

CHAPTER:



6

DESIGN _DEVELOPMENT



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The design intention of the original design brief written for this thesis document was only concerned designing a BRT terminal on the site at the Belle Ombre rail station identified by the BRT operational guide as discussed previously in this document.

After the investigation into the site and its context, together with the urban design theory, it was obvious that a larger intervention was needed to ensure that the building will become a public space catering for the various needs of the urban dwellers.

With the investigation of the site in its context, together with the study of urban design theory the accommodation list grew to accommodate the BRT, the inner city distribution bus, park and ride facilities (basement for parking ones car and using the BRT system), bicycle parking facilities, accommodating the informal traders on site together with the new small scale trading opportunities that will arise from the construction of such a system. Also let able space will be available for small businesses and transitional housing for people seeking short term housing.

The building thus evolved from being a mono-functional facility to being a structure that is multi-functional in its nature, defining space, creating a link between the various public transport systems and becoming a good public space for the urban dwellers.

The next section is to enable the reader to see the maturing of the design, from being a building that is very expressive in its nature to one that only seeks to ensure the basic need of shelter. Finally a balance was struck between the two original concept designs and the final product reflects the combination of the two, being a building that uplifts the area and caters for the needs of the people.



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Series of flowing spaces...

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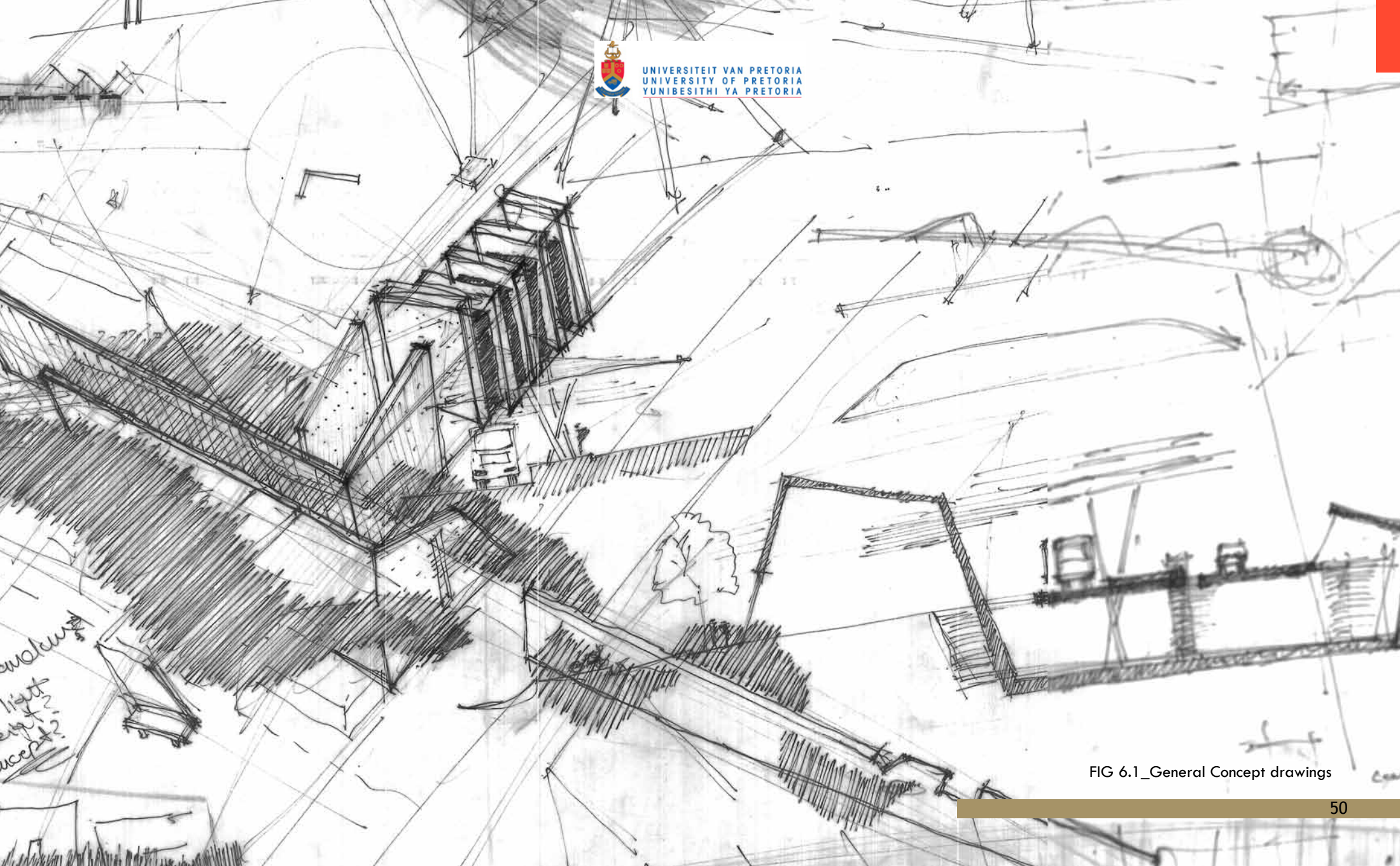


FIG 6.1_General Concept drawings

CONCEPT 1

The first attempt to solve the design problem quickly evolved into a structure that was concerned with the movement of commuters to and from the BRT platforms.

As the busses are expected to arrive every 90 seconds in peak time, sky bridges and tunnels were created in order to ensure the safe passage of the people. This idea was soon scrapped as bridges and tunnels are very unaffected ways of moving to and from a destination, as it adds a great distance to the route. Also it creates dangerous pockets of spaces that are unsafe and due to its lack of visibility of the public eye.

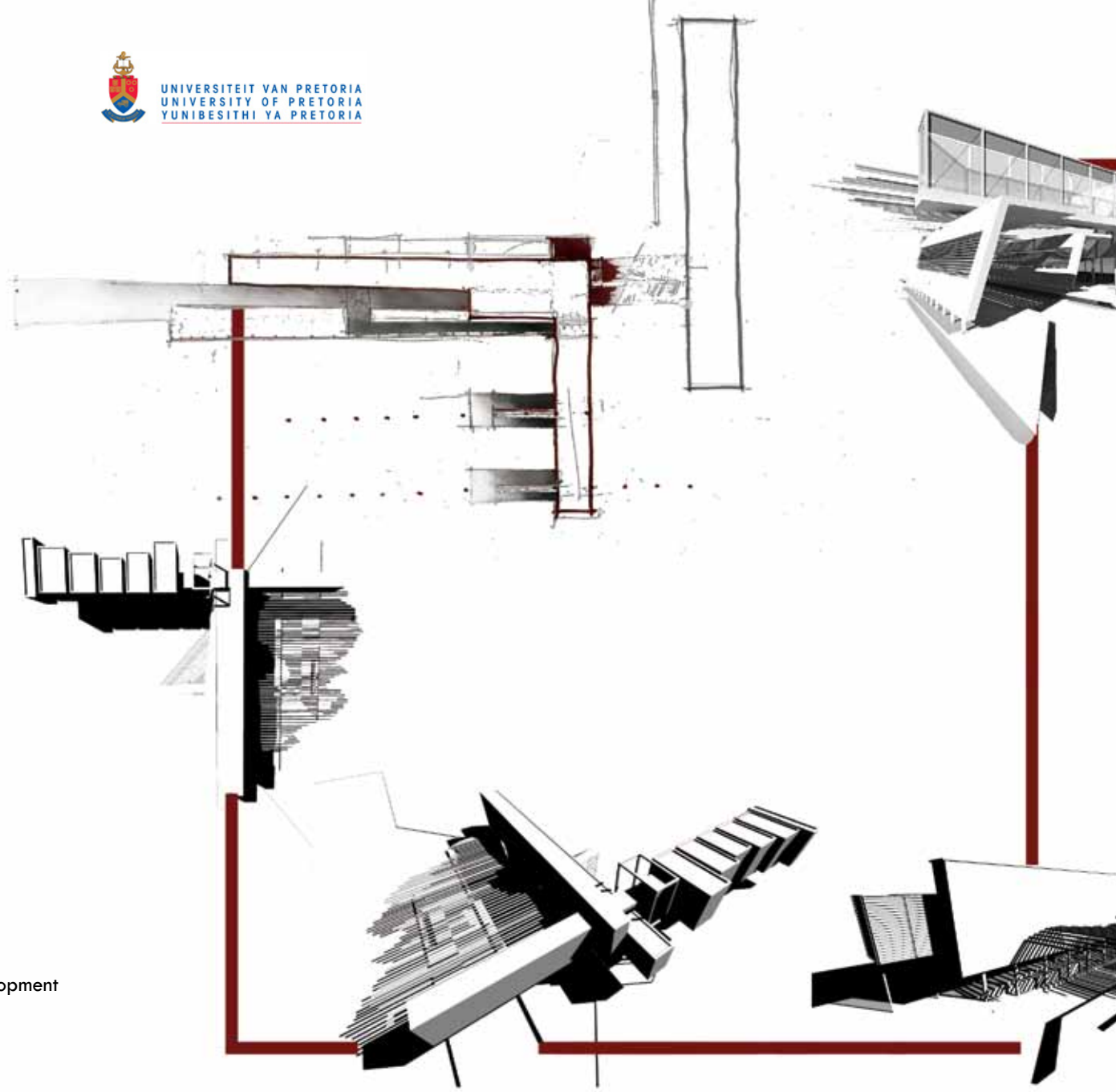
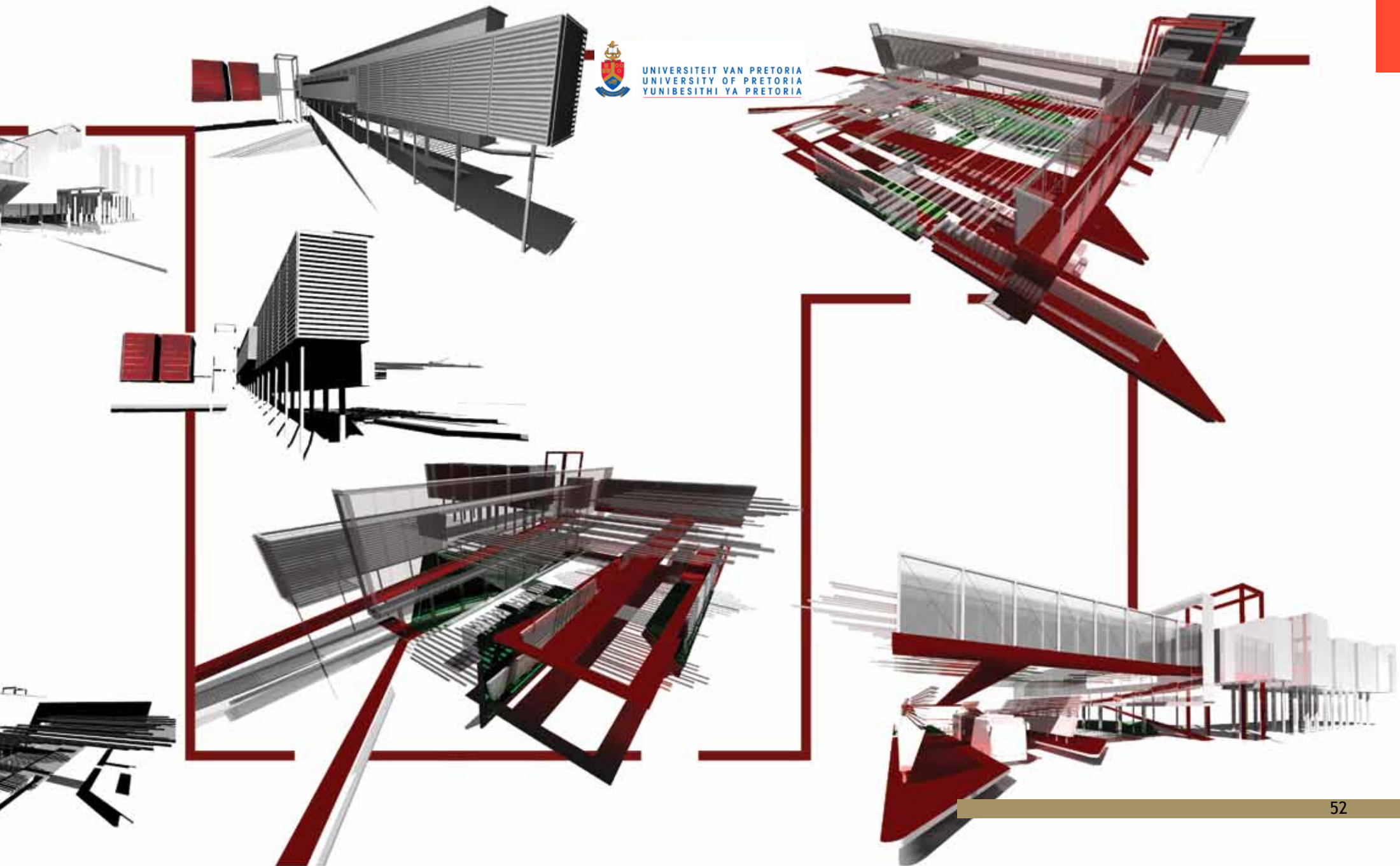


FIG 6.2_Concept 1 development



CONCEPT 2

The aim of this design concept was to simplify the problem, and to solve the urban design issues of the site and to fall into the urban design framework for Marabastad. The building defined the public square that is situated at the end of the green strip that follows the Steenhoven Spruit that runs through the Marabastad area. Also all public movement and activities were moved to the ground level to reduce the formation of unsafe spaces caused by ramps and tunnels. The design was still very much concerned with only the BRT side of the building.

