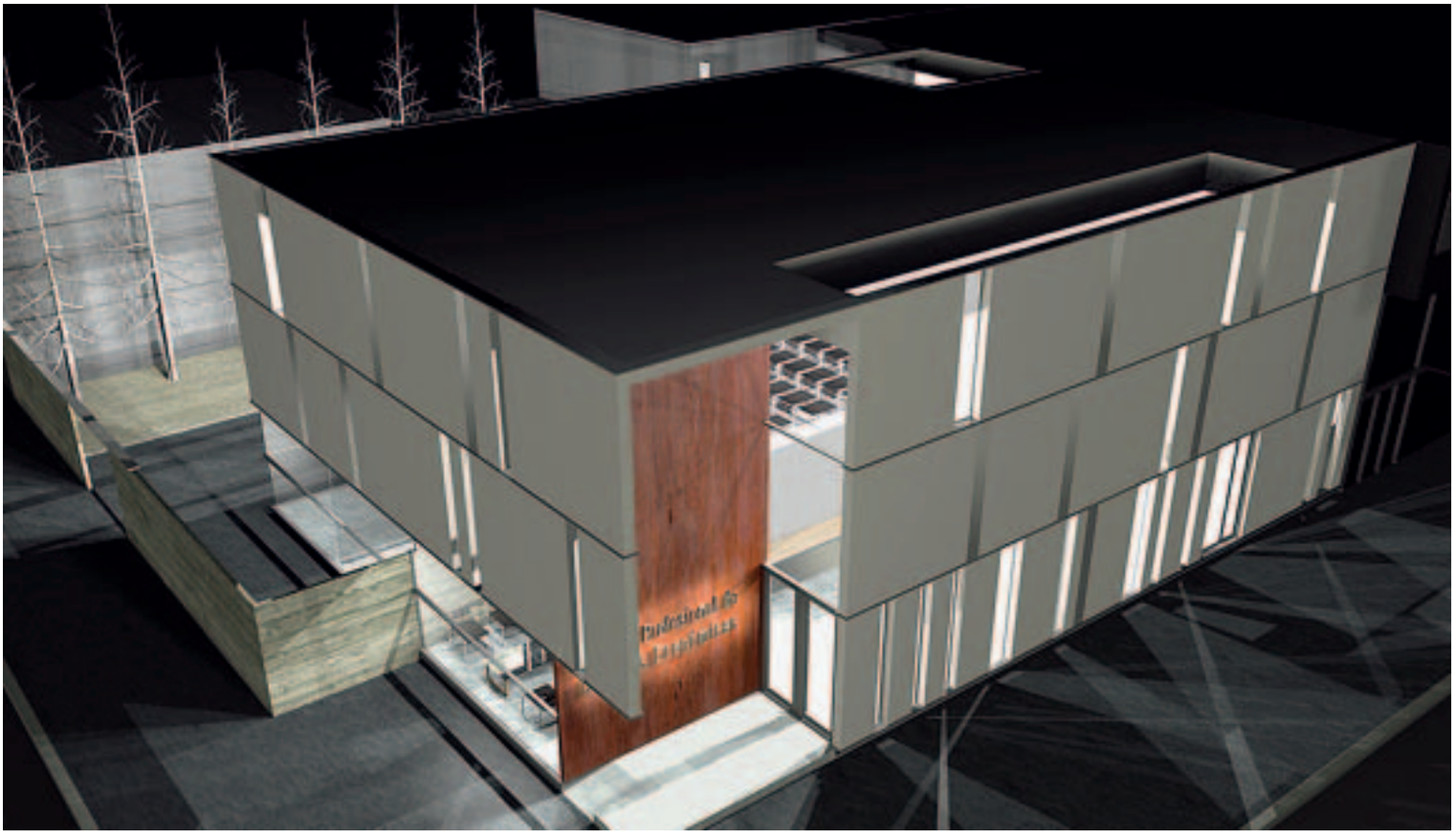
Location Zwinglistrasse 9, Winterthur, Switzerland
Client and project management Knecht AG, Oberwil; Erwin Knecht, Jürg Knecht, Samuel Erny
Architect Hans Suter, Woodarc, Winterthur
Building period 2004–2005
Contractor Lerch AG, Winterthur
Façade construction and carpentry Knecht AG, Oberwil
Façade material Swisspearl® Carat, Azurite 7040, Black Opal (Anthracite) 7020 and Onyx (Ivory) 7090

