5.1
The Mediated Metropolitan Shock

Fig. [5.1]

Concept 5: The 'Mediated Metropolitan Shock'

> 'Architecture in the megalopolis may be more about finding unfamiliar solutions to problems than about the quieting, comforting solutions of the established community.' Tschumi (1997:16)

Shock value is an indispensable tool we have to communicate in an era of generalised information. We are bombarded with thousands of images everyday and it is inevitable that repetitive images loose effect and our attention too. Shock value is used daily in various industries such as the fashion and advertising industries.

When discussing the repetition of images Tschumi (1997:16) draws the conclusion that their interchangeability makes them negligible. However, images that have a certain shock value allow them to stand out - due to their surprise factor. He links this occurrence to the characteristics of our contemporary condition, and the dangers of life in the city. There is a constant anxiety about finding oneself in a world in which everything is insignificant and gratuitous. The experience of such anxiety is an experience of defamiliarisation.

Tschumi (1997:16) links a person's aesthetic experience to actively keeping the defamiliarisation alive as contrasted to its opposite; familiarisation, security and *geborgenheit*. This brings us to the historical and philosophical dilemmas of architecture:

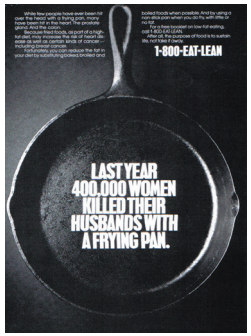
whether architecture is meant to defamiliarise – 'a form of art' or on the contrary, something that is meant to be comforting, homely, something that protects?

There are two extremes that are in constant opposition:

The general public sees the role of architecture as refamiliarising (this occurs when images of our architectural past are reaffirmed by using certain elements as ornament). In the public eye architecture is about comfort, about shelter, about bricks and mortar.

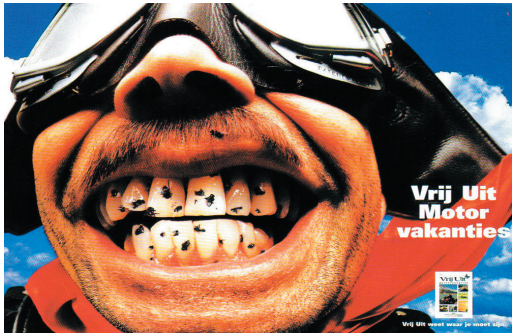
But for certain people, most likely architects and architectural students, it is about advancing society and its development, not necessarily about geborgenheit. To this group of people the device of shock may be an indispensable tool. "It is those who see architecture of our cities as places of experience and experimentation, as exciting reflections of contemporary society. Those who like things that deconstruct and self-destruct." (Tschumi 1997: 16)

The latter opposition would imply that an event should be made out of urban shock, to intensify and accelerate the urban experience through clash and disjunction (Ibid.).



[5.2]

[5.3]



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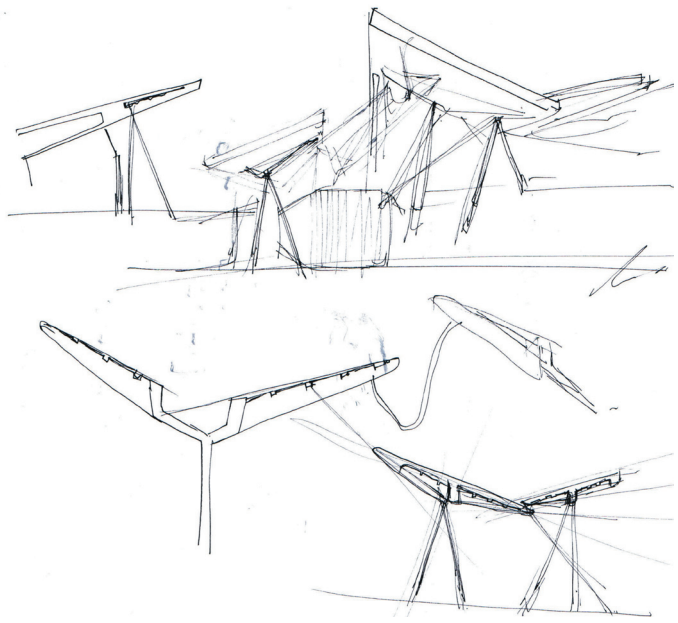


[5.5]

Shock value in the project

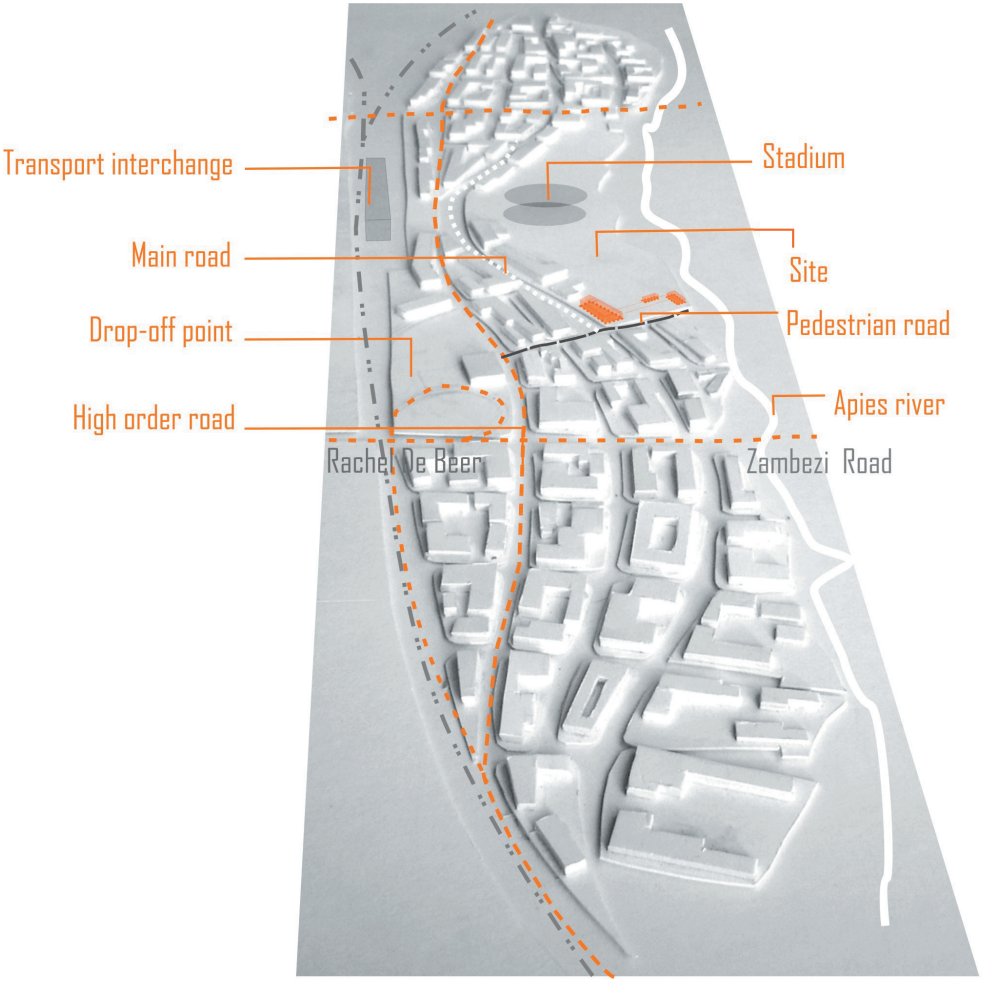
The design development is aimed at producing the surprise factor that makes the building different from known and repetitive images, so that the user will be jolted into seeing what architecture in the city is about. The greatest challenge of this dissertation is the lack of a built context, this factor leads to a further challenge of creating a suitable language for the building. The quest for a language is rooted in the primary experience of space. The language of the building responds creatively to the issues of anonymity and facelessness in today's culture, through a pursuit of the radical tectonic. 'The radial tectonic values the capacity of the individual to invent and build empathetically within our physical and cultural environment '(Frampton 1996:22).

The sports administration building is utilised as a podium for experimenting with the experience architecture in the city. The design resolution intends to offer an unfamiliar solution to a combination of problems. The element of shock will be achieved by keeping defamiliarisation alive. The building aims to challenge the experience of architecture in the building and unravel a different perspective to the user.