The connection of the building to the site was from this point forward looked at.

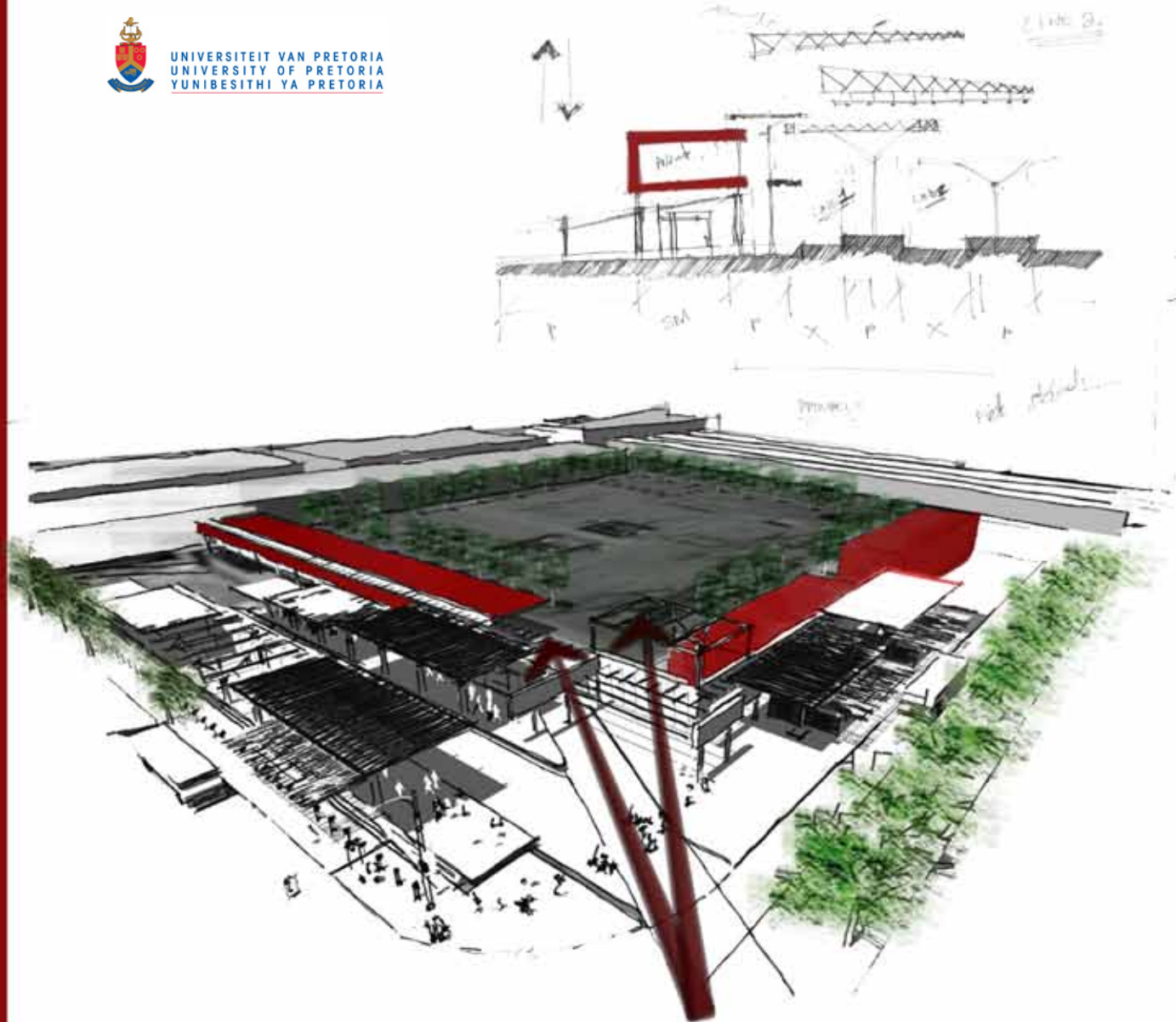
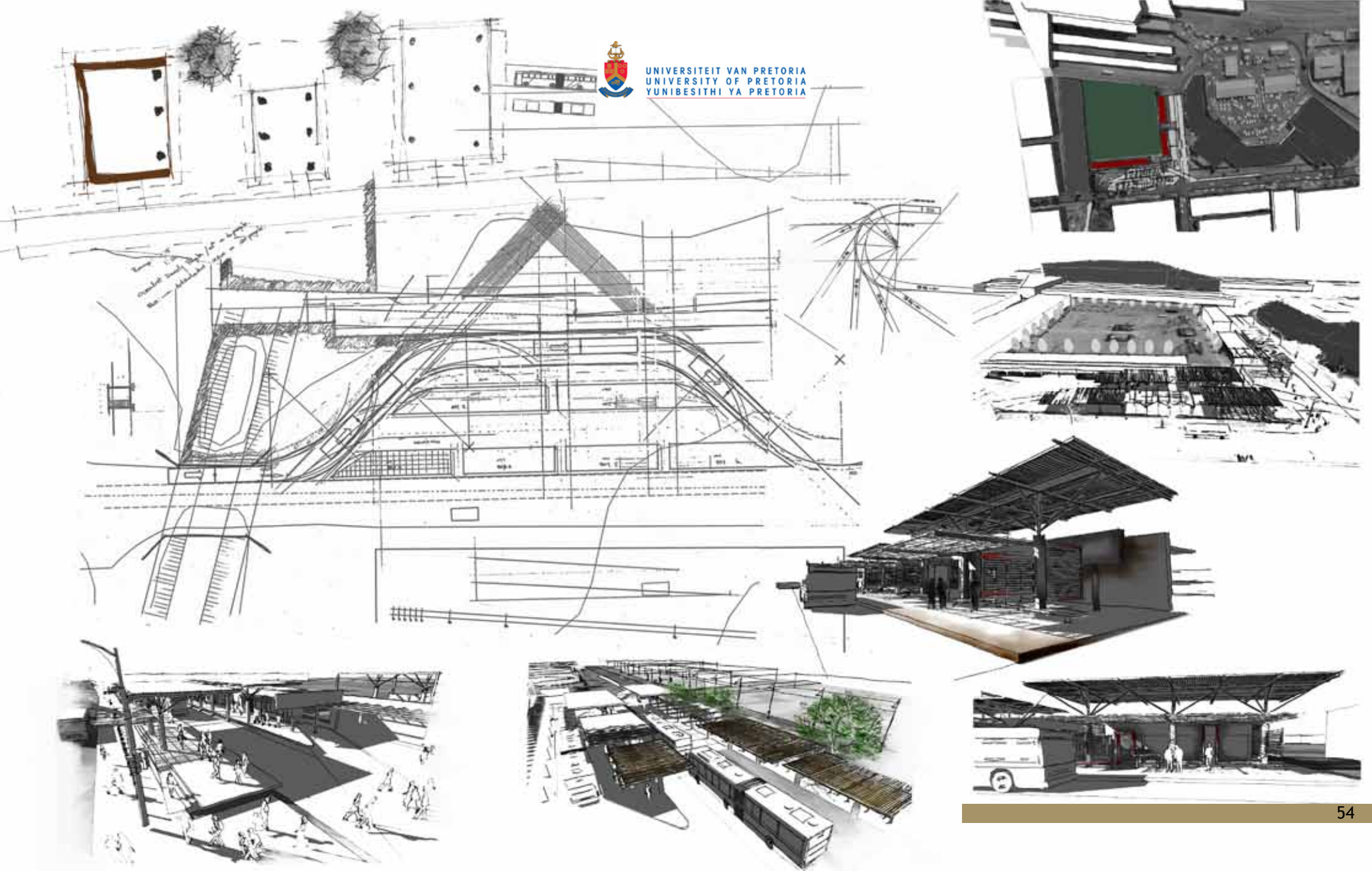


