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RE-INTERPRETING THE TRADITIONAL MOSQUE

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It began as and continues to be an exciting personal journey of discovery, revealing the essence of my religion Islam, the culture I embrace, and its articulation into the built form I find myself within.

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For my mother
with whom many struggles were overcome

& for Ilhaam
my most “productive” distraction

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I further state that not part of my thesis has already been, or is currently being submitted by me for a degree, diploma or and other qualification.

I further declare that this thesis is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

Naeem Adam

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STUDY LEADER
Derrick De Bruyn

COURSE COORDINATOR
Arthur Barker

RESEARCH FIELDS
Identity & Place

UNIVERSITY OF PRETORIA 2014

Submitted in partial fulfillment of the requirements for the degree: Master of Architecture (Professional) in the faculty of Engineering, Built Environment and Information Technology

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ABSTRACT

Islamic architecture is understood to have a distinct set of elements which emotively contribute to the divine logic of ritual and spiritual manifestation. This rationality, however, is imitative and has been boldly positioned within an unfamiliar context as a derivative of Arabian stimulus. Traditionally understood as a place welcoming to all people for matters extending beyond the religious, its circumstantial interpretation has had a profoundly negative influence on its newfound context, consequently acting as a deterrent for some. Its spatial proximity has fostered a sense of territorialism; its monumentalism has disconnected it from its urban milieu.

The consequential reassessment of the mosque typology is necessitated whereby contextual and cultural reasoning makes an impact on its form, identity and meaning within an unfamiliar urban framework. This new comprehension is proposed to foster a sense of Islamic Ubuntu amongst a unified diaspora given its vastly connected assembly within the urban locale.

The investigation aims to uncover an alternate process of choreographing a spiritual and emotive experience through contestation and subsequent redefinition. Instead of designing a religious edifice as an emblem of our own worldly inspiration, the inquiry seeks to spatially manifest the objective teachings of the divine scripture – the Holy Quran. Tangible and intangible mapping, along with a grounded theoretical outlook drives the study; the overall premise is based on a personal understanding and a life-long discovery of the religion in question.

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ملخص

ومن المفهوم العمارة الإسلامية لديها مجموعة متميزة من العناصر التي تسهم إلى المنطق الإلهي من مظاهر الطقوس والروحي . هذه العقلانية ، ومع ذلك، هو مقلد و تم وضع بجرأة ضمن سياق غير مألوف كما مشتق من التحفيز العربي.

يفهم تقليديا كمكان الترحيب لجميع الناس عن الأمور تتجاوز الدينية ، كان تفسيرها ظرفية لها تأثير سلبي عميق على السياق الجديد وجدت لها وبالتالي بوصفها رادعا للبعض. في القرب المكاني عزز شعور النزعة الإقليمية . وقد فصل لها من الوسط الحضري.

واستلزم إعادة تقييم يترتب على ذلك من حيث تصنيف مسجد السياقية والمنطق الثقافي يجعل له تأثير على شكله والهوية و المعنى ضمن إطار الحضري غير مألوف . ويقترح هذا الفهم الجديد ل تعزيز الشعور أوبونتو الإسلامية بين الشتات موحدة نظرا جمعيتها مرتبطة إلى حد كبير داخل لغة الحضرية.

ويهدف التحقيق إلى كشف عملية بديلة لل تصميم رقصة تجربة الروحية و العاطفية من خلال الطعن و إعادة تعريف لاحق . بدلا من تصميم الصرح الديني كشعار ل دينا إلهام الدنيوية الخاصة ، و يسعى إلى تحقيق اضح مكانيا تعاليم موضوعية من الكتاب المقدس - القرآن الكريم . خرائط المادي وغير المادي ،

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MOSQUE
/mosk/
noun

- a muslim house of worship.
- a building for Islamic religious activities and worship

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GLOSSARY

Quran: the central religious text of Islam, which Muslims believe to be a revelation from God. It is widely regarded as the finest piece of literature in the Arabic language.

Hadith: a collection of traditions containing sayings of the prophet Muhammad which, with accounts of his daily practice (the Sunna), constitute the major source of guidance for Muslims apart from the Quran.

Zakaat: payment made under Islamic law on certain kinds of property and used for charitable and religious purposes, one of the Five Pillars of Islam.

Ummah: the whole community of Muslims bound together by ties of religion

UnMosqued: not connected with a mosque or masjid, people who do not regularly attend masjid services.

Jamaat Khana: term used by various Muslim communities around the world to denote a place of gathering where prayer may be executed. Usually of an informal nature if compared to that of a Mosque

Masjid: Arabic term for a mosque.

The Five Pillars of Islam: the five basic acts in Islam, considered mandatory by believers and are the foundation of Muslim life. They include: faith, prayer, concern for the needy, self-purification and the pilgrimage.

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AUTHOR'S MANIFESTO

An architecture of place has the power to ennoble people. It may allow them to feel empowered, important and excited. An architecture of place contributes to healthy, comfortable, engaging and motivating spaces and destinations.

A place, however, should be differentiated from that of iconic space, iconic architecture and design, and objects acting in space.
The over-optimistic idea that a building may acquire a spiritual quality by how profoundly it represents the human aspiration concerned with grandeur and capability, not because it shows the glory of God is a cocky one. After all, how can a place built by ordinary human beings truly reflect the glory of an Almighty?

Large and monumental religious structures, objects of overwhelming grandeur-stylistically embellished with unnecessary decoration and superfluous symbolism, presupposed to create sacred and sanctified spaces do not- in my opinion- create an architecture of place.

Although temporarily admired, photographed and adorned upon, this short-lived admiration of architectural style is in many ways a system of "pigeonholing buildings and creating false and misleading distinctions".

The art museum has replaced the religious monument as we have conflated the aesthetic and the sacred. Since commercial skyscrapers have come to represent the cultural symbols of our time, we now design religious buildings as art museums and as emblems of our aspirations. We have- architecturally- chosen to be attracted to the beautiful rather than to the divine, and therefore to have our eyes and our hearts satisfied, instead of our souls. Instead of the architecture becoming the spectacle, can the revered act of worship in itself not become the exhibition?

It is rather arrogant to think that architecture can in itself create the sacred in the first place. I believe that the users of a building and their activities within it allow for architectural place-making. In other words, we confer the quality of sanctity upon spaces, where spaces do not by themselves confer sanctity upon us. However elaborate the building; the physical structure does not take precedence over the importance of the written word of the Holy Quran.

(Inspired by Paul Goldberger-Architecture Critic for The New Yorker)

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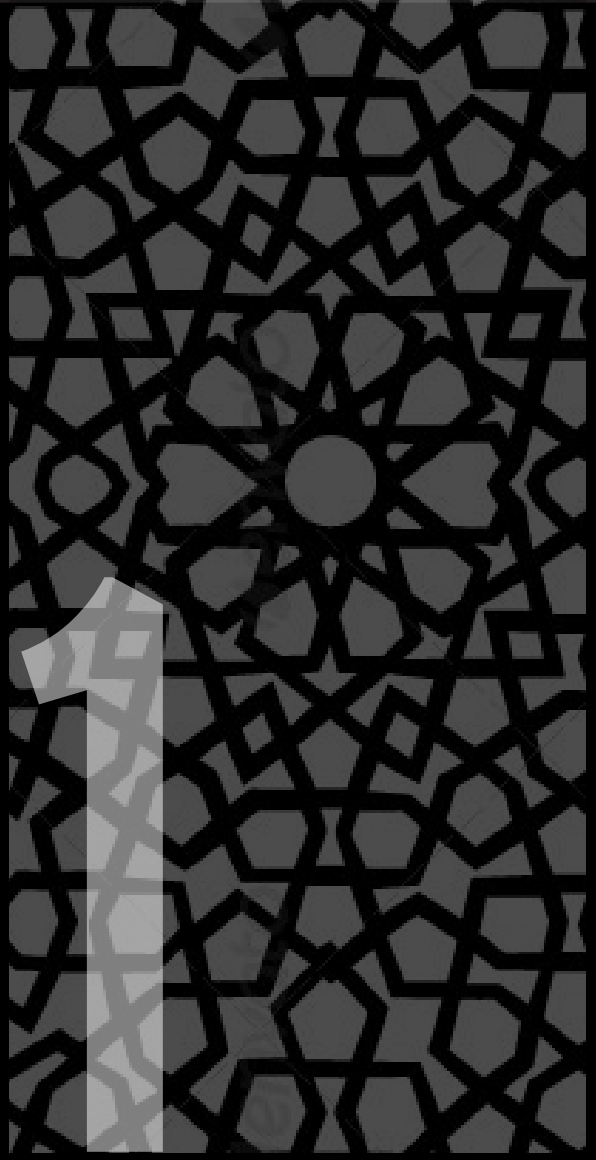

1

INTRODUCTION

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01.1 RE PURPOSING THE 21ST CENTURY MOSQUE

There have been many questions related to the idea of what constitutes Islamic Architecture- specifically the Mosque typology. Examined specifically within the culturally imbued context of vibrant Johannesburg, its sacred nature acts as a moment of reflection for Muslim worshippers within the chaos and eclecticism of the city. The contemporaneity and pluralistic nature of our society sparks interest and debate around the role, form and image of the Mosque- that which is purposefully the rather contentious prerogative of this dissertation.

FIGURE 01.01 RE-CONCEPTUALISING THE OLD AND NEW MOSQUE

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01.1.1 PROBLEM STATEMENT

Given the diaspora of different Islamic schools of thought, language barriers and cultural clashes; mosques have become territorial and somewhat exclusive to cultural divides. It is no longer the unifying factor which brings people together within the selfless act of worship.

01.1.2 THEORETICAL APPROACH

The predominant understanding is that Islamic architecture possesses a distinct set of architectural vocabulary that is unquestionable. The most consistent perception of Islamic architectural vocabulary is represented by the many community and monumental state mosques that make evident use of Middle Eastern or Central Asian architectural apparel as dutifully exemplified in its extravagant splendour as the Turkish Mosque in Midrand and the Tshwane Muslim School in Laudium.

This dissertation seeks to establish- through a new conception of Islamic architecture- that this notion of a consistent architectural vocabulary is not what Islamic architecture is merely about and is not objectively prescribed. It is through this dissertation that different forms and architectural vocabularies –concerned with cultural and contextually articulated space in response to technology, climate and social-political concerns- will be explored.

Also, the place of the woman within the religion of Islam has been that of a false and negative stereotype. Women are known to be inferior towards men within the religion, causing the spatial definition within mosques and other religious spaces to follow such trends. Objective research –within this dissertation- has shown that a clear distinction needs to be made between that of cultural and religious practice, spatially defining the role and importance of individuals within the built environment we find ourselves in.

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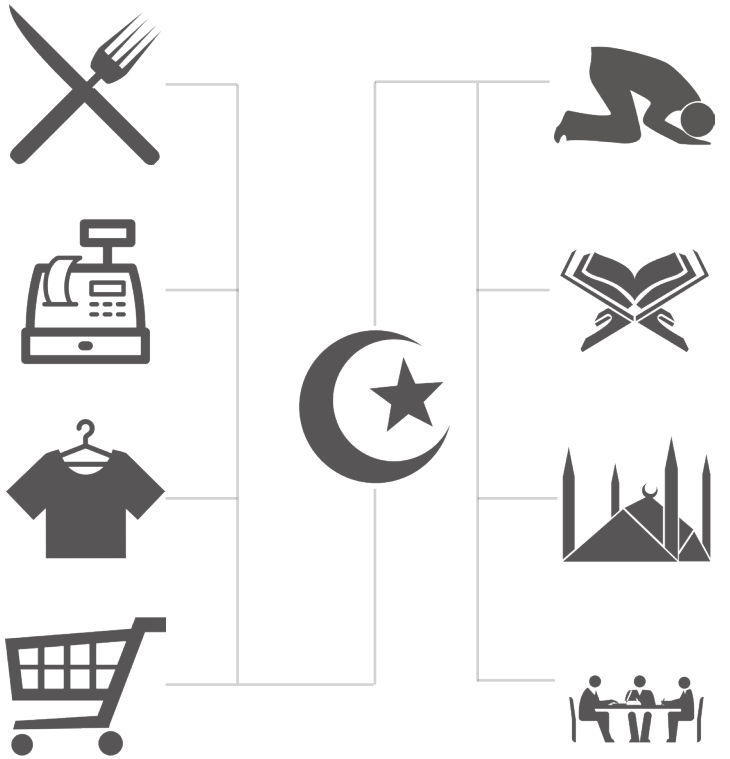

FIGURE 01.02 PROPOSED ECULAR & RELIGIOUS PROGRAMMING

0.1.1.3 PROPOSED PROGRAMME

Programatically, this dissertation explores the re-definition of the mosque and mall typology of the 21st century, and how the need for public and natural space may articulate itself within these typologies in order to produce productive environments which are socially, contextually and environmentally beneficial.

The mosque precinct therefore –in relation to the main project intention of re-linking the religious and the secular- proposes the restructuring of typical mosque-building tendencies and proposes the design of three mosque spaces providing different spatial intimacies, servicing worshippers at their different occupancies, during different religious periods of the day, month and year. These spaces aim to re-invent themselves as they are able to be re-programmed and used as a community hall, gathering space and Public Square.

This hybrid religious space imbues itself in close proximity to the secular as a gallery space looks directly into the main prayer space in order to publicise the religious practice of prostration,restaurants which will look out onto the public spaces, and retail shops which spill over onto the sidewalk. Liminal spaces allow for informal pop-up shops and markets to temporarily exist, adding to the hybridized nature of the informal and formal environments existing in unison upon the redeveloped site.

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01.2 CONTEXT AND SITE

01.2.1 SITE CHOICE AND LOCATION

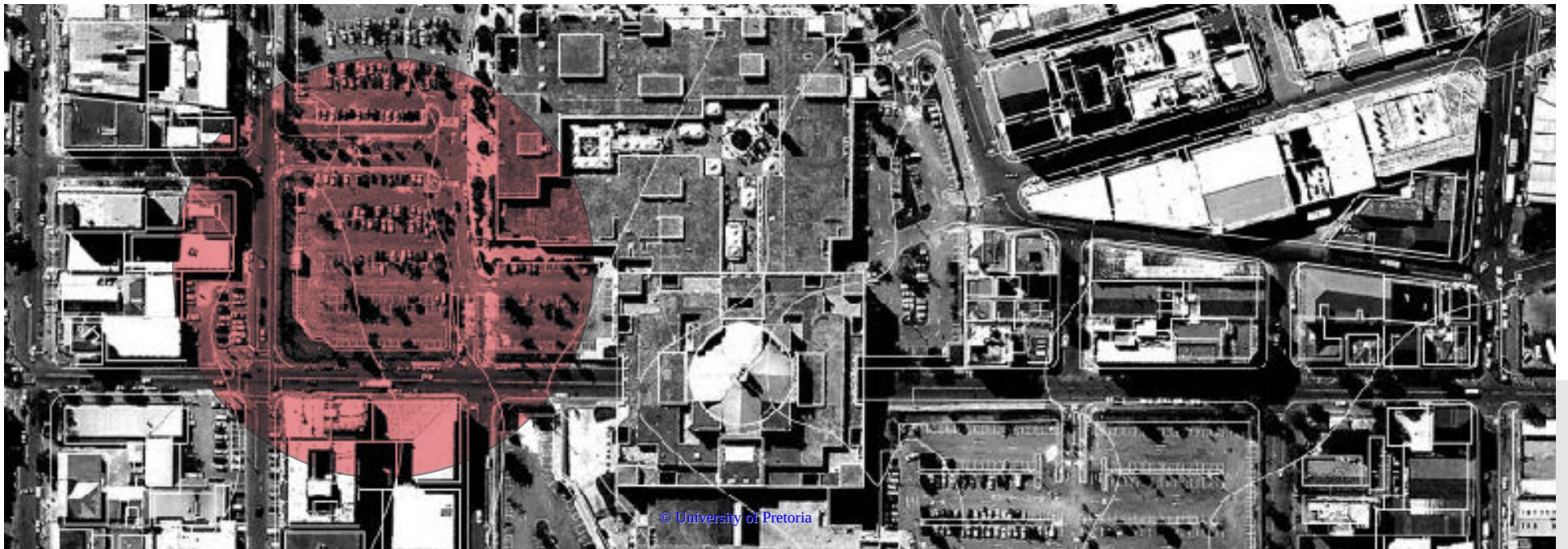
For the purpose of this dissertation, a site that lies within the urban core of Fordsburg, accessible by people from frequently used roads and in close proximity to retail facilities, the various cultural enclaves and numerous other religious anchor points was necessary in order for the development of a central Islamic precinct that aims to expand and gain popularity over time.

Nestled in a vast open-aired parking lot- the proposed site lies between the monumental and insular mall typology of the Oriental Plaza and the dynamic urban fabric of Fordsburg. It aims to play a vital role in creating a sustainable and walkable urban context which provides the resources necessary for its urban development.

01.2.2 URBAN CONTEXT

Chosen for its vast and varied cultural identity, the urban context exists as a gateway into the inner city of Johannesburg. Proposed as a unique cultural enclave which needs to be added to the Johannesburg tourist bus map, Fordsburg's rich history lends itself to the political struggle of a pre-democractic South Africa. An urban vision which encourages tourism and celebration within a larger context proposes Fordsburg to become an urban catalyst for the regeneration of the forgotten social and cultural heritage, reconnecting it with areas such as Mayfair, Newtown and Chinatown.

FIGURE 01.03 PROPOSED SITE IN CONTEXT



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01.3 ISSUES

01.3.1 SOCIAL ISSUE

Diasporic settlement amongst a multitude of cultures during various political and social epochs has created and shaped the formation of cultural enclaves. The development of the built-environment has sporadically formed in and around these enclaves, making mosques and infrastructure exclusive and territorial to cultural divides. Even though within close proximity, cultural groups have developed negative feelings and tendencies towards each other, causing friction within what could potentially be one unified and celebrated cultural enclave within the broader context of Johannesburg.

01.3.2 URBAN ISSUE

Mosques exist on the periphery of the urban core of Fordsburg, compelling restaurant and shop owners to construct smaller informal prayer facilities within their workplaces. This trend, along with the primary reliance of the motor vehicle, discourages people from praying the required five times a day, from creating s a sense of community amongst neighbours and colleagues, and from developing a physical connection with one's context in order to create safer and more habitable immediate environments.

0.1.3.3 ARCHITECTURAL ISSUE

The traditional approach of form-giving and supposed place-making primarily concerned with a presumed architectural vocabulary has -through case studies and examples within this document- proved to assume the Mosque as being fortified and insular in its stereotomic nature. Although making use of traditional (outdated) materials and methods of building, the use of the mosque has become exclusive and has become a mere monumentalised space used only for the act of prostration, locked up at times other than that of prayer.

FIGURE 01.04 ACTIVITY ANCHOR: FORDSBURG MARKET SQUARE

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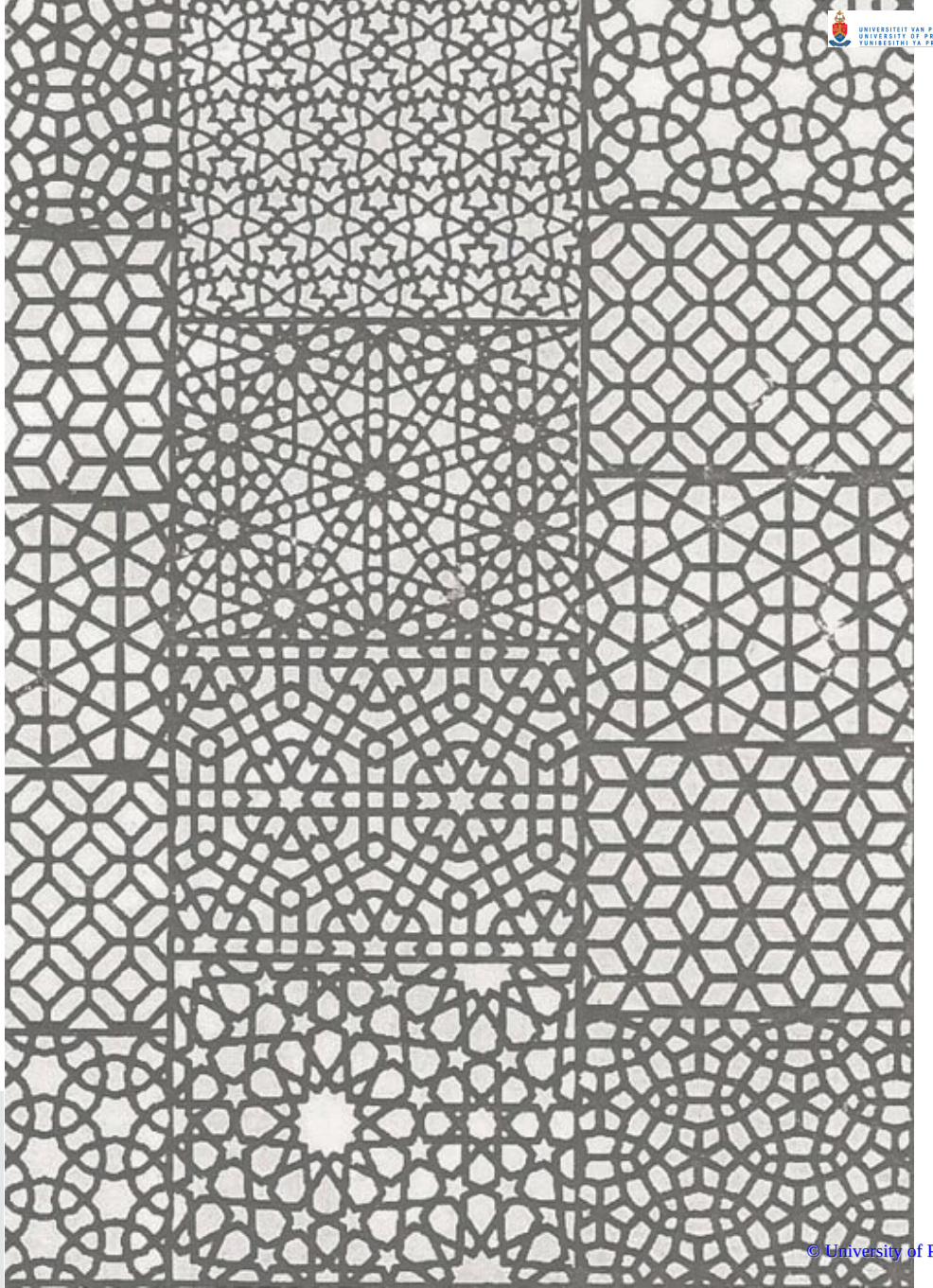

01.4 DISSERTATION CONCEPT

The concept of creating “third spaces” and “third/ alternate conditions” has been theoretically and spatially explored in order to fulfill the project intentions. Notions of cross-programming, hybridity and liminality have thus been explored in order to create a place (as opposed from a mere space) that mediates between the sacred and the profane, that fosters and creates new relationships amongst people and opposing cultures, and creates a centrally juxtaposed space for females within the community. The mosques existence as a solid and insular object within the landscape has been redefined as a sacred mediation space that exists within the profane workings of the urban core, allowing it to become cross-programmed, transparent and liminal in its newly conceptualized existence.

FIGURE 01.05 ISLAMIC PATTERN MAKING- A CONCEPTUAL EXPLORATION

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01.5 INFORMANTS

Conceptual informants and design generators have -through critical analyses and mapping- been explored by sketching, modelling and iteratively testing in order for the fulfillment of a theoretical, conceptual and project intention standpoint.

01.5.1 DESIGN GENERATORS:

•Theoretical premise- traditional pattern-making in Islam related to geometry and proportion

•Theoretical premise- female space and their place in the contemporary mosques

•Ritualistic transitioning- program and space allocation within and around the mosque

•Historical context of Fordsburg and the immediate site

•Physical context- restrictions and opportunities

•Existing fabric- democratic ownership restricting opportunity for intervention

01.5.2 CONCEPTUAL AND CONTEXTUAL RESPONSE:

•Defining a third condition between that of the existing conditions

•Geometric overlay- the 3rd religious grid juxtaposed over the contextual grid

•3 mosques of varying intimacy and usage

•Inversion of the minaret/dome

•Transparency of ritual of prayer

•Social and physical stitching of east and west, using the intervention as catalyst

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01.6 DISSERTATION INTENTIONS

01.6.1 GENERAL INTENTION

In order to foster unity amongst a diaspora and multitude of cultural groups, the re-linkage (existed within precedent) of secular life with that of religious life is envisioned. The blurring of boundaries between that of the sacred and that of the profane would break down emotional and physical barriers between these two poles as one may exist between either. Religion interweaves itself in the demanding life of the secular in order for moments of reverence, devotion and reflection to occur at the necessitated times of day.

01.6.2 URBAN INTENTION

As previously mentioned, the Fordsburg core is envisioned to become an urban catalyst for the regeneration of the forgotten social and cultural heritage, reconnecting it with areas such as Mayfair, Newtown and Chinatown. Its linkages -which does not give preference to the motor vehicle- encourages the pedestrianisation of city, aiming to create public space pulsating with formal and informal activity in relation to existing energies sporadically found on site. Historically inclined intentions of re-establishing memory and spatiality form part of the urban framework, premised on the creation of strong linkages between religious and memorial sites within the proximity.

01.6.3 ARCHITECTURAL INTENTION

Architecturally, a pedestrianized precinct that promotes public spatiality is aimed to find itself highly contextualized with existing pathways, formal and informal energies, along with existing buildings. Transparency of and liminality amongst space acts in opposition to monumentalisation and insularity of building, as-discussed within the architectural issue. The merge between secular and religious space assists in the de-monumentalisation of building type and integration within the context the intervention finds itself within.

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01.6.4 DISSERTATION VISION

The investigation is directed towards an exploration and subsequent redefinition of building-type which re-addresses Islam as a social religion performing as the heart of the community that it serves, transforming the insular typology into a hybrid building which- in its new outward nature- encourages its use as more than just a prayer facility, exploring alternative uses and functions in an attempt to blur the unmistakably evident boundaries of the sacred and the profane.

This blurring of opposing conditions is aimed- through its design- to accommodate and welcome all people in an attempt to successfully foster new-found relationships between those of contrasting schools of thought, religions and creeds.

01.6.5 DELIMITATIONS AND LIMITATIONS

This dissertation does not seek to disregard the value of symbols in Islamic architecture. It merely seeks to look beyond the superfluous and superficial use of symbolism as means for an aesthetically driven architecture.

It also does not aim to create a homogenous Islam which creates a hybrid culture amongst cultural groups, but merely intends to use the common thread –the religion of Islam- to act as a binder for the cultural groups in question to exist in unison.

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01.7 OUTLINE

01.7.1 STRUCTURE OF REPORT

CHAPTER 2: **Religious Utopia**
An overview on traditional common Islamic notions and methodologies that are objectively stated within the Holy Quran, as well as cultural practices within traditional Islamic communities. These notions and values were spatially defined where the
Masjid acted as more than just a prayer facility and place of worship.

CHAPTER 3: **Johannesburg as Religious Dystopia**
Defines the dystopian reality of the Masjid within the context
of Johannesburg, acting in stark contrast to that of the utopian ideals of the traditional mosque.

CHAPTER 4: **Site Analysis | Mapping | Identification**
Critical analyses of the tangible and intangible context in an
attempt to obtain suitable information for site selection and
appropriate programing in order to fulfil the project intentions.

CHAPTER 5: **Project Intentions**
In light of the above mentioned contextual issues, chapter 3 identifies key project intentions and spatial manifestations in order to rectify the dystopia in order to re-establish the key components of the traditional Mosque typology.

CHAPTER 6: **Urban Vision**
An exploration of a new cultural district that proposes to integrate Forsdburg with Newtown, Chinatown and Mayfair , building on the analysis of existing energies, contextual conditions and architectural potential. Three proposed frameworks of different scales consequently generate the parameters within which the proposed intervention will sit.

CHAPTER 7: **Typological Critique | Precedent Study**
Comprised of three categories of precedent studies:
Theory related precedent- abstraction of symbolism
Programmatic precedent- mosque as public space
Spatial precedent- allowance for men and women
Issue related precedent- the mall configuration

CHAPTER 8: **Concept | Theory**
Translation of the findings above into a concept appropriate
to theoretical underpinnings. These notions and ideas are translated into a number of conceptual scenarios that are weighed up according to the intentions previously outlined. The chapter also explores the main design generators and substantiates the decision-making within the theoretical, practical and contextual realms.

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CHAPTER 9: **Design Synthesis**
The building is discussed as an assimilated response to
theory, concept, programme and the hypothesis as outlined previously.

CHAPTER 10: **Technical Resolution**
Explorations of the technical assembly of the Islamic precinct as a result of theoretical and conceptual principles, together with contextual and sustainable underpinnings. The structural intention, materality and systemic responses are discussed with reference to iterative thermal and lighting tests undertaken in **Ecotect.**

CHAPTER 11: **Conclusion**

CHAPTER 12: **Bibliography**

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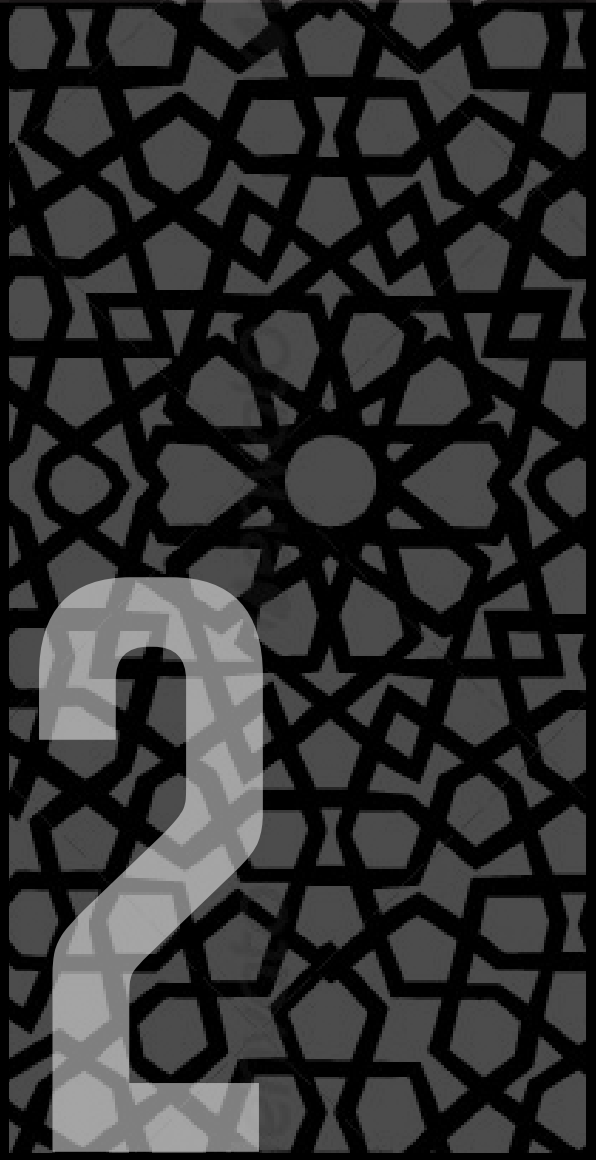

RELIGIOUS UTOPIA

An overview on traditional common Islamic notions and methodologies that are objectively stated within the Holy Quran, as well as cultural practices within traditional Islamic communities. These notions and values were spatially defined where the Masjid acted as more than just a prayer facility and place of worship.

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02.1 THE FAITH OF ISLAM

Born in the land of Arabia, Islam manifests itself into the life of its followers as more than just a religion, but as an overall way of life, supplicating for order, stability, composure and harmony (Chohan; 2010, 6).

The first and most significant principle of Islamic practice is TAWHID. Islam being a monotheistic religion, tawhid refers to the oneness with God. (Razak, 1973)

"SAY; HE IS ALLAH THE ONE. ALLAH THE ETERNAL ABSOLUTE. HE BEGETTETH NOT NOR IS HE BEGOTTEN. AND THERE IS NONE LIKE UNTO HIM"

02.2 ISLAMIC UBUNTU

The second principal of Islam is UMMAH; broadly defined as being the bond used to mean the diaspora or "Community of the Believers" (ummat al-mu'minin), and thus the whole Muslim world. This concept also refers to the importance of the community over the individual, very similar to the concept of 'Ubuntu' in local South African culture (Razak, 1973)

"AND HOLD FAST, ALL TOGETHER, BY THE ROPE WHICH ALLAH (STRETCHES OUT FOR YOU), AND BE NOT DIVIDED AMONG YOURSELVES; AND REMEMBER WITH GRATITUDE ALLAH'S FAVOUR ON YOU; FOR YE WERE ENEMIES AND HE JOINED YOUR HEARTS IN LOVE, SO THAT BY HIS GRACE, YE BECAME BRETHREN; AND YE WERE ON THE BRINK OF THE PIT OF FIRE, AND HE SAVED YOU FROM IT. THUS DOTH ALLAH MAKE HIS SIGNS CLEAR TO YOU: THAT YE MAY BE"
(Quran Chapter 03 Verse 103)

02.3 THE SUBMISSION TO THE WILL OF GOD

This third principle in Islam is the reason mosques were built in the first place. It is objectively prescribe within the Holy Quran that Muslims are to pray five times a day.

Foster argues that that architecture addresses our "metaphysical, philosophical and cultural identities within a material context" (Chohan; 2010: 7).

This metaphysical manifestation of complete submission to the will of the Creator is to take place amongst others within the Masjid. Razak (1973) states how the prescribed prayer times coincide with periods of the day when man would be involved in secular practices of satisfying his/her own needs.

"SEEK HELP IN PATIENCE AND PRAYER, AND TRULY IT IS HARD SAVE FOR THOSE HUMBLY SUBMISSIVE (TO THEIR LORD)"
(Quran Chapter 02 Verse 45)

FIGURE 02.01 CONGREGATION OF MUSLIMS IN PRAYER

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02.4 TRADITIONAL ROLE OF THE MASJID

Norwina (Nawawi, 2014) simply defines the Masjid as a space characterized by its spatial provision that is designed to accommodate a specific congregation with a particular orientation to qibla (the direction Muslims face when in engaged in prayer). These spaces usually include provisions for ablution, the call for prayer, sermons, meetings, discussions, learning and governance.

As mentioned above, daily prayers are performed five times a day, where congregational prayers - with a larger turnout- is performed every Friday and at other specific times of the year.

In all Muslim societies, the masjid is the most significant building in the community, providing a sense of identity and place for its people (Serageldin & Steele, 1995; 54)

Its central role in the city may be likened to that of the cathedral in Christian societies of the West, developed both as a landmark and congregation and gathering point, used for "communal meetings, court of justice, hall for official audiences, starting point for joint actions, shelter in case of danger or an ever open room for those who had nowhere to spend the night, or the treasure where precious valuables could be safely deposited in purpose built chambers, if somebody left for travels" (Prochazka 1986;35).

Its approach through narrow and dimly lit streets led to a sense of discovery, in stark contrast to the broad avenues and public places found in Western urbanism. Chohan (2010:8) states how a sense of spirituality was evoked by introverting the spatial focus in order to shut out the outside world, articulated by thick space-enclosing walls, narrow arcades, and high vaulted ceilings. It was frequently surrounded by densely packed buildings which were sometimes built onto its stereotomic structure.

The mosque acted as both a spiritual and secular space- not exclusively a place for prayer, but also a place where important matters of the community were discussed and resolved. Mahatma Ghandi and his people protested for their rights, burning their pass books in a struggle for democracy. The mosque acted as a platform for the community to partake in an ethical debate. Rasdi (2014, 8) defines the big city mosque having a firm hold over the political affairs of the empire, retaining their roles as an administrative center, a financial center, a courthouse, the place of official state audience, the place for religious celebrations and the center of learning. The mosque also acted as a social magnet where friendships and brotherhoods were formed. Its relationship with context allowed for its religious nature to be intertwined with the secular life of society, blurring boundaries between the two.

Norwina (Nawawi, 2014) states how the image of the Masjid has been evolutionised from its simple physical structure used for congregation, dissemination of information and state meetings to lofty and impersonal images of today's Masjid.

FIGURE 02.02 MUSLIM MAN ENGAGED IN PRAYER

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FIGURE 02.03 MUSLIM WOMEN ENGAGED IN CONGERGATIONAL PRAYER

FIGURE 02.04 MUSLIM GIRLS DRESSED IN HIJAAB

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02.5 WOMEN IN ISLAM

Nawawi (2014) states that a Muslim woman's participation in the Masjid is non-compulsory in Islam, however, if the women do undertake to pray in the Masjid, rewards will be in equal measure to men praying in the Masjid. Although, women should avoid wearing perfume, they should wear their hijab (coverings) properly to avoid fitnah (being framed unjustly and sexually).

The following extracts from the Holy Quran and Hadiths provides objective proof on permissibility of women attending the Masjid:

"Do not prevent your women from (going to) the mosques, though their houses are best for them"(Abu Dawud)

"If your women asks permission to go to the mosque at night, allow them"
(Narrated by Al-Bukhari)

"When the wife of one of you asks about going to the mosque, do not stop her"
(Narrated by Al-Bukhari)

"If any among your women asks permission to go to the mosque, don't stop her from going"
(Narrated by Al-Bukhari)

She also mentions how women with higher education and for economic reasons, more women find themselves contributors to the general workforce. Because of this, women travelling, working or attending events outside the home is common. Hence, there is a definitive need for prayers spaces for females who are prescribed to perform their five daily prayers whether on a journey, at work, or leisure.

Nawawi (2014) indicates that women and children form an important part of the community and are thus important users of the Masjid. It is for these reasons that space planning and design provisions should accommodate for their usage thereof.

Observations and personal use of these spaces suggest that the requirements provided are not consistent and frequently gender insensitive.

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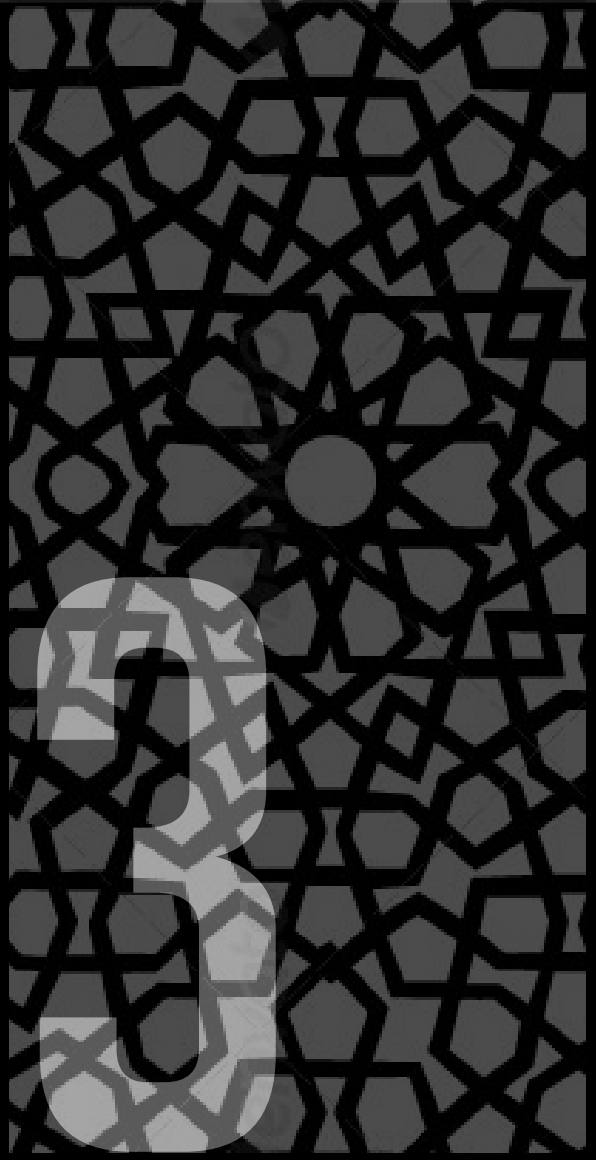

JOHANNESBURG AS RELIGIOUS DYSTOPIA

Defines the dystopian reality of the Masjid within the context of Johannesburg, acting in stark contrast to that of the utopian ideals of the traditional mosque.

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FIGURE 03.01 SPATIAL FOOTPRINT OF FORDSBURG, MATFAIR AND NEWTOWN WEST

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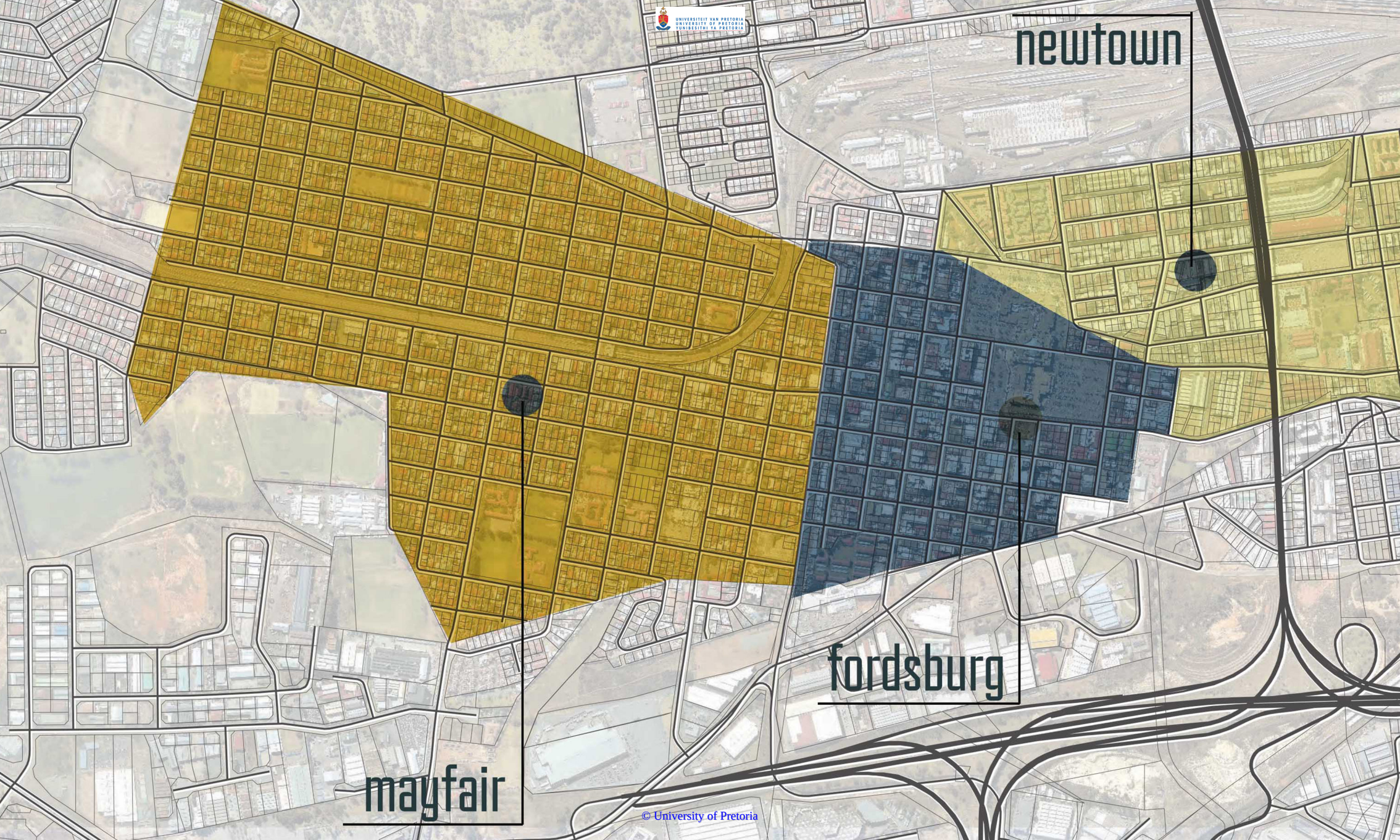

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03.1 HISTORY

1887- Indians moved to Brickfields/ Burghersdorp

1904- Destruction of homes for white economy, thus moved to Pageview because of the Group Areas Act

1934-1961-Overcrowding of Indians in Pageview caused an overflow in Fordsburg. Whites started moving into Mayfair.

1970's-Demolition of homes in Fordsburg for the erection of the Oriental Plaza; Indians slowly moved into Mayfair

1980's- Illegal and legal migration of Indians/Pakistanis/Bangladeshis moved into Fordsburg due to existing family networks and the anticipated demand for their services

1994- Democracy allowed for Somali refugees to flee their war torn country in order to seek refuge in Johannesburg. Sought mosque as totem and found homes close to Halaal butcheries.

Times Media, Africana Museum

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The Nicolaides brothers outside their Mayfair cafe, 1938. Like many immigrants, these men worked long and hard hours to establish their business. But as whites in South Africa, their chances were far better, and their livelihood far more secure, than that of William Bekiswayo in the picture opposite.

FIGURE 03.02 NEWSPAPER ARTICLE OF INDIAN SHOP OWNERS

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03.2 SEGREGATED DEVELOPMENT

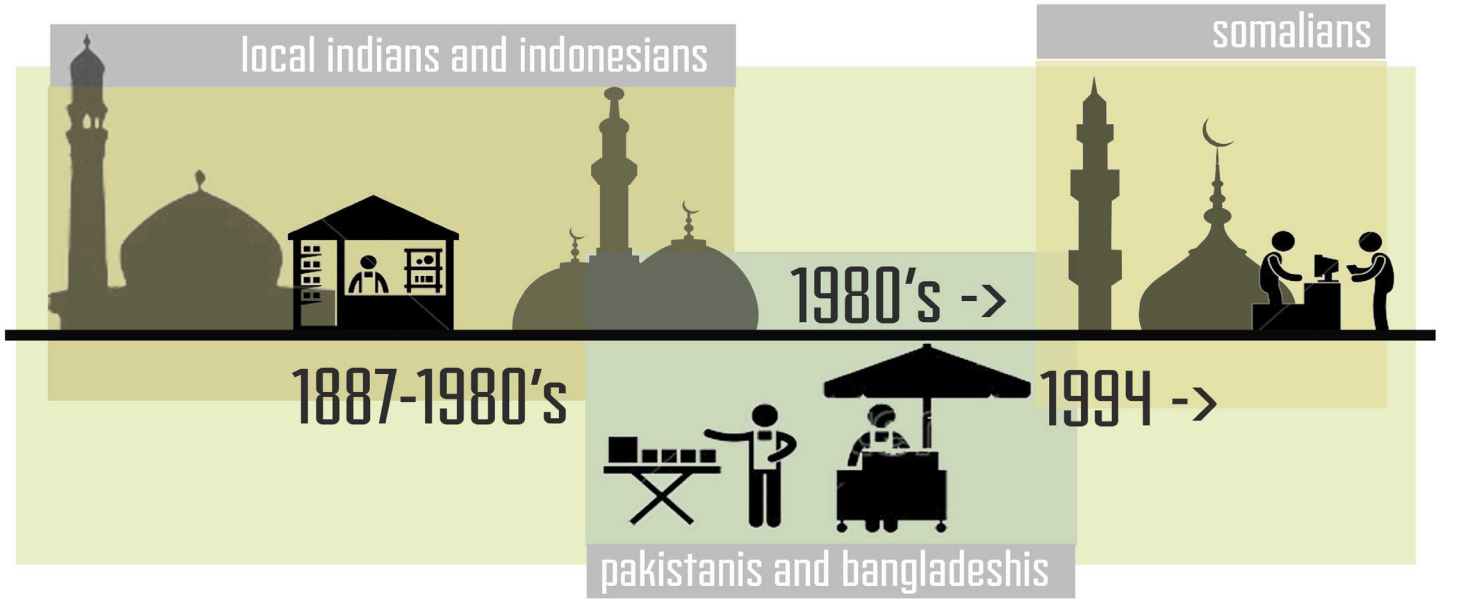

FIGURE 03.03 TIMELINE OF DIASPORIC SETTLEMENT

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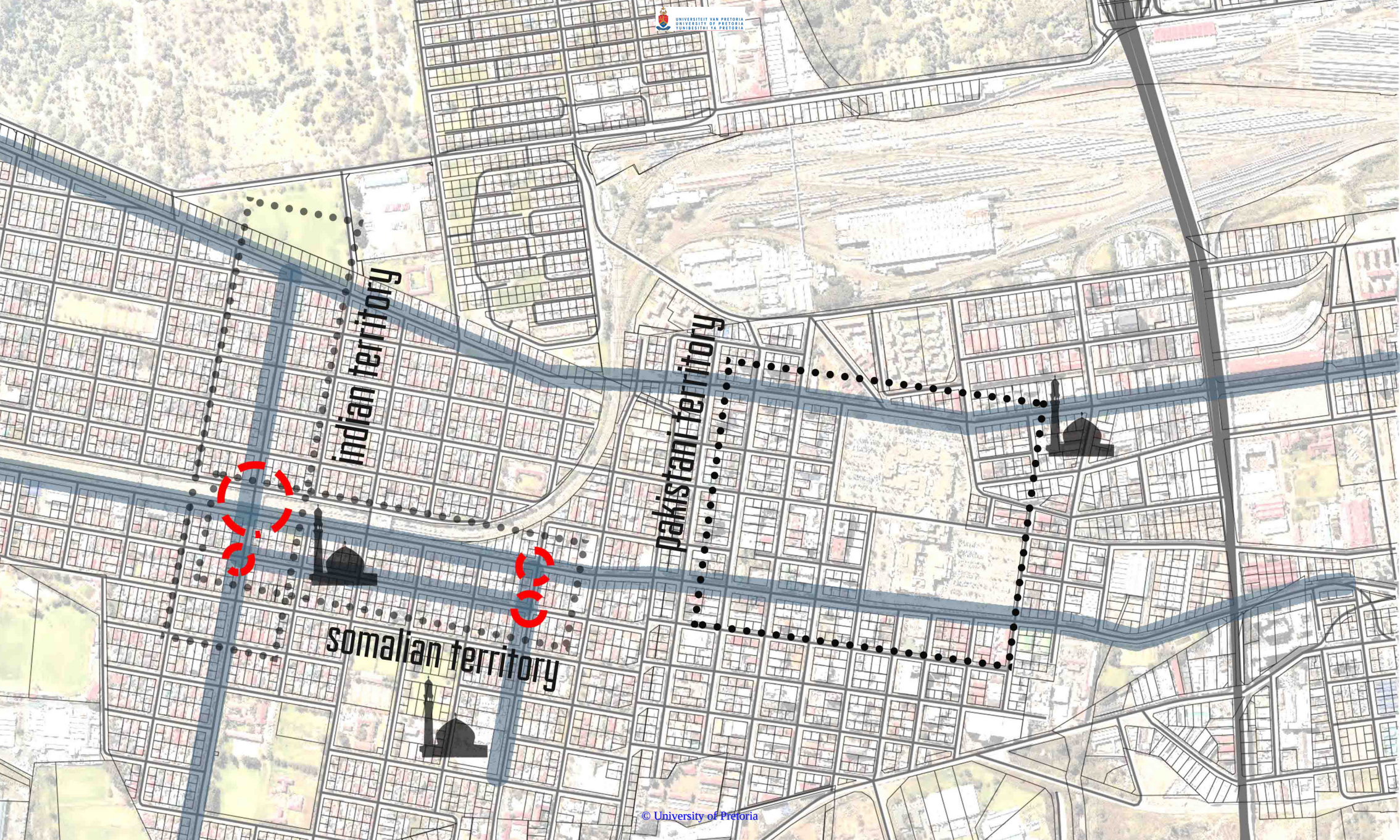

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Seedat, Dinatha & Patel (n.d.) state that the development of Islam within the confines of Johannesburg is not of a homogeneous nature but rather points to a heterogeneous community of Muslims.

Diasporic settlement therefore, given the above time-line, has caused for the formulation of cultural enclaves within which over time has created a social and spatial distinction servicing the three broad groupings of Muslims in Johannesburg within and between which this heterogeneity is expressed.

1. The majority being the established Muslims of Indian and Indonesian descent who settled due to strict implementation of the policy of apartheid.

2. The second being the migrant Pakistani and Bangladeshi community who began to illegally entrench themselves within Johannesburg before the advent of democracy as they possessed skills that may have been of interest to Indians and Indonesians.

3. The third being the refugee Somali community who- in search for the minaret as a totem and halaal butcheries for convenience-have rooted themselves strongly since the advent of democracy.

There is an evident social tension that exists as the distinctions between these 3 cultural groups – according to Seedat, Dinatha & Patel (n.d.)- this may be based on a variety of Islamic schools of jurisprudence and outlook, embedded as it is in the historical development of the religion; race and ethnicity, as well as the impact of social class relations.

Gender politics has added a further dynamic to the spatial layout of these cultural enclaves. It is however ironic that the three groups in question exist in a relative isolation, even though the same religious dogma is followed.

FIGURE 03.04 TERRETORIAL DEVELOPMENT OF FORDSBURG & MAYFAIR

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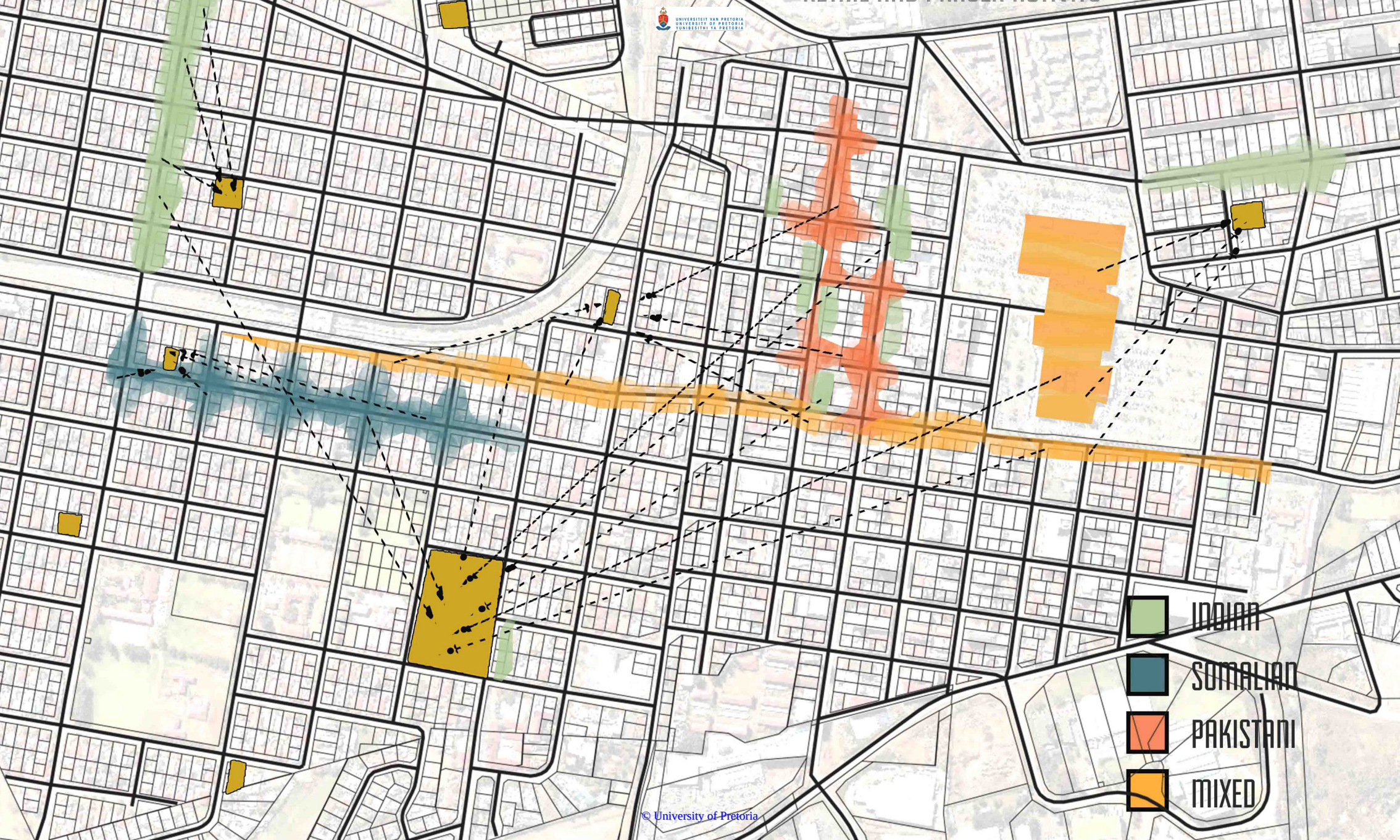

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03.3 CULTURAL ENCLAVES- RETAIL AND RELIGIOUS ACTIVITY

These cultural enclaves have been spatially defined as the erection of formal and informal infrastructure for retail and service provision cater for the specific cultural grouping- creating smaller cultural communities within a larger Muslim community. Sadouni (n.d., 2) mentions that pronounced pluralism in Johannesburg has led to the visibility of Islam where the erection of new religious institutions, the practice of religious events and festivals are also a result of a this creation of diverse territories marked by the settlement of the three migrant communities.

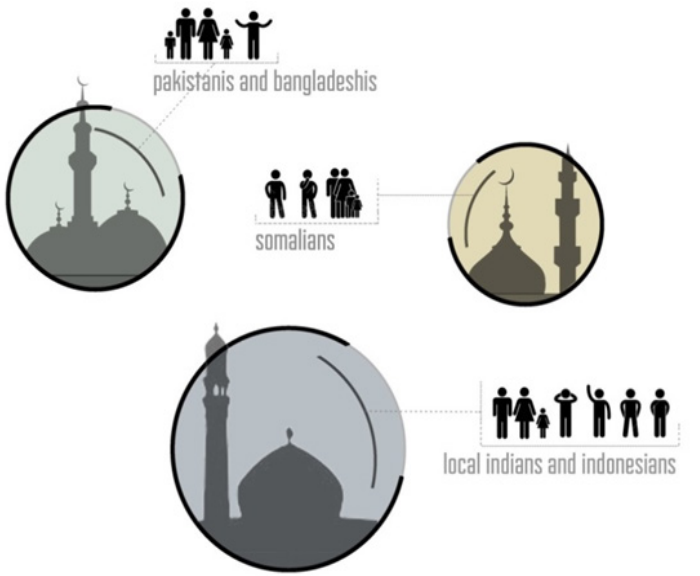

FIGURE 03.06 MOSQUE TERRETORIALISM OF CULTURAL GROUPINGS

03.4 TERRITORIALISM OF MOSQUE

Because of the social and cultural relations formulated because of cultural enclaves, mosques have become territorial whereby different cultural practices are performed and different languages are used.

This creation of spatially confined and socially insular pockets of Muslim communities' disregards the concept mosque being the uniting and binding factor amongst all Muslims. It has become territorial and no longer serves the community in all aspects of life- like it once did- (as in the initial example of Mahatma Ghandi).

This notion of exclusivity is further reinforced by Chohan's (2010;11) thoughts of the mosque being used exclusively by just Muslims as being unnatural for an architectural symbol of a religion that is notably welcoming and receptive.

Jahnmohamed (n.d., 2) states that those who have been seduced by violence or discrimination have not found it in mosques, but rather have been alienated and socially deterred from them. She poses a question and asks whether a well-designed, well-built and well implemented religious building could inspire minds and souls in positive ways?

FIGURE 03.05 CULTURAL ENCLAVE FORMATION, ACTIVITY & MOSQUE USAGE

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03.5 SIDE ENTRANCE- MISCONCEPTIONS ABOUT FEMALES IN ISLAM

The Holy Qur'an says:

"And the mosques are for Allah (Alone), so invoke not anyone along with Allah"
(72:18).

Mosques are commonly understood as the house of God, inviting to all those who seek to physically manifest their spirituality.

Women, however, have been sidelined and given secondary preference within the mosque. Spaces are specifically demarcated away from the men-folk, often not within an audible or visual distance from the imaan (priest). Women consequently feel a disconnection with mosques as they are spatially and emotionally segregated, secluded and unvoiced within a typology that is meant to be inviting and inclusive to all.

This unjust occurrence and insensitive spatial planning is of cultural practice and must not be conflated with the religious beliefs of Islam- causing misconceptions about the religion itself.

Precedent studies show that traditionally, men and women were allowed to pray in unison within the mosque space, only separated by hijaab (veil). Chapter eight elaborates on this.

Imam Bukhari makes mention that the Prophet Muhammad(pbuh) said:

"Do not forbid the mosques of Allah to the women of Allah."

"Why are there still mosques where there are incidents of women feeling so unwelcomed? Why does it feel like at some point or another, we're fighting for space?"
(huffingtonpost.com/imam-khalid, 2014)

FIGURE 03.07 FEMALES ENTER THROUGH SECONDARY ENTRANCE

FIGURE 03.08 MOSQUE DISPERSAL IN FORDSBURG & MAYFAIR

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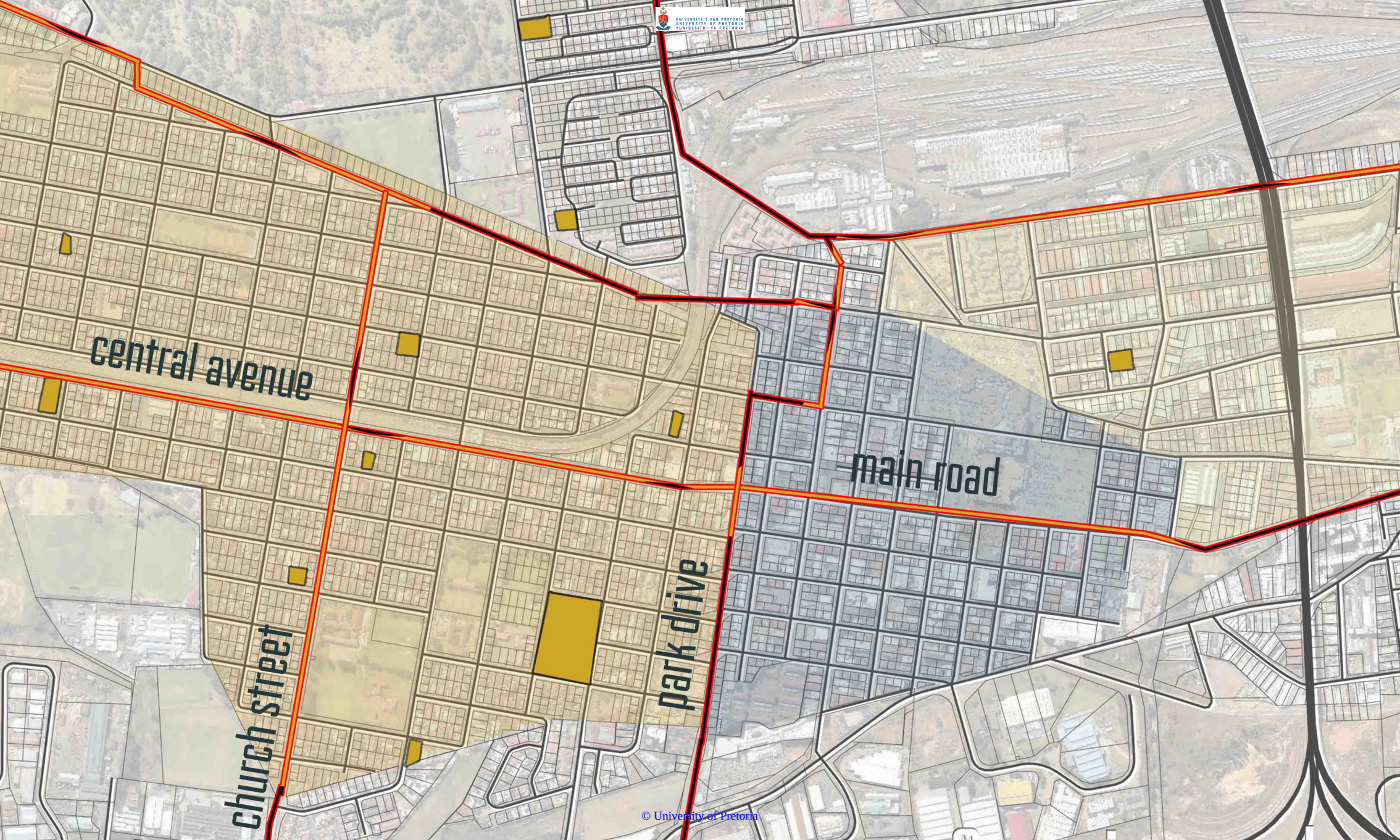

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03.6 AN URBAN INVESTIGATION

The Mosque was once “the anchor of the society and the center of the community. Unity of society is another fundamental of any Muslim community, where the division between the secular and religious life does not exist, and the mosque is a part of daily life embedded in society” (Razak, 1973).

The above definition, along with precedent show that the Mosque once acted as the central core of the city- out of which retail and public space grew. Islamic societies were not characterized by a division between religious and secular life since this division was “removed through the integration of all aspects of life into a sacred unity outside of which nothing exists” (Ardalan & Bakthiar: 1973;3). Urban planning took into account the daily ritual of the Muslim citizen and accommodated for all aspects of one’s life within a reachable distance.

“The splitting of society into two poles was a product of western thinking, a rejection of the Church and its hardline approach to science. Based on theories such as Darwin’s theory of evolution, atheist thinking developed. The Church was then no longer the center of the city, it became detached from everyday life, and man’s goal shifted from the achievement of paradise to the achievement of material success” (Razak, 1973).

Analysis has mapped the two main anchor points within the larger precinct of Fordsburg: The Oriental Plaza and Fordsburg square. These mappings, along with mosques within the precinct is indicate in figure 03.10.

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Mapping exercises have shown that there is a physical divide and disconnection between the anchor points -where energy and densities exist- and where Mosques are constructed. Because these Mosques are not within a favourable walking distance from these anchor points. (Lockerbie; 2014, 23) indicates how the lack of pedestrian contact- be it formally or informally- may lead to the destruction of social intercourse.

Conversely it is suggested that the more chances people have to meet as pedestrians, more opportunities are made in order for the development and continuation of relationships.

There has been a lack within one's spiritual state of being as people do not pray the prescribed 5 times a day. Religious life is thus divorced from the daily life of economy and retail.

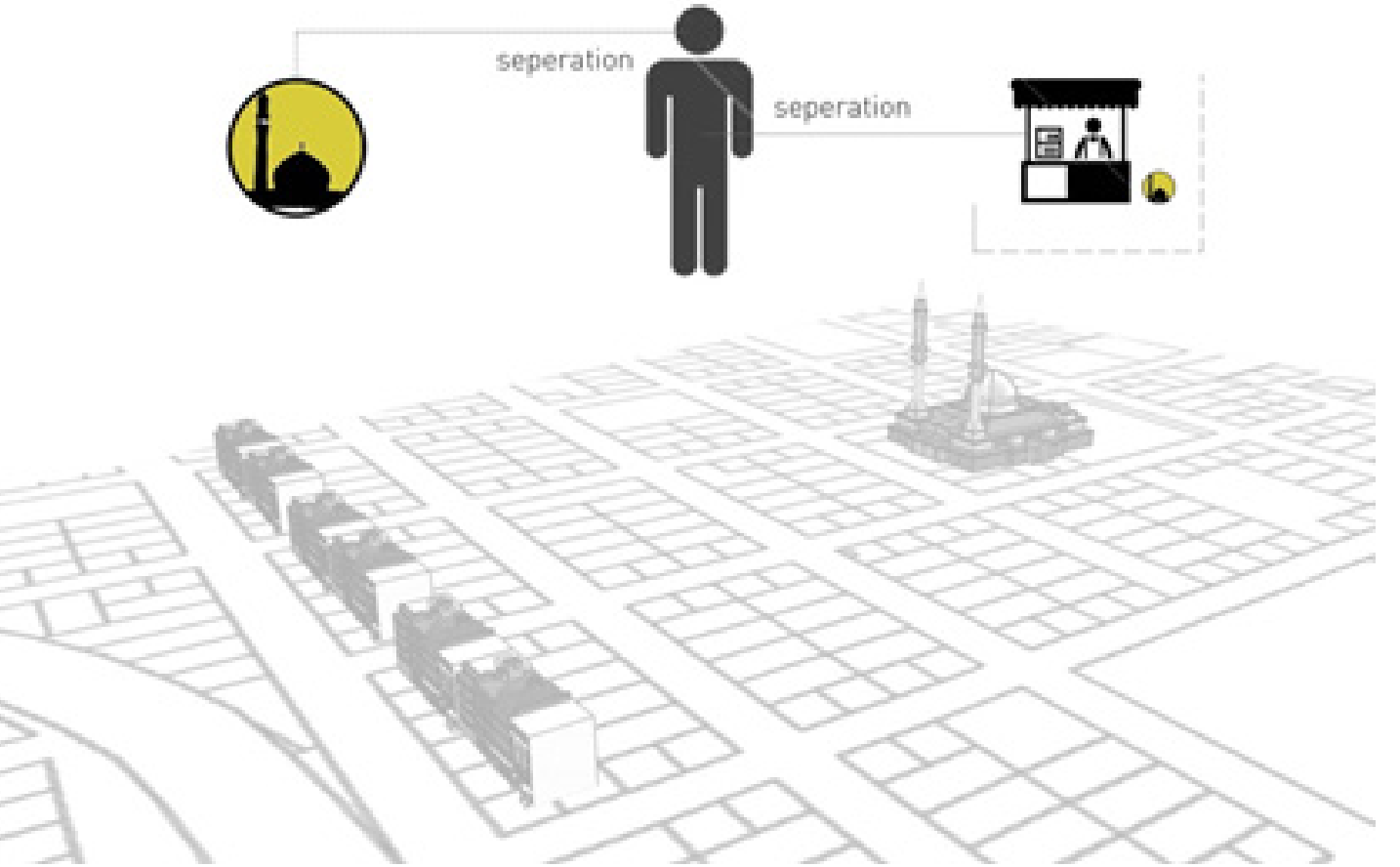

FIGURE 03.09 PHYSICAL SEPERATION BETWEEN RELIGIOUS AND SECULAR LIFE

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It has caused for – due to the religious requirement of physical prayer - the erection of small Jamaat Khana prayer facilities within restaurants and shops which service customers and shop owners.

The Jamaat Khana is a socially and spiritually unsustainable model for a prayer facility - it is therefore a 'drive-through' facility where its informality does not promote congregational prayer (as prescribed by the Quran and Hadith); it does not facilitate in creating social encounters- thus satisfying the notions of Ummah; it does not provide religious amenities such as cleansing facilities and prayer books, etc.

FIGURE 03.10 RELIGIOUS, SPIRITUAL AND RETAIL ANCHOR POINTS

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03.7 THE MOSQUE TYPOLOGY:

In its earlier manifestations – as mentioned above- the mosque acted as both a spiritual and secular space- not exclusively a place for prayer, but also a place where important matters of the community were discussed and resolved. Mahatma Ghandi and his people protested for their rights, burning their pass books in a struggle for democracy. The mosque acted as a platform for the community to partake in an ethical debate. In accordance with this, Serageldin and Steele mention how the role of the mosque has varied from time to time and from place to place. Its form, structure and overall appearance have reflected a similar evolution and variation.

This evolution and variation has however not always been to the benefit of the society. “Islamic societies were not characterized by a division between secular and religious life, rather this division was “removed through the integration of all aspects of life into a sacred unity outside of which nothing exists.” (Ardalan & Bakhtiar 1973; 3)”

This division exists within Fordsburg where there is a physical divide between the Mosque and its context, and a spiritual divide between the Mosque and its people.

The **islandification** and **lack of integration** of the mosque as it stands tall like a monument creates a sense of isolation within its context. The parking lot does not create rich urban environments to thrive around it as in historic examples. Catsnaps.org defines these stand-alone buildings as the experience of objects that are not dissimilar from sculpture; the production of conceptual work as opposed to contextual work which “melds into the physical fabric of the city… best enjoyed by those moving in and around” (Lockerbie, 2014).

FIGURE 03.11 ISLANDIFICATION OF MOSQUE WITHIN ITS CONTEXT

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Serageldin and Steele (1996) highlight the patterns and trends of mosque design and development. These are:

•“The emergence of the state mosque and the divorce of the massive public works structure from its social milieu”

•“The degree of success of novel modern architectural forms and their acceptance by the population.” Eg: Jummah Mosque Fordsburg

•”The visibility of mosques in the contemporary building environment, in spite of the emergence of other large modern structures, continues to underline their importance and impact as form givers in contemporary architectural language.” But are they performing the required role in developing new forms and new languages capable of enriching the architecture of other building types?

The primary use of the car- ignoring the pedestrian- inhibits the ritual of walking in congregation to prayer, meeting people on the way, getting a quick hot-dog at the Aunty around the corner, etc. This drive-through culture of religious manifestation defeats part of the purpose of the existence of the Mosque since “if a person comes to a Mosque and does not have one single conversation with anybody- what was the purpose at all?” (Spirit21.co.uk, 2014).

Its current use and design as just a prayer facility- in stark contrast to what the mosque previously accommodated for- which happens to be used to its capacity only on Fridays for mass Jummah congregation- does not allow it to fulfill the role of being the heart of the town. It does not cater for more than the basic prayer needs of the *ummah*. Jahnmohamed indicates that this single programmed monument lacks in confidence, is constrained by lack of time, resources and vision (Janmohamed, n.d.).

FIGURE 03.12 RELIANCE ON MOTOR VEHICLE

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FIGURE 03.13 FORTIFIED EDGE CONDITION OF TYPICAL MOSQUE

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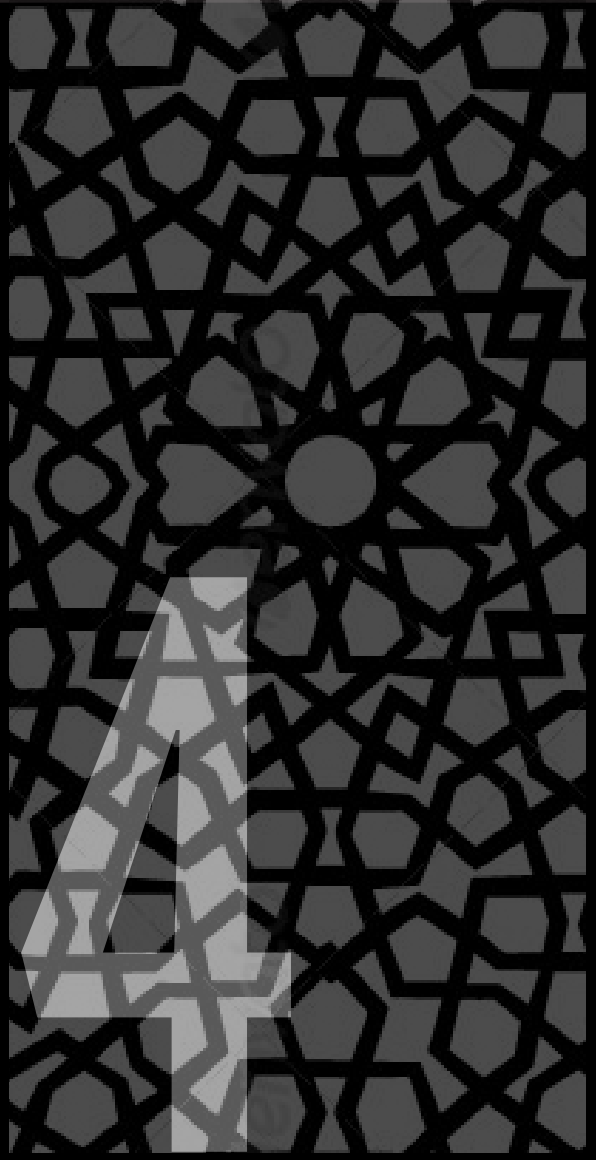

SITE ANALYSIS & IDENTIFICATION

Critical analyses of the tangible and intangible context in an attempt to obtain suitable information for site selection and appropriate programing in order to fulfil the project intentions.

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“Fordsburg reveals itself as a palimpsest in a field of memory. There are silent memories, those places which are still extant but whose great historical value has been largely forgotten. There are memories whose voices can still be heard. They speak of the disembodiment of the Fordsburg fabric and other areas and their re-manifestation into the Oriental Plaza. Then there are lost memories, urban fabric and everyday life destroyed by systems of demolition and separation. In all of this is celebrated memory, held together by a collective culture, which permeates beyond socio-political and spatial polarities.”

(Toffah; 2008, 10)

Figure 3 Johannesburg 1897 Source: Beavon K, Johannesburg: The Making and Shaping of the City, University of South Africa Press, Pretoria, 2004.

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FIGURE 04.01 JOHANNESBURG 1897

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04.1 CITY OF GOLD: WORKHOUSE TO MIXED USE

FIGURE 04.02 ROW HOUSING IN VREDEDORP, SIMILAR HOUSING FOUND IN NORTHERN FORDSBURG

Fordsburg itself was established in 1888, along with areas such as Mayfair, Industria, Crown Mines, Consolidated Main Reef Mines, Newclare and Sophiatown, upon which the first Main Reef –Langlaagte farm- was found (Leyds: 1964). The name was derived from its founder Lewis Peter Ford, a Transvaal Attorney-General under the Shepstone administration involved in gold-mining transactions from the earliest days of the Witwatersrand. (Toffah;2008,12)

In its earliest days, land in Fordsburg could not legally be sold or even given away as potential buyers feared that they would be drowned in the Fordsburg Dip, a dangerous swamp at the time, still evident today in the contour levels that converge on the South eastern edge of Fordsburg in the region of what was the Fordsburg Spruit. (Toffah;2008,12)

Fordsburg, like many other suburbs in Johannesburg at the time, housed mineworkers employed at surrounding gold mines within the rapidly developing area of Langlaagte. Even though countless South African mineworkers had settled within the area, lack of sufficient manpower called for the import of workers from England, Ireland and Australia (Toffah;2008,14).

Pubs and hotels rapidly sprung up all around the suburb, serving a boisterous nightlife to the predominantly male society of Fordsburg and Johannesburg at the time (Norwich; n.d.,1986). By 1893 Fordsburg formed part of the Johannesburg municipal area allowing land to be sold and rented as both dwelling and business. No restrictions were put in place preventive buyers to use their plots for both residential and business purposes, allowing shopkeepers to live in rooms behind their workplace (Toffah;2008,14).

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Times Media, Africana Museum

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The Nicolaides brothers outside their Mayfair cafe, 1938. Like many immigrants, these men worked long and hard hours to establish their business. But as whites in South Africa, their chances were far better, and their livelihood far more secure, than that of William Bekiswayo in the picture opposite.

FIGURE 04.03 MAYFAIR TRADERS

04.2 PEOPLE, PLACE, POLITICS: ROOTING AND UPROOTING OF PROPERTY

1885 called for apartheid ownership laws which prohibited Indians from owning any property in areas not set aside for them. The non-white population of Johannesburg were consequently concentrated in three 'locations' derogatorily termed as the 'Coolie Location', the 'Kafir Location' and the 'Malay Location' (Carrim; n.d.,1990).

The 'Coolie Location' –established in 1887- was situated in present-day Newtown. The dilapidated area lacked proper roads, adequate and comfortable access to electricity and sanitation, and although the population drastically increased, its infrastructure did not grow simultaneously. Overcrowding and improper living conditions led to a severe outbreak of a bubonic plague. In reaction to this crisis, the Town Council burnt the Indian Location to the ground at the end of March 1904. The entire population was consequently uprooted and moved to an emergency camp near the sewerage works at Klipspruit, 30km south of Johannesburg (Carrim; n.d.,1990) .

The location was then redeveloped as a commercial area and named 'Newtown'. By July 1904, many of the inhabitants who were previously evacuated from the Indian Location started moving back into the urban centre while others chose to seek refuge in the 'Malay Location', where Pageview exists today, as it was one of the very few residential areas available for legal 'non-white' occupation within Johannesburg (Toffah;2008, 11).

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The Asiatic Land Tenure Act was introduced in 1932, having severe implications for non-white citizens. Provisions of the Act meant that all non-whites who owned business that existed outside of the designated areas were to be forcefully closed and sold to white people (Toffa 16).

Community leaders of the Transvaal Indian Congress applied pressure and intervention pleading that areas such as Denver, Fordsburg and Jeppe were exempt in terms of the discriminating Act. (Essop: 2002) The exemption of these areas were further influenced by the fact that Indians in Fordsburg were beginning to firmly establish themselves, creating an identify within the area. The existence of amenities and infrastructure such as schools, social halls, prayer facilities, cinemas, Indian trading and living spaces were evidence thereof.

The Johannesburg Indian Government School, also known as the Bree Street Indian Government School ('BIGS'), located on the corner of Bree and Malherbe Streets, was built in 1914 and still exists today.

These amenities serviced residents of Fordsburg and Pageview which by the 1960s was predominantly Indian owned (Tofah 16).

The implementation of the Group Areas legislation of the 1970s was a means by which the Nationalist government intended for stricter separation of all race groups, resulting in the demolition and forced removals of all non-white residents from Pageview. The Johannesburg City Council proposed that Burghersdorp then be set aside for Indians. It was also then proposed that part of Fordsburg and Newtown should be allocated to the Indian community, along with the township of Lenasia on the southwest edge of the municipal boundary, 32 kilometres south of Johannesburg (Tofah 16).

Fordsburg now exists as a melting pot of mostly foreign inhabitants who sought refuge in an area fully established with halaal (permissible to consume) eateries and butcheries, religious infrastructure, and a bustling neighbourhood diverse in its nature.

FIGURE 04.04 ROUTE TO NEWTOWN MOSQUE

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04.3 FORDSBURG IDENTITY

Main Road and Mint Street function as the major external hives of activity within Fordsburg. Street level activity comprises of a diverse range of commercial, formal and informal retail trade, all spilling onto the pavements, giving the area a unique character and sense of place. The area comprises of eastern and western-driven retail stores, restaurants, coffee shops, ice cream parlours, hairdressers and various CD and DVD stalls endorsing Eastern and Western cinema and entertainment.