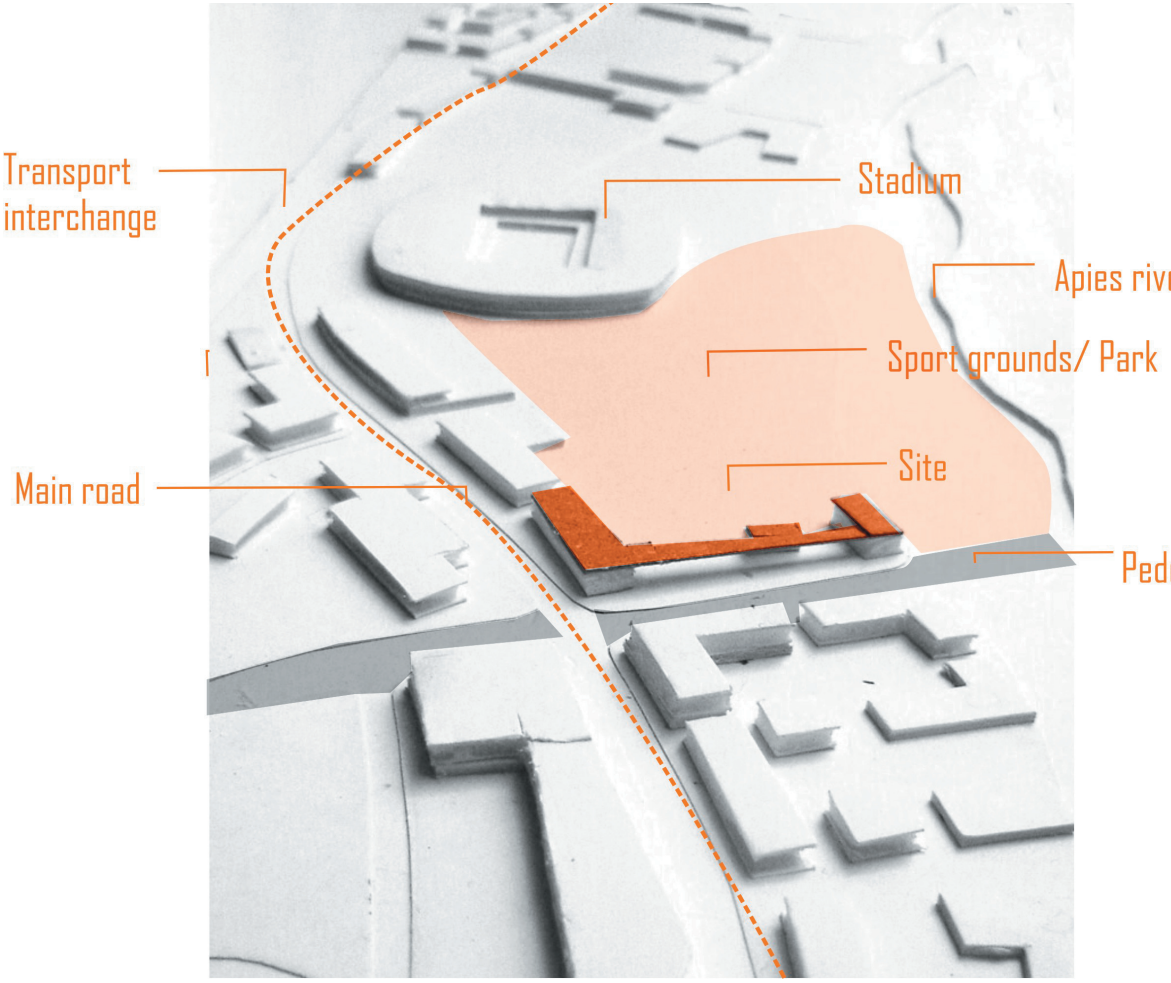
Conceptual development

INFLUENCE OF THE PRECINCT ON THE BUILDING

Within the stipulated context, movement is generated along the main road influencing the main façade of the administration building. The visual link from the various roads towards the river is acknowledged through the passageways located between the building on the main road. Through these passageways, the



5.6 Wider Context of the Site



5.7 Study Area

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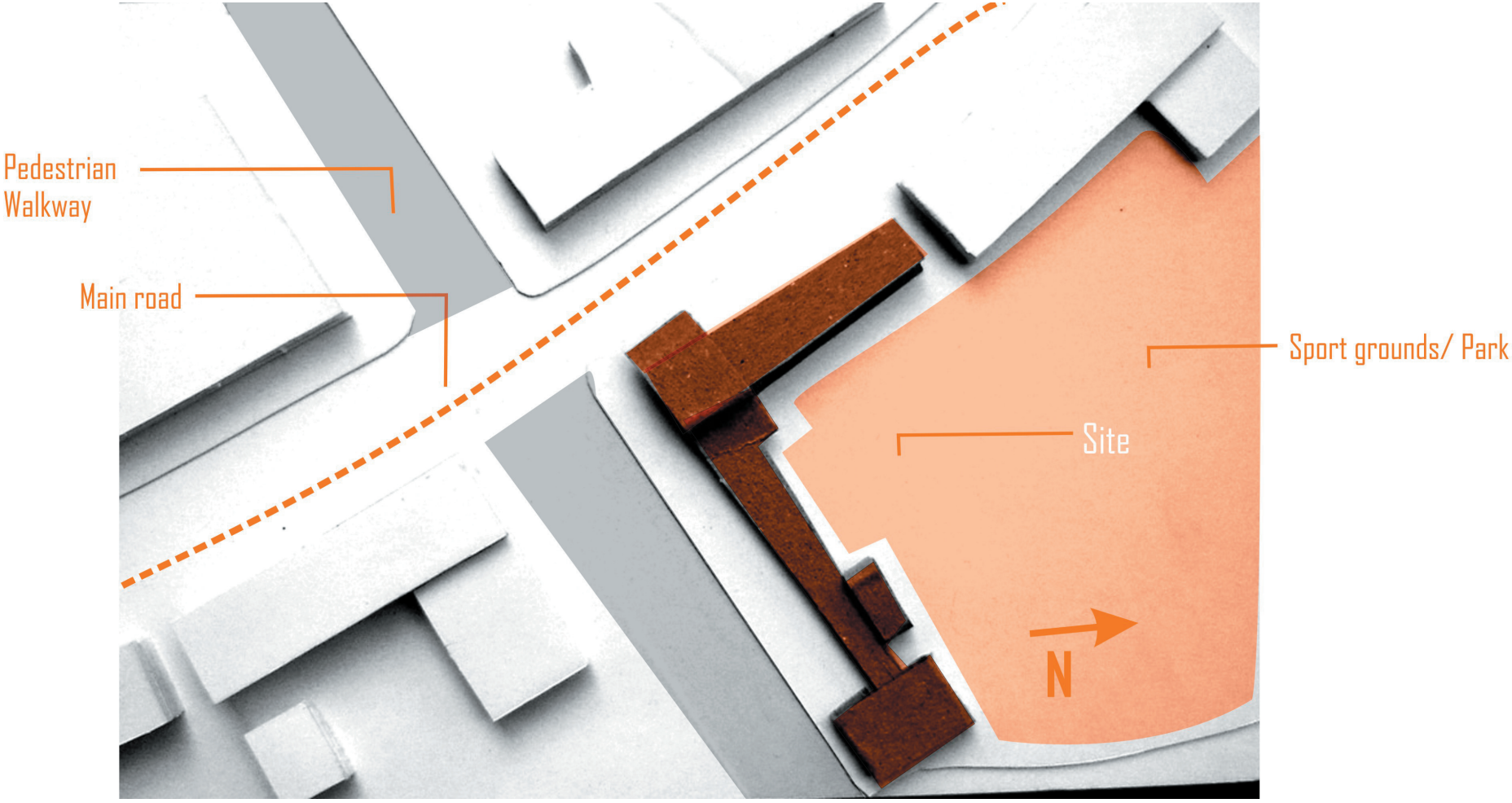
estrian