FIG 6.3_Concept 2 development





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Types of Transfer

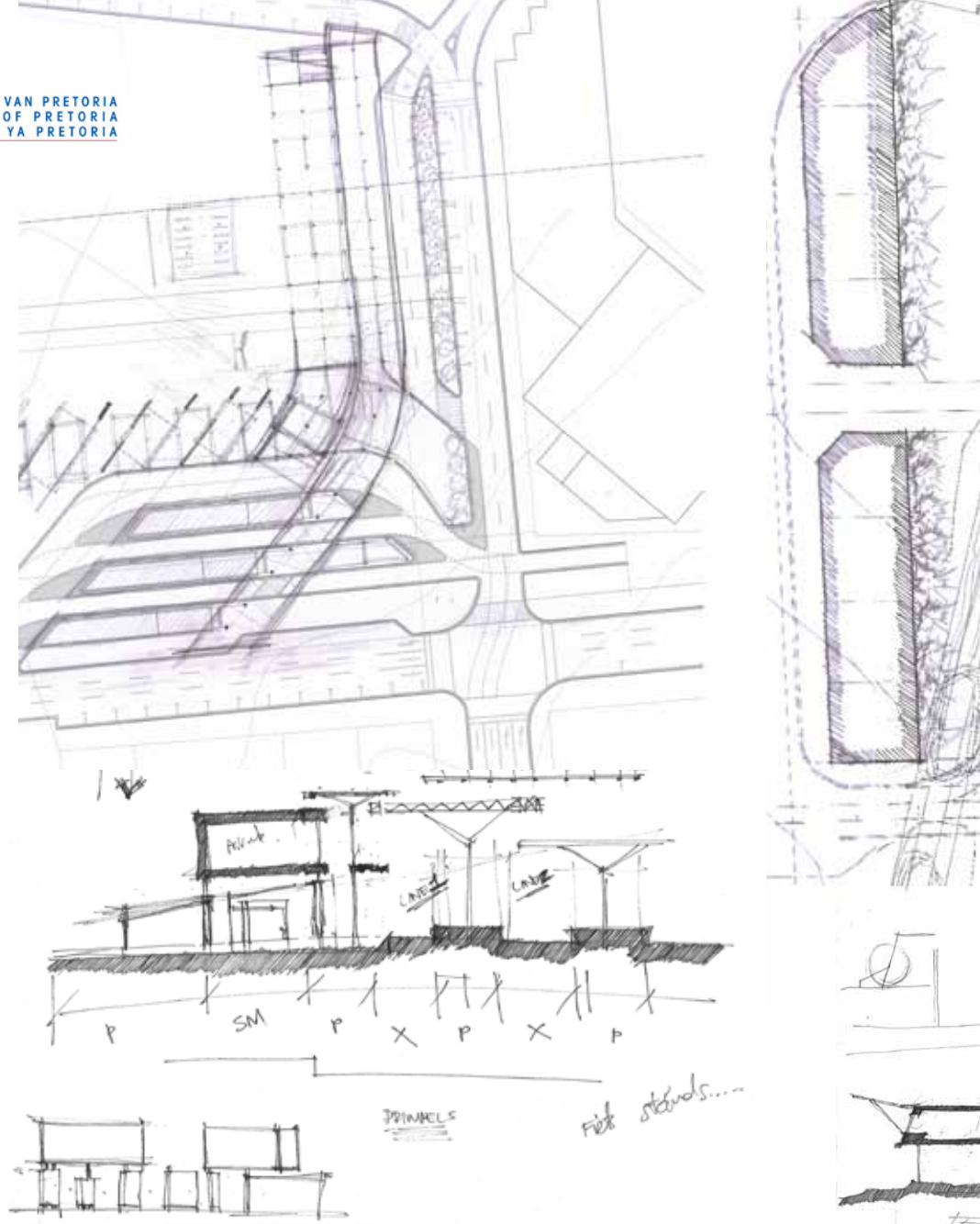
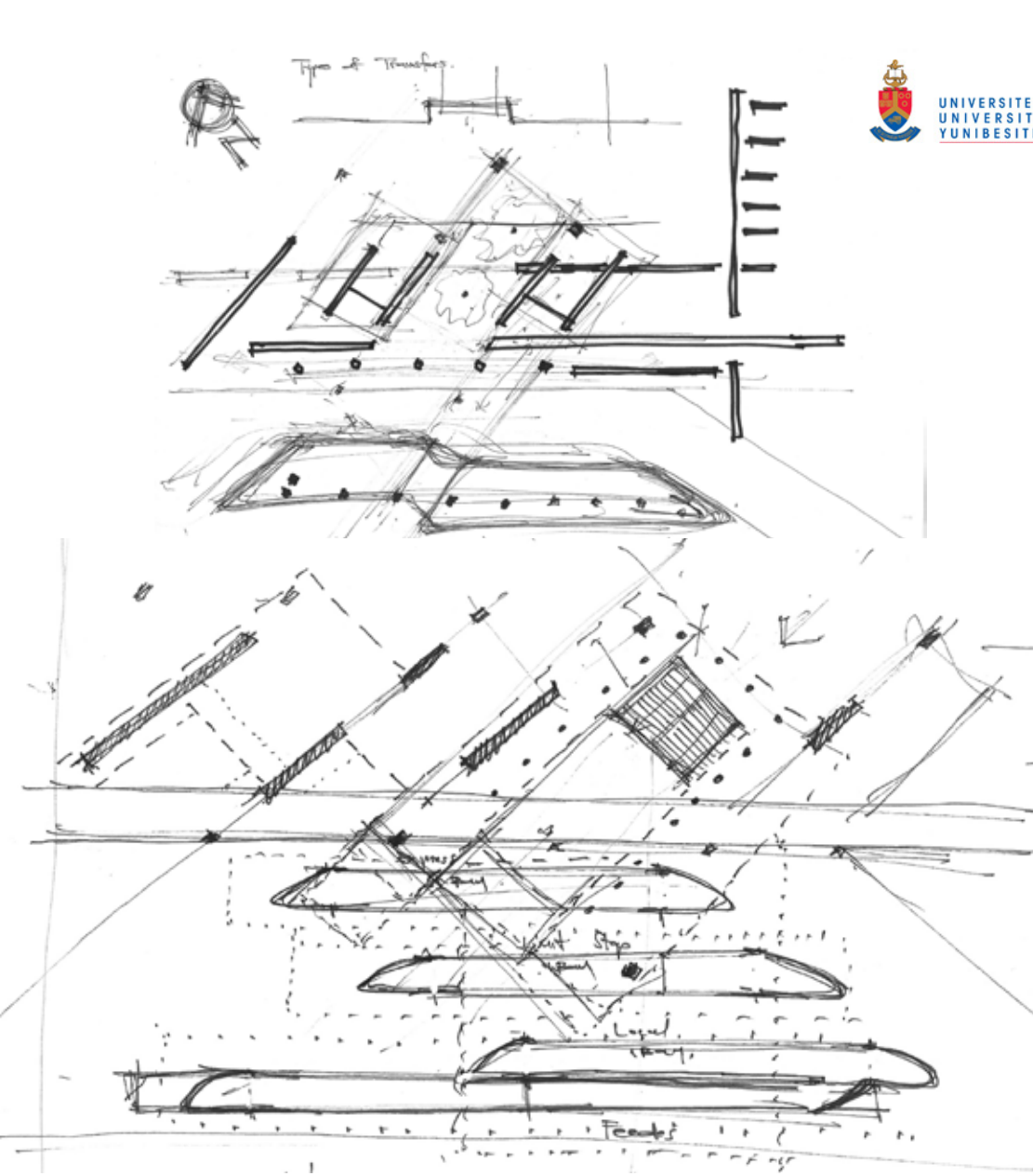
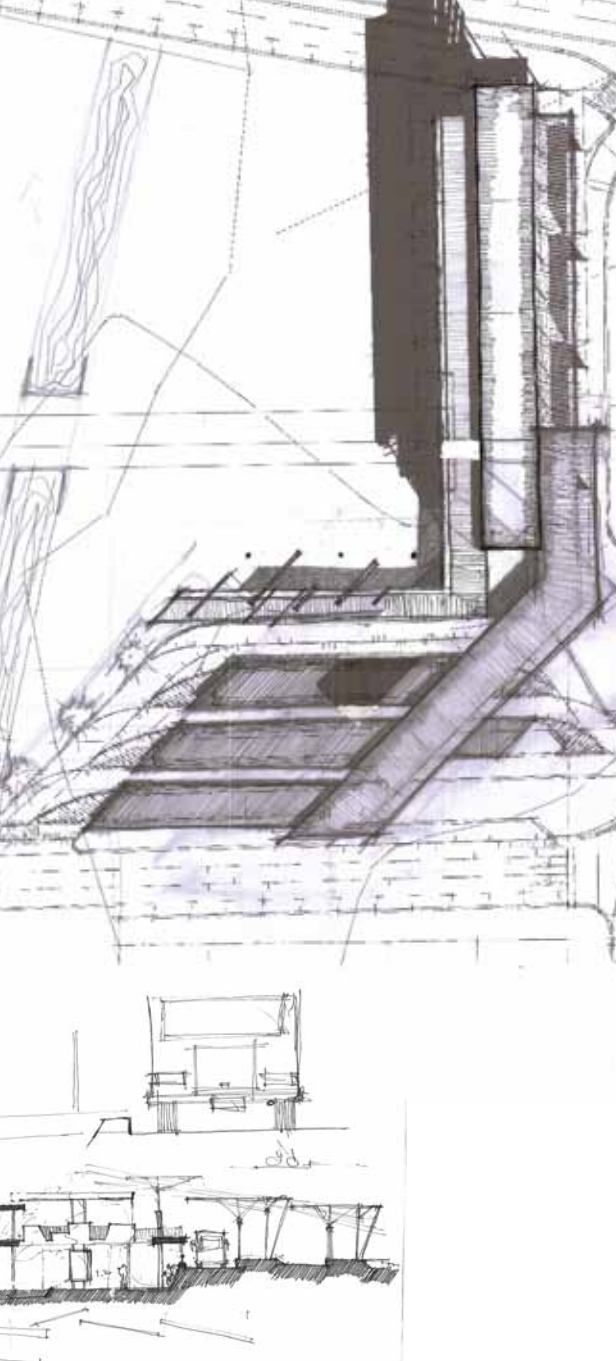


FIG 6.4_Concept 3 development



CONCEPT 3



Concept 3 started to critically address the problems presented by the site and its specific conditions. The question of how does the building react to this new public square arose, and the connection of the building to the train station.

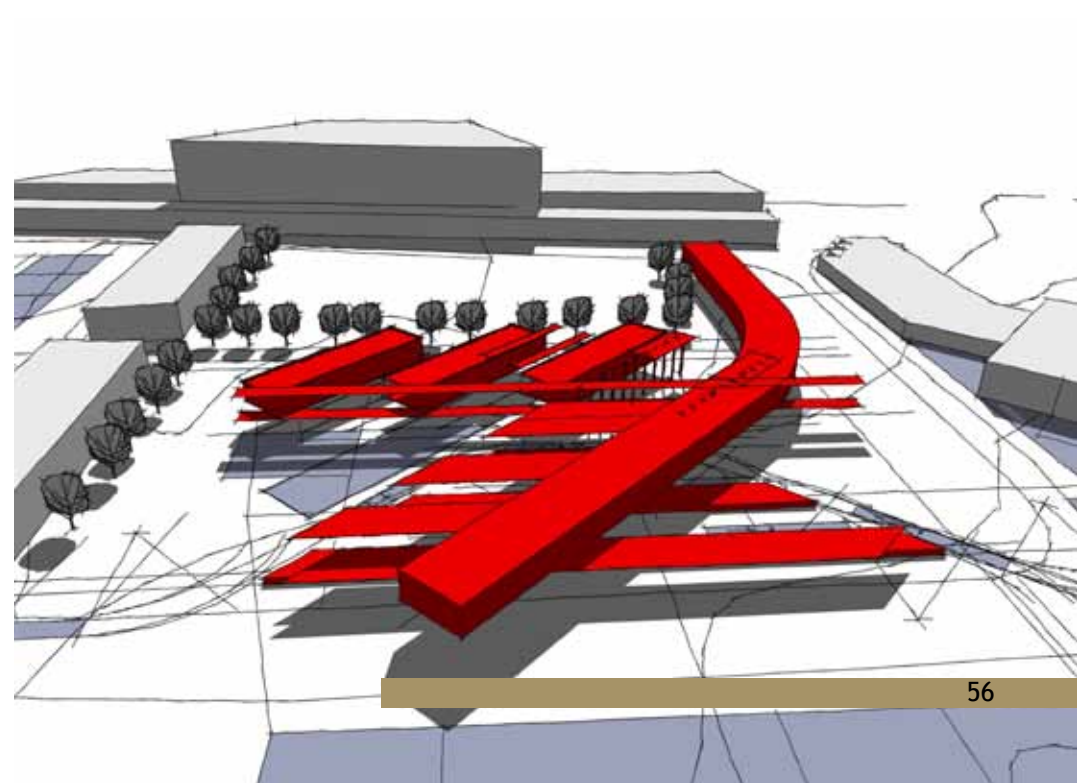
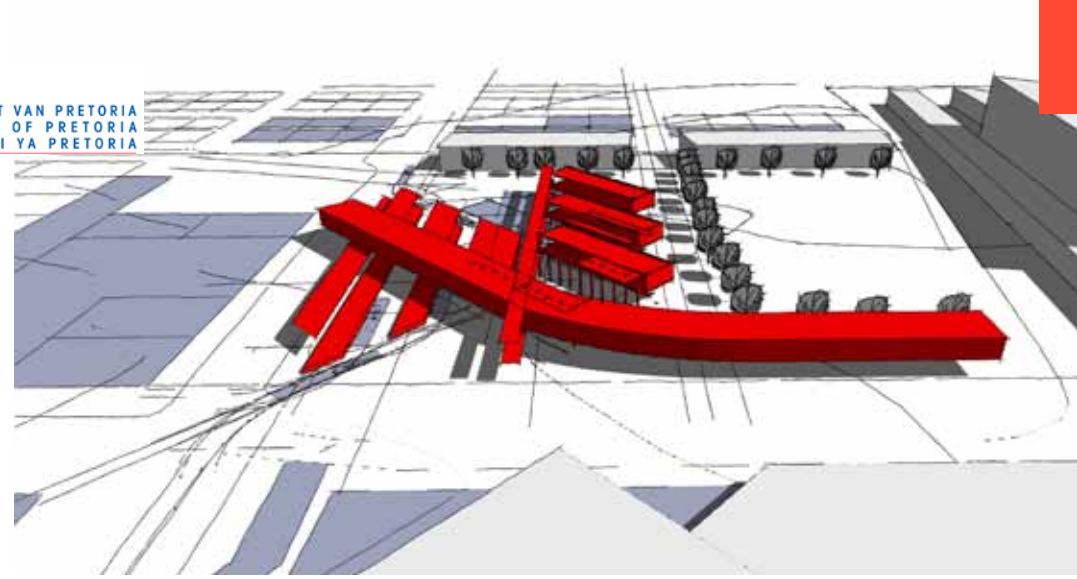
The solution was to create pockets of public space in the form of courtyards that acts as the transition spaces between the public square and the programs of the intended building.

Because of the position of the inner city distribution bus stop and the fact that there already exist a main entrance on the eastern side of the train station guided the decision making in the direction seen in the figures presented on this page.

The main access route to the train station also acts as a circulation spine that pulls all the various activities together that takes place along the length of the building towards the train station.

Because of the flow of people down this circulation spine it will be a great place to position informal traders that are already located on site.

The BRT system was also further investigated thus the provision of three bus bays, one for the local bus route, another for the limited stop service and lastly the express route was provided.