Much of the retail in Fordsburg serves local residents who reside in the area whereas specialty shops draw a dynamic customer base from the broader city fabric of Johannesburg and Pretoria. The Mint Road strip is is characterized by Indian and Pakistani restaurants which also attract a diverse clientele all in search for an authentic Eastern experience. Toffah (2008,20) indicates how Fordsburg Square, 'The Square' as referred to by local residents, is one of the few places in Johannesburg where a diversity of people engage in the public life of the city after hours. Together with the vast array of restaurants and shops, the market can attract up to 2000 people on a Saturday evening, all in the hopes of experiencing the unique sights, sounds and aromas of the area. Its vibrant energy is the result of the multitude of activities such as eating, sleeping, working, praying and playing occurring simultaneously and in close proximity to each other (Toffah;2008,20).

FIGURE 04.05 VIBRANCY OF FORSBURG MARKET SQUARE

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04.4 CONTEXT MAPPING

04.4.1 HERITAGE AND RELIGIOUS

Fordsburg and its surrounding context exists amongst an abundance of historical and monumental buildings and sites which speak of the political and social influences enforced upon by unjust legislation, and its consequent reaction thereof.

These buildings have defined the spatial footprint of muslims and other religious groups who have -at some time or another- found solitude within the context. Although some are underused or lay dormant, these structures have signinifantly added to the rich and vibrant context of Fordsburg and Mayfair. In order for the critical understanding and analysis, important buildings have thus been mapped.

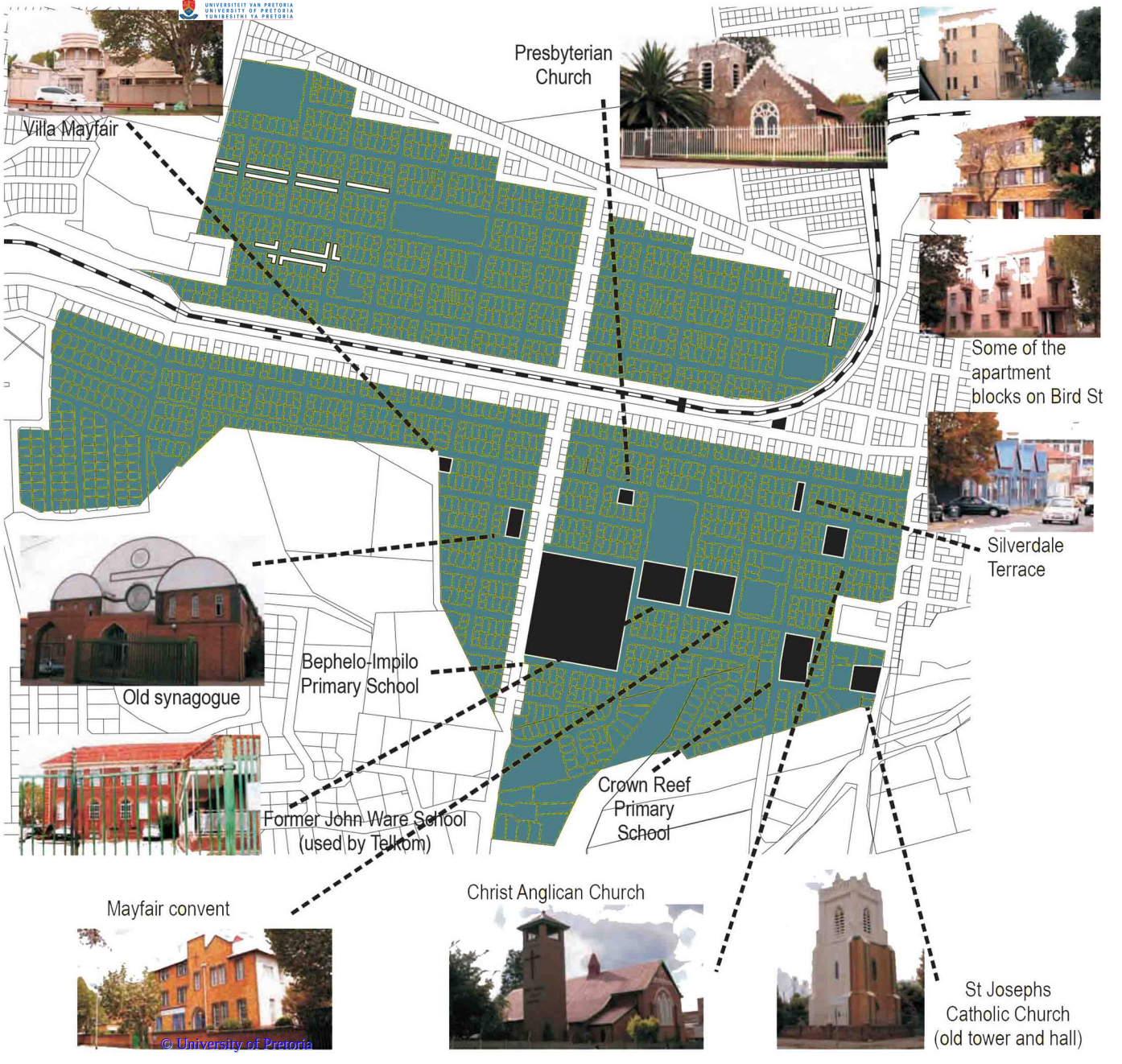

FIGURE 04.06 INTERNAL COURYARD OF ORIENTAL PLAZA

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Railway Institute

Railway compound
(declare provincial heritage site)

Premier Milling
(facade)

Price's Candle Factory
(facade)

Jennings St
Mosque

Housing stock

Joburg Indian
School

Bata Building

Octavia Hills

John Ware /
Fordsburg Park

Gundelfinger
Warehouse

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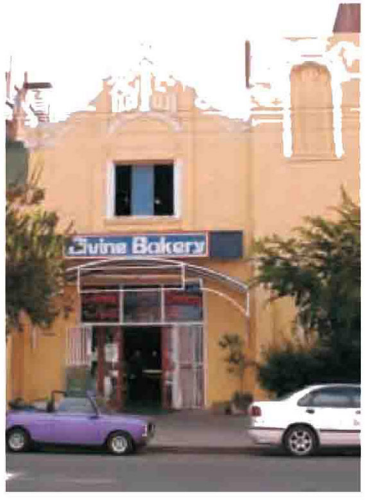
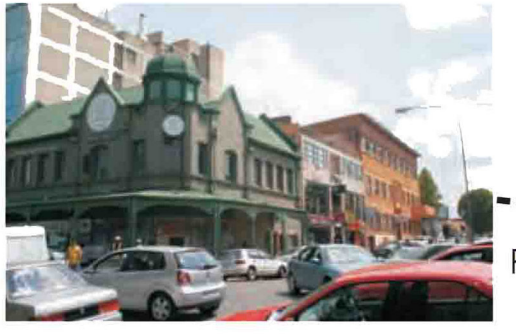
Divine Bakery
(formerly Presbyterian Church)



Fordsburg Post Office

VEKA Building

Maronite Church



Roses Building

Lyric, Avalon cinema, Central Road

Fordsburg Square & Public convenience

Orient Hotel (former Sacks Hotel)

Mijnpacht Hotel

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FIGURE 04.07 INFORMAL RETAIL AT FORDSBURG MARKET SQUARE

04.4.2 INTERVIEWS

Interviews were conducted with shop owners, workers and iresidents of local and foreign descent.

Conclusions derived from this quantitative approach have shown that entrepreneurship is abundant. There is also a common trend whereby men either pray within their shops or attend mosques of cultural affiliation predominantly for compulsory Friday prayers.

There is very little provision made for women within certain mosques. They are consequently forced to pray within their shops or wait until the end of the day to pray when at home. This architectural insensitivity stems from the social misconception that a woman is inferior to man. This notion is however not true as the holy Quraan objectively states that “When the wife of one of you asks about going to the mosque, do not stop her”

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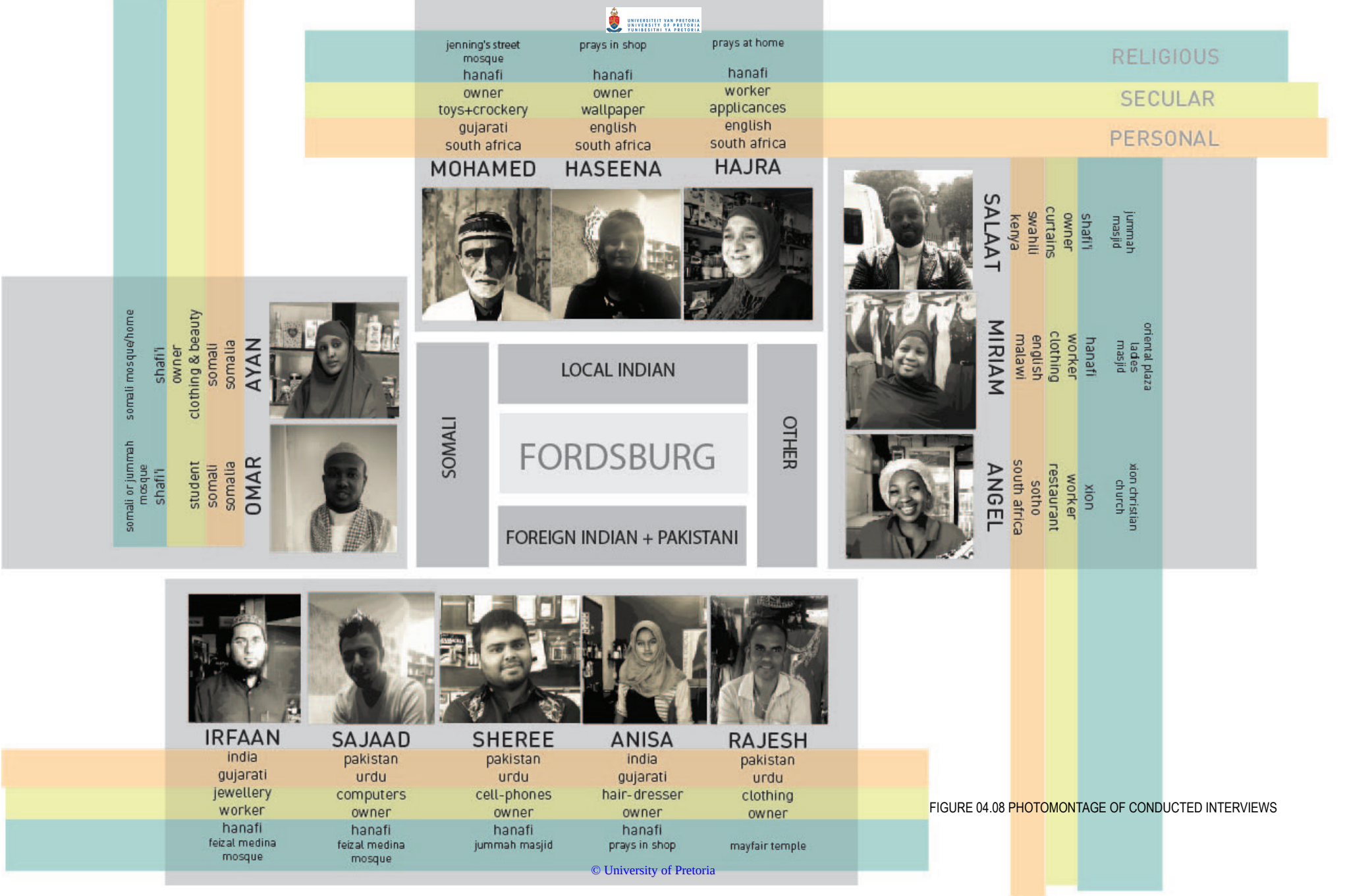

FIGURE 04.08 PHOTOMONTAGE OF CONDUCTED INTERVIEWS

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04.4.3 HISTORY AND HERITAGE

Mr Ebrahim Moosa outside his corner shop dwarfed by the beginnings of Johannesburg's new Oriental Plaza shopping complex.

Staff Reporter

NEXT MONTH Mr Ebrahim Moosa says goodbye to a way of life, moves 20 metres to begin a new one.

He's swopping his crumbling corner shop for a smart new kiosk in Johannesburg's new Oriental Plaza — and leaving his rent fate the bargain.

"This place has been good to me. I've been here 18 years. It's part of me really."

Mr Moosa, 46, is the landlord of many of the shops in Mayfair West.

(Interior of his pre-fabricated structure.)

MEMORIES

"On June 23 he'll close the door, locking up a host of memories. "There's a school near here and many of the children grew up with me," he said.

"There used to be 2 000 children now there are only about 400. You see the houses are coming down round here and most of the people going out to Lenasia."

Mr Moosa said his business — in Mayfair West Street, Fordsburg — has fed and clothed his family, his wife Fatima, 38, and two children, aged 17 and 13.

"I used to net R150 a month but this last years ago they started pulling up this Plaza and business came up a little bit. I get R300 net now," said Mr Moosa.

EXCITED

He pays R30 a month rent. His new kiosk — he's already proudly painting words advertising his wide range of goods — will cost him for the first year R15 a month.

On July 3 he'll open up. "I'm very excited about it," he said, "maybe it is time to change. It's been good here — but hard. I open seven days a week, 6 am to 8 pm."

His wife nodded in agreement. "Yes, she said, "it's time to go." Mr Moosa's kiosk will form part of the unique shopping complex which when fully completed will have over 100 outlets, will be bigger than the Carlton shopping centre and will house 300 shops in an area covering 14 city blocks.

FIGURE 04.09 NEWSPAPER ARTICLE ON FORDSBURG EVICTIONS

THE ORIENTAL PLAZA :
ASIAN CITADEL

The Oriental Plaza shopping centre was established as a segregated commercial shopping centre by the apartheid government in 1974 (Toffah; 2008,17).

Its construction was due to a direct consequence of the forced removals of apartheid legacy. Toffah suggests that some interpret it as a means by which Indian trading could be more strictly controlled by white leaders, but most agree that its construction was a political tool aimed to satisfy the needs of a middle class white consumer market, simultaneously creating a tourist attraction that sours into the Johannesburg skyline.

Interviews with local shop owners involve the notion that the primary intention for the demolition of livelihoods and the subsequent erection of the Oriental Plaza was ultimately for the eradication of the threat of Indian trading.

The extract below is from Architect and Builder, February 1975, Vol 25
No 2 pg 8:

"Symbolically, the centre was seen as an Asian Citadel - an Indian Oasis surrounded by the White business areas - within which there existed, for the Asian trader, a world offering him economic security." The article in the Architect and Builder goes on to further justify the complete introversion of the Plaza by saying that "care was taken to prevent perforating the external wall, by introducing cross ventilation and daylight to shops through clerestory windows, dropped slabs and skylights."

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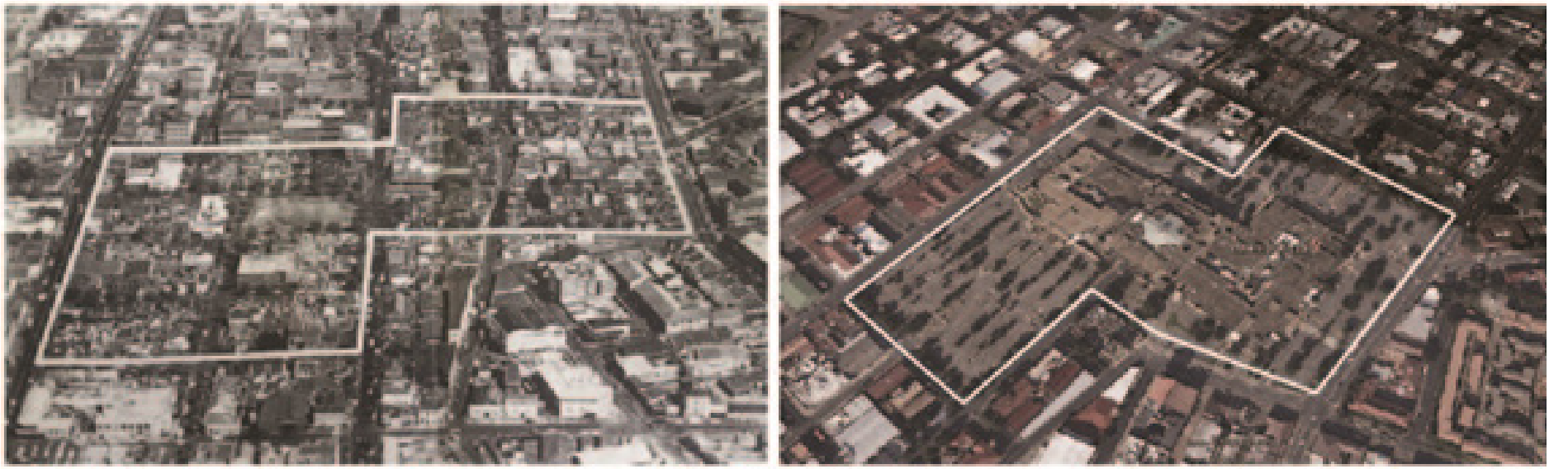

FIGURE 04.10 SPATIAL CHANGE AS RESULT OF EVICTIONS

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The construction of the Oriental Plaza has created a buffer zone between Newtown West and Fordsburg. Its Grand Bazaar in particular has created a gradient dip, a tunnel constructed for the movement of cars beneath the building, consequently severing the east-west connection on the Avenue Road corridor.

Apart from this physical disconnection it has caused within its surroundings, it also erased a significant public space as the Grand Bazaar occupies the site of a historic public square, Red Square, as it was known by locals, was a popular public space where family was brought together, people congregated, and political activism took place, hosting speakers such as Mahatma Ghandi and Alan Patin (Toffah; 2008).

The proposal to re-establish red-square in order to create an important multi-use space is intended. The reinstated public space erased through commercialization, is intended to reclaim the public nature of the inner city, pedestrianizing and welcoming people of all creeds to come

together and to congregate for recreation, prayer or protest. Its placement within the core of Fordsburg would act as a catalyst for the urban re-generation of underused and underdeveloped parts of Fordsburg and Newtown while its close proximity to the abundance of local retail and trade facilities would significantly increase sales, incentivising owners to expand.

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FIGURE 04.11FORDSBURG BEFORE UNDEMOCRATIC DEMOLITION- HIGHLIGHTING RED SQUARE

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04.4.4 EXISTING FABRIC

DEMOCRATIC OWNERSHIP OF THE ORIENTAL PLAZA

A unique aspect differentiating the Oriental Plaza from its mall-like counterparts is its ownership. Its development proved to be an unprofitable investment and in 1896, the Department of Community Development advised the Oriental Plaza Merchants Association of its intention to sell the Oriental Plaza to interested negotiators. The Association did not take this decision without difficulty, and after months of negotiations and high level political intervention, the Oriental Plaza was consequently sold to the existing traders on a sectional title basis. It is now the one of the only shopping centres in South Africa owned by its tenants who each pays a monthly levy to the body corporate for management, maintenance and security within and around the building. (Toffah; 2008, 51)

Because of the sectional title ownership, previous attempts at architectural intervention within the Oriental Plaza have been unsuccessful. Proposals would have to benefit both the grand bazaar, together with the north and south mall.

This would call for an impossibly large intervention which would not only render itself as spatially detrimental to the existing architectural character and fabric, but would also need to be financially funded by all tenants within the Oriental Plaza. It is for this reason that very little design intervention and encroachment on or within the Oriental Plaza has been proposed.

The stereotomic brick-faced walls of the Oriental Plaza with its symbolic patterning around openings and niches give character and identity to the Oriental Plaza. Clerestory windows that wash the interior with light exist on first floor and within the basement of the building, compelling the design proposal to be step back from the facades of the building in order to be historically and symbolically considerate, as well as physically unobtrusive in overshading the building. Albeit, the existing proportioning system and the relative dimensions of the existing facades have been used within the proposed grid.

FIGURE 04.12 RYTHMIC PROPORTIONING OF PLAZA FACADE

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04.4.5 CONNECTING NEWTOWN AND FORDSBURG

Permeability towards the internal spaces of the Oriental Plaza is sought in order to soften the stereotomic facade of the Plaza so that an east- west connection from Newtown West and Fordsburg may be created.

Connections to other anchor points such as Fordsburg Market Square is proposed, however, because a service yard sits within the proposed space, a new entrance is envisioned to spill out directly into the Islamic Precinct. Minimal destructive impact will take place due to an emergency exit corridor already being in place within an under-utilised area of the Plaza parking lot.

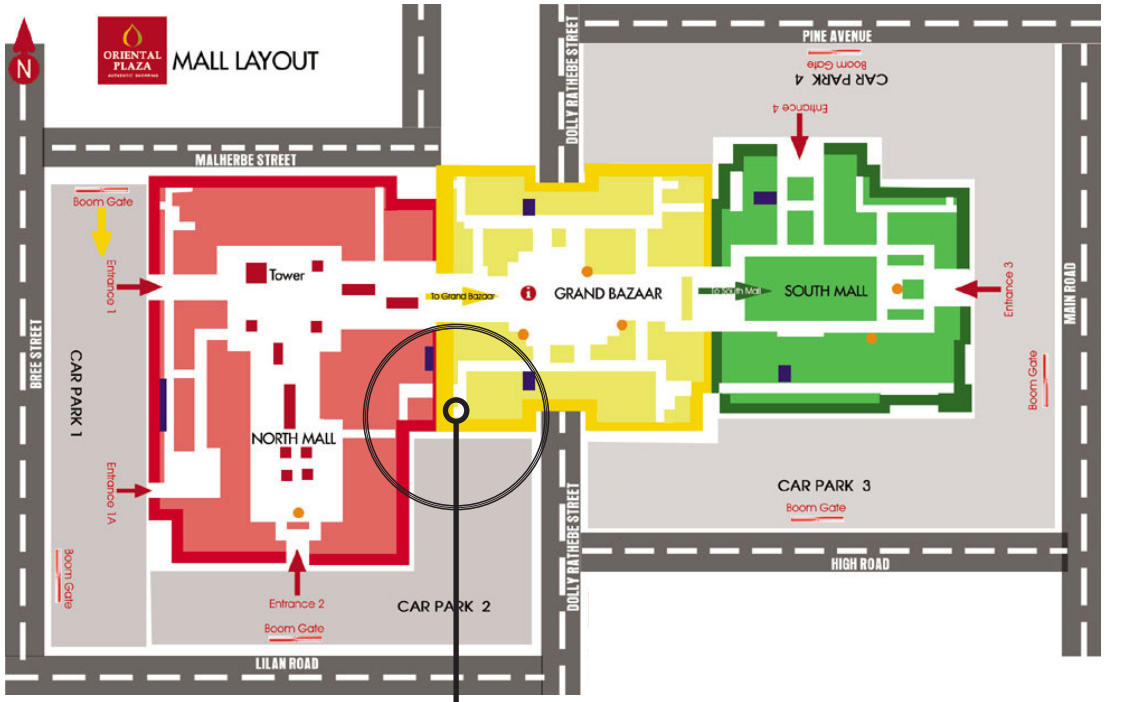

FIGURE 04.13 OPPORTUNITY FOR NEW ENTRANCE INTO ORIENTAL PLAZA

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SOCIAL SIGNIFICANCE

retail anchor point
internal courtyards
job opportunities for foreigners

AESTHETIC SIGNIFICANCE

scale
materiality
stereotomic beacon

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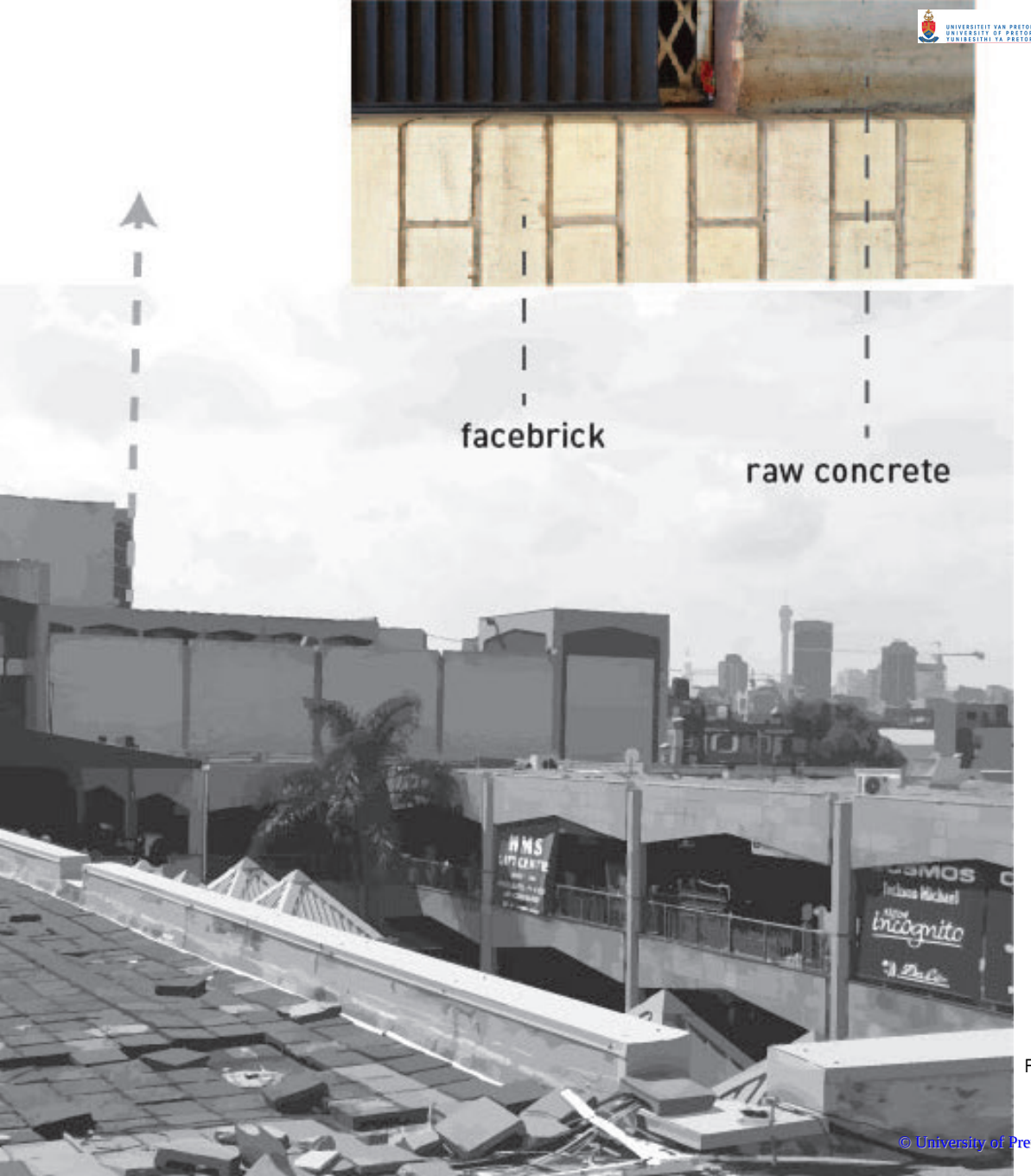

STATEMENT OF SIGNIFICANCE

Robust and stereotomic in nature, the Oriental Plaza acts as a physical and social beacon offering opportunity for a livelihood for some. Its existance however reminds us of the unjust and undemocratic acts of apartheid supremacy .

FIGURE 04.14 SIGNIFICANCE OF ORIENTAL PLAZA

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04.4.6 OBJECTIVE RESEARCH

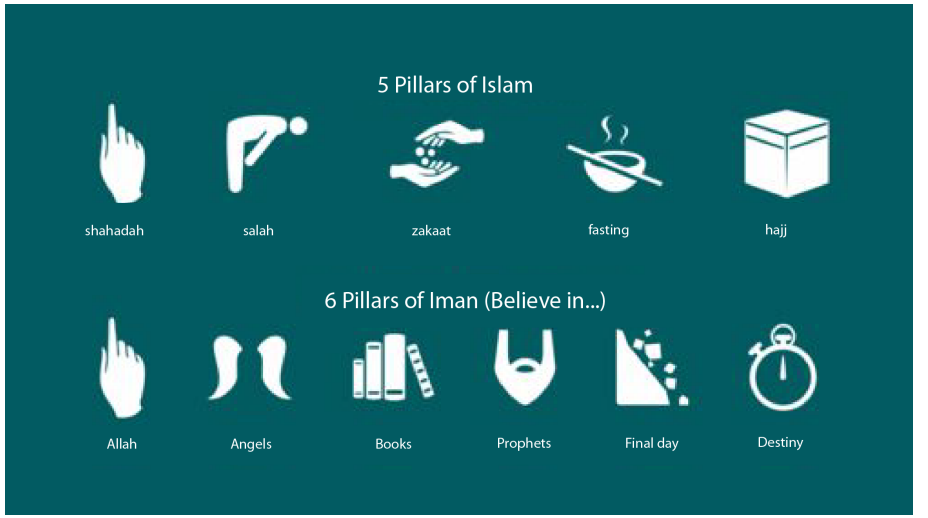

FIGURE 04.15 OBJECTIVE REQUIREMENTS OF MUSLIMS

Chohan (2010:6) states that as a Muslim, there is a constant sense of brotherhood, unity through prayers and supplication and unity through binding beliefs.

These are exemplified through the Five Pillars of Islam, defined as the obligatory actions and deeds that must be followed by every Muslim person, and is objectively stated within the Holy Quran. These include:

1. Shahadah- Profession of faith
2. Salaah- Performing 5 daily prayers
3. Zakaat- Giving charity to the needy
4. Saum- Fasting in the holy month of Ramadaan
5. Hajj- Pilgrimage to Mecca (if one can afford it)

It is interesting to note that different schools of Islamic thought, along with distinctive cultural differences still allude to the execution of the 5 pillars of Islam objectively stated within the Holy Quraan.

All Muslims, regardless of culture, location or tradition ascribe to them. These overlaps create potential for the programming of spaces where social collision may occur in order to fulfil the project intentions.

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FIGURE 04.16 OBJECTIVE REQUIREMENT OF ALL MUSLIMS REGARDLESS OF CULTURE

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04.5 SITE IDENTIFICATION

Precedent has indicated the Mosque stood as the central core around which daily life was practiced, standing as “the anchor of the society and the center of the community”. This allowed for the flourishing of Islamic communities that partook in congregational activities within public and privately shared space.

The above mapping has indicated that there is an ever-growing boom of activity along Mint Road and its surrounding streets, and due to the increasing popularity and space limitations within the allocated market space of Fordsburg square, informal traders exist on the street.

The Oriental Plaza contains over 360 stores that market themselves on tradition and culture. Its typology is that of a mall (that speaks of South Africa’s mall fetish of the 70’s). Its rich history includes the unjust acts of the apartheid government where Indian traders were forcefully displaced from the site in order to erect a new mall which was envisioned to service the white man and where high rental prices would deter the Indian trader.

There is a non-place that exists between the booming core of Fordsburg and the Oriental Plaza. Due to the fact that these areas already service high densities, the site to be developed has great potential to become the formalized core of the Fordsburg , Mayfair and Newtown West areas that is envisioned to contain prayer and public spaces that service the community at large- binding the ritual of daily activity and that of cultural manifestation, along with servicing the need for prayer space (in relation to the Jamaat Khana).

This will facilitate in the “stitching” of the street fabric which lies to the east with the internalized Oriental Plaza lying to the west.

FIGURE 04.17 PANORAMA OF PROPOSED SITE WITHIN PLAZA PARKING LOT

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FIGURE 04.18 PANORAMA OF PROPOSED SITE

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FIGURE 04.19 FORDSBURG WITHIN LARGER CONTEXT

04.6 SITE ANAYLSIS

The following diagramatic analysis explain the different components of the Oriental Plaza and the surrounding urban fabric in order to understand their function over the various levels.

These findings are key to understanding the decision making encapsulated by both the urban and architectural proposals which follow.

FIGURE 04.20 SITE IDENTIFICATION WITHIN FORDSBURG CONTEXT

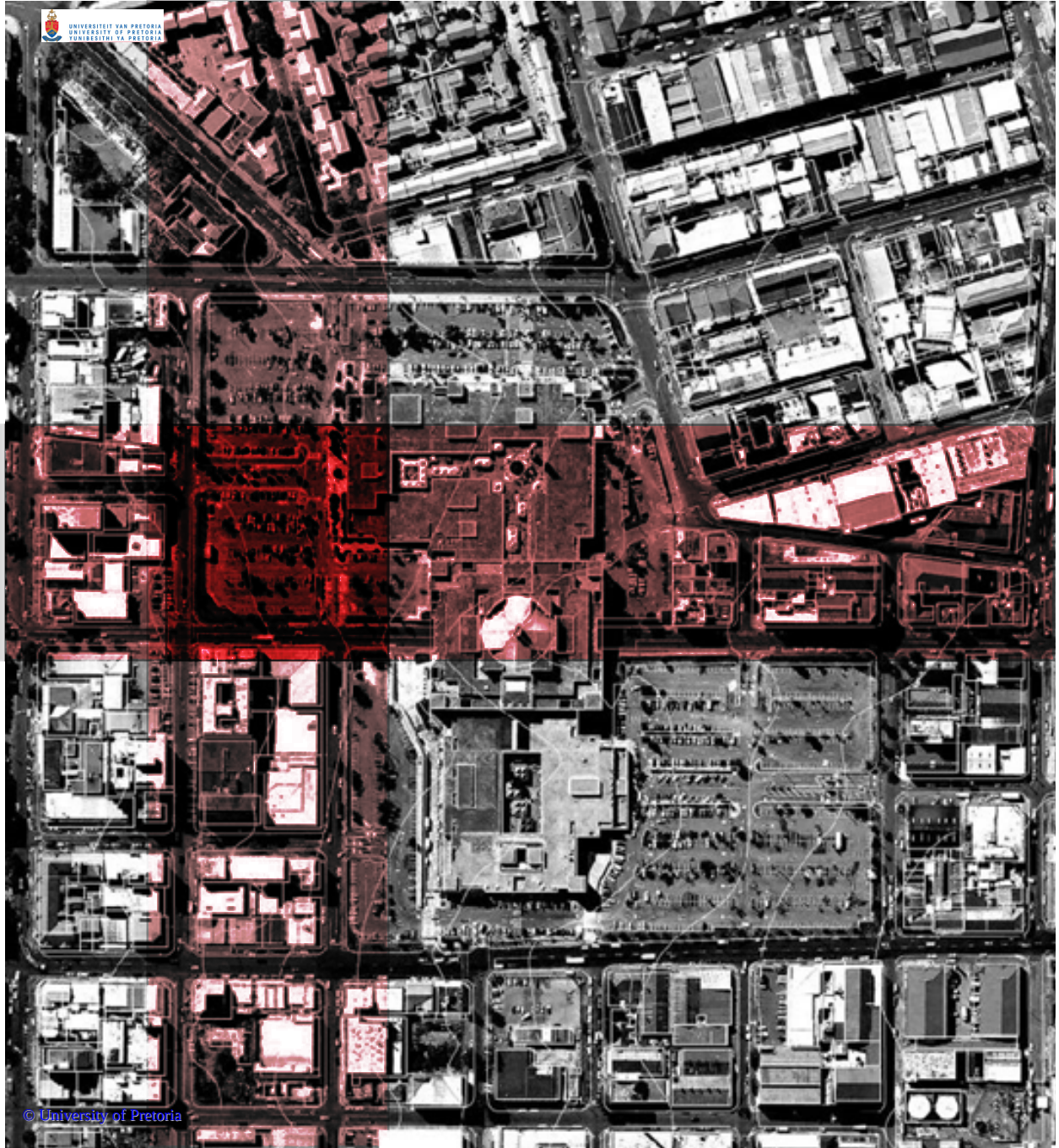

FIGURE 04.21 PHOTOMONTAGE OF MAIN INTERSECTION

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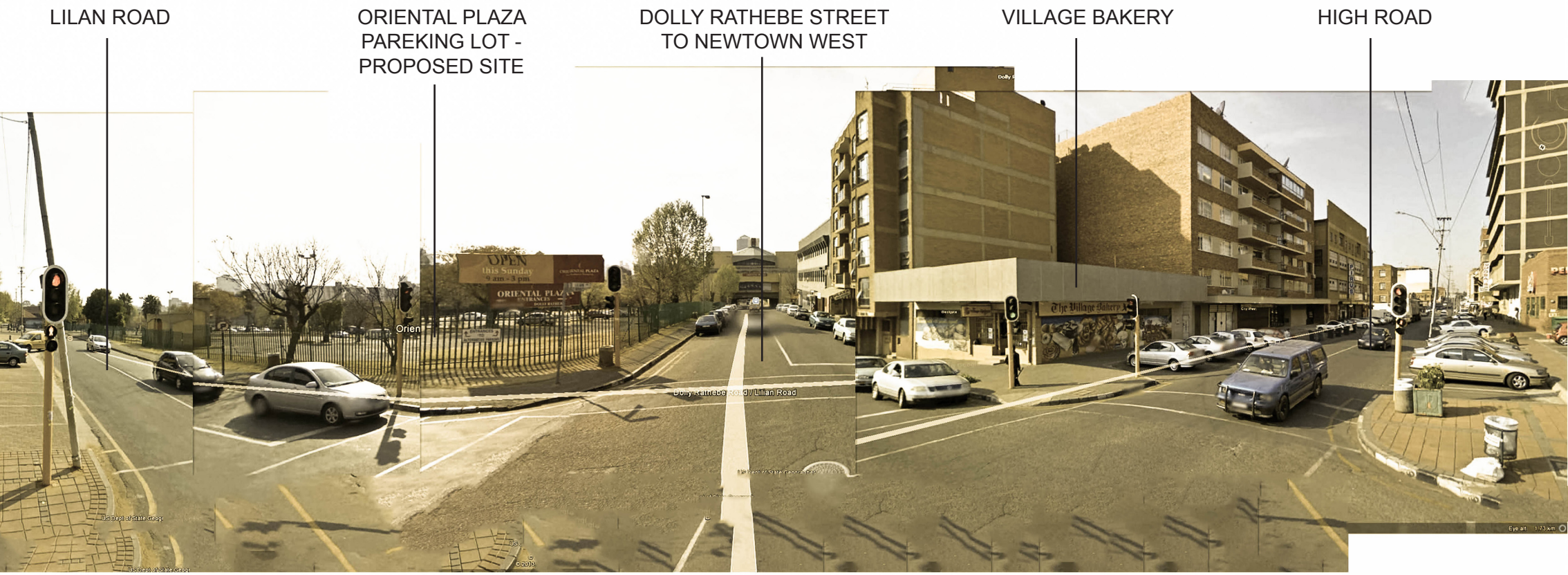

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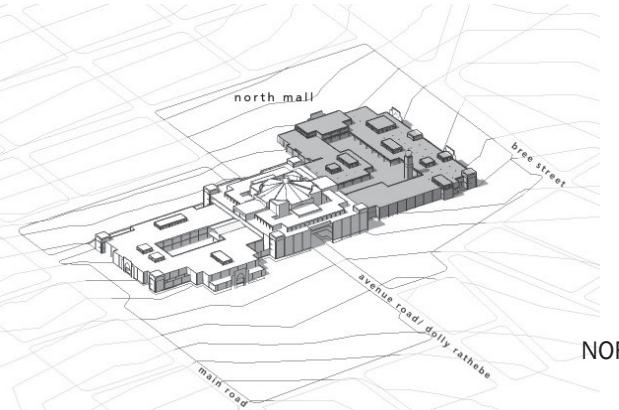
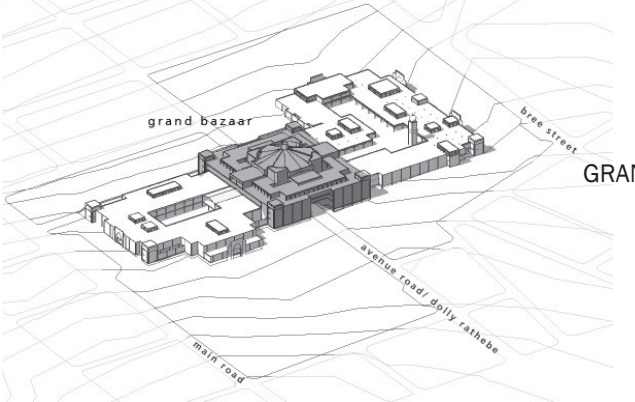
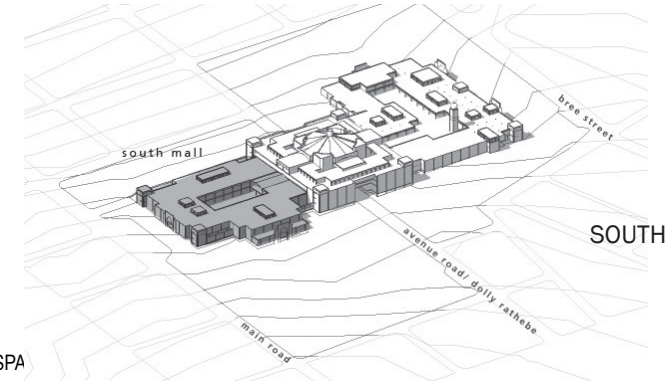


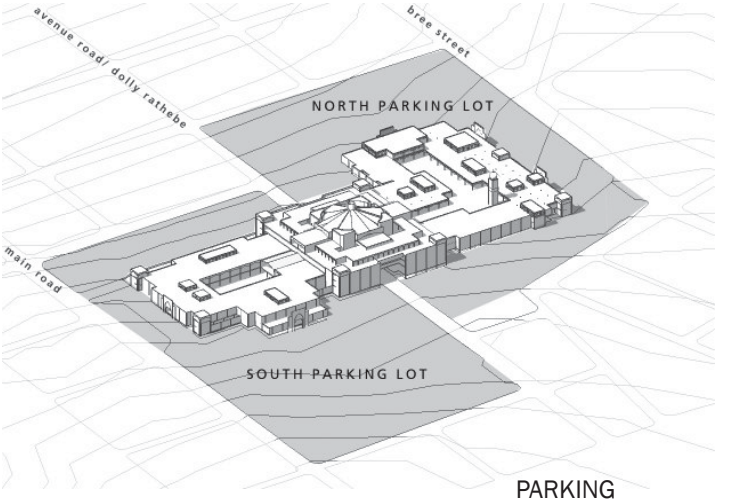
NORTH MALL



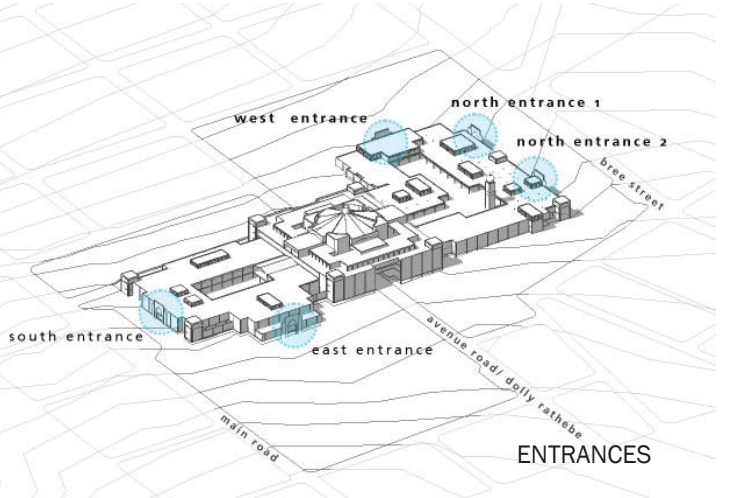
GRAND BAZAAR



SOUTH MALL



PARKING



ENTRANCES

FIGURE 04.22 SPA

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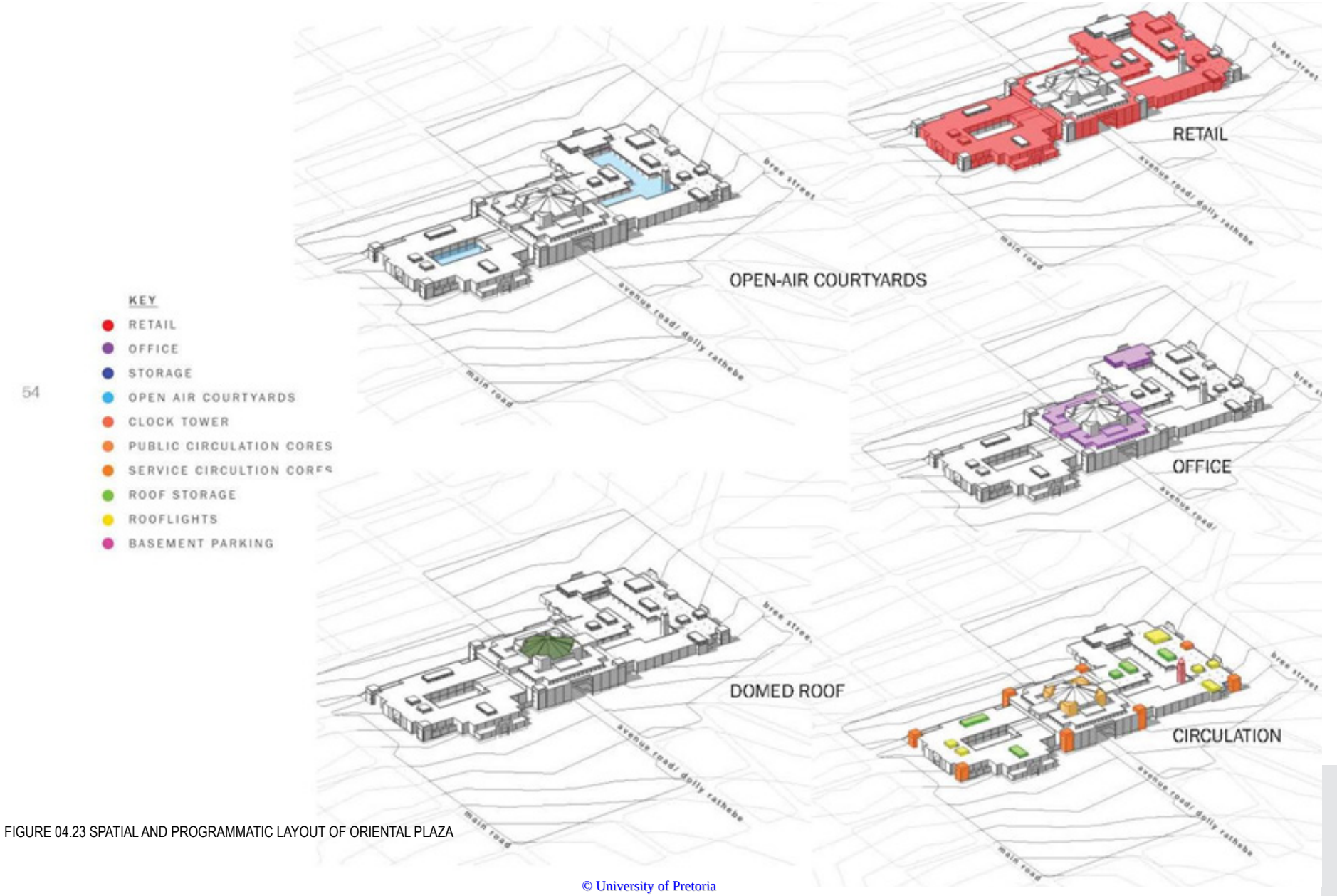

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FIGURE 04.23 SPATIAL AND PROGRAMMATIC LAYOUT OF ORIENTAL PLAZA

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FIGURE 04.24 EDGE CONDITION OF SITE

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NORTH MALL

GRAND BAZAAR

SOUTH MALL

TOILETS

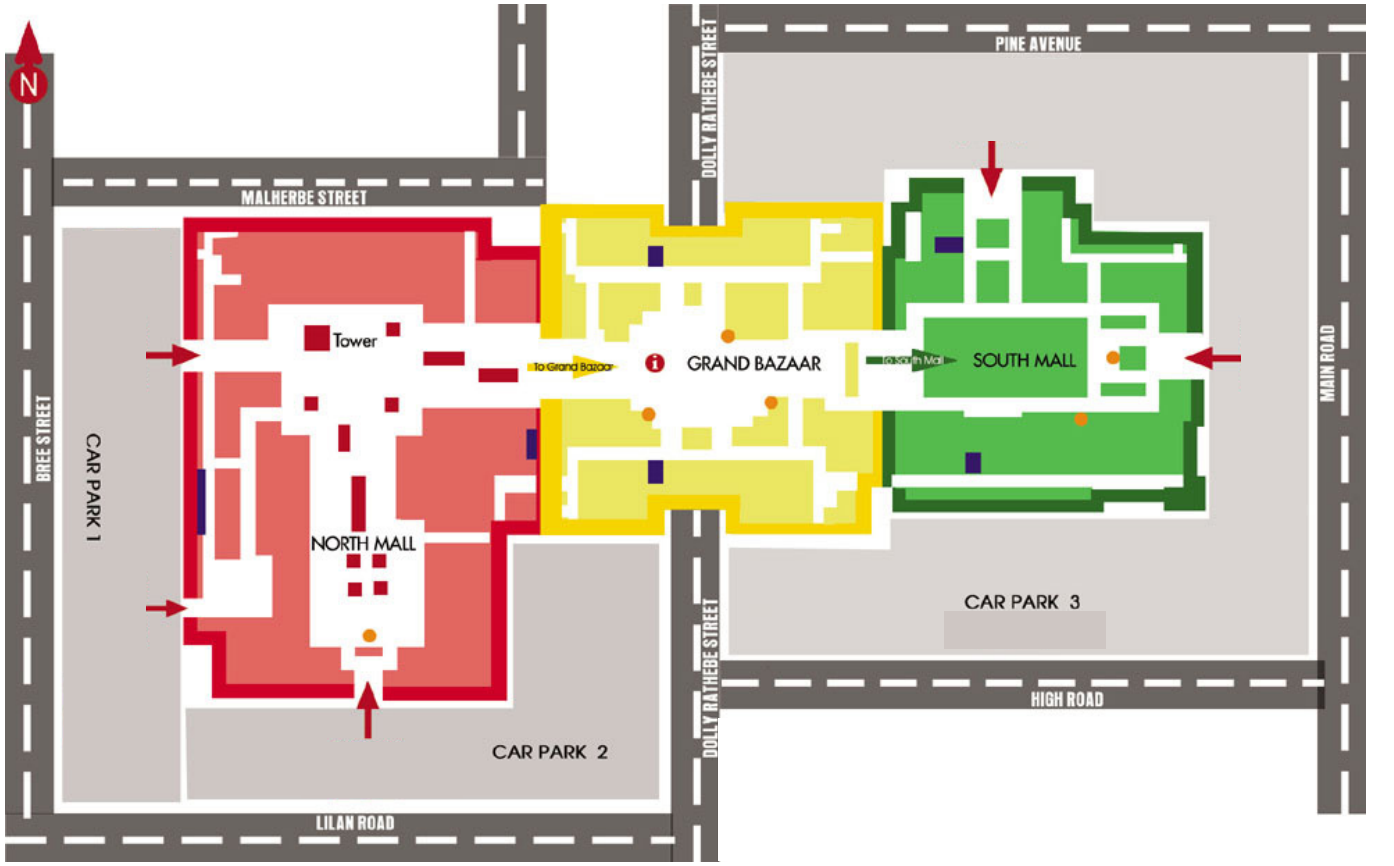

FIGURE 04.25 SPATIAL AND PROGRAMMATIC LAYOUT OF ORIENTAL PLAZA

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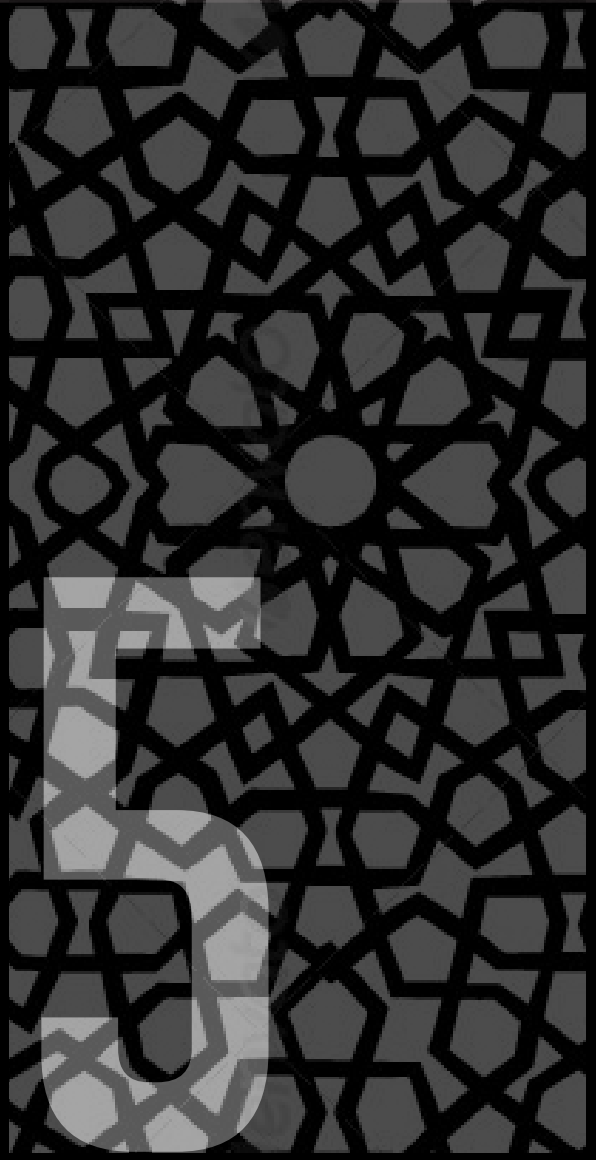

PROJECT INTENTIONS

In light of the above mentioned contextual issues, chapter 3 identifies key project intentions and spatial manifestations in order to rectify the dystopia in order to re-establish the key components of the traditional Mosque typology.

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FIGURE 05.01 TRADITIONAL MARKET/SOUK EN-ROUTE TO THE CENTRAL MOSQUE

FIGURE 05.02 INFORMAL RETAIL EN-ROUTE TO THE CENTRAL MOSQUE

FIGURE 05.03 INFORMAL MARKET EN-ROUTE TO THE CENTRAL MOSQUE

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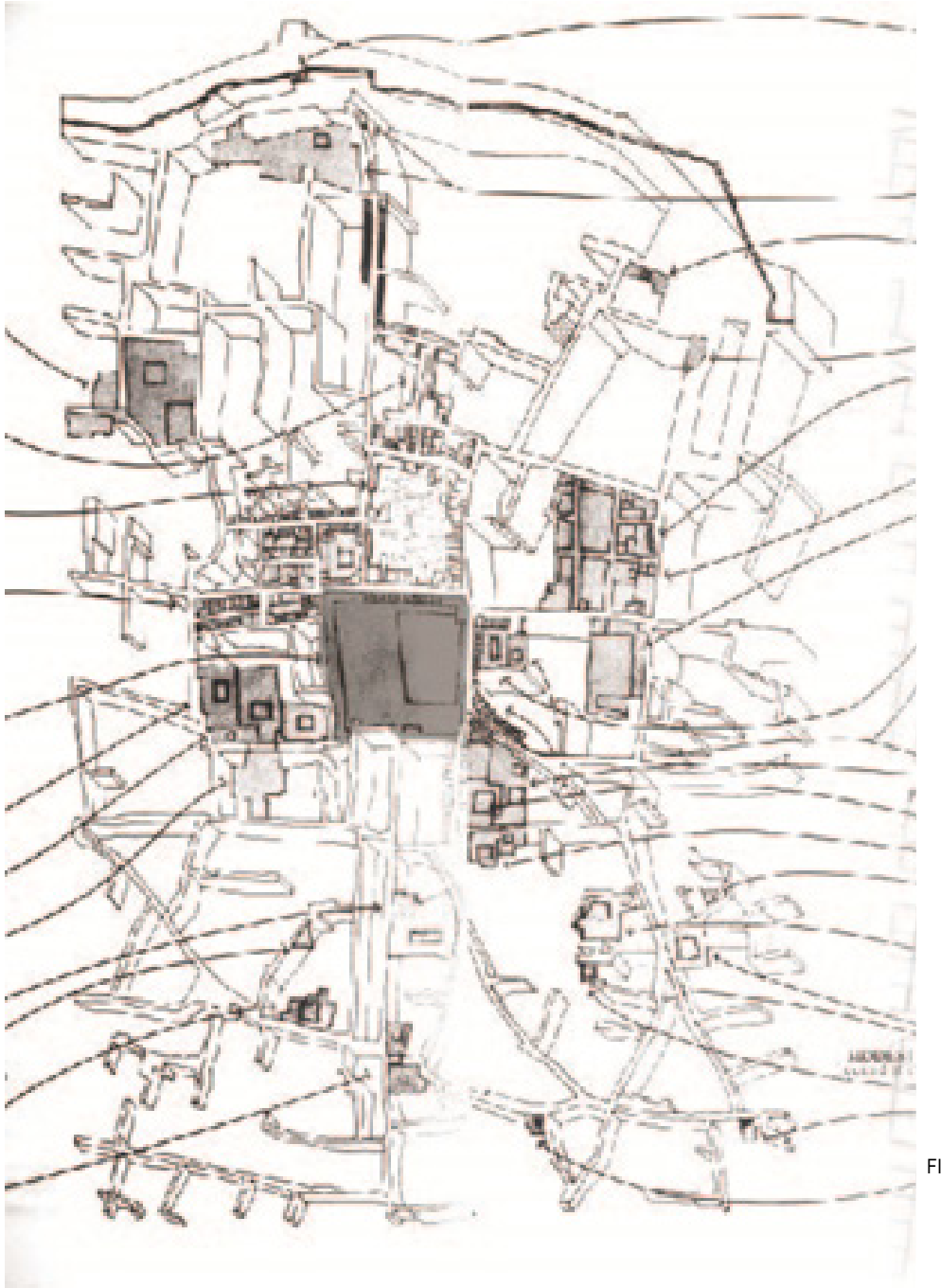

Traditionally, the Masjid acted as the core of the Islamic city. Its infrastructure organically grew from this core whereby all secular activities were linked to one's religious life- spatially defining the importance of Mosque in one's life- as well as becoming a sort of public yet private space where many things happen.

It is for this reason that the main project intention is:
to **re-link the secular with religious**

The blurring of boundaries between that of the sacred and that of the profane would break down emotional and physical barriers between these two poles as one may exist between either, fostering unity amongst a diaspora and multitude of cultural groups.

Religion interweaves itself in the demanding life of the secular in order for moments of reverence, devotion and reflection to occur at the necessitated five prayer times everyday.

FIGURE 05.04 TRADITIONAL INFRASTRUCTURE DEVELOPMENT FORMING AROUND CENTRAL MOSQUE

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05.1 ARCHITECTURAL INTENTIONS

FIGURE 05.05 CROSS-PROGRAMMED MOSQUE THAT INCLUDES RELIGIOUS & SECULAR ACTIVITY

05.1.1 RE-THINKING

Reinterpreting and redefining the Mosque typology by cross programming it with the overlapping aspects that the three cultural groupings in question have in common, i.e: retail and service delivery + 5 Pillars of Islam.

This involves the analysis and design for the ritual of daily activity and commerce with the ritual of prayer and religious manifestation.

Jahnmohamed (n.d.,2) states that it is now time for architects to ponder more deeply on the multiple aspects and accommodations that may be designed for within a faith centre. She suggests we evaluate the location, the architecture, art, people, services and its urban relationship.

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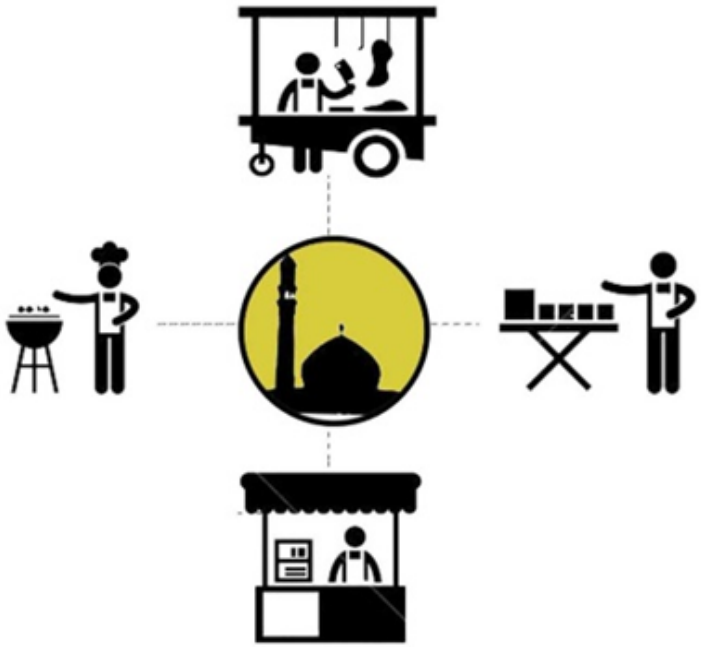

FIGURE 05.06 MOSQUE CENTRALLY POSITIONED BETWEEN DAILY ACTIVITY

05.1.2 RE-POSITIONING

Positioning the Mosque (physically and spiritually) at the centre of the life of the Muslim citizen in order to regain its sense of place, its position in society, and to facilitate chance encounters amongst the diaspora of cultural groups.

Jahnmohamed (n.d., 2) states that art has the ability to bring people together. She further mentions that art and

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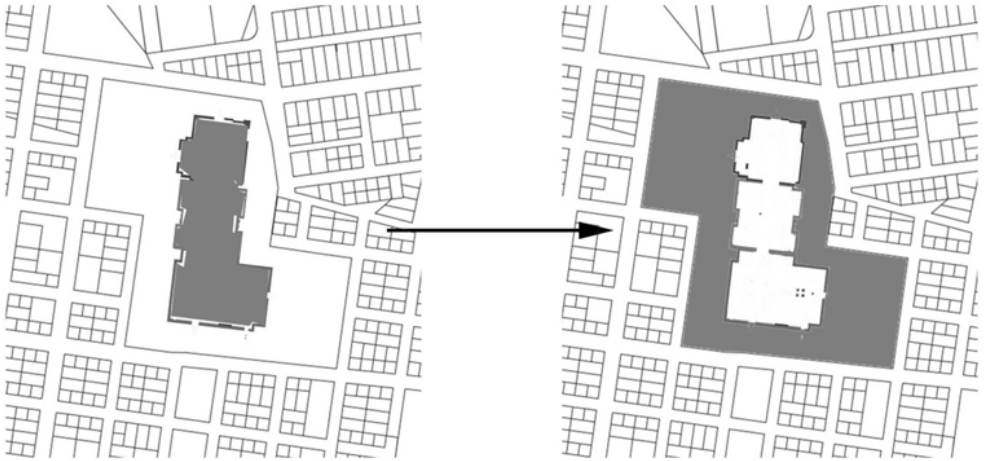

FIGURE 05.07 PROPOSAL TO INVERT INTERNALIZED MOSQUE & MALL CONFIGURATION

05.1.3 CONTESTING

Contesting the internalized mosque and mall typology in order to “stitch” the fabric of the Oriental Plaza and that of the street, consequently weaving both form and function of the religious building into the lives of the people whom it serves, together with others who co-habit the area.

New buildings have to engage with existing environments and accommodate them. This process of externalising the typology and blurring the boundaries between private and public involves not just the physical space, but the softer things too.

Jahnmohamed (n.d.,3) suggests that the people, processes, access, approach and support are determinants in creating the kind of space this dissertation is focused upon.

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FIGURE 05.08 SPATIAL EQUALITY AND ALLOWANCE FOR MEN & WOMEN

05.1.4 GENDER EQUALITY

Allowing for women to find their place –physically and spiritually- within the South African mosque; simultaneously changing misconceptions about a woman's place and role in Islam.

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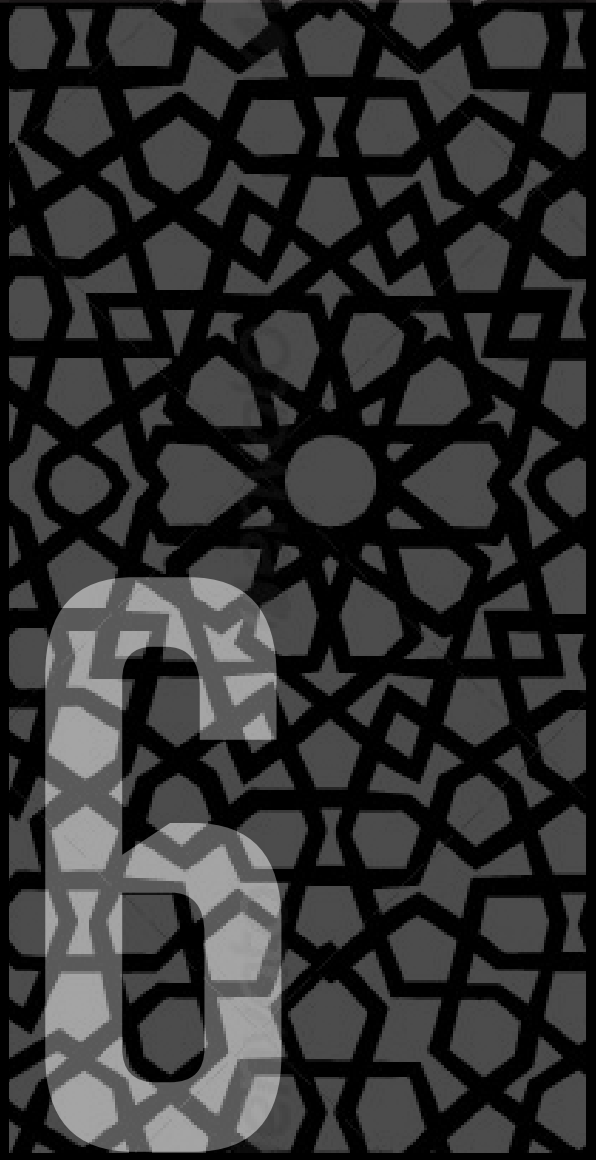

URBAN VISION

An exploration of a new cultural district that proposes to integrate Forsdburg with Newtown, Chinatown and Mayfair , building on the analysis of existing energies, contextual conditions and architectural potential. Three proposed frameworks of different scales consequently generate the parameters within which the proposed intervention will sit.

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“The challenge lies in reaching the point where these unique socio-cultural qualities are embedded in the physical appearance of the area. The vision is to create a place in the city that: reveals the richness in character of the local community by celebrating the diversity created through layered patterns of social involvement and histories in the area; portrays the qualities of the local community by creating improved and upgraded quality spaces; and supports the passion of the community through appropriate development and sustained maintenance of the place.”

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06.1 VISION

The vision is to create a unique enclave in the city that:

Reveals the richness in character of the local community by celebrating the diversity created through layered patterns of social involvement and histories in the area;

Portrays the qualities of the local community by creating improved and upgraded quality spaces; and

Supports the passion of the community through appropriate development and sustained maintenance of the place.

06.2 APPROACH TO THE FRAMEWORK

An approach should be followed whereby the framework is guided by the following realities: The past – As one of the oldest suburbs of the city, and as area that has experienced major historical events, the Fordsburg / Mayfair area has significant heritage value and is characterized by the presence of numerous conservation-worthy elements. The present – As a combination of its strategic locality and the evolution of a unique mix of community

attributes the area started to experience pressure due to private development interest, a changing role of the Inner City and changing demographics. The future – Several individuals are passionate about the area. This is to a certain extent also true for the community as a whole, with dreams to create a quality urban area as living and trading space. A plan should thus not only guide development, but should also excite and unite.

06.3 GENERAL DEVELOPMENT PRINCIPLES

Based on the identified vision and approach, the proposed development of the area is founded on the following principles: Although a strong sense of being one community is prevalent throughout the area, the study area is nevertheless diverse in terms of physical characteristics. This diversity also contributes towards a unique character. It should thus accommodated and enhanced in the Framework. This is done through a precinct approach. As symbol of being one community, the area needs a vibrant heart that pull the community together through socio-cultural interaction.

This is achieved by providing a Walkable Core as focal point for community activities. The Fordsburg / Mayfair area is one of the oldest in the city and thus it has a rich layered heritage pattern, with numerous heritage resources. Heritage elements should support the creation of a unique character for the area, but should not stifle development.

The principle of Heritage Zones as opposed to Heritage Conservation Areas is thus proposed. The purpose of a Heritage Zone is to guide owners and developers to renovate properties in line with certain guidelines. It is proposed that incentives be provided, as opposed to the strict legal conditions set by Conservation Areas.

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CHINATOWN

FORDSBURG

FIGURE 06.01 CULTURAL, RELIGIOUS, POLITICAL, RECREATIONAL AND INSTITUTIONAL DYNAMIC URBAN & ARCHITECTURAL FABRIC BEWTEEN SITES

06.4 COLLABORATION

This dissertation supports the integration of universities- University of Pretoria and University of the Witwatersrand in order to create awareness and allow for integration between institutions and to encourage the idea of sharing research and information for the benefit of both universities.

A collaborative urban framework has been established which defines pedestrian routes from the cultural enclaves of Chinatown,through rehabilitated Newtown, towards Fordsburg. The proposed interventions are aimed to act as catalysts for the regeneration and revitalisation of the entire precinct.

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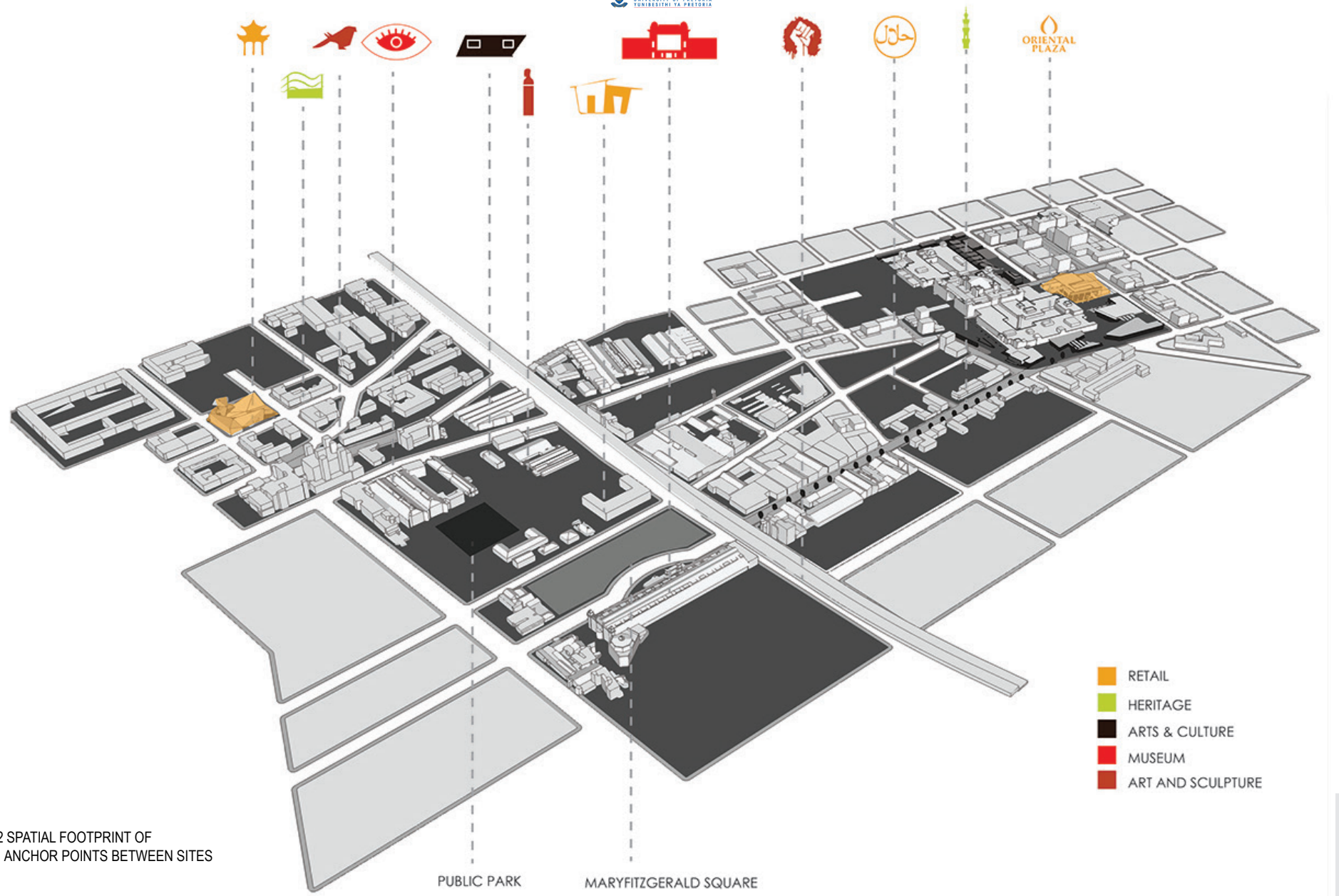

FIGURE 06.02 SPATIAL FOOTPRINT OF ANCHOR POINTS BETWEEN SITES

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FIGURE 06.03 PANORAMA OF URBAN DIVISION BETWEEN TWO SITES

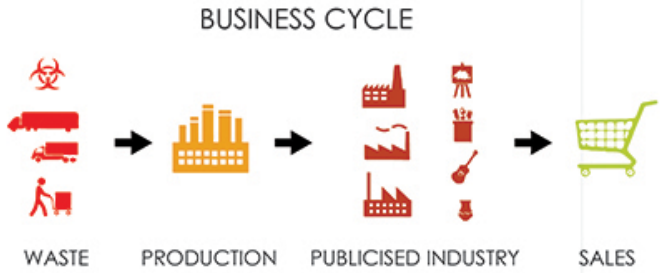

FIGURE 06.04 PROPOSED ECONOMICALLY DRIVEN BUSINESS CYCLE

In addition, the two projects operate together in the same business cycle where urban waste is collected from junkyards and other surrounding areas, are then recycled to produce raw materials, which are then transformed into products creating publicized industrial areas, lastly distributed and sold within the designed interventions.

This business model assists in urban waste management and provides potential for site rehabilitation and land reclamation within a larger cultural area in order to break down the barrier of the M1 motorway.

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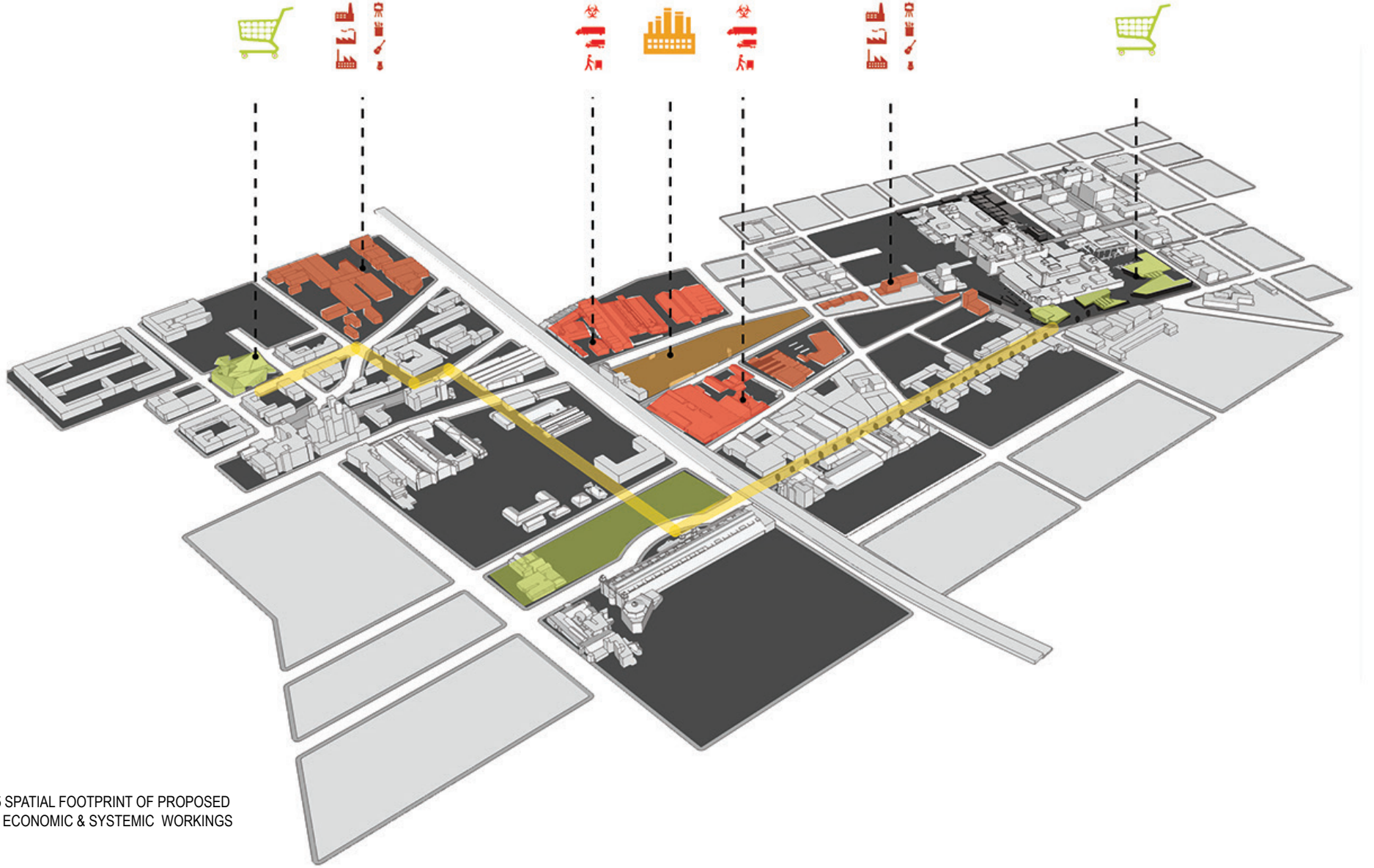

FIGURE 06.05 SPATIAL FOOTPRINT OF PROPOSED ECONOMIC & SYSTEMIC WORKINGS

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06.5 MEDIUM TO HIGH DENSITY RESIDENTIAL DEVELOPMENT PRINCIPLES

The Fordsburg and Mayfair precincts should make use of the historically built fabric of the area through re-use and adaption re-script the use of neglected, unkept and abandoned areas .

The area should establish a medium to high density residential and commercial precinct in close proximity to the Inner City, the Newtown Cultural Precinct and the historic core of Fordsburg, focussed on accessibility by foot and public transportation.The precinct should have well-designed sidewalks and an abundance of planted trees along the street to take advantage of the locality, to promote pedestrian movement and non-motorised access to public facilities and retail anchor points.

The urban core [A] is envisioned to be of high rise and high density, aimed to promote business ventures and apartment living. [B] is envisioned to be of medium rise and medium density. [C] is of a residential nature aimed to be low rise and low density.