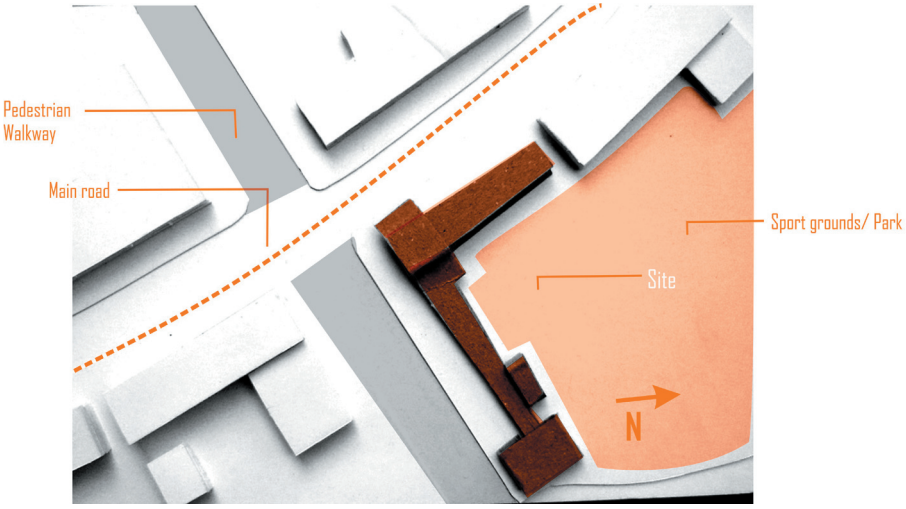


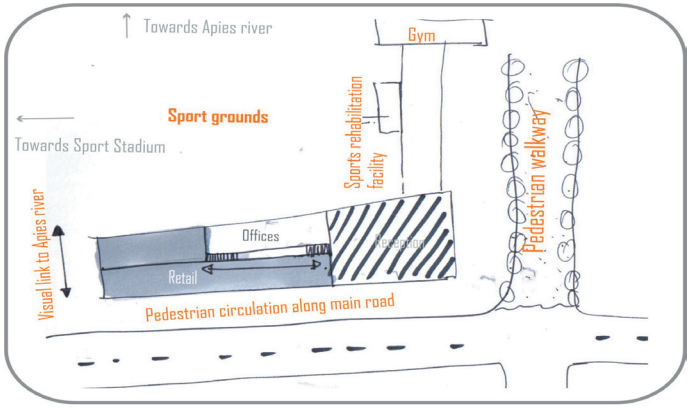
5.8 Immediate Context of the Site

commuters will gain access to the public green space along the river. The north-western facade of the building offers a covered walkway which focuses the attention of the pedestrian on towards the river.

The main road motivates movement past the building on a daily basis. However, on days of sporting events, commuters will journey towards the stadium filtering through the precinct towards the soccer stadium. The pedestrian drop-off point along the MI high order road is linked to the sports grounds (the Apies River) by the use of the pedestrian walkway. The walkway channels commuters to pass the southern side of the building. Once the pedestrian passes the building, the walkway leads down to the river and reveals the sports ground and park to the pedestrian. The south eastern façade of the building is solely experienced on foot.

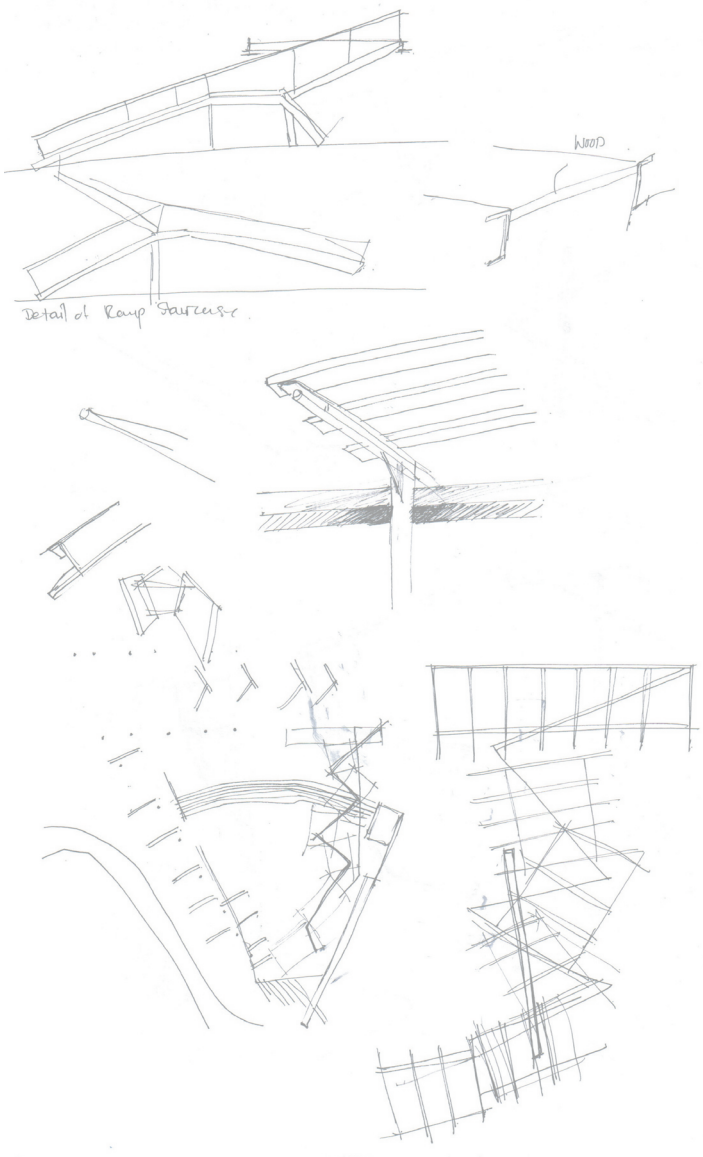
The main road façade aims to excite and invite the passer-by and has a hard interactive street edge defining the public interface. The permeability of the main road (south-west) facade creates a security risk for the shops located on-street. The western aspect of the sun will result in direct solar heat gain in the afternoon that will create an uncomfortable thermal climate within the building.

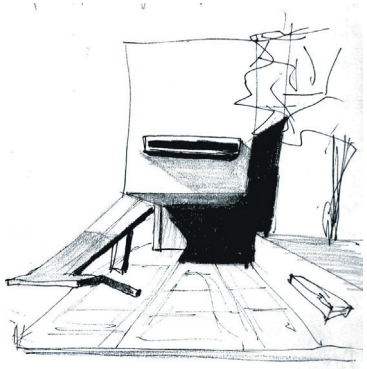




5.9 **Top Right:** The Site

5.10 **Right:** Conceptual Layout of the Facilities and the Sports Administration Building





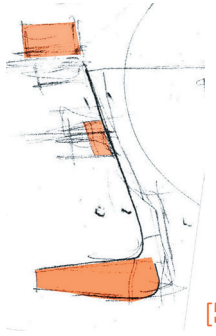
[5.11]

5.12 **Bottom Left:** Intergration of the Sports Facilities into the Landscape
5.13 **Bottom Middle:** The Sports Development Facilities in relation to the Natural and Man Made Green Spaces
5.14 **Bottom Right:** Conceptual Sketch of the Sports Administration Building and the Immediate Context

CONCEPTUAL DESIGN

The postulated context, the precedent studies along with an intensive study (and sketching) of structures and buildings, informed the conceptual design of the building. The conceptual design is a result of intuition, desire and constraints of the particular building and site.

The first conceptual structure design questions the foundations of structure and breaks away from the conventional vertical load distribution system. This idea has remained constant throughout design development. The concept design takes form from the opportunities and constraints of the site. The initial idea was a single centre to host the various aspects of the programme. After the initial design, the programme was divided into three buildings and distributed into the landscape. The three buildings are the main administration building (on the main road), the sports rehabilitation centre and the sports performance centre (within the sports grounds).



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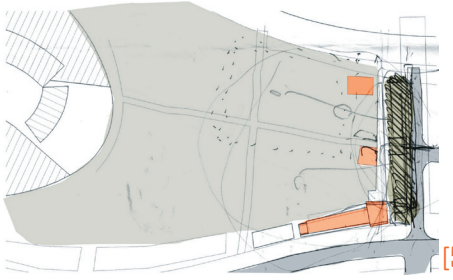

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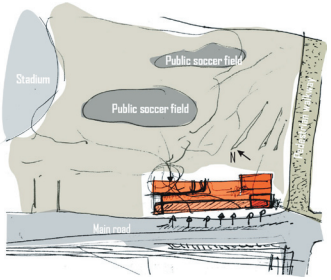

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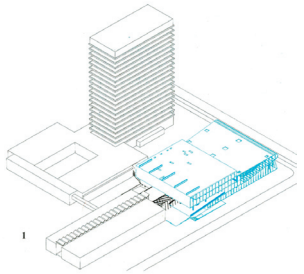

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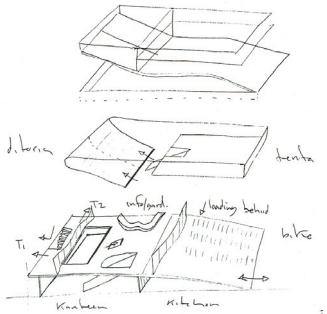

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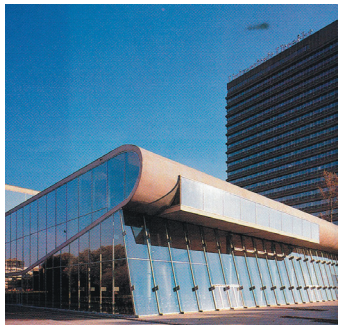
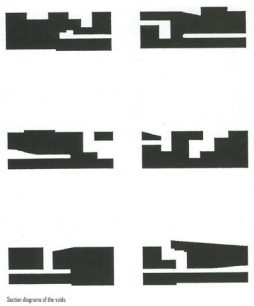