GENERAL SECTION DEVELOPMENT

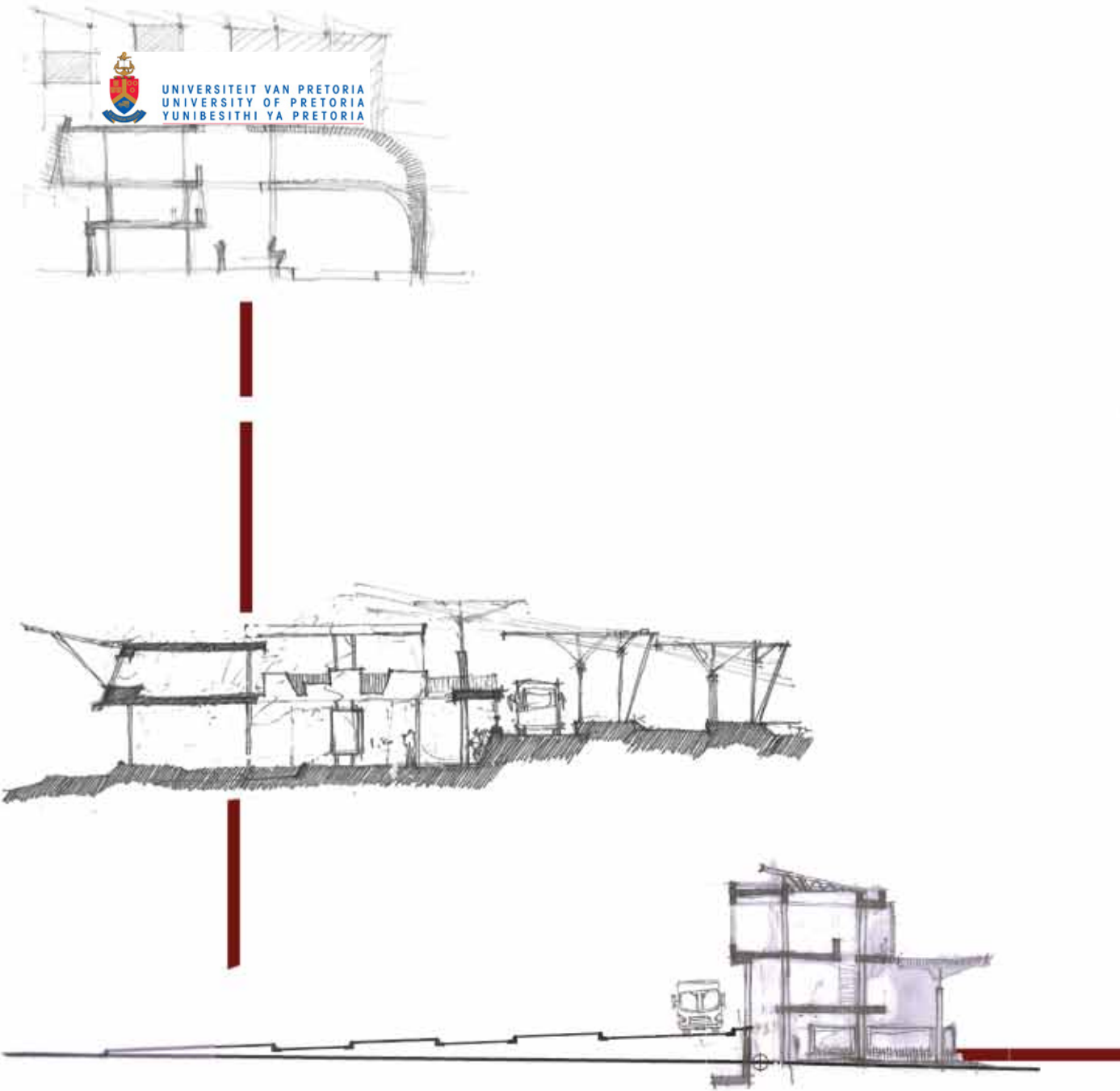
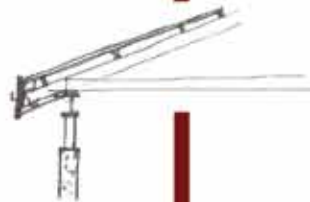
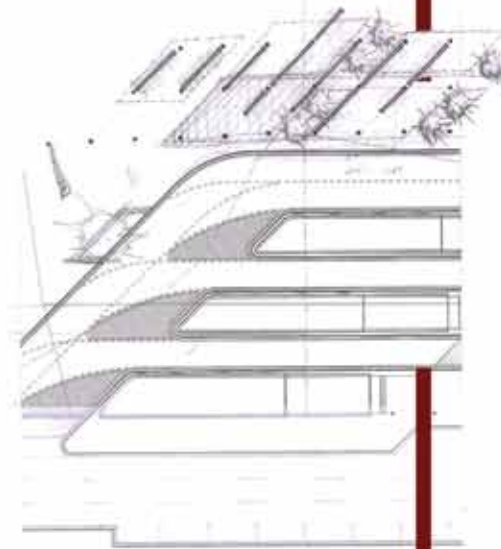
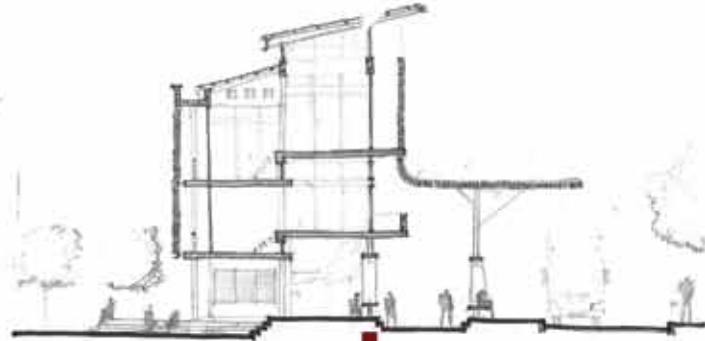
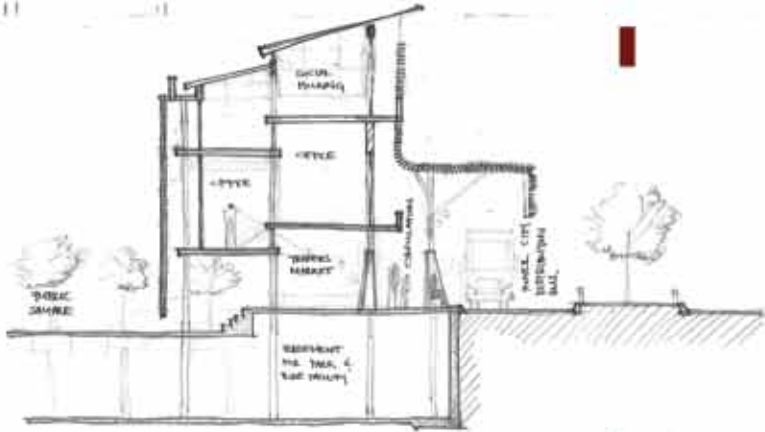
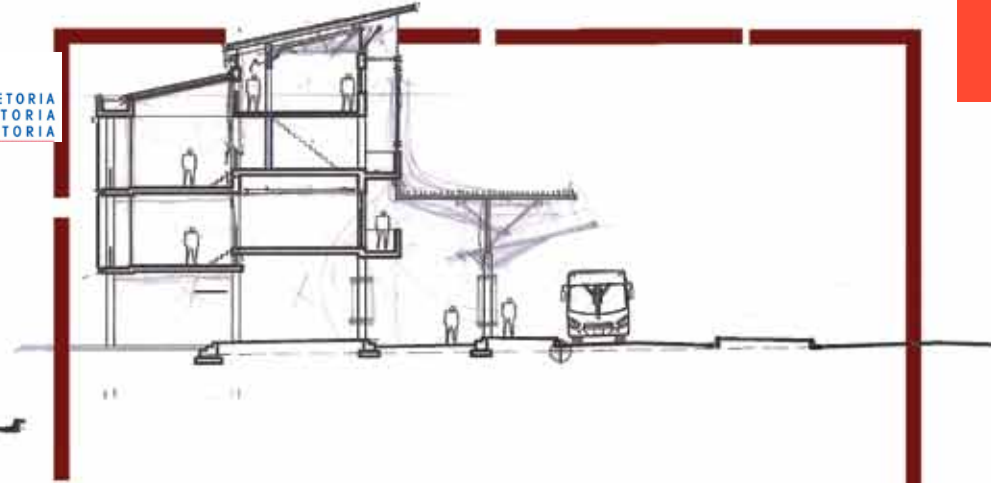
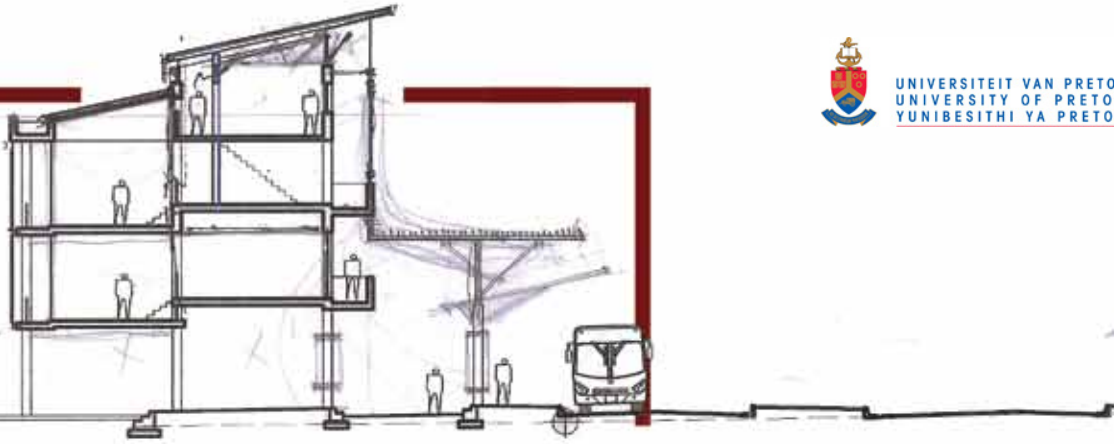