FIGURE 06.06 DENSITY ZONING OF FORDSBURG & MAYFAIR

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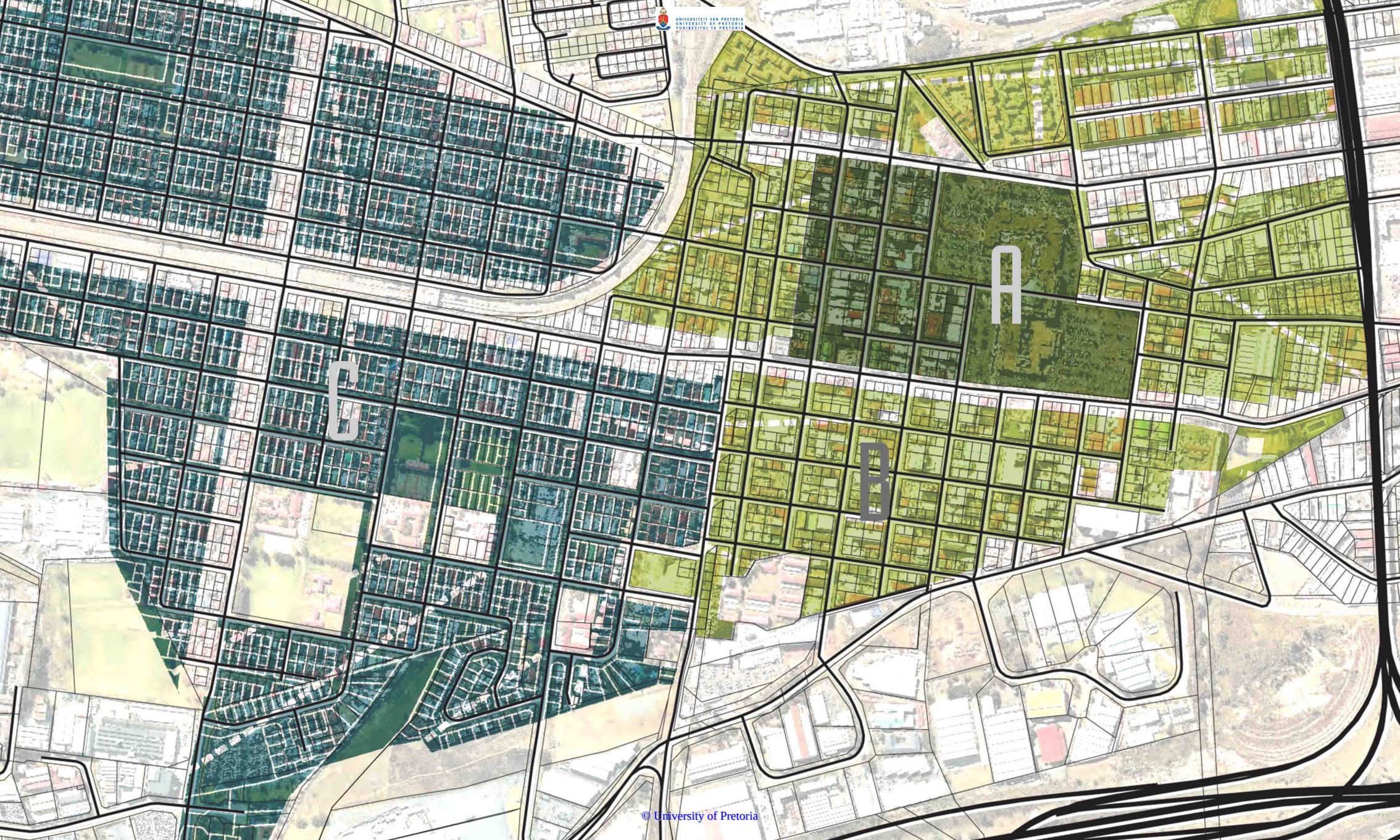

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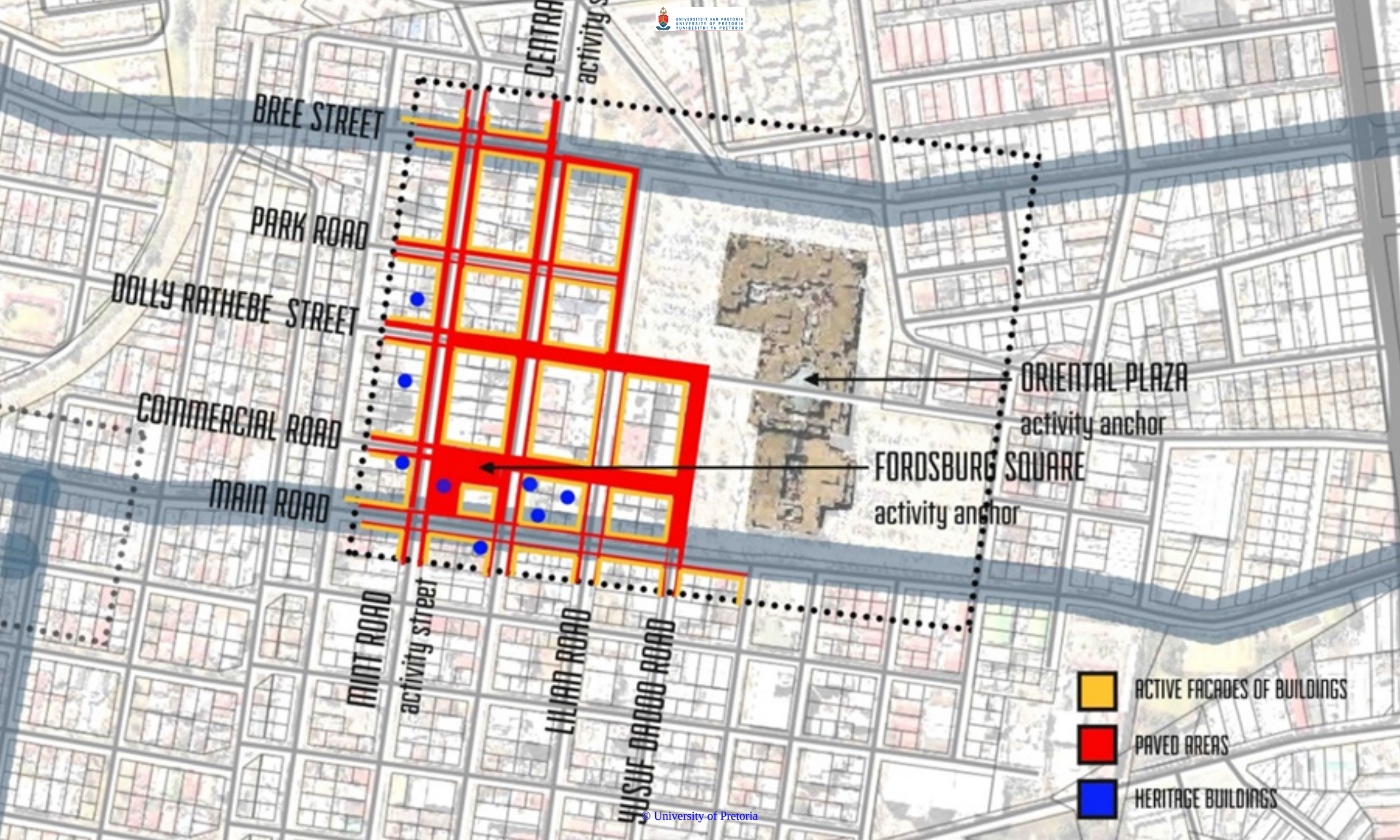

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06.6 WALKABLE CORE

“The lack of pedestrian contact – both formally and informally – leads to the destruction of social intercourse. Conversely, the more chances people have to meet as pedestrians, the more opportunities they have to continue and develop relationships” (Lockerbie, 2014).

06.7 DEVELOPMENT PRINCIPLES

The central core of Fordsburg should build on the abundance of historic fabric within the area creating a vertical mixed-use character in order to promote 24 hour usage.The functional walkable core will link anchor points such as Mint Road, Fordsburg Square, and the Oriental Plaza whereby a maximum of 500 metre walking distances with defined boundaries are established. The core should facilitate the erection of formal and informal retail and service shops in order to contribute to the existing vibrant shopping spaces unique to the area. This includes the streets and shop-fronts designed as ‘active facades’ in order to promote retail and eyes on the street during all times. The walkable core should have safe and convenient sidewalks in order to link activity anchor points, and to allow for informal pop-up shops to exist on the sidewalk.

There will also be a link between Islamic religious institutions that exist within the area (Johannesburg Muslim School, SANZAF- Charity Organisation, Jamiatul Ulama, HBZ Islamic Bank)- so that “the cities political, religious, financial and social dimensions are all linked in one continuous whole” (Razak, 1973). These “high streets” are envisioned to also become cultural routes towards the mosque as the call to prayer is sounded 5 times a day for the 5 daily prayers.

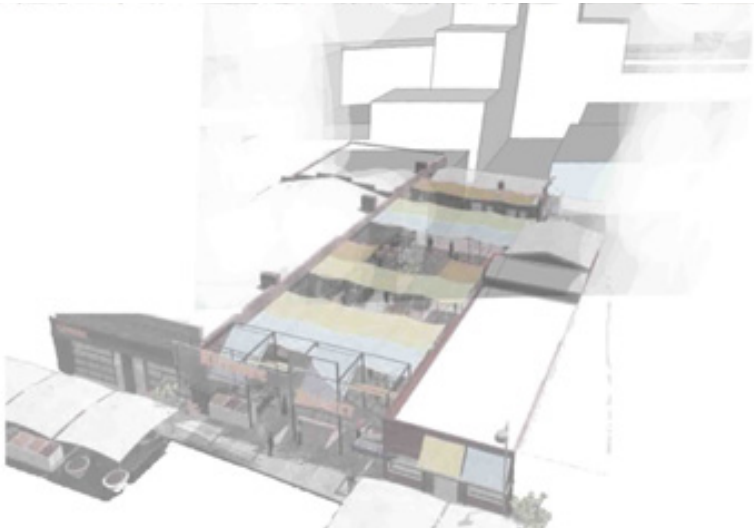

FIGURE 06.08 PROPOSED INFORMAL RETAIL TOWARDS ANCHOR POINT

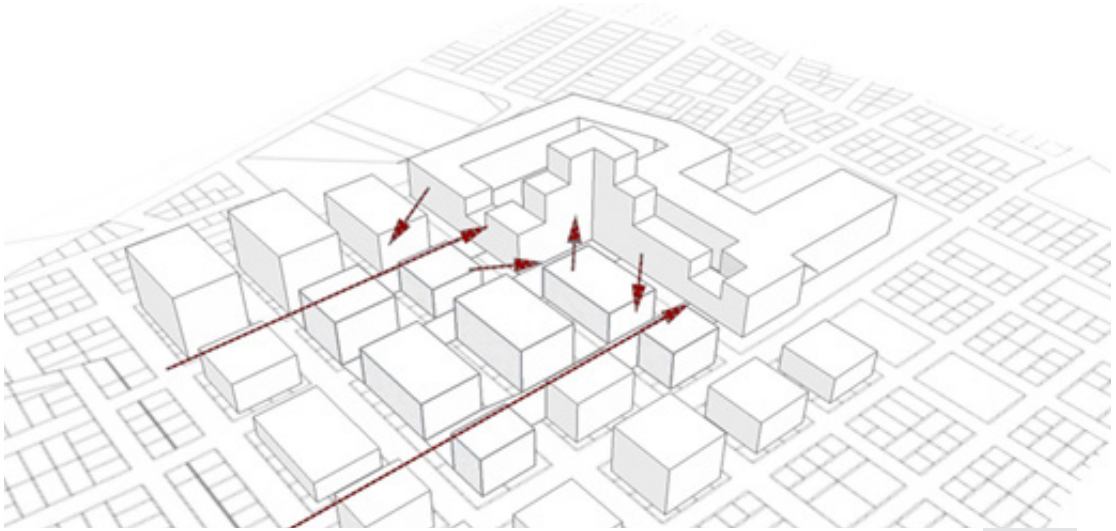

FIGURE 06.09 PROPOSED MAIN ROUTES TOWARDS ANCHOR POINT

FIGURE 06.07 PROPOSED PEDESTRIANIZATION OF URBAN CORE

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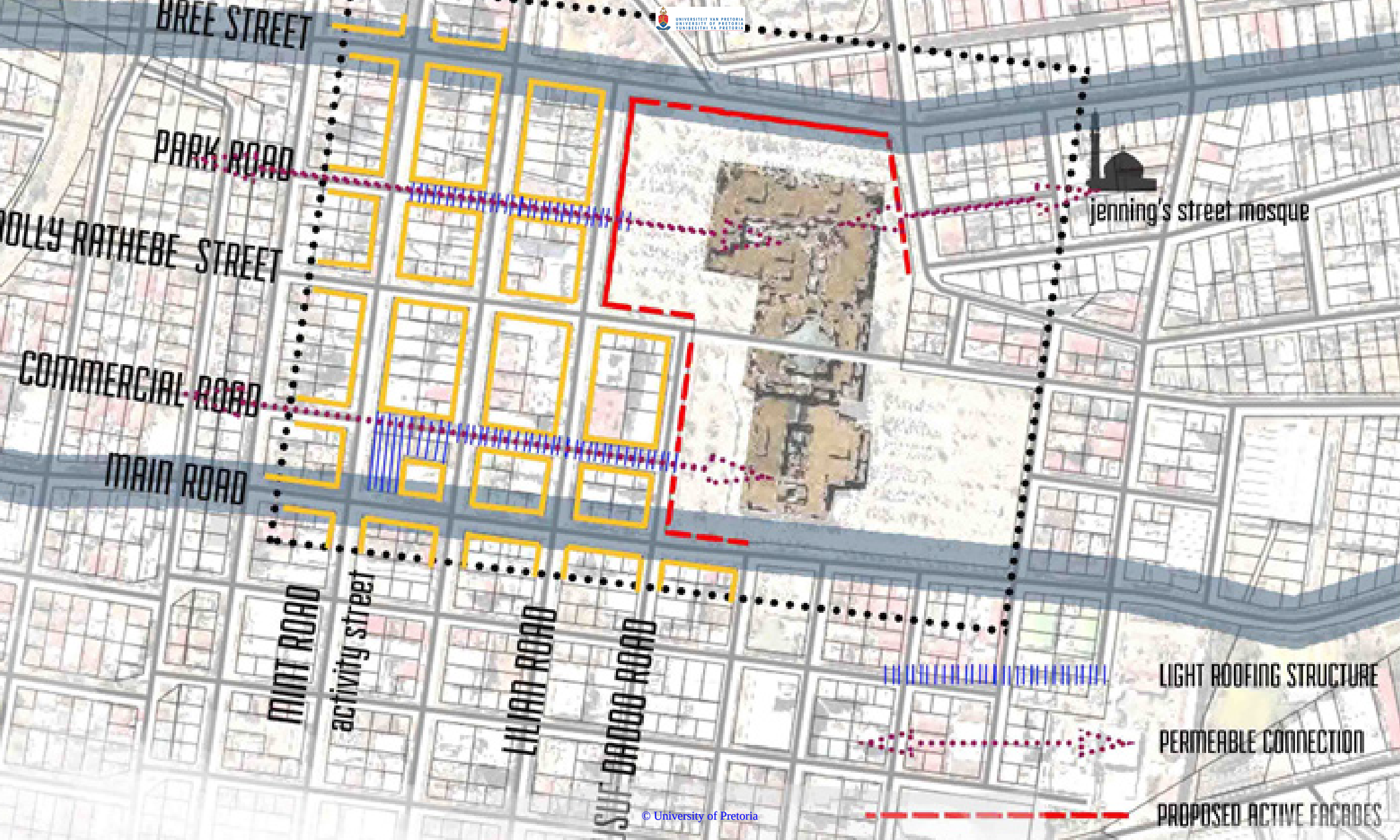

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06.8 ACTIVITY ANCHOR- ORIENTAL PLAZA

To successfully integrate the Oriental Plaza with the rest of the Walkable Core, the design aims to stitch the urban fabric with that of the Plaza in order to make it as permeable as possible.

Parking will be provided beneath the Plaza while people are envisioned to move through the building, past trading stalls, towards the proposed architectural intervention, through to the rest of the Fordsburg area.

The provision of another entrance when walking from the Fordsburg Square into the Plaza will create the desired permeability. It is, however realised that an entrance into the Plaza at the eastern end of Commercial Road might be problematic due to the locality of service yards at this point. This will be evaluated further within the chapter: Design Synthesis.

06.9 IMMEDIATE CONTEXT

The immediate urban framework aims to connect Newtown West and Fordsburg Square with buildings of a religious nature together with externalised retail- making use of existing energies, creating third courtyard spaces.

Bus and Taxi parking currently exists informally on Yusuf Dadoo Street, mainly picking up clients and workers from the Oriental Plaza. Public transport is welcomed in the area and is thus designed to service Fordsburg, Bree Street and the Newtown commercial, industrial and recreational disctricts. This facility is proposed within the north-eastern parking pocket of the site which is currently under-used by private vehicles, or any other identified locality east of the Plaza. This will immediately clear up Yusuf Dadoo Street in a first attempt to make the street space more pedestrian friendly.

An Imaam (Islamic priest) School is proposed across from the Johannesburg Muslim primary and high schools to create an educational campus, while an Islamic Interpretation centre acts as a research facility for members registered and visitors interested in the institution to undertake research on the religion Islam.

FIGURE 06.10 CONNECTING TOWARDS ANCHOR POINT
PERMEABILITY OF ORIENTAL PLAZA

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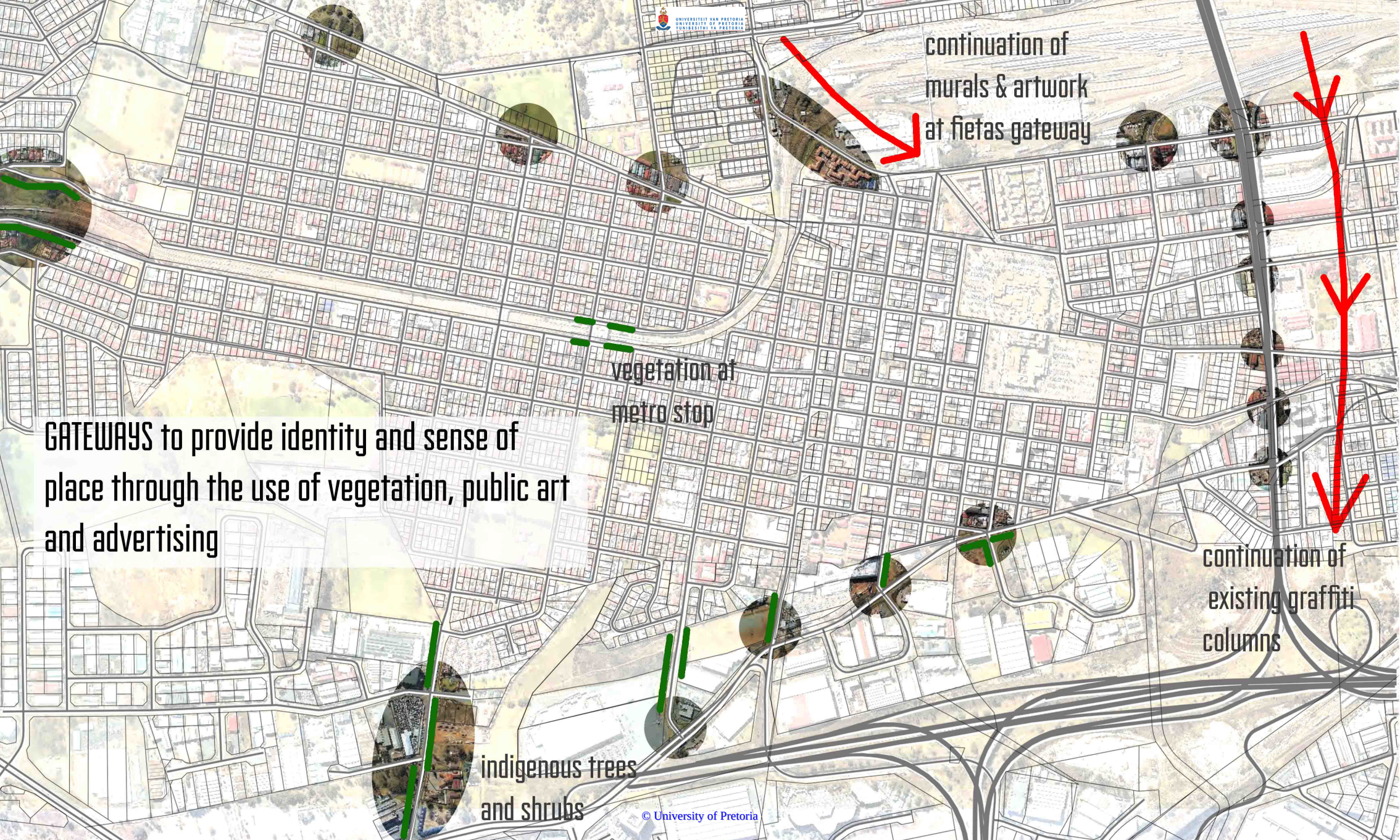

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06.10 SOCIAL AND PHYSICAL STITCHING

The physical incorporation and assimilation of secular space with that of religious space by the use of urban elements such as movement corridors, circulation routes, shared courtyard spaces, urban squares, street furniture and flooring textures are intended to blur the boundaries between these poles in order to not only stitch the existing urban fabric of Fordsburg with that of the islandified Oriental Plaza, but to also create key opportunities for formal and informal retail and service opportunities to formulate within liminal and unoccupied spaces within a bustling urban core. These opportunities are intended to create new-found relationships between a community of varied ethnicity who unknowingly share similar aspirations and ambitions.

FIGURE 06.11 DESIGNED GATEWAYS INTO FORDSBURG

FIGURE 06.12 STITCHING THROUGH NODES & COURTYARDS

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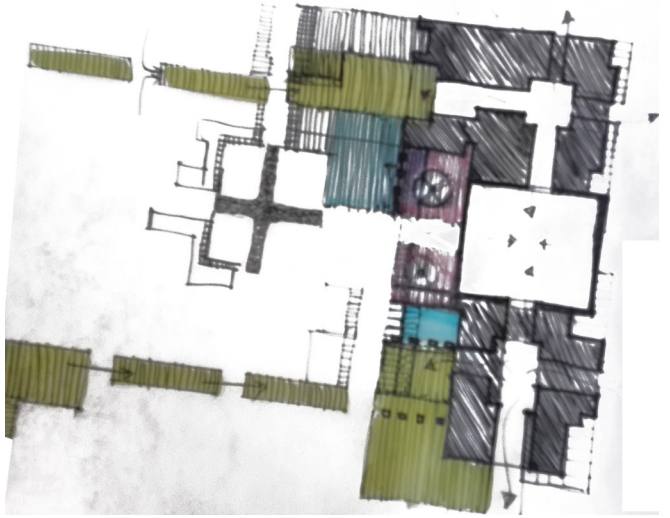

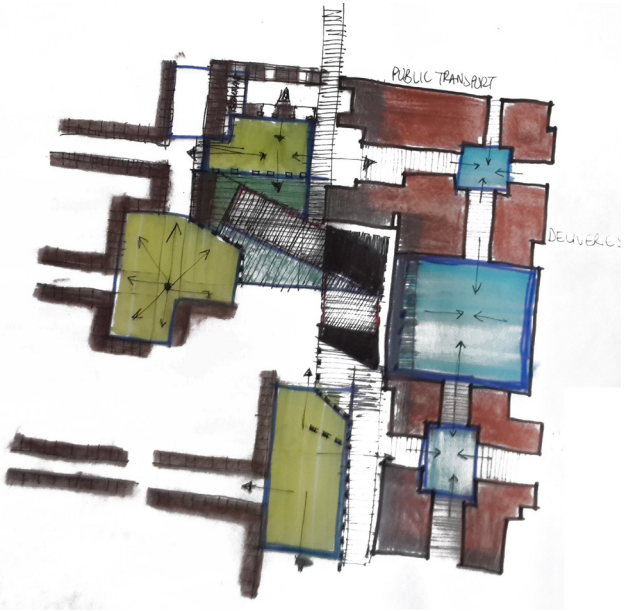

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The intervention mediates between the monumentalised Oriental Plaza and the dynamic urban core of Fordsburg.

Its edges allow for a permeable pedestrianised connection between the opposing architectural conditions.

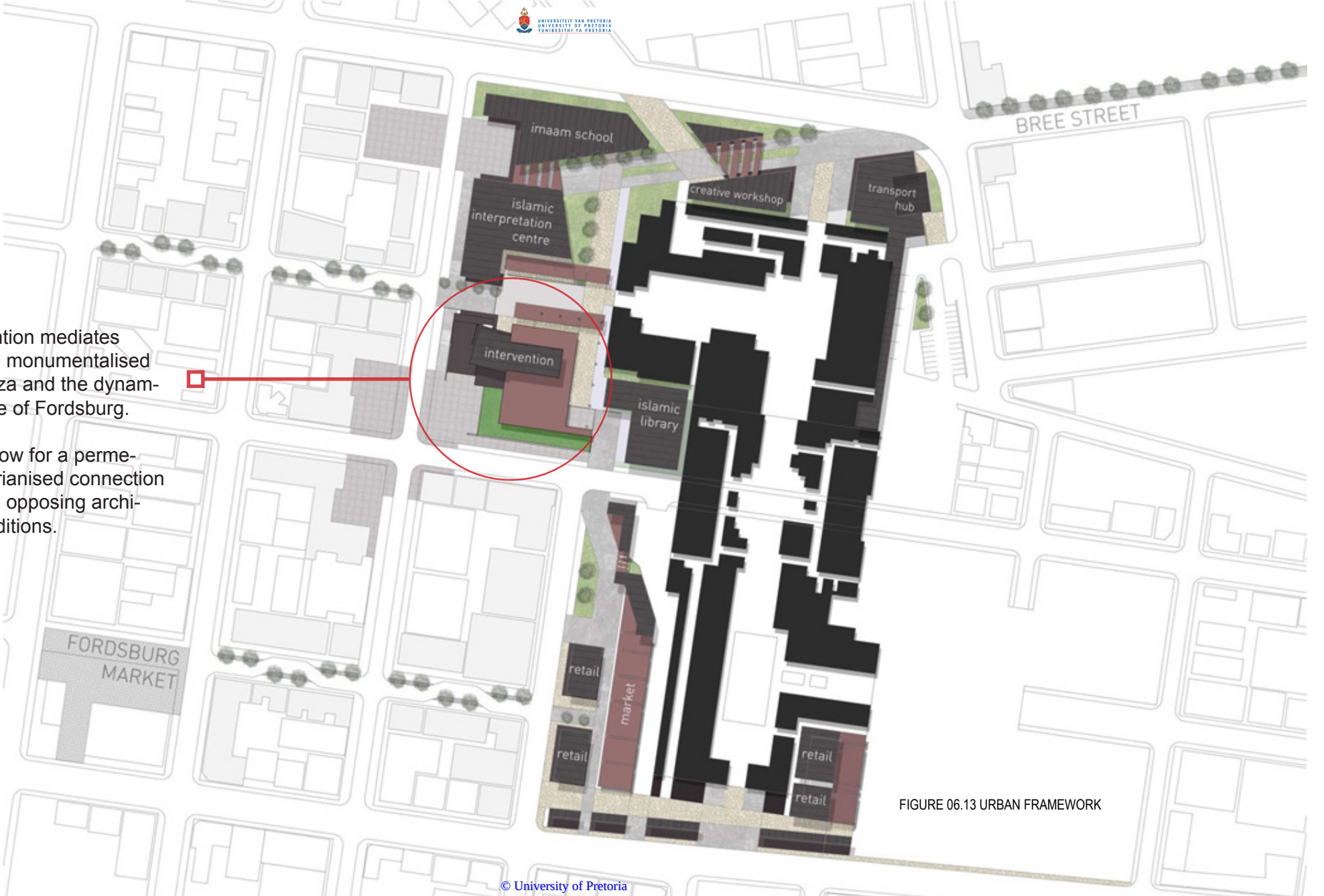

FIGURE 06.13 URBAN FRAMEWORK

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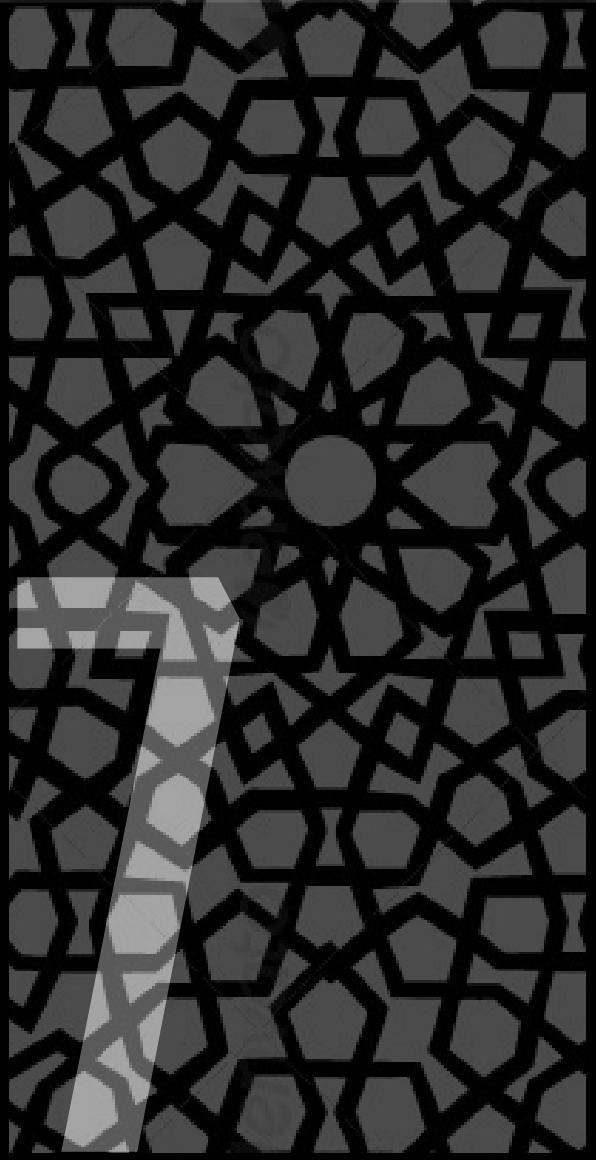

TYPOLOGICAL CRITIQUE | PRECEDENT STUDY

Comprised of three categories of precedent studies:
Theory related precedent- abstraction of symbolism
Programmatic precedent- mosque as public space
Spatial precedent- allowance for men and women
Issue related precedent- the mall configuration

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07.1 ‘STYLE’ IN ISLAMIC ARCHITECTURE

Rasdi (2014, 30) states that one of the major problems in the discourse of Islamic Architecture is the significance of the idea of a ‘style’ as opposed to a more fundamentalist approach of vernacular revivalism, or the approach of interpreting Islamic scriptures and the Sunnah of the Prophet Muhammed.

The question of the use of style in architecture being a effective approach to design was critically questioned by the early modernists in Europe and America. (Rasdi; 2014). Le Corbusier attacked the Ecole de Beaux arts approach and criticized them of stylization as being frivolous and wasteful. Louis Sullivan and Frank Lloyd Wright both warned about the artificiality and futility of reviving classical styles for American buildings (Rasdi; 2014).

Rasdi (2014, 30) further elaborates and explains that rapid urbanisation, the world energy crisis, the spirit of nationalism, the idea of Islam as a comprehensive way of life, and the rise of local academic scholarship concerned with the validity of vernacular architecture calls for a ‘new’ kind of Islamic architecture.

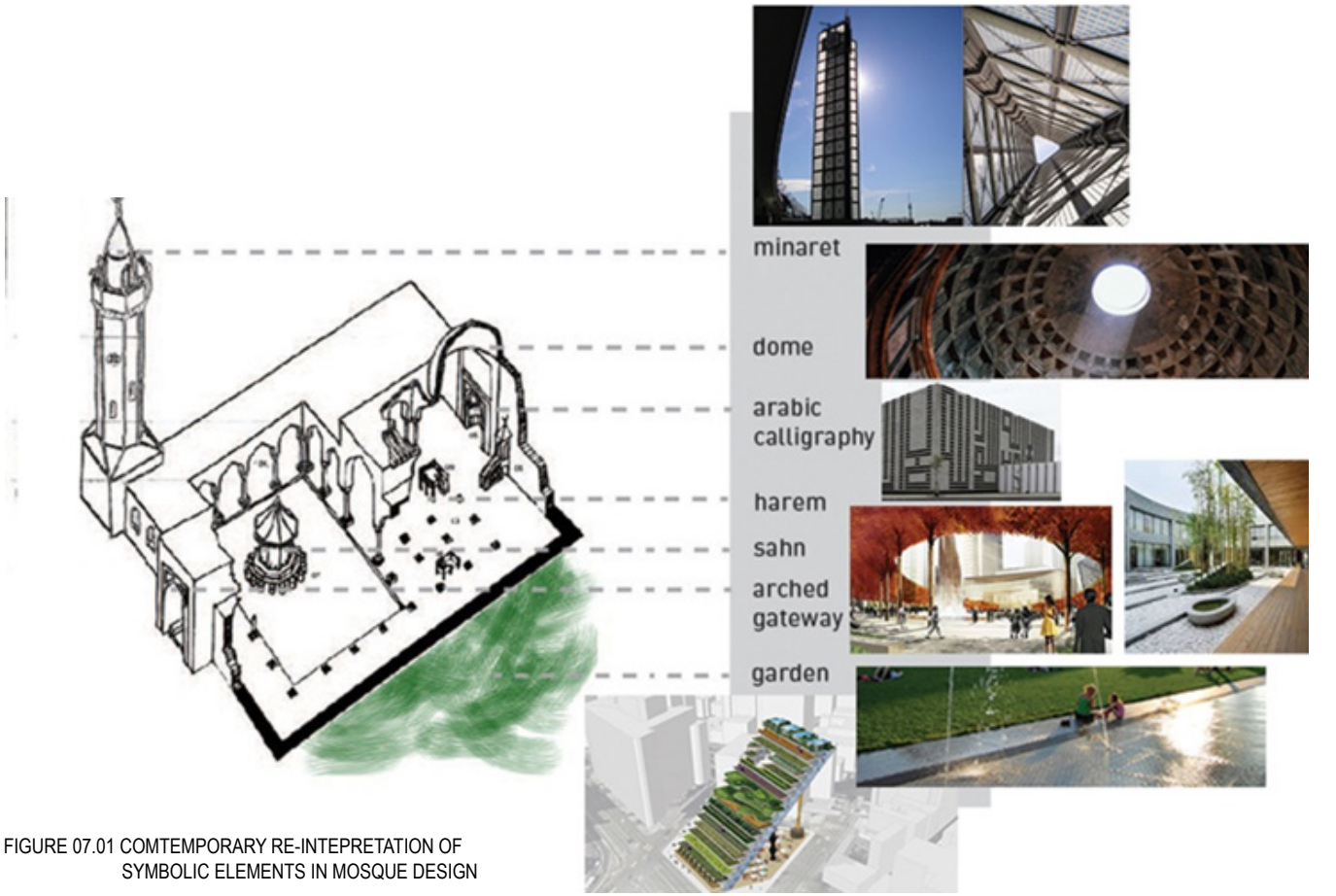

FIGURE 07.01 COMTEMPORARY RE-INTEPRETATION OF SYMBOLIC ELEMENTS IN MOSQUE DESIGN

© University of Pretoria

07.2 MOSQUE IDENTITY AND MEMORY

The following figure (Chohan; 2012:8) illustrates the spatial development of mosque architecture through its history, dating back to the first Prophet Muhammad's (May peace be upon him) mosque in Medina, Saudi Arabia. Epitomized by its simplicity, practicality and humility, formal elements- such as the courtyard typology- has remained consistent, yet the dome and minaret emanated from Iranian and Turkish influence.

There have been many questions related to the idea of what physically and metaphysically constitutes Islamic Mosque architecture. The most consistent perception of Islamic architectural vocabulary is represented by the many community and monumental state mosques that make evident use of Middle Eastern or Central Asian architectural apparel as dutifully exemplified in its extravagant splendour as the Turkish Mosque in Midrand and the Tshwane Muslim School in Laudium.

The predominant understanding is that it possesses a distinct set of architectural vocabulary that is unquestionable. This is however false as there is only one Quranic condition for a Mosque; that it faces the Ka'ba in Makkah.

Razak (1973) states that the actual architecture has more to do with issues of identity, than with the function of the Mosque.

Serageldin, Frishman & Khan (1994;72) state that even though mosques have a particular functional requirement of providing space for prostration, its architecture needs to "speak to the community providing both spiritual uplift and an anchor for the communities identity". The method in which a building converses with its community is dependent on the particular code and imagination forged by the evolution of its society.

The development of technology and architectural innovation has thus rendered- in my opinion- the dome and minaret redundant and unnecessary. Apart from its mere identifiable and symbolic nature, domes are not anymore the only means of spanning large distance in order to create vast internal spaces. Also, tall minarets are not required any longer as electronic devices and technological speaker systems have replaced this traditional method of calling the community to the mosque for prayer.

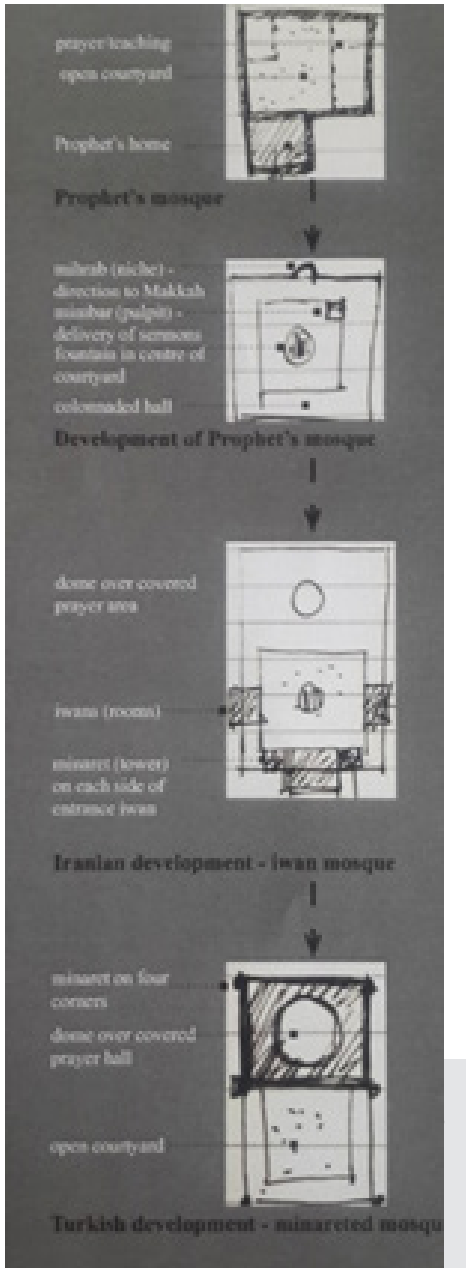

FIGURE 07.02 SPATIAL DEVELOPMENT OF MOSQUE PLAN OVER TIME

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07.3 SYMBOLISM AND MOSQUE PLANNING IN ARCHITECTURE

Traditionally the mosque has played a dominant role in most Muslim environments acting as the physical organiser of space and society. It also acts the definer of its people's identity, providing of a point of reference for citizens, passers-by, as well as travellers (Serageldin and Steele; 1996).

Nawawi (2014) states that while generic symbolism of the Masjid-around the world- as an icon lies in its definitive domes, arches and minarets, however the definitions and abstract implications of the Masjid as objectively states within the Holy Quran and the traditions of the Prophet S.A.W. do not address the issue physically.

Serageldin and Steele (1996) state how mosques are designed as impressive monuments which certainly do provided a sense of identity, but paradoxically sometimes for societies living in a culture of mass poverty. They suggest that the notion of symbolic reproduction related to an architectural iconography is reflected primarily in monumentalism and opulence, void of any social and contextual significance. This architectural conception needs to be refined and is thus a project intention of this dissertation.

"People cling onto an archetype of a mosque with a dome and a minaret, but this is not the typology of a mosque" (Janmohamed, n.d.). Although the rites of prayer are identical for the different schools of thought within Islam, Serageldin and Steele indicate that there is no strictly prescribed architectural vocabulary as each element allows endless combinations and permutations, bounded only by the the responses of the community and inventiveness and imagination of the architect.

One has to recognise the need to re-symbolise the existing environment in Muslim societies as a fundamental task of contemporary intellectuals in the Muslim world, and no architectural expression is more likely to re-symbolise the built environment of Muslim societies than mosque architecture. The continuity of key symbolic elements, such as the minaret. dome; gateway and muqarnas can be transformed without eliminating the deep imagery inherent in them.

The specific liturgy and functional requirements of the mosque do not dictate and particular architectural and physical layout. Thus architects are bounded only by their imaginations in what they can propose. If some have preferred to go back to the classical forms then this has been by choice rather than limitation. If some have broken radically with tradition they have been able to do so while remaining faithful to all the requirements for prayer and worship in the Muslim liturgical doctrine.

Nawawi (2014) states that -as the Holy Quran has quoted- the Masjid may be every place on earth, then no matter what architectural form it assumes, if it is used as a Masjid, it is a Masjid in whatever name or form it may portray.

The marriage of technology and architectural convention has opened up new avenues and developed a wide variety of new interventions that merit attention

Inherent tension between innovation and tradition in the architectural expression of mosque design
It is clear that from this rich background three trends have emerged which seek to anchor contemporary expression in a reinterpreted idiom of the past

It is realised that there are many other ways of providing mosques which respond to the need of Muslim societies as well as its social and historical context in order to anchor one's self-identity within the structures we build today, and which represents itself as eloquently as earlier symbols have to past generations.

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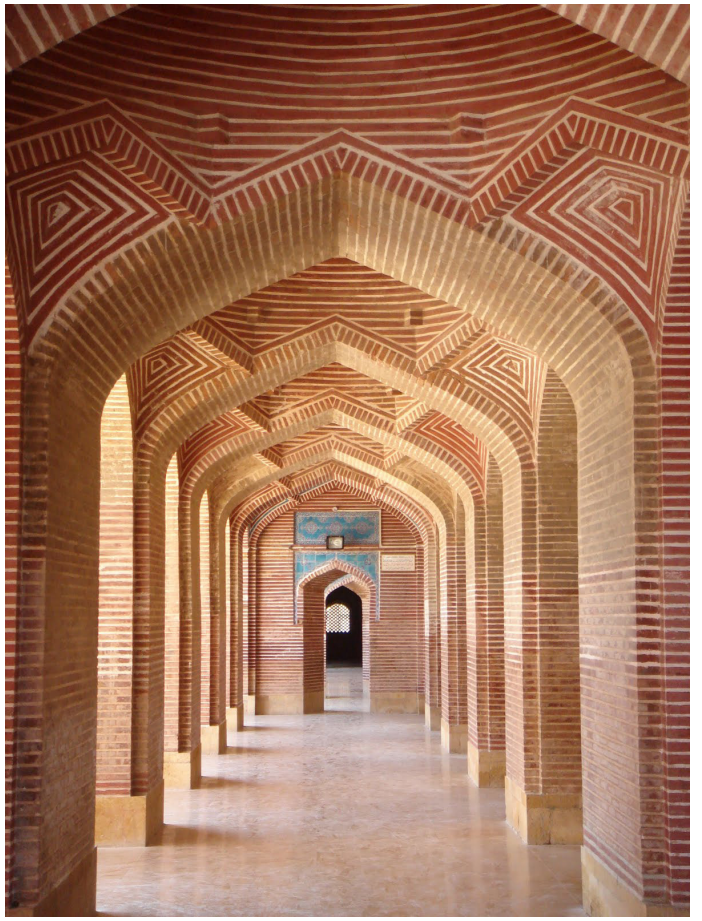

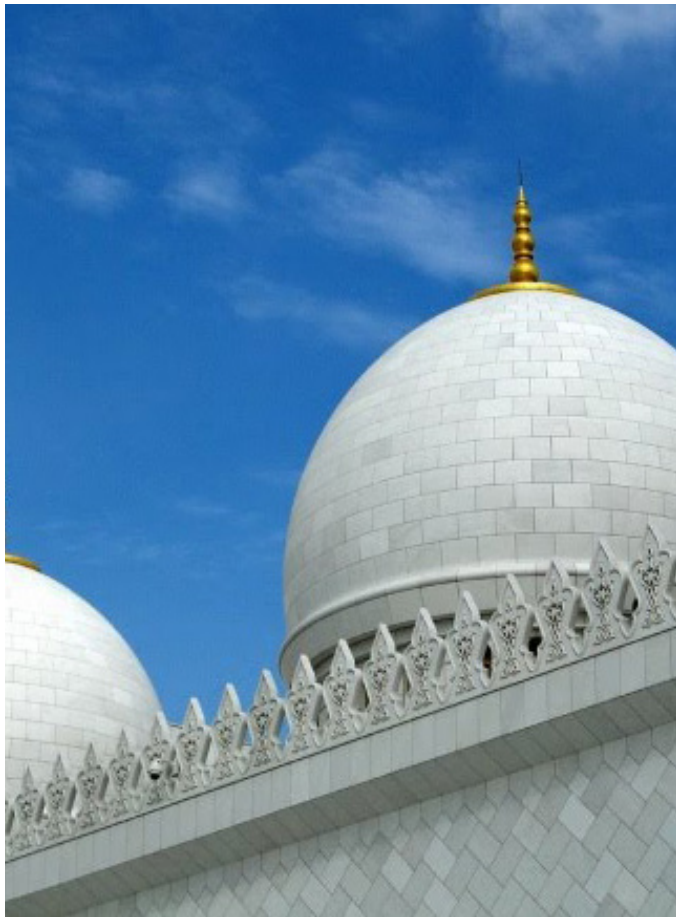

FIGURE 07.03 ARCHITECTURAL ELEMENTS CONSTITUTING TRADITIONAL MOSQUE DESIGN

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07.4 THEORY RELATED PRECEDENT- ABSTRACTION OF SYMBOLISM

MOSQUE OF PRISTINA

Architects: Victoria Stotskaia, Raof Abdelnabi, Kamel Loqman- Invert Studios
Categories: Mosque, shrine
Dates: 2010
Status: unbuilt
Address: Pristina, Kosovo
Hours: Always open to Muslims

FIGURE 07.04 3D PERSPECTIVE WITHIN CONTEXT

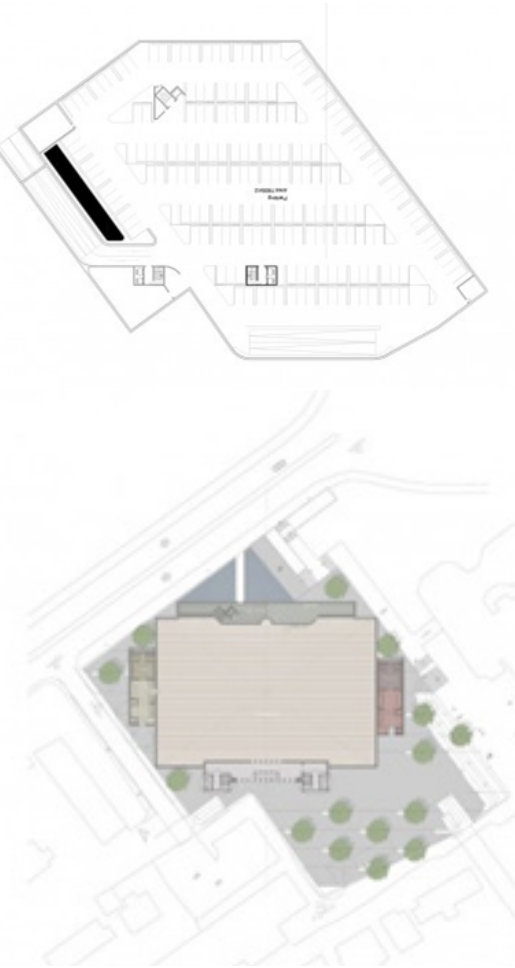

FIGURE 07.05 UNTRADITIONAL PLANNING OF MOSQUE

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The project explores notions of surrounding itself with its context, playing in harmony with its neighbourhood. The proposal aims to integrate itself with the urbanity of Pristina, yet also to stand out as a monumental structure that acts as an icon for the city.

Unconventional and uncommon shapes are intentionally spatially manipulated in a conscious effort to change public perceptions on mosque design and external shaping. The proposal therefore aims to reflect the Islamic Architectural Heritage whilst simultaneously standing out with its high technological character (Furuto, 2013).

The deficient prayer space has resulted in a trend of building extensions to the existing mosques with the community's intension to gain more space and even using the public spaces near them especially for the Friday prayers. This issue of lack of adequate prayer space and disproportionate mosque coverage over parts of the new and old city of Pristina is attended to in the design of the mosque proposal servicing the vast number of worshippers on all days of the week.

The consideration of building a central Mosque as one with extraordinary importance to the Muslim Community of Kosovo has served as a crucial guide in the design process. Traditional Ottoman architectural elements were evaluated and considered, then simply merged the shape of the dome and minaret in order for the design of its new-found shape. The mosques iconic nature therefore lends itself to the technologically merged shaping of the dome and minaret, integrated with a tower to create a large presence towards the main road, consequently tying itself in with the urbanity of the site, interacting with all circulation and approaching points to it (Furuto, 2013).

The specific angle oriented to Mecca is purposely emphasized in order for the public to understand its importance within its landscape. Solid and transparent skins facing north and south protect the monument from climatic concerns and create a sense of privacy.

Principles adopted from this design include the ability of transformation and abstraction of symbol within design. Its contemporary interpretation from a traditional Ottoman approach is one of value and has thus been a key informant for the design of this dissertation. Lessons in terms of the precedents monumentality (conscious alternate axis, scale of the roof and tower, siting within the landscape) have been understood and consciously worked against in the design of this dissertation in order to fulfil the projects intentions to de-monumentalise and hybridise that of sacred and profane space.

FIGURE 07.06 UNTRADITIONAL FORM AND MATERIALITY OF MOSQUE

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07.5 PROGRAMMATIC PRECEDENT-MOSQUE AS PUBLIC SPACE

THE VANISHING MOSQUE

Architects: Rux Architects
Categories: Mosque, public square, arcade
Dates: 2009
Status: concept, unbuilt
Address: Proposed for the UAE
Hours: Always open to Muslims, and non-Muslims

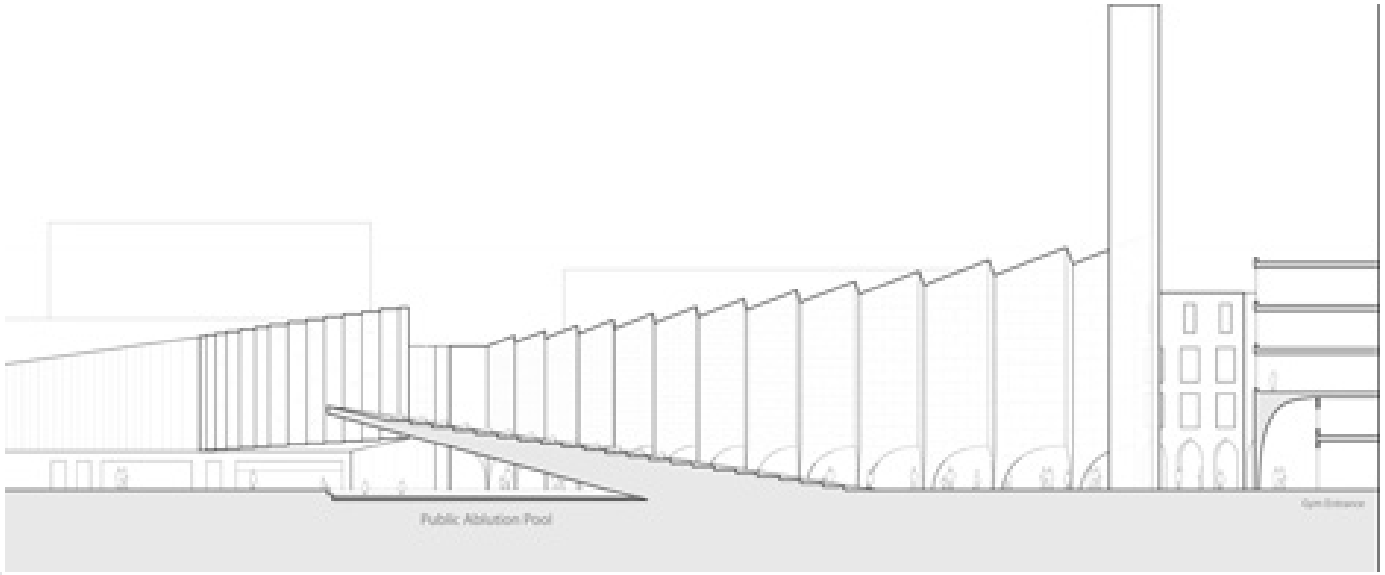
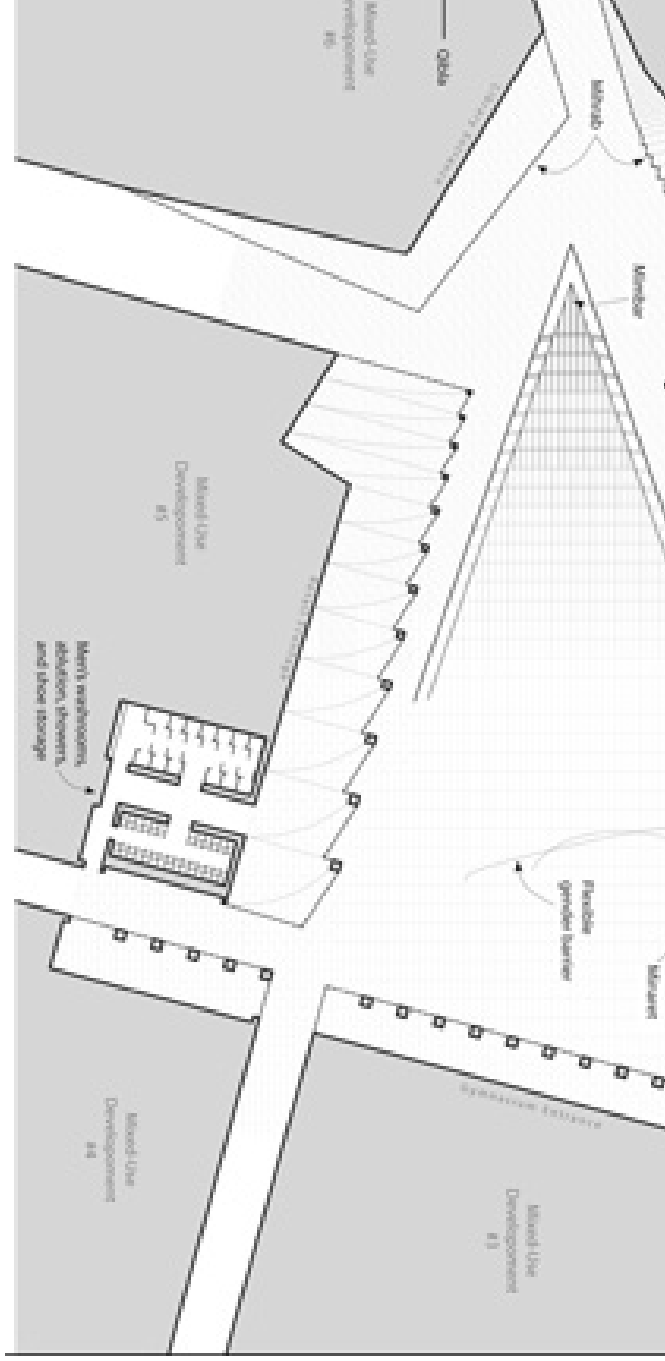


FIGURE 07.07 SECTION OF URBAN PLAZA/ MOSQUE



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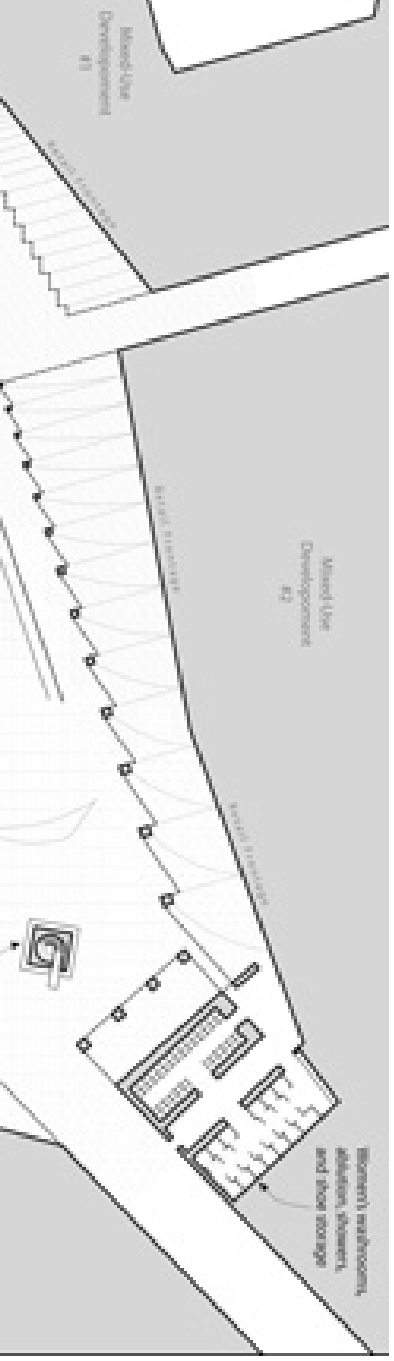

In 2009, an international design competition called “Design as Reform Volume 2” was held in order for concepts for the re-invention of the traditional mosque to be investigated. The overall aim of the competition was to re-evaluate and evolve the formal and programmatic offerings of a traditional mosque in a way that was both sensitive to history and tradition, acting as visionary and innovative in its reinterpretation (Etherington, 2010).

The design response was not a building, but rather a space that vanished into the fabric of the city. Seamless with the streets, connected directly to the pulse and energies of daily life, and welcoming to anyone and everyone at any time. The proposal is seen to become more visible, more iconic, and more integral to the spiritual and cultural workings of the community than any building with doors and walls ever could.

The design became a strategy, acting as a “developer’s tool” for integrating spiritual space within new urban developments in the Middle East. The raised prayer plinth facing Mecca, and the deep shaded arcades allows for the hustle and bustle of city life to slip around and beneath the mosque during prayer time without disrupting the congregation. When not in use as a mosque, the space functions as a place for casual lounging and chance interaction amongst people within the community (designboom | architecture & design magazine, 2014).

FIGURE 07.08 FLOOR PLAN OF URBAN PLAZA/ MOSQUE

Principles adopted form this precedent include lessons of superimposing the function of a mosque (sacred space) within an urban plaza (profane space) increases the social value of public spaces, increases the monetary value of adjacent properties, also fostering a powerful sense of community for residents. This precedent effectively relates to the dissertations overall project intention of linking the spiritual with the secular workings of the city in, in order to make the practice of Islam a transparent and inviting one to all those who come across it.

FIGURE 07.09 MOSQUE SPACE IN USE

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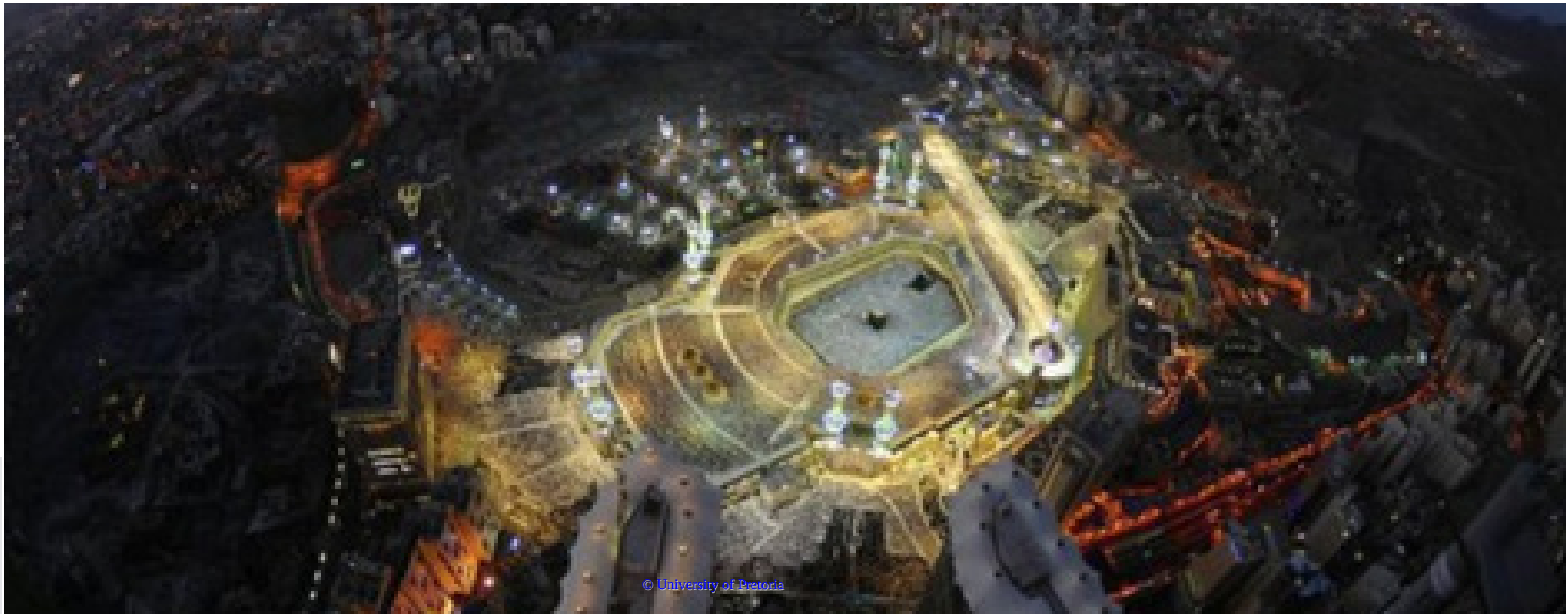
YUNIBESITHI YA PRETORIA

07.6 SPATIAL PRECEDENT- ALLOWANCE FOR MEN AND WOMEN

MASJIDIL HARAM

Names: al-Haram Mosque, Al-Masjid al-Haram , Al-Masjid al-Haram (The Holy Mosque) Haram • Masjid al-Sharif • The Holy Mosque
Categories: shrines; mosques; pilgrimage destinations
Dates: 16th C, 20th C
Status: active
Address: Mecca, Saudi Arabia
Hours: Always open to Muslims. Non-Muslims are not permitted to enter Mecca or the mosque

FIGURE 07.10 BIRD'S EYE VIEW OF HARAM



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Al-Masjid al-Haram in Mecca, Saudi Arabia, is the holiest mosque in the world and the primary destination of the Hajj pilgrimage, previously outlined as one of the five Pillars of Islam. The mosque's prayer complex covers an area of 356,800 square meters and can accommodate up to 820,000 worshippers during the Hajj pilgrimage which occurs annually in September through to October.

The Holy Mosque is the only mosque that has no qibla direction, since Muslims pray facing this holy mosque from wherever they are in the world. This particular site is therefore the basis on which the particular axis to Mecca is formed. The Haram –originally built in the 7th century- has been spatially modified, rebuilt, and expanded on a regular basis ever since.

A major extension consisted of a new wing and an outdoor prayer area on the southeast side of the mosque where air conditioning circulates below the tiled floors, supplied through ventilation grids located at the base of each column. The monumental King Fahd Gate consists of three arches with black and white voussoirs, elaborately decorated with carved white marble and two colossal new minarets matching the older ones. Windows are covered with brass and framed with carved bands of white marble (Sacred-destinations.com, 2014).

Spatial transience and adaptability are principles adopted within the dissertation's design. The floor plan shows how men and women are mixed within this large building, separated only by hijab (veil covering in order to maintain modesty).The spatial layout is in tune with the hadith, where the Prophet (pbuh) stated that the "women should pray behind the men, the masjid thus provides women's spaces behind the men on the left and right side of the prayer hall" (Nawawi; 2014, 8).

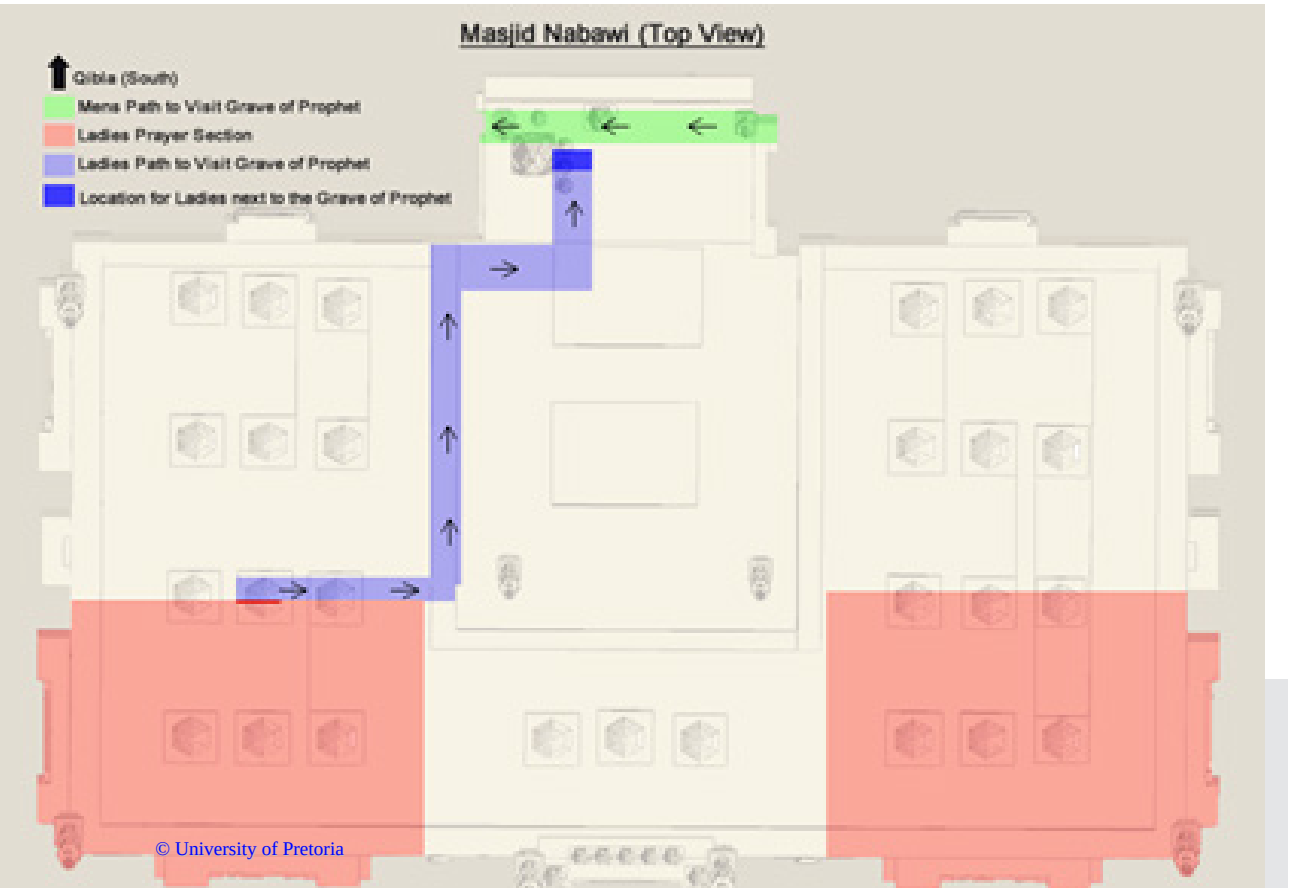

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FIGURE 07.11 FLOOR PLAN ILLUSTRATING NO DISTINCTIVE SEPERATION BETWEEN MALES & FEMALES

07.7 ISSUE RELATED PRECEDENT- THE MALL CONFIGURATION

AN ARCHITECTURAL CRITIQUE - THE MALL TYPOLOGY:

The Oriental Plaza- an unrealized mall configuration

The proverbial architectural configuration of the Mall- especially within the context of Gauteng- is comprised of a series of internalised corridors of a specific width, usually six to seven meters, which radiate out in various configurations but are always linked to facilitate movement. Larger anchor tenants are strategically planned at the end of a run of small scale shops that line the corridors on either side. (Noble: 2000)

Crawford appropriately explains certain tactics employed by mall designers: ‘All the familiar tricks of mall design - limited entrances, escalators placed only at the end of corridors, benches and fountains carefully positioned to entice shoppers into stores - control the flow of consumers through the numbingly repetitive corridors of shops. (Sorkin, 1992: 14 - 15)’

As much as the Plaza was an instrument of control in its socio-political conception of apartheid supremacy, Toffah suggests that its design fulfils the above mentioned strategic tactics and physical layout in order for consumer control in order to entice shoppers.

The mall therefore acts as an internalized architectural device of consumerism and manipulation within which a disconnection with one’s context exists. Its insular nature does not allow for much permeability with the urban fabric of Fordsburg.

FIGURE 07.12 3D PERSPECTIVE OFTHE OPEN-NATURE OF MALL TYPOLOGY

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WILLOWBRIDGE SHOPPING CENTRE

Categories: Mall, shopping centre, entertainment hub
Status: Built
Address: Tygervalley, Cape Town
Hours: Mon-Thurs 09:00- 18:00
Fri-Sat 09-20:00
Sun 09-17:00

Conceived of as a new-concept retail and shopping centre that would not only reflect the uniqueness of the site,responding sensitively to its context, it was also the clients' objective to challenge traditional insular retail models of other popular regional shopping malls.

Vivid Architects and the client shared similar design aspirations and philosophies in the realization that even though shopping centres are not only designed to entice customers to shop, they also need to reflect the growing desire to experience environments that both supports and encourages the human need to gather and socialise within a stimulating place enhanced by natural light, fresh air and open skies above. (Low: 2006)

The site sits on a greenbelt and was thus the key informant for the design of a 'high street' for shopping. Influenced by the linear nature of the site, the centre also acts as an interface between the urban edge of the Tygervalley business district and the natural splendour of the rehabilitated Elsieskraal River that it borders. (Low: 2006) Major tenants typically anchor the centre on either end while the overall length of the open street is articulated by three 'Village Squares' with a series of pedestrian bridges that cross the street at first floor level. The squares are the focus of the restaurants and are enhanced by specially designed landscape elements. (Low: 2006)

Principles adopted by this precedent include its sensitivity to site and its external nature that promotes stimulating and encouraging interaction between people and landscape. Healthy environments are created to allow for moments of reflection, recreation and contemplation, allowing the traditional shopping centre to become more than just a consumerist plot of persuasion and influence. This dissertations proposal ties itself well with this new-found vision of shopping mall as it is believed that the experience should be designed to be all-encompassing and invigorating for its users.

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07.8 EVALUATION & WAY FORWARD

Nothing generates a higher degree of critical polemicism today that the question of the appropriate connection between the spiritual and secular aspects of religious architecture in Muslim societies. (Serageldin and Steele;1996)

Serageldin and Steele (1996) suggest their position that 'tradition' is usually represented as the recapturing of a romanticised and idealised past- making use of symbolic elements, while 'modernity' is associated with the contemporary- adopting new ways and means of architectural expression .

Serageldin and Steele mention how on one side of the debate are those architects and designers who use a select range of easily recognisable, traditional forms, purposely choosing to limit the architectural vocabulary. On the other are those who contest and believe that the only other way to truly express the central role of the mosque in a 21st century contemporary culture is to be iconoclastic by utilising a range of industrial materials and technology available, in the search for a new and innovative architectural language.

The design encompassed by this dissertation contests the existing Mosque, consequently opting for the latter option with regard to the above-mentioned debate.

Joe Noero has defined two types of contextualism;

1. 'pathological contextualism' which is inspiration by context
2. 'progressive contextualism' which shifts from inspiration by context to provision of upliftment. (Marchall & Kearney 2000; 1726)

The latter example - progressive contextualism, is achieved by understanding the context in terms of what it is lacking, what it needs, the types of spaces that would improve the context by adding uniqueness and a sense of place. (Razak, 1973)

Khalid Asfour, a PHD student at Massachusetts Institute of Technology in Boston USA, has outlined three approaches that have been used by contemporary Muslim architects when looking at history:

1. 'Visual Abstraction'- whereby architects imitate past forms either -dimensionally or three-dimensionally.
2. 'Conceptual Abstraction'- here the architect deciphers rules/formulas from the past and applies them (such as proportion, sequence of space, etc.).
3. The third approach is a combination of the first two, where the architect "seeks from history a design attitude and not an end product" (Razak, 1973).

Rasdi (2014,29) explains that the term 'modernistic' relates to the notion that a true architecture is one that rejects historic revivalism, rejects ornamentation, celebrates abstraction, and rejoices in structural expression in architecture. He further explains that phrase 'modernistic expressionism' relates to any form of architecture that carries a metaphoric message through the use of structurally expressive form.

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This dissertation aims to adopt an alternate/ third approach as means to create an appropriate architecture.

The relationship between tradition and modernity, the eastern and western, and how it might be possible to combine two elements together rather than be forced to choose one or the other gives indication into a third condition (Janmohamed, n.d.).

This third condition (in relation to the conceptual approach of creating a third space) is conceptualised through Joe Noero's theory of progressive contextualism, along with Khalid Asfour's third example of seeking from history as a design attitude – as mentioned above. These outcomes have been tabulated.

the mosque

was	is	should be
important	disconnected	inviting
internalized	internalized	transparent
central	on periphery	central
connected to community	connected to car-park	interaction with community
passively heated/cooled	air-conditioned	technological/sustainable

the human [islamic] condition

was	is	should be
no existence of groups	isolated existence	integrated existence
workers	owners/entrepreneurs	educators/practitioners
religious	indifferent	mutually religious
unity amongst muslims	independence	unity in society at large

FIGURE 07.13 TIME COMPARISON OF THOUGHT METHODOLOGY

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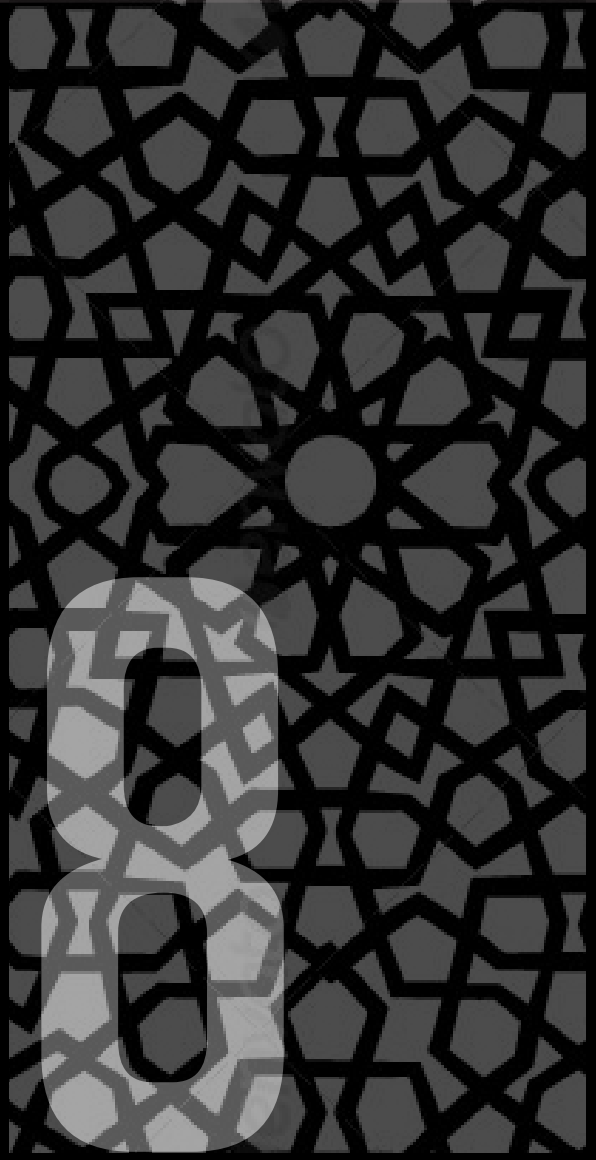

CONCEPT | THEORY

Translation of the findings above into a concept appropriate to theoretical underpinnings. These notions and ideas are translated into a number of conceptual scenarios that are weighed up according to the intentions previously outlined. The chapter also explores the main design generators and substantiates the decision-making within the theoretical, practical and contextual realms.

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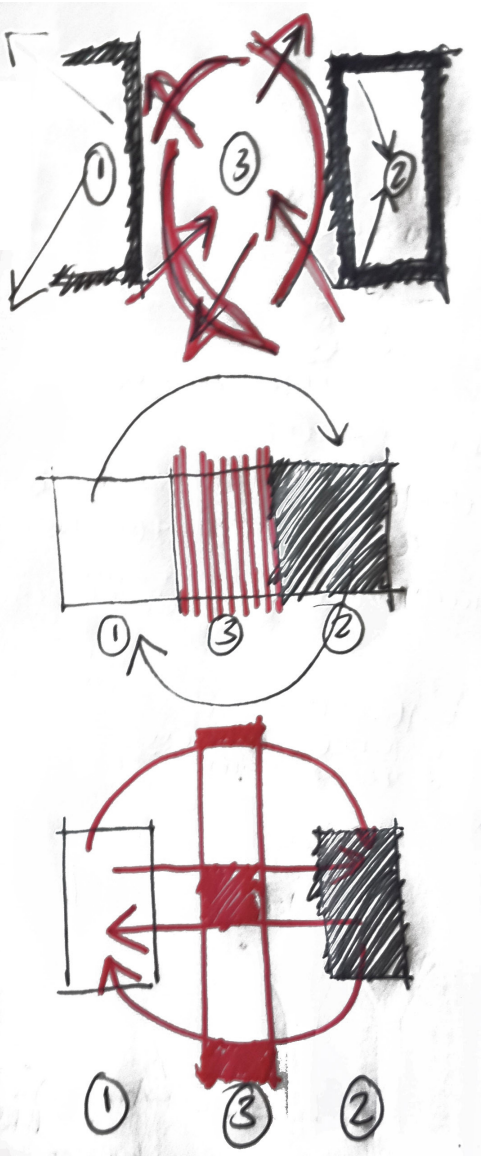

FIGURE 08.01 CONCEPT SKETCH SHOWING JUXTAPOSITION OF THIRD SPACE BETWEEN THAT OF THE FIRST AND SECOND SPACE

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08.1 CONCEPT FORMULATION

Contextual tangible and intangible mapping (chapter 4) has given indications of possible programs that may fulfil the project intention of re-linking the secular with the religious.

These include:

RELIGIOUS	SECULAR
-congregational prayer space -cleansing/ bath facilities -ladies prayer facility -islamic library -eid prayer space -lecture hall	-formal and informal market/souk -green reflection space -civic congregational area -restaurants -community hall -donation/collection area

An overlap of these programs is proposed in order for the de-monumentalisation of both the Masjid and the Mall typology to occur. This overlap of religious and secular is envisioned to create hybrid spaces which may create a third space. These in-between third spaces are neither private nor public, but are rather social spaces, transparent spaces, and liminal spaces which are- according to reference- envisioned to reinforce the dialectic interaction between the first space and second space.

08.1.1 CONCEPT THEORY

In order for there to be a third space, a first and second space has to be clearly defined.

The first space refers to that of the urban fabric of Fordsburg while the second space refers to that of the Oriental Plaza- the internalized mall-both of which refer to the secular. A third condition- a religious space- is envisioned to create “a dynamic tension between the first proposition and its alternative: this juxtaposition reinforces the dialectic interaction between the positions rather than a duality of opposites.” (Arendt; 1959, 25)

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08.1.2 THE SOCIAL REALM

Hannah Arendt (1959, 26) refers to the emergence of the social realm, a space that is neither public nor private. This concept is a relatively new phenomenon whose origin coincided with the emergence of the modern age. This social realm- a third space- between that of spaces one and two, between private space and public space, between family space and social space, between cultural space and useful space, between space of leisure and that of work, all of which are oppositions outlined by Michel Foucault- of other spaces.

These third spaces –in support of the author's argument- may be characterized by Foucault's notion on Heterotopias

These principles include:

- Heterotopias take quite varied forms
- May have one function or another
- Is capable of juxtaposing in a single real place several incompatible spaces
- Are most often linked to slices in time
- Always presuppose a system of opening and closing that both isolate them and make them penetrable
- Have to function in relation to all the space that remains

08.1.3 LIMINALITY

In the context of this dissertation and with reference to theory related readings, liminiality is understood to:

- point to a thirdspace
- be seen as as a midpoint of transition, between two positions and as a temporary phase rather than a permanent state.
- be thought as "the realm of conscious and unconscious speculation and questioning- the 'zone' where things concrete and ideas are intermingled, taken apart and reassembled- where memory, values, and intentions collide".Fred Koetter (1980:69)
- be an ambiguous space that is by definition a transitional space that exists between two contradicting poles (Viljoen; 2012,102).
- to be a "phase in social life in which this confrontation between activity which has no structure and its structured results produces in men their highest pitch of self-consciousness"
- While in the liminal state, human beings are stripped of anything that might differentiate them from their fellow human beings."
- Muslims are liminal figures because they believe they are temporary residents of the world. This liminal state only ends with death, and thus the liminal state lasts for their entire lives on earth."
- Theories of liminality point towards the zone of blurring between the making and experience of spaces"

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08.2 CONCEPTUAL AND CONTEXTUAL THEORY & RESPONSE

08.2.1 DEFINING THE THIRD CONDITION

In order for there to be a third space, a clear definition of first and second space must be established.

Within the context of this dissertation, the first space refers to that of the islandified mall-like Oriental Plaza which exists in isolation and grandeur surrounded by its vast and unvaried parking lot. The second space refers to that of the urban fabric of Fordsburg along Lilan andd Dolly Rathebe road. Varied and dynamic, this space is more permeable and provides more opportunity for the integration and stitching of a new sacred space.

Juxtaposed between the secular first and second space lays an inserted new third religious space. This space mediates between, acting as a liminal space between those that are existent. Furthermore, new third spaces- amongst, between, above and under- are created within the new third space which are intended to mediate between the sacred and profane in order to create new relationships and to blur the boundaries between the two poles.

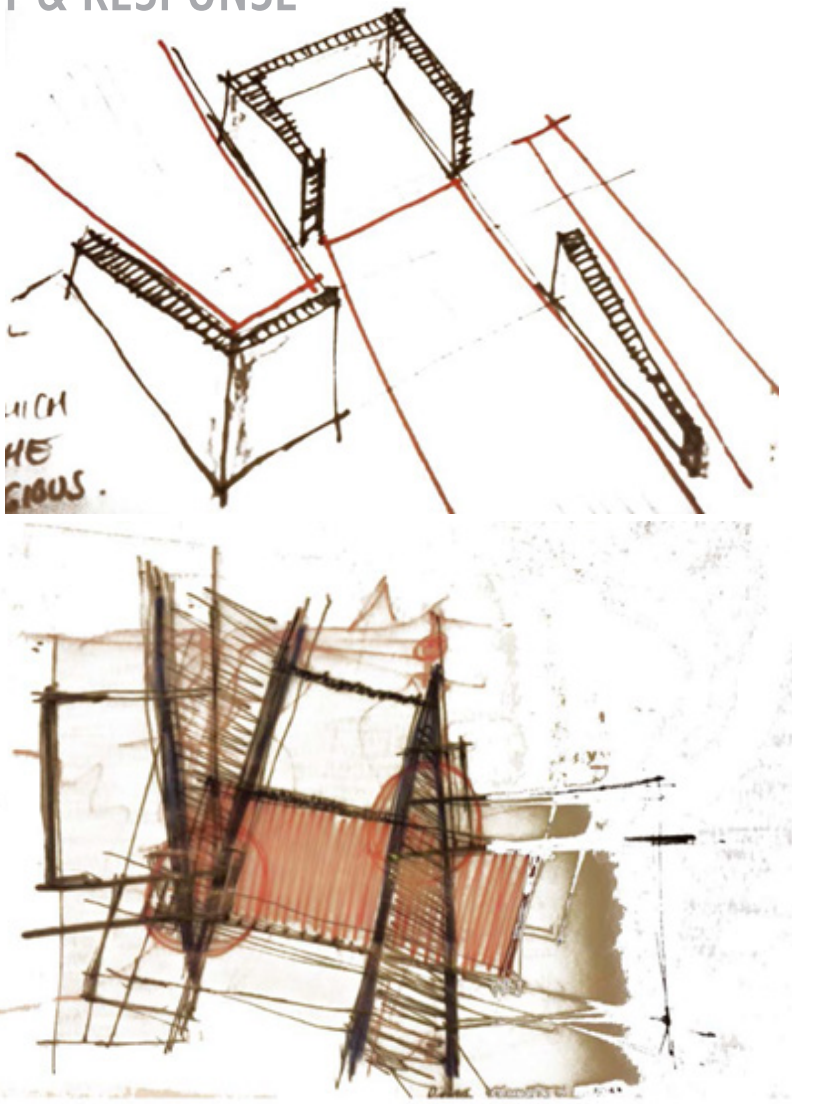

FIGURE 08.02 CONCEPTUAL EXPLORATIONS
DEFINING 3 CONDITIONS

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08.2.2 THEORETICAL PREMISE- TRADIONAL PATTERN-MAKING- GEOMETRY AND PROPORTION

The Oxford English Dictionary (2011) defines the word geometry as the science of properties and relations of magnitudes such as points, lines, surfaces, or solids in space and the way the parts of a particular object fit together. Geometry, according to Plato, can also refer to the science of stereo-metry or “spatial measurements”. Tradition holds that, “Only he who is familiar with geometry shall be admitted here” as engraved over the entrance to Plato’s Academy, (Critchlow, 1976). Critchlow (1076) further states that the very laws of how things were allowed to be by the “Divine will” are the laws of “Harmony of Being”.