[5.17]

5.15, 5.16 & 5.17 Educatorium Designed by Rem Koolhaas (OMA), Utrecht, the Netherlands

5.18, 5.19 & 5.20 Villa VPRO Designed by MVRDV, Hilversium



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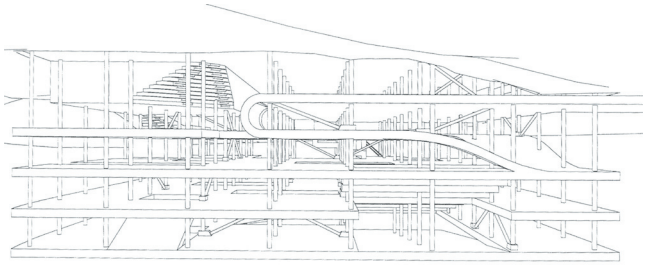

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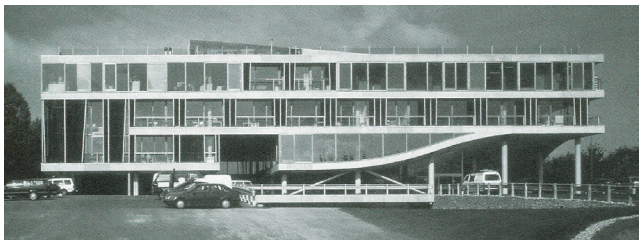


[5.20]

The second theme that emerged in the concept design was the curved shapes of the mass in the building. This theme remains noticeable in the final execution.

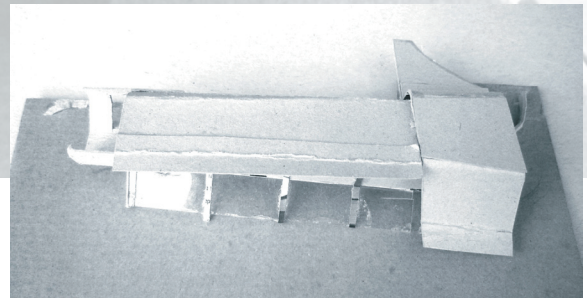
Precedents were sought that dealt with folding planes and alternative load distributing systems. In the Educatorium, Utrecht by Rem Koolhaas (OMA) both the folding planes and a diagonal distribution system are used. Rem Koolhaas (1996:26) reacts on folding planes with regard to 'Bibliotheque de France :'It became clear, looking at the section, that if you conceive the major elements of the building as voids, you are allowed much greater potential. The floor could come around turn up, become a wall, then a ceiling, turn around on itself, become another wall and then the floor again.' In MVRDV's Villa VPRO, Hilversum we find a similar study on the voids in the building. Here the different types of spaces are stacked, eliminating long corridors. The voids combine light and air with views of the surroundings. (MVRDV 1997:94)

The conceptual design comprises of an extruded concrete folded plane supported on H – shaped structural steel columns. The revised conceptual design exploits the folding planes and voids within the building. The first floor (folded concrete plane) hosts the formal functions of the administration building. The two lecture rooms, office space and auditorium are defined and have circulation space between the various rooms. Three of the rooms slope at an angle to create seating for the audience. The voids are used as circulation space and it allows movement towards the rooms and even passes underneath the facilities. This concept is closely related to the superimposition of events within the building. The conceptual design evolved through various stages and design refinement.

[5.21]

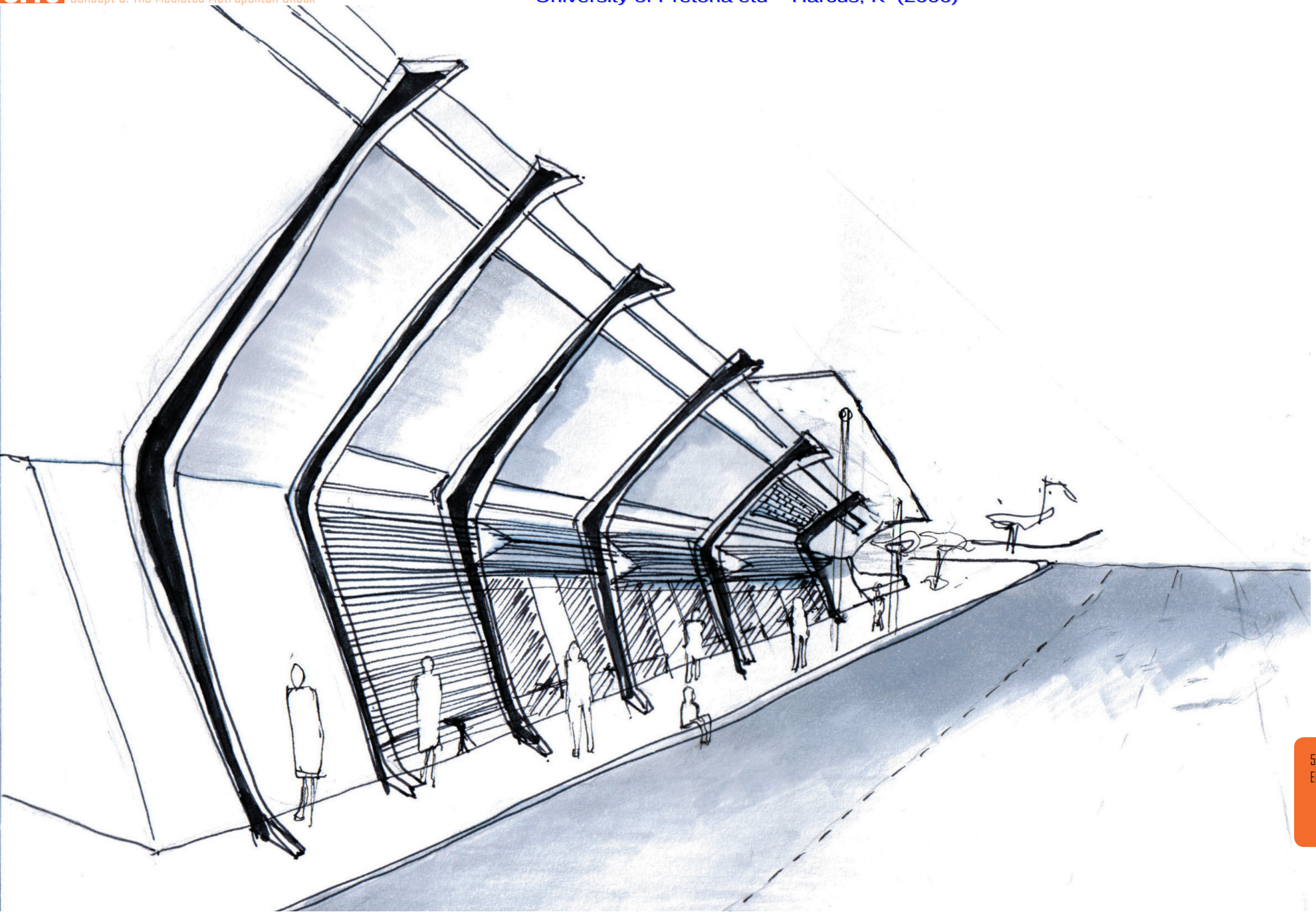
5.21, 5.22 & 5.23 First Conceptual Model

[5.22]

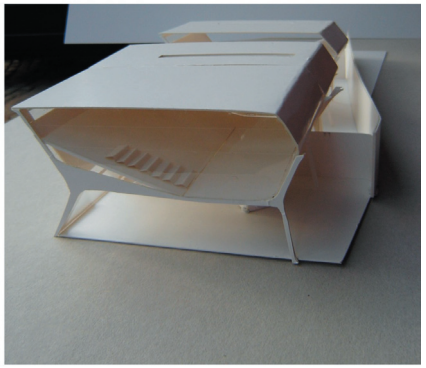


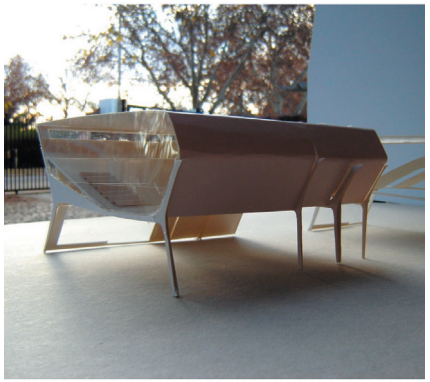
[5.23]