FIG 6.5_Concept 3 general section development



GENERAL SECTION DEVELOPMENT

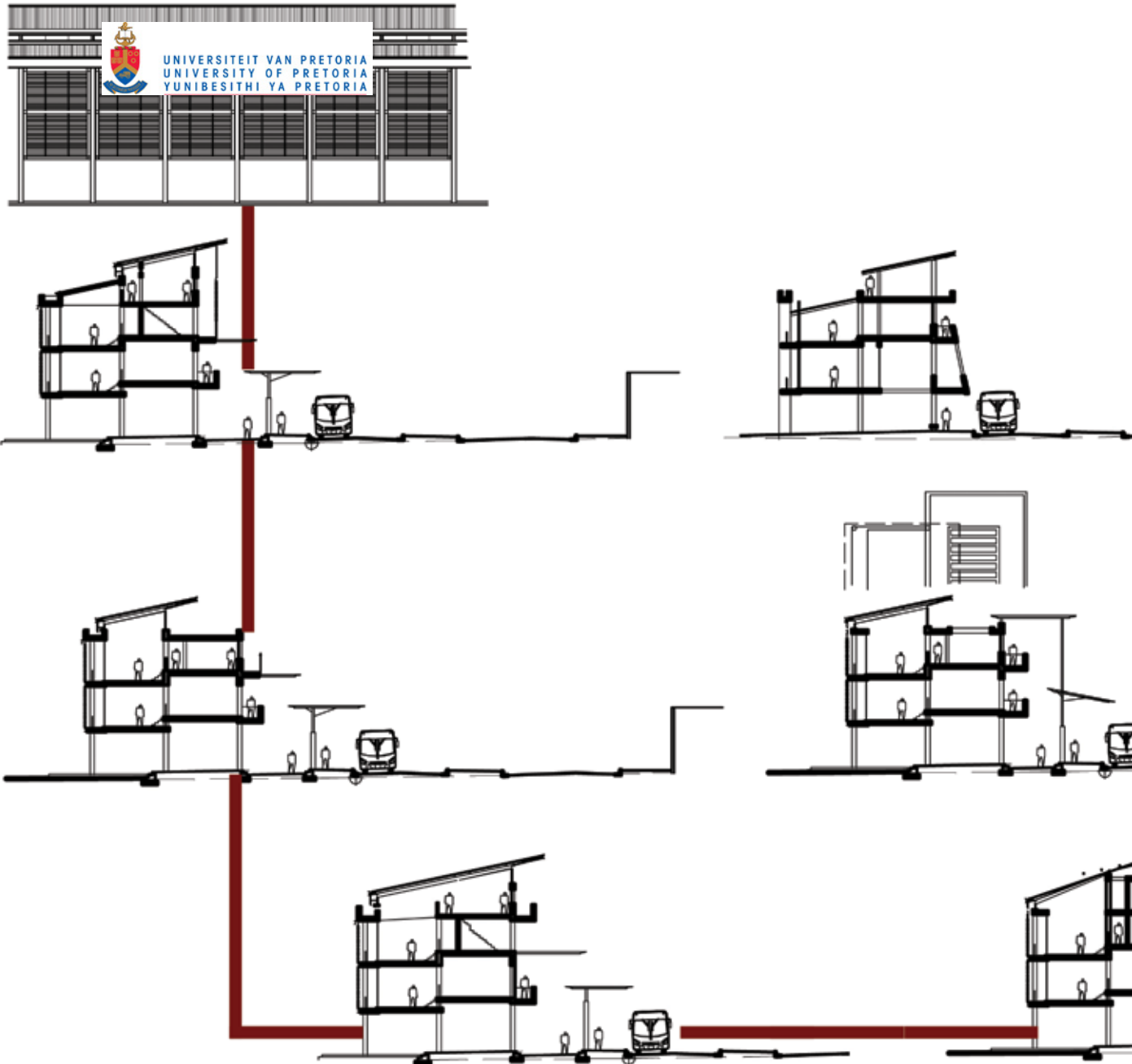
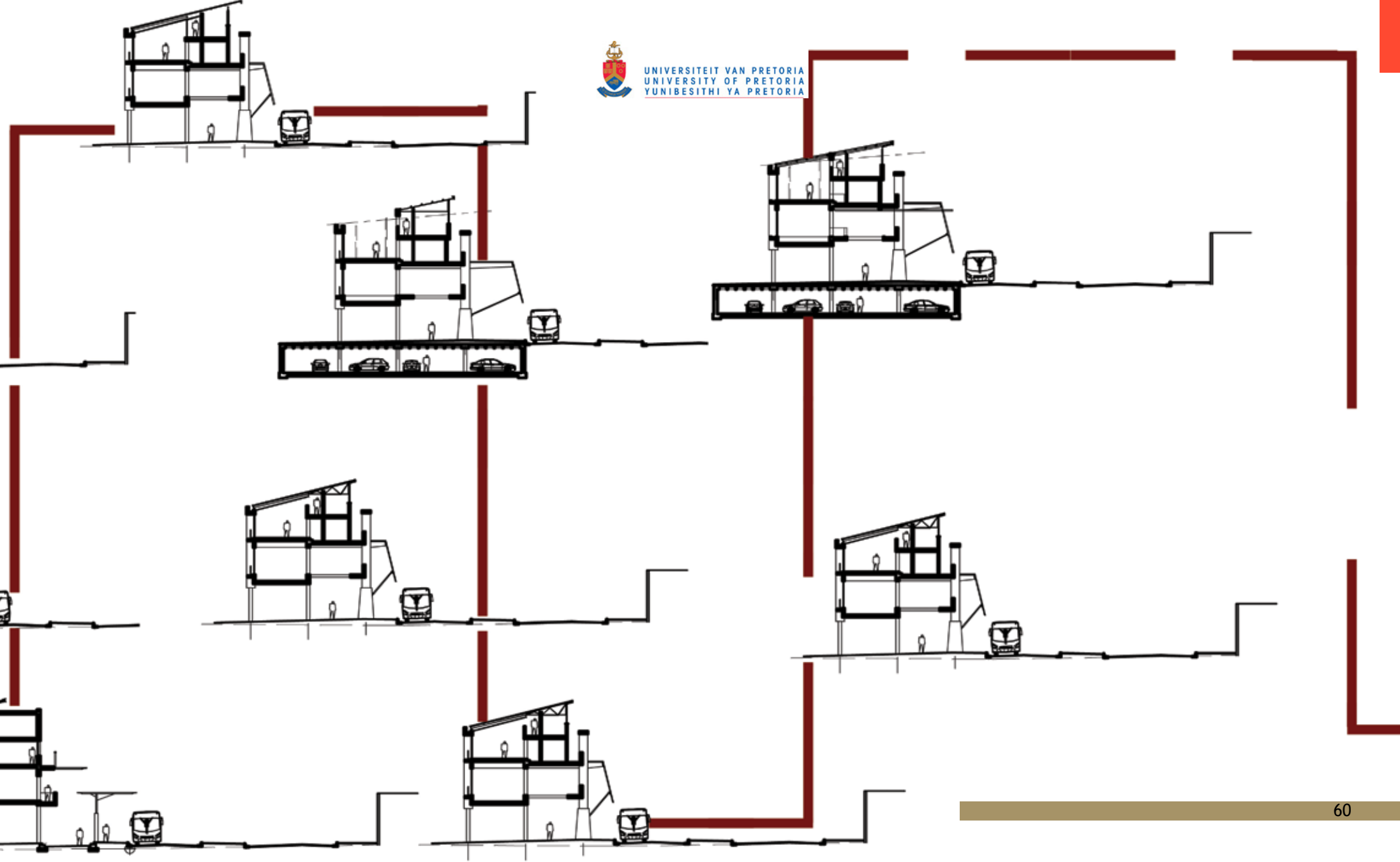