The use of geometry has existed in many architectural forms, across centuries. The first confirmed record of geometric usage in design, acting in relationship to astronomy, human and music may be traced back to the ancient Greeks, in particular, Pythagoras and Plato. These geometric ratios and proportions (such as the golden section) were employed in the design of ancient sacred and ceremonial sites in all traditional civilizations, together with elaborate depictions of the participants and their stories from religious scriptures and beliefs.

In Islamic art-making, however, geometric patterning has always- since its origin- involved the primary usage of geometric formation, serving as the underlying structure of Islamic design process (sciencedirect.com, 2014). This is due to the prohibited use of human depiction in Islam, considering instead the relationship between cosmology and geometry, manifested in Islamic patterns where geometry acts as the vocabulary underpinning the pattern language.

Proportions serve two main objectives (sciencedirect.com, 2014). These include:

1. “Proportions are strongly linked to geometry which in itself may be viewed as a self-guiding method of aesthetically proven design”.
2. “Geometric proportions regulate the order and rhythm of patterns. It also mediates between the two poles of order and diversity”.

Islamic art favors geometry because of its intelligible aspect. Geometry possesses abstraction and the capacity to express and reveal objectively immutable and spiritual truths. Geometry involves proportions and prime roots that are considered the most beautiful proportions (the proportions of beauty). As such, beauty, for the Muslim artists, is objective and self-expression of truths, which is the essential nature of beauty as Plato stated, “Beauty is the splendor of the truth” (Burckhardt, 1987).

Geometric proportions regulate the order of patterns based on mathematical ratios, which is influential in understanding the universe, man and nature; these proportions are, by their nature, the essential ingredients in sacred geometry, as Pythagoreans stated that these harmonic ratios render music in a balanced pattern (sciencedirect.com, 2014).

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08.2.3 GEOMETRIC OVERLAY

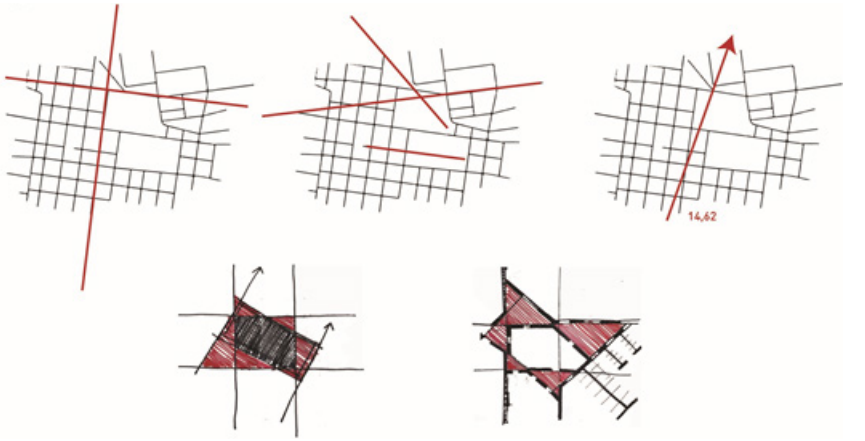
“Geometric proportion is strongly linked to Islamic cosmology, philosophy and metaphysical dimensions. It brings meanings and spiritual exercises for the viewer, deconstructing the meanings underpinning the geometric framework. As such, the viewer is more than an observer; he or she is a participant in the establishment of a strong link with geometry symbolizing man, nature and cosmos” (sciencedirect.com; 2014).

Geometry- Since the use of art with human depictions is forbidden in Islam, innovations within geometry as an art were expertly explored within Islamic art. The art employs strategies of repetition, symmetry and change in scale, producing a mystifying effect. Doctor Keith Critchlow further validates the strong use of geometric pattern in mosques and other Islamic buildings to an idea of a relationship between islam, cosmology and pattern formation. (Chohan; 2010, 10)

The concept of 3rd spaces, places and conditions is manifested in the overlay and superimposition of two grids. The former being that of the secular (the profane), linking to the fabric of the city and its current orientation, where the latter is in relation to that of the religious (the sacred) which faces 14,62 degrees north east toward the contextual axis of Mecca.

This contextualised juxtaposition represents an alternate design language, as words do in a spoken language. This hybridised grid determines the framework within which elements may be arranged into a pattern, create a relationship between one elements and another, or generate a proportional relation within another element. It thus guides the design and its subsequent technification in that of the roof structure, the ceilings, walls and openings, the structural grid and column placement, as well as the floor pattern and its materiality.

FIGURE 08.03 OVERLAY OF RELIGIOUS AND SECULAR GRIDS



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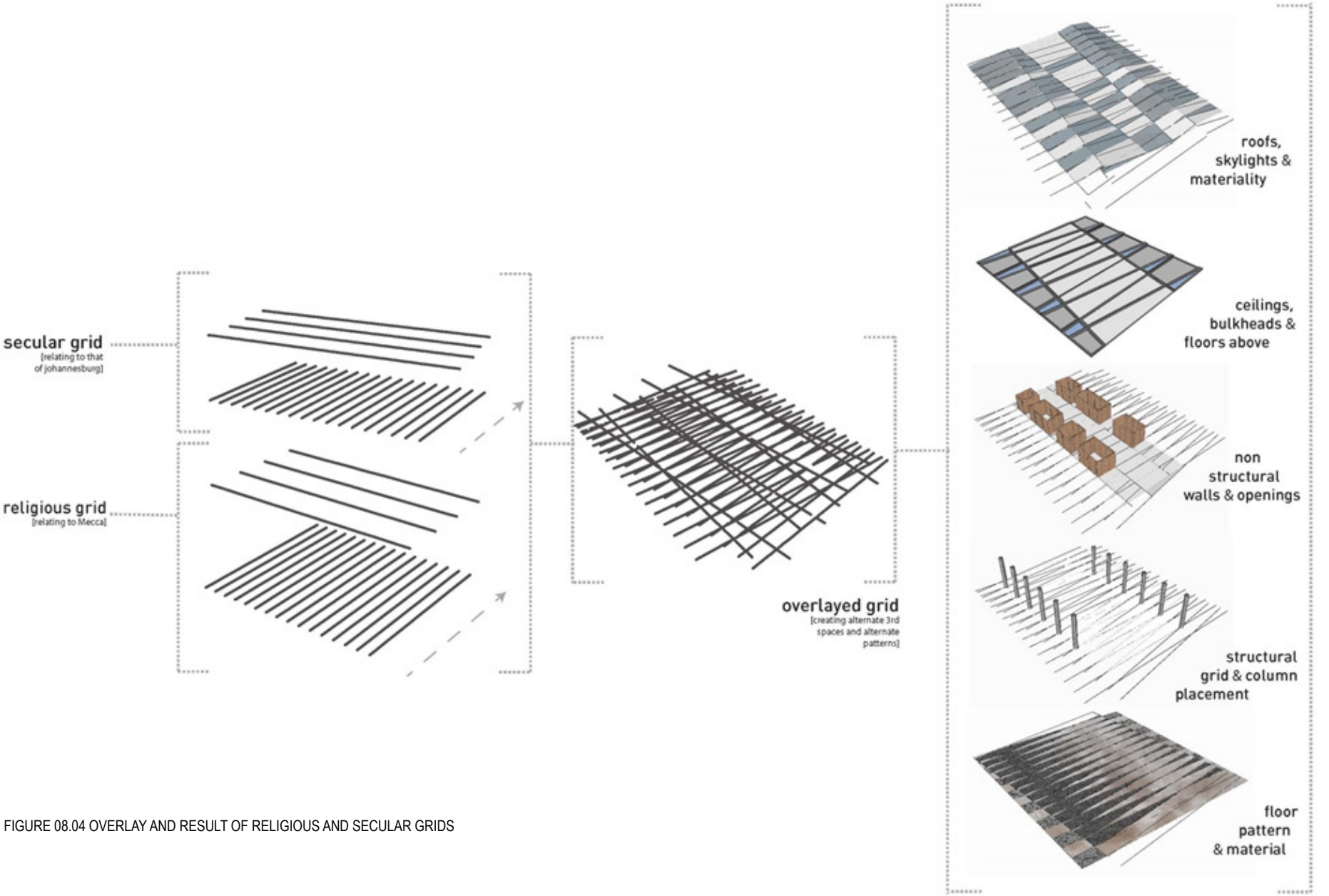

FIGURE 08.04 OVERLAY AND RESULT OF RELIGIOUS AND SECULAR GRIDS

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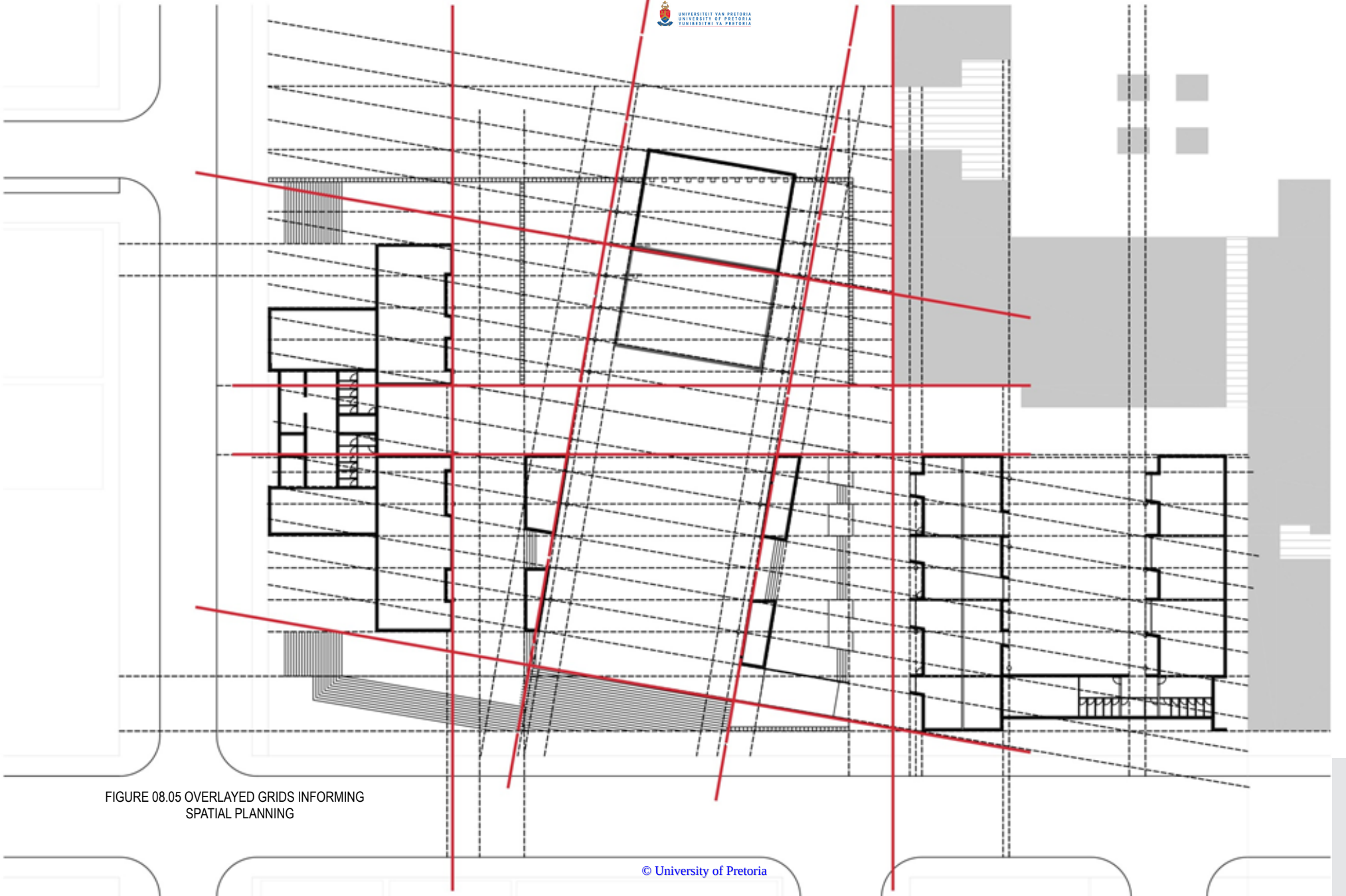

FIGURE 08.05 OVERLAYED GRIDS INFORMING SPATIAL PLANNING

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08.2.4 TRANSPARENCY OF RITUAL

“Instead of the architecture becoming the spectacle, can the revered act of worship in itself not become the exhibition?” (Author)

The idea of transparency manifests in the many ways the design allows for the non-Muslim to get a glimpse of the ritual occurring within prayer spaces. Thresholds of level differences and materials allow for people engaged with acts other than prayer to look within and beyond prayer spaces while the use of glass as a transparent and soundproof material allows for the spectator to engage with and learn from the procession being witnessed, yet still allowing the prayer to occur in a respectfully sacred environment.

Two poles of sacred and profane are thus brought together to create a hybrid situation of mutual inter-dependence where the religion of Islam is put on show for a sense of awareness to be created. The mosque is no longer exclusive to just Muslim worshippers, but is a place for learning, introspection, and analysis by all who wish to do so.

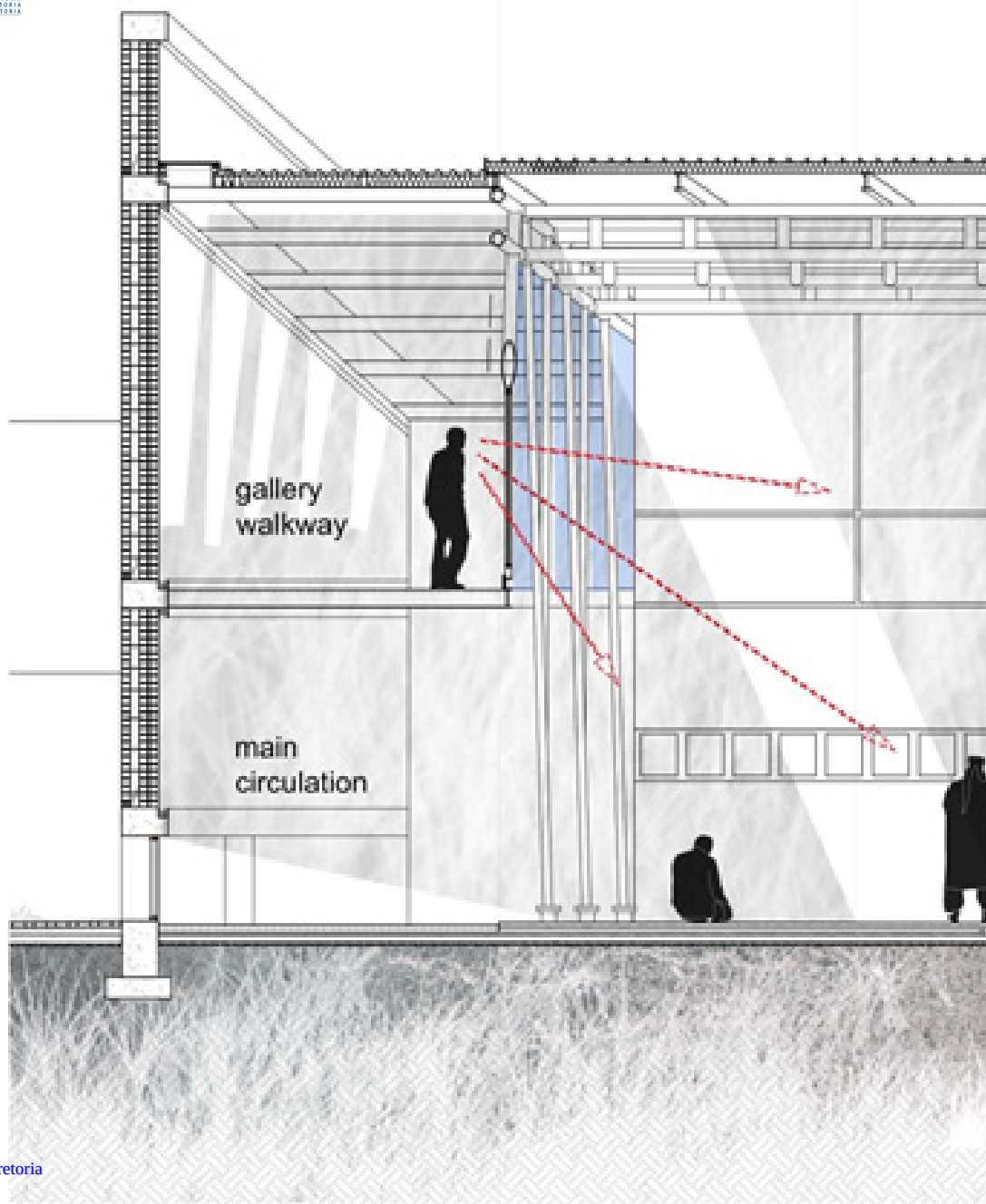

FIGURE 08.06 VANTAGE POINTS FOR OBSERVATION THROUGHOUT INTERVENTION

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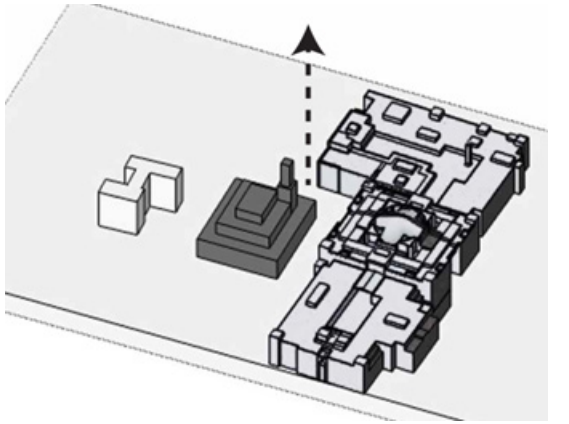
08.2.5 INVERSION OF THE MINARET/DOME

Traditionally, the dome and minaret had close associations to the divine heavens, linking to that of the sky. This notion is turned on its head whereby inverting the hypothetical dome and minaret would thus give the entire ground floor linkages to the sky as sunlight and a connection to one's context would now be possible.

This inversion also gives opportunity for the creation of public space, a project requirement as discussed above.



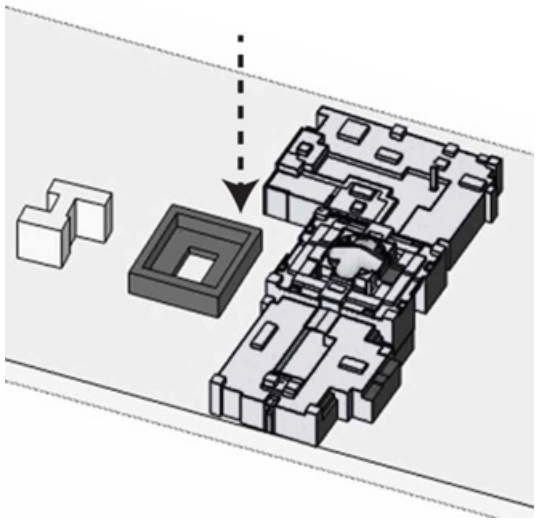


FIGURE 08.07 INVERTING TRADITIONAL SYMBOLIC ARCHITECTURAL ELEMENTS

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08.2.6 THREE MOSQUES

The objective of flexibility and multi-use in architecture is to provide spaces with an allowance to change its primary use, required performance and application. Though architectural spaces could be restricted through physical elements such as walls and planes, it's proximity, floor, ceilings and finishes, along with its openings allow it to become permeable, adaptable, and to be used for more than one purpose.

The design of three mosques (often used as other spaces) is proposed to limit wasted space when not in use. The bi-annual Eid celebration, along with Friday prayers require the most occupied space, where early morning prayers, for example, require very little space.

It is for this reason that the three mosques have been designed of different intimicies; also as a spatial division betwen men and women, worshipper and observer, muslim and non-muslim.

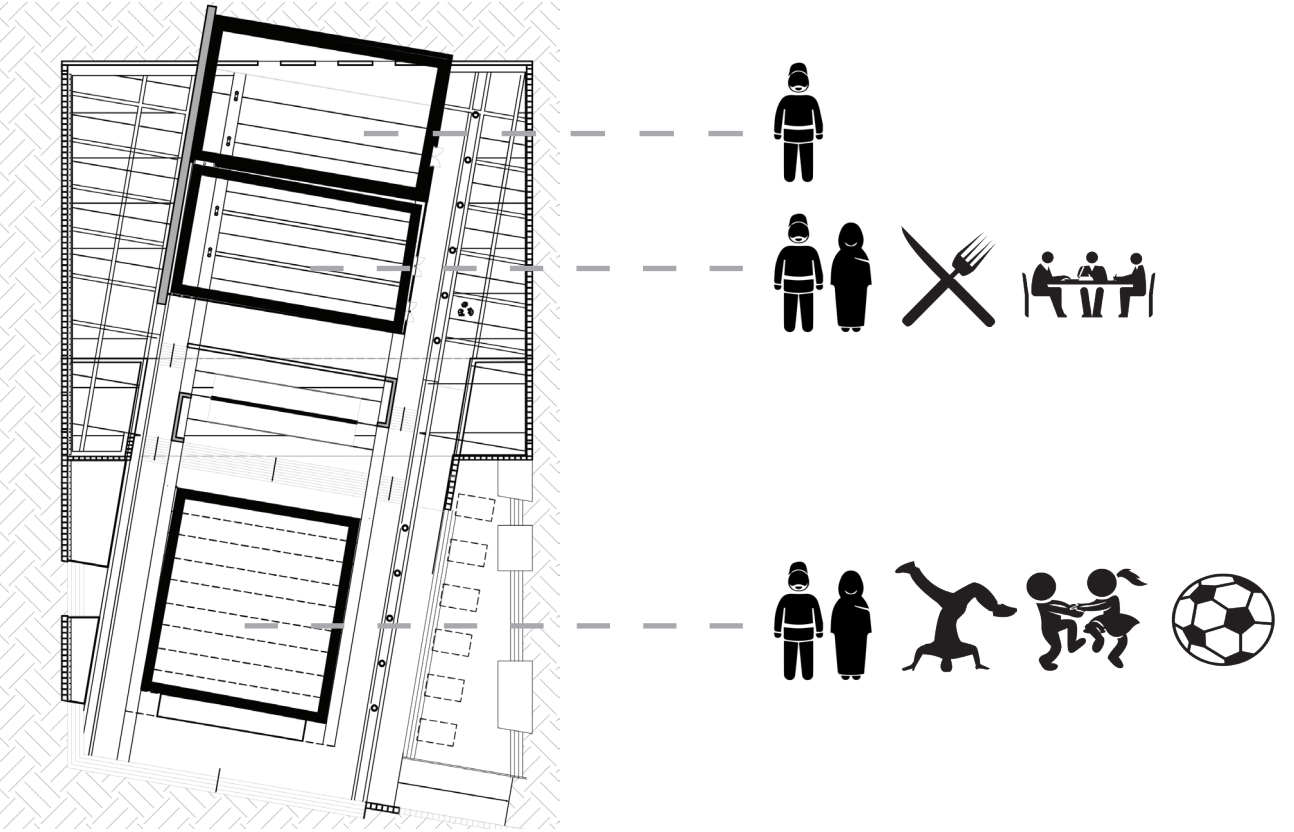

FIGURE 08.08 PROPOSED MULTI-USE PROGRAMMING OF 3 MOSQUES

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08.2.7 THEORETICAL PREMISE- FEMALE SPACE IN MOSQUES

Nawawi (2014, 9) mentions that, at the time of the Prophet Muhammad (pbuh), women occupied the back rows of the Masjid, behind the menfolk. Women could be seen and heard by the entire congregation. The Prophet (pbuh) said:

"The best of the rows for the men are the front rows and the worst of them are the last ones, and the best of the rows for the women are the last ones and the worst of them are the first ones."

Nawawi (2014, 9) explains that Masjid designs have evolved from the simple and humble division of prayer and ablution spaces into modern solutions which cause segregation and a definitive division in spaces, transformed into a separated network for access, circulation and ablution. The following case studies have shown that women –within contemporary mosques- receive the secondary entrance which is architecturally uncelebrated. They in turn receive spaces that are sometimes not within visual or audible contact with the Imam (priest) and his sermon.Nawawi (2014, 10) indicates how space provision for women is most often blatantly separated from the main prayer hall. She further notes that although most contemporary mosques do provide for women, it is done insensitively as other needs are still prevalent in the physical interpretation of mosque.

SPACE REQUIREMENTS FOR WOMEN

Al-Sindi's commentary on hadith has indicated that at the time of the Prophet Muhammed (pbuh), there was no need for a partition- neither of temporary nor of permanent nature- between males and females within the Masjid. It is however important to note that Muslim women who prostrate and congregate within public gatherings must be in proper Islamic dress, observing propriety (Nawawi (2014, 4)

Hatem Al Haj (2011) Indicates that the barrier provides privacy and comfort to women who seek to relax; breastfeed their babies, or take off their Islamic dress in a hot day Nawawi (2014, 5)

It is evident from both views that Masjids may be designed with or without walls, satisfying either opinion. It is however- according to Nawawi (2014, 5) that within all designs of Masjids, the location of women is behind the imaam (priest), behind the men or alongside the men, with distinct separation wither physically or by placement in space. There needs to be a visual and audible connection with the Imam- that which the case studies above has failed upon.

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08.2.8 GENDER SENSITIVITY

And from the hadith of ‘Aisha in al- Muwatta’, it is said that “the women would pray Fajr (the dawn prayer) with the Prophet. The men and women at the time were not separated completely in the mosque. The women prayed in rows behind the men.”
(huffingtonpost.com/imam-khalid, 2014)

Trationals notions, along with the liberal and contesting outlook of this disseration, space has been divided similarly for men and women, allowing an equally dignified entrance and ritualistic circulation route. Spatial planning takes congisance of gender equality and places the wudhu (ablution before prayer) area next to that of the men, where the female prayer area is desiignated right behind that of the male -as Islamically pointed out in the above quote extracted from Islamic writings. This is in contrast to existing trends where architectural spatial planning makes sure that women are not within site at any point of the ritual, consequently allowing them the side entrance and no spatial importance within the mosque facility.

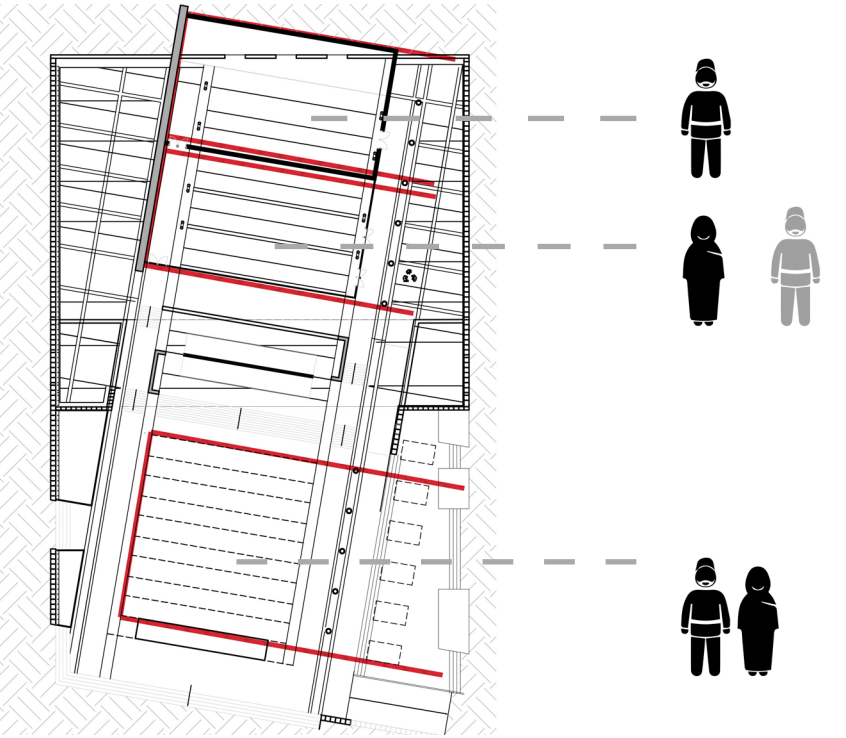

FIGURE 08.09 SPATIAL DEFINITION FOR WOMEN DIRECTLY BEHIND MEN

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08.2.9 SPATIALITY OF ABLUTION TO PRAYER ROOM

Salaah (prayer) is a means of the physical and spiritual transitioning from the profane to the sacred, from an earthly, consumerist realm towards the celestial heavens where man enters into conversation with his Lord (Chohan; 2010, 35).

Wudhu (ablution) is the means by which such a relationship is established. This procession creates a series of thresholds which one engages with within a process of prayer. The processes act as moments of transition, having direct spatial implications on the design of a mosque.

A sense of order and hierarchy is established as the design of the circulation and adjoining spaces instil a sense of procession and ritual as the user is intended to move between them. Awareness is created which intensifies the spirituality of the worshipper as he moves further away from the outside world (Chohan; 2010, 35).

Figure 09.13 shows the typical procession of one's journey between that of profane and sacred space.

Mokhtar (2005) defines the spatiality of the mosque in terms of the prayer space and ablution space in three scenarios:

1. Access to ablutions is from outside the clean zone , shoes are removed before entering the clean zone

2. Access to ablutions is from inside the clean zone, shoes are removed at the border of the clean zone already

3. Access is from inside the clean zone, however a corridor between the two spaces provides a separation

Each of these scenarios have their spatial advantages and disadvantages. Scenario one has however been chosen due to the multi-functional intended usage of spaces within the mosque proposal for this dissertation.

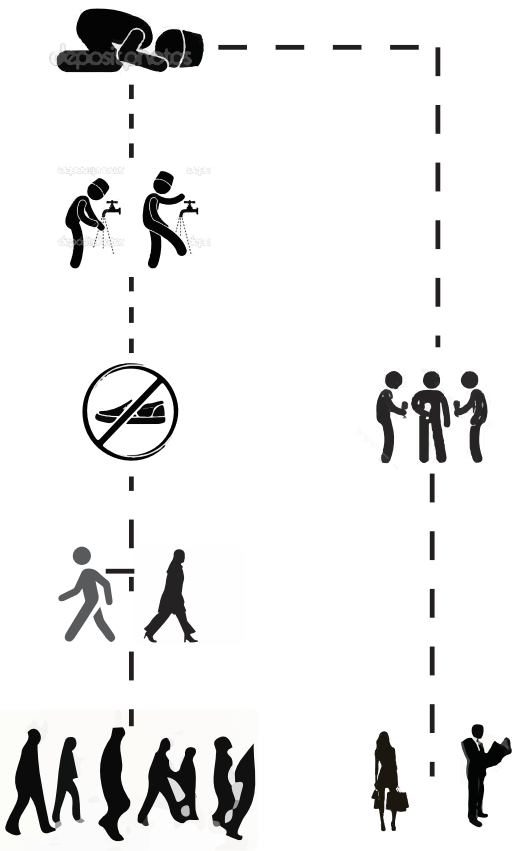

FIGURE 08.10 RITUALISTIC PROCESS FROM SECULAR TO RELIGIOUS

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08.2.10 ARCHITECTURAL ALLOWANCES

FIGURE 08.11 PROCESS OF ABLUTION BEFORE PRAYER

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The matrix below indicates the basic elements that constitute the ethical and visual characteristics of mosque building (Chohan; 2010: 9)

MANDATORY	AESTHETIC	IDENTIFIABLE YET ADAPTABLE
-cleanliness- space for ablution -center- a main prayer hall -orientation in space- cosmic alignment of the Kaaba (house of God in Mekka) and the earthly alignment of mosques towards Makkah expressed hrough the architectural device of the mihrab social directional axis as the focal point which stabilises entire muslim community +liturgical directional axis -mimbar- situated to the right of the mihrab, it is used by the imam when conducting sermons	-evolution of the minaret- development of a tower to project the call to prayer (need for height) -repeated patterns of geometric shape	.-principle of introversion expressed architecturally through the courtyard and central dome -the dome instated to define direction externally as well as to provide natural lighting internally. Also noted as a celestial symbol in almost every religion. Within islam, its symbolically represents a connection to heaven -the gateway or portico as a positive space -The circle- usually in the form of domes symbolising heaven and eternity

Chohan (2010:2) states that iconoclastic solutions to re-defining mosque building should not be radical in the search for an entire new architectural language or methodology. Where recognisable, traditional and revivalist designs sit at the other end of the spectrum, the challenge lies in conceptualising an appropriate architecture that is situated somewhere between these two extremes and acts as a “mirror of the socio-economic, cultural and technological reality of the society that it serves” (Chohan; 2010:3).

Given the above information, less obvious symbolic representations of Islamic architecture are interpreted and thus designed with. These elements include:

- Geometry
- Poetics of light
- Water
- Gardens

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08.2.11 RITUALISTIC TRANSITIONING- PROGRAM

"Ismail Serageldin elaborates further by introducing two new concepts; societal specificities and overlay, the latter referring to the process by which Islamic Culture enriched local cultures it interacted with, and the former being defined as local geographic, climatic, socio - political context" (Razak, 1973).

Observation through local assimilation of the ritual being performed in its secular towards its spiritual environment provides a wealth of data and assists in understanding the culture of the Muslims of this specific place without making use of one's perceptions that dangerously distort the simple reasoning.

The introverted nature of the courtyard was weighed up against the extroverted nature of the public square in an attempt to design a seamlessly integrated cultural route which shapes the urban framework layout, as well as that of the architectural intervention itself.

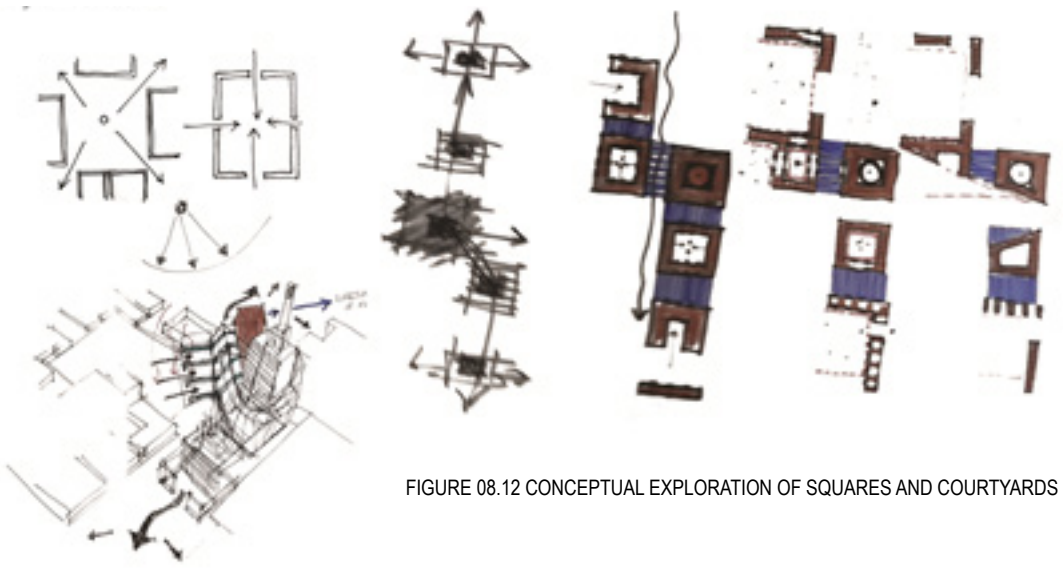

FIGURE 08.12 CONCEPTUAL EXPLORATION OF SQUARES AND COURTYARDS

Transitioning between secular and religious environments acted as a primary design informant when mapping out the physical context. The ritual of prayer is intended -in its appropriation within the design - to seamlessly integrate itself with that of secular life, blurring the very evident boundaries between the religious and profane.

FIGURE 08.13 RITUALISTIC MAPPING OF THE TRA
BETWEEN SECULAR AND RELIGIO

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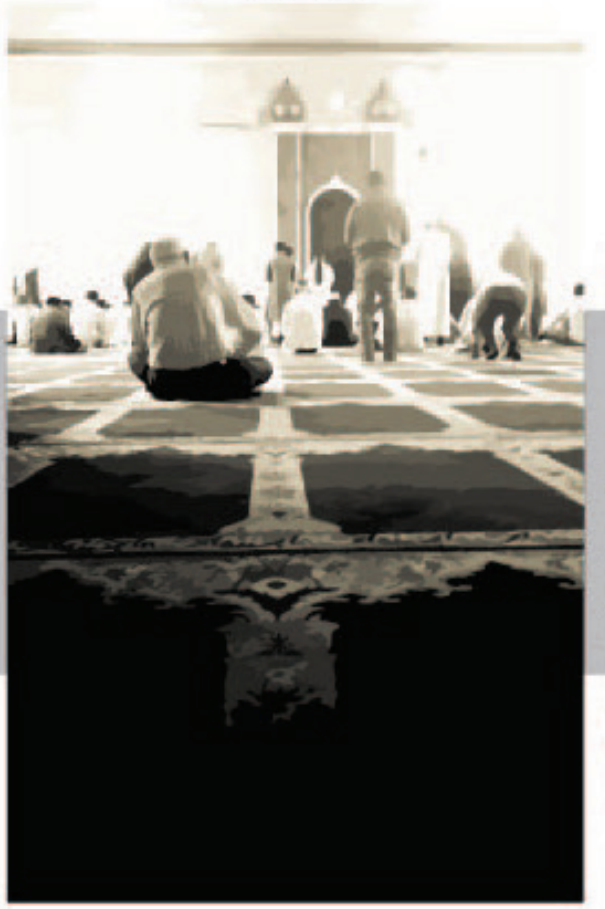
refreshing
cleansing
purifying

ANSITIONING

calm
peace
serenity



ENSE_OF_PLACE

content
humble
social

ANSITION
US

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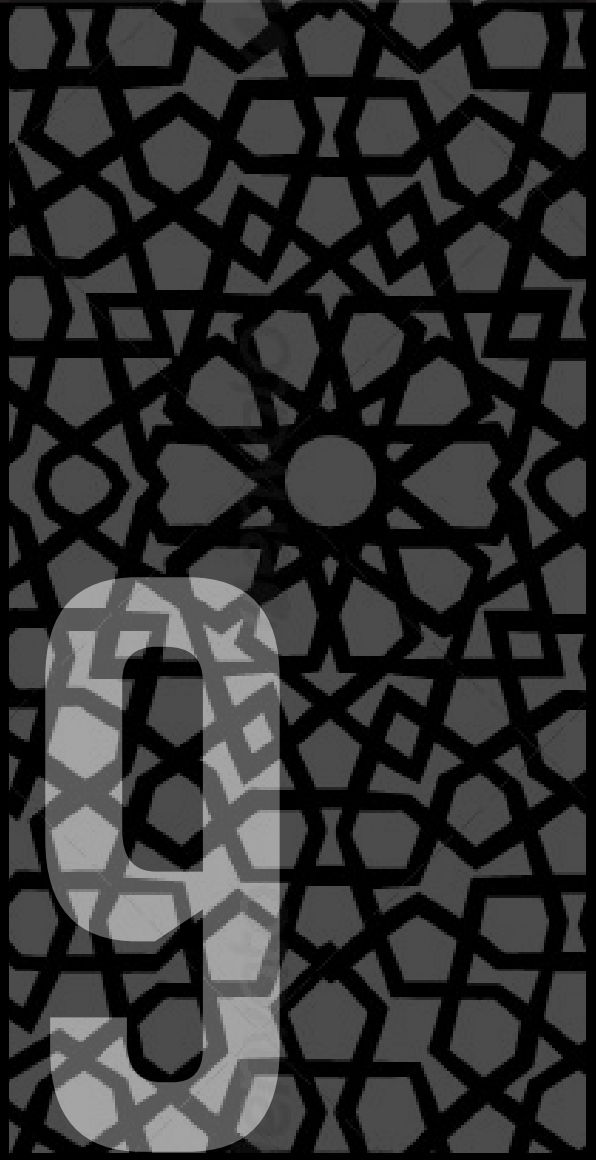

DESIGN SYNTHESIS

The building is discussed as an assimilated response to theory, concept, programme and the hypothesis as outlined previously.

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“Architecture may, paradoxically, be most suggestive when we do not know how to occupy it.”
(Hill, n.d; 85)

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The design was shaped as a reaction to the main design generators -as outlined above, resulting in a succession of architectural responses and iterations. Responses to these influences were layered and assimilated to eventually form the hybridized Islamic precinct.

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09.1 PREVIOUS ATTEMPTS AND ITERATIONS

09.1.1 ATTEMPT 1- A RATIONALLY CONTEXTUAL

CRITICISM:

- Process too rational
- Lacks intuition
- Design scheme lacks poetics
- Architecture for the sake of architecture
- Monumental- contradicting project intentions

LESSONS LEARNT:

- Architecture is not just bricks and mortar
- Spaces need to be more poetic and sacred
- Design more intuitively
- De-monumentalize by fragmenting

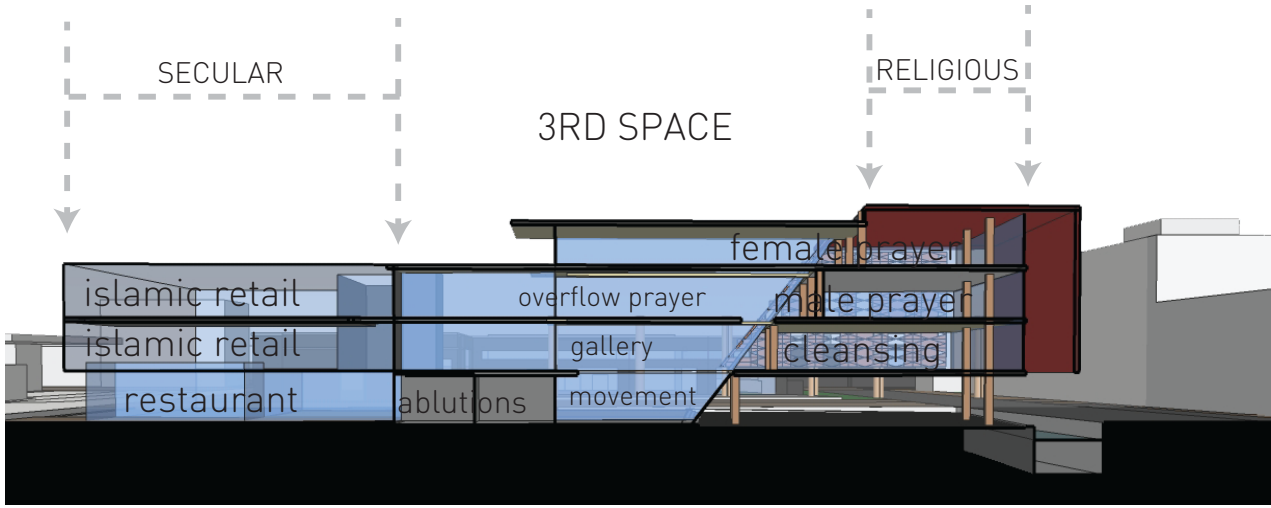

FIGURE 09.01 3D RITUALISTIC VERTICAL PROGRAMMING OF BUILDING

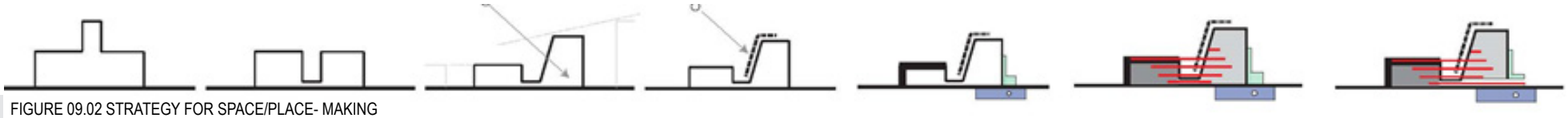

FIGURE 09.02 STRATEGY FOR SPACE/PLACE- MAKING

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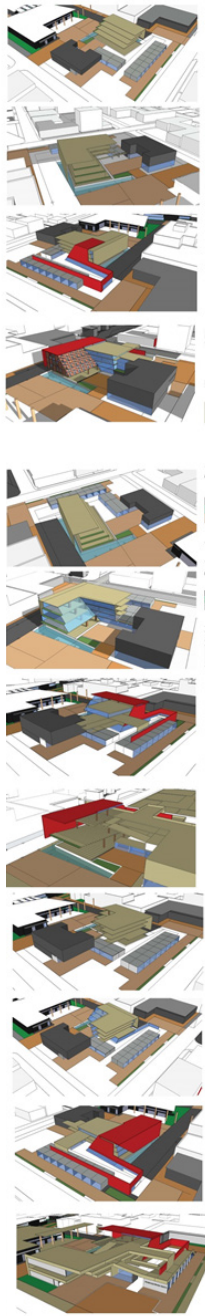

FIGURE 09.03 3D PERSPECTIVES OF STRATEGY FOR SPACE/PLACE- MAKING

FIGURE 09.04 3D PERSPECTIVES OF INTERVENTION

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09.1.2 ATTEMPT 2- POETIC AND SYMBOLIC PLACE-MAKING

CRITICISM:

- Structural aesthetic too literal and symbolic
- Contradiction of project intentions

LESSONS LEARNT:

- Think more contextually
- Form does not/ should not relate to religious iconography

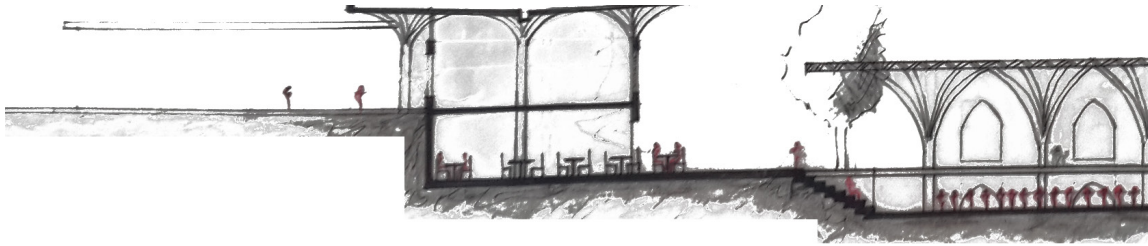

FIGURE 09.05 SECTION/ ELEVATION ACROSS ENTIRE SITE

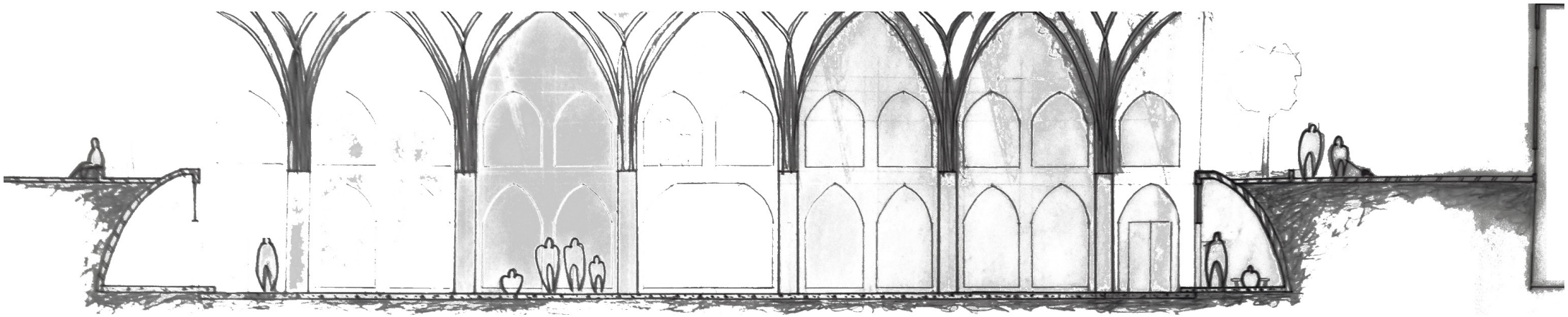

FIGURE 09.05 SECTION/ ELEVATION OF MOSQUE SPACE

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FIGURE 09.06/07 3D PERSPECTIVE OF INTEVENTION WITHIN CONTEXT

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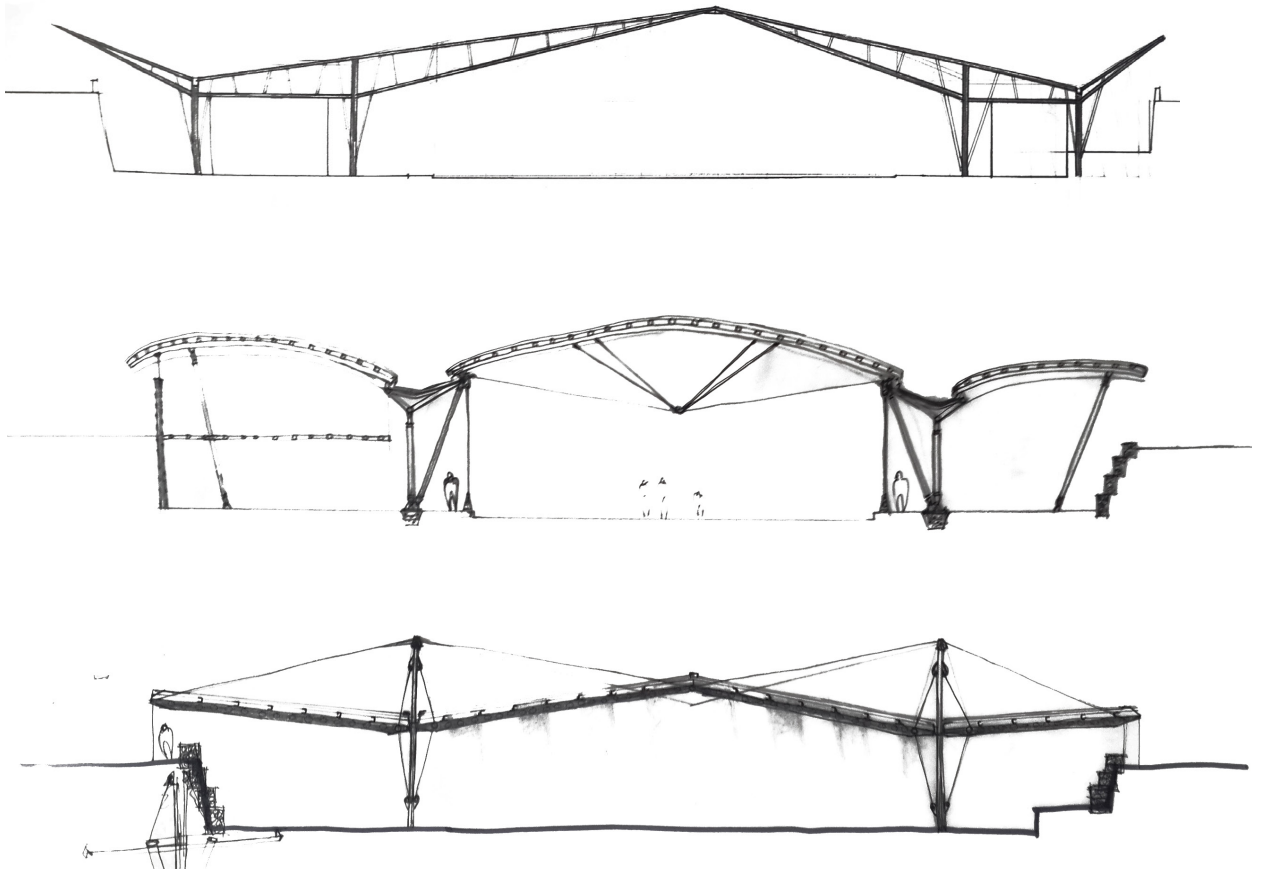
09.1.3 ATTEMPT 3- IN SEARCH FOR AN APPROPRIATE STRUCTURAL SYSTEM

FIGURE 09.08 SECTION OF PROPOSED ROOFING STRUCTURES



CRITICISM:

- Spaces are too fragmented because of separated roofs on the site
- Internal spaces are not sacred

LESSONS LEARNT:

- Structural engineering solutions not appropriate

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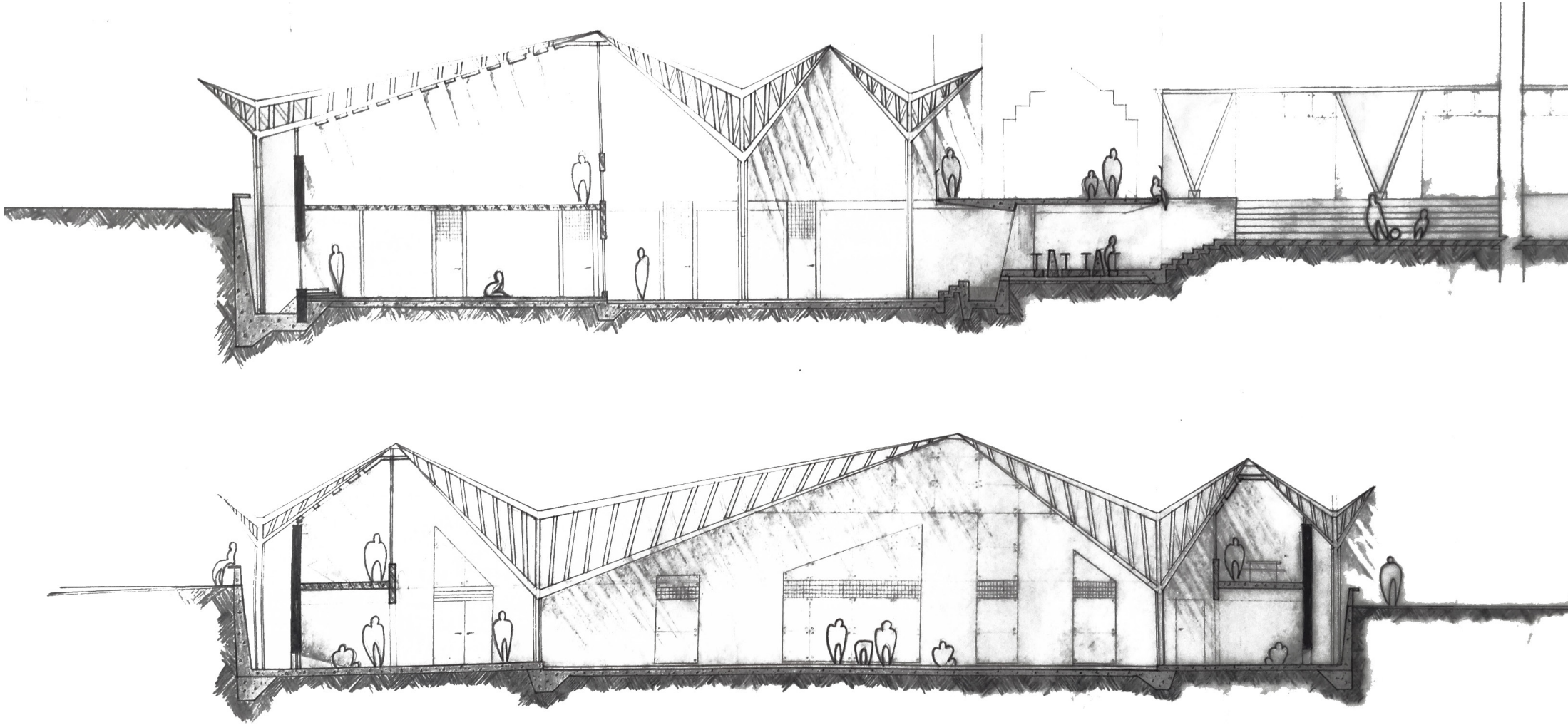

FIGURE 09.09 SECTION OF INTERNAL SPATIALITY BENEATH TECTONIC ROOFING STRUCTURE

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09.2 SPATIAL LAYOUT

NODAL DEVELOPMENT AND CIRCULATION

The design aims to promote pedestrianisation between the secular and religious.

A connection between the new insertion with the existing is an integral part of creating this physical connection. Opportunity for nodal development has risen from the existence of retail shops and restaurants directly across the road. Public squares are therefore proposed to slow down traffic and to promote the pedestrianisation of people towards the public intervention.

The circulation across site has therfore been primarily influenced by the existing energies found on site such as existing entrances and potential squares and courtyards. It aims to create hybridised religious and secular routes that take the user across a paths which cross these opposing conditions. A new entrance has therefore been proposed to create permeability between the religious and secular where transparency of ritual is on display, creating an intangible tapestry of connection between the worshipper, visitor and wanderer.

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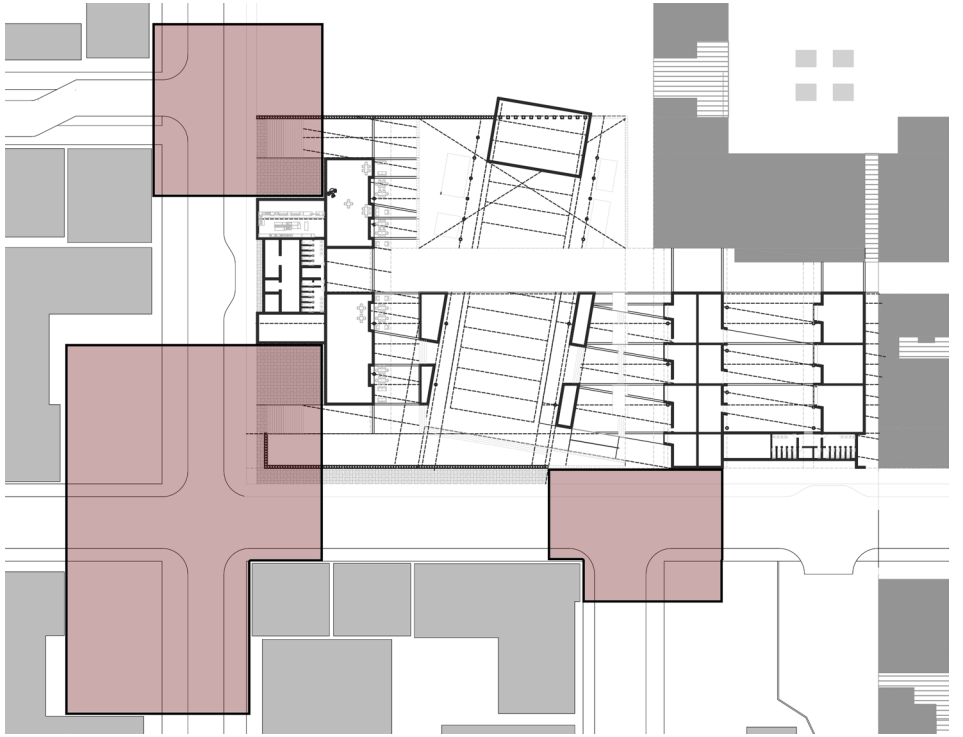
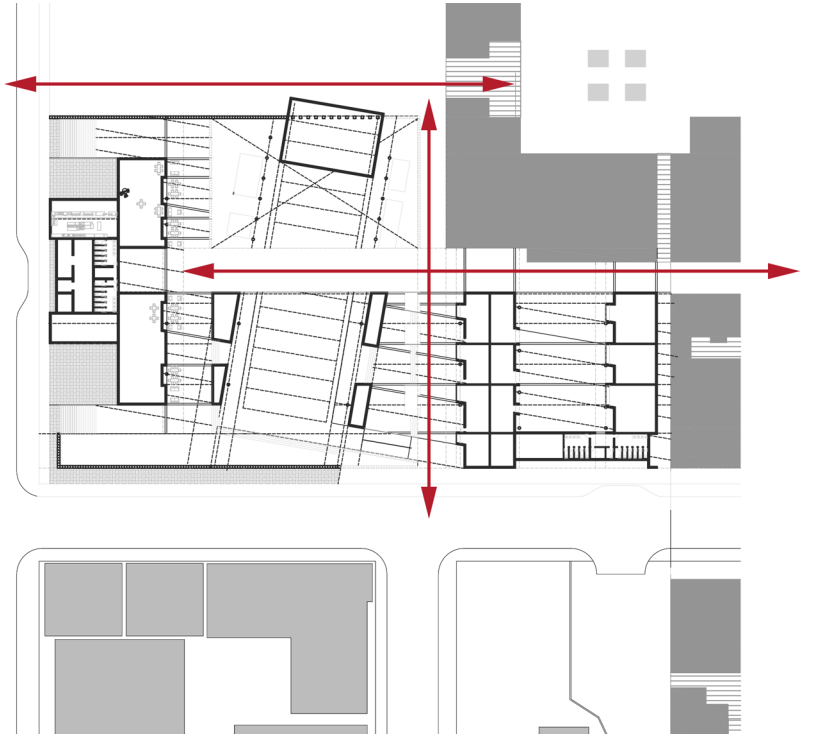


NODAL DEVELOPMENT



SITE CIRCULATION

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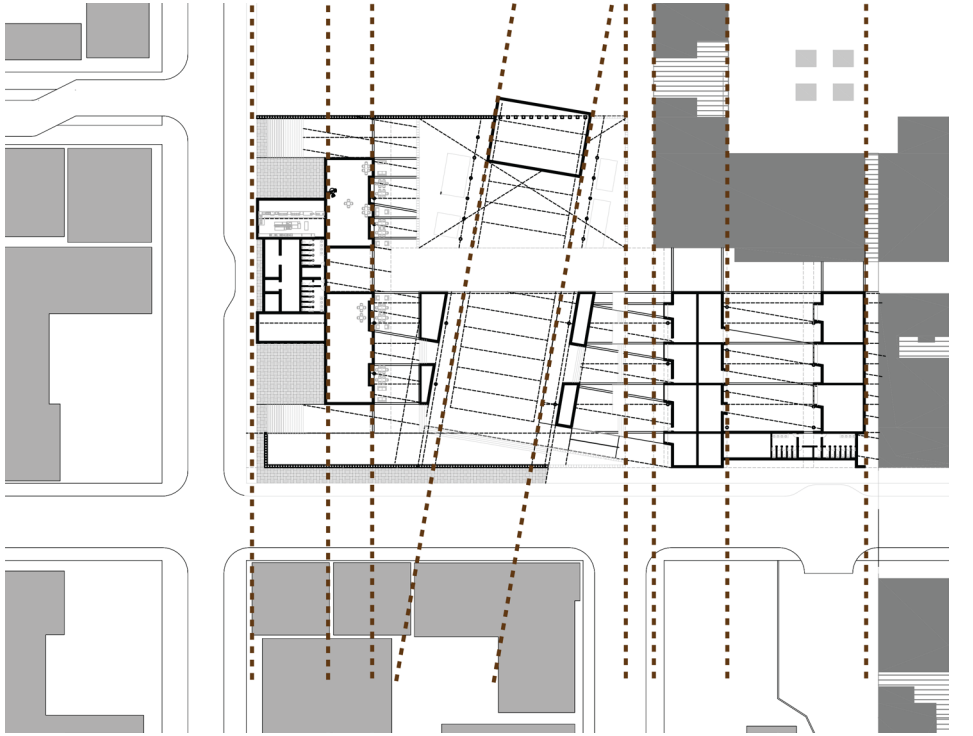
SPATIAL LAYERING

By shaping the building along public routes that are formulated between the urban fabric of Fordsburg and that of the Oriental Plaza, a connection between Fordburg and Newtown West is created, assisting in creating a pedestrianised city centre- that which the urban vision aims to achieve. Spatial arrangements articulated by public movement across the site and within the building itself are layered according to existing site opportunities and restraints.

The juxtaposition of a religious space that hierarchically sits between that of the Oriental Plaza and the urban fabric acts as a culmination point where the strategic siting of a depressed urban plane -an urban square- allows for a multitude of activity to take place; viewed and protected by eyes looking directly into it.



SPATIAL LAYERING

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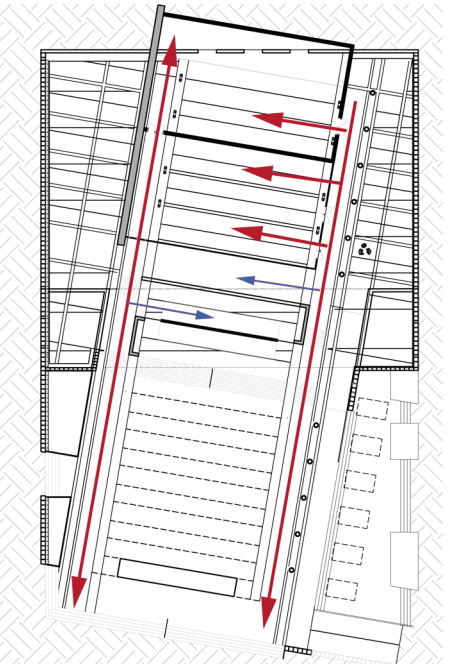
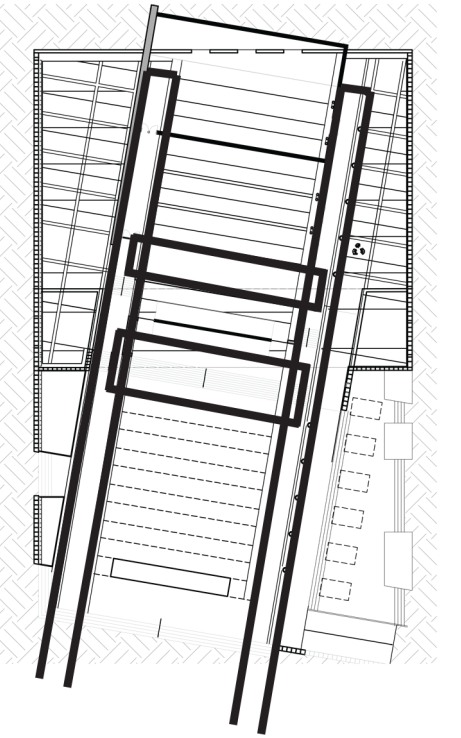
The route from an ablution space or entrance hall towards the prayer hall should allow for access preferably from the back so as not to disturb other worshippers engaged in prayer (Chohan; 2010,36). Similarly, a person's prayer is interrupted and must start again if someone walks directly in front of them while he/she is engaged in prayer.

These notions, along with the ritual between the profane and sacred -as mentioned above- acts as the primary determinant for the circulation and juxta-position of spaces within the courtyard and mosque spaces.

Thresholds are designed to divide spaces into zones wet and dry zones, carpeted and hard sur-faced floor finishes, social and sacred spaces, all along a ritualistic route as previously outlined.



MOSQUE CIRCULATION



THRESHOLD

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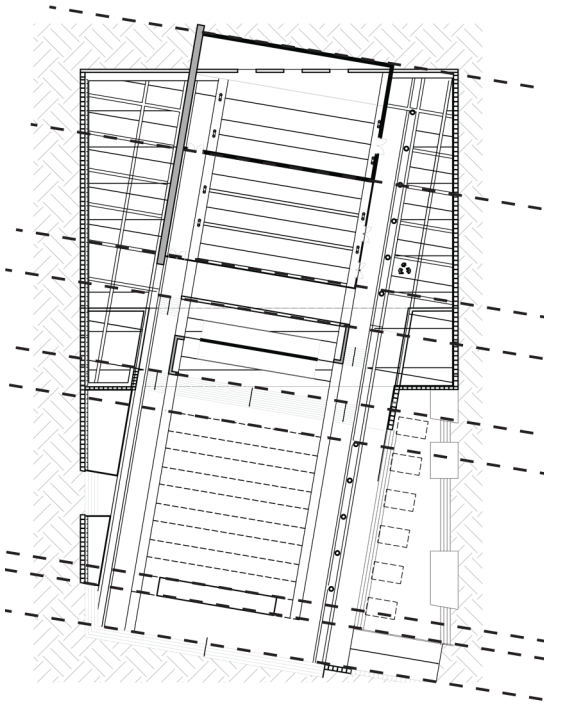
The spatial layering of the mosque space was determined by the ritualistic transitioning between similar and dissimilar programs in close proximity to each other.

A division between natural and unnatural environments creates a physical and metaphysical divide which satisfies contextual concerns of sustainability (at the overexposed western facade) as well as traditional Islamic interpretations of the garden as being a calm and serene religious space of solitude.

Conceptual notions of transparency allow for the precinct to be publically viewed from numerous vantage points and along circulation routes.



SPATIAL LAYERING

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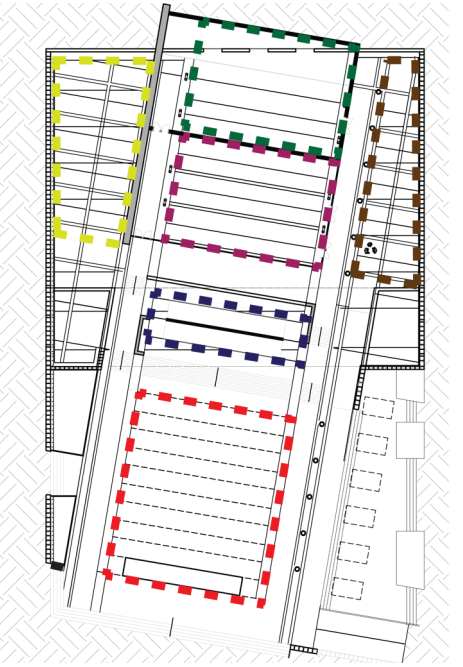
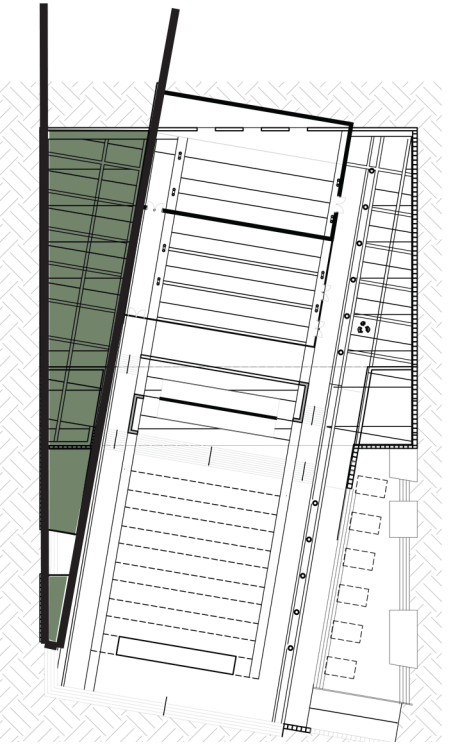
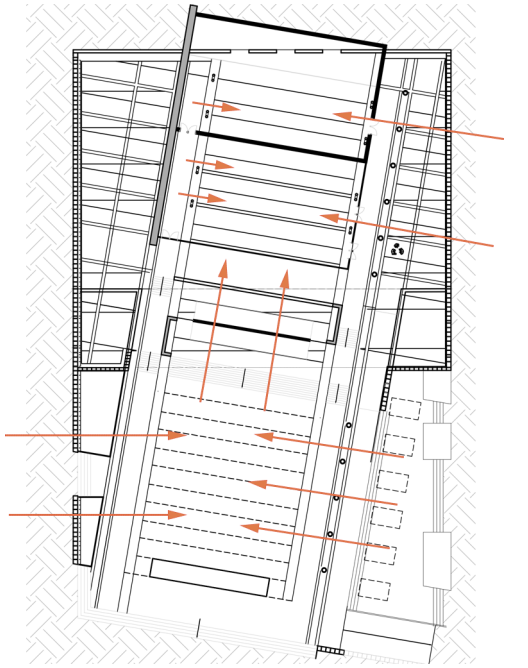


PROGRAMME



GREEN



VISUAL ACCESS

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Ground/ First Floor Panorama| Liminal Space for Informal Activity_ Gallery Entrance_ Oriental Plaza Entrance_ Fordsburg Urban Fabric

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Ground Floor Panorama | High Street_Oriental Plaza Entrance_Gallery Entrance_Restaurants

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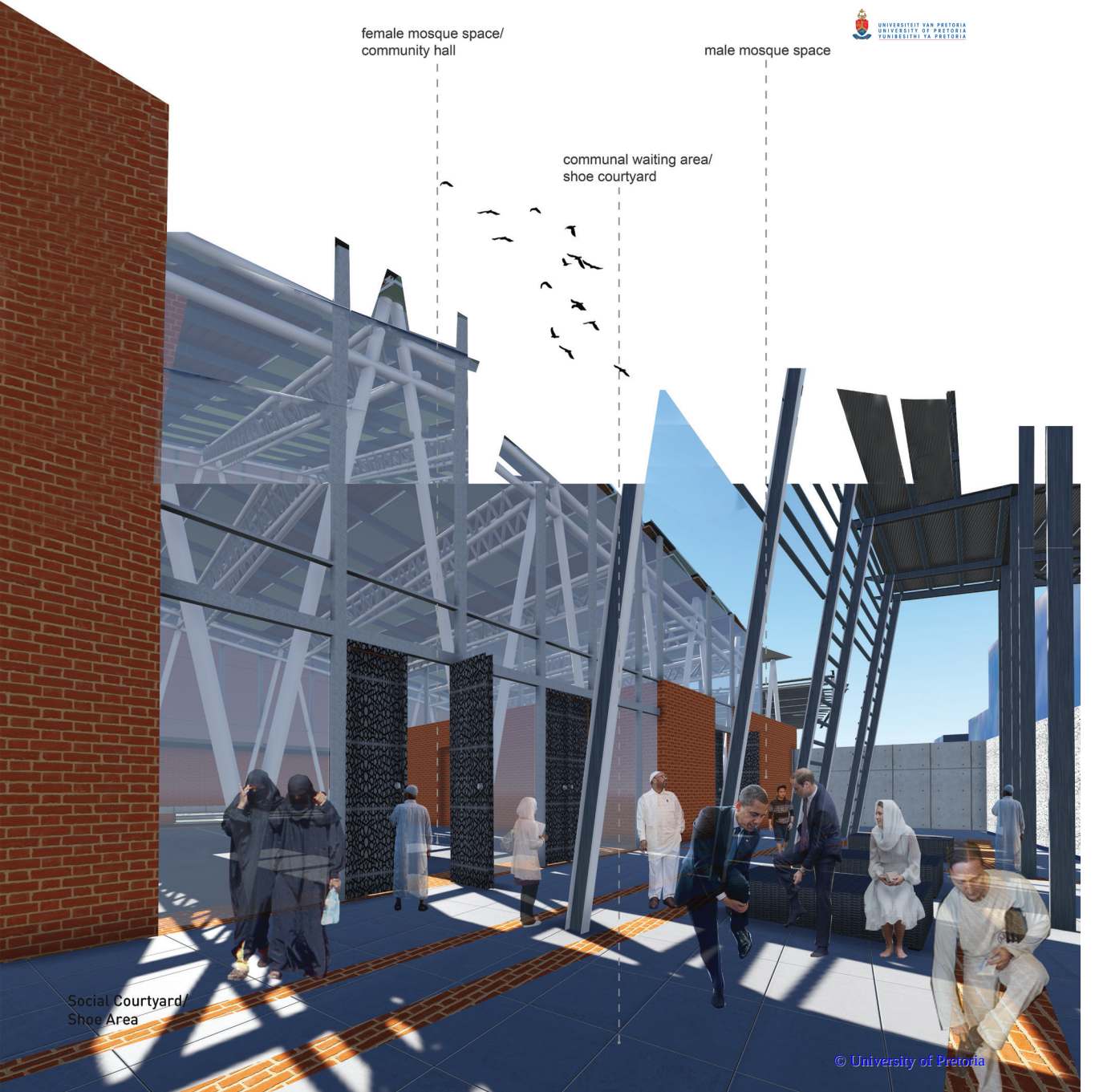

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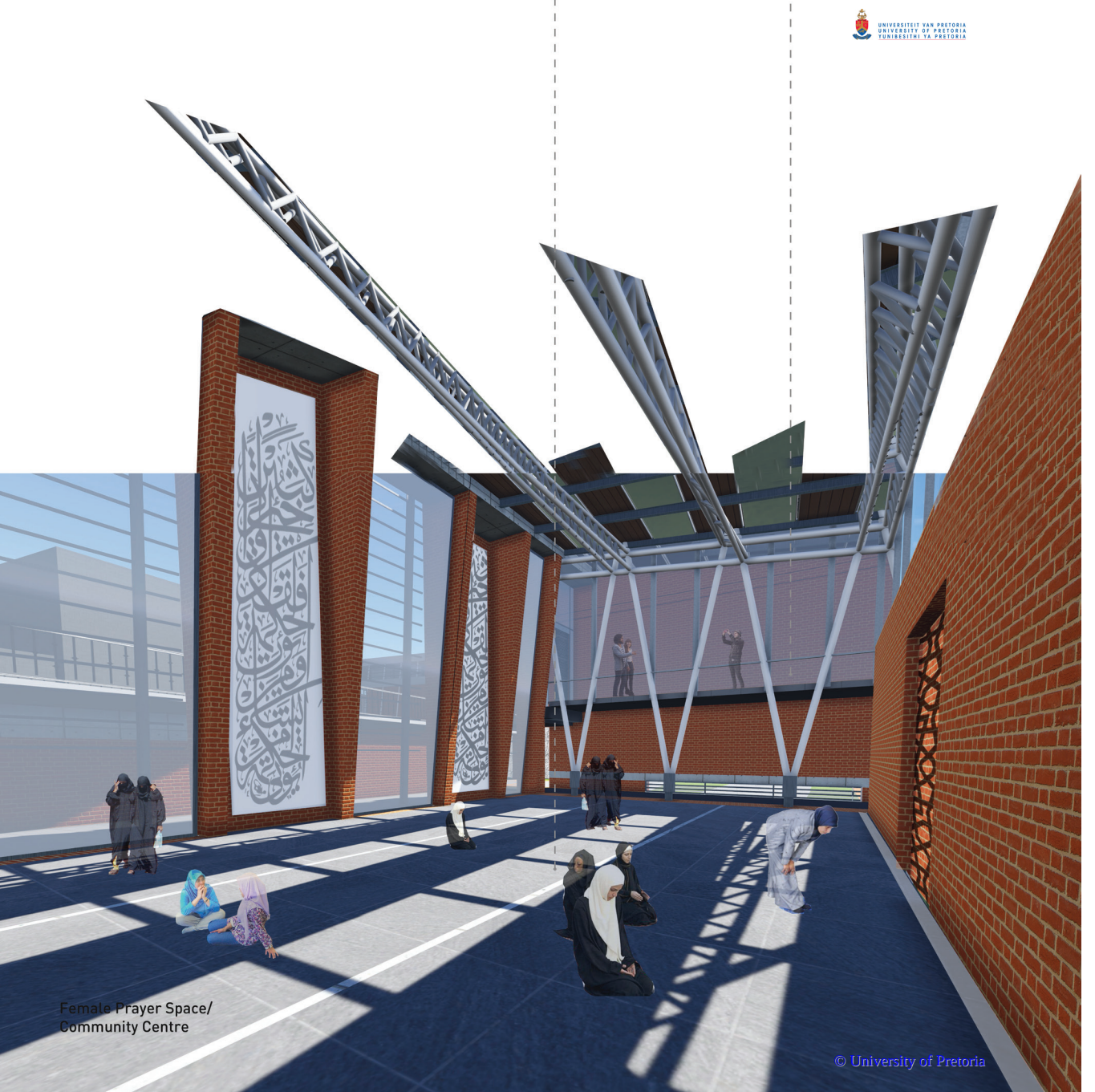

Female Prayer Space/
Community Centre

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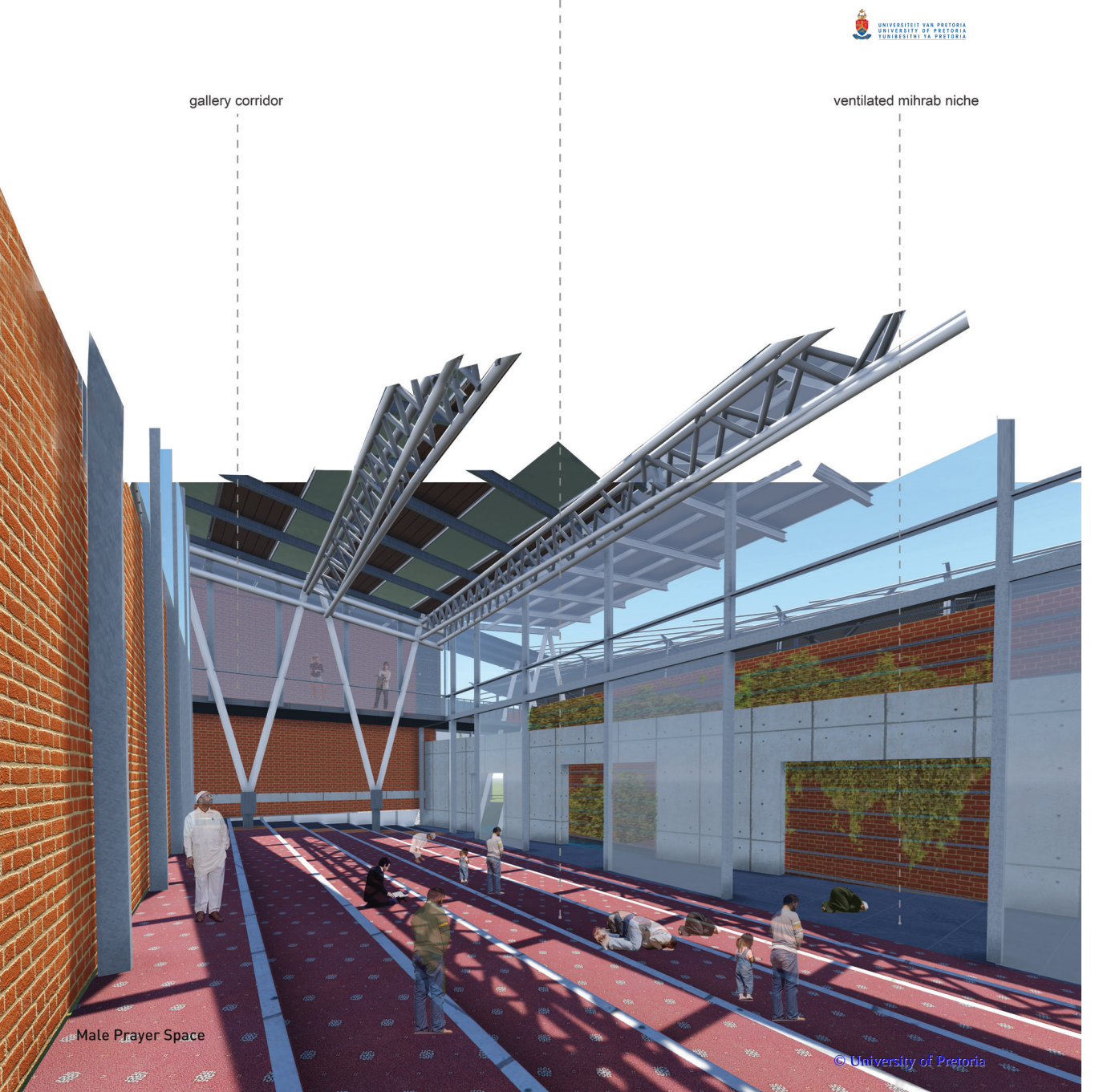

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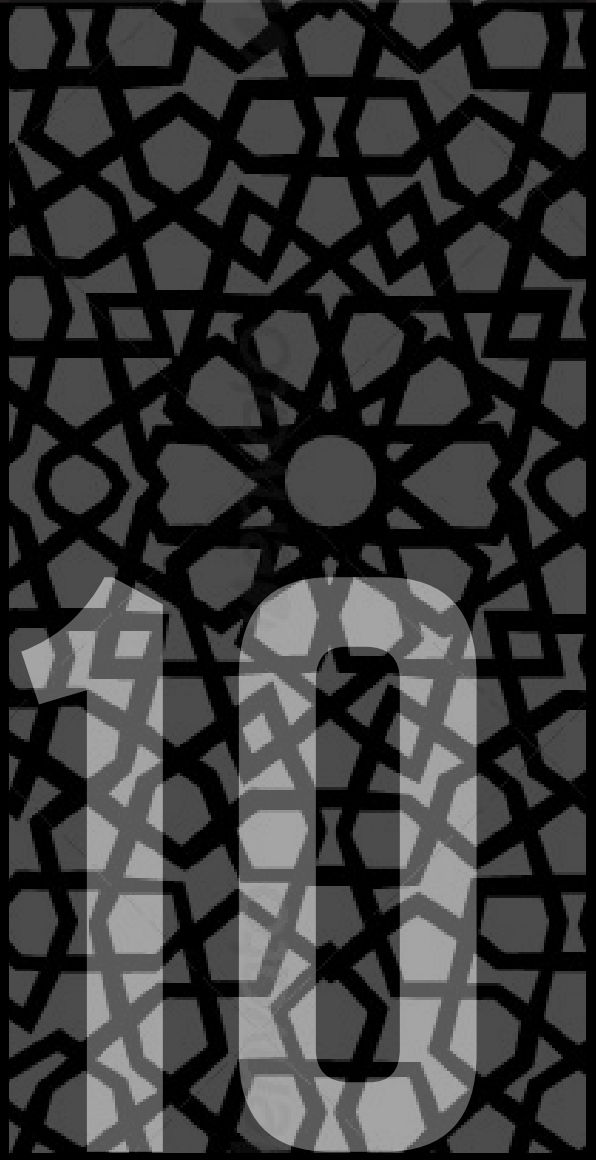

TECHNICAL RESOLUTION

Explorations of the technical assembly of the Islamic precinct as a result of theoretical and conceptual principles, together with contextual and sustainable underpinnings. The structural intention, materality and systemic responses are discussed with reference to iterative thermal and lighting tests undertaken in Ecotect.