1 Swisspearl® cement composite panel
2 Rear ventilation 27 mm
3 Insulating fibre board, porous 25 mm
4 Wooden uprights 240 mm, rockwool infill 240 mm
5 Cork scrap panel 10 mm
6 Insulating strip 2 × 20 mm
7 Box element filled with sand
8 Pressed wood panel 14 mm
9 Fibreglass reinforced plaster panel, infilled and plastered



Vertical section 1:20

Economic Science Building, San Francisco, Argentina
A carefully perforated box

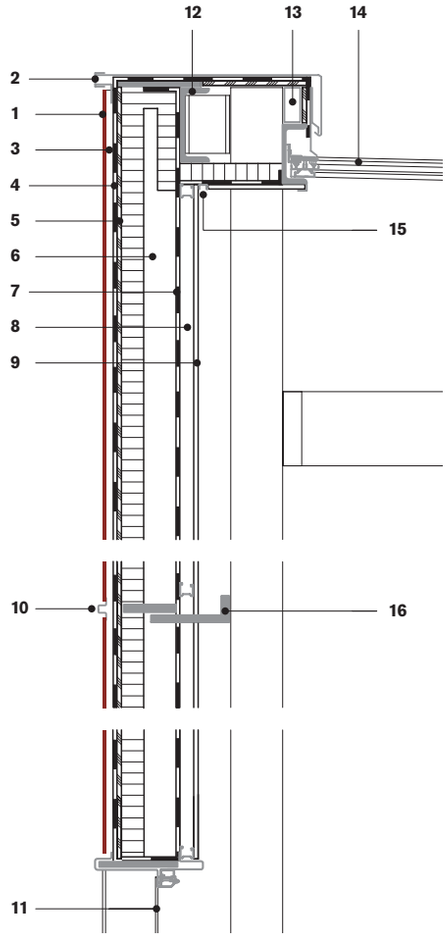


In the late summer of 2004, the professional council of economic science (Consejo Profesional de Ciencias Económicas, in brief: CPCE) launched a competition for its new branch in San Francisco in the central Argentinean province of Córdoba. The winning project by the architects Benito, Costamagna and Ariztimuño is currently under construction and is expected to be completed this spring.

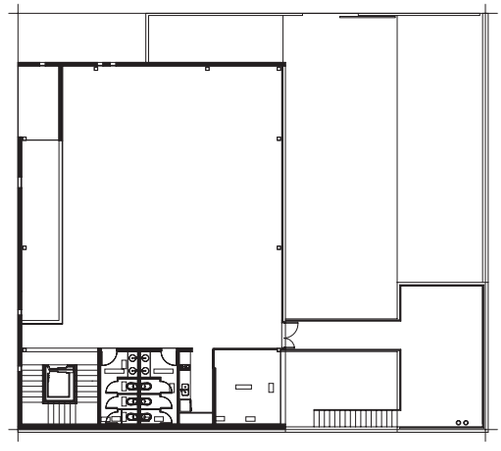
The core of the concept is a free ground plan divided by items of furniture and moveable partition walls to provide flexibility for future changes of use. Two access axises accentuate the ground plan and give it a spatial structure. One of the axises connects the entrance in the northwest corner of the building with the stairs in the southwest. It represents an actual "circulation hall" extending over the two storeys and is lit from above. A second axis is set at right angles in the stairs area, separating the services rooms from the main rooms and leading to the courtyard. An auxiliary entrance makes it possible to use the lecture hall on the upper floor independently of the offices and the library on the ground floor. The fact that the courtyard is intended as more than a mere car park is indicated by the *Quincho*, the traditional Argentinean grill area that the architects located in the southeast corner. Its roof serves as a terrace and is connected to the lecture hall by a bridge.