FIG 6.6_Concept 3 general section development



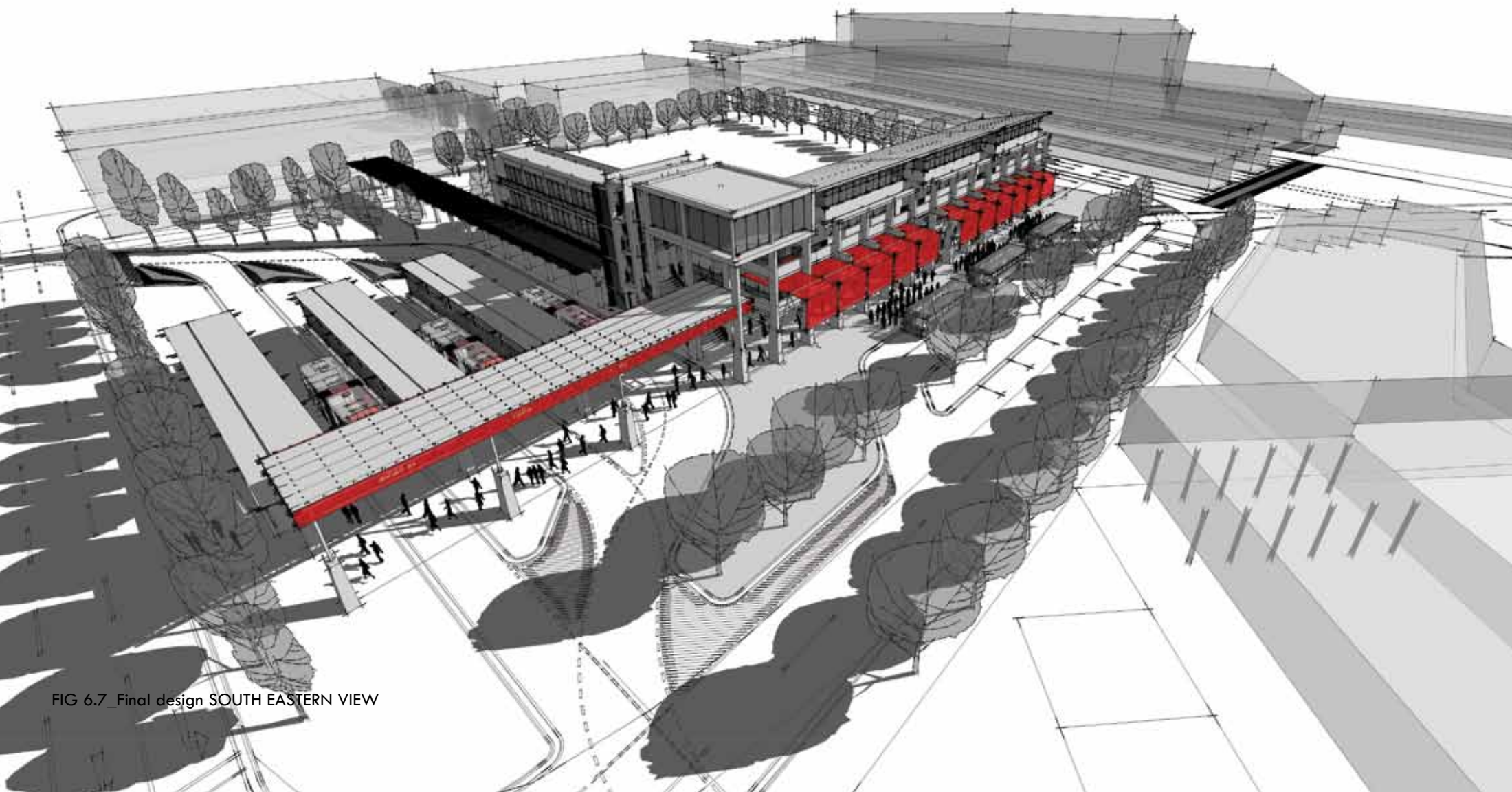


FIG 6.7_Final design SOUTH EASTERN VIEW

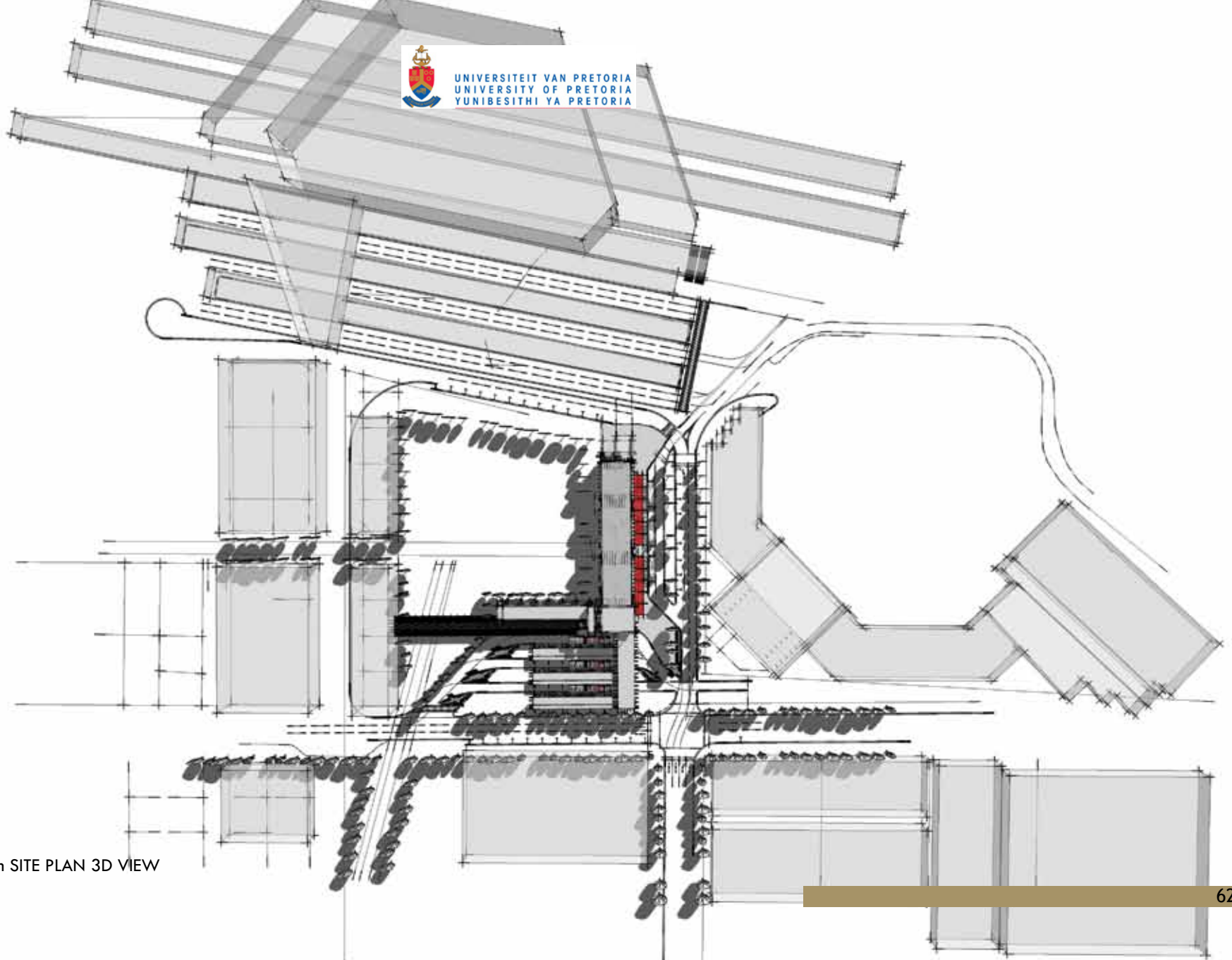


FIG 6.8_Final design SITE PLAN 3D VIEW



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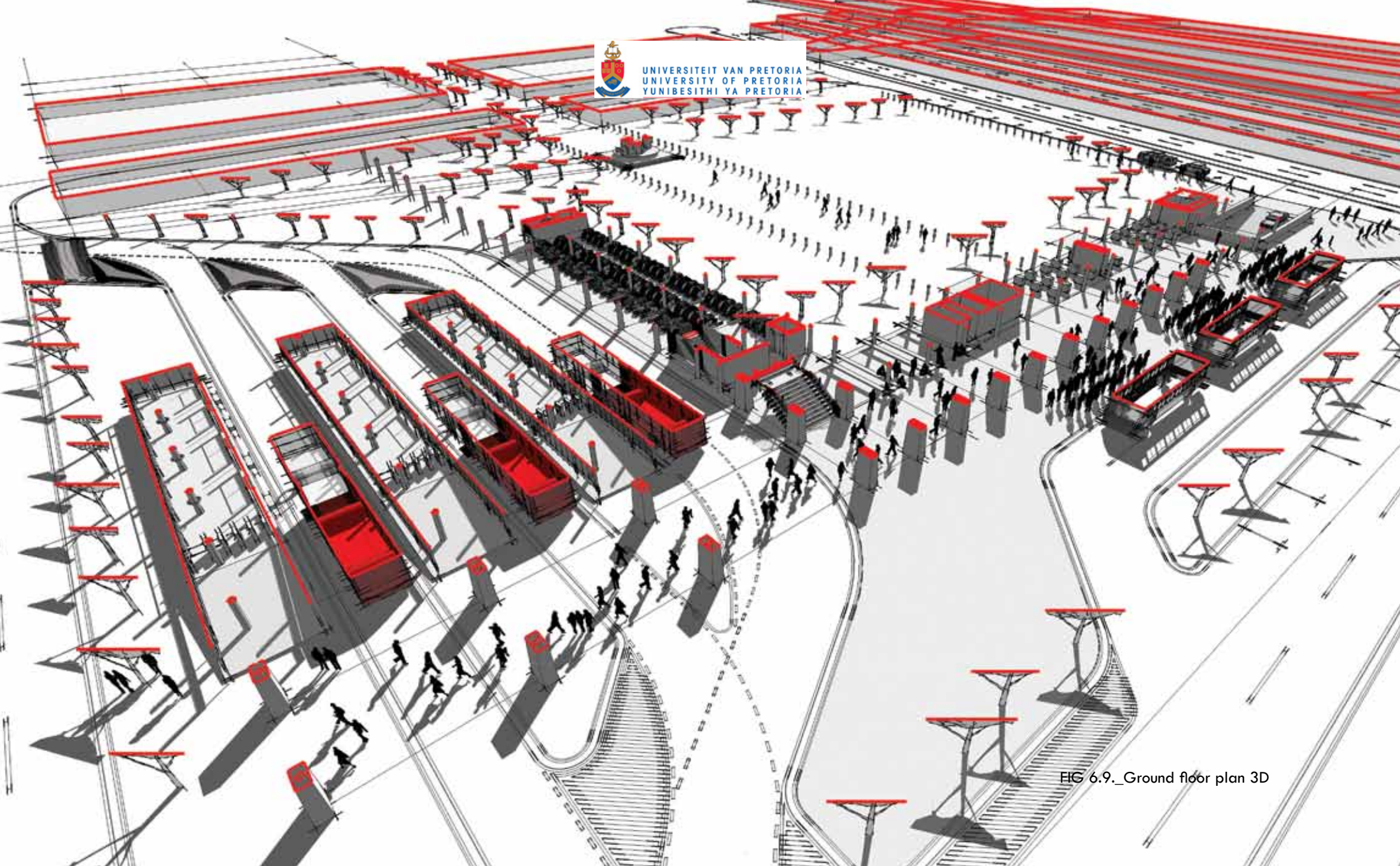


FIG 6.9. Ground floor plan 3D



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to Belle Ombre station

traders market

traders market

inner city distribution bus bays

bicycle parking area

foyer area

covered walkway to Marabastad shopping complex

express route stopping

limited stop route stopping bay

local route stopping bay

BRT stations



FIG 6.10_Ground floor plan

GROUND FLOOR PLAN



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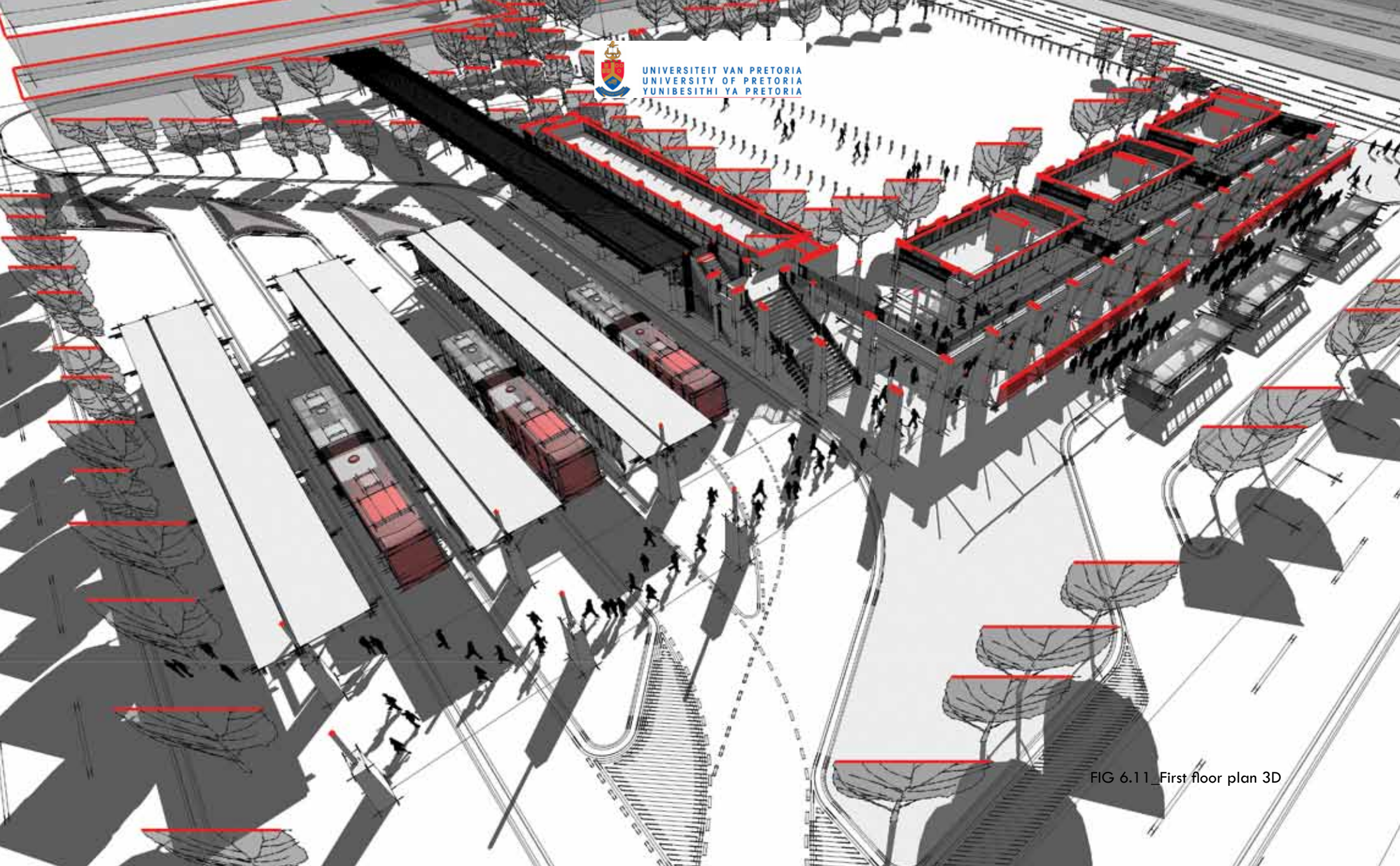


FIG 6.11 _First floor plan 3D

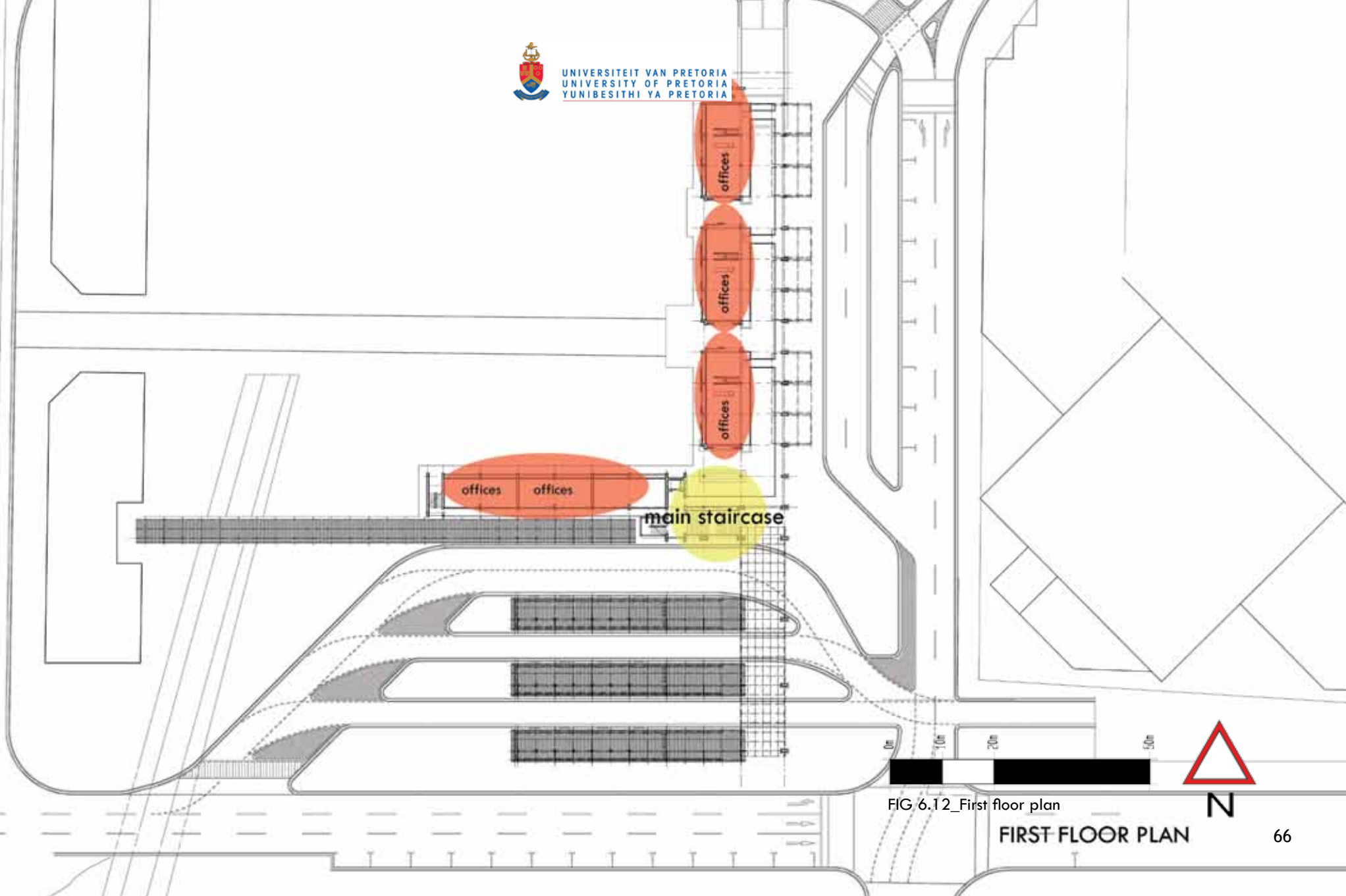


FIG 6.12 First floor plan

FIRST FLOOR PLAN



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FIG 6.13_Second floor plan 3D