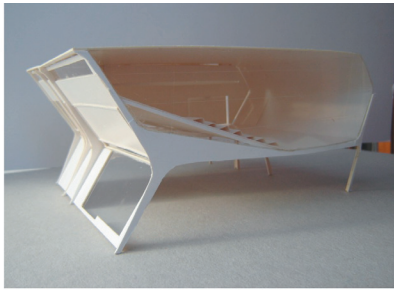
[5.24]



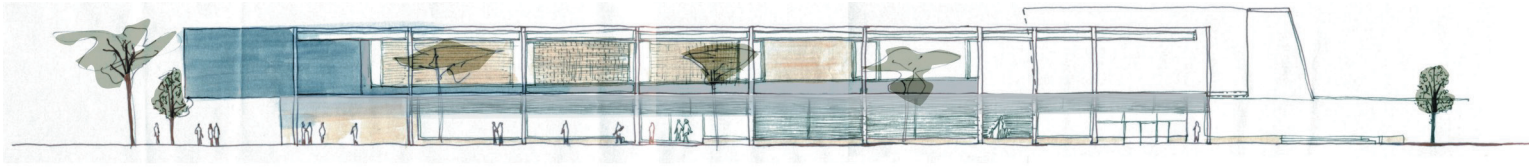
5.24 Perception of Street Elevation



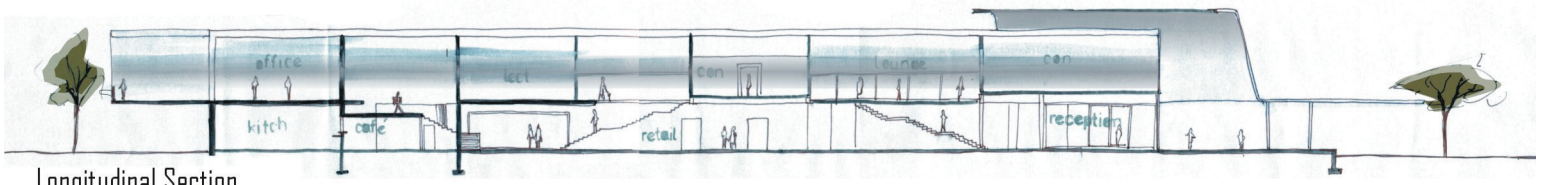




5.25 Second Conceptual Model to Explore Spaces within the Building



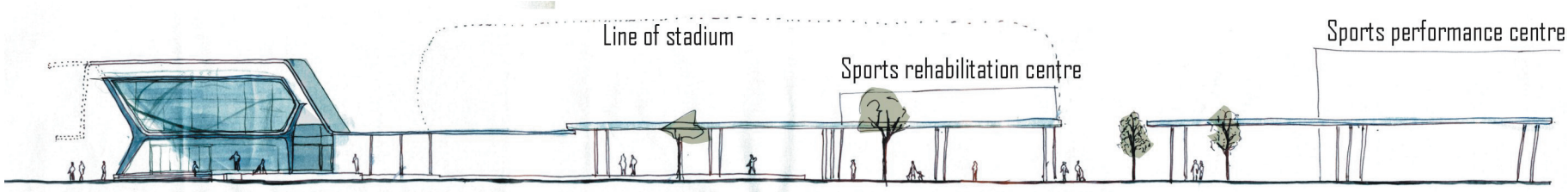
South-Western Elevation



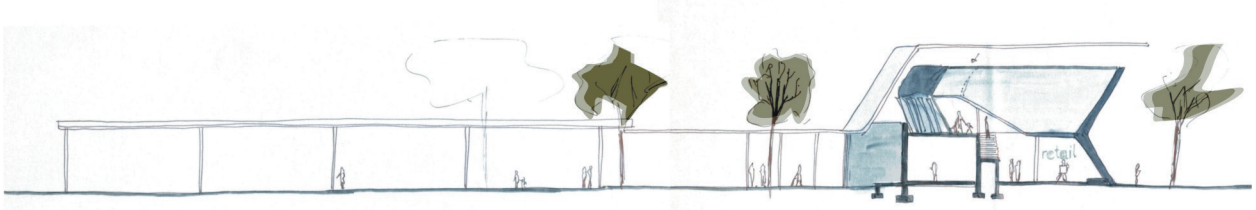
Longitudinal Section

5.26 Initial South-Western Elevation

5.27 Initial Longitudinal Section



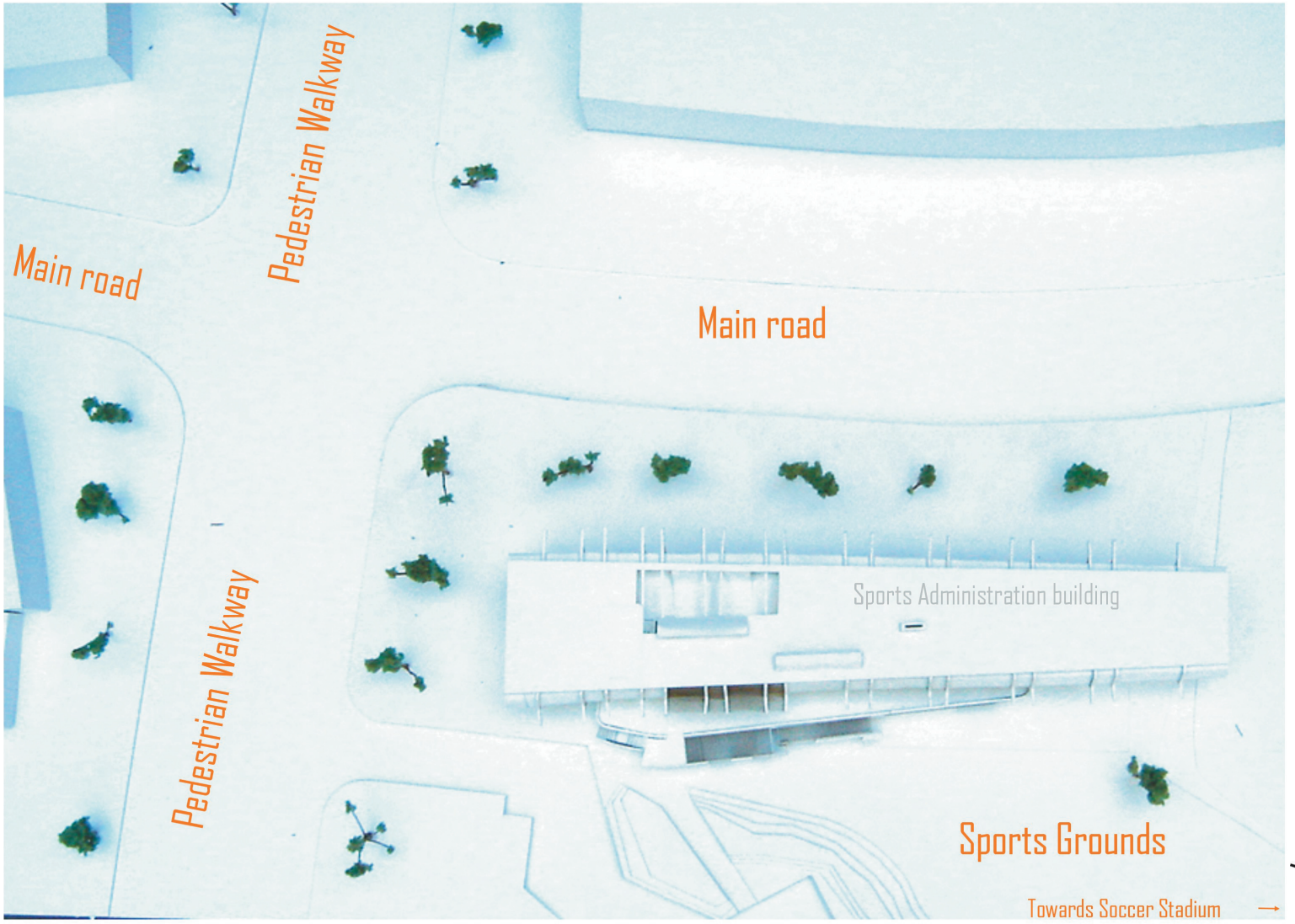
South- Eastern Elevation



Cross Section

5.28 South-West Elevation

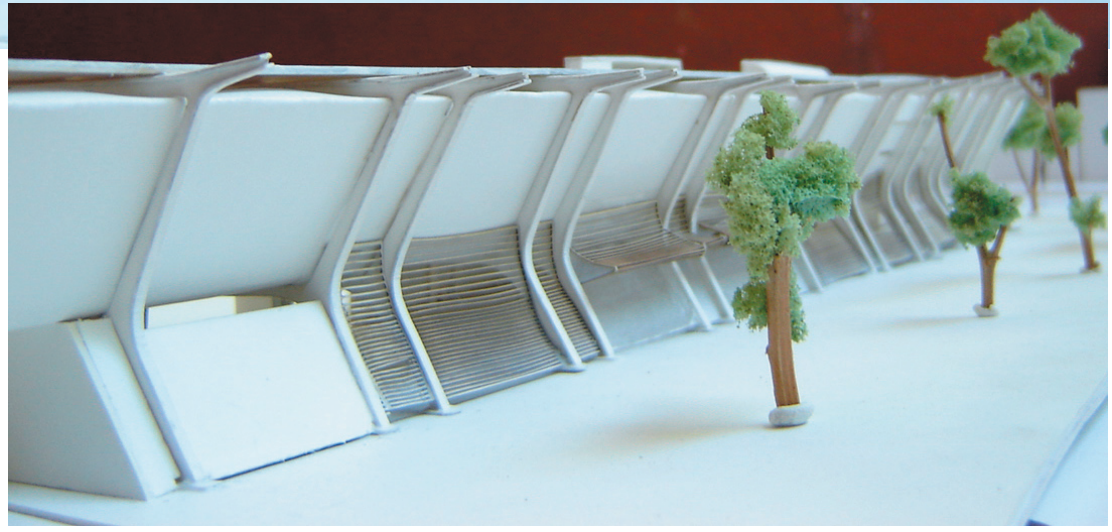
5.29 Cross section

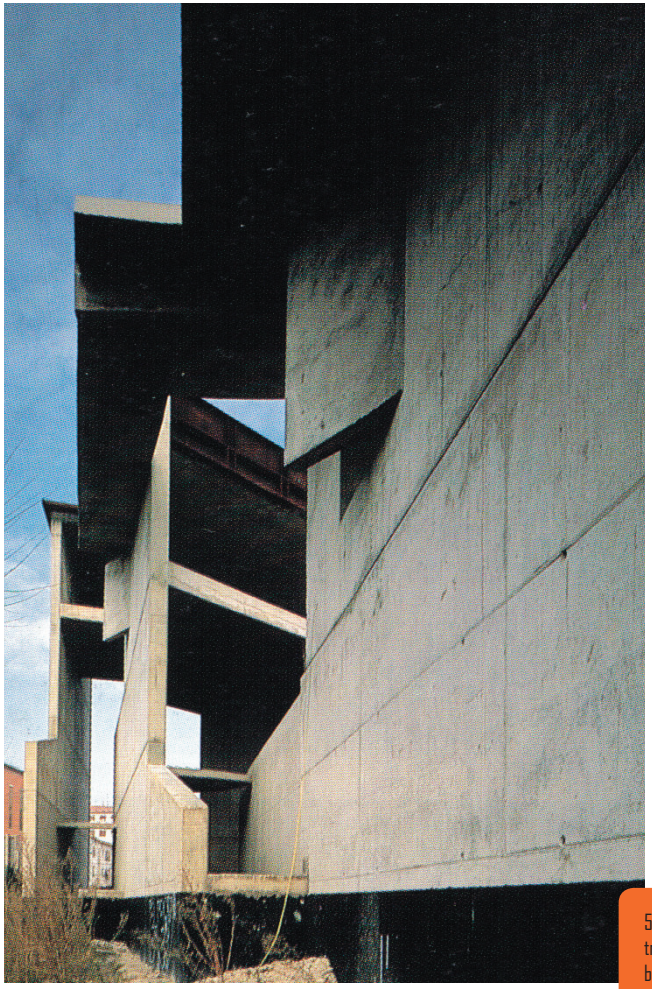


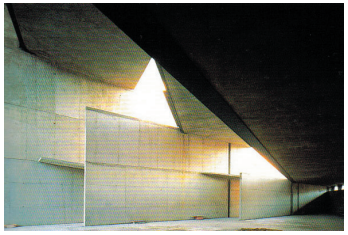
5.29a An Annotated Model of the Site and Immediated Context

5.29b View of the Building from the Apies River (North Eastern Side)

5.29c The Main Road Facade (from the South-West)







5.30 Hostalets Civic Centre, Barcelona, Designed by Enric Miralles and Carme Pinos

Final design

The main road façade of the building has a distinct concave shape that is punctuated with protruding steel structural columns that articulate the shape. The structural steel columns are spaced in relation to the increasing dept of the building. The building depth on the northern end is fairly narrow, increasing in depth towards the southern end. The columns are spaced to reveal their structural function to the viewer and related closely to the dynamic function of the sports facilities. The steel columns have an accelerating intention from north to south where the main entrance is located (as discussed under de-structuring).

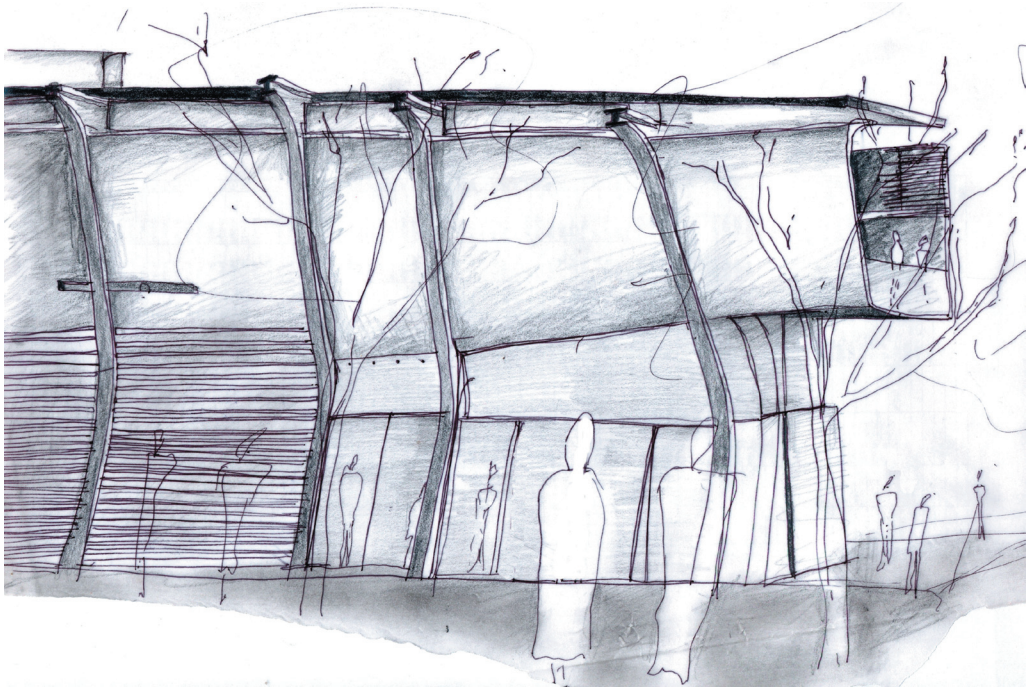
The upper section of the façade is made of a smooth finish in-situ concrete that suggests cover over the building's public interface at ground level. The lower part of the façade consists of diagonally angled panes of glass and sliding doors. The entrances are in fact sheltered from rain and sun with wooden slatted sunscreens. The sunscreens have the dual purpose of eliminating direct solar radiation, and acts as a security screen. The wooden slats are closely spaced at the bottom with increasing spaces towards the upper ends. The slats echo the vertical acceleration of the steel columns although it is in a horizontal plane. The screen can be locked, while the sliding doors on the inside are opened to allow airflow through the slats.