In view of the summer temperatures of around 45 degrees, the design of the main façade facing west represented a real challenge for the architects. They met it with extensive façade panels that serve as insulation against the heat while providing views of the street through the intermediate spaces at the same time. The same principle is used for the north façade, whereby the proportion of the transparent surfaces constantly increases. The east courtyard façade is completely glazed. *Patrick Zamariàn*

1 Swisspearl® cement composite panel
2 Stainless steel cap over galvanized metal coping
3 Ventilated void 30 mm
4 Waterproof membrane
5 Plywood backing board 15 mm
6 Structural framing, 70 mm thermal insulation board
7 Vapour barrier
8 Galvanized metal supporting system
9 But jointed gypsum plaster board to internal face
10 Mat finished stainless steel joints, lintels and sills
11 Laminated tinted glass 4+4 mm
12 "C" steel beam 200 mm
13 Rectangular metal tube to back copping
14 Glazed roof over entrance hall
15 Aluminium recessed joint to gypsum plaster board capping
16 Tie steel plate to metal column welding a 20 mm metal plate bent to given dimensions

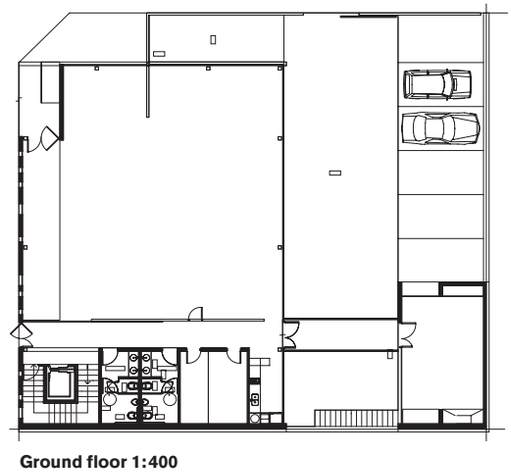


Vertical section 1:20



First floor 1:400

Location Av. Del Libertador, San Francisco, Argentina
Client Consejo Profesional de Ciencias Económicas, San Francisco
Architects Roberto Alejandro Benito, Carlos Alberto Costamagna and Oscar Alfredo Ariztimuño, San Francisco
Building period 2004–2006
Façade construction Grupo T, Cordoba
Façade material Swisspearl® Carat, Onyx (Ivory) 7090



Ground floor 1:400

Atmosphere with aesthetics

Cement composite is being used increasingly for internal finishing. The latest production generation of coloured panels has created new possibilities. The unique material character can be used specifically as a design parameter to generate a certain atmosphere. The determining criteria for the choice of material are, in addition to the practical requirements, the aesthetic qualities: Swisspearl panels exude a unified, high-quality expression.

Interior spaces should have an atmosphere of their own. This determined the choice of materials with a specific emanation. Cement composite has a direct, stony aspect. Current applications with Swisspearl panels often evidence virtuoso, complex forms and bear witness to the multifaceted possibilities of the material.

▲ House entrances require long-lasting materials. Swisspearl products are particularly appropriate owing to their uncomplicated, unpretentious ambience. In addition, they are suitable as wall cladding in both interior and exterior areas.

▲▲ Cement composite panels can be used as cladding material on interior and exterior walls. They are frequently used to create a fluid transition between indoors and outdoors. The continuity of the material can contribute to the interconnection between the rooms.

Publisher
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Design *Bernet & Schönenberger, Zurich, Switzerland*
Proof-reading *Barbara Raschig, Zurich, Switzerland*
Printed by *Südostschweiz Print AG, Chur, Switzerland*

Photos
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ISSN 1661-3260

Cement composite panels Swisspearl® Carat, Reflex, Xpressiv, Natura and Tectura are only manufactured in Switzerland by Eternit (Schweiz) AG.
Due to the new global naming concept for the extended Swisspearl range, four colours were renamed. The previous names are mentioned in brackets.

Argentina Economic Science Building, San Francisco

Canada Scarborough Campus, University of Toronto

Czech Republic Single-Family House, Ricany

Denmark The Cones Housing Estate, Jyllinge

El Salvador Cinema Complex, San Salvador

Italy Research Centre, Lodi

Mexico Commercial Centre, San Pedro Garza García

Portugal Residential and Business Building, Estoril

Slovenia Airport Parking, Brnik
Social Housing Development, Ljubljana-Polj

Sweden Fish Shop and Restaurant, Kivik
Lillgrund Multi-Family Residence, Malmö

Switzerland Residential Building, Winterthur

USA Student Recreation Center, University of Cincinnati

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