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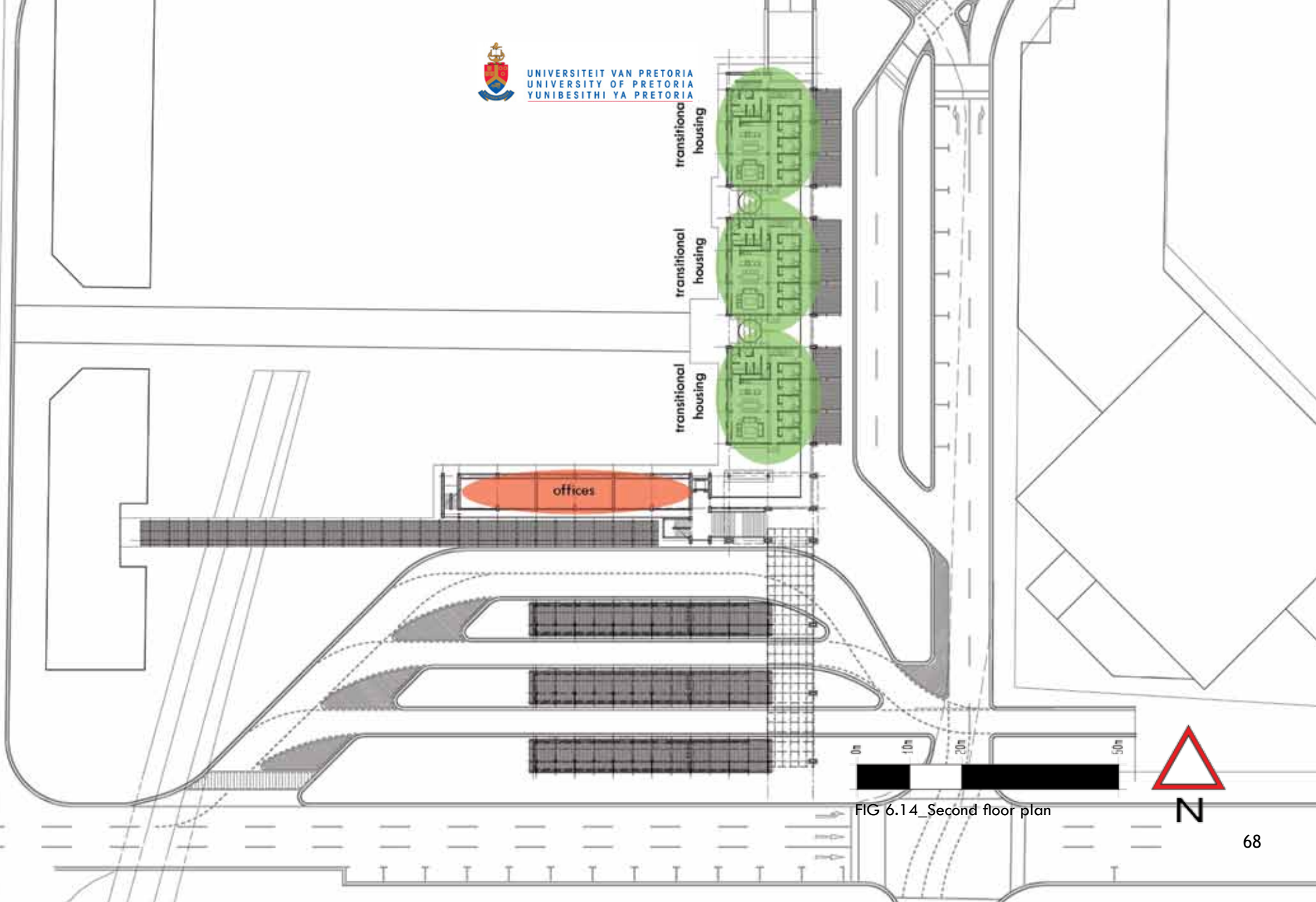


FIG 6.14_Second floor plan



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FIG 6.15 Third floor plan 3D