The interior of the building hosts a complex programme of events that have been superimposed to allow for unexpected events to occur. The ground floor is host to the public functions of the building, a restaurant, café, sports retail and the sports administration offices. The spaces allow

for crossprogramming between events as discussed under the chapter crossprogramming. Portions of the circulation space on the ground floor become voids that have double volume qualities. The voids allow visual connectivity to most functions of the building. The visual connectivity is achieved through the application of vertical superimposition. Miralles and Pinos's Civic Centre in Barcelona fig. [5.30] was used as precedent for interaction between users of a building, Curtis (1999:15) describes the centre as an institutional interpretation which insists upon such values as communal interaction and casual meeting. 'It is a building, which seems to imply social emancipation and participation'.

The threshold between the pavement and the ground floor is seamless. The floor finish upon entering is a highly polished epoxy mortar finish. The structural frames are exposed under the first floor concrete slab. Light streams in through the windows, that are located under the ceiling slab, giving the first floor floating qualities from within. Various functional spaces are experienced as a person moves through the building. The sloping slabs of the two lecture rooms interrupt the continuity of first floor slab. These interruptions open views from the ground floor to the formal activities of the first floor. The lecture rooms have glass panels along the side to allow visual interaction. The ground and the first floor have intermediate levels (the mezzanine level and the staircases) that allow movement between the floors. The user is able to visual interact, allowing a bird's eye view of the other functions. The first floor comprises of circulation space and the formal facilities that open onto a balcony. The circulation spaces are areas where events overlap, increasing the possibility of the unexpected event. The circulation space incorporates a lounge and waiting area. The balcony has an endless horizon effect with a clear glass balustrade. The balcony is an informal extension of the conference facilities also to be used in connection with the restaurant.