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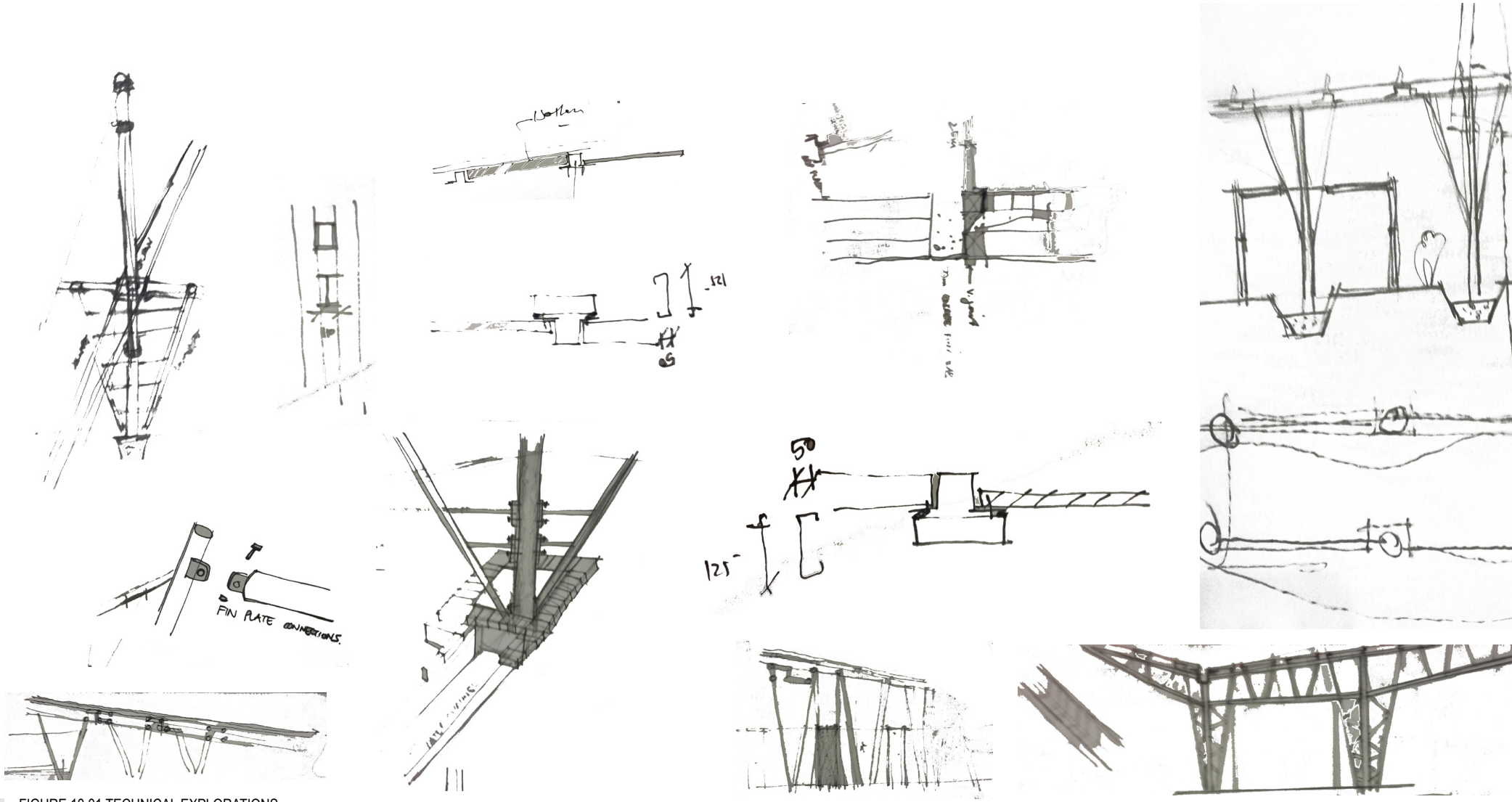

FIGURE 10.01 TECHNICAL EXPLORATIONS

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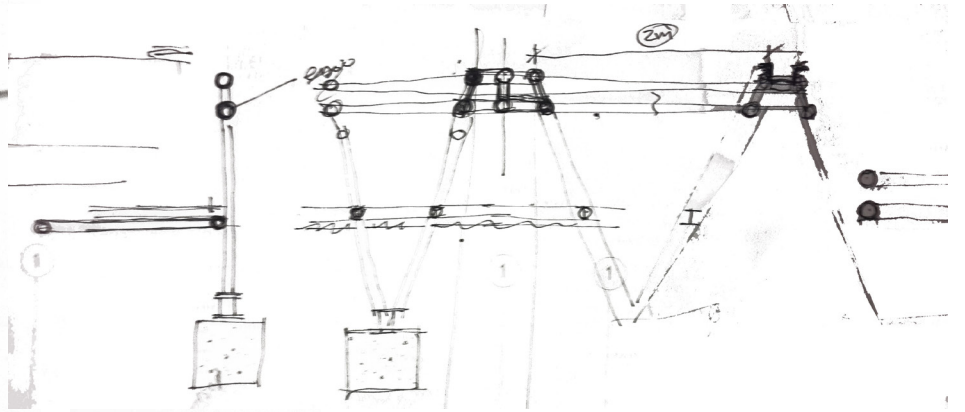

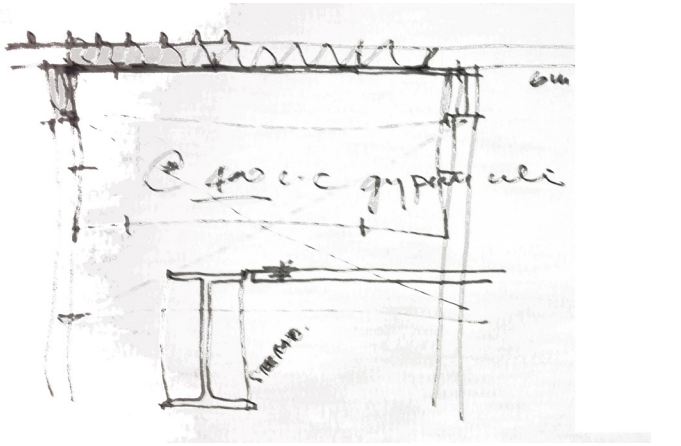

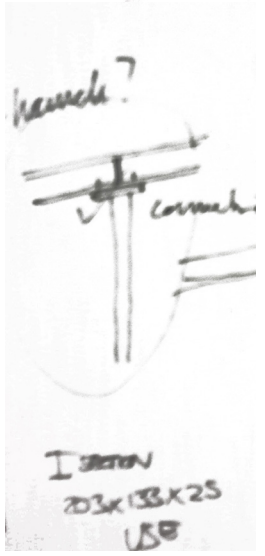

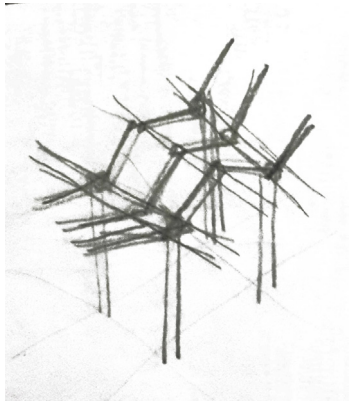

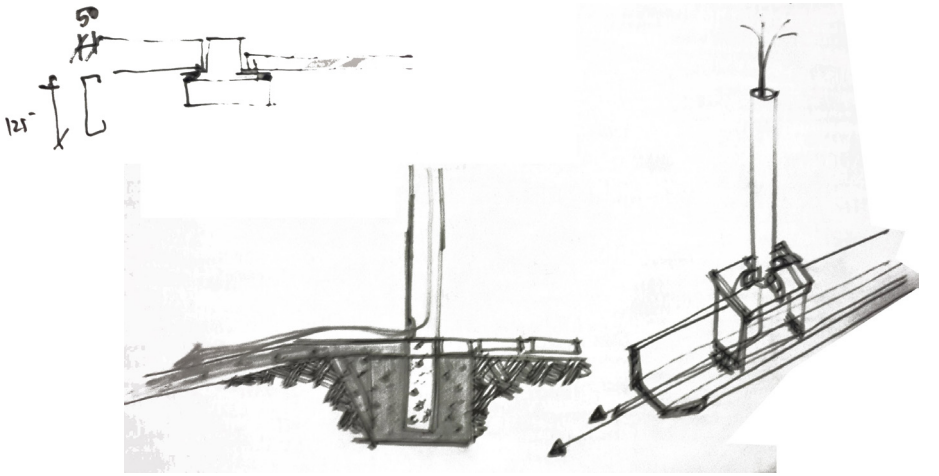

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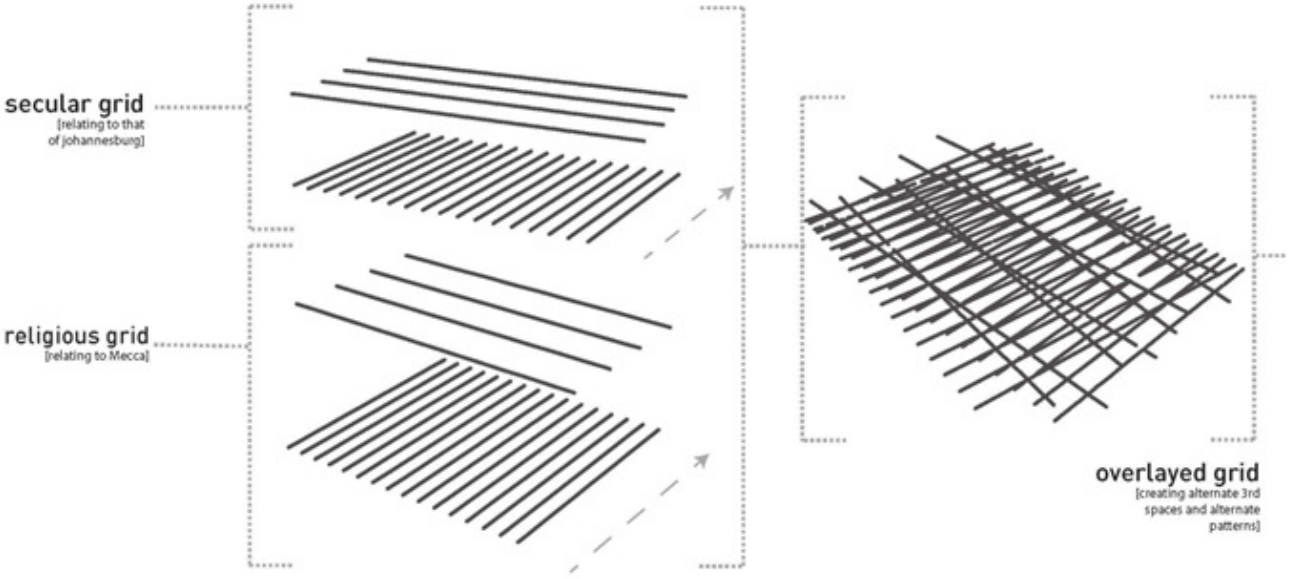

FIGURE 10.02 OVERLAY OF SECULAR & RELIGIOUS GRID INFLUENCING TECTONIC RESOLUTION AND DECISION-MAKING

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10.1 TECHNICAL CONCEPT

The conceptual approach manifests in the merging of the two grids: that of the secular related to the existing city grid, and that of the religious which faces to Mecca. The subsequent superimposition/ overlay of opposing axis creates opportunity for pattern-making, closely linked to that of its specific context.

This juxtaposition creates a new grid which has influenced the structural formulation of technical elements and their placement and use thereof. Column placement, beam direction, girder support/ bracing placement and use, materiality - together creating a new patterned system, an alternate structure that satisfies third space theory.

- **TECHNICAL CONCEPT**
  -MATHEMATICS AND PATTERN-MAKING
  -CONTEXTUAL PATTERN-MAKING
- **STRUCTURE**
  -AESTHETIC
  -ITERATIONS AND PREVIOUS ATTEMPTS
  -MAKING
- **A SUSTAINABLE SYSTEMS APPROACH- SYSTEMIC APPROACH**
  -ECOTECT TECHNICAL ITERATION AND RESULTS
  -HEATING/COOLING
  -WATER
  -VENTILATION AND LIGHT
- **MATERIALITY**
  -CONCRETE
  -STEEL
  -STONE
- **IN DETAIL**
  -ASSEMBLY
  -PLANS
  -ELEVATIONS
  -SECTIONS

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10.2 STRUCTURE

10.2.1 PREVIOUS ATTEMPTS

These notions of pattern-making have manifested into a technological system that has incorporated a girder truss system that spans an 18m space. Iterations in terms of its construction, its form, its constructability and design has led to a new technological scheme which intends to create a more poetic internal space that uses its structural members overlayed on both grids, to create a patterning system that poetically brings in light.

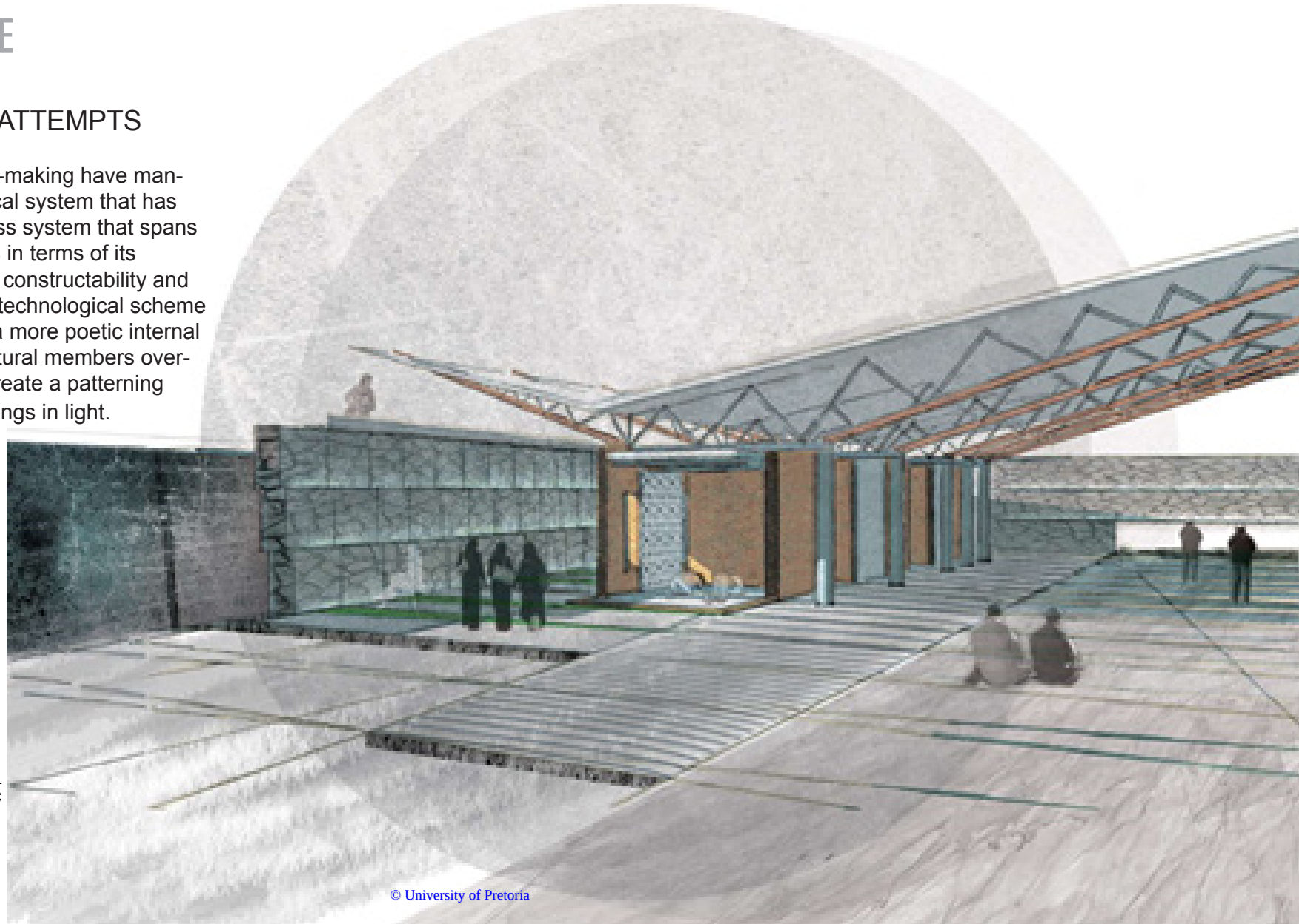

FIGURE 10.03 TECHNOLOGICAL AESTHETIC

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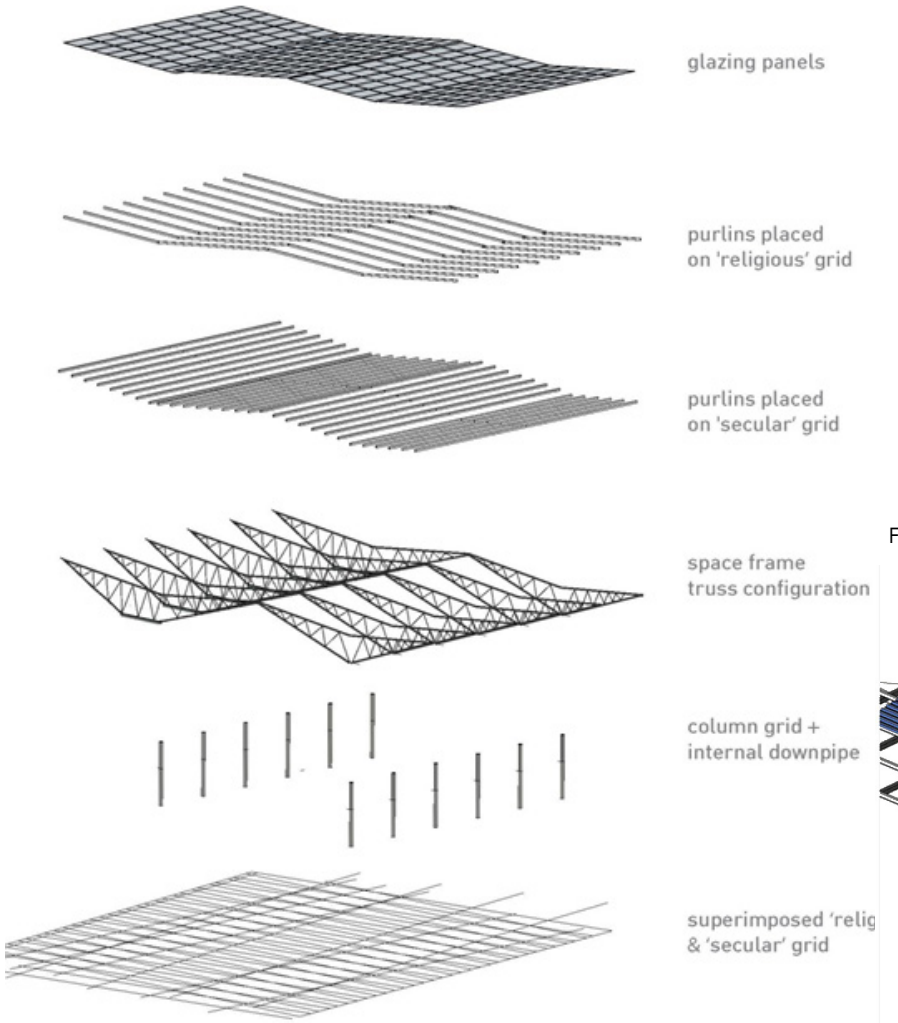

FIGURE 10.04 MATERIAL OVERLAY OVER OPPOSING GRIDS

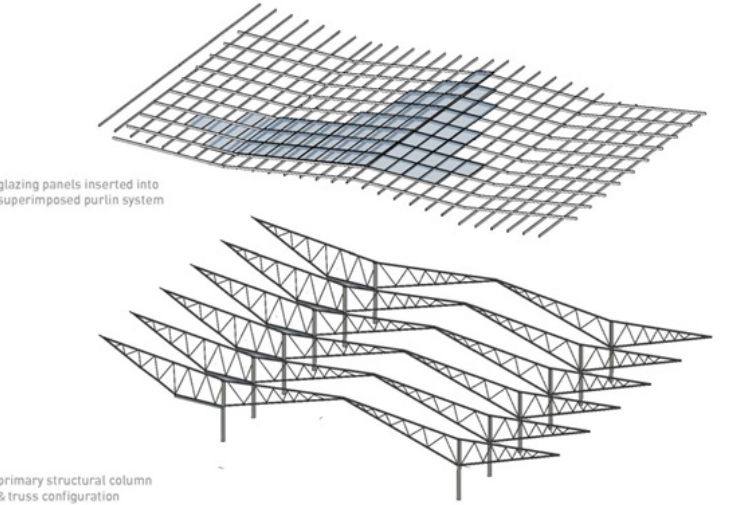

FIGURE 10.05 TECTONIC GIRDER TRUSS ROOFING PROPOSAL

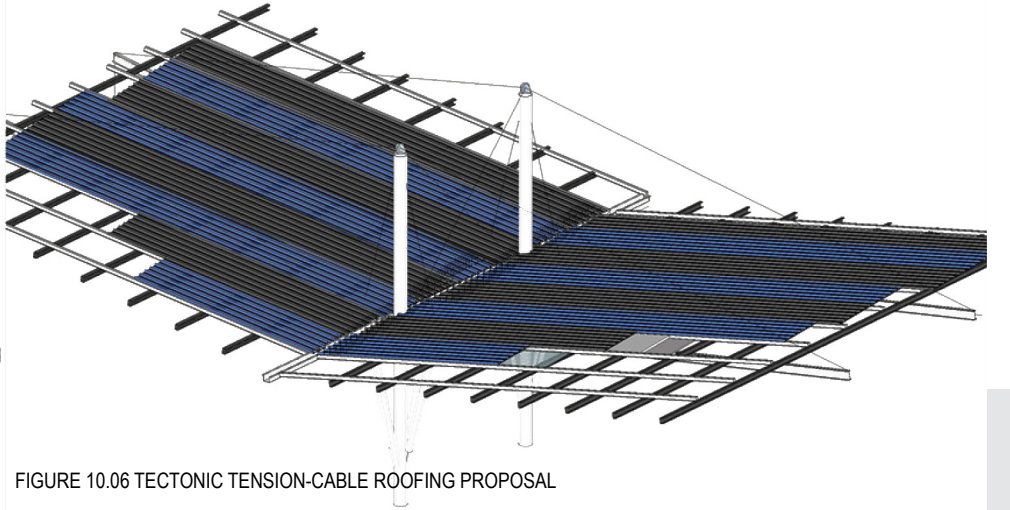

FIGURE 10.06 TECTONIC TENSION-CABLE ROOFING PROPOSAL

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10.2.2 STRUCTURAL SYSTEM

The structural system is articulated as a hybrid as it aims to introduce a new tectonic pallete over its stereotomic base that blends into its context. An intricate steel framed roofing structure supported by tubular steel columns is proposed, influenced by the overlay of a religious and secular grid- allowing the opportunity to exist at different angles and in different directions.

Members are fixed at these different grids, subsequently creating a new-found patterning system, existing in relation to that of traditional Islamic patterning systems. Light entering at strategic points will create a poetic internal quality as the geometric patterning system will produce an intricate ever-changing shadow at the different prayer times.

Because of its eighteen metre span, depth was required by beam members in order to increase the stiffness and strength, allowing bracing members to follow the interplay of grids, creating a uniquely patterned girder truss system.

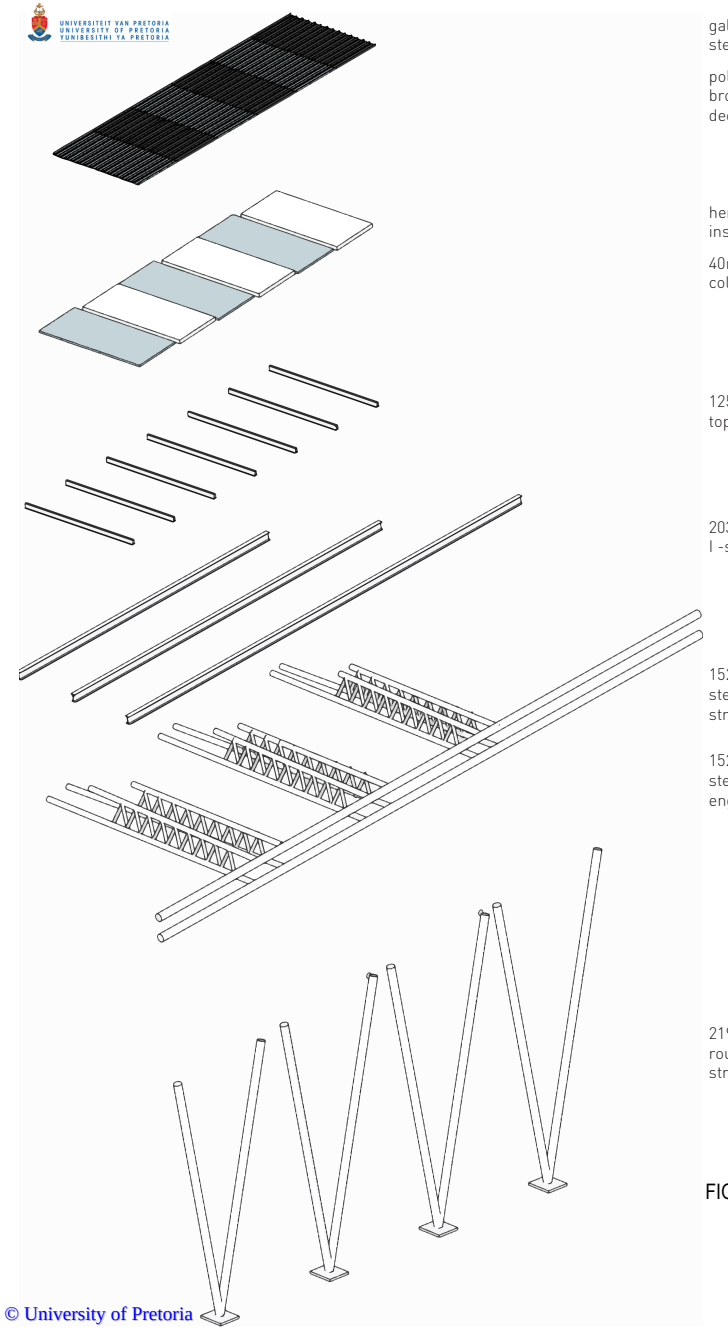

FIGURE 10.07 STRUCTURAL OVERLAY OF MEMBERS

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UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

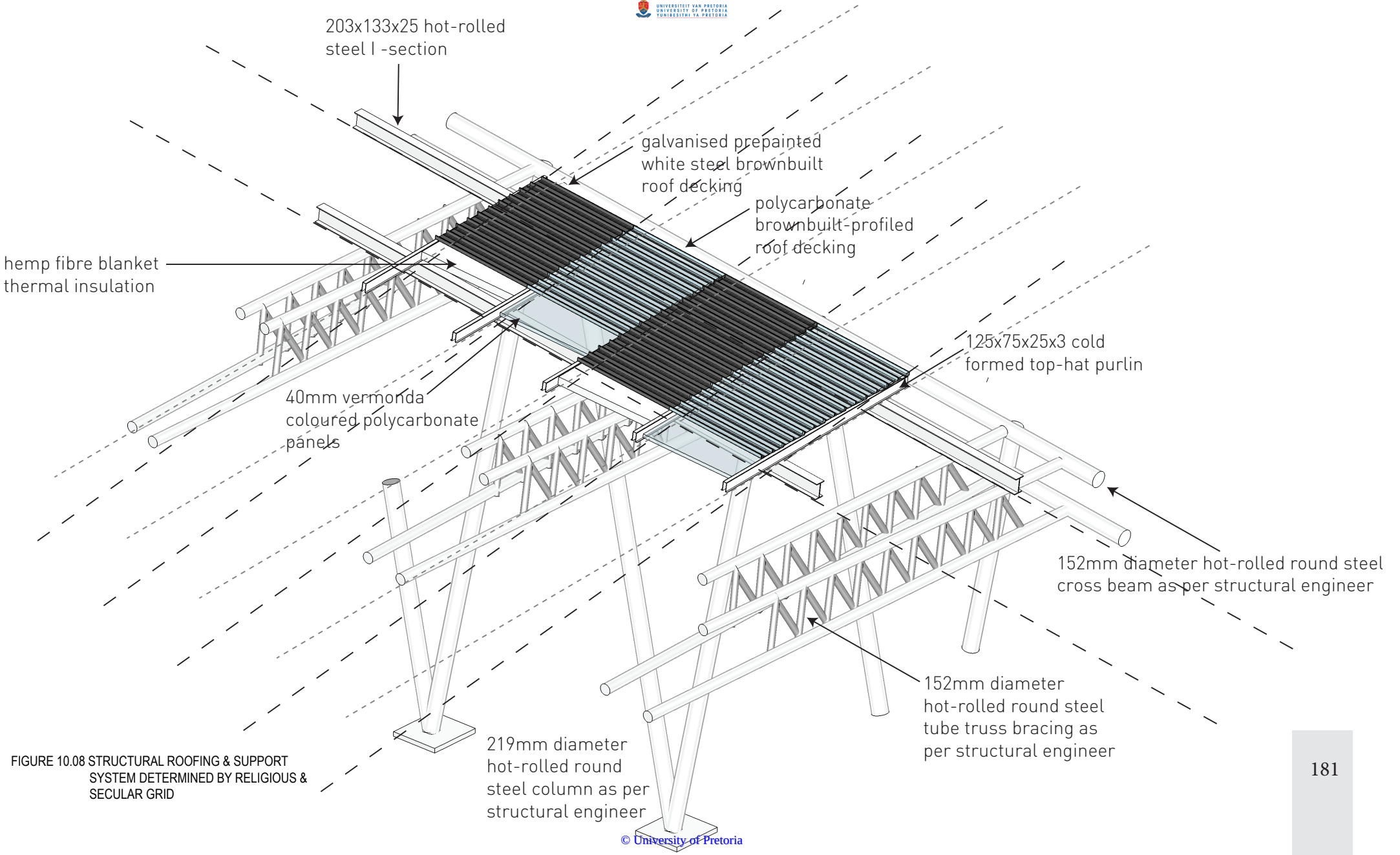

FIGURE 10.08 STRUCTURAL ROOFING & SUPPORT SYSTEM DETERMINED BY RELIGIOUS & SECULAR GRID

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10.3 A SUSTAINABLE SYSTEMS APPROACH- SYSTEMIC PRINCIPLES

10.3.1 ECOTECT TECHNICAL ITERATION AND RESULTS

A base hourly thermal analysis on the warmest and coldest days have proved that the space is overheated in the summer months. Passive means of cooling the interior is suggested and explored.

HOURLY TEMPERATURES - SUNDAY 7TH JANUARY (7)

Zone: Space
Avg. Temperature: 20.3 C (Ground 16.4 C)
Total Surface Area: 277.131 m2 (330.3% flr area).
Total Exposed Area: 267.299 m2 (318.6% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 8.579 m2 (10.2% flr area).
Total Conductance (AU): 483 W/°K
Total Admittance (AY): 858 W/°K
Response Factor: 1.72

HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	19.9	19.1	0.8
01	19.6	18.6	1.0
02	19.3	18.0	1.3
03	19.2	17.4	1.8
04	19.0	17.1	1.9
05	18.8	16.8	2.0
06	18.8	16.9	1.9
07	19.4	18.9	0.5
08	20.6	20.6	0.0
09	24.2	22.0	2.2
10	25.5	23.4	2.1
11	26.8	24.6	2.2
12	31.3	25.4	5.9
13	36.4	26.1	10.3
14	36.9	26.3	10.6
15	33.6	24.8	8.8
16	29.5	24.2	5.3
17	26.5	23.3	3.2
18	24.2	23.3	0.9
19	23.6	21.9	1.7
20	20.9	21.1	-0.2
21	20.6	20.4	0.2
22	20.1	19.3	0.8
23	19.8	18.9	0.9

hottest day

HOURLY TEMPERATURES - TUESDAY 31ST JULY (212)

Zone: Space
Avg. Temperature: 11.8 C (Ground 16.4 C)
Total Surface Area: 277.131 m2 (330.3% flr area).
Total Exposed Area: 267.299 m2 (318.6% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 8.579 m2 (10.2% flr area).
Total Conductance (AU): 483 W/°K
Total Admittance (AY): 858 W/°K
Response Factor: 1.72

HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	11.1	9.1	2.0
01	10.8	8.6	2.2
02	10.6	8.0	2.6
03	10.2	7.2	3.0
04	9.9	6.5	3.4
05	9.7	6.5	3.2
06	9.6	6.2	3.4
07	9.6	6.5	3.1
08	10.7	8.8	1.9
09	15.1	11.0	4.1
10	17.6	13.1	4.5
11	20.5	14.8	5.7
12	22.7	16.0	6.7
13	22.7	16.9	5.8
14	20.8	17.6	3.2
15	19.3	18.0	1.3
16	17.1	17.3	-0.2
17	16.6	16.2	0.4
18	15.9	14.2	1.7
19	12.9	12.7	0.2
20	12.5	12.2	0.3
21	12.3	11.6	0.7
22	12.1	11.2	0.9
23	11.7	10.1	1.6

coldest day

Unfavourable thermal results from Ecotect testing has assisted in the design of a northern shading device to protect the interior mosque space from unwanted solar radiation which -from thermal testing- has significantly overheated the interior.

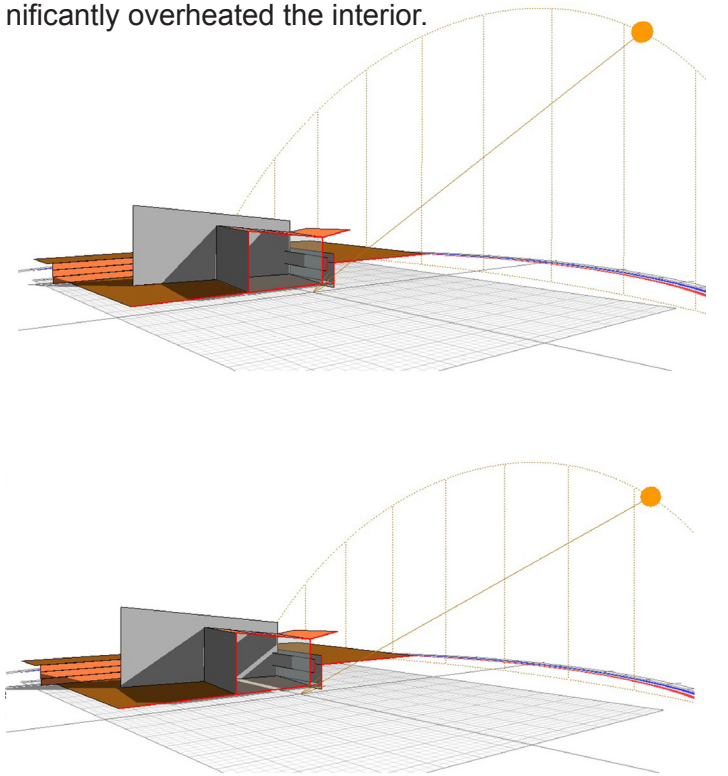

FIGURE 10.09 SOLAR SHADING TESTS & ITERATIONS IN WINTER AND SUMMER MOINTHS

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Even though the design has taken cognisance of general sun-shading principles and rules-of-thumb with regards to orientation, openings on western and eastern facades were required for access and ventilation.

Direct radiation access was iteratively tested and is thus controlled by overhangs (shown in blue) and recessed fenestration. Windows and doors are openable and allow for cross ventilation to occur at the overheated times- such as late afternoons.

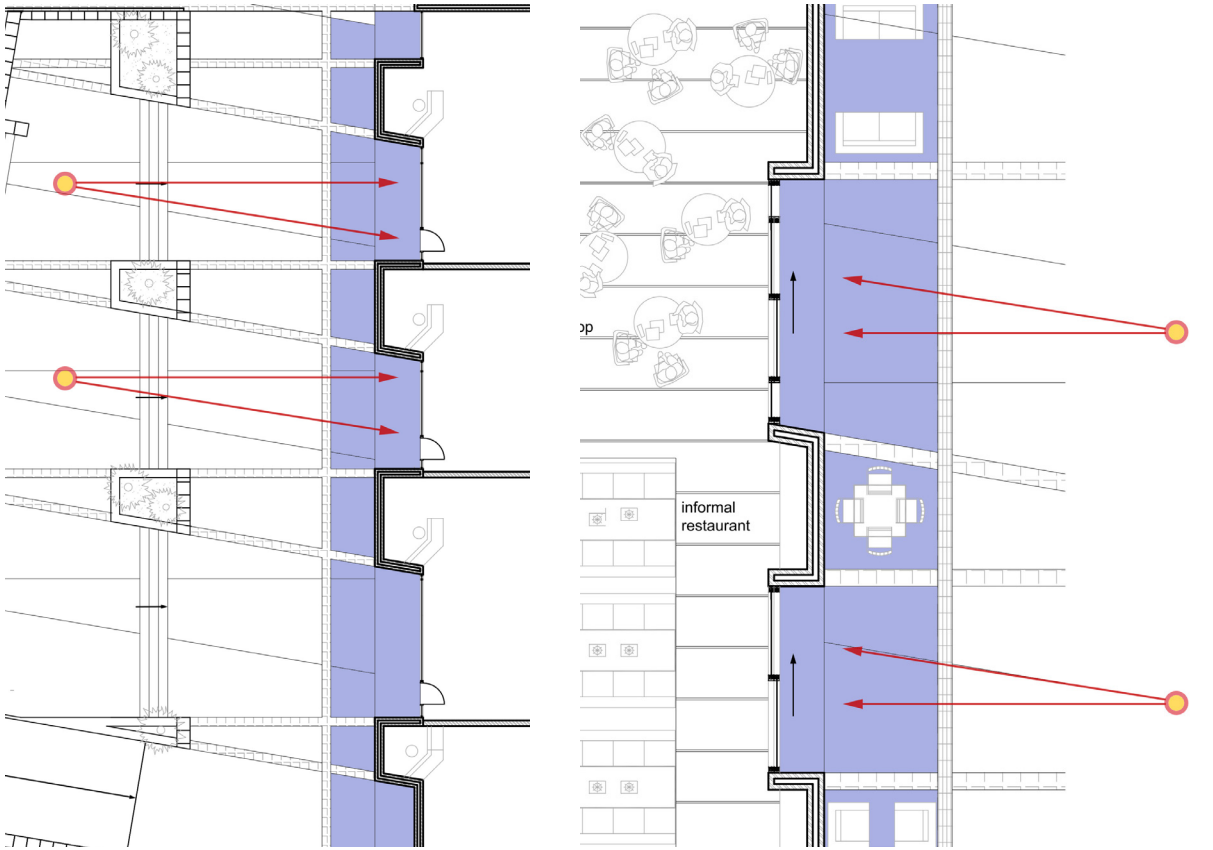

FIGURE 10.10 OVERNHANG AND RECESSED GLAZING AT EASTERN AND WESTERN FACADESOVERHANG SHOWN IN BLUE

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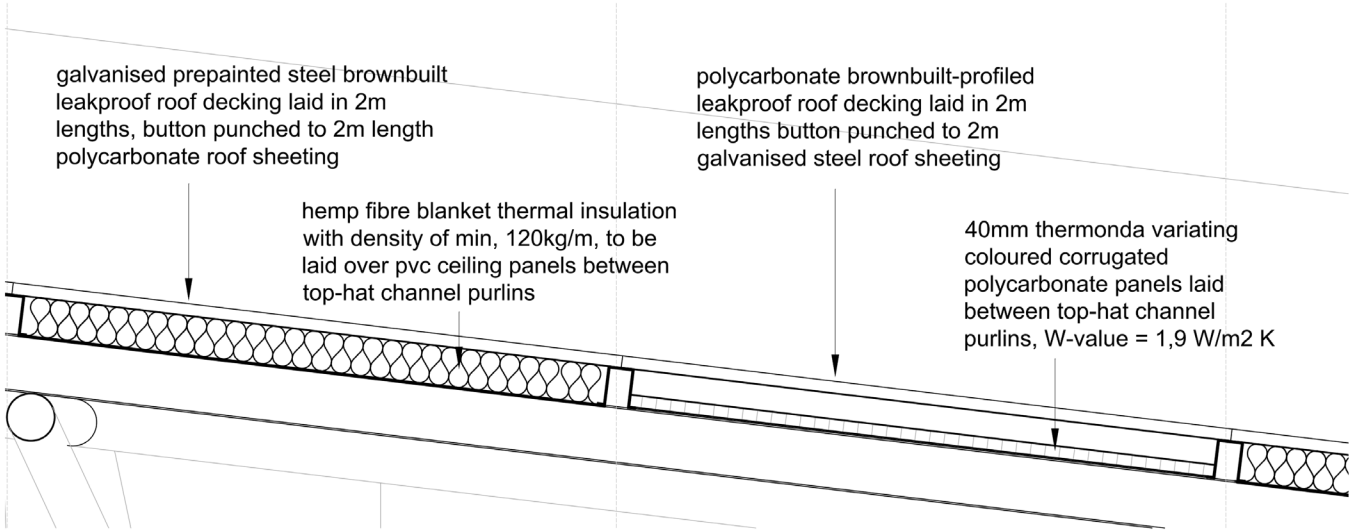
The roof is constructed of a traditional galvanised steel brownbuilt roofing system with polycarbonate panels over-layed in order to bring light into the interior at key points. Different panels of different colours, shading co-efficients, as well as different thicknesses with different u-values have been iterated.

Colour	Light Transmission (%) DIN 5036	Shading Coefficient
Clear S	68%	0.75
Bronze B	11%	0.45
Opal V	30%	0.52
Bronze Opal	8%	0.42
Heat Guard Opal	7%	0.30
Blue Opal	27%	0.54

Product Range at a Glance

Name	Gauge	Colours	Size	Weight /m²	U Value (W/M²°k)
Solid Sheets	1.3mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	1.56 kg	-
Solid Sheets	1.5mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	1.80 kg	-
Solid Sheets	2.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	2.40 kg	5.66
Solid Sheets	3.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	3.60 kg	5.49
Solid Sheets	4.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	4.80 kg	5.33
Solid Sheets*	6.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	7.20 kg	5.09
Solid Sheets*	8.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	9.60 kg	4.84
Solid Sheets*	10.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	12.00 kg	4.61

FIGURE 10.11 TECHNICAL DATA OF POLYCARBONATE GLAZING SYSTEMS



ROOF CONSTRUCTION AFTER TESTING

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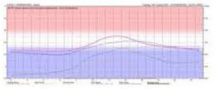
HOURLY TEMPERATURES - SUNDAY 8TH JULY (189)

Zone: Space
Avg. Temperature: 15.7 C (Ground 16.4 C)
Total Surface Area: 289.943 m2 (331.0% flr area).
Total Exposed Area: 280.111 m2 (319.8% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 7.331 m2 (8.4% flr area).
Total Conductance (AU): 523 W/°K
Total Admittance (AY): 956 W/°K
Response Factor: 1.77



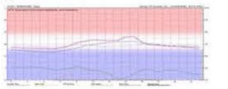
HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	13.8	11.8	2.0
01	13.7	11.6	2.1
02	13.4	11.0	2.4
03	13.2	10.6	2.6
04	13.0	10.1	2.9
05	12.9	10.0	2.9
06	12.8	9.5	3.3
07	13.2	10.7	2.5
08	14.5	12.7	1.8
09	16.6	15.0	1.6
10	19.3	16.6	2.7
11	22.7	18.3	4.4
12	24.6	19.6	5.0
13	25.3	20.5	4.8
14	24.5	21.5	3.0
15	22.3	21.1	1.2
16	19.7	20.9	-1.2
17	18.0	20.0	-2.0
18	17.0	18.4	-1.4
19	16.2	16.9	-0.7
20	15.8	16.3	-0.5
21	15.4	15.1	0.3
22	15.0	14.4	0.6
23	14.6	13.1	1.5

operating hours

hottest day

HOURLY TEMPERATURES - SUNDAY 7TH JANUARY (7)

Zone: Space
Avg. Temperature: 18.8 C (Ground 16.4 C)
Total Surface Area: 289.943 m2 (331.0% flr area).
Total Exposed Area: 280.111 m2 (319.8% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 7.331 m2 (8.4% flr area).
Total Conductance (AU): 511 W/°K
Total Admittance (AY): 943 W/°K
Response Factor: 1.78

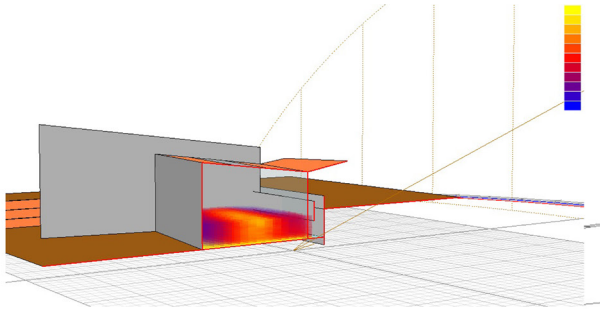


HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	17.2	15.3	1.9
01	17.1	14.9	2.2
02	16.8	14.3	2.5
03	16.6	13.9	2.7
04	16.5	13.6	2.9
05	16.4	13.4	3.0
06	16.7	14.1	2.6
07	18.3	15.3	3.0
08	21.2	16.8	4.4
09	22.4	18.7	3.7
10	23.6	19.7	3.9
11	23.2	20.7	2.5
12	23.0	21.6	1.4
13	22.9	21.8	1.1
14	26.0	22.3	3.7
15	25.3	22.5	2.8
16	22.7	20.9	1.8
17	19.3	20.4	-1.1
18	19.0	19.7	-0.7
19	18.6	18.7	-0.1
20	18.2	18.5	-0.3
21	18.1	17.6	0.5
22	17.9	17.0	0.9
23	17.7	16.2	1.5

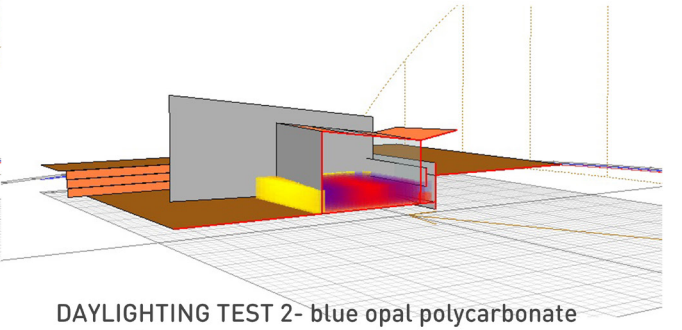
operating hours

coldest day

THERMAL ANALYSIS 3- improvement



DAYLIGHTING TEST 1- clear polycarbonate
transmittance: 68%
u-value: 5.66



DAYLIGHTING TEST 2- blue opal polycarbonate
transmittance: 27%
u-value: 4.61

FIGURE 10.12 ECOTECT DAYLIGHT TESTS & ITERATIONS

Northern and western shading iterations, along with skylight allowances, material properties and their respective transmittance and u-values have assisted in significantly reducing the overheated internal temperatures during the summer months.

Shading co-efficients and transmittance iterations of polycarbonate sheets used within the skylights have also assisted in reducing the direct sunlight and glare which has overexposed the internal space.

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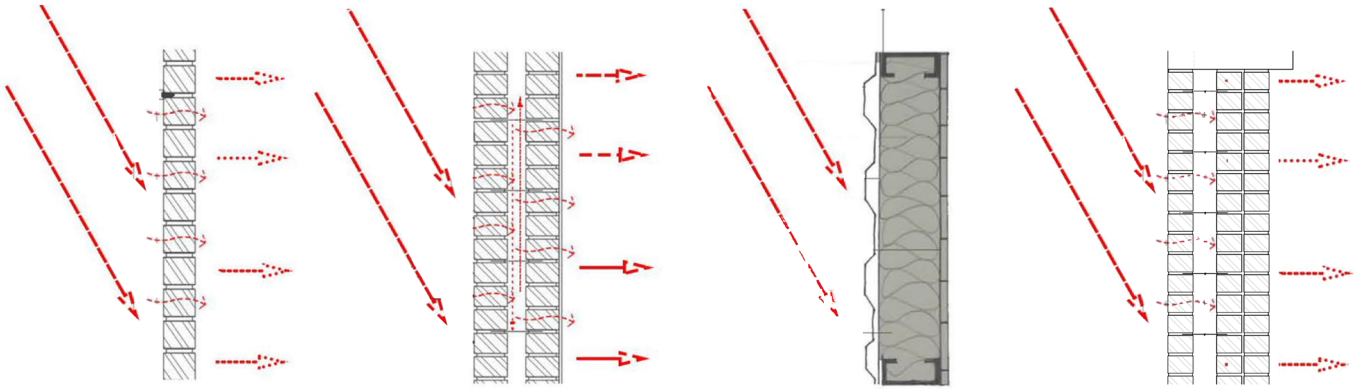

FIGURE 10.13 WALL-TYPE ECOTECT TESTING & ITERATIONS

THERMAL MASSING- for increased night time heat gain (thermal lag) and reduction in heat loss through conduction

Single skin brick, double skin brick, composite wall with hemp fibre blanket thermal insulation, and cavity wall construction were tested and iterated in terms of its thermal massing and thermal lag capabilities on the overexposed western facade.

Results proved that the cavity wall construction with a 110mm air-gap -together with its concree frame-worked best for its increased night time heat gain due to its high thermal mass and the reduction in heat loss through conduction.

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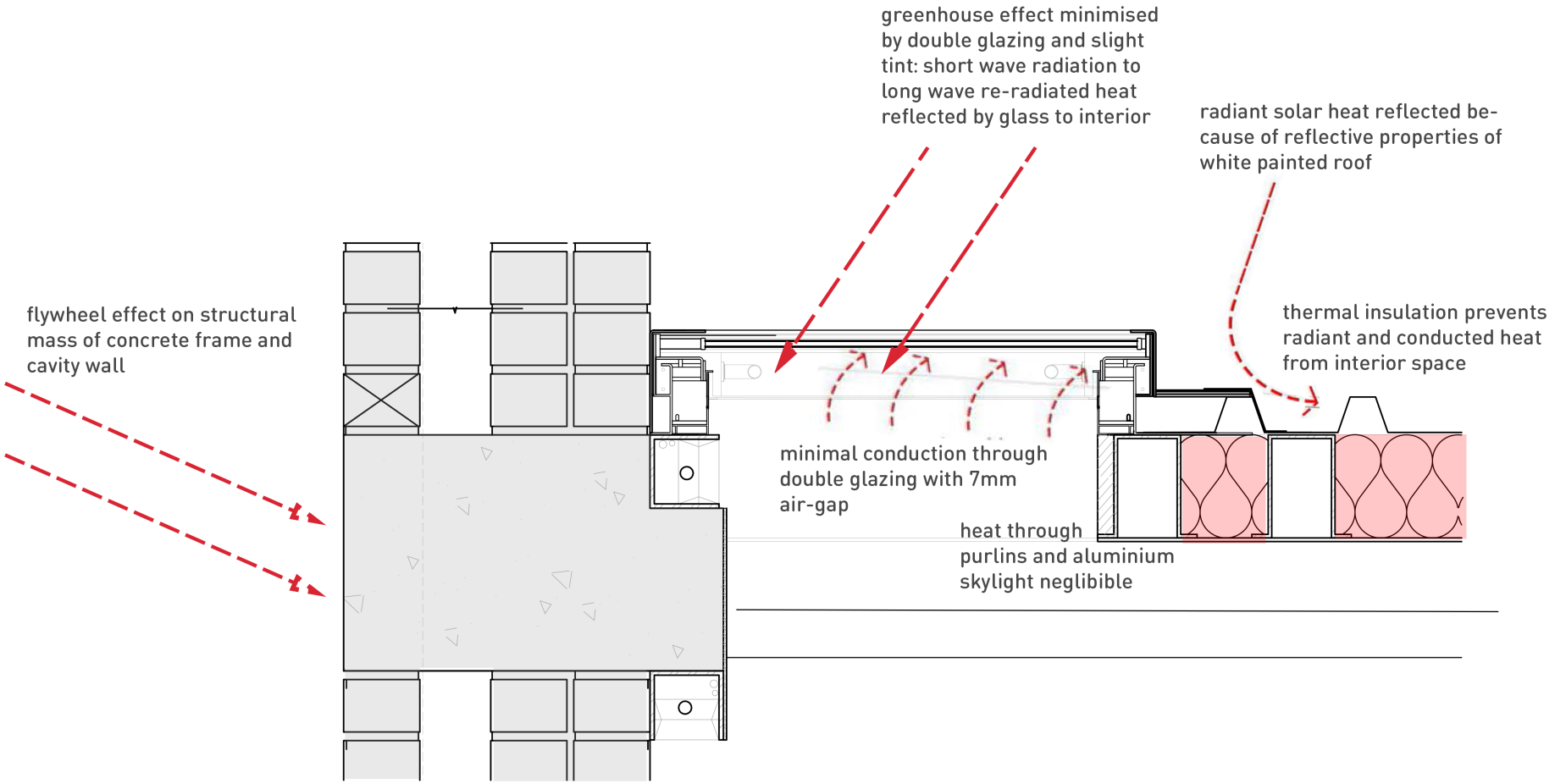

FIGURE 10.14 SKYLIGHT DETAIL SHOWING THERMAL PERFORMANCE

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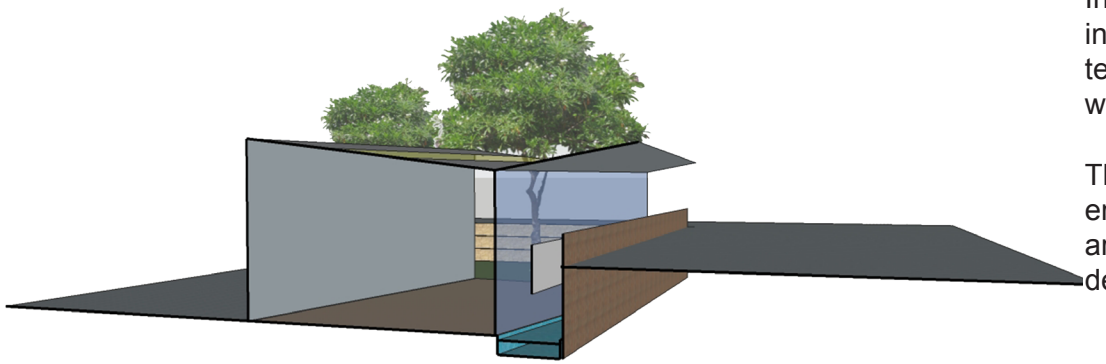

EVAPORATIVE COOLING AND BUILDING SHADING
proposal for a water body and natural vegetation
THERMAL ANALYSIS 4- negligible improvement

Incorporation of a water body for evaporative cooling and a vegetated landscape for air-cooling was tested. A reduction in the overall thermal results were negligible.

These elements, however, do contribute to the emotional well-being of the user when within and around the space. Such elements have thus been designed with.

FIGURE 10.15 APPLICATION OF NATURAL COOLING METHODOLOGIES

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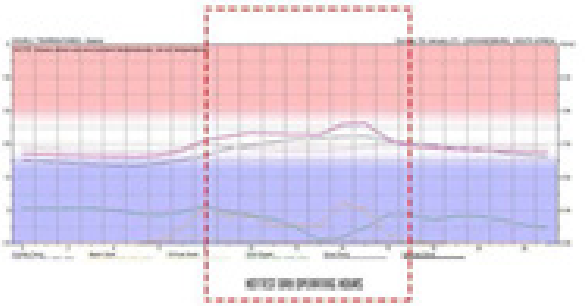

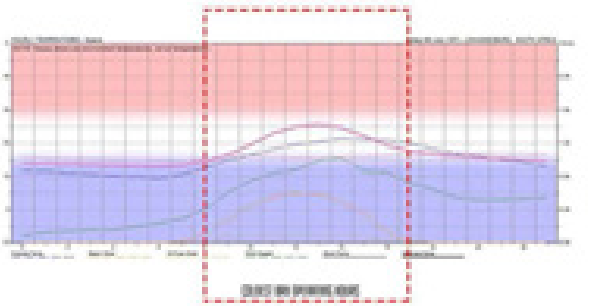

FINAL RESULTS

Wall-type, fenestration, skylight testing and iterations have resulted in favourable internal thermal conditions, whereby the final results fall within the comfort band of Johannesburg.

Although passive means have proved to be adequate, the unpredictable usage of the mosque/ multipurposed space due to unaccounted visitors and worshippers, a geothermal and hydronic system has been proposed which will assist in creating a habitable and comfortable internal space.

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10.3.2 HEATING/COOLING

A geothermal water heating and cooling system assists in supplying the adequately required water temperature for Islamic ablutions, and is also proposed hydronic system allows for radiant heating and cooling to occur through water pipes wet installed into the concrete floor used for its thermal mass.

Uponor horizontal collector geothermal pipes will be laid in the upper two metres of the ground soil. This particular heat exchanger is chosen for its low investment cost, minimum soil disturbance, and its high seasonal performance factor.

Individual 40mm diameter pipe loops are laid at distances of 0.8 metres in a similar way to the pipe loops of an underfloor heating system. The supply and return pipes of these pipe loops are routed to a heat pump which heats and cools the water routed beneath the floor of the internal mosque/ multipurpose space.

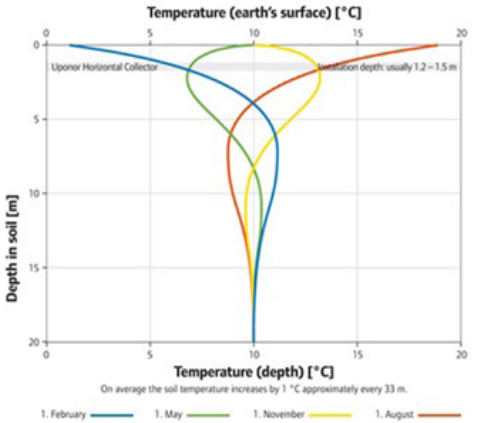

FIGURE 10.16 GEOTHERMAL COLLECTOR TECHNICAL DATA

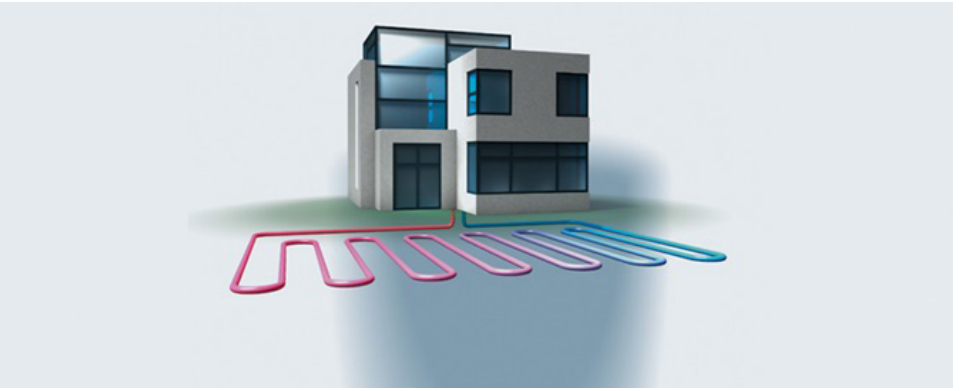

FIGURE 10.17 GEOTHERMAL COLLECTOR APPLICATION DIAGRAM

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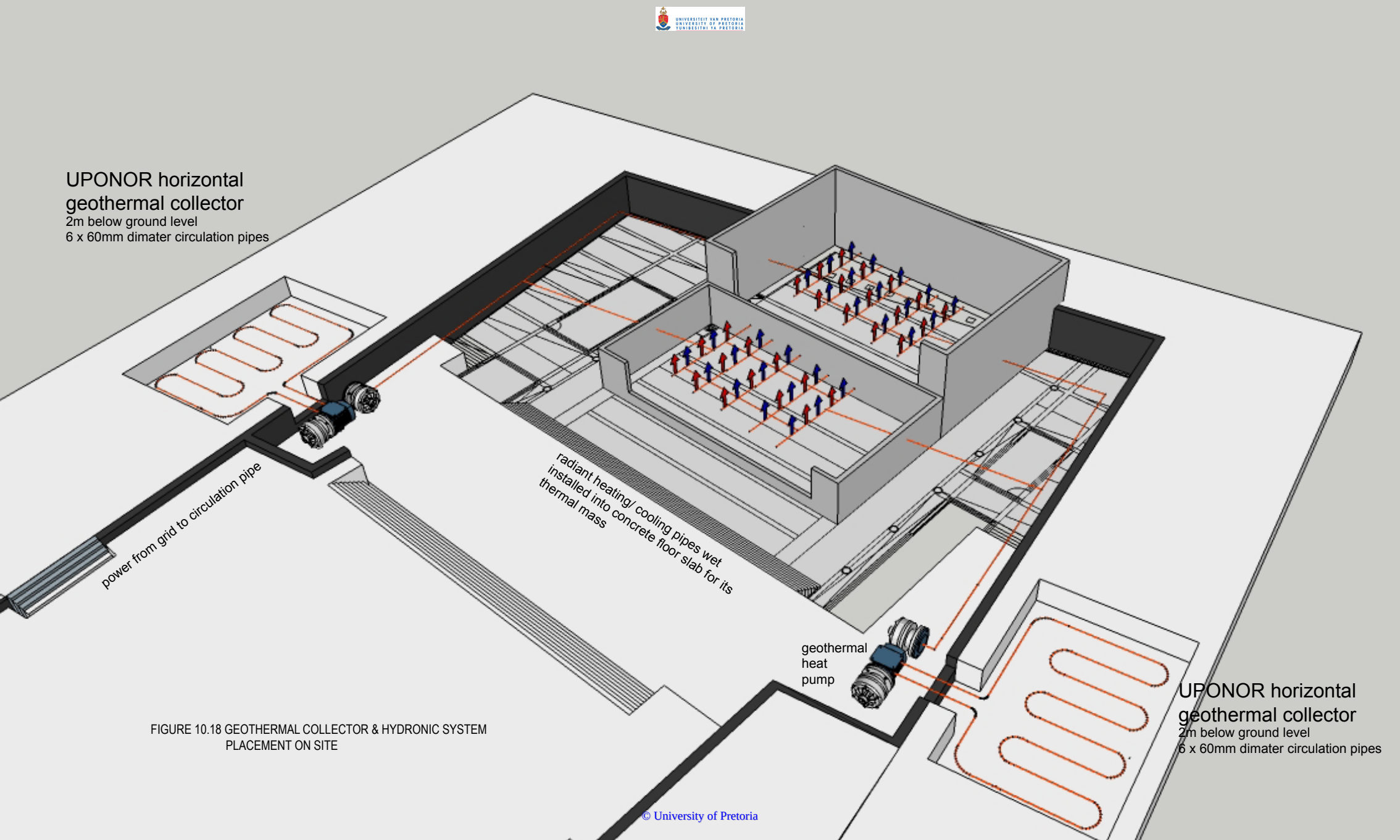

FIGURE 10.18 GEOTHERMAL COLLECTOR & HYDRONIC SYSTEM PLACEMENT ON SITE

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10.3.3 WATER

Water is seen as an almost sacramental element in Islam. It is associated with cleanliness, fertility, wealth and purity, to list a few, and is thus an essential part of Islamic architecture. The ablution ritual compulsory before praying, solidifies the important roles that water plays in the design of a mosque even further (Chohan; 2010:10)

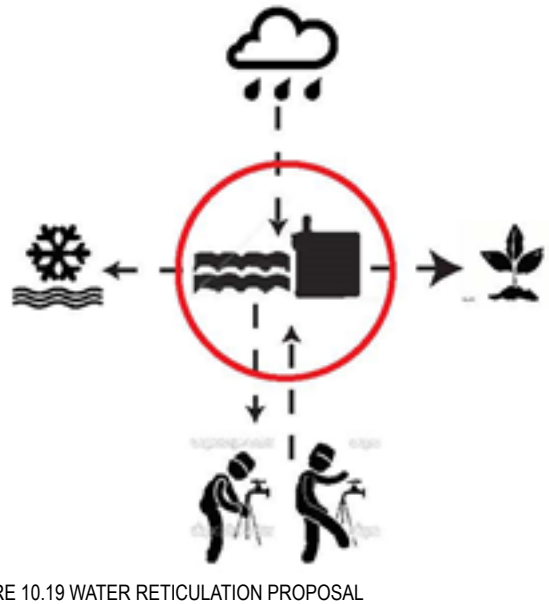


FIGURE 10.19 WATER RETICULATION PROPOSAL

Proposal for: Water harvesting and reticulation system which services a formal and informal ablution/ water fountain.

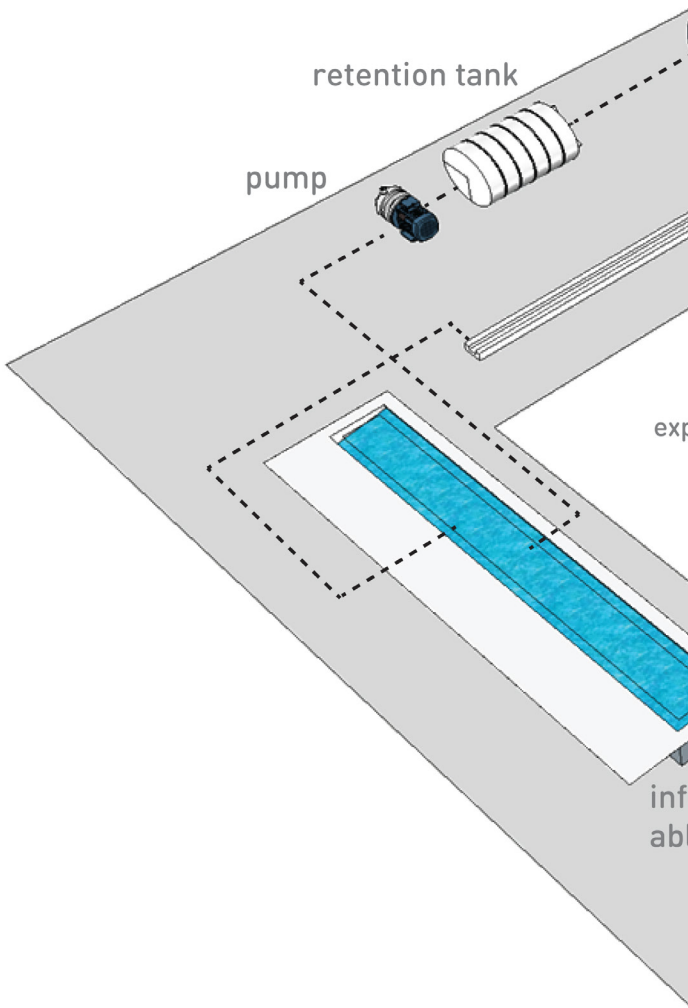
HARVESTING SYSTEM
1. Water captured by roofs, stored in 6x 20000 litre plastic Jojo underground water tanks

2. Water is filtered and chlorinated, after which water is directed by gravity through an exposed water channel with trash trap and fines filter to formal ablution area

3. Grey water is directed to an existing stormwater channel.

RETICULATION SYSTEM
1. Flowing water is directed by gravity down an exposed water channel into an unltraviolet water filtration system for disinfection

2. Disinfected water temporarily stored in retention tank until pumped back up to informal ablution feature.



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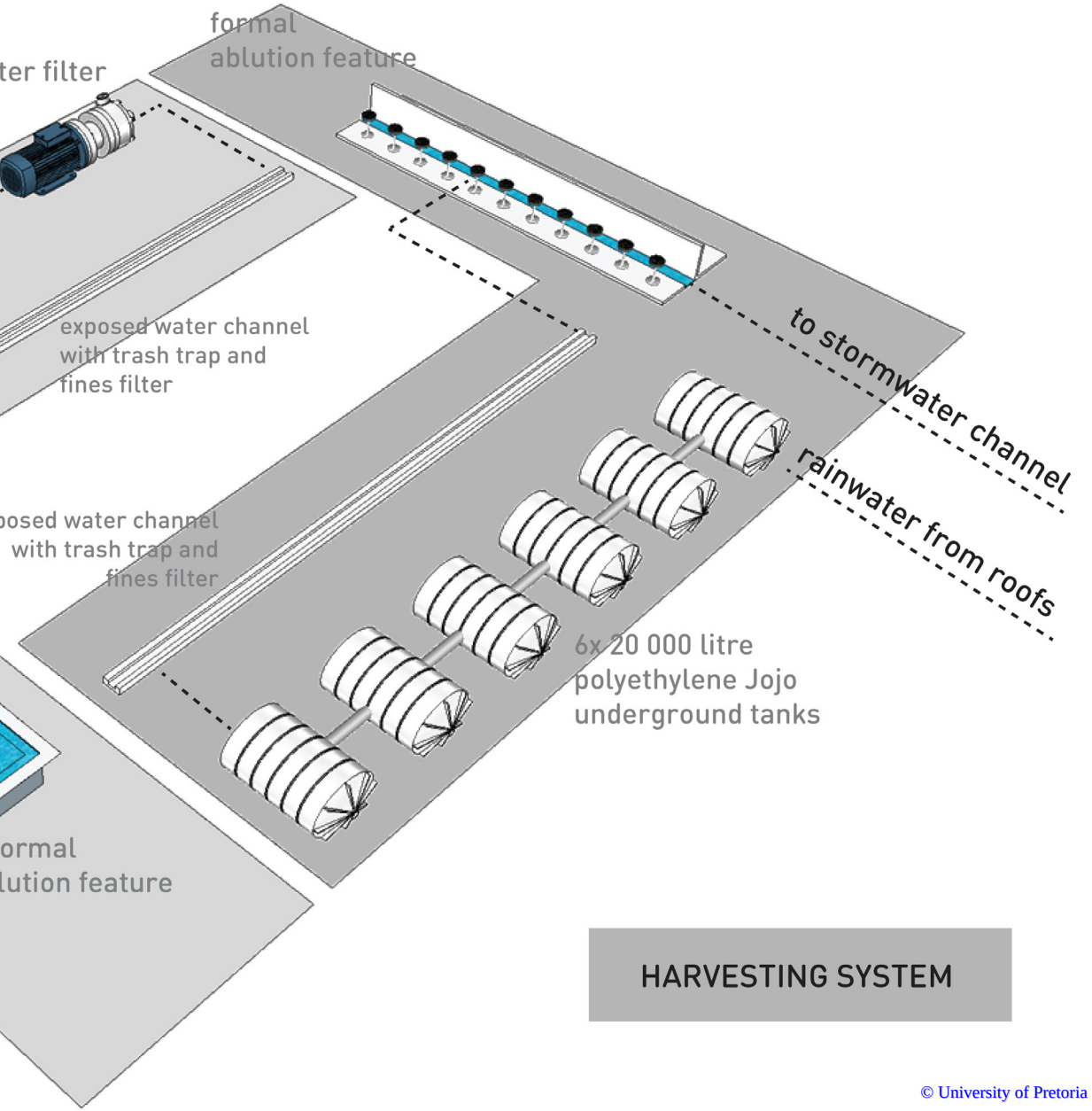

HARVESTING SYSTEM

	Occupancy	Ablutions	Drinking
Monday	110	440	22
Tuesday	110	440	22
Wednesday	110	440	22
Thursday	110	440	22
Friday	440	193600	88
Saturday	100	400	20
Sunday	80	320	16

4litres per person for ablutions
200millilitres per person for drinking

	litres
January	979738
February	785516
March	786440
April	919738
May	786440
June	919738
July	786440
August	919738
September	786440
October	919738
November	786440
December	919738

Total roof area: 1452+576+728+224+510 3490

Irrigation demand	Ablution+ Drinking Demand	Total demand
January	98.64	98.64
February	85.13	85.13
March	85.2	85.2
April	98.64	98.64
may	85.2	85.2
June	98.64	98.64
July	85.2	85.2
August	98.64	98.64
September	85.2	85.2
October	98.64	98.64
November	85.2	85.2
December	98.64	98.64
	0	

Yield	Precipitation	Roof 3490m²	Total	0.9
January	0.125	392.63	392.63	293.99
February	0.094	295.24	295.24	210.11
March	0.09	282.69	282.69	197.49
April	0.054	169.61	169.61	70.97
May	0.013	40.83	40.83	-44.37
June	0.009	28.27	28.27	-70.37
July	0.004	12.54	12.54	-72.66
August	0.006	18.85	18.85	-79.79
September	0.027	84.81	84.81	-0.39
October	0.007	21.99	21.99	-76.65
November	0.011	345.51	345.51	260.31
December	0.103	323.52	323.52	224.88
Annual ave	0.543	1705.56	1705.56	1705.56
			5400	

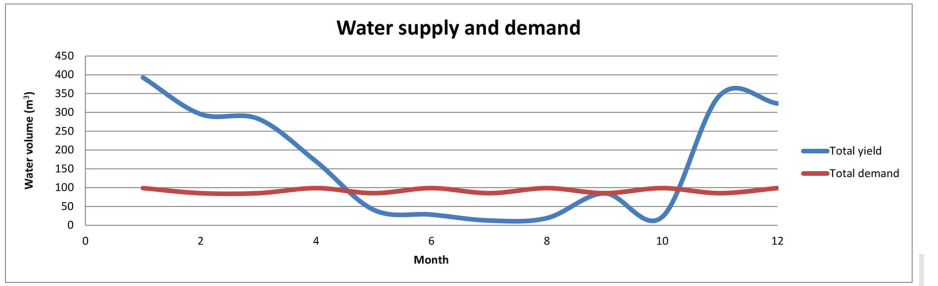

FIGURE 10.21 WATER HARVESTING CALCULATIONS PROVING SURPLUS OF RAINWATER COLLECTED FROM ROOFS

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10.3.4 VENTILATION AND LIGHT

Passive sustainable strategies make use of screens, thermal mass, vegetation, evaporative cooling, cross-ventilation, and the stack effect.

A planted brise soleil (solar screens) are designed to dissapate the direct eastern and western sunlight, reducing glare and direct solar gain, allowing light and a cross-ventilated air-flow to enter and exit the internal space -by means of stack effect and air-buoyancy principles- through openings, clerestory windows and skylights.

Northern and southern light is maximised using curtain walls (summer protected with a roof overhang) while skylights are purposely designed (check ecotect iterations) to filter light poetically into the interior prayer space.

The thermal mass of concrete and brickwork is designed with to absorb the harsh western solar radiation in order to disappate it back into the interior for early morning prayers.

Water bodies, ablution spaces and vegetated gardens provide cool environments for air to be cross-ventilated through the buildings interior.