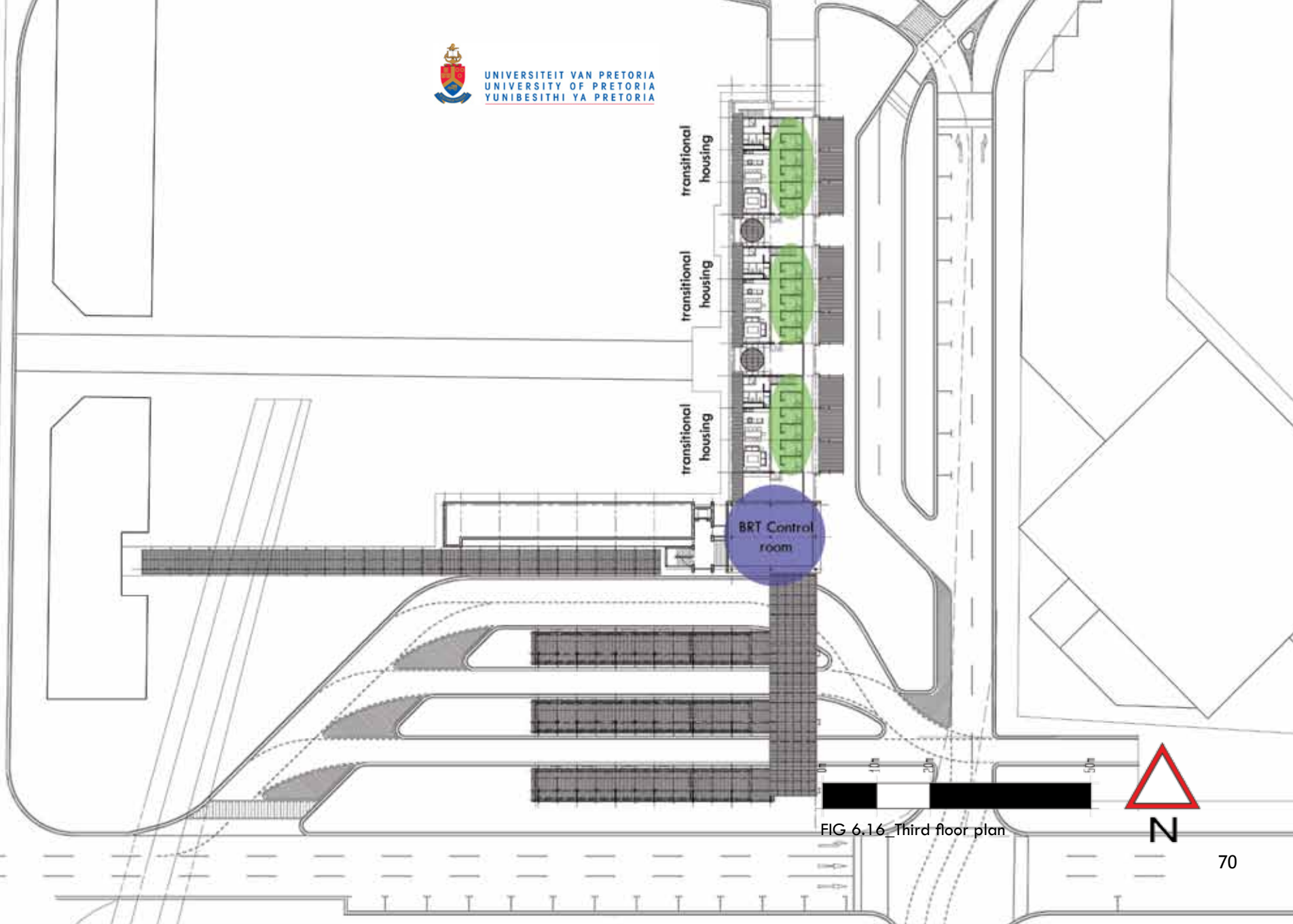


FIG 6.16 Third floor plan

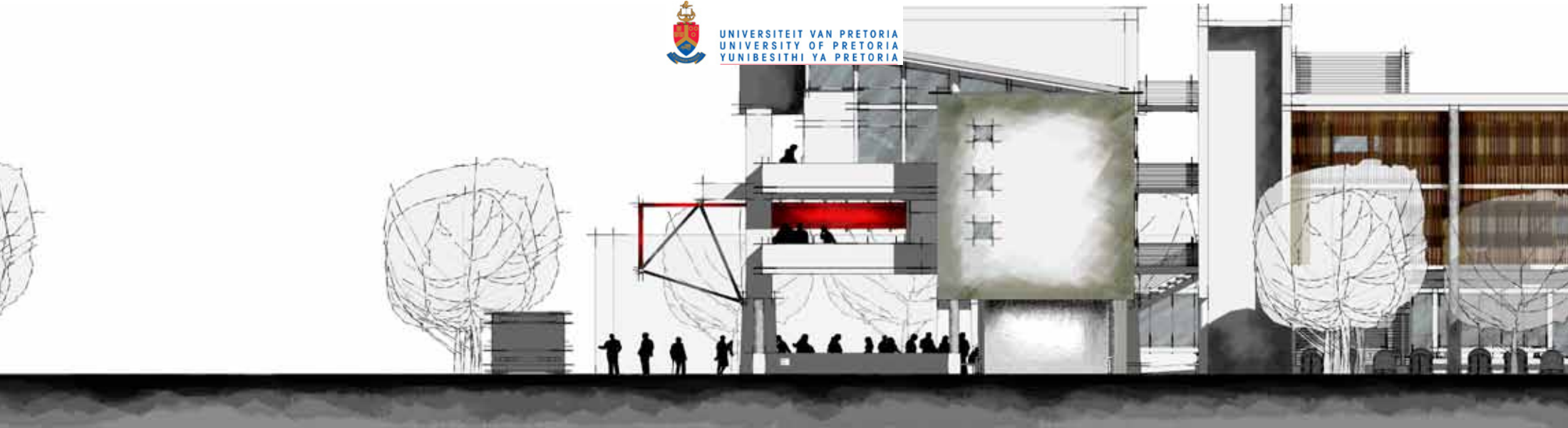


FIG 6.17_Final design north elevation

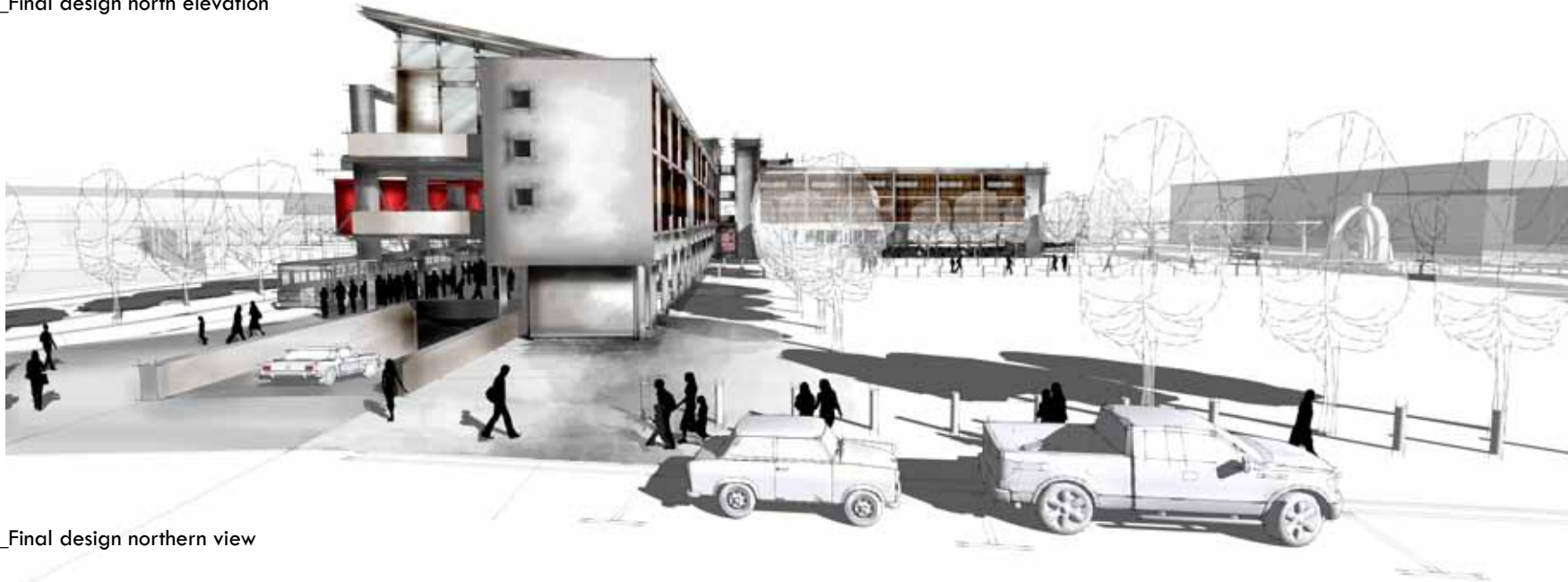


FIG 6.18_Final design northern view





FIG 6.19_Final design south elevation

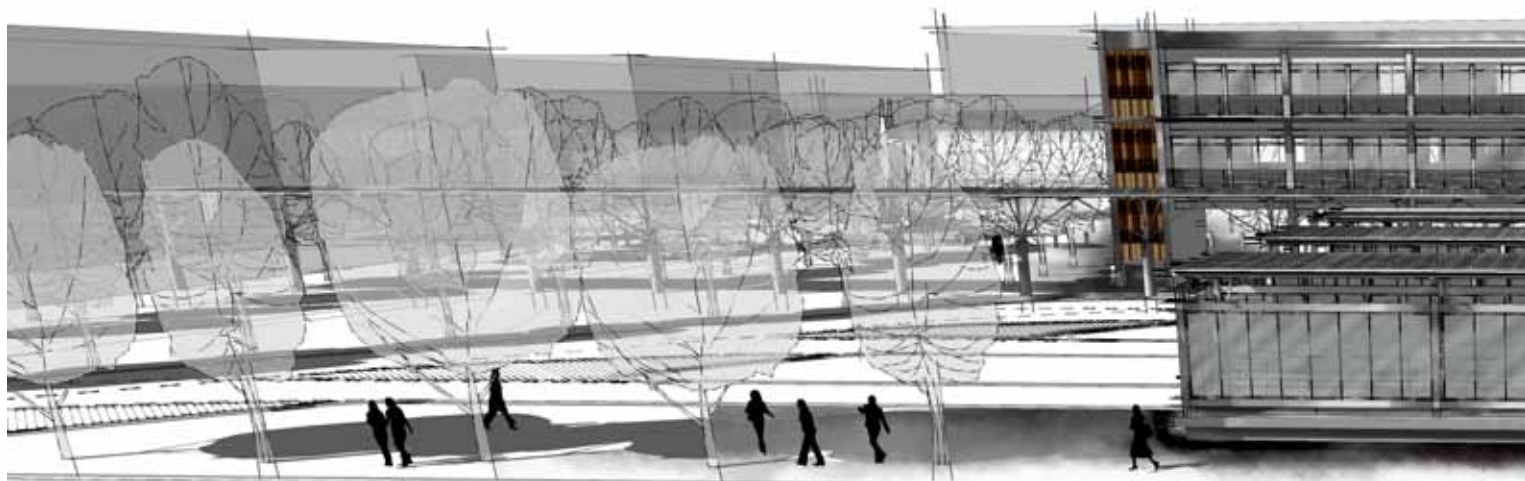
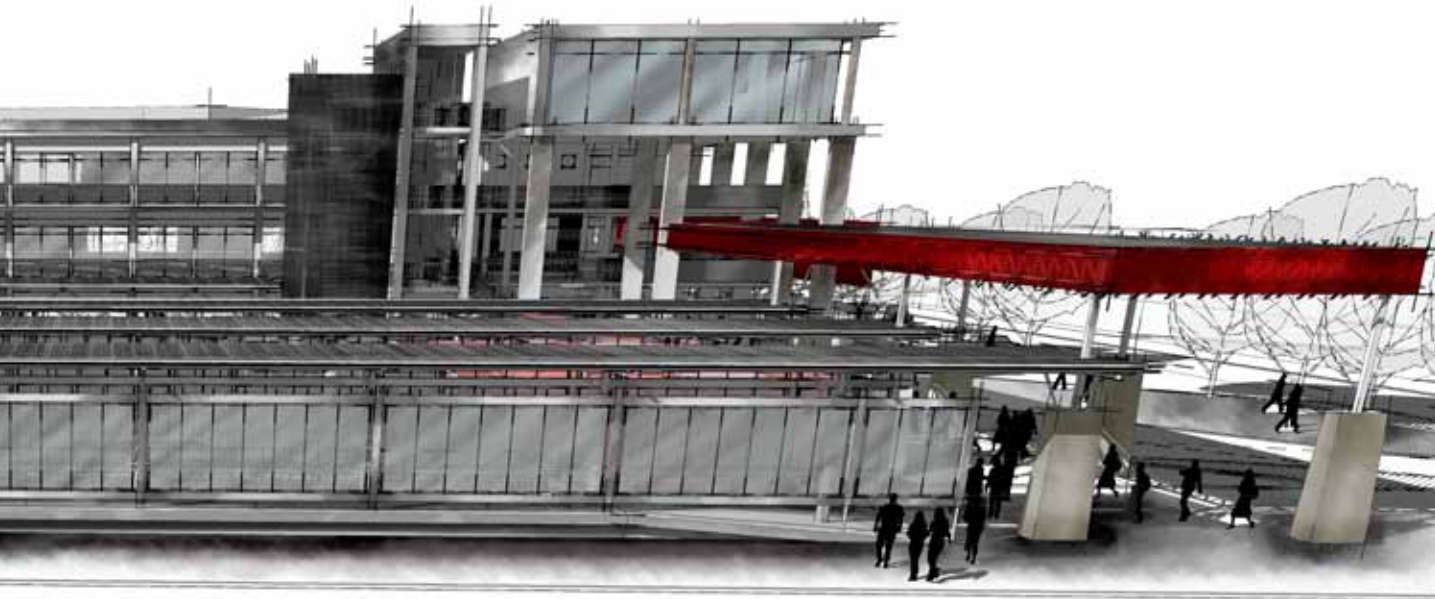


FIG 6.20_Final design southern view





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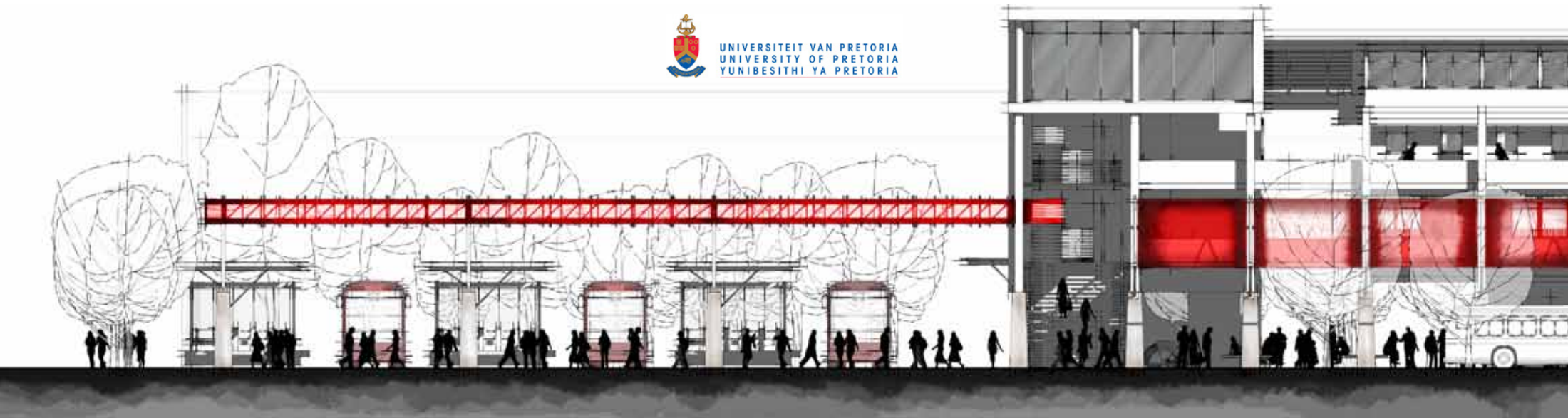


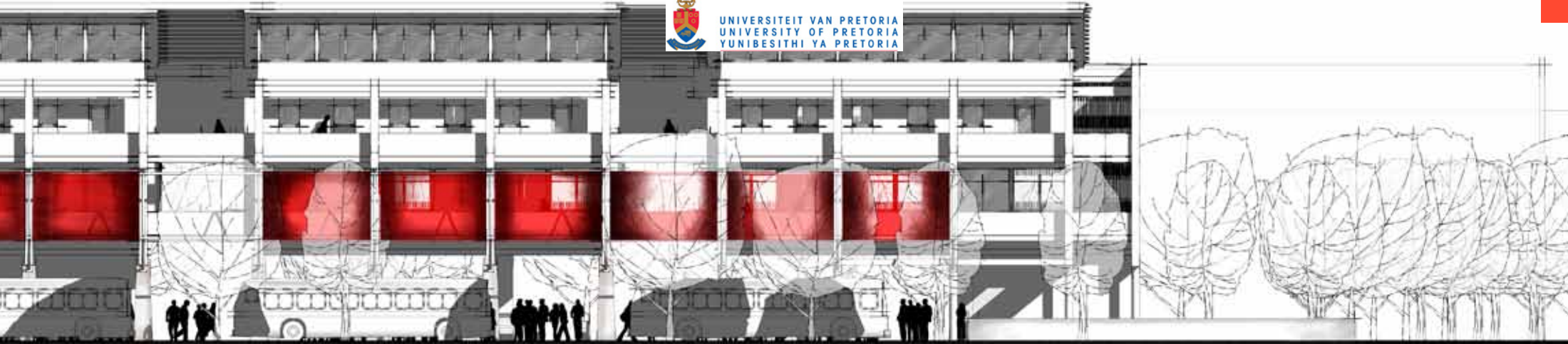
FIG 6.21_Final design east elevation



FIG 6.22_Final design eastern view



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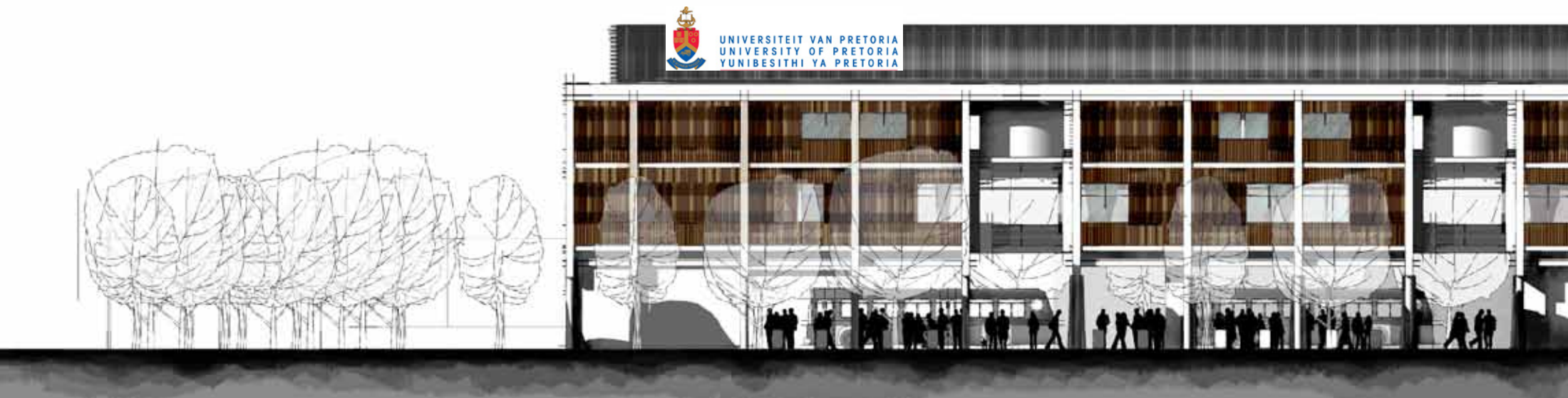


FIG 6.23_Final design west elevation



FIG 6.24_Final design western view