5.31 View from the South Towards the Main Entrance of the Building and the Sloping Auditorium



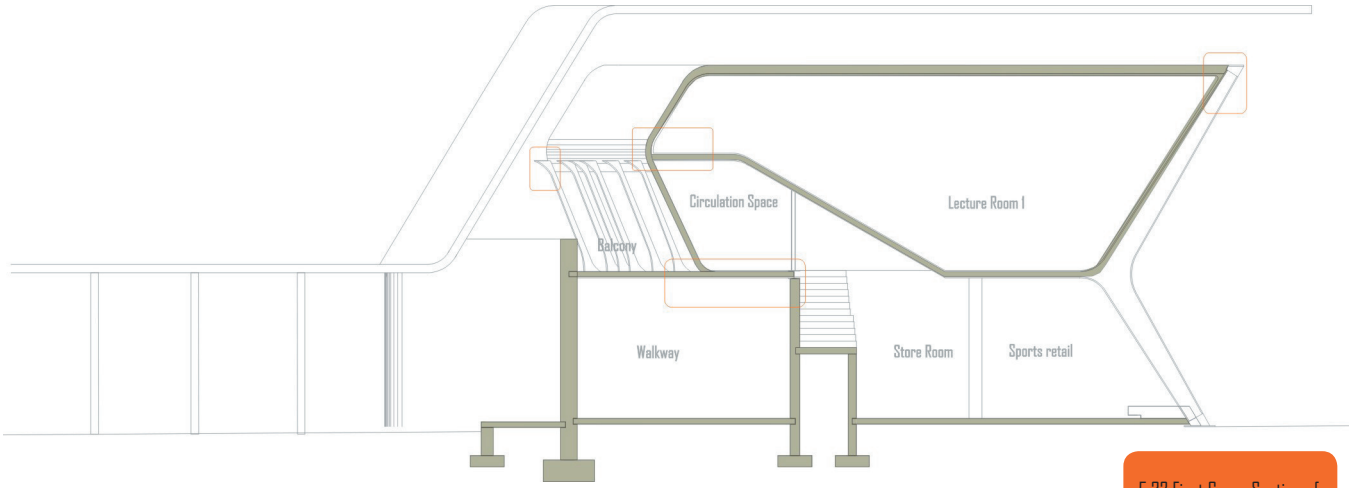
[5.31]

THE SECTION

Within the building, the structural system is revealed to the user, through honesty of construction. The section of the building was refined to reveal the concrete shape and the columns without cluttering the spaces with walls. The columns remain freestanding and simply support the concrete shape of the first floor. This allows the ground floor to become an infill of walls and glass. The main façade glass panels are set at an angle and are curved at the top. The lower parts of the glass panels are set in a steel frame, whereas the top of the curved glass is bolted to the side of the building. The connection between the first floor and the ground floor is made of glass, as not to fuse the distinct concrete shell with the rest of the walls. This allows the shell to remain distinguishable. The diagrams fig. [5.32+ 5.33] clearly indicate design refinement and development from conceptual section to the final product.

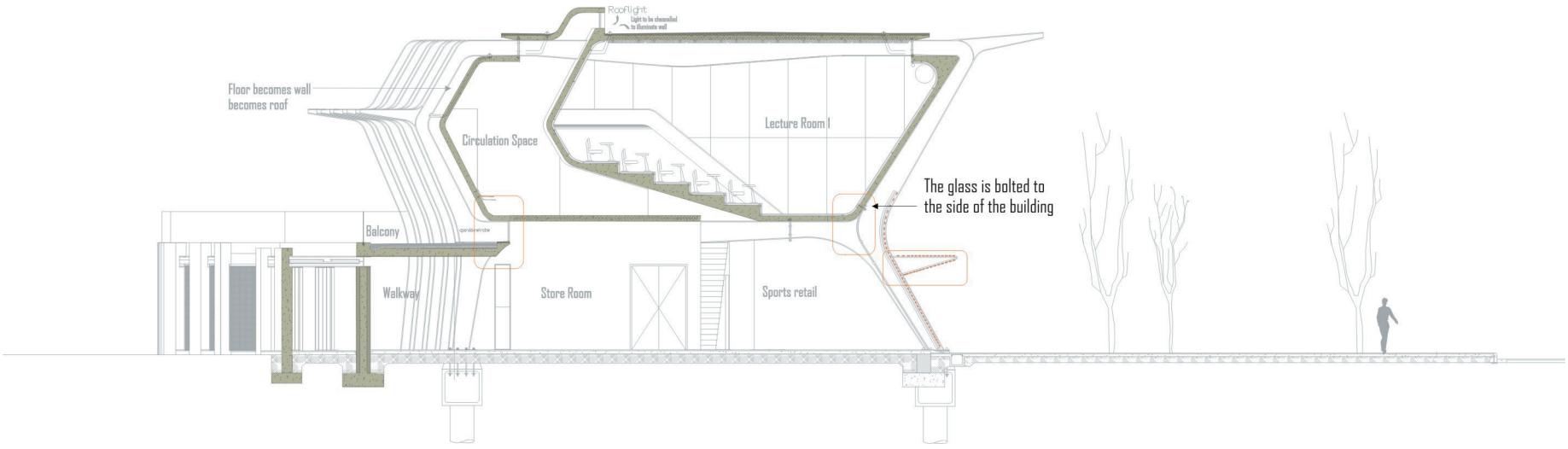
THE PLAN

The plan of the building was fine-tuned to reveal the curving nature of the walls in sections and to free the structural frames. The initial plan clutters the open plan with walls. The services in the building were another challenge, as the majority of the building's facades are interactive or at an angle. This was resolved by creating a central service core with curved walls that are reminiscent of the curving nature of the folded concrete slab. The approach was extremely successful, as it allowed the columns to be free standing, enhancing the aesthetic qualities of the structure. See pg 6.15 fig. [6.24].



5.32 First Cross Section of the Sports Administration Building with Problem Areas Encircled

5.33 Advanced Cross Section of the Sports Administration Building with Problem Areas Resolved



THE STRUCTURE

The structural design evolved increasingly towards the end of the design resolution. The frame originated as a simple H-like frame. The shape of the concrete shell had a great influence on the shape of the steel frames. The concrete curve and the steel structure had to work in unity with one another. The concrete fold in the auditorium of Rem Koolhaas's (OMA) Educatorium, Utrecht fig. [5.17] was used as a precedent for the concrete curve. The technical resolution of Educatorium proved inappropriate to the problems faced within the administration building. The Educatorium's steel structure is on the inside of the concrete fold, to allow the concrete to be as thin as possible.