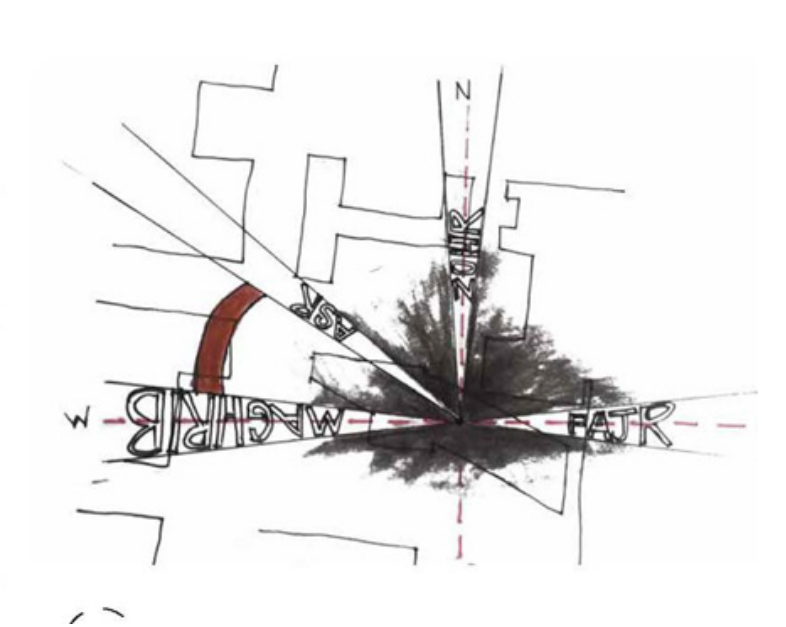

FIGURE 10.22 DIRECTION OF SUN/ DIRECT LIGHT ACCESS AT THE FIVE DAILY PRAYER TIMES

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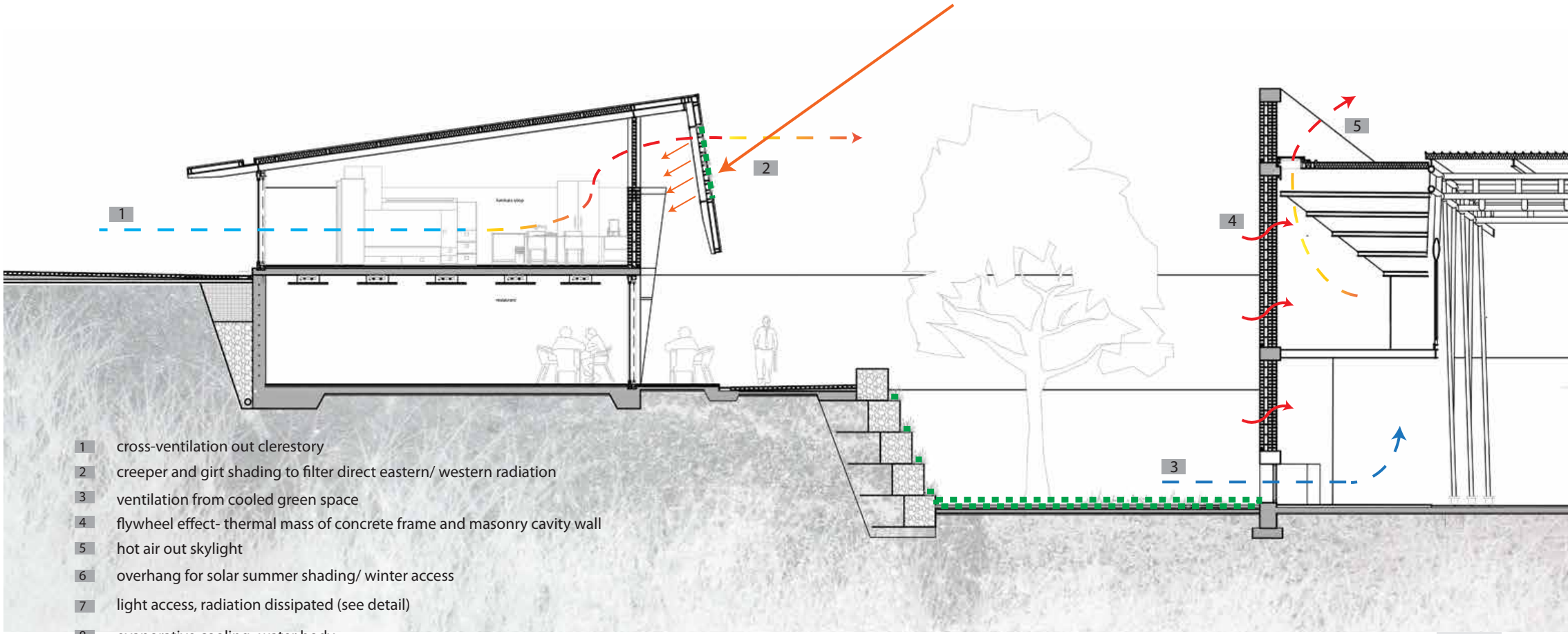

1 cross-ventilation out clerestory
2 creeper and girt shading to filter direct eastern/ western radiation
3 ventilation from cooled green space
4 flywheel effect- thermal mass of concrete frame and masonry cavity wall
5 hot air out skylight
6 overhang for solar summer shading/ winter access
7 light access, radiation dissipated (see detail)
8 evaporative cooling- water body
9 hydronic radiant heating and cooling- see sustainable systems
10 cross ventilation from cooled ablution area

FIGURE 10.23 PASSIVE SUSTAINABILITY STRATEGIES APPLIED TO BUILDING

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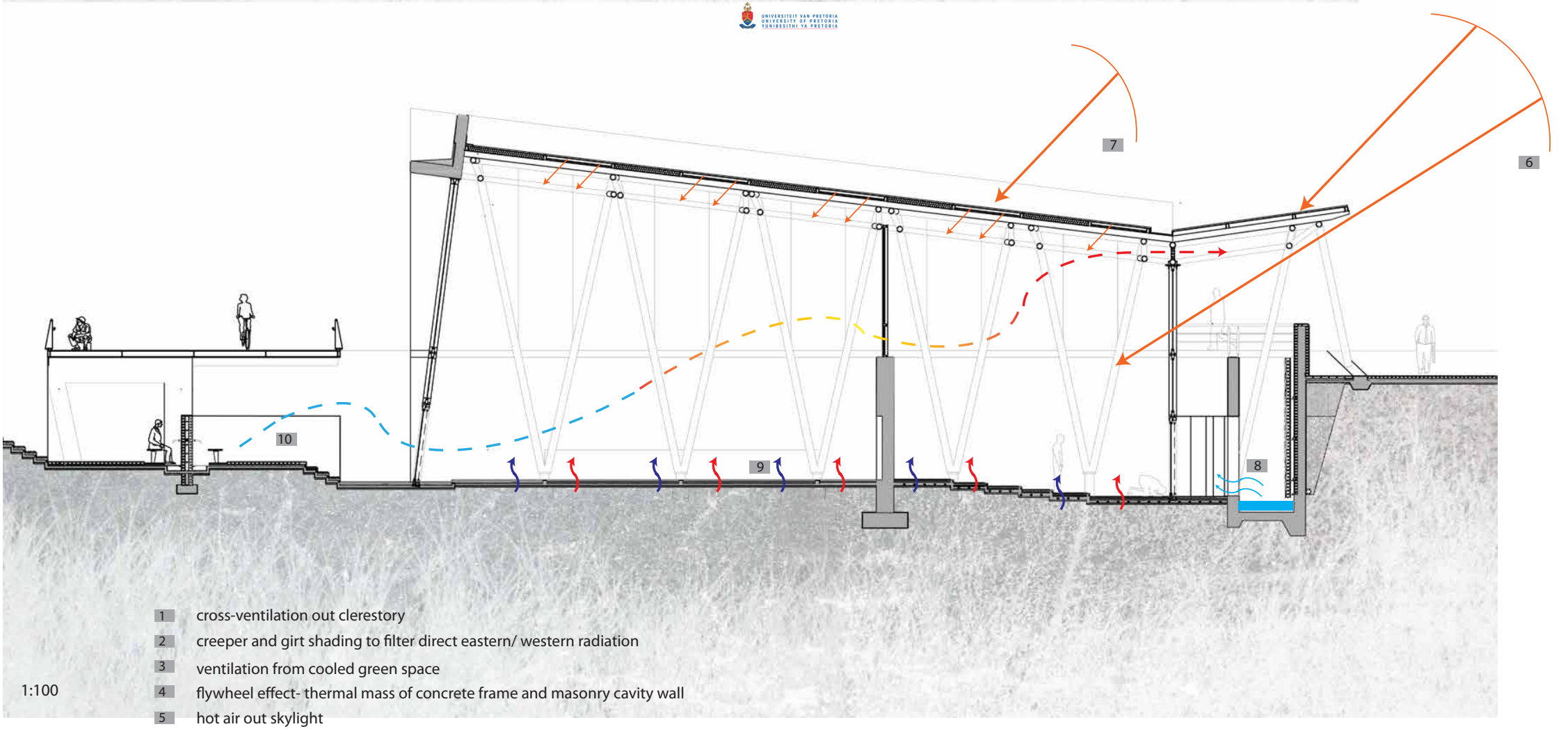

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1 cross-ventilation out clerestory
2 creeper and girt shading to filter direct eastern/ western radiation
3 ventilation from cooled green space
4 flywheel effect- thermal mass of concrete frame and masonry cavity wall
5 hot air out skylight
6 overhang for solar summer shading/ winter access
7 light access, radiation dissipated (see detail)
8 evaporative cooling- water body
9 hydronic radiant heating and cooling- see sustainable systems
10 cross ventilation from cooled ablution area

FIGURE 10.24 PASSIVE SUSTAINABILITY STRATEGIES APPLIED TO BUILDING

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10.4 MATERIALITY

“The materials used in architecture inform our experience of buildings and spaces through the interplay of aesthetic, social and historic considerations. Both structural and decorative elements have a role to play, whether immediately visceral or only on a subliminal level”, (McLuhan;2011,9).

The technological, sustainable and material responses of the Islamic precinct are a reaction to the context it finds itself in. As the context is comprised of stereotomic surroundings and a hard surfaced landscape, the site’s existing materiality is understood and responded to in its altered industrial-like state.

New proposed materiality in the Islamic precinct is specified to form a consistent dialogue with the site and its materiality, so that the mosque merges with its built context while subtly contrasting with the existing stereotomic to contribute a new layer of tectonic spatial narrative to the architectural backdrop. Materials were also selected for its geometric patterning closely associated with Islamic art, for the structural ability to span vast distances creating intricate formations, and for its honesty and durability (as a frequently used structure in an urban setting would face considerable wear-and-tear).

The predominant materials on site are brickwork, concrete and steel. Each material is discussed according to the materiality found on site, and the interpretation of the material as used in the Islamic Precinct.

FIGURE 10.25 EXISTING SITE MATERIALITY

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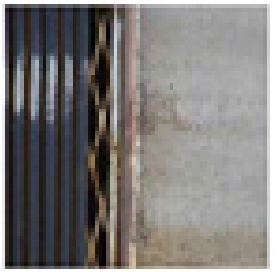
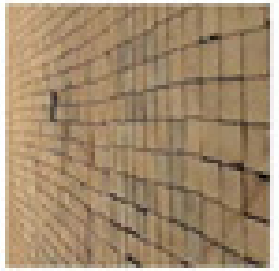
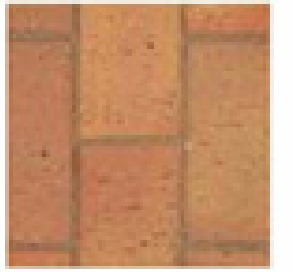
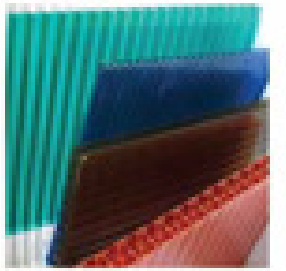
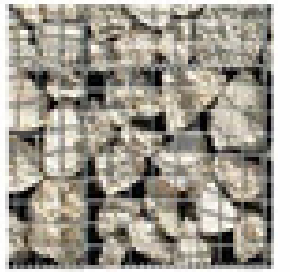
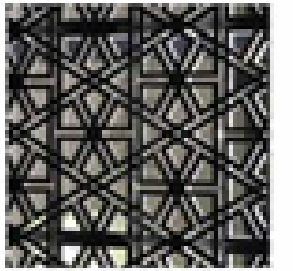
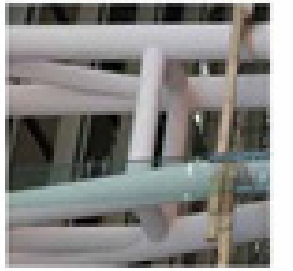



existing site materiality





proposed site materiality

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10.4.1 BRICKWORK

Corobrick cederburg coloured clay face-bricks will be used as infill for concrete framed and cavity walls within the Islamic precinct. Walls will be left unplastered so that it fits in with the unplastered Oriental Plaza and surrounding buildings within its context.

Nutmeg coloured clay paving bricks will create various patterns that define liminal and informal space, also giving the precinct a directional quality at circulation and other routes that represent the religious ritual.

Corobrick clay bricks are locally produced and have a low carbon footprint; also requiring low-skilled level workmanship as masonry is a common South African building material.

10.4.2 CONCRETE

The existing construction of the Oriental Plaza includes an off-shutter reinforced concrete frame. A similar framing method constructed if in-situ concrete will shape the wall systems of the Islamic precinct so that it -along with its brick infill- successfully blends with that of surrounding buildings.

Lafarge ready-mixed concrete suppliers are within close proximity to the site, lowering the overall carbon footprint. The off-shutter concrete framework requires low-skilled level workmanship whereby local unemployed labourers will be employed for the construction thereof.

10.4.2 STEEL

A new insertion onto the site which represents an alternate mosque-building strategy includes the use of steel to span large distances in order to create large free space.

The new steel palette incorporates the primary use of I-beams and tubular steel members, manipulated in use and scale in order for the formation of intricate patterning systems.

As its use conceptually fulfills aims of the hypothesis, acting in stark relation to outdated and aesthetically driven symbolic mosque-building elements, its usage is familiar within a South African context, locally produced and brought prefabricated to be assembled on site.

10.4.3 OTHER

Gabion walls, rubber interlocking tiles, grass and vegetation, polycarbonate, etc. are used for their ability to create pattern, for their durability and functionality, as well as their relation to a South African context.

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10.5 IN DETAIL

10.5.1 ASSEMBLY DRAWINGS

Detail assembly drawings -on a microscale- continue the application of the conceptual approach and project aims in order to create -through its assembly and allowances- a poetic quality within the internal space.

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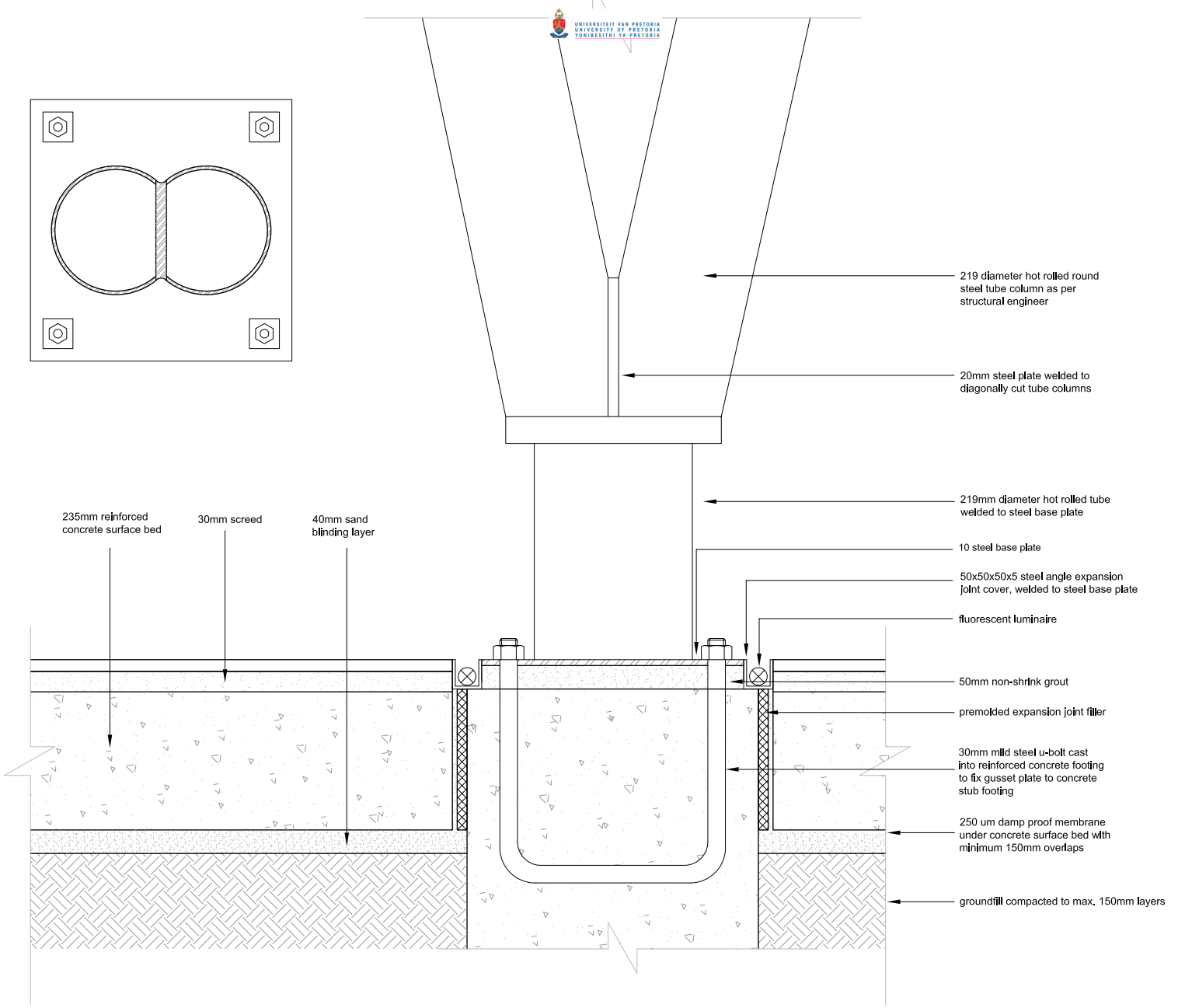

COLUMN FOOTING DETAIL
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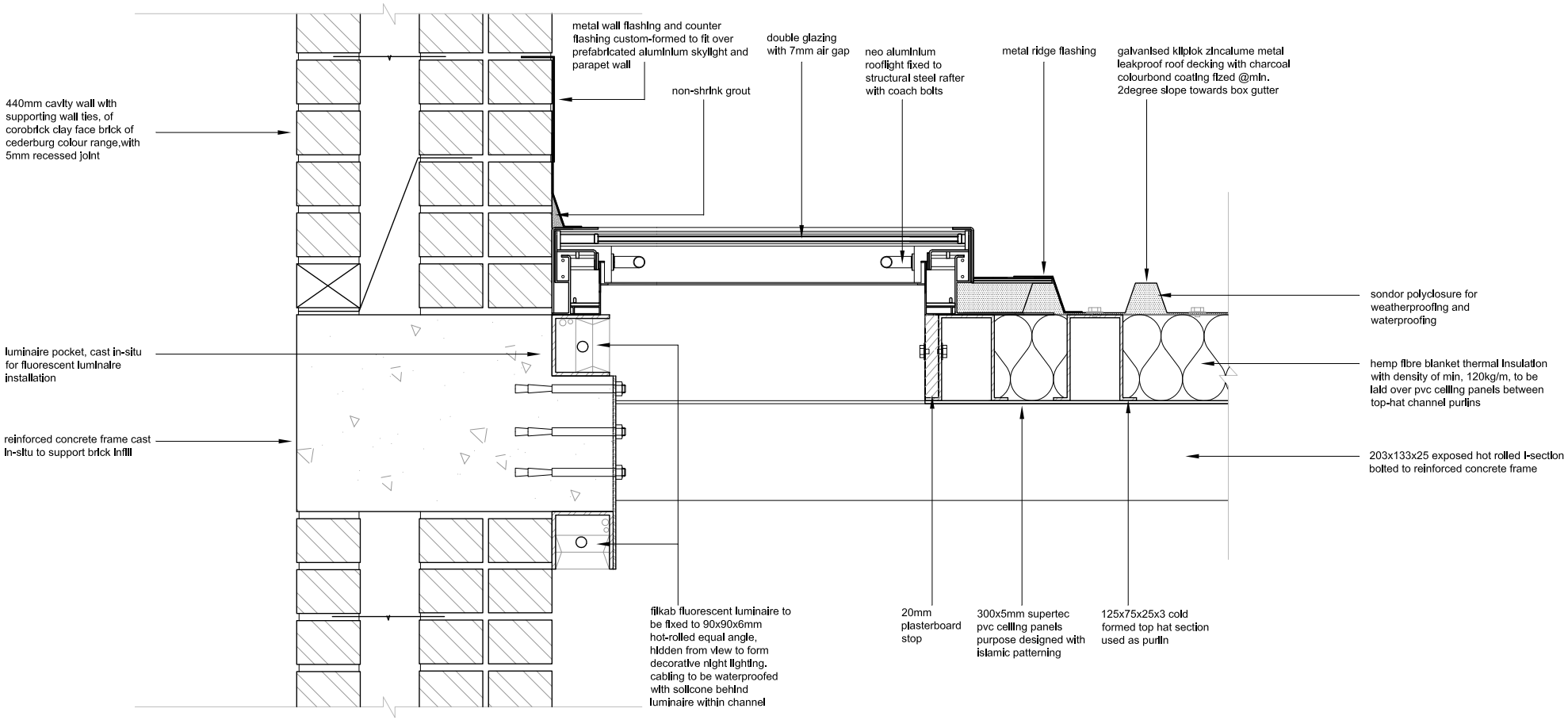

PARAPET SKYLIGHT DETAIL
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10.5.2 SECTIONS

Detailed sections illustrate the internal and external spatial relationships, incorporating the structural and sustainable systemic workings of the building that have been tested and iterated.

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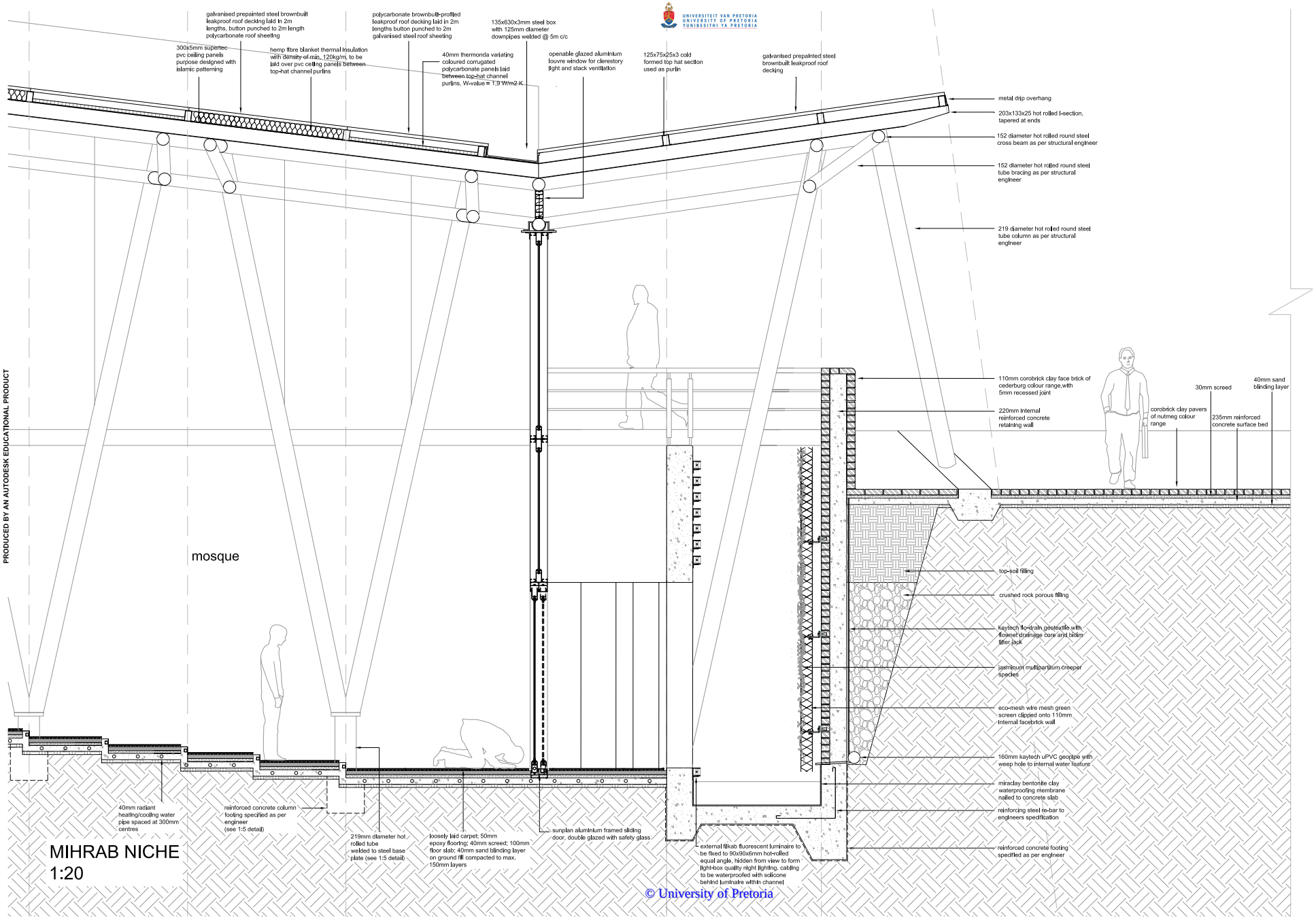

MIHRAB NICHE
1:20

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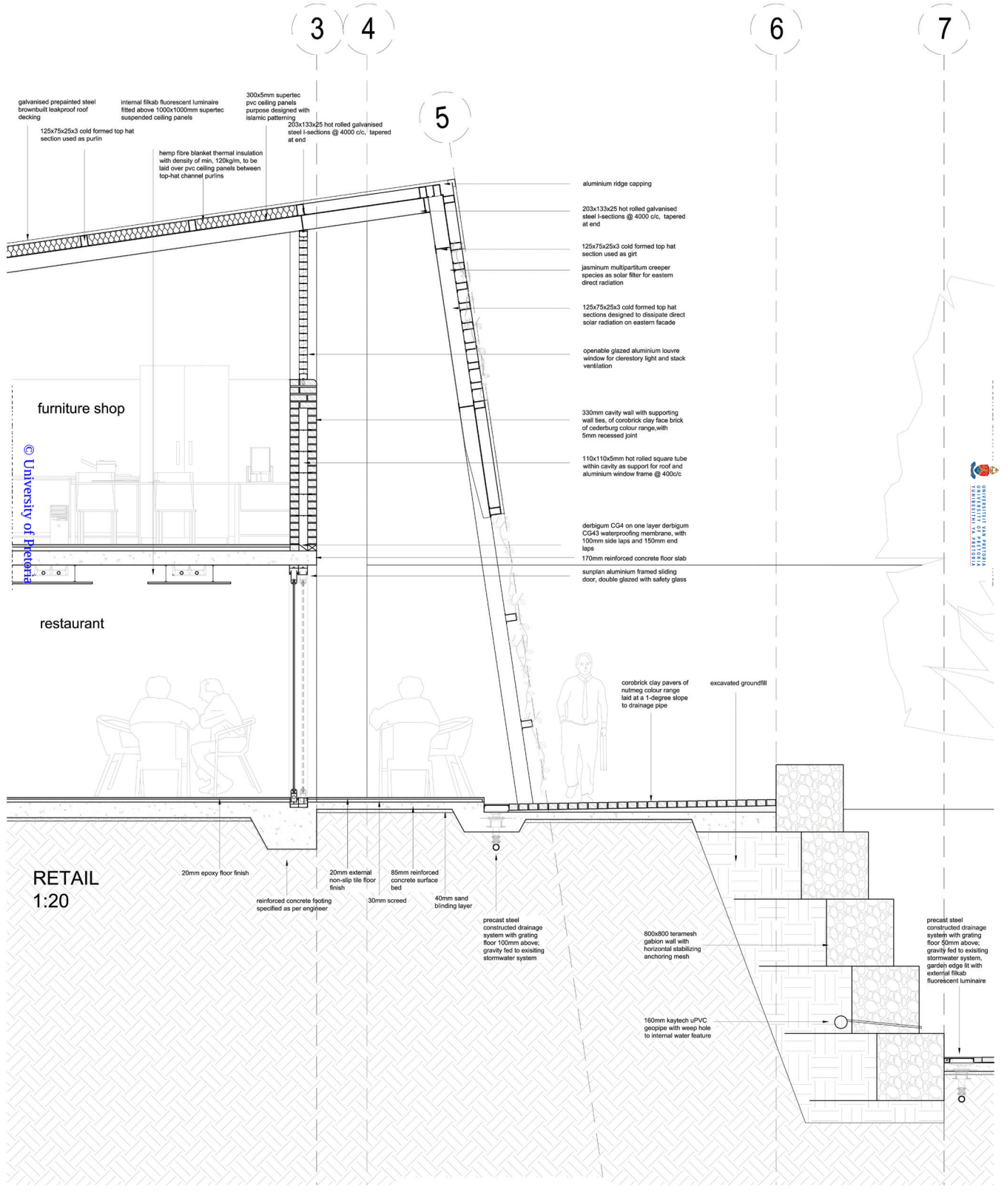

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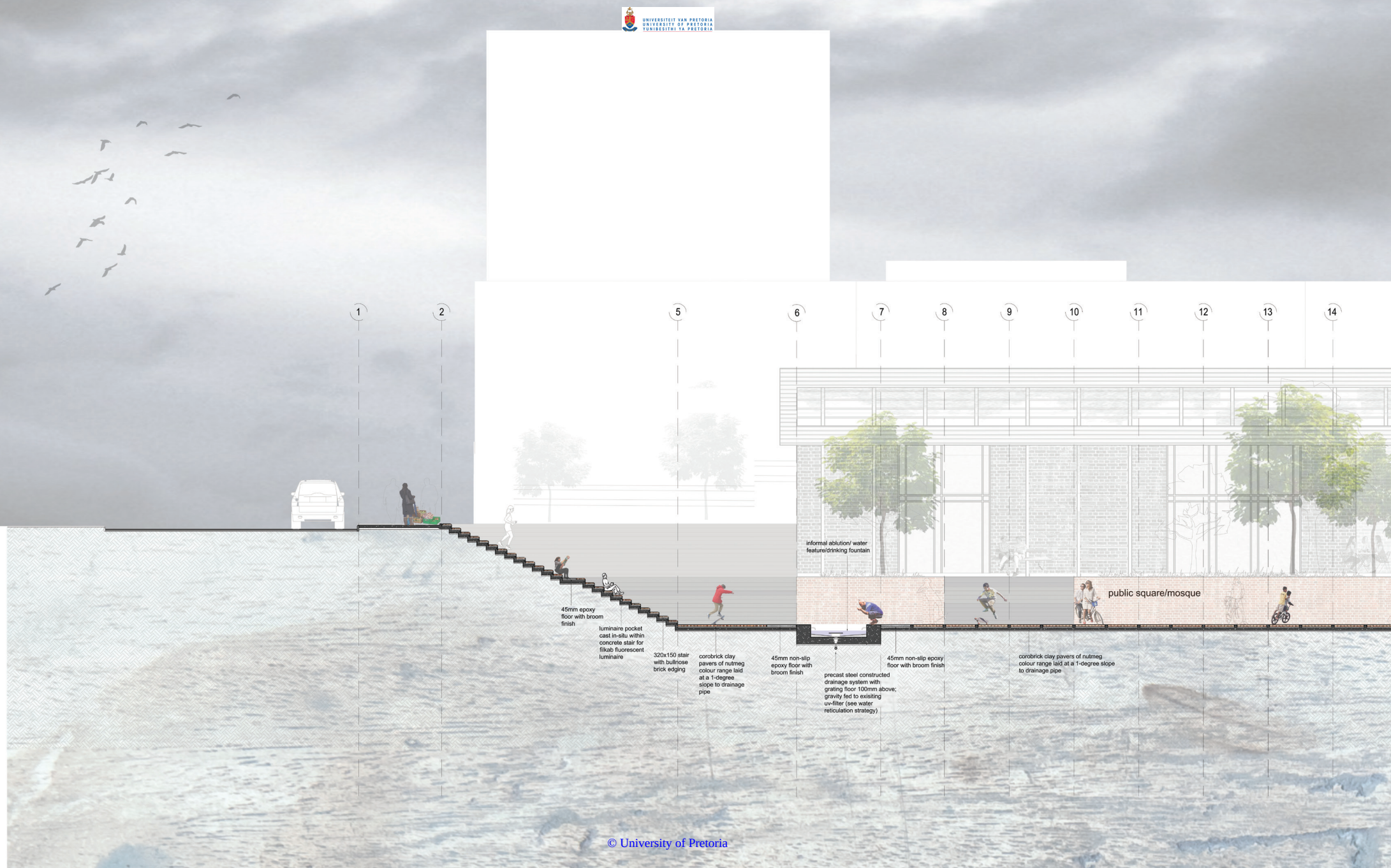

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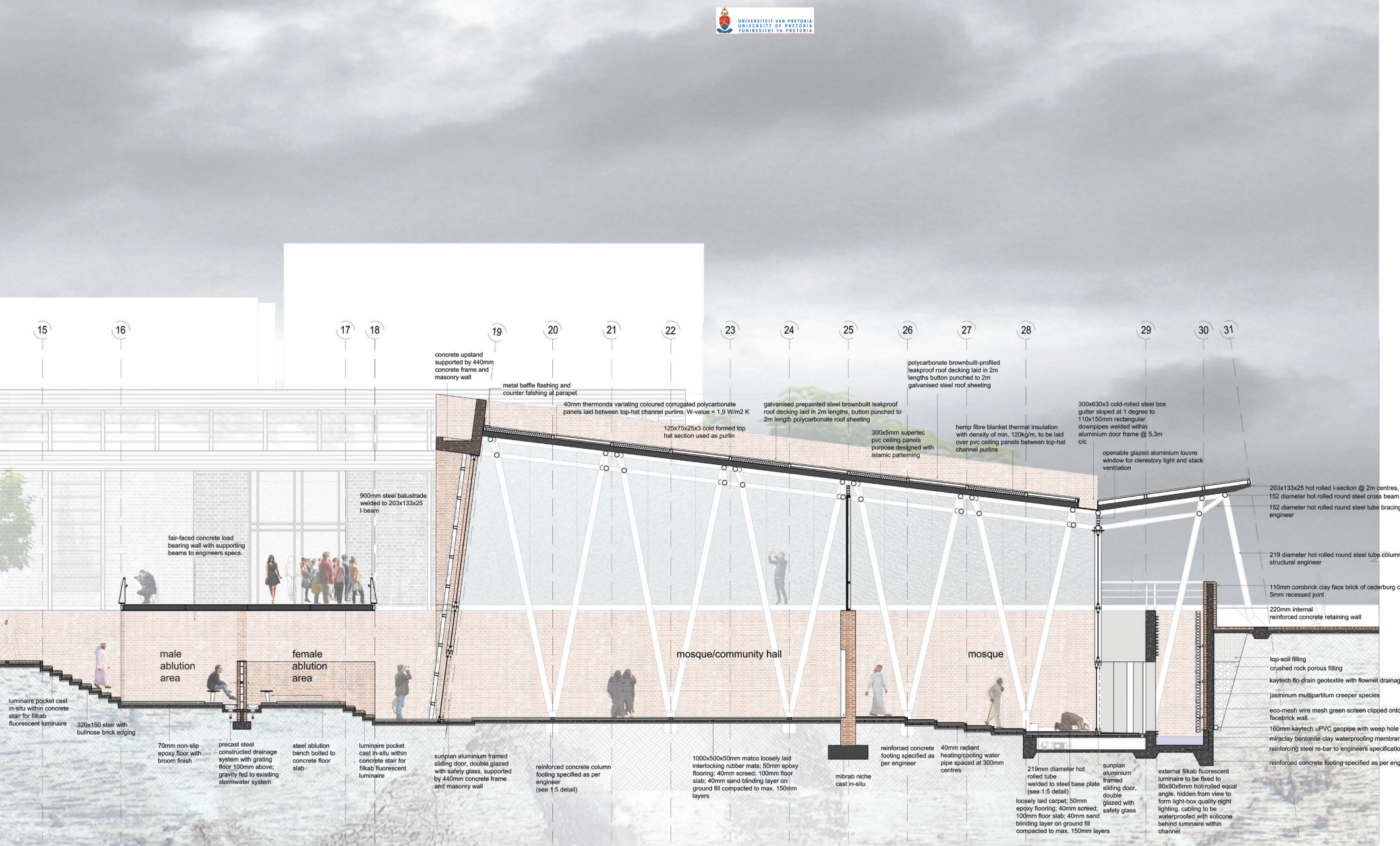

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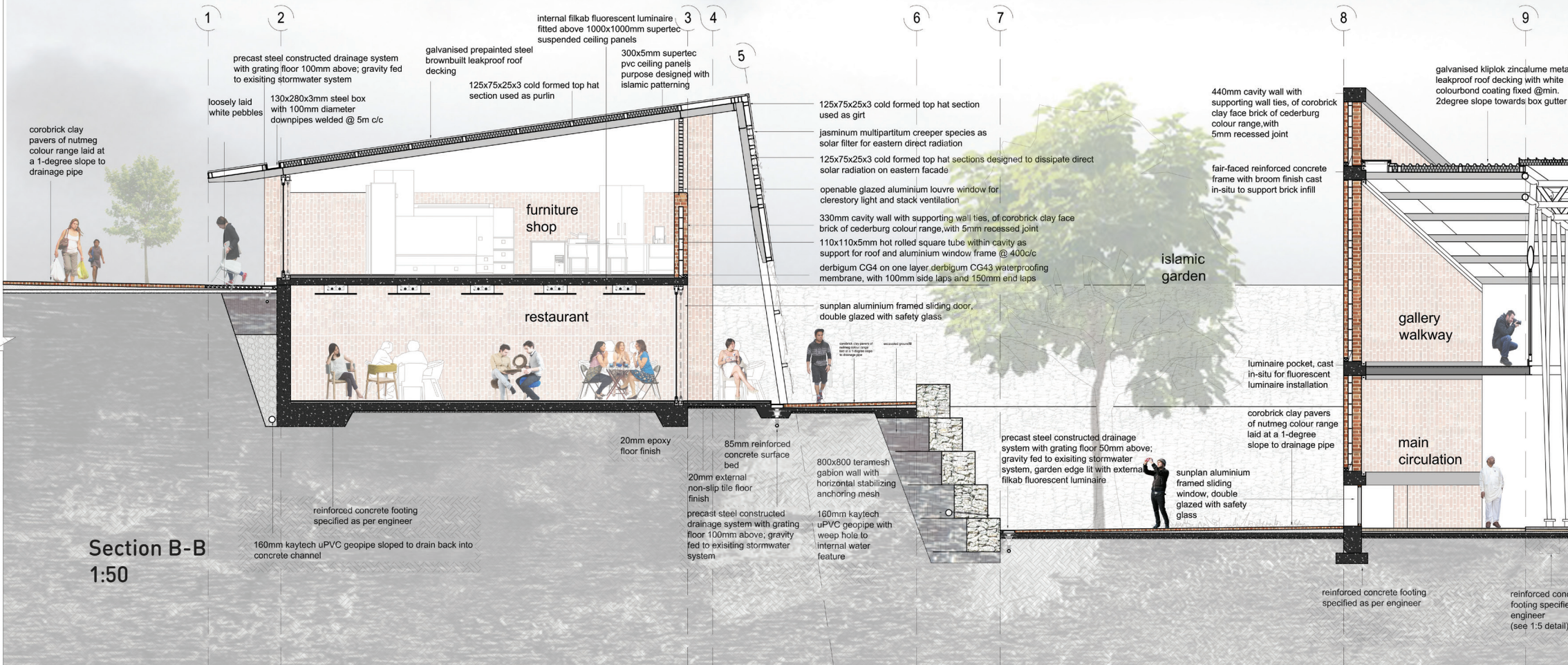

Section B-B
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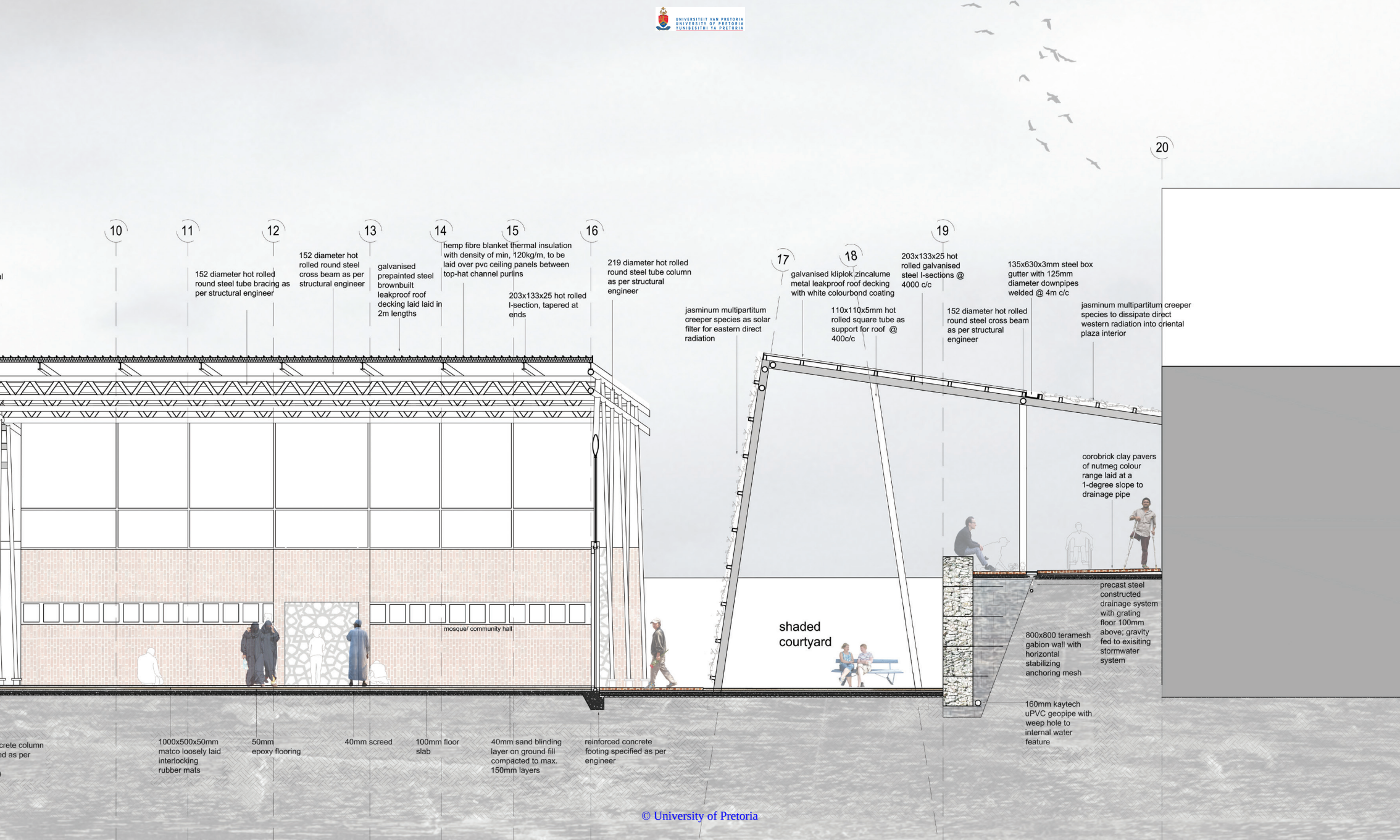

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10.5.3 FLOOR PLANS

Plans express the conceptual, experiential and systemic workings on the intervention placed within its context.

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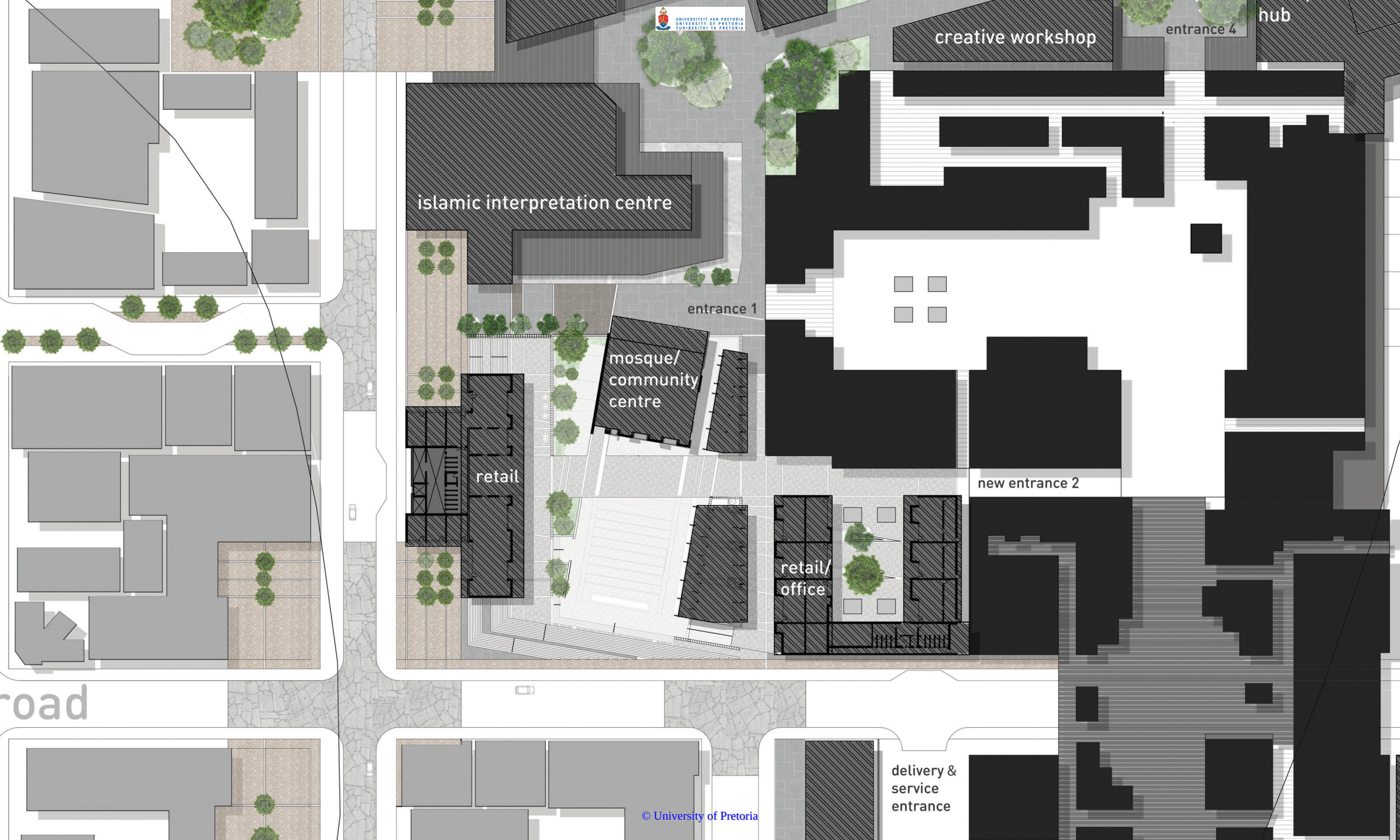

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FIRST FLOOR

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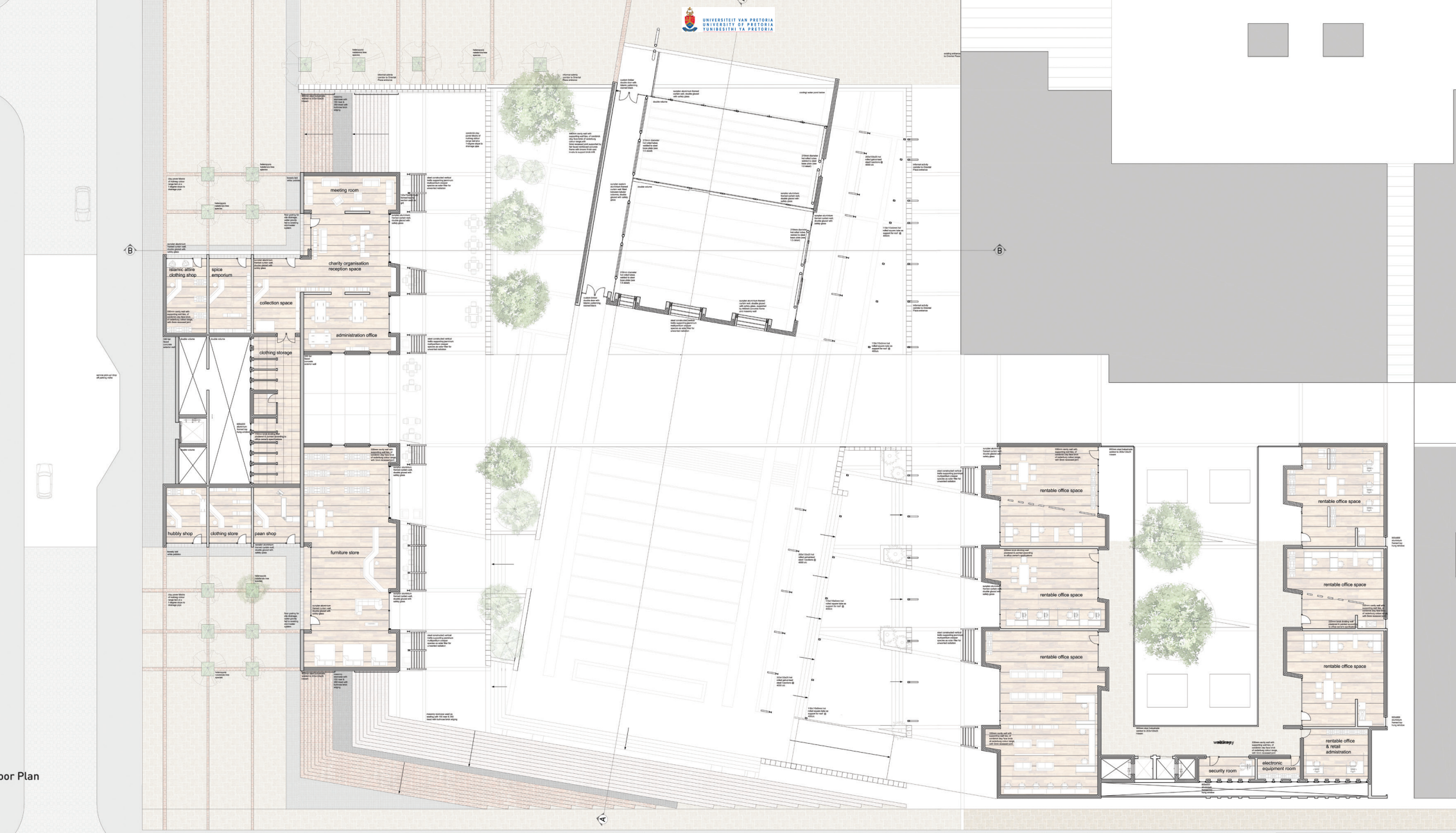

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GROUND FLOOR

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Ground Floor Plan
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BASEMENT/ MOSQUE

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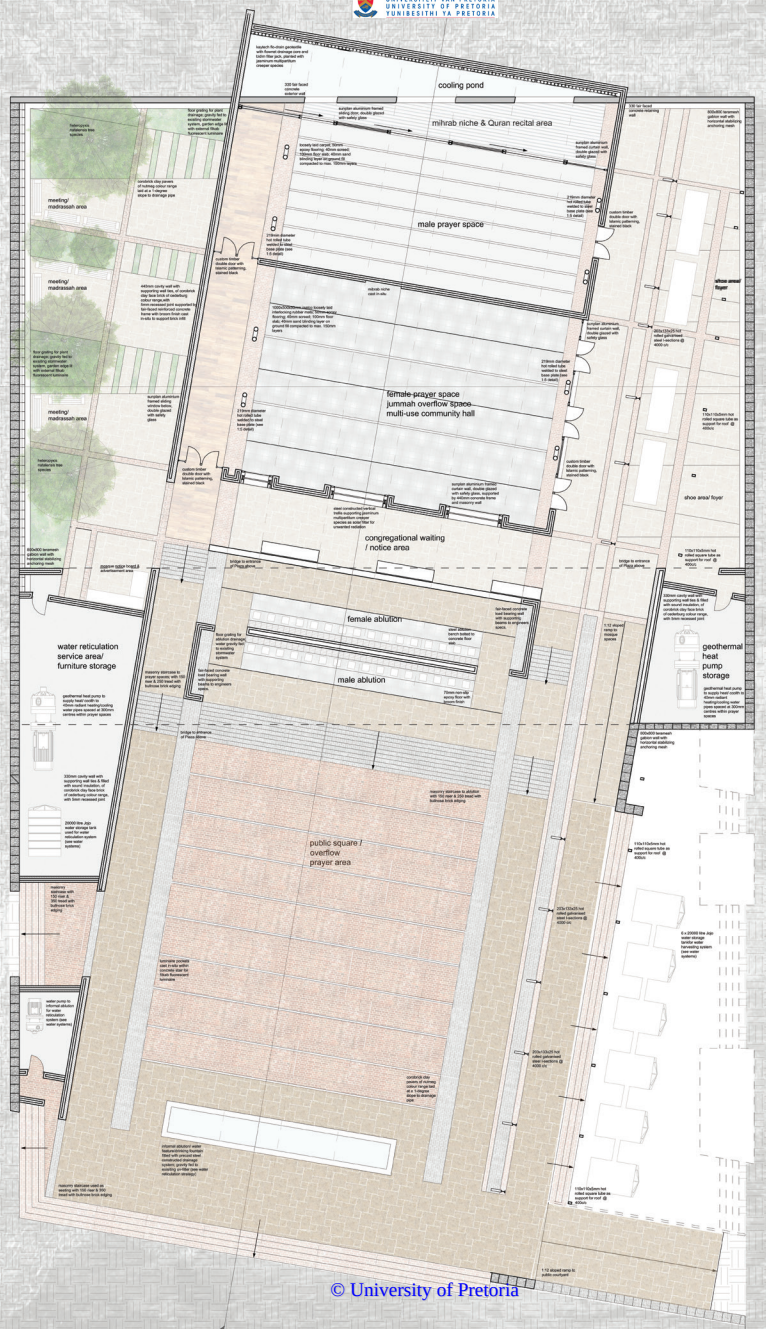

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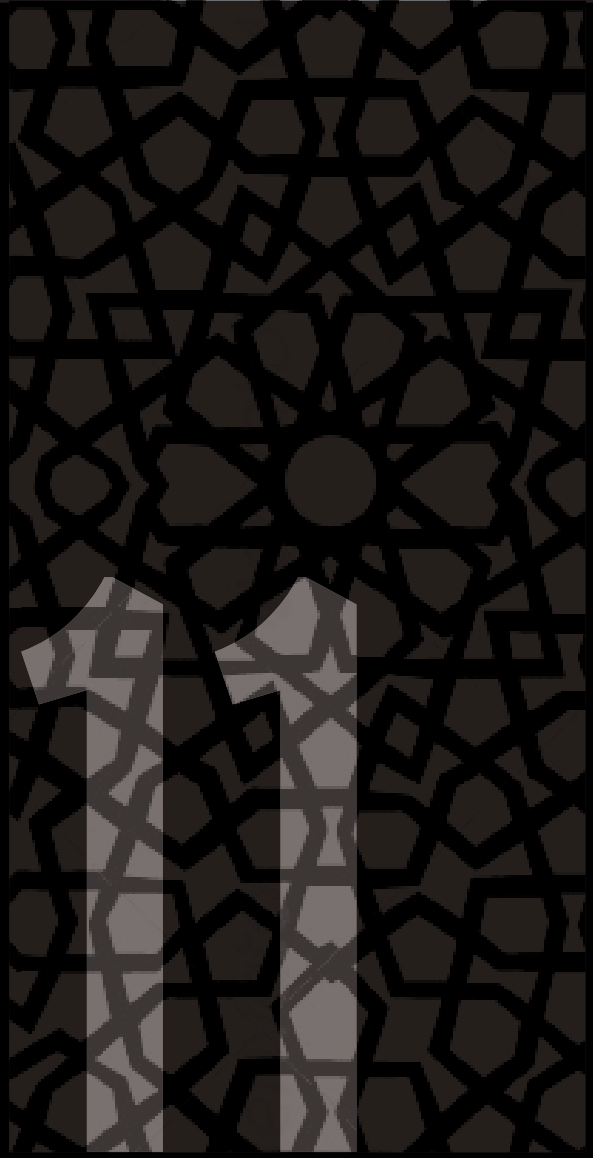

CONCLUSION

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110.1 REFLECTION

The primary objective of this dissertation was to create a place –opposed to that of iconic space- that stimulates the experiential qualities Islamic architecture may possess. In this process -within the context of Fordsburg- meaningful relationships amongst dissimilar cultural groups, different genders, and people of other religious affiliation has been fostered by the conceptualisation of a centralised public architecture, exhibiting Islam to all those who wish to view it. The consequential merge of religious and secular life was aimed to create unification amongst these two conditions, creating a hybridised physical and emotional situation amongst and within the life of the muslim citizen.

The re-definition of architectural symbol –imitatively used as superfluous decoration- was explored in order to create a new architectural parlant that narrates a redefined spiritual space. Its tectonic language, transparency, externalised and public nature has been in reaction to a contextual requisite that finds permanence within its specific context. In this way, the architecture of the intervention does not necessarily confer sanctity upon its users; instead sanctity is conferred upon the architecture in its operation by its worshippers.

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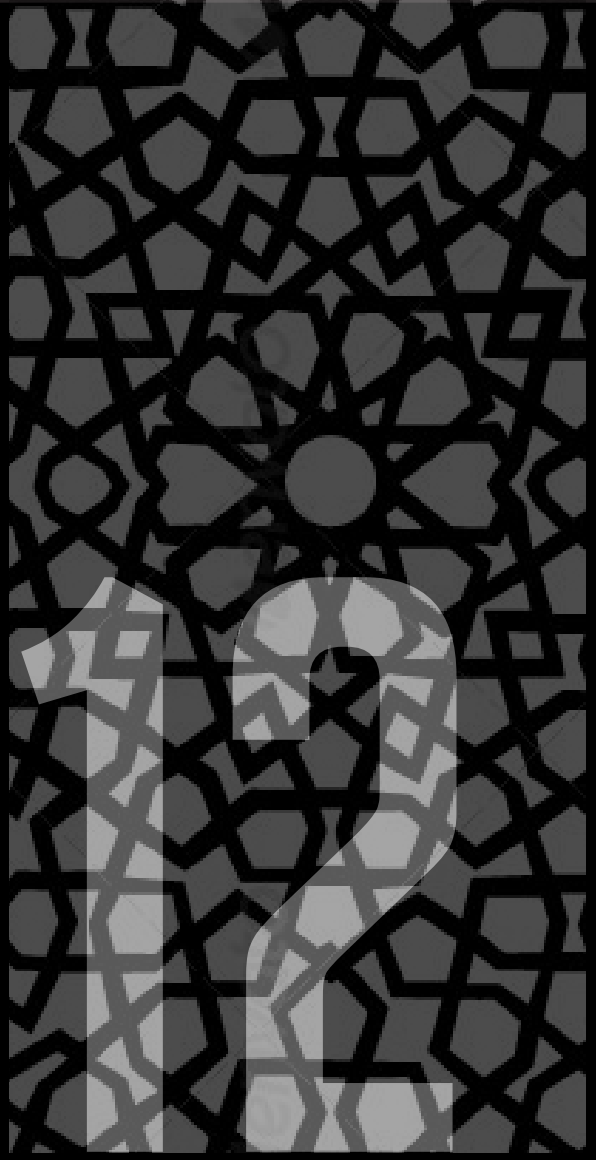

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RE-INTERPRETING THE TRADITIONAL MOSQUE

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It began as and continues to be an exciting personal journey of discovery, revealing the essence of my religion Islam, the culture I embrace, and its articulation into the built form I find myself within.

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For my mother
with whom many struggles were overcome

& for Ilhaam
my most “productive” distraction

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In accordance with Regulation 4[e] of the General Regulations [G.57] for dissertations and theses, I declare that this thesis, which is hereby submitted for the degree Master of Architecture [Professional] at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that not part of my thesis has already been, or is currently being submitted by me for a degree, diploma or and other qualification.

I further declare that this thesis is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

Naeem Adam

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STUDY LEADER
Derrick De Bruyn

COURSE COORDINATOR
Arthur Barker

RESEARCH FIELDS
Identity & Place

UNIVERSITY OF PRETORIA 2014

Submitted in partial fulfillment of the requirements for the degree: Master of Architecture (Professional) in the faculty of Engineering, Built Environment and Information Technology

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ABSTRACT

Islamic architecture is understood to have a distinct set of elements which emotively contribute to the divine logic of ritual and spiritual manifestation. This rationality, however, is imitative and has been boldly positioned within an unfamiliar context as a derivative of Arabian stimulus. Traditionally understood as a place welcoming to all people for matters extending beyond the religious, its circumstantial interpretation has had a profoundly negative influence on its newfound context, consequently acting as a deterrent for some. Its spatial proximity has fostered a sense of territorialism; its monumentalism has disconnected it from its urban milieu.

The consequential reassessment of the mosque typology is necessitated whereby contextual and cultural reasoning makes an impact on its form, identity and meaning within an unfamiliar urban framework. This new comprehension is proposed to foster a sense of Islamic Ubuntu amongst a unified diaspora given its vastly connected assembly within the urban locale.

The investigation aims to uncover an alternate process of choreographing a spiritual and emotive experience through contestation and subsequent redefinition. Instead of designing a religious edifice as an emblem of our own worldly inspiration, the inquiry seeks to spatially manifest the objective teachings of the divine scripture – the Holy Quran. Tangible and intangible mapping, along with a grounded theoretical outlook drives the study; the overall premise is based on a personal understanding and a life-long discovery of the religion in question.

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ملخص

ومن المفهوم العمارة الإسلامية لديها مجموعة متميزة من العناصر التي تسهم إلى المنطق الإلهي من مظاهر الطقوس والروحي . هذه العقلانية ، ومع ذلك، هو مقلد و تم وضع بجرأة ضمن سياق غير مألوف كما مشتق من التحفيز العربي.

يفهم تقليديا كمكان الترحيب لجميع الناس عن الأمور تتجاوز الدينية ، كان تفسيرها ظرفية لها تأثير سلبي عميق على السياق الجديد وجدت لها وبالتالي بوصفها رادعا للبعض. في القرب المكاني عزز شعور النزعة الإقليمية . وقد فصل لها من الوسط الحضري.

واستلزم إعادة تقييم يترتب على ذلك من حيث تصنيف مسجد السياقية والمنطق الثقافي يجعل له تأثير على شكله والهوية و المعنى ضمن إطار الحضري غير مألوف . ويقترح هذا الفهم الجديد ل تعزيز الشعور أوبونتو الإسلامية بين الشتات موحدة نظرا جمعيتها مرتبطة إلى حد كبير داخل لغة الحضرية.

ويهدف التحقيق إلى كشف عملية بديلة لل تصميم رقصة تجربة الروحية و العاطفية من خلال الطعن و إعادة تعريف لاحق . بدلا من تصميم الصرح الديني كشعار ل دينا إلهام الدنيوية الخاصة ، و يسعى إلى تحقيق اضح مكانيا تعاليم موضوعية من الكتاب المقدس - القرآن الكريم . خرائط المادي وغير المادي ،

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MOSQUE
/mosk/
noun

- a muslim house of worship.
- a building for Islamic religious activities and worship

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11.1 REFLECTION

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GLOSSARY

Quran: the central religious text of Islam, which Muslims believe to be a revelation from God. It is widely regarded as the finest piece of literature in the Arabic language.

Hadith: a collection of traditions containing sayings of the prophet Muhammad which, with accounts of his daily practice (the Sunna), constitute the major source of guidance for Muslims apart from the Quran.

Zakaat: payment made under Islamic law on certain kinds of property and used for charitable and religious purposes, one of the Five Pillars of Islam.

Ummah: the whole community of Muslims bound together by ties of religion

UnMosqued: not connected with a mosque or masjid, people who do not regularly attend masjid services.

Jamaat Khana: term used by various Muslim communities around the world to denote a place of gathering where prayer may be executed. Usually of an informal nature if compared to that of a Mosque

Masjid: Arabic term for a mosque.

The Five Pillars of Islam: the five basic acts in Islam, considered mandatory by believers and are the foundation of Muslim life. They include: faith, prayer, concern for the needy, self-purification and the pilgrimage.

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AUTHOR'S MANIFESTO

An architecture of place has the power to ennoble people. It may allow them to feel empowered, important and excited. An architecture of place contributes to healthy, comfortable, engaging and motivating spaces and destinations.

A place, however, should be differentiated from that of iconic space, iconic architecture and design, and objects acting in space.
The over-optimistic idea that a building may acquire a spiritual quality by how profoundly it represents the human aspiration concerned with grandeur and capability, not because it shows the glory of God is a cocky one. After all, how can a place built by ordinary human beings truly reflect the glory of an Almighty?

Large and monumental religious structures, objects of overwhelming grandeur-stylistically embellished with unnecessary decoration and superfluous symbolism, presupposed to create sacred and sanctified spaces do not- in my opinion- create an architecture of place.

Although temporarily admired, photographed and adorned upon, this short-lived admiration of architectural style is in many ways a system of "pigeonholing buildings and creating false and misleading distinctions".

The art museum has replaced the religious monument as we have conflated the aesthetic and the sacred. Since commercial skyscrapers have come to represent the cultural symbols of our time, we now design religious buildings as art museums and as emblems of our aspirations. We have- architecturally- chosen to be attracted to the beautiful rather than to the divine, and therefore to have our eyes and our hearts satisfied, instead of our souls. Instead of the architecture becoming the spectacle, can the revered act of worship in itself not become the exhibition?

It is rather arrogant to think that architecture can in itself create the sacred in the first place. I believe that the users of a building and their activities within it allow for architectural place-making. In other words, we confer the quality of sanctity upon spaces, where spaces do not by themselves confer sanctity upon us. However elaborate the building; the physical structure does not take precedence over the importance of the written word of the Holy Quran.

(Inspired by Paul Goldberger-Architecture Critic for The New Yorker)

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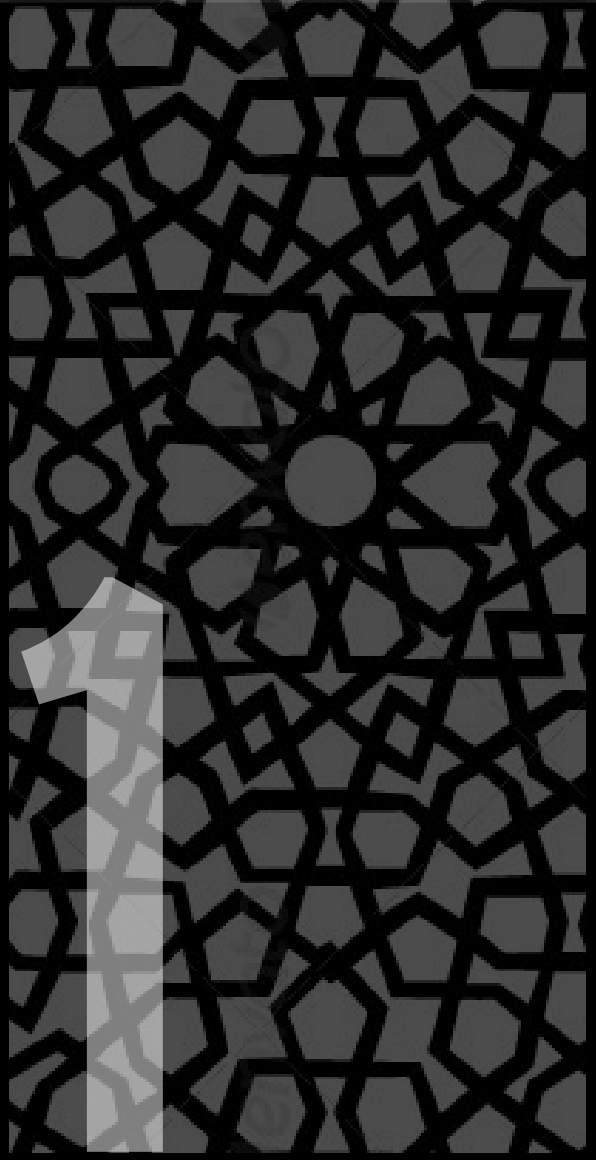

1

INTRODUCTION

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01.1 RE PURPOSING THE 21ST CENTURY MOSQUE

There have been many questions related to the idea of what constitutes Islamic Architecture- specifically the Mosque typology. Examined specifically within the culturally imbued context of vibrant Johannesburg, its sacred nature acts as a moment of reflection for Muslim worshippers within the chaos and eclecticism of the city. The contemporaneity and pluralistic nature of our society sparks interest and debate around the role, form and image of the Mosque- that which is purposefully the rather contentious prerogative of this dissertation.

FIGURE 01.01 RE-CONCEPTUALISING THE OLD AND NEW MOSQUE

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01.1.1 PROBLEM STATEMENT

Given the diaspora of different Islamic schools of thought, language barriers and cultural clashes; mosques have become territorial and somewhat exclusive to cultural divides. It is no longer the unifying factor which brings people together within the selfless act of worship.

01.1.2 THEORETICAL APPROACH

The predominant understanding is that Islamic architecture possesses a distinct set of architectural vocabulary that is unquestionable. The most consistent perception of Islamic architectural vocabulary is represented by the many community and monumental state mosques that make evident use of Middle Eastern or Central Asian architectural apparel as dutifully exemplified in its extravagant splendour as the Turkish Mosque in Midrand and the Tshwane Muslim School in Laudium.

This dissertation seeks to establish- through a new conception of Islamic architecture- that this notion of a consistent architectural vocabulary is not what Islamic architecture is merely about and is not objectively prescribed. It is through this dissertation that different forms and architectural vocabularies –concerned with cultural and contextually articulated space in response to technology, climate and social-political concerns- will be explored.

Also, the place of the woman within the religion of Islam has been that of a false and negative stereotype. Women are known to be inferior towards men within the religion, causing the spatial definition within mosques and other religious spaces to follow such trends. Objective research –within this dissertation- has shown that a clear distinction needs to be made between that of cultural and religious practice, spatially defining the role and importance of individuals within the built environment we find ourselves in.

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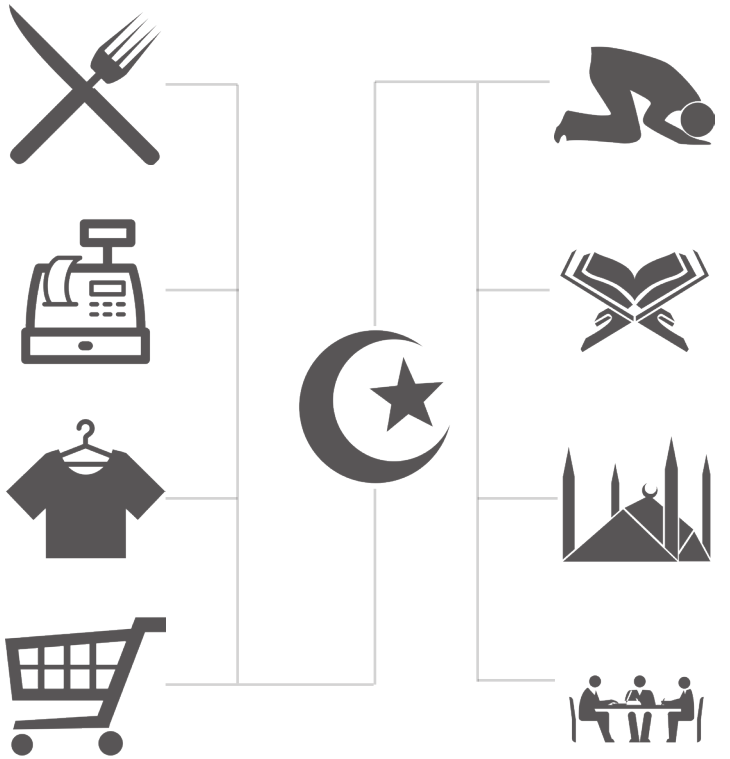

FIGURE 01.02 PROPOSED ECULAR & RELIGIOUS PROGRAMMING

0.1.1.3 PROPOSED PROGRAMME

Programatically, this dissertation explores the re-definition of the mosque and mall typology of the 21st century, and how the need for public and natural space may articulate itself within these typologies in order to produce productive environments which are socially, contextually and environmentally beneficial.

The mosque precinct therefore –in relation to the main project intention of re-linking the religious and the secular- proposes the restructuring of typical mosque-building tendencies and proposes the design of three mosque spaces providing different spatial intimacies, servicing worshippers at their different occupancies, during different religious periods of the day, month and year. These spaces aim to re-invent themselves as they are able to be re-programmed and used as a community hall, gathering space and Public Square.

This hybrid religious space imbues itself in close proximity to the secular as a gallery space looks directly into the main prayer space in order to publicise the religious practice of prostration,restaurants which will look out onto the public spaces, and retail shops which spill over onto the sidewalk. Liminal spaces allow for informal pop-up shops and markets to temporarily exist, adding to the hybridized nature of the informal and formal environments existing in unison upon the redeveloped site.

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01.2 CONTEXT AND SITE

01.2.1 SITE CHOICE AND LOCATION

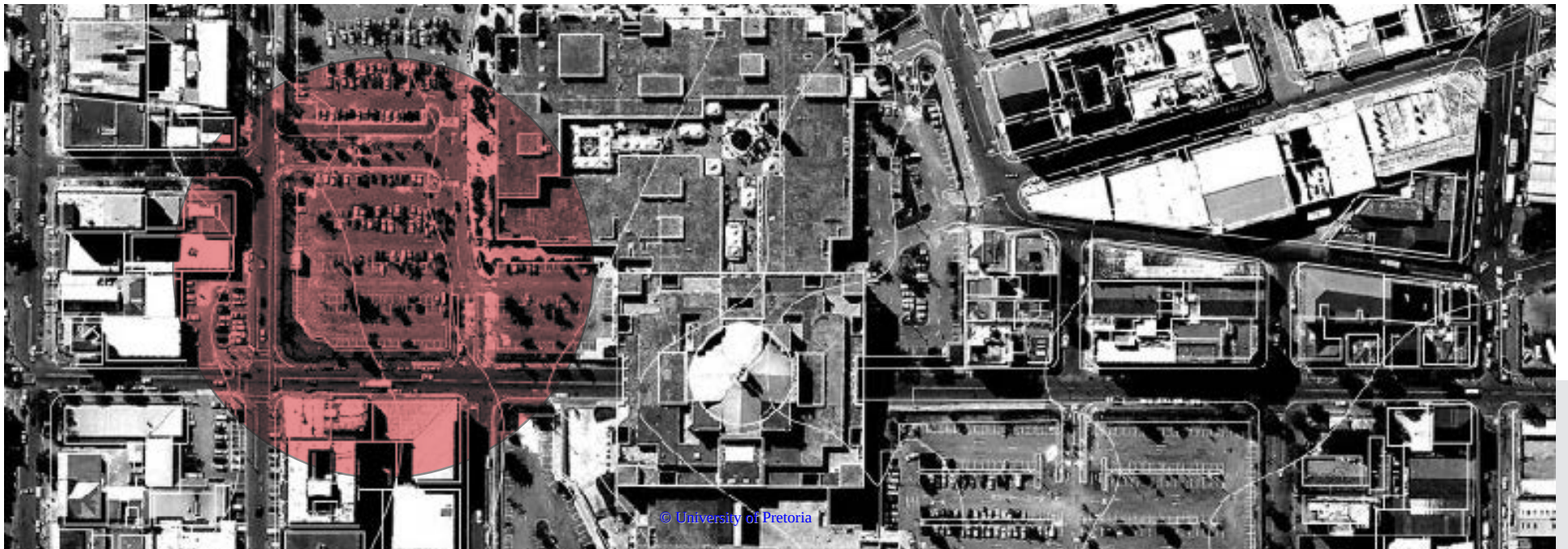
For the purpose of this dissertation, a site that lies within the urban core of Fordsburg, accessible by people from frequently used roads and in close proximity to retail facilities, the various cultural enclaves and numerous other religious anchor points was necessary in order for the development of a central Islamic precinct that aims to expand and gain popularity over time.

Nestled in a vast open-aired parking lot- the proposed site lies between the monumental and insular mall typology of the Oriental Plaza and the dynamic urban fabric of Fordsburg. It aims to play a vital role in creating a sustainable and walkable urban context which provides the resources necessary for its urban development.

01.2.2 URBAN CONTEXT

Chosen for its vast and varied cultural identity, the urban context exists as a gateway into the inner city of Johannesburg. Proposed as a unique cultural enclave which needs to be added to the Johannesburg tourist bus map, Fordsburg's rich history lends itself to the political struggle of a pre-democractic South Africa. An urban vision which encourages tourism and celebration within a larger context proposes Fordsburg to become an urban catalyst for the regeneration of the forgotten social and cultural heritage, reconnecting it with areas such as Mayfair, Newtown and Chinatown.

FIGURE 01.03 PROPOSED SITE IN CONTEXT



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01.3 ISSUES

01.3.1 SOCIAL ISSUE

Diasporic settlement amongst a multitude of cultures during various political and social epochs has created and shaped the formation of cultural enclaves. The development of the built-environment has sporadically formed in and around these enclaves, making mosques and infrastructure exclusive and territorial to cultural divides. Even though within close proximity, cultural groups have developed negative feelings and tendencies towards each other, causing friction within what could potentially be one unified and celebrated cultural enclave within the broader context of Johannesburg.

01.3.2 URBAN ISSUE

Mosques exist on the periphery of the urban core of Fordsburg, compelling restaurant and shop owners to construct smaller informal prayer facilities within their workplaces. This trend, along with the primary reliance of the motor vehicle, discourages people from praying the required five times a day, from creating s a sense of community amongst neighbours and colleagues, and from developing a physical connection with one's context in order to create safer and more habitable immediate environments.

0.1.3.3 ARCHITECTURAL ISSUE

The traditional approach of form-giving and supposed place-making primarily concerned with a presumed architectural vocabulary has -through case studies and examples within this document- proved to assume the Mosque as being fortified and insular in its stereotomic nature. Although making use of traditional (outdated) materials and methods of building, the use of the mosque has become exclusive and has become a mere monumentalised space used only for the act of prostration, locked up at times other than that of prayer.

FIGURE 01.04 ACTIVITY ANCHOR: FORDSBURG MARKET SQUARE

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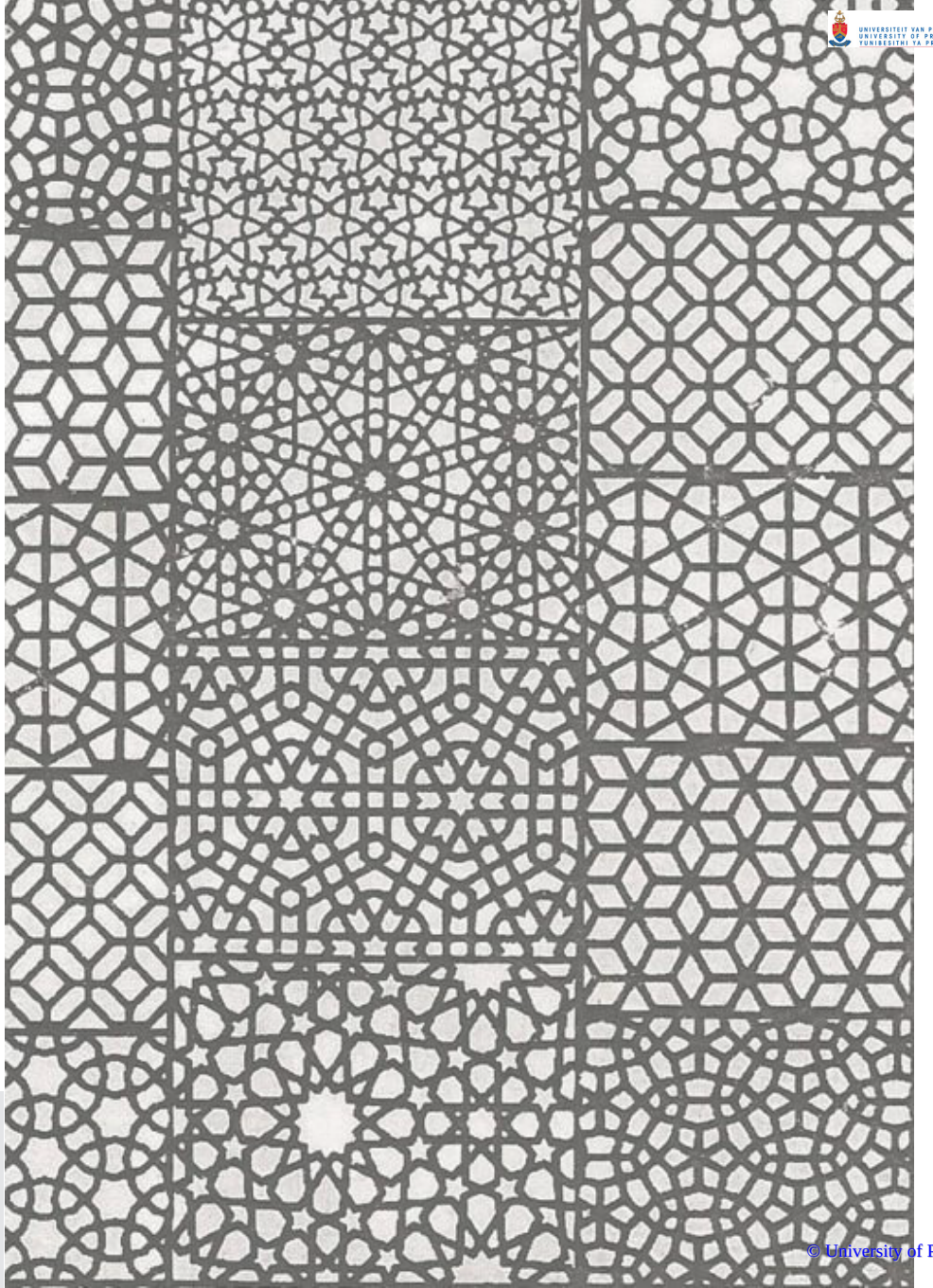

01.4 DISSERTATION CONCEPT

The concept of creating “third spaces” and “third/ alternate conditions” has been theoretically and spatially explored in order to fulfill the project intentions. Notions of cross-programming, hybridity and liminality have thus been explored in order to create a place (as opposed from a mere space) that mediates between the sacred and the profane, that fosters and creates new relationships amongst people and opposing cultures, and creates a centrally juxtaposed space for females within the community. The mosques existence as a solid and insular object within the landscape has been redefined as a sacred mediation space that exists within the profane workings of the urban core, allowing it to become cross-programmed, transparent and liminal in its newly conceptualized existence.

FIGURE 01.05 ISLAMIC PATTERN MAKING- A CONCEPTUAL EXPLORATION

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01.5 INFORMANTS

Conceptual informants and design generators have -through critical analyses and mapping- been explored by sketching, modelling and iteratively testing in order for the fulfillment of a theoretical, conceptual and project intention standpoint.

01.5.1 DESIGN GENERATORS:

•Theoretical premise- traditional pattern-making in Islam related to geometry and proportion

•Theoretical premise- female space and their place in the contemporary mosques

•Ritualistic transitioning- program and space allocation within and around the mosque

•Historical context of Fordsburg and the immediate site

•Physical context- restrictions and opportunities

•Existing fabric- democratic ownership restricting opportunity for intervention

01.5.2 CONCEPTUAL AND CONTEXTUAL RESPONSE:

•Defining a third condition between that of the existing conditions

•Geometric overlay- the 3rd religious grid juxtaposed over the contextual grid

•3 mosques of varying intimacy and usage

•Inversion of the minaret/dome

•Transparency of ritual of prayer

•Social and physical stitching of east and west, using the intervention as catalyst

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01.6 DISSERTATION INTENTIONS

01.6.1 GENERAL INTENTION

In order to foster unity amongst a diaspora and multitude of cultural groups, the re-linkage (existed within precedent) of secular life with that of religious life is envisioned. The blurring of boundaries between that of the sacred and that of the profane would break down emotional and physical barriers between these two poles as one may exist between either. Religion interweaves itself in the demanding life of the secular in order for moments of reverence, devotion and reflection to occur at the necessitated times of day.

01.6.2 URBAN INTENTION

As previously mentioned, the Fordsburg core is envisioned to become an urban catalyst for the regeneration of the forgotten social and cultural heritage, reconnecting it with areas such as Mayfair, Newtown and Chinatown. Its linkages -which does not give preference to the motor vehicle- encourages the pedestrianisation of city, aiming to create public space pulsating with formal and informal activity in relation to existing energies sporadically found on site. Historically inclined intentions of re-establishing memory and spatiality form part of the urban framework, premised on the creation of strong linkages between religious and memorial sites within the proximity.