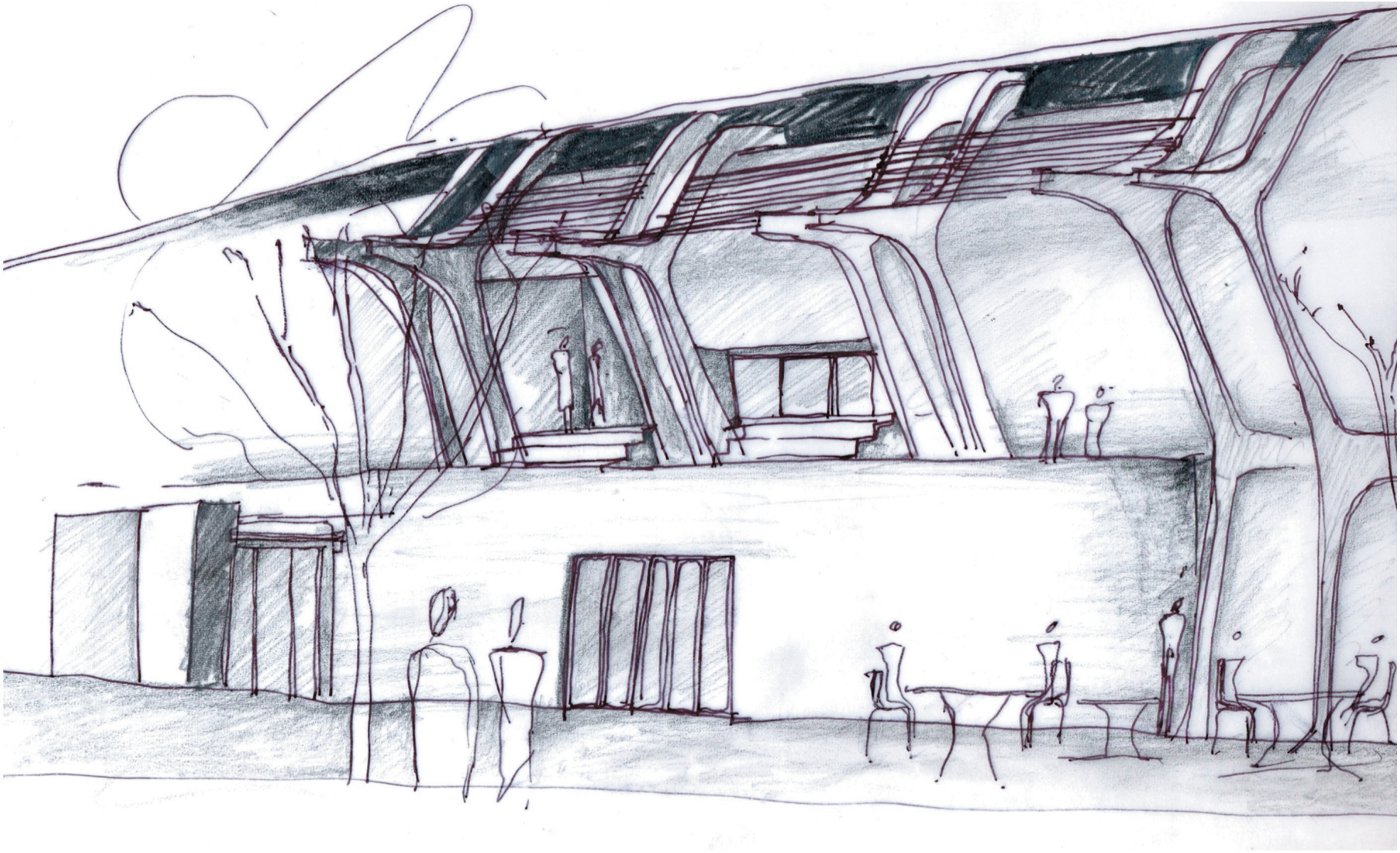
The steel structure later evolved to a portal frame, where the concrete shell lies within. The concrete roof spanned between the steel frames that aided in the reinforcing of the roof. This solution also proved inappropriate as there would be potential waterproofing problems at each connection between the concrete roof and the steel frame. The final solution was to split the roof and the sidewalls. The concrete shell remains on the inside of the steel frame, where the roof rests on top of the steel frame. The connection is made with glass, allowing light to enter under the roof. The concrete roof consists of prestressed hollow core concrete slabs, with waterproofing. The placement of the roof allows for the rainwater drainage pipes to be built into the hollow steel frames as discussed in the technical inquiry (refer to de-structuring p 6.21 fig. [6.28 & 6.29]).

INFINITY

The poetic theme in the building is that of infinity, seamlessness and endlessness. This theme is present in every aspect of the building. The beginning and the end of the longitudinal elevation of the building was considered. The building had to start at some point and have a definite end (infinity was not an option). After much deliberation, the auditorium was rotated 90 degrees from the initial design. This allowed for the auditorium on the southern end of the building to be elevated, simultaneously creating a double volume foyer for the main entrance. The northern end of the building creates a tension between the neighbouring building. The building ends in a balcony that acts as cover for the passageway on the ground floor. This end of the building reaches towards the neighbouring building as if to continue.

(This chapter focuses on the design development and should be read in conjunction with the technical inquiry in the chapter de-structuring.)

5.34 View from the Sports Grounds (North) Towards the Restaurant Area and the Main Balcony



[5.35]

[5.36]

5.35 Bird's Eye View of the Sports Administration Building

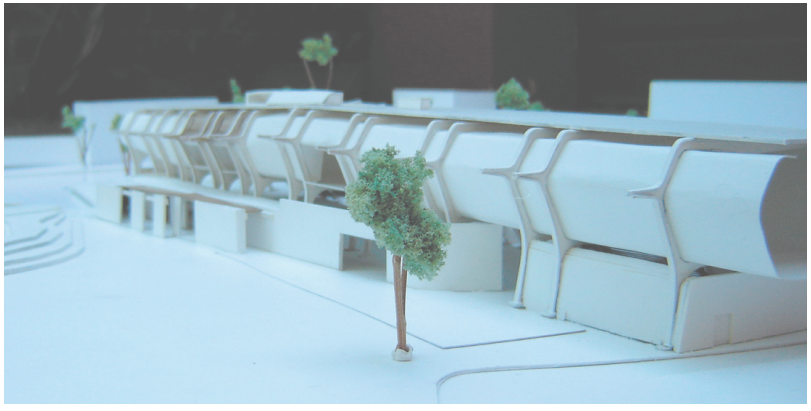
5.36 View from the Pedestrian Walkway

[5.37]

5.37 Bird's Eye View of the Sports Administration Building

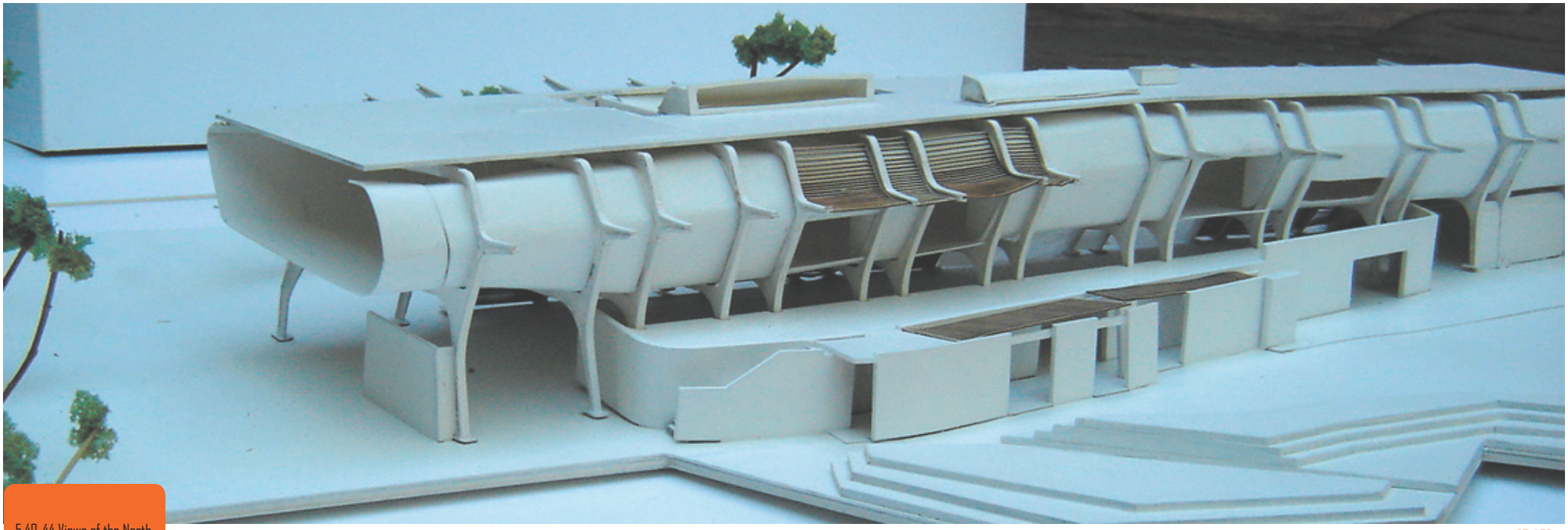
5.38 View of the North Eastern Facade of the Building

5.39 Main Road Facade (South-West)



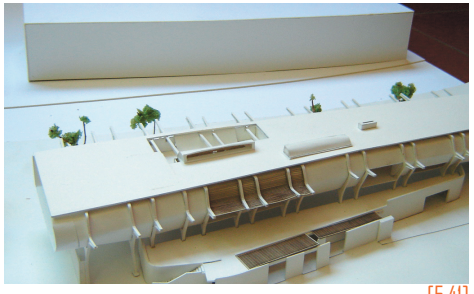
[5.38]

[5.39]



[5.40]

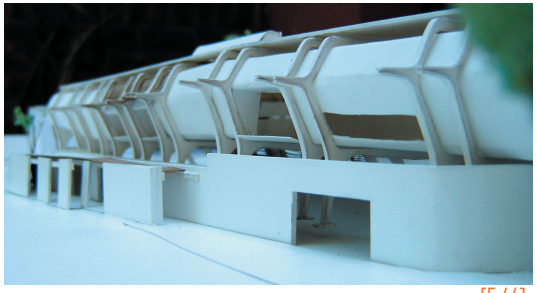
5.40-44 Views of the North Eastern Facade of the Building that Faces the Apies River and the Sports Grounds



[5.41]

[5.42]

[5.43]



[5.44]