01.6.3 ARCHITECTURAL INTENTION

Architecturally, a pedestrianized precinct that promotes public spatiality is aimed to find itself highly contextualized with existing pathways, formal and informal energies, along with existing buildings. Transparency of and liminality amongst space acts in opposition to monumentalisation and insularity of building, as-discussed within the architectural issue. The merge between secular and religious space assists in the de-monumentalisation of building type and integration within the context the intervention finds itself within.

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01.6.4 DISSERTATION VISION

The investigation is directed towards an exploration and subsequent redefinition of building-type which re-addresses Islam as a social religion performing as the heart of the community that it serves, transforming the insular typology into a hybrid building which- in its new outward nature- encourages its use as more than just a prayer facility, exploring alternative uses and functions in an attempt to blur the unmistakably evident boundaries of the sacred and the profane.

This blurring of opposing conditions is aimed- through its design- to accommodate and welcome all people in an attempt to successfully foster new-found relationships between those of contrasting schools of thought, religions and creeds.

01.6.5 DELIMITATIONS AND LIMITATIONS

This dissertation does not seek to disregard the value of symbols in Islamic architecture. It merely seeks to look beyond the superfluous and superficial use of symbolism as means for an aesthetically driven architecture.

It also does not aim to create a homogenous Islam which creates a hybrid culture amongst cultural groups, but merely intends to use the common thread –the religion of Islam- to act as a binder for the cultural groups in question to exist in unison.

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01.7 OUTLINE

01.7.1 STRUCTURE OF REPORT

CHAPTER 2: **Religious Utopia**
An overview on traditional common Islamic notions and methodologies that are objectively stated within the Holy Quran, as well as cultural practices within traditional Islamic communities. These notions and values were spatially defined where the
Masjid acted as more than just a prayer facility and place of worship.

CHAPTER 3: **Johannesburg as Religious Dystopia**
Defines the dystopian reality of the Masjid within the context
of Johannesburg, acting in stark contrast to that of the utopian ideals of the traditional mosque.

CHAPTER 4: **Site Analysis | Mapping | Identification**
Critical analyses of the tangible and intangible context in an
attempt to obtain suitable information for site selection and
appropriate programing in order to fulfil the project intentions.

CHAPTER 5: **Project Intentions**
In light of the above mentioned contextual issues, chapter 3 identifies key project intentions and spatial manifestations in order to rectify the dystopia in order to re-establish the key components of the traditional Mosque typology.

CHAPTER 6: **Urban Vision**
An exploration of a new cultural district that proposes to integrate Forsdburg with Newtown, Chinatown and Mayfair , building on the analysis of existing energies, contextual conditions and architectural potential. Three proposed frameworks of different scales consequently generate the parameters within which the proposed intervention will sit.

CHAPTER 7: **Typological Critique | Precedent Study**
Comprised of three categories of precedent studies:
Theory related precedent- abstraction of symbolism
Programmatic precedent- mosque as public space
Spatial precedent- allowance for men and women
Issue related precedent- the mall configuration

CHAPTER 8: **Concept | Theory**
Translation of the findings above into a concept appropriate
to theoretical underpinnings. These notions and ideas are translated into a number of conceptual scenarios that are weighed up according to the intentions previously outlined. The chapter also explores the main design generators and substantiates the decision-making within the theoretical, practical and contextual realms.

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CHAPTER 9: **Design Synthesis**
The building is discussed as an assimilated response to
theory, concept, programme and the hypothesis as outlined previously.

CHAPTER 10: **Technical Resolution**
Explorations of the technical assembly of the Islamic precinct as a result of theoretical and conceptual principles, together with contextual and sustainable underpinnings. The structural intention, materality and systemic responses are discussed with reference to iterative thermal and lighting tests undertaken in **Ecotect.**

CHAPTER 11: **Conclusion**

CHAPTER 12: **Bibliography**

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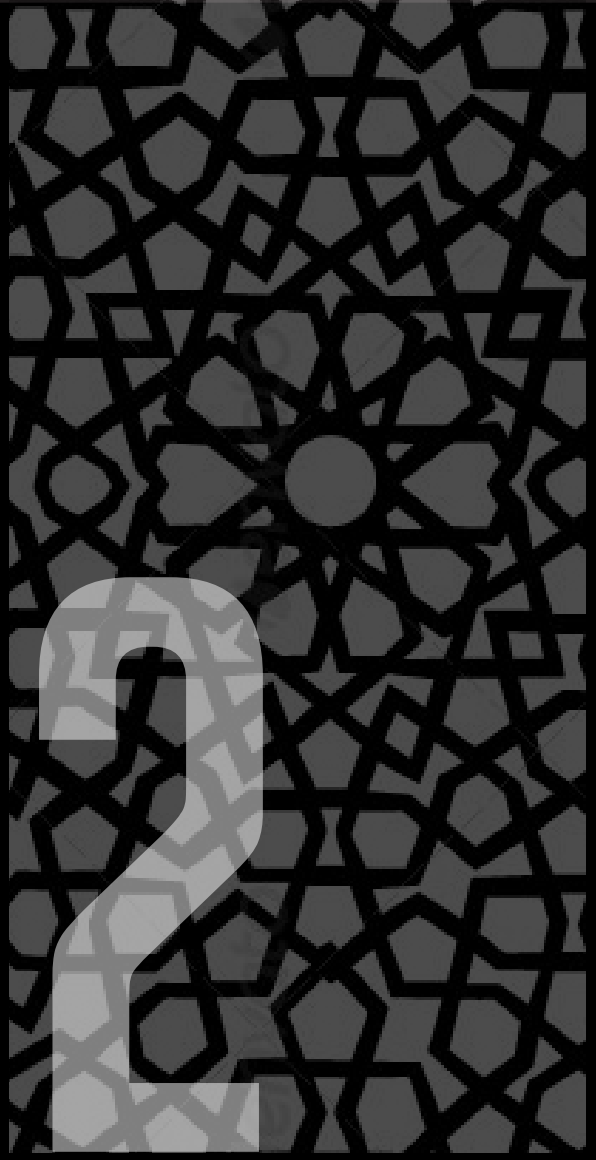

RELIGIOUS UTOPIA

An overview on traditional common Islamic notions and methodologies that are objectively stated within the Holy Quran, as well as cultural practices within traditional Islamic communities. These notions and values were spatially defined where the Masjid acted as more than just a prayer facility and place of worship.

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02.1 THE FAITH OF ISLAM

Born in the land of Arabia, Islam manifests itself into the life of its followers as more than just a religion, but as an overall way of life, supplicating for order, stability, composure and harmony (Chohan; 2010, 6).

The first and most significant principle of Islamic practice is TAWHID. Islam being a monotheistic religion, tawhid refers to the oneness with God. (Razak, 1973)

"SAY; HE IS ALLAH THE ONE. ALLAH THE ETERNAL ABSOLUTE. HE BEGETTETH NOT NOR IS HE BEGOTTEN. AND THERE IS NONE LIKE UNTO HIM"

02.2 ISLAMIC UBUNTU

The second principal of Islam is UMMAH; broadly defined as being the bond used to mean the diaspora or "Community of the Believers" (ummat al-mu'minin), and thus the whole Muslim world. This concept also refers to the importance of the community over the individual, very similar to the concept of 'Ubuntu' in local South African culture (Razak, 1973)

"AND HOLD FAST, ALL TOGETHER, BY THE ROPE WHICH ALLAH (STRETCHES OUT FOR YOU), AND BE NOT DIVIDED AMONG YOURSELVES; AND REMEMBER WITH GRATITUDE ALLAH'S FAVOUR ON YOU; FOR YE WERE ENEMIES AND HE JOINED YOUR HEARTS IN LOVE, SO THAT BY HIS GRACE, YE BECAME BRETHREN; AND YE WERE ON THE BRINK OF THE PIT OF FIRE, AND HE SAVED YOU FROM IT. THUS DOTH ALLAH MAKE HIS SIGNS CLEAR TO YOU: THAT YE MAY BE"
(Quran Chapter 03 Verse 103)

02.3 THE SUBMISSION TO THE WILL OF GOD

This third principle in Islam is the reason mosques were built in the first place. It is objectively prescribe within the Holy Quran that Muslims are to pray five times a day.

Foster argues that that architecture addresses our "metaphysical, philosophical and cultural identities within a material context" (Chohan; 2010: 7).

This metaphysical manifestation of complete submission to the will of the Creator is to take place amongst others within the Masjid. Razak (1973) states how the prescribed prayer times coincide with periods of the day when man would be involved in secular practices of satisfying his/her own needs.

"SEEK HELP IN PATIENCE AND PRAYER, AND TRULY IT IS HARD SAVE FOR THOSE HUMBLY SUBMISSIVE (TO THEIR LORD)"
(Quran Chapter 02 Verse 45)

FIGURE 02.01 CONGREGATION OF MUSLIMS IN PRAYER

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02.4 TRADITIONAL ROLE OF THE MASJID

Norwina (Nawawi, 2014) simply defines the Masjid as a space characterized by its spatial provision that is designed to accommodate a specific congregation with a particular orientation to qibla (the direction Muslims face when in engaged in prayer). These spaces usually include provisions for ablution, the call for prayer, sermons, meetings, discussions, learning and governance.

As mentioned above, daily prayers are performed five times a day, where congregational prayers - with a larger turnout- is performed every Friday and at other specific times of the year.

In all Muslim societies, the masjid is the most significant building in the community, providing a sense of identity and place for its people (Serageldin & Steele, 1995; 54)

Its central role in the city may be likened to that of the cathedral in Christian societies of the West, developed both as a landmark and congregation and gathering point, used for "communal meetings, court of justice, hall for official audiences, starting point for joint actions, shelter in case of danger or an ever open room for those who had nowhere to spend the night, or the treasure where precious valuables could be safely deposited in purpose built chambers, if somebody left for travels" (Prochazka 1986;35).

Its approach through narrow and dimly lit streets led to a sense of discovery, in stark contrast to the broad avenues and public places found in Western urbanism. Chohan (2010:8) states how a sense of spirituality was evoked by introverting the spatial focus in order to shut out the outside world, articulated by thick space-enclosing walls, narrow arcades, and high vaulted ceilings. It was frequently surrounded by densely packed buildings which were sometimes built onto its stereotomic structure.

The mosque acted as both a spiritual and secular space- not exclusively a place for prayer, but also a place where important matters of the community were discussed and resolved. Mahatma Ghandi and his people protested for their rights, burning their pass books in a struggle for democracy. The mosque acted as a platform for the community to partake in an ethical debate. Rasdi (2014, 8) defines the big city mosque having a firm hold over the political affairs of the empire, retaining their roles as an administrative center, a financial center, a courthouse, the place of official state audience, the place for religious celebrations and the center of learning. The mosque also acted as a social magnet where friendships and brotherhoods were formed. Its relationship with context allowed for its religious nature to be intertwined with the secular life of society, blurring boundaries between the two.

Norwina (Nawawi, 2014) states how the image of the Masjid has been evolutionised from its simple physical structure used for congregation, dissemination of information and state meetings to lofty and impersonal images of today's Masjid.

FIGURE 02.02 MUSLIM MAN ENGAGED IN PRAYER

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FIGURE 02.03 MUSLIM WOMEN ENGAGED IN CONGERGATIONAL PRAYER

FIGURE 02.04 MUSLIM GIRLS DRESSED IN HIJAAB

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02.5 WOMEN IN ISLAM

Nawawi (2014) states that a Muslim woman's participation in the Masjid is non-compulsory in Islam, however, if the women do undertake to pray in the Masjid, rewards will be in equal measure to men praying in the Masjid. Although, women should avoid wearing perfume, they should wear their hijab (coverings) properly to avoid fitnah (being framed unjustly and sexually).

The following extracts from the Holy Quran and Hadiths provides objective proof on permissibility of women attending the Masjid:

"Do not prevent your women from (going to) the mosques, though their houses are best for them"(Abu Dawud)

"If your women asks permission to go to the mosque at night, allow them"
(Narrated by Al-Bukhari)

"When the wife of one of you asks about going to the mosque, do not stop her"
(Narrated by Al-Bukhari)

"If any among your women asks permission to go to the mosque, don't stop her from going"
(Narrated by Al-Bukhari)

She also mentions how women with higher education and for economic reasons, more women find themselves contributors to the general workforce. Because of this, women travelling, working or attending events outside the home is common. Hence, there is a definitive need for prayers spaces for females who are prescribed to perform their five daily prayers whether on a journey, at work, or leisure.

Nawawi (2014) indicates that women and children form an important part of the community and are thus important users of the Masjid. It is for these reasons that space planning and design provisions should accommodate for their usage thereof.

Observations and personal use of these spaces suggest that the requirements provided are not consistent and frequently gender insensitive.

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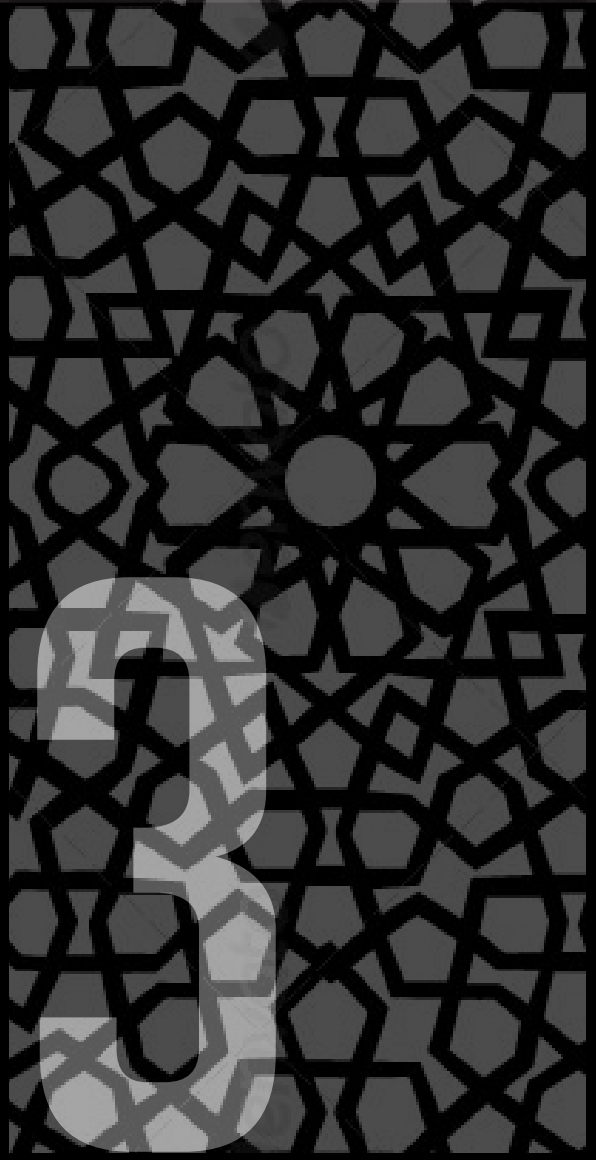

JOHANNESBURG AS RELIGIOUS DYSTOPIA

Defines the dystopian reality of the Masjid within the context of Johannesburg, acting in stark contrast to that of the utopian ideals of the traditional mosque.

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FIGURE 03.01 SPATIAL FOOTPRINT OF FORDSBURG, MATFAIR AND NEWTOWN WEST

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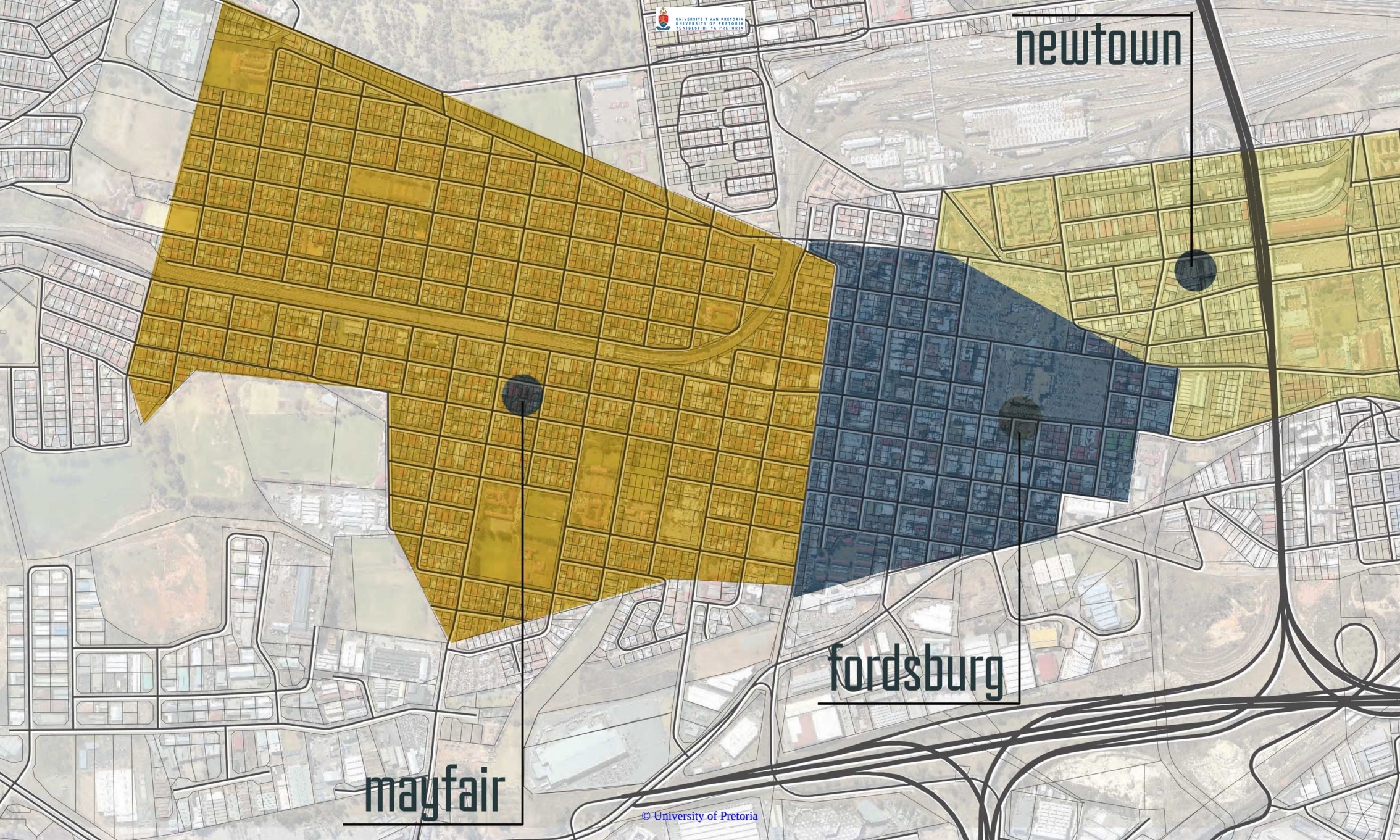

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03.1 HISTORY

1887- Indians moved to Brickfields/ Burghersdorp

1904- Destruction of homes for white economy, thus moved to Pageview because of the Group Areas Act

1934-1961-Overcrowding of Indians in Pageview caused an overflow in Fordsburg. Whites started moving into Mayfair.

1970's-Demolition of homes in Fordsburg for the erection of the Oriental Plaza; Indians slowly moved into Mayfair

1980's- Illegal and legal migration of Indians/Pakistanis/Bangladeshis moved into Fordsburg due to existing family networks and the anticipated demand for their services

1994- Democracy allowed for Somali refugees to flee their war torn country in order to seek refuge in Johannesburg. Sought mosque as totem and found homes close to Halaal butcheries.

Times Media, Africana Museum

n the Rand, like their
d by friends and rela-
were able to find and
mes.
k and Katerina's hus-

The Nicolaides brothers outside their Mayfair cafe, 1938. Like many immigrants, these men worked long and hard hours to establish their business. But as whites in South Africa, their chances were far better, and their livelihood far more secure, than that of William Bekiswayo in the picture opposite.

FIGURE 03.02 NEWSPAPER ARTICLE OF INDIAN SHOP OWNERS

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03.2 SEGREGATED DEVELOPMENT

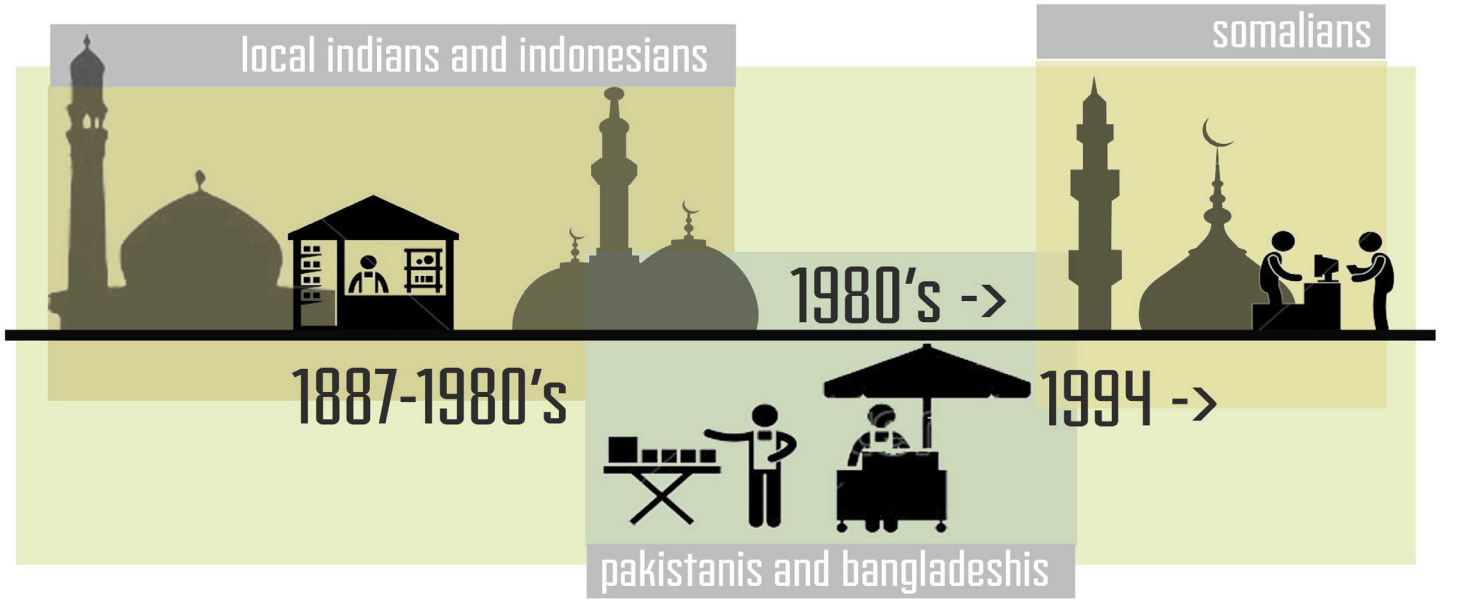

FIGURE 03.03 TIMELINE OF DIASPORIC SETTLEMENT

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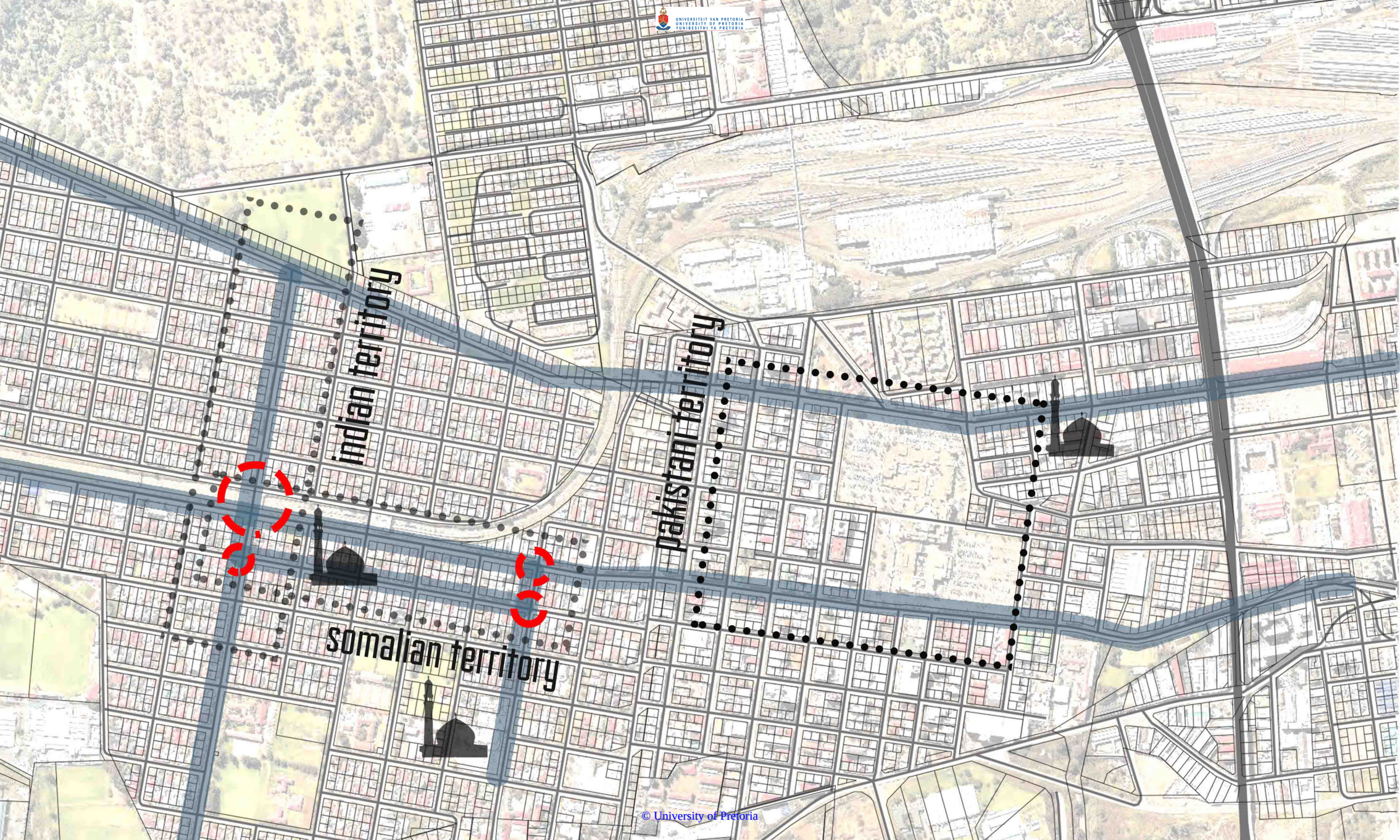

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Seedat, Dinatha & Patel (n.d.) state that the development of Islam within the confines of Johannesburg is not of a homogeneous nature but rather points to a heterogeneous community of Muslims.

Diasporic settlement therefore, given the above time-line, has caused for the formulation of cultural enclaves within which over time has created a social and spatial distinction servicing the three broad groupings of Muslims in Johannesburg within and between which this heterogeneity is expressed.

1. The majority being the established Muslims of Indian and Indonesian descent who settled due to strict implementation of the policy of apartheid.

2. The second being the migrant Pakistani and Bangladeshi community who began to illegally entrench themselves within Johannesburg before the advent of democracy as they possessed skills that may have been of interest to Indians and Indonesians.

3. The third being the refugee Somali community who- in search for the minaret as a totem and halaal butcheries for convenience-have rooted themselves strongly since the advent of democracy.

There is an evident social tension that exists as the distinctions between these 3 cultural groups – according to Seedat, Dinatha & Patel (n.d.)- this may be based on a variety of Islamic schools of jurisprudence and outlook, embedded as it is in the historical development of the religion; race and ethnicity, as well as the impact of social class relations.

Gender politics has added a further dynamic to the spatial layout of these cultural enclaves. It is however ironic that the three groups in question exist in a relative isolation, even though the same religious dogma is followed.

FIGURE 03.04 TERRETORIAL DEVELOPMENT OF FORDSBURG & MAYFAIR

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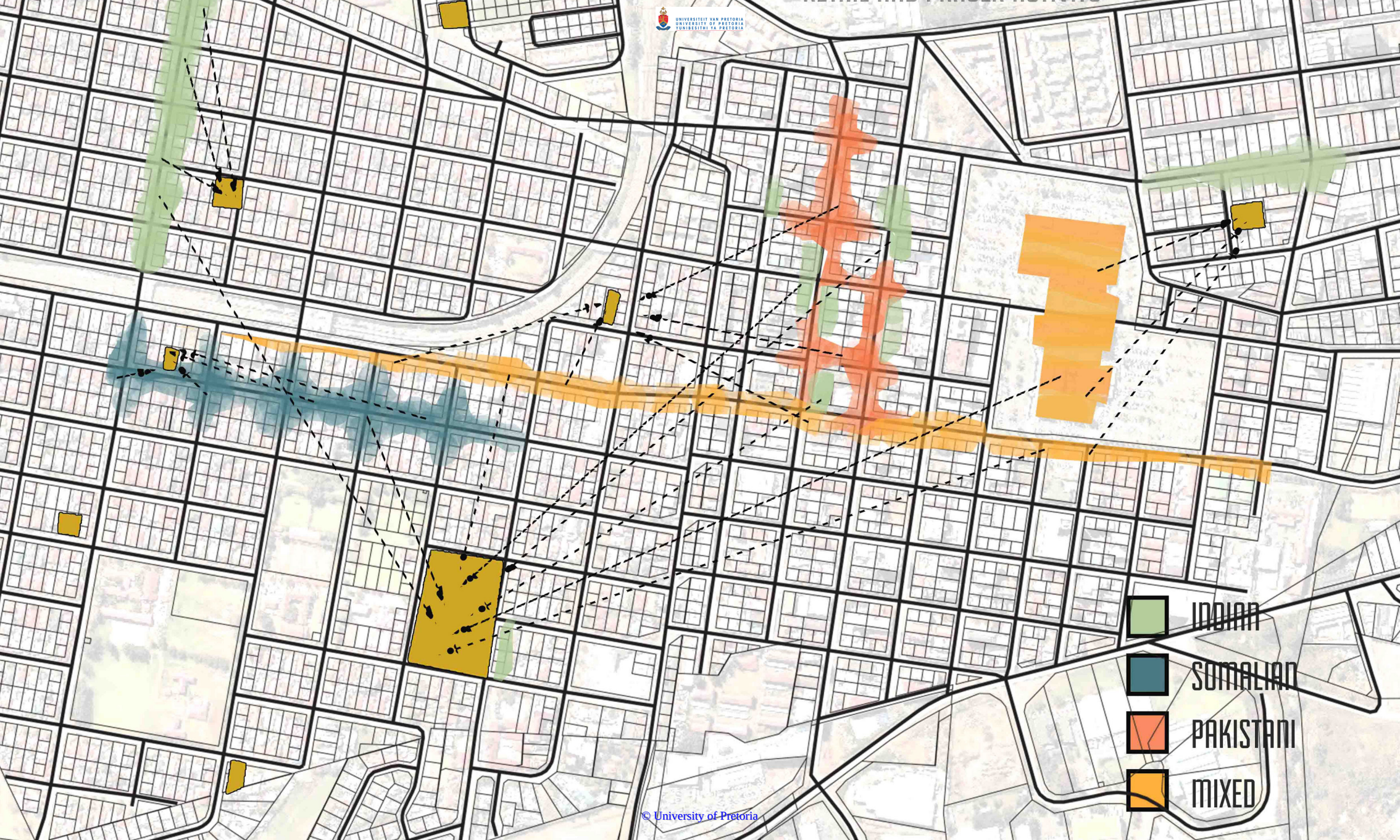

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03.3 CULTURAL ENCLAVES- RETAIL AND RELIGIOUS ACTIVITY

These cultural enclaves have been spatially defined as the erection of formal and informal infrastructure for retail and service provision cater for the specific cultural grouping- creating smaller cultural communities within a larger Muslim community. Sadouni (n.d., 2) mentions that pronounced pluralism in Johannesburg has led to the visibility of Islam where the erection of new religious institutions, the practice of religious events and festivals are also a result of a this creation of diverse territories marked by the settlement of the three migrant communities.

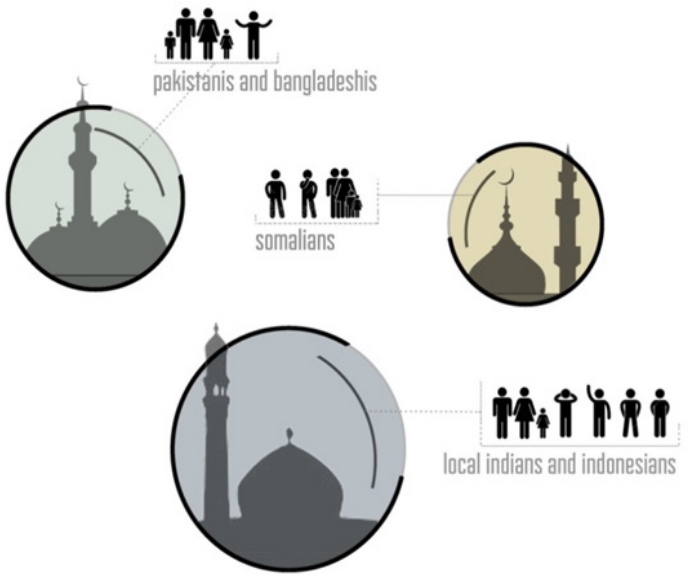

FIGURE 03.06 MOSQUE TERRETORIALISM OF CULTURAL GROUPINGS

03.4 TERRITORIALISM OF MOSQUE

Because of the social and cultural relations formulated because of cultural enclaves, mosques have become territorial whereby different cultural practices are performed and different languages are used.

This creation of spatially confined and socially insular pockets of Muslim communities' disregards the concept mosque being the uniting and binding factor amongst all Muslims. It has become territorial and no longer serves the community in all aspects of life- like it once did- (as in the initial example of Mahatma Ghandi).

This notion of exclusivity is further reinforced by Chohan's (2010;11) thoughts of the mosque being used exclusively by just Muslims as being unnatural for an architectural symbol of a religion that is notably welcoming and receptive.

Jahnmohamed (n.d., 2) states that those who have been seduced by violence or discrimination have not found it in mosques, but rather have been alienated and socially deterred from them. She poses a question and asks whether a well-designed, well-built and well implemented religious building could inspire minds and souls in positive ways?

FIGURE 03.05 CULTURAL ENCLAVE FORMATION, ACTIVITY & MOSQUE USAGE

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03.5 SIDE ENTRANCE- MISCONCEPTIONS ABOUT FEMALES IN ISLAM

The Holy Qur'an says:

"And the mosques are for Allah (Alone), so invoke not anyone along with Allah"
(72:18).

Mosques are commonly understood as the house of God, inviting to all those who seek to physically manifest their spirituality.

Women, however, have been sidelined and given secondary preference within the mosque. Spaces are specifically demarcated away from the men-folk, often not within an audible or visual distance from the imaan (priest). Women consequently feel a disconnection with mosques as they are spatially and emotionally segregated, secluded and unvoiced within a typology that is meant to be inviting and inclusive to all.

This unjust occurrence and insensitive spatial planning is of cultural practice and must not be conflated with the religious beliefs of Islam- causing misconceptions about the religion itself.

Precedent studies show that traditionally, men and women were allowed to pray in unison within the mosque space, only separated by hijaab (veil). Chapter eight elaborates on this.

Imam Bukhari makes mention that the Prophet Muhammad(pbuh) said:

"Do not forbid the mosques of Allah to the women of Allah."

"Why are there still mosques where there are incidents of women feeling so unwelcomed? Why does it feel like at some point or another, we're fighting for space?"
(huffingtonpost.com/imam-khalid, 2014)

FIGURE 03.07 FEMALES ENTER THROUGH SECONDARY ENTRANCE

FIGURE 03.08 MOSQUE DISPERSAL IN FORDSBURG & MAYFAIR

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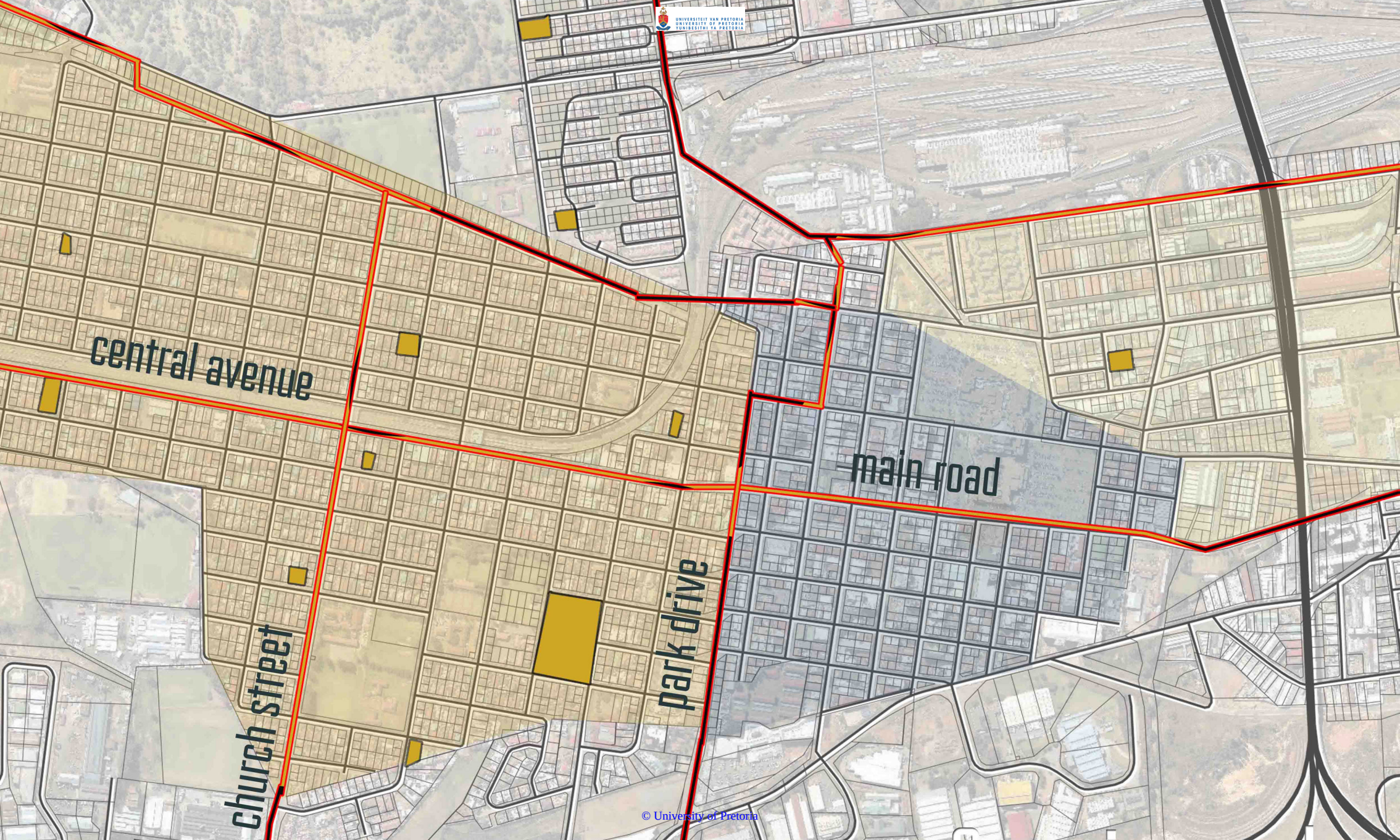

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03.6 AN URBAN INVESTIGATION

The Mosque was once “the anchor of the society and the center of the community. Unity of society is another fundamental of any Muslim community, where the division between the secular and religious life does not exist, and the mosque is a part of daily life embedded in society” (Razak, 1973).

The above definition, along with precedent show that the Mosque once acted as the central core of the city- out of which retail and public space grew. Islamic societies were not characterized by a division between religious and secular life since this division was “removed through the integration of all aspects of life into a sacred unity outside of which nothing exists” (Ardalan & Bakthiar: 1973;3). Urban planning took into account the daily ritual of the Muslim citizen and accommodated for all aspects of one’s life within a reachable distance.

“The splitting of society into two poles was a product of western thinking, a rejection of the Church and its hardline approach to science. Based on theories such as Darwin’s theory of evolution, atheist thinking developed. The Church was then no longer the center of the city, it became detached from everyday life, and man’s goal shifted from the achievement of paradise to the achievement of material success” (Razak, 1973).

Analysis has mapped the two main anchor points within the larger precinct of Fordsburg: The Oriental Plaza and Fordsburg square. These mappings, along with mosques within the precinct is indicate in figure 03.10.

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Mapping exercises have shown that there is a physical divide and disconnection between the anchor points -where energy and densities exist- and where Mosques are constructed. Because these Mosques are not within a favourable walking distance from these anchor points. (Lockerbie; 2014, 23) indicates how the lack of pedestrian contact- be it formally or informally- may lead to the destruction of social intercourse.

Conversely it is suggested that the more chances people have to meet as pedestrians, more opportunities are made in order for the development and continuation of relationships.

There has been a lack within one's spiritual state of being as people do not pray the prescribed 5 times a day. Religious life is thus divorced from the daily life of economy and retail.

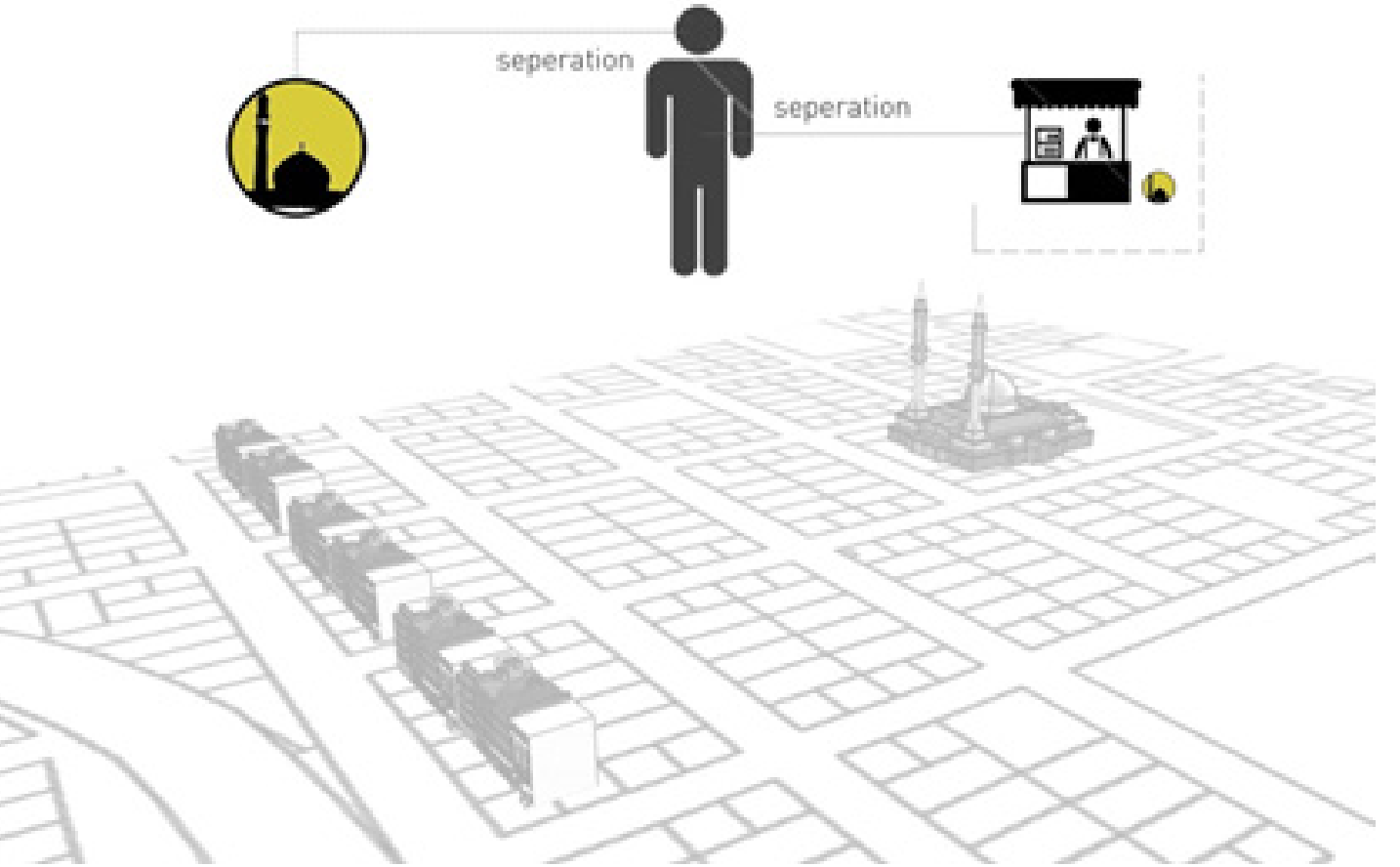

FIGURE 03.09 PHYSICAL SEPERATION BETWEEN RELIGIOUS AND SECULAR LIFE

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It has caused for – due to the religious requirement of physical prayer - the erection of small Jamaat Khana prayer facilities within restaurants and shops which service customers and shop owners.

The Jamaat Khana is a socially and spiritually unsustainable model for a prayer facility - it is therefore a 'drive-through' facility where its informality does not promote congregational prayer (as prescribed by the Quran and Hadith); it does not facilitate in creating social encounters- thus satisfying the notions of Ummah; it does not provide religious amenities such as cleansing facilities and prayer books, etc.

FIGURE 03.10 RELIGIOUS, SPIRITUAL AND RETAIL ANCHOR POINTS

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03.7 THE MOSQUE TYPOLOGY:

In its earlier manifestations – as mentioned above- the mosque acted as both a spiritual and secular space- not exclusively a place for prayer, but also a place where important matters of the community were discussed and resolved. Mahatma Ghandi and his people protested for their rights, burning their pass books in a struggle for democracy. The mosque acted as a platform for the community to partake in an ethical debate. In accordance with this, Serageldin and Steele mention how the role of the mosque has varied from time to time and from place to place. Its form, structure and overall appearance have reflected a similar evolution and variation.

This evolution and variation has however not always been to the benefit of the society. “Islamic societies were not characterized by a division between secular and religious life, rather this division was “removed through the integration of all aspects of life into a sacred unity outside of which nothing exists.” (Ardalan & Bakhtiar 1973; 3)”

This division exists within Fordsburg where there is a physical divide between the Mosque and its context, and a spiritual divide between the Mosque and its people.

The **islandification** and **lack of integration** of the mosque as it stands tall like a monument creates a sense of isolation within its context. The parking lot does not create rich urban environments to thrive around it as in historic examples. Catsnaps.org defines these stand-alone buildings as the experience of objects that are not dissimilar from sculpture; the production of conceptual work as opposed to contextual work which “melds into the physical fabric of the city… best enjoyed by those moving in and around” (Lockerbie, 2014).

FIGURE 03.11 ISLANDIFICATION OF MOSQUE WITHIN ITS CONTEXT

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Serageldin and Steele (1996) highlight the patterns and trends of mosque design and development. These are:

•“The emergence of the state mosque and the divorce of the massive public works structure from its social milieu”

•“The degree of success of novel modern architectural forms and their acceptance by the population.” Eg: Jummah Mosque Fordsburg

•”The visibility of mosques in the contemporary building environment, in spite of the emergence of other large modern structures, continues to underline their importance and impact as form givers in contemporary architectural language.” But are they performing the required role in developing new forms and new languages capable of enriching the architecture of other building types?

The primary use of the car- ignoring the pedestrian- inhibits the ritual of walking in congregation to prayer, meeting people on the way, getting a quick hot-dog at the Aunty around the corner, etc. This drive-through culture of religious manifestation defeats part of the purpose of the existence of the Mosque since “if a person comes to a Mosque and does not have one single conversation with anybody- what was the purpose at all?” (Spirit21.co.uk, 2014).

Its current use and design as just a prayer facility- in stark contrast to what the mosque previously accommodated for- which happens to be used to its capacity only on Fridays for mass Jummah congregation- does not allow it to fulfill the role of being the heart of the town. It does not cater for more than the basic prayer needs of the *ummah*. Jahnmohamed indicates that this single programmed monument lacks in confidence, is constrained by lack of time, resources and vision (Janmohamed, n.d.).

FIGURE 03.12 RELIANCE ON MOTOR VEHICLE

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FIGURE 03.13 FORTIFIED EDGE CONDITION OF TYPICAL MOSQUE

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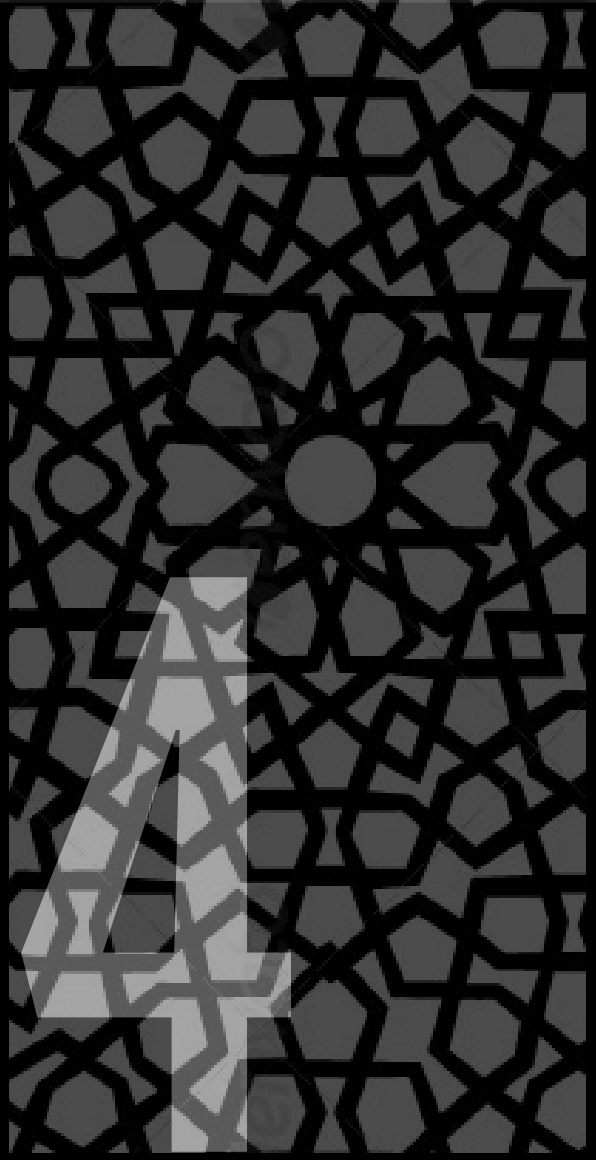

SITE ANALYSIS & IDENTIFICATION

Critical analyses of the tangible and intangible context in an attempt to obtain suitable information for site selection and appropriate programing in order to fulfil the project intentions.

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“Fordsburg reveals itself as a palimpsest in a field of memory. There are silent memories, those places which are still extant but whose great historical value has been largely forgotten. There are memories whose voices can still be heard. They speak of the disembodiment of the Fordsburg fabric and other areas and their re-manifestation into the Oriental Plaza. Then there are lost memories, urban fabric and everyday life destroyed by systems of demolition and separation. In all of this is celebrated memory, held together by a collective culture, which permeates beyond socio-political and spatial polarities.”

(Toffah; 2008, 10)

Figure 3 Johannesburg 1897 Source: Beavon K, Johannesburg: The Making and Shaping of the City, University of South Africa Press, Pretoria, 2004.

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FIGURE 04.01 JOHANNESBURG 1897

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04.1 CITY OF GOLD: WORKHOUSE TO MIXED USE

FIGURE 04.02 ROW HOUSING IN VREDEDORP, SIMILAR HOUSING FOUND IN NORTHERN FORDSBURG

Fordsburg itself was established in 1888, along with areas such as Mayfair, Industria, Crown Mines, Consolidated Main Reef Mines, Newclare and Sophiatown, upon which the first Main Reef –Langlaagte farm- was found (Leyds: 1964). The name was derived from its founder Lewis Peter Ford, a Transvaal Attorney-General under the Shepstone administration involved in gold-mining transactions from the earliest days of the Witwatersrand. (Toffah;2008,12)

In its earliest days, land in Fordsburg could not legally be sold or even given away as potential buyers feared that they would be drowned in the Fordsburg Dip, a dangerous swamp at the time, still evident today in the contour levels that converge on the South eastern edge of Fordsburg in the region of what was the Fordsburg Spruit. (Toffah;2008,12)

Fordsburg, like many other suburbs in Johannesburg at the time, housed mineworkers employed at surrounding gold mines within the rapidly developing area of Langlaagte. Even though countless South African mineworkers had settled within the area, lack of sufficient manpower called for the import of workers from England, Ireland and Australia (Toffah;2008,14).

Pubs and hotels rapidly sprung up all around the suburb, serving a boisterous nightlife to the predominantly male society of Fordsburg and Johannesburg at the time (Norwich; n.d.,1986). By 1893 Fordsburg formed part of the Johannesburg municipal area allowing land to be sold and rented as both dwelling and business. No restrictions were put in place preventive buyers to use their plots for both residential and business purposes, allowing shopkeepers to live in rooms behind their workplace (Toffah;2008,14).

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Times Media, Africana Museum

...n the Rand, like their
...d by friends and rela-
... were able to find and
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...k and Katerina's hus-
...es at low rents. After

The Nicolaides brothers outside their Mayfair cafe, 1938. Like many immigrants, these men worked long and hard hours to establish their business. But as whites in South Africa, their chances were far better, and their livelihood far more secure, than that of William Bekiswayo in the picture opposite.

FIGURE 04.03 MAYFAIR TRADERS

04.2 PEOPLE, PLACE, POLITICS: ROOTING AND UPROOTING OF PROPERTY

1885 called for apartheid ownership laws which prohibited Indians from owning any property in areas not set aside for them. The non-white population of Johannesburg were consequently concentrated in three 'locations' derogatorily termed as the 'Coolie Location', the 'Kafir Location' and the 'Malay Location' (Carrim; n.d.,1990).

The 'Coolie Location' –established in 1887- was situated in present-day Newtown. The dilapidated area lacked proper roads, adequate and comfortable access to electricity and sanitation, and although the population drastically increased, its infrastructure did not grow simultaneously. Overcrowding and improper living conditions led to a severe outbreak of a bubonic plague. In reaction to this crisis, the Town Council burnt the Indian Location to the ground at the end of March 1904. The entire population was consequently uprooted and moved to an emergency camp near the sewerage works at Klipspruit, 30km south of Johannesburg (Carrim; n.d.,1990) .

The location was then redeveloped as a commercial area and named 'Newtown'. By July 1904, many of the inhabitants who were previously evacuated from the Indian Location started moving back into the urban centre while others chose to seek refuge in the 'Malay Location', where Pageview exists today, as it was one of the very few residential areas available for legal 'non-white' occupation within Johannesburg (Toffah;2008, 11).

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The Asiatic Land Tenure Act was introduced in 1932, having severe implications for non-white citizens. Provisions of the Act meant that all non-whites who owned business that existed outside of the designated areas were to be forcefully closed and sold to white people (Toffa 16).

Community leaders of the Transvaal Indian Congress applied pressure and intervention pleading that areas such as Denver, Fordsburg and Jeppe were exempt in terms of the discriminating Act. (Essop: 2002) The exemption of these areas were further influenced by the fact that Indians in Fordsburg were beginning to firmly establish themselves, creating an identify within the area. The existence of amenities and infrastructure such as schools, social halls, prayer facilities, cinemas, Indian trading and living spaces were evidence thereof.

The Johannesburg Indian Government School, also known as the Bree Street Indian Government School ('BIGS'), located on the corner of Bree and Malherbe Streets, was built in 1914 and still exists today.

These amenities serviced residents of Fordsburg and Pageview which by the 1960s was predominantly Indian owned (Tofah 16).

The implementation of the Group Areas legislation of the 1970s was a means by which the Nationalist government intended for stricter separation of all race groups, resulting in the demolition and forced removals of all non-white residents from Pageview. The Johannesburg City Council proposed that Burghersdorp then be set aside for Indians. It was also then proposed that part of Fordsburg and Newtown should be allocated to the Indian community, along with the township of Lenasia on the southwest edge of the municipal boundary, 32 kilometres south of Johannesburg (Tofah 16).

Fordsburg now exists as a melting pot of mostly foreign inhabitants who sought refuge in an area fully established with halaal (permissible to consume) eateries and butcheries, religious infrastructure, and a bustling neighbourhood diverse in its nature.

FIGURE 04.04 ROUTE TO NEWTOWN MOSQUE

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04.3 FORDSBURG IDENTITY

Main Road and Mint Street function as the major external hives of activity within Fordsburg. Street level activity comprises of a diverse range of commercial, formal and informal retail trade, all spilling onto the pavements, giving the area a unique character and sense of place. The area comprises of eastern and western-driven retail stores, restaurants, coffee shops, ice cream parlours, hairdressers and various CD and DVD stalls endorsing Eastern and Western cinema and entertainment.

Much of the retail in Fordsburg serves local residents who reside in the area whereas specialty shops draw a dynamic customer base from the broader city fabric of Johannesburg and Pretoria. The Mint Road strip is is characterized by Indian and Pakistani restaurants which also attract a diverse clientele all in search for an authentic Eastern experience. Toffah (2008,20) indicates how Fordsburg Square, 'The Square' as referred to by local residents, is one of the few places in Johannesburg where a diversity of people engage in the public life of the city after hours. Together with the vast array of restaurants and shops, the market can attract up to 2000 people on a Saturday evening, all in the hopes of experiencing the unique sights, sounds and aromas of the area. Its vibrant energy is the result of the multitude of activities such as eating, sleeping, working, praying and playing occurring simultaneously and in close proximity to each other (Toffah;2008,20).

FIGURE 04.05 VIBRANCY OF FORSBURG MARKET SQUARE

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04.4 CONTEXT MAPPING

04.4.1 HERITAGE AND RELIGIOUS

Fordsburg and its surrounding context exists amongst an abundance of historical and monumental buildings and sites which speak of the political and social influences enforced upon by unjust legislation, and its consequent reaction thereof.

These buildings have defined the spatial footprint of muslims and other religious groups who have -at some time or another- found solitude within the context. Although some are underused or lay dormant, these structures have signinifantly added to the rich and vibrant context of Fordsburg and Mayfair. In order for the critical understanding and analysis, important buildings have thus been mapped.

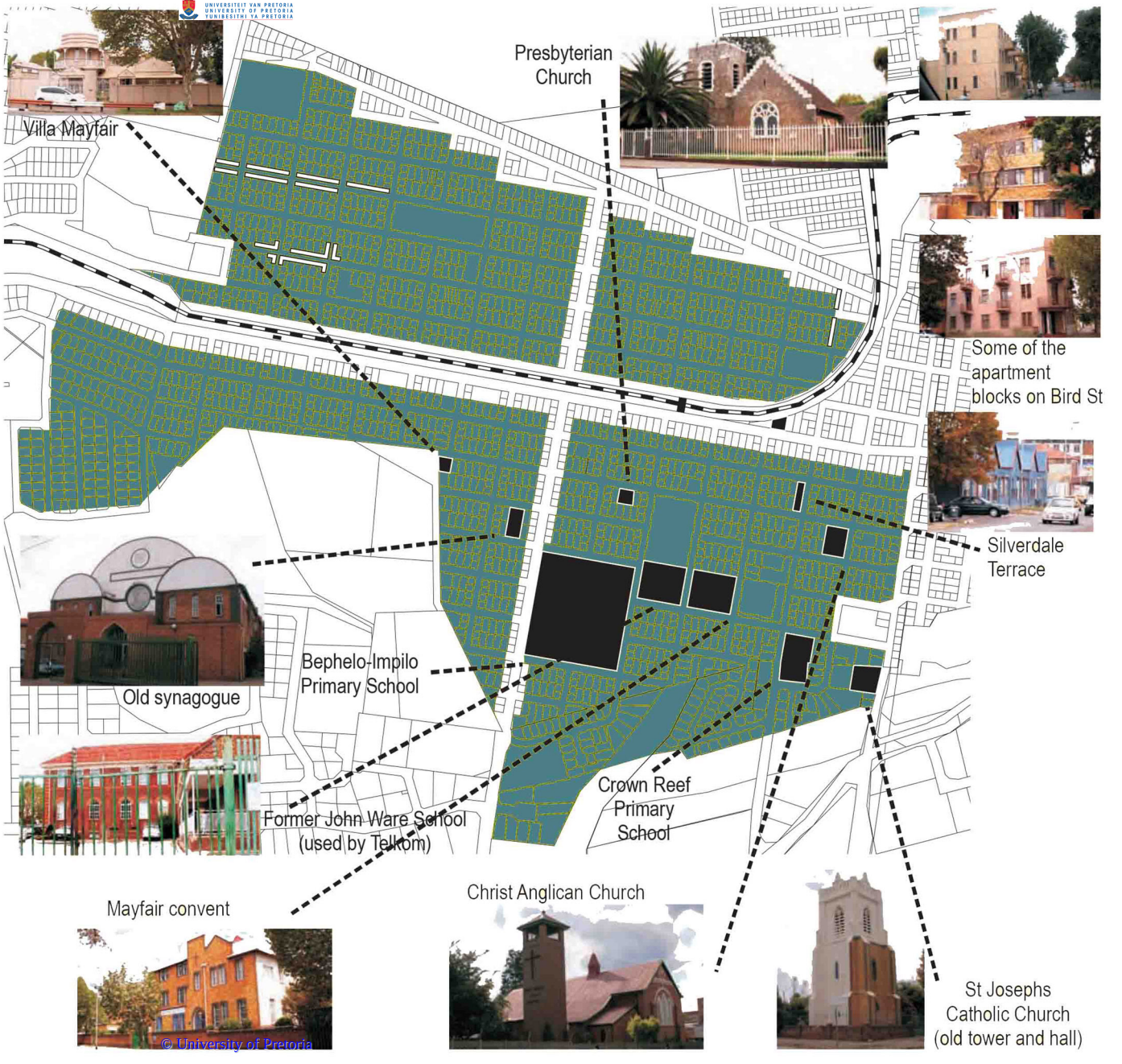

FIGURE 04.06 INTERNAL COURYARD OF ORIENTAL PLAZA

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Railway Institute

Railway compound
(declare provincial heritage site)

Premier Milling
(facade)

Price's Candle Factory
(facade)

Jennings St
Mosque

Housing stock

Joburg Indian
School

Bata Building

Octavia Hills

John Ware /
Fordsburg Park

Gundelfinger
Warehouse

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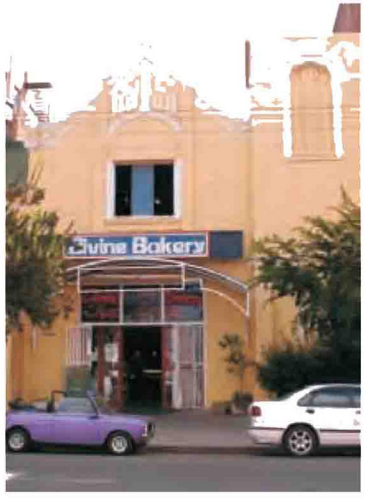
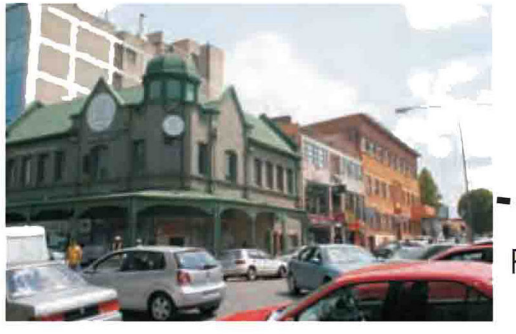
Divine Bakery
(formerly Presbyterian Church)



Fordsburg Post Office

VEKA Building

Maronite Church



Roses Building

Lyric, Avalon cinema, Central Road

Fordsburg Square & Public convenience

Orient Hotel (former Sacks Hotel)

Mijnpacht Hotel

© University of Pretoria

FIGURE 04.07 INFORMAL RETAIL AT FORDSBURG MARKET SQUARE

04.4.2 INTERVIEWS

Interviews were conducted with shop owners, workers and iresidents of local and foreign descent.

Conclusions derived from this quantitative approach have shown that entrepreneurship is abundant. There is also a common trend whereby men either pray within their shops or attend mosques of cultural affiliation predominantly for compulsory Friday prayers.

There is very little provision made for women within certain mosques. They are consequently forced to pray within their shops or wait until the end of the day to pray when at home. This architectural insensitivity stems from the social misconception that a woman is inferior to man. This notion is however not true as the holy Quraan objectively states that “When the wife of one of you asks about going to the mosque, do not stop her”

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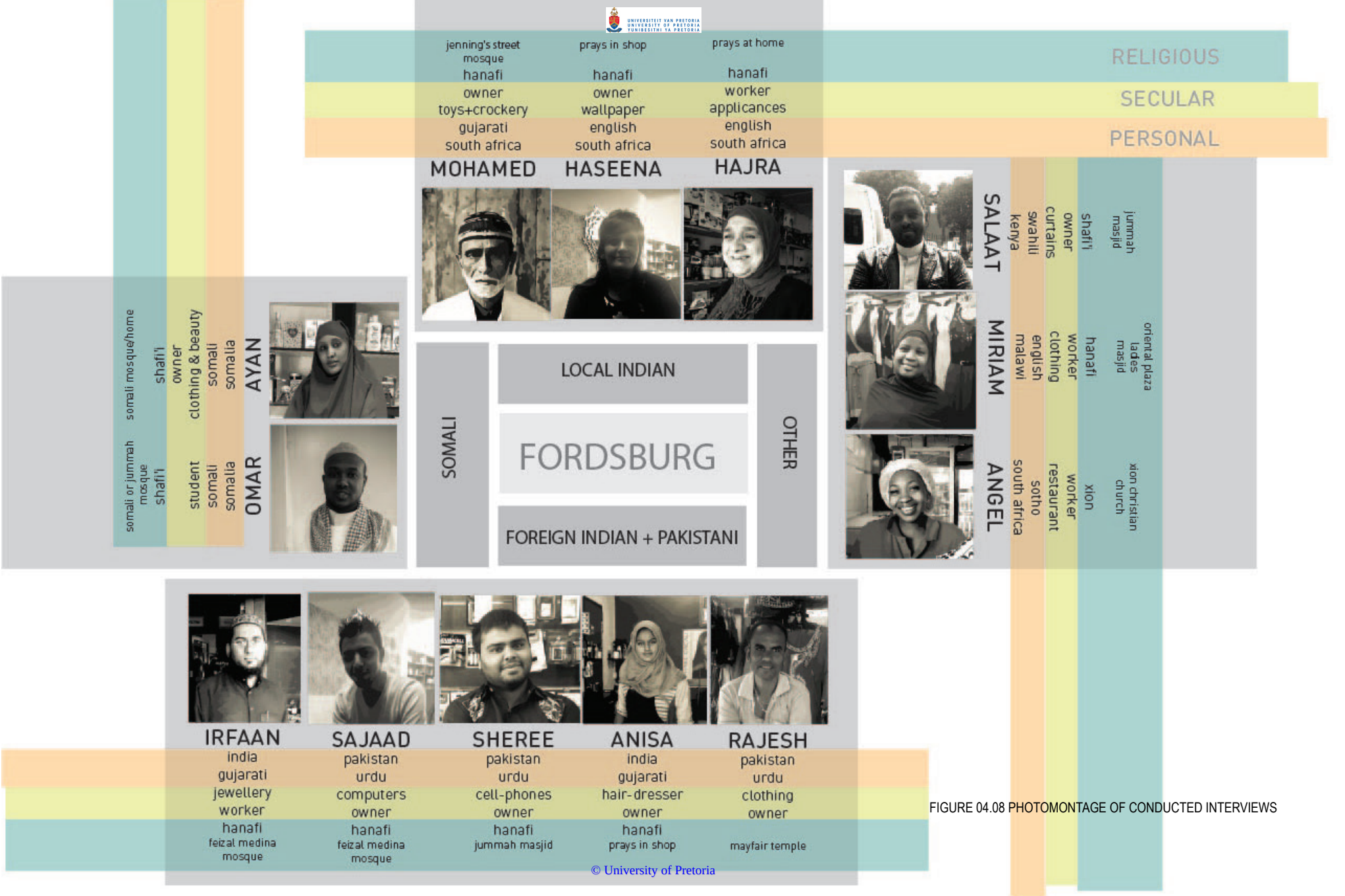

FIGURE 04.08 PHOTOMONTAGE OF CONDUCTED INTERVIEWS

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04.4.3 HISTORY AND HERITAGE

Mr Ebrahim Moosa outside his corner shop dwarfed by the beginnings of Johannesburg's new Oriental Plaza shopping complex.

Staff Reporter

NEXT MONTH Mr Ebrahim Moosa says goodbye to a way of life, moves 20 metres to begin a new one.

He's swopping his crumbling corner shop for a smart new kiosk in Johannesburg's new Oriental Plaza — and leaving his rent fate the bargain.

"This place has been good to me. I've been here 18 years. It's part of me really."

Mr Moosa, 46, is the landlord of many of the shops in Mayfair West.

(Interior of his pre-fabricated structure.)

MEMORIES

"On June 23 he'll close the door, locking up a host of memories. "There's a school near here and many of the children grew up with me," he said.

"There used to be 2 000 children now there are only about 400. You see the houses are coming down round here and most of the people going out to Lenasia."

Mr Moosa said his business — in Mayfair West Street, Fordsburg — has fed and clothed his family, his wife Fatima, 38, and two children, aged 17 and 13.

"I used to net R150 a month but this last years ago they started pulling up this Plaza and business came up a little bit. I get R300 net now," said Mr Moosa.

EXCITED

He pays R30 a month rent. His new kiosk — he's already proudly painting words advertising his wide range of goods — will cost him for the first year R15 a month.

On July 3 he'll open up. "I'm very excited about it," he said, "maybe it is time to change. It's been good here — but hard. I open seven days a week, 6 am to 8 pm."

His wife nodded in agreement. "Yes, she said, "it's time to go." Mr Moosa's kiosk will form part of the unique shopping complex which when fully completed will have over 100 outlets, will be bigger than the Carlton shopping centre and will house 300 shops in an area covering 14 city blocks.

FIGURE 04.09 NEWSPAPER ARTICLE ON FORDSBURG EVICTIONS

THE ORIENTAL PLAZA :
ASIAN CITADEL

The Oriental Plaza shopping centre was established as a segregated commercial shopping centre by the apartheid government in 1974 (Toffah; 2008,17).

Its construction was due to a direct consequence of the forced removals of apartheid legacy. Toffah suggests that some interpret it as a means by which Indian trading could be more strictly controlled by white leaders, but most agree that its construction was a political tool aimed to satisfy the needs of a middle class white consumer market, simultaneously creating a tourist attraction that sours into the Johannesburg skyline.

Interviews with local shop owners involve the notion that the primary intention for the demolition of livelihoods and the subsequent erection of the Oriental Plaza was ultimately for the eradication of the threat of Indian trading.

The extract below is from Architect and Builder, February 1975, Vol 25
No 2 pg 8:

"Symbolically, the centre was seen as an Asian Citadel - an Indian Oasis surrounded by the White business areas - within which there existed, for the Asian trader, a world offering him economic security." The article in the Architect and Builder goes on to further justify the complete introversion of the Plaza by saying that "care was taken to prevent perforating the external wall, by introducing cross ventilation and daylight to shops through clerestory windows, dropped slabs and skylights."

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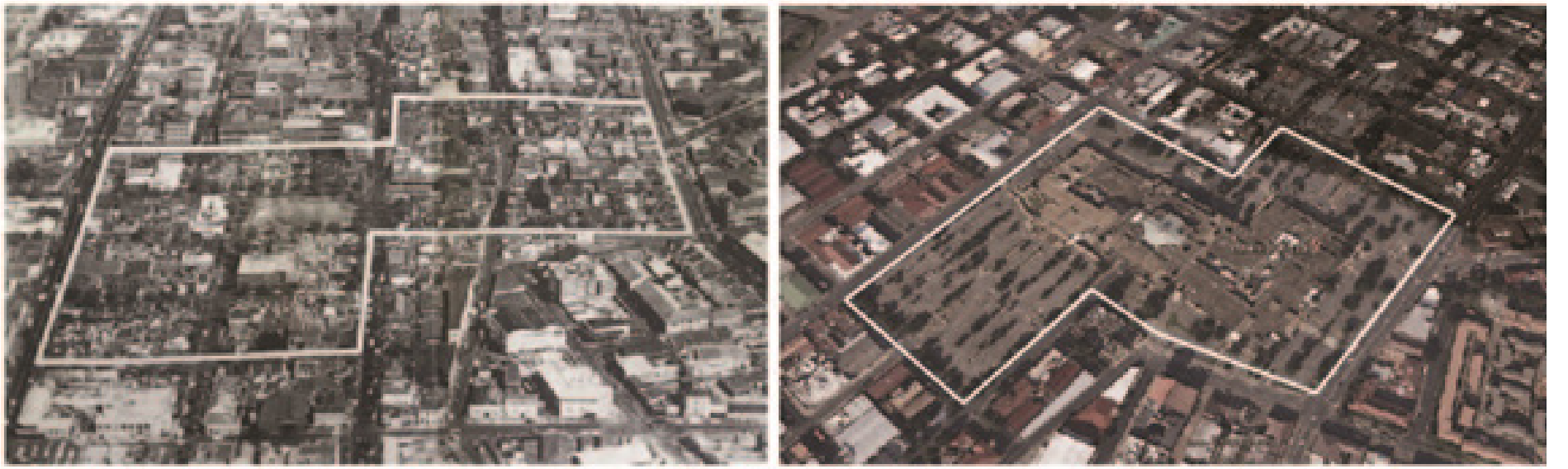

FIGURE 04.10 SPATIAL CHANGE AS RESULT OF EVICTIONS

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The construction of the Oriental Plaza has created a buffer zone between Newtown West and Fordsburg. Its Grand Bazaar in particular has created a gradient dip, a tunnel constructed for the movement of cars beneath the building, consequently severing the east-west connection on the Avenue Road corridor.

Apart from this physical disconnection it has caused within its surroundings, it also erased a significant public space as the Grand Bazaar occupies the site of a historic public square, Red Square, as it was known by locals, was a popular public space where family was brought together, people congregated, and political activism took place, hosting speakers such as Mahatma Ghandi and Alan Patin (Toffah; 2008).

The proposal to re-establish red-square in order to create an important multi-use space is intended. The reinstated public space erased through commercialization, is intended to reclaim the public nature of the inner city, pedestrianizing and welcoming people of all creeds to come

together and to congregate for recreation, prayer or protest. Its placement within the core of Fordsburg would act as a catalyst for the urban re-generation of underused and underdeveloped parts of Fordsburg and Newtown while its close proximity to the abundance of local retail and trade facilities would significantly increase sales, incentivising owners to expand.

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FIGURE 04.11FORDSBURG BEFORE UNDEMOCRATIC DEMOLITION- HIGHLIGHTING RED SQUARE

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04.4.4 EXISTING FABRIC

DEMOCRATIC OWNERSHIP OF THE ORIENTAL PLAZA

A unique aspect differentiating the Oriental Plaza from its mall-like counterparts is its ownership. Its development proved to be an unprofitable investment and in 1896, the Department of Community Development advised the Oriental Plaza Merchants Association of its intention to sell the Oriental Plaza to interested negotiators. The Association did not take this decision without difficulty, and after months of negotiations and high level political intervention, the Oriental Plaza was consequently sold to the existing traders on a sectional title basis. It is now the one of the only shopping centres in South Africa owned by its tenants who each pays a monthly levy to the body corporate for management, maintenance and security within and around the building. (Toffah; 2008, 51)

Because of the sectional title ownership, previous attempts at architectural intervention within the Oriental Plaza have been unsuccessful. Proposals would have to benefit both the grand bazaar, together with the north and south mall.

This would call for an impossibly large intervention which would not only render itself as spatially detrimental to the existing architectural character and fabric, but would also need to be financially funded by all tenants within the Oriental Plaza. It is for this reason that very little design intervention and encroachment on or within the Oriental Plaza has been proposed.

The stereotomic brick-faced walls of the Oriental Plaza with its symbolic patterning around openings and niches give character and identity to the Oriental Plaza. Clerestory windows that wash the interior with light exist on first floor and within the basement of the building, compelling the design proposal to be step back from the facades of the building in order to be historically and symbolically considerate, as well as physically unobtrusive in overshading the building. Albeit, the existing proportioning system and the relative dimensions of the existing facades have been used within the proposed grid.

FIGURE 04.12 RYTHMIC PROPORTIONING OF PLAZA FACADE

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04.4.5 CONNECTING NEWTOWN AND FORDSBURG

Permeability towards the internal spaces of the Oriental Plaza is sought in order to soften the stereotomic facade of the Plaza so that an east- west connection from Newtown West and Fordsburg may be created.

Connections to other anchor points such as Fordsburg Market Square is proposed, however, because a service yard sits within the proposed space, a new entrance is envisioned to spill out directly into the Islamic Precinct. Minimal destructive impact will take place due to an emergency exit corridor already being in place within an under-utilised area of the Plaza parking lot.

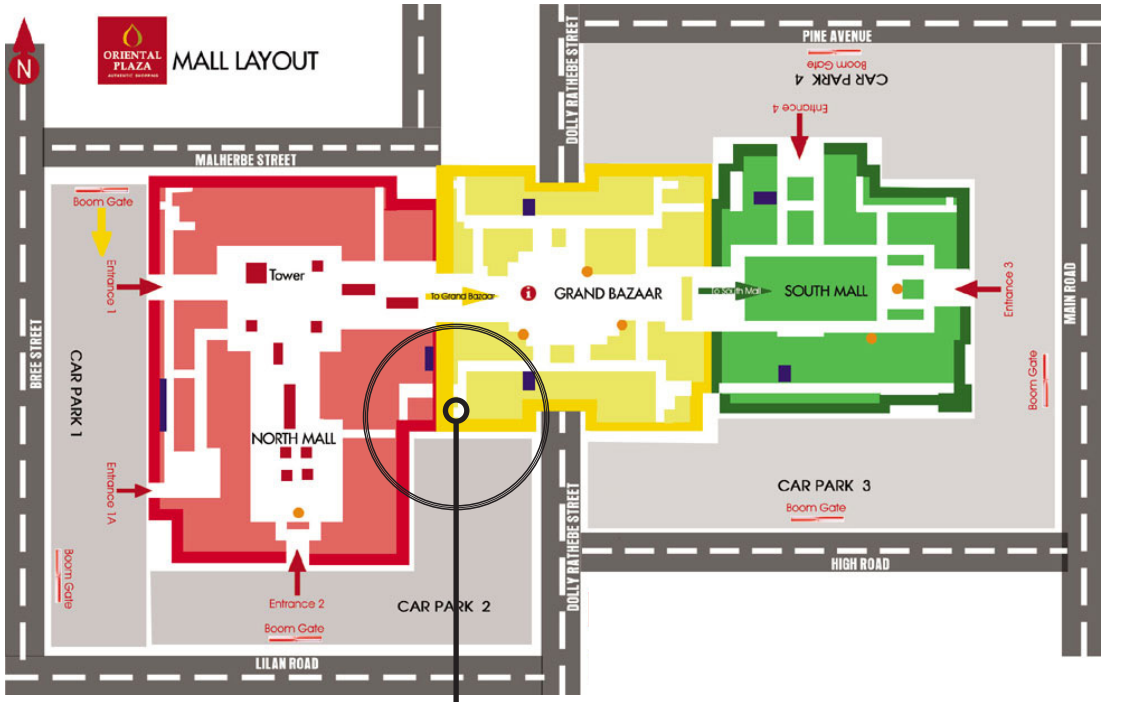

FIGURE 04.13 OPPORTUNITY FOR NEW ENTRANCE INTO ORIENTAL PLAZA

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SOCIAL SIGNIFICANCE

retail anchor point
internal courtyards
job opportunities for foreigners

AESTHETIC SIGNIFICANCE

scale
materiality
stereotomic beacon

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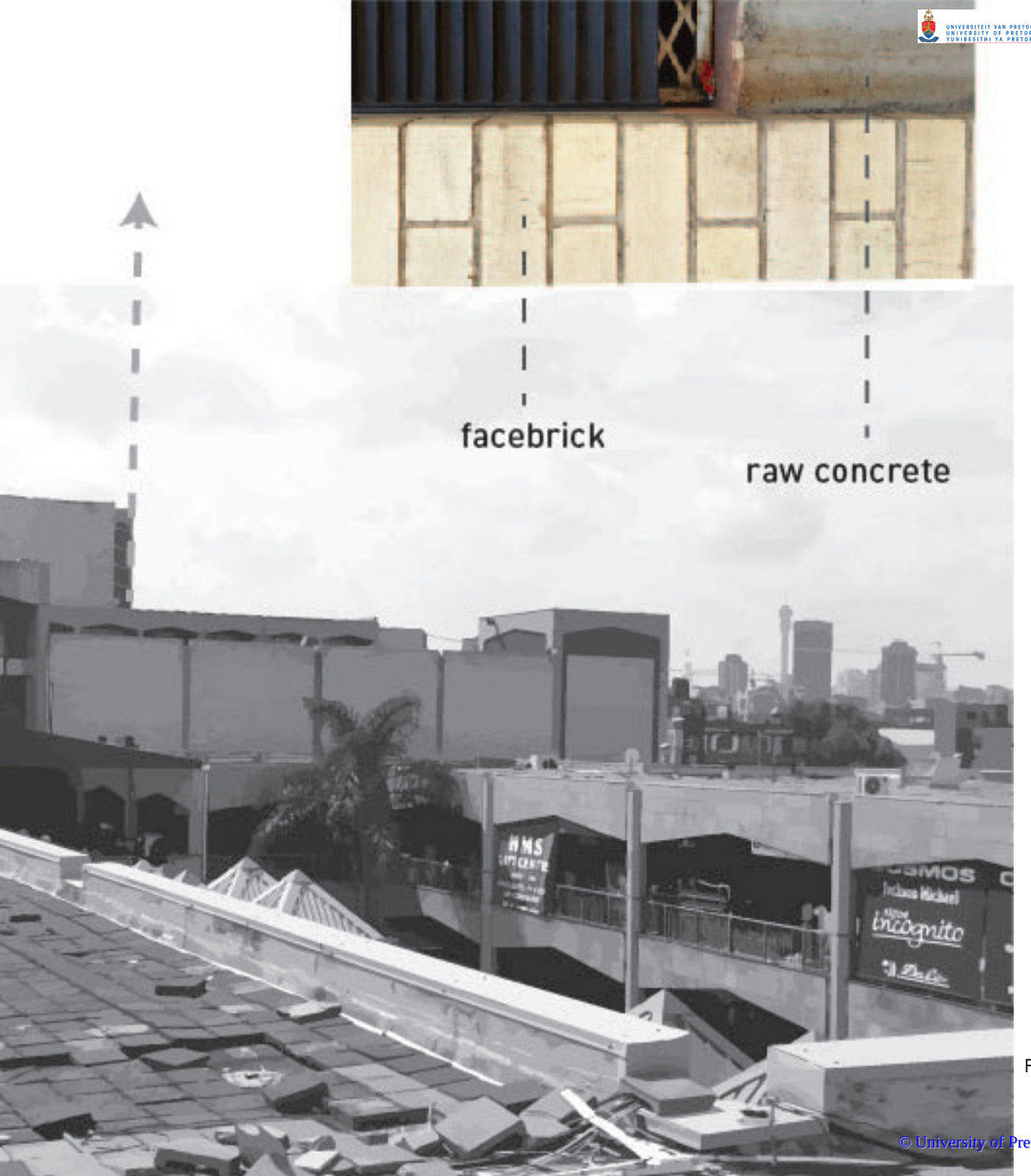

STATEMENT OF SIGNIFICANCE

Robust and stereotomic in nature, the Oriental Plaza acts as a physical and social beacon offering opportunity for a livelihood for some. Its existance however reminds us of the unjust and undemocratic acts of apartheid supremacy .

FIGURE 04.14 SIGNIFICANCE OF ORIENTAL PLAZA

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04.4.6 OBJECTIVE RESEARCH

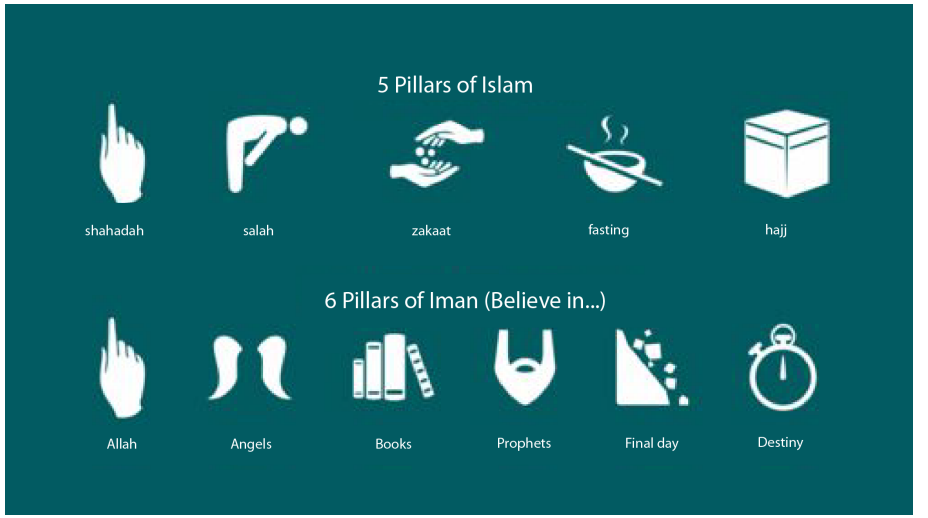

FIGURE 04.15 OBJECTIVE REQUIREMENTS OF MUSLIMS

Chohan (2010:6) states that as a Muslim, there is a constant sense of brotherhood, unity through prayers and supplication and unity through binding beliefs.

These are exemplified through the Five Pillars of Islam, defined as the obligatory actions and deeds that must be followed by every Muslim person, and is objectively stated within the Holy Quran. These include:

1. Shahadah- Profession of faith
2. Salaah- Performing 5 daily prayers
3. Zakaat- Giving charity to the needy
4. Saum- Fasting in the holy month of Ramadaan
5. Hajj- Pilgrimage to Mecca (if one can afford it)

It is interesting to note that different schools of Islamic thought, along with distinctive cultural differences still allude to the execution of the 5 pillars of Islam objectively stated within the Holy Quraan.

All Muslims, regardless of culture, location or tradition ascribe to them. These overlaps create potential for the programming of spaces where social collision may occur in order to fulfil the project intentions.

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FIGURE 04.16 OBJECTIVE REQUIREMENT OF ALL MUSLIMS REGARDLESS OF CULTURE

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04.5 SITE IDENTIFICATION

Precedent has indicated the Mosque stood as the central core around which daily life was practiced, standing as “the anchor of the society and the center of the community”. This allowed for the flourishing of Islamic communities that partook in congregational activities within public and privately shared space.

The above mapping has indicated that there is an ever-growing boom of activity along Mint Road and its surrounding streets, and due to the increasing popularity and space limitations within the allocated market space of Fordsburg square, informal traders exist on the street.

The Oriental Plaza contains over 360 stores that market themselves on tradition and culture. Its typology is that of a mall (that speaks of South Africa’s mall fetish of the 70’s). Its rich history includes the unjust acts of the apartheid government where Indian traders were forcefully displaced from the site in order to erect a new mall which was envisioned to service the white man and where high rental prices would deter the Indian trader.

There is a non-place that exists between the booming core of Fordsburg and the Oriental Plaza. Due to the fact that these areas already service high densities, the site to be developed has great potential to become the formalized core of the Fordsburg , Mayfair and Newtown West areas that is envisioned to contain prayer and public spaces that service the community at large- binding the ritual of daily activity and that of cultural manifestation, along with servicing the need for prayer space (in relation to the Jamaat Khana).

This will facilitate in the “stitching” of the street fabric which lies to the east with the internalized Oriental Plaza lying to the west.

FIGURE 04.17 PANORAMA OF PROPOSED SITE WITHIN PLAZA PARKING LOT

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FIGURE 04.18 PANORAMA OF PROPOSED SITE

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FIGURE 04.19 FORDSBURG WITHIN LARGER CONTEXT

04.6 SITE ANAYLSIS

The following diagramatic analysis explain the different components of the Oriental Plaza and the surrounding urban fabric in order to understand their function over the various levels.

These findings are key to understanding the decision making encapsulated by both the urban and architectural proposals which follow.

FIGURE 04.20 SITE IDENTIFICATION WITHIN FORDSBURG CONTEXT

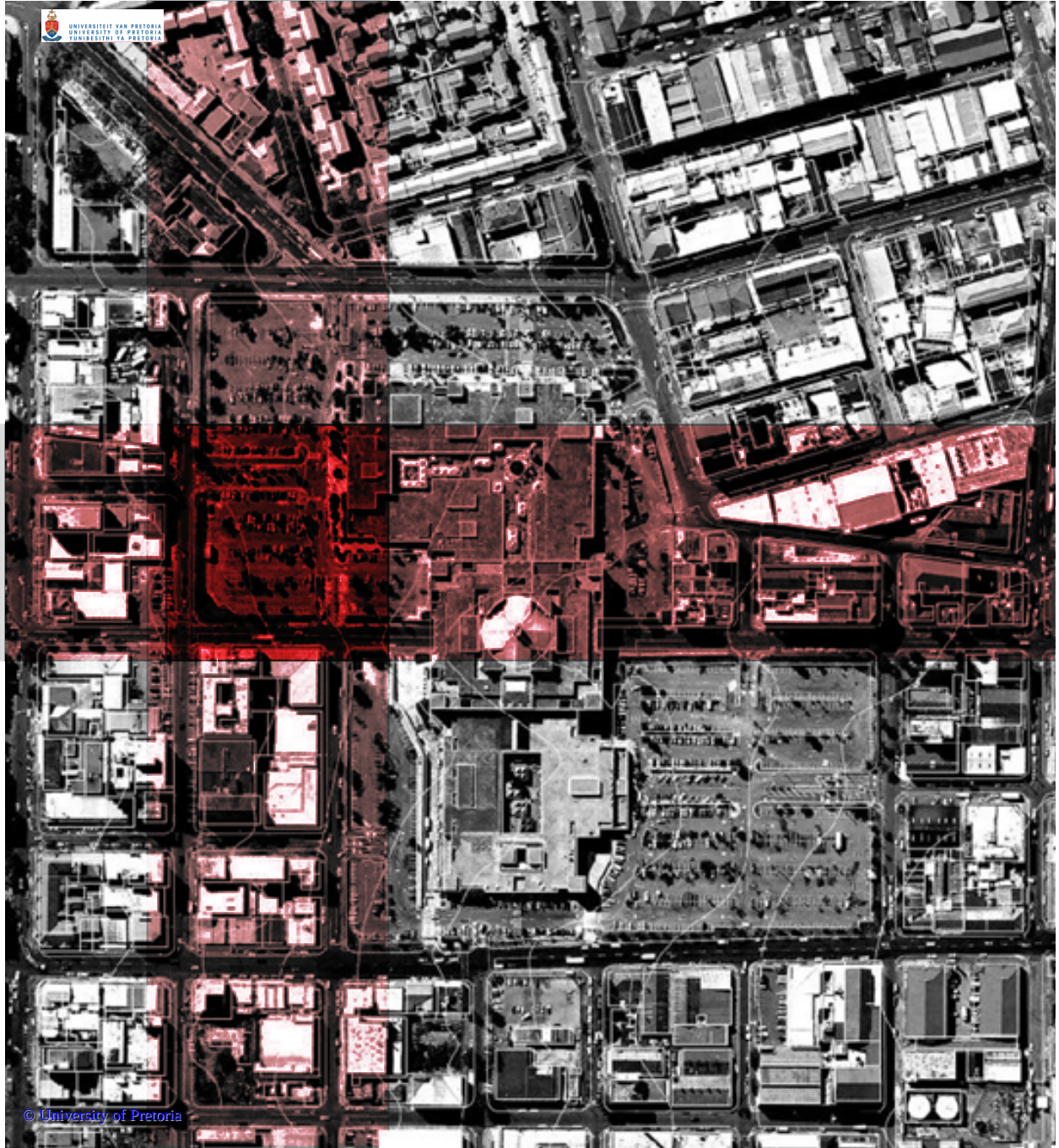

FIGURE 04.21 PHOTOMONTAGE OF MAIN INTERSECTION

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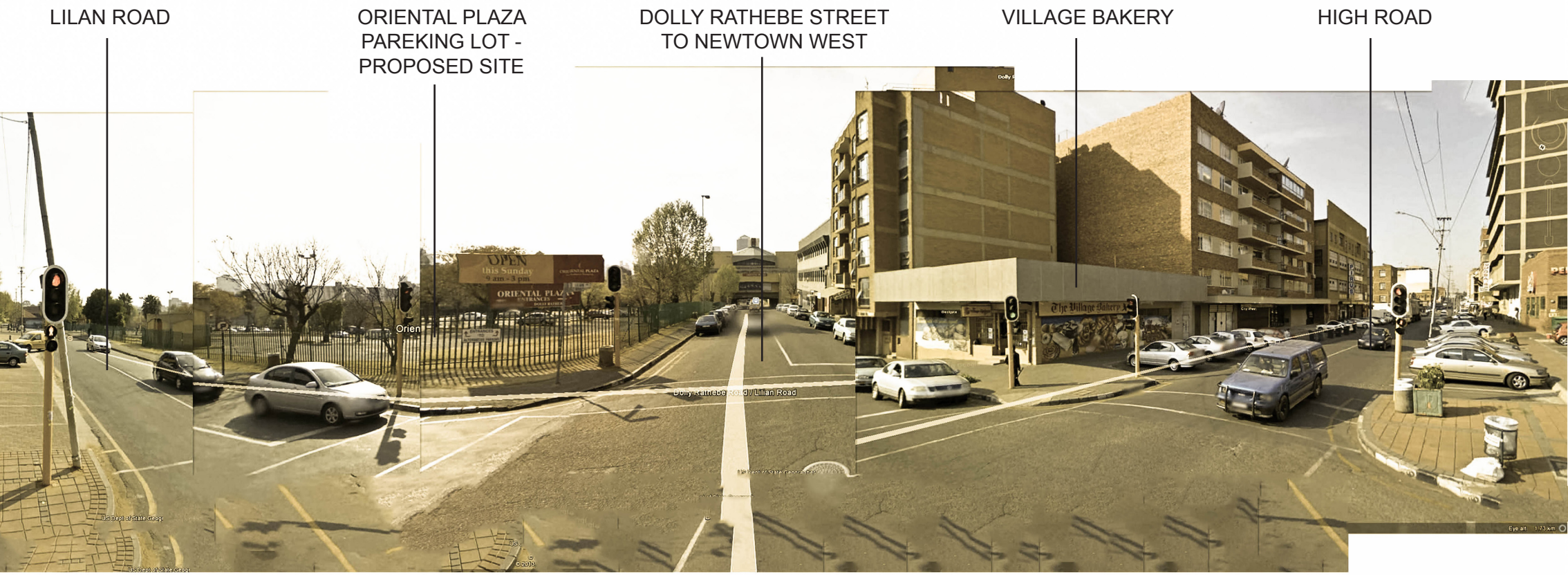

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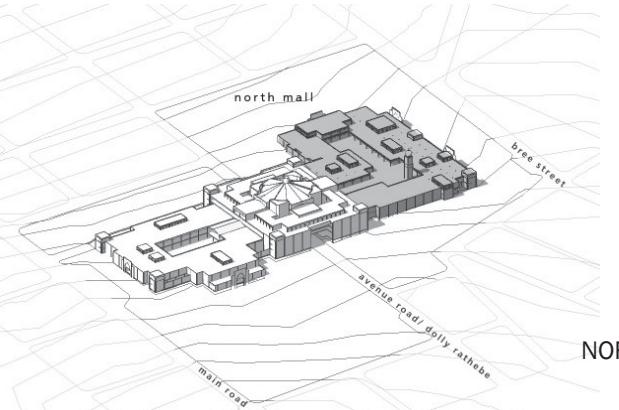
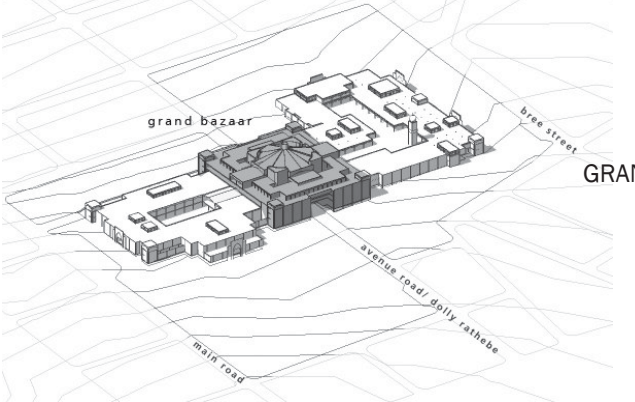
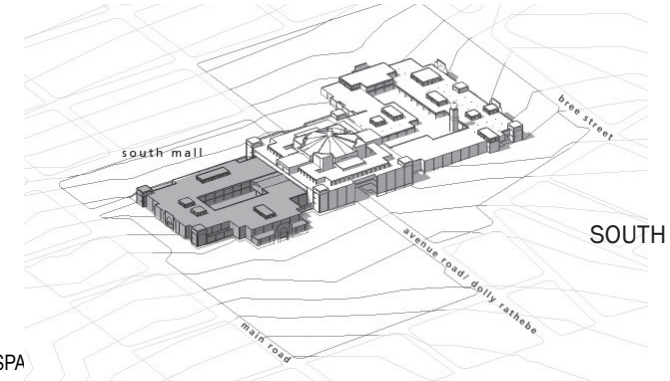


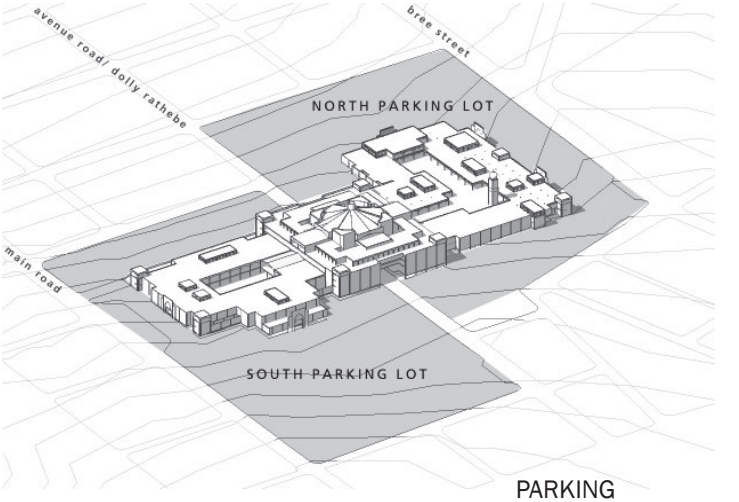
NORTH MALL



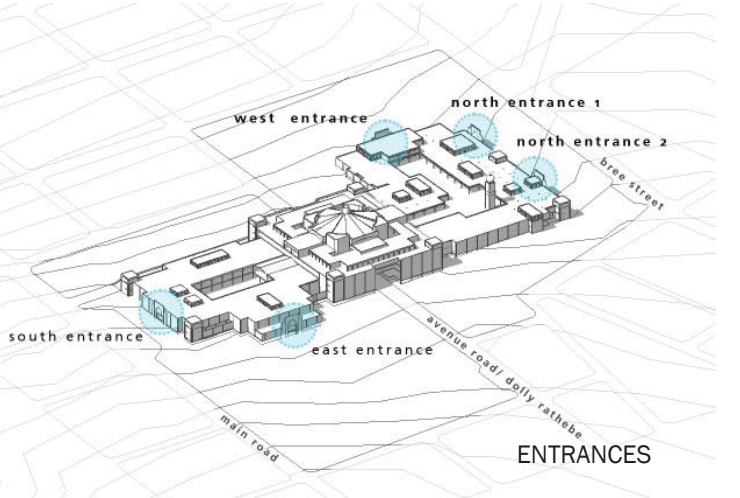
GRAND BAZAAR



SOUTH MALL



PARKING



ENTRANCES

FIGURE 04.22 SPA

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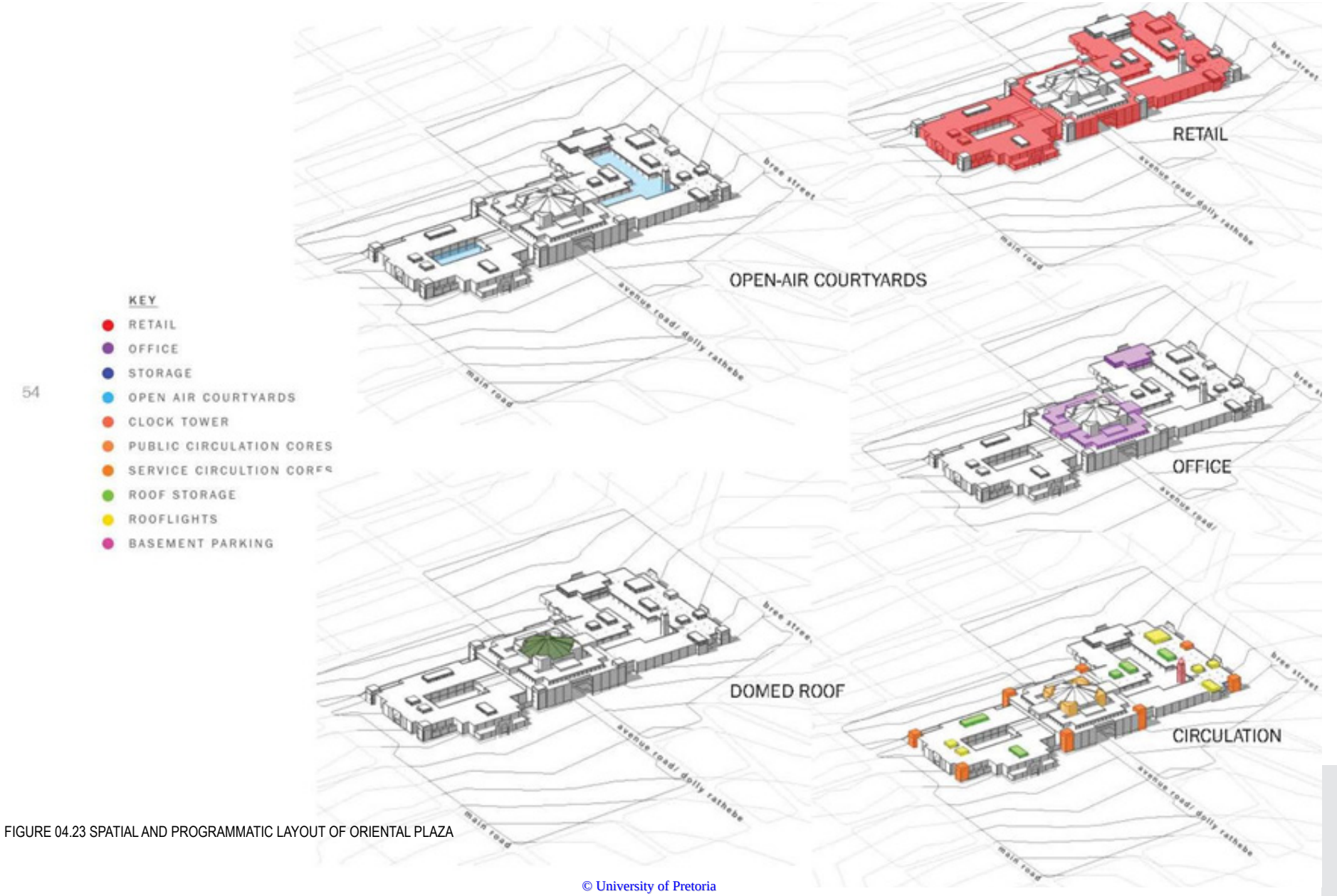

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FIGURE 04.23 SPATIAL AND PROGRAMMATIC LAYOUT OF ORIENTAL PLAZA

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UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

FIGURE 04.24 EDGE CONDITION OF SITE

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NORTH MALL

GRAND BAZAAR

SOUTH MALL

TOILETS

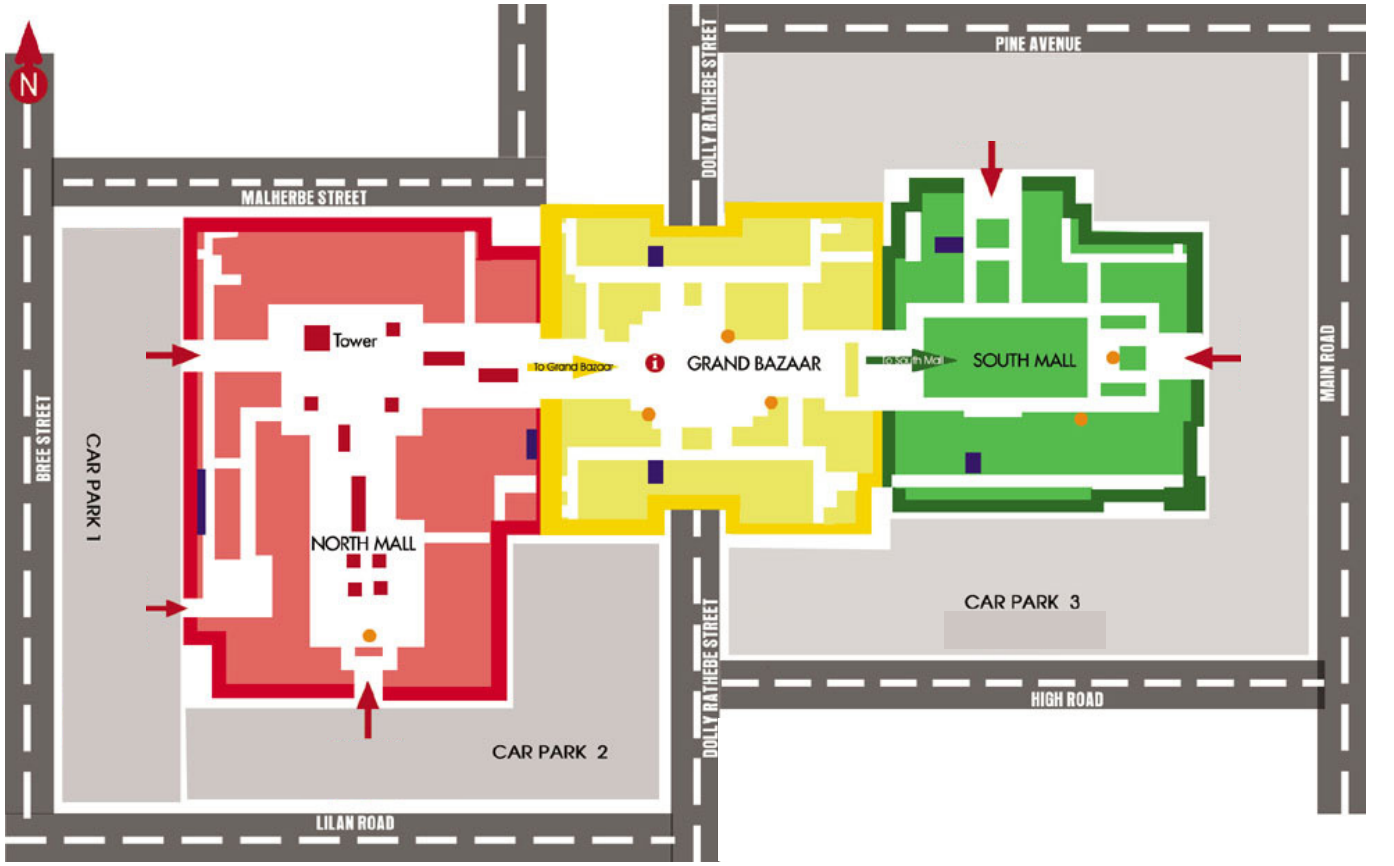

FIGURE 04.25 SPATIAL AND PROGRAMMATIC LAYOUT OF ORIENTAL PLAZA

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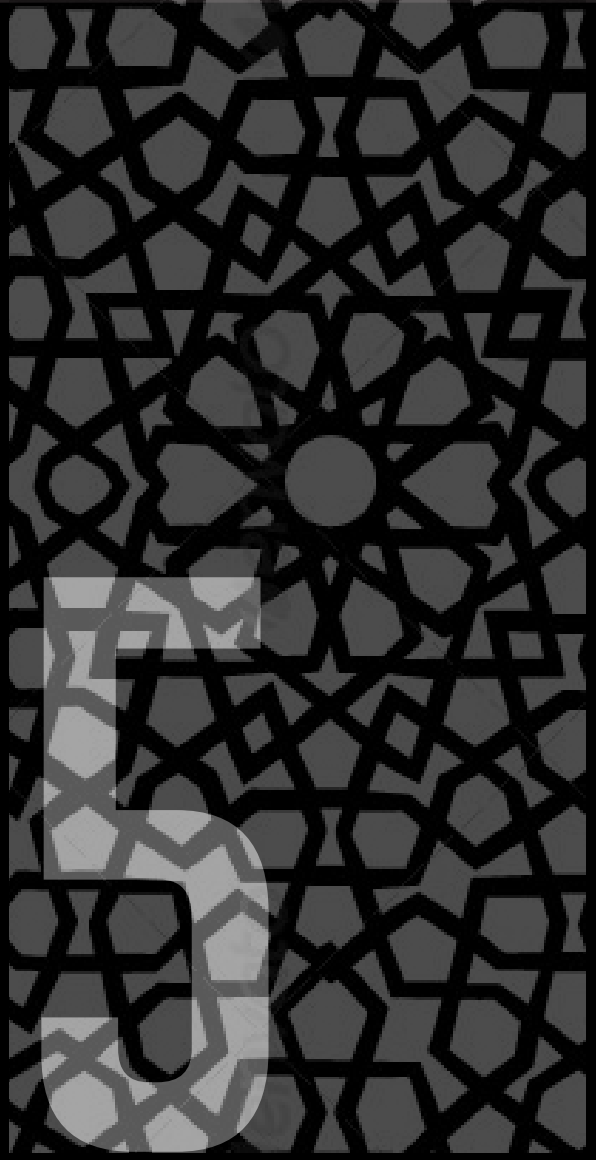

PROJECT INTENTIONS

In light of the above mentioned contextual issues, chapter 3 identifies key project intentions and spatial manifestations in order to rectify the dystopia in order to re-establish the key components of the traditional Mosque typology.

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FIGURE 05.01 TRADITIONAL MARKET/SOUK EN-ROUTE TO THE CENTRAL MOSQUE

FIGURE 05.02 INFORMAL RETAIL EN-ROUTE TO THE CENTRAL MOSQUE

FIGURE 05.03 INFORMAL MARKET EN-ROUTE TO THE CENTRAL MOSQUE

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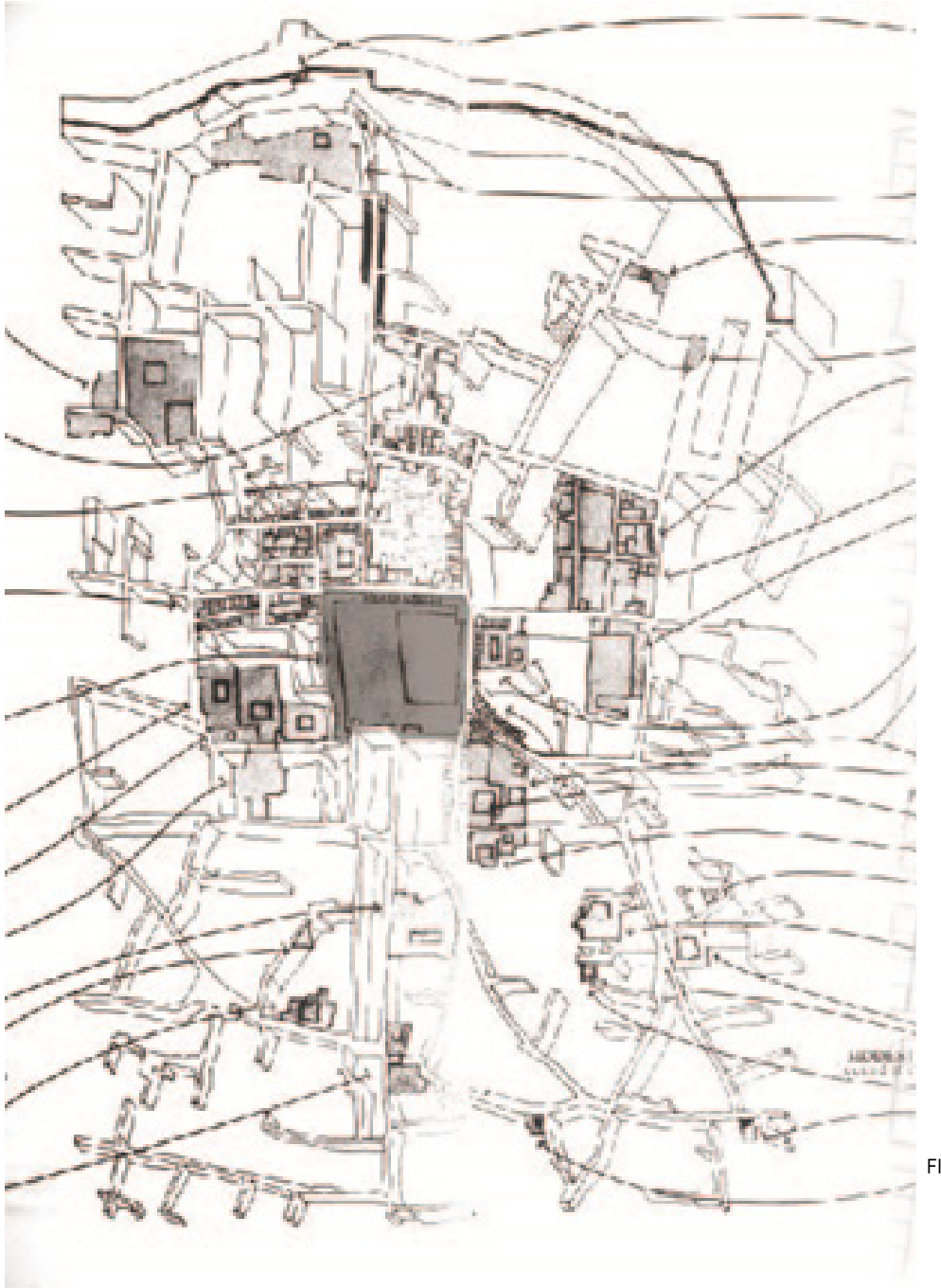

Traditionally, the Masjid acted as the core of the Islamic city. Its infrastructure organically grew from this core whereby all secular activities were linked to one's religious life- spatially defining the importance of Mosque in one's life- as well as becoming a sort of public yet private space where many things happen.

It is for this reason that the main project intention is:
to **re-link the secular with religious**

The blurring of boundaries between that of the sacred and that of the profane would break down emotional and physical barriers between these two poles as one may exist between either, fostering unity amongst a diaspora and multitude of cultural groups.

Religion interweaves itself in the demanding life of the secular in order for moments of reverence, devotion and reflection to occur at the necessitated five prayer times everyday.

FIGURE 05.04 TRADITIONAL INFRASTRUCTURE DEVELOPMENT FORMING AROUND CENTRAL MOSQUE

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05.1 ARCHITECTURAL INTENTIONS

FIGURE 05.05 CROSS-PROGRAMMED MOSQUE THAT INCLUDES RELIGIOUS & SECULAR ACTIVITY

05.1.1 RE-THINKING

Reinterpreting and redefining the Mosque typology by cross programming it with the overlapping aspects that the three cultural groupings in question have in common, i.e: retail and service delivery + 5 Pillars of Islam.

This involves the analysis and design for the ritual of daily activity and commerce with the ritual of prayer and religious manifestation.

Jahnmohamed (n.d.,2) states that it is now time for architects to ponder more deeply on the multiple aspects and accommodations that may be designed for within a faith centre. She suggests we evaluate the location, the architecture, art, people, services and its urban relationship.

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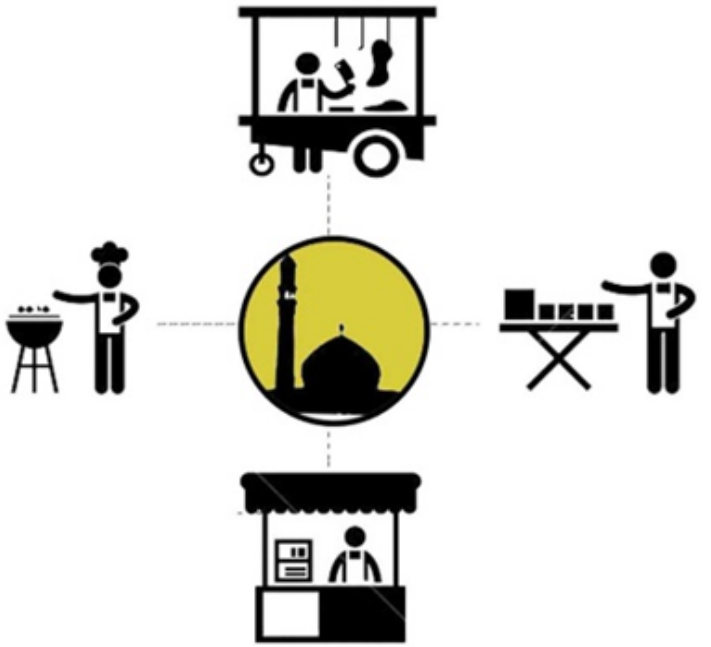

FIGURE 05.06 MOSQUE CENTRALLY POSITIONED BETWEEN DAILY ACTIVITY

05.1.2 RE-POSITIONING

Positioning the Mosque (physically and spiritually) at the centre of the life of the Muslim citizen in order to regain its sense of place, its position in society, and to facilitate chance encounters amongst the diaspora of cultural groups.

Jahnmohamed (n.d., 2) states that art has the ability to bring people together. She further mentions that art and

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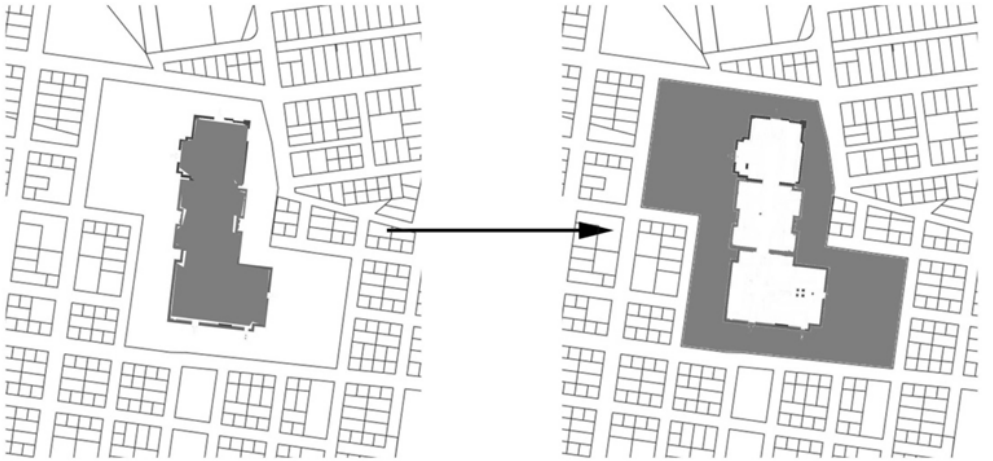

FIGURE 05.07 PROPOSAL TO INVERT INTERNALIZED MOSQUE & MALL CONFIGURATION

05.1.3 CONTESTING

Contesting the internalized mosque and mall typology in order to “stitch” the fabric of the Oriental Plaza and that of the street, consequently weaving both form and function of the religious building into the lives of the people whom it serves, together with others who co-habit the area.

New buildings have to engage with existing environments and accommodate them. This process of externalising the typology and blurring the boundaries between private and public involves not just the physical space, but the softer things too.

Jahnmohamed (n.d.,3) suggests that the people, processes, access, approach and support are determinants in creating the kind of space this dissertation is focused upon.

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FIGURE 05.08 SPATIAL EQUALITY AND ALLOWANCE FOR MEN & WOMEN

05.1.4 GENDER EQUALITY

Allowing for women to find their place –physically and spiritually- within the South African mosque; simultaneously changing misconceptions about a woman's place and role in Islam.

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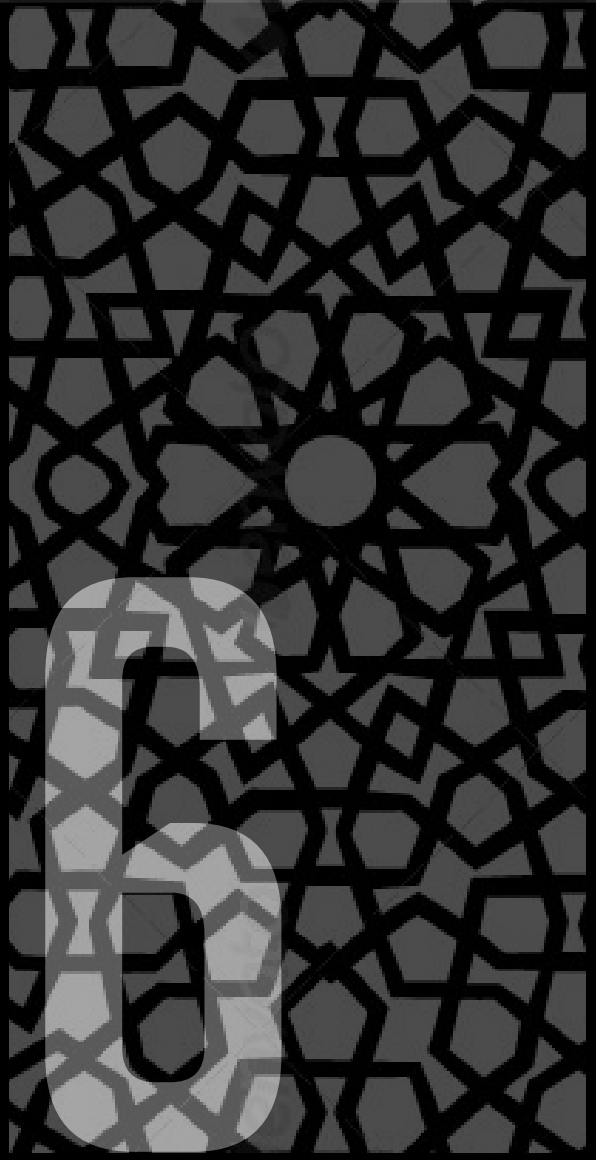

URBAN VISION

An exploration of a new cultural district that proposes to integrate Forsdburg with Newtown, Chinatown and Mayfair , building on the analysis of existing energies, contextual conditions and architectural potential. Three proposed frameworks of different scales consequently generate the parameters within which the proposed intervention will sit.

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“The challenge lies in reaching the point where these unique socio-cultural qualities are embedded in the physical appearance of the area. The vision is to create a place in the city that: reveals the richness in character of the local community by celebrating the diversity created through layered patterns of social involvement and histories in the area; portrays the qualities of the local community by creating improved and upgraded quality spaces; and supports the passion of the community through appropriate development and sustained maintenance of the place.”

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06.1 VISION

The vision is to create a unique enclave in the city that:

Reveals the richness in character of the local community by celebrating the diversity created through layered patterns of social involvement and histories in the area;

Portrays the qualities of the local community by creating improved and upgraded quality spaces; and

Supports the passion of the community through appropriate development and sustained maintenance of the place.

06.2 APPROACH TO THE FRAMEWORK

An approach should be followed whereby the framework is guided by the following realities: The past – As one of the oldest suburbs of the city, and as area that has experienced major historical events, the Fordsburg / Mayfair area has significant heritage value and is characterized by the presence of numerous conservation-worthy elements. The present – As a combination of its strategic locality and the evolution of a unique mix of community

attributes the area started to experience pressure due to private development interest, a changing role of the Inner City and changing demographics. The future – Several individuals are passionate about the area. This is to a certain extent also true for the community as a whole, with dreams to create a quality urban area as living and trading space. A plan should thus not only guide development, but should also excite and unite.

06.3 GENERAL DEVELOPMENT PRINCIPLES

Based on the identified vision and approach, the proposed development of the area is founded on the following principles: Although a strong sense of being one community is prevalent throughout the area, the study area is nevertheless diverse in terms of physical characteristics. This diversity also contributes towards a unique character. It should thus accommodated and enhanced in the Framework. This is done through a precinct approach. As symbol of being one community, the area needs a vibrant heart that pull the community together through socio-cultural interaction.

This is achieved by providing a Walkable Core as focal point for community activities. The Fordsburg / Mayfair area is one of the oldest in the city and thus it has a rich layered heritage pattern, with numerous heritage resources. Heritage elements should support the creation of a unique character for the area, but should not stifle development.

The principle of Heritage Zones as opposed to Heritage Conservation Areas is thus proposed. The purpose of a Heritage Zone is to guide owners and developers to renovate properties in line with certain guidelines. It is proposed that incentives be provided, as opposed to the strict legal conditions set by Conservation Areas.

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CHINATOWN

FORDSBURG

FIGURE 06.01 CULTURAL, RELIGIOUS, POLITICAL, RECREATIONAL AND INSTITUTIONAL DYNAMIC URBAN & ARCHITECTURAL FABRIC BEWTEEN SITES

06.4 COLLABORATION

This dissertation supports the integration of universities- University of Pretoria and University of the Witwatersrand in order to create awareness and allow for integration between institutions and to encourage the idea of sharing research and information for the benefit of both universities.

A collaborative urban framework has been established which defines pedestrian routes from the cultural enclaves of Chinatown,through rehabilitated Newtown, towards Fordsburg. The proposed interventions are aimed to act as catalysts for the regeneration and revitalisation of the entire precinct.

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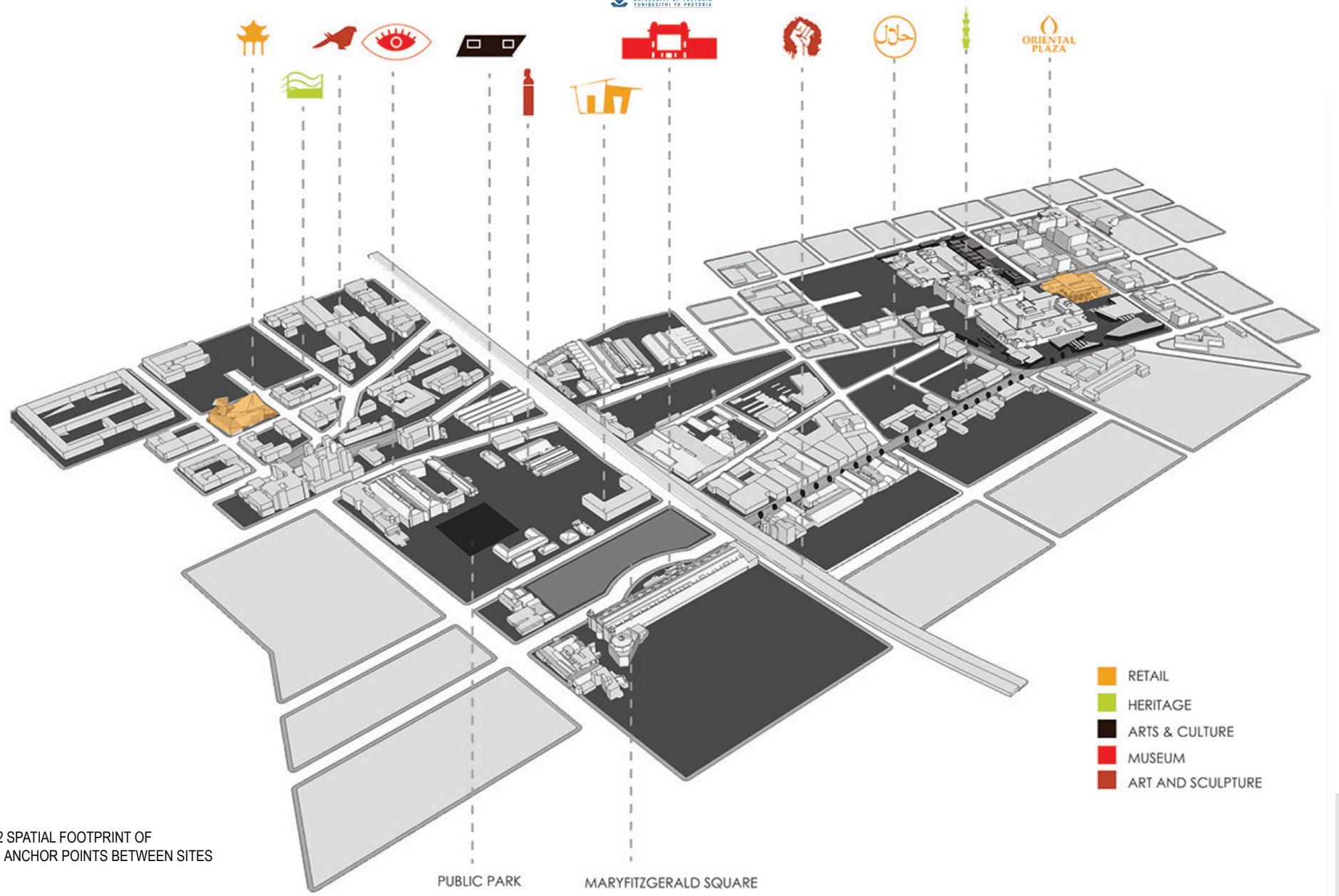

FIGURE 06.02 SPATIAL FOOTPRINT OF ANCHOR POINTS BETWEEN SITES

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FIGURE 06.03 PANORAMA OF URBAN DIVISION BETWEEN TWO SITES

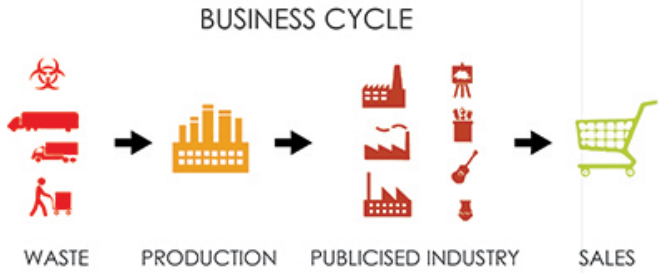

FIGURE 06.04 PROPOSED ECONOMICALLY DRIVEN BUSINESS CYCLE

In addition, the two projects operate together in the same business cycle where urban waste is collected from junkyards and other surrounding areas, are then recycled to produce raw materials, which are then transformed into products creating publicized industrial areas, lastly distributed and sold within the designed interventions.

This business model assists in urban waste management and provides potential for site rehabilitation and land reclamation within a larger cultural area in order to break down the barrier of the M1 motorway.

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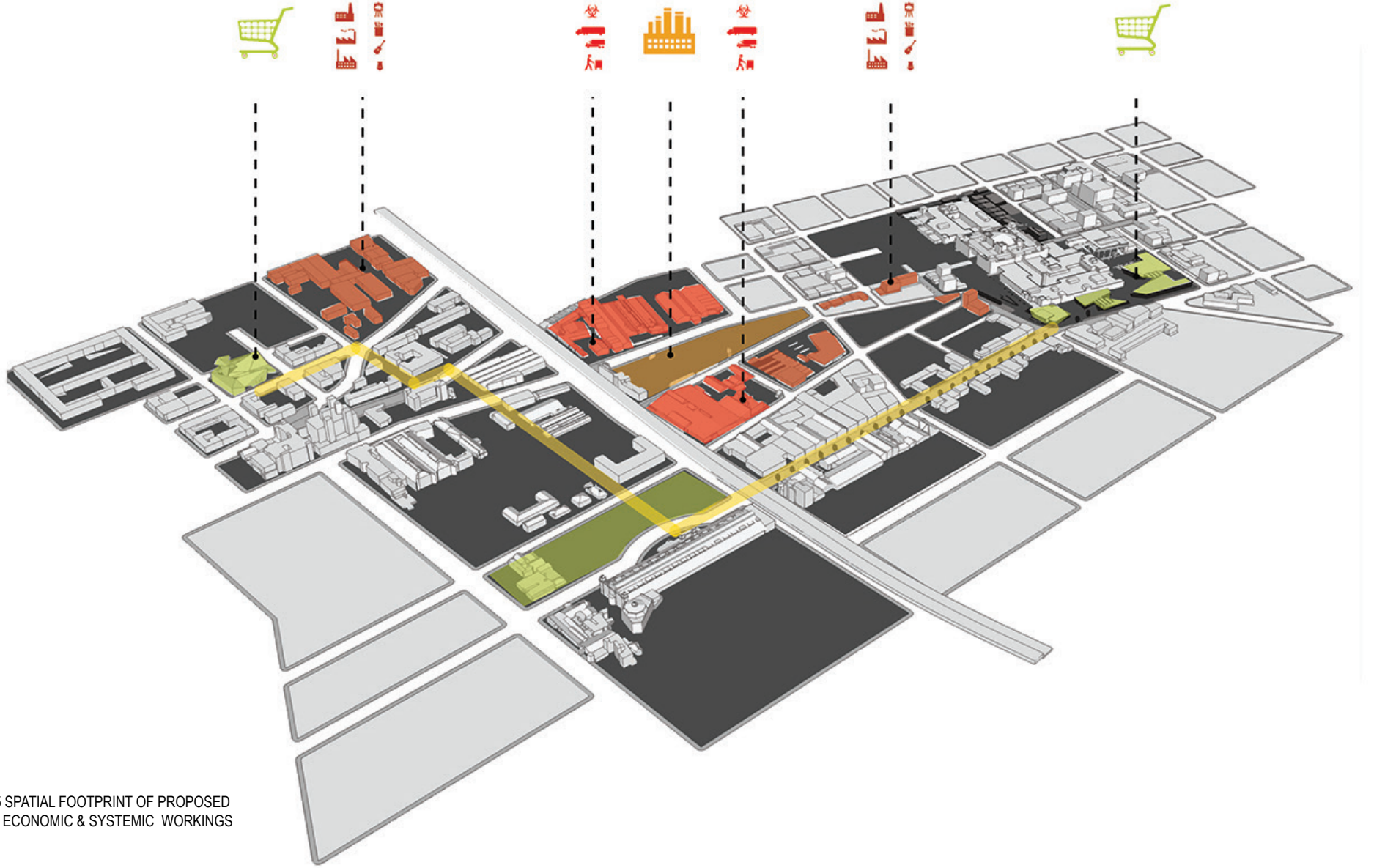

FIGURE 06.05 SPATIAL FOOTPRINT OF PROPOSED ECONOMIC & SYSTEMIC WORKINGS

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06.5 MEDIUM TO HIGH DENSITY RESIDENTIAL DEVELOPMENT PRINCIPLES

The Fordsburg and Mayfair precincts should make use of the historically built fabric of the area through re-use and adaption re-script the use of neglected, unkept and abandoned areas .

The area should establish a medium to high density residential and commercial precinct in close proximity to the Inner City, the Newtown Cultural Precinct and the historic core of Fordsburg, focussed on accessibility by foot and public transportation.The precinct should have well-designed sidewalks and an abundance of planted trees along the street to take advantage of the locality, to promote pedestrian movement and non-motorised access to public facilities and retail anchor points.

The urban core [A] is envisioned to be of high rise and high density, aimed to promote business ventures and apartment living. [B] is envisioned to be of medium rise and medium density. [C] is of a residential nature aimed to be low rise and low density.

FIGURE 06.06 DENSITY ZONING OF FORDSBURG & MAYFAIR

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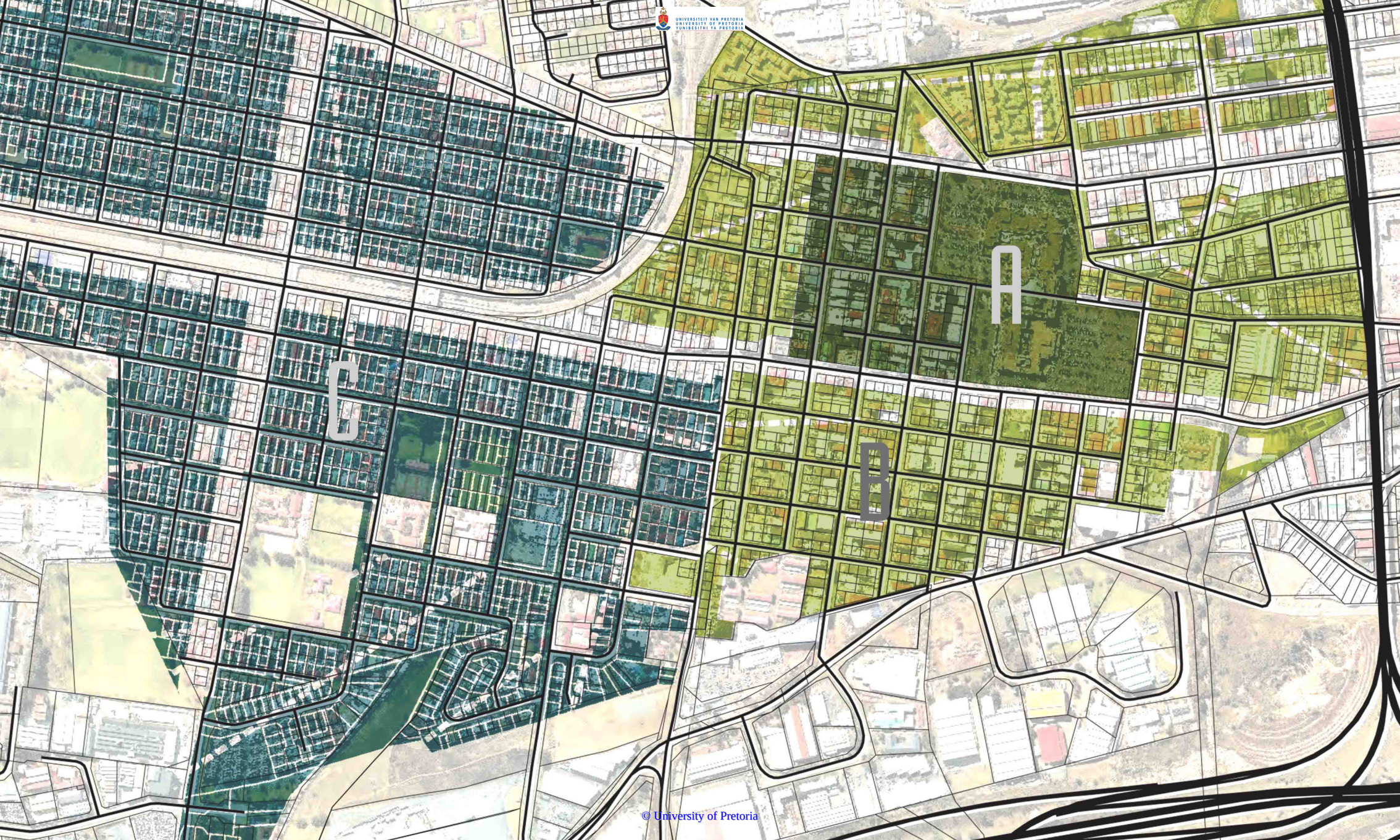

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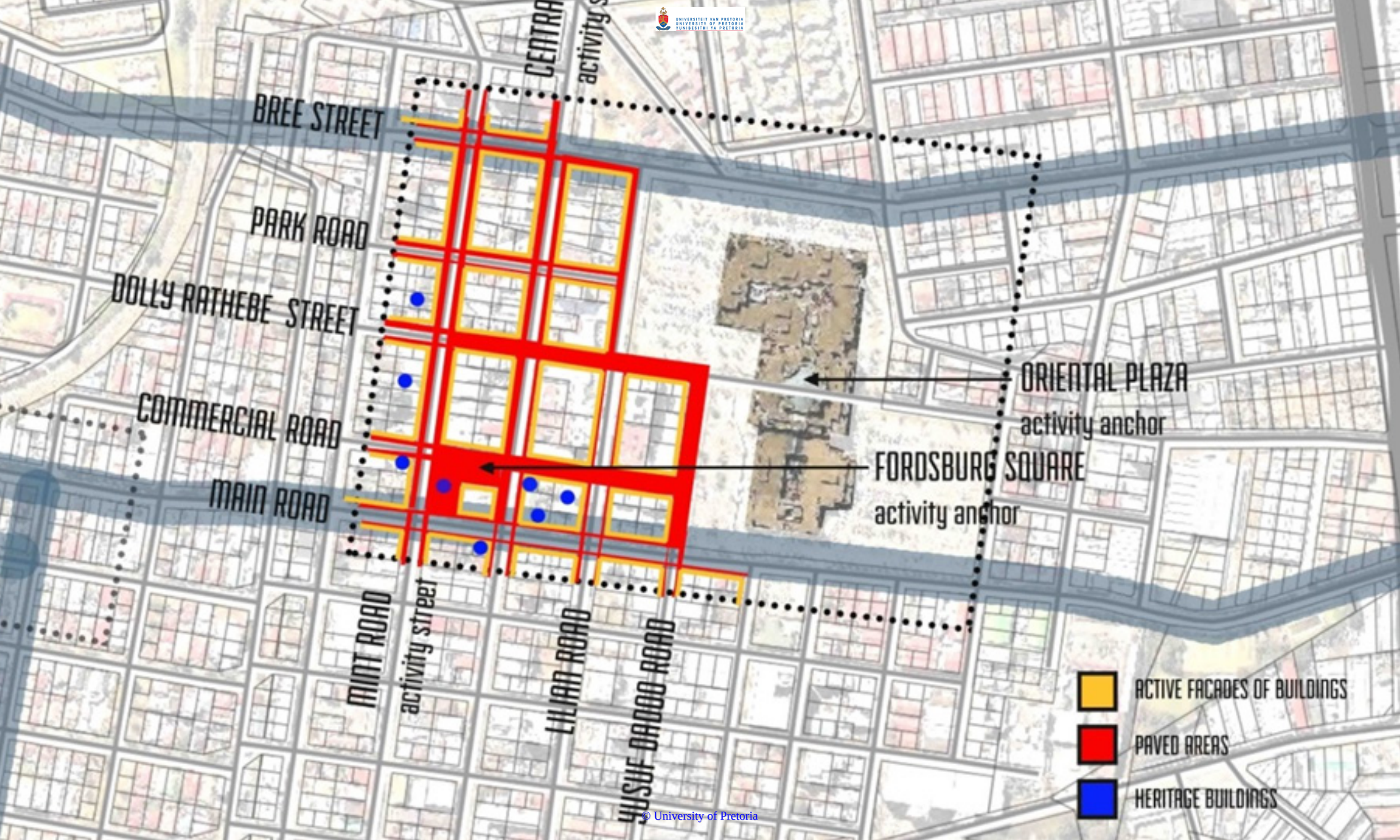

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06.6 WALKABLE CORE

“The lack of pedestrian contact – both formally and informally – leads to the destruction of social intercourse. Conversely, the more chances people have to meet as pedestrians, the more opportunities they have to continue and develop relationships” (Lockerbie, 2014).

06.7 DEVELOPMENT PRINCIPLES

The central core of Fordsburg should build on the abundance of historic fabric within the area creating a vertical mixed-use character in order to promote 24 hour usage.The functional walkable core will link anchor points such as Mint Road, Fordsburg Square, and the Oriental Plaza whereby a maximum of 500 metre walking distances with defined boundaries are established. The core should facilitate the erection of formal and informal retail and service shops in order to contribute to the existing vibrant shopping spaces unique to the area. This includes the streets and shop-fronts designed as ‘active facades’ in order to promote retail and eyes on the street during all times. The walkable core should have safe and convenient sidewalks in order to link activity anchor points, and to allow for informal pop-up shops to exist on the sidewalk.

There will also be a link between Islamic religious institutions that exist within the area (Johannesburg Muslim School, SANZAF- Charity Organisation, Jamiatul Ulama, HBZ Islamic Bank)- so that “the cities political, religious, financial and social dimensions are all linked in one continuous whole” (Razak, 1973). These “high streets” are envisioned to also become cultural routes towards the mosque as the call to prayer is sounded 5 times a day for the 5 daily prayers.

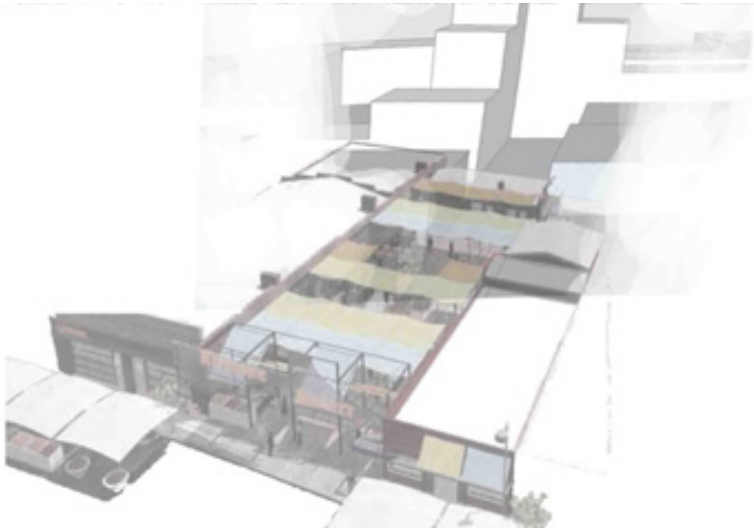

FIGURE 06.08 PROPOSED INFORMAL RETAIL TOWARDS ANCHOR POINT

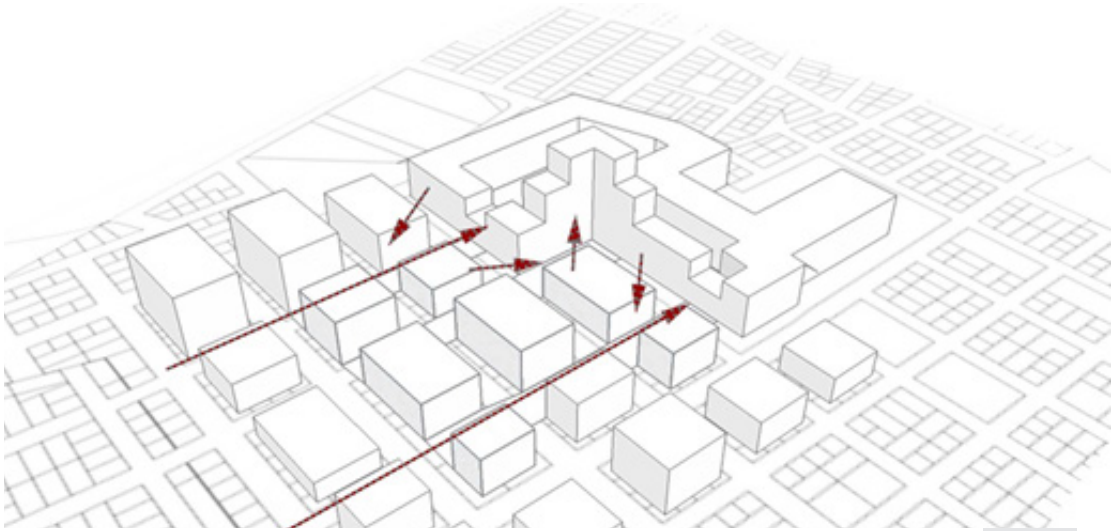

FIGURE 06.09 PROPOSED MAIN ROUTES TOWARDS ANCHOR POINT

FIGURE 06.07 PROPOSED PEDESTRIANIZATION OF URBAN CORE

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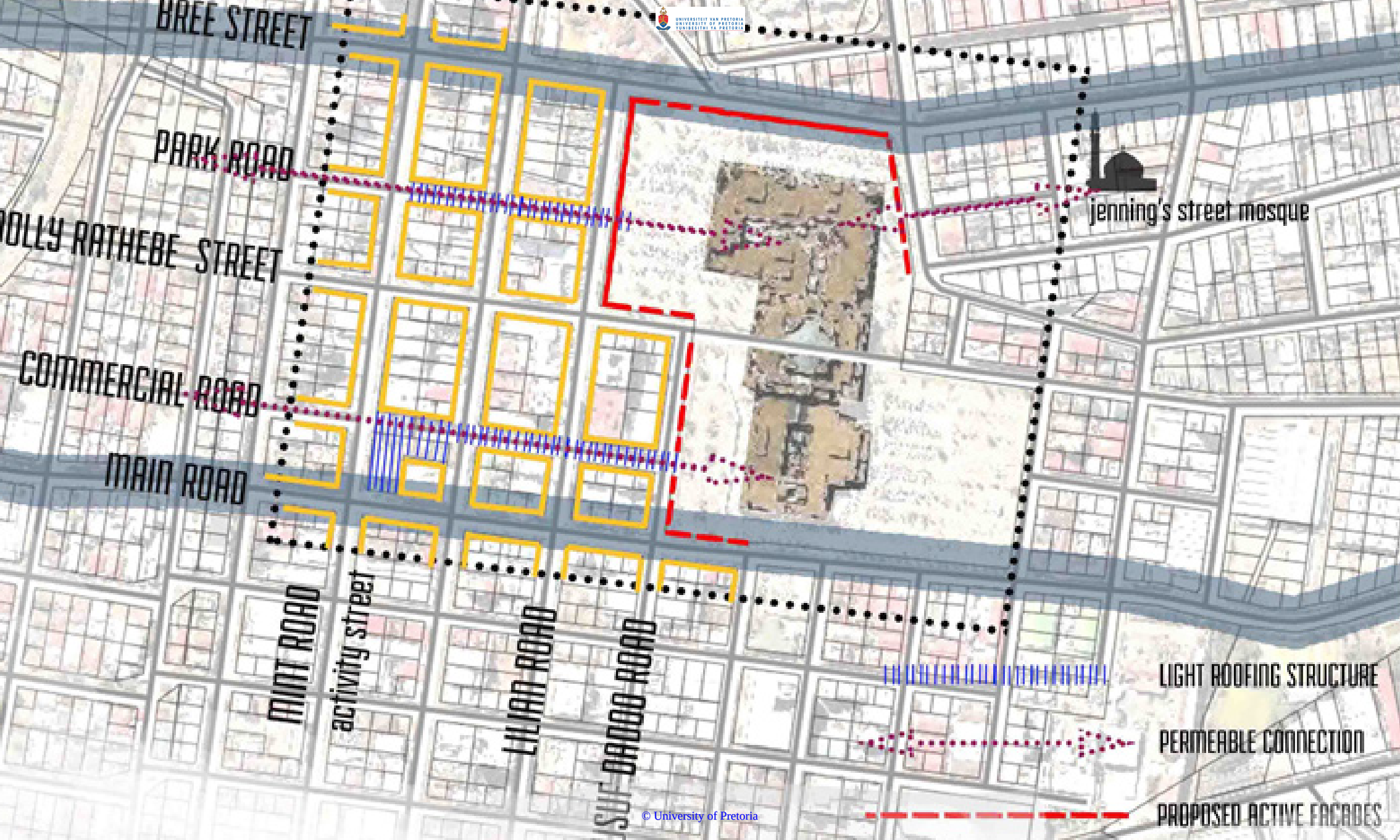

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06.8 ACTIVITY ANCHOR- ORIENTAL PLAZA

To successfully integrate the Oriental Plaza with the rest of the Walkable Core, the design aims to stitch the urban fabric with that of the Plaza in order to make it as permeable as possible.

Parking will be provided beneath the Plaza while people are envisioned to move through the building, past trading stalls, towards the proposed architectural intervention, through to the rest of the Fordsburg area.

The provision of another entrance when walking from the Fordsburg Square into the Plaza will create the desired permeability. It is, however realised that an entrance into the Plaza at the eastern end of Commercial Road might be problematic due to the locality of service yards at this point. This will be evaluated further within the chapter: Design Synthesis.

06.9 IMMEDIATE CONTEXT

The immediate urban framework aims to connect Newtown West and Fordsburg Square with buildings of a religious nature together with externalised retail- making use of existing energies, creating third courtyard spaces.

Bus and Taxi parking currently exists informally on Yusuf Dadoo Street, mainly picking up clients and workers from the Oriental Plaza. Public transport is welcomed in the area and is thus designed to service Fordsburg, Bree Street and the Newtown commercial, industrial and recreational disctricts. This facility is proposed within the north-eastern parking pocket of the site which is currently under-used by private vehicles, or any other identified locality east of the Plaza. This will immediately clear up Yusuf Dadoo Street in a first attempt to make the street space more pedestrian friendly.

An Imaam (Islamic priest) School is proposed across from the Johannesburg Muslim primary and high schools to create an educational campus, while an Islamic Interpretation centre acts as a research facility for members registered and visitors interested in the institution to undertake research on the religion Islam.

FIGURE 06.10 CONNECTING TOWARDS ANCHOR POINT
PERMEABILITY OF ORIENTAL PLAZA

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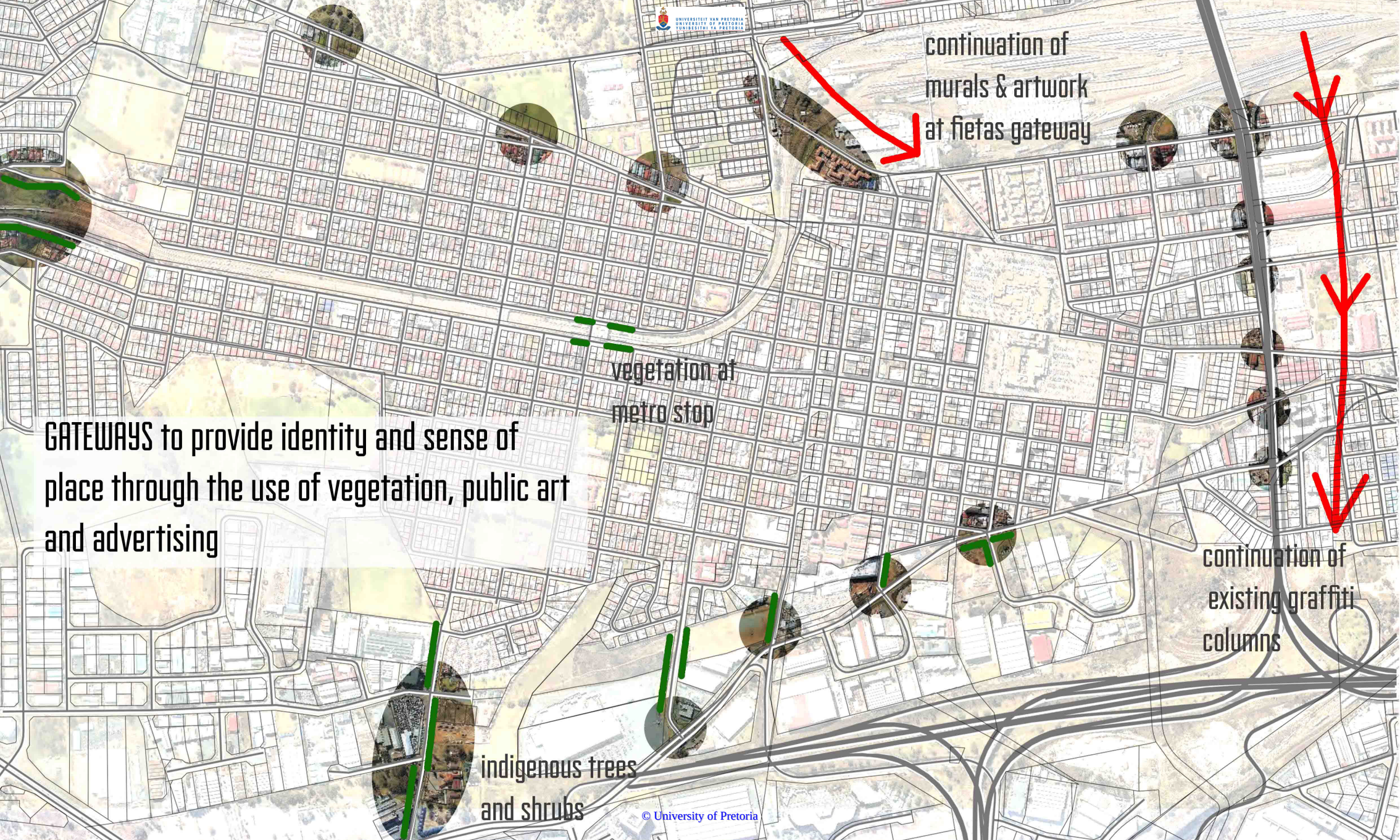

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06.10 SOCIAL AND PHYSICAL STITCHING

The physical incorporation and assimilation of secular space with that of religious space by the use of urban elements such as movement corridors, circulation routes, shared courtyard spaces, urban squares, street furniture and flooring textures are intended to blur the boundaries between these poles in order to not only stitch the existing urban fabric of Fordsburg with that of the islandified Oriental Plaza, but to also create key opportunities for formal and informal retail and service opportunities to formulate within liminal and unoccupied spaces within a bustling urban core. These opportunities are intended to create new-found relationships between a community of varied ethnicity who unknowingly share similar aspirations and ambitions.

FIGURE 06.11 DESIGNED GATEWAYS INTO FORDSBURG

FIGURE 06.12 STITCHING THROUGH NODES & COURTYARDS

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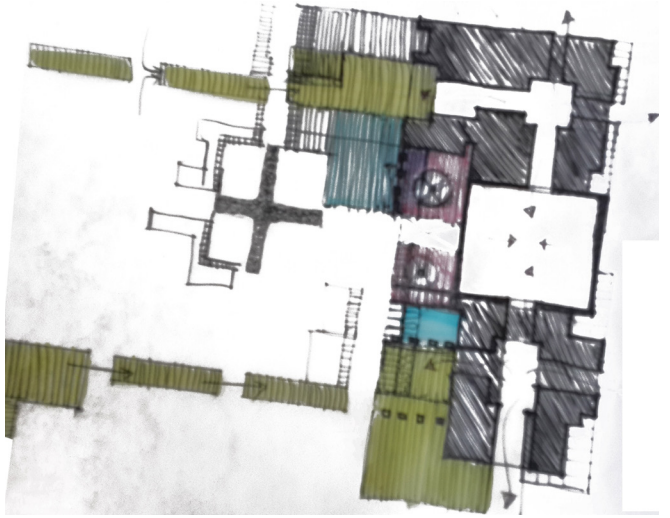

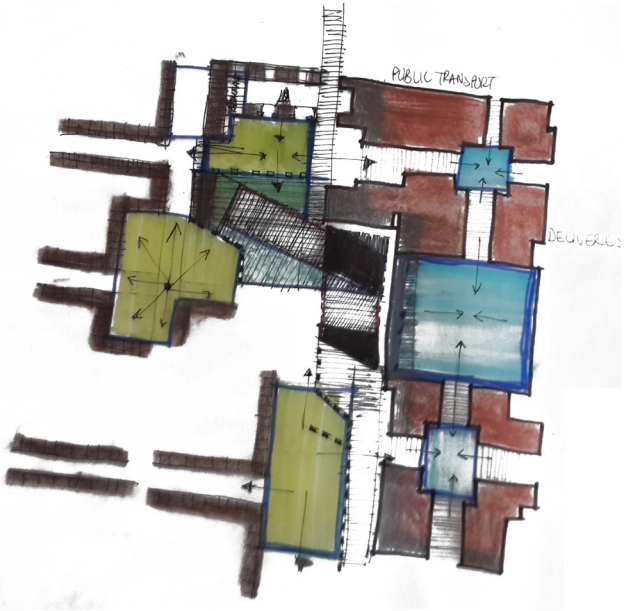

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The intervention mediates between the monumentalised Oriental Plaza and the dynamic urban core of Fordsburg.

Its edges allow for a permeable pedestrianised connection between the opposing architectural conditions.

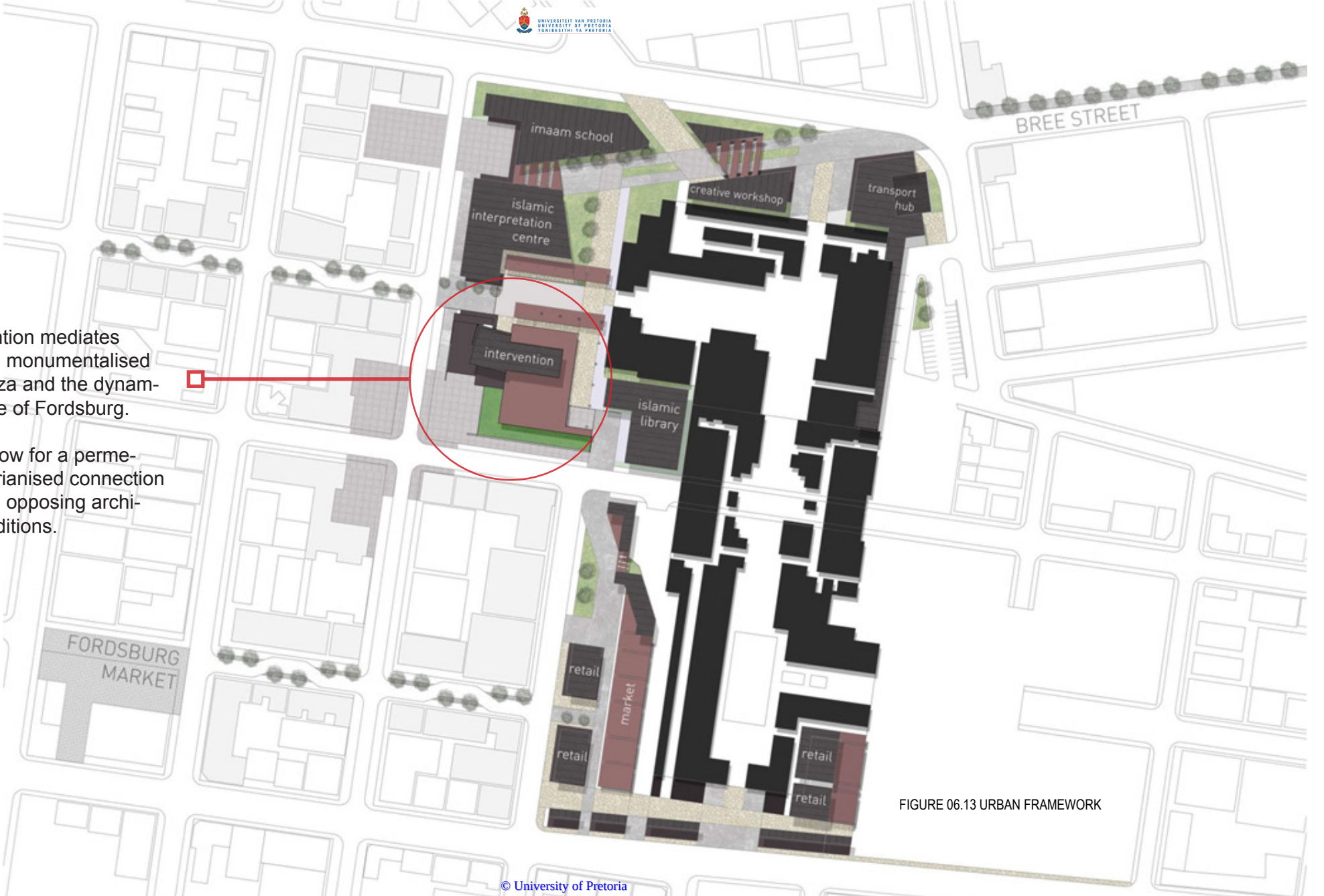

FIGURE 06.13 URBAN FRAMEWORK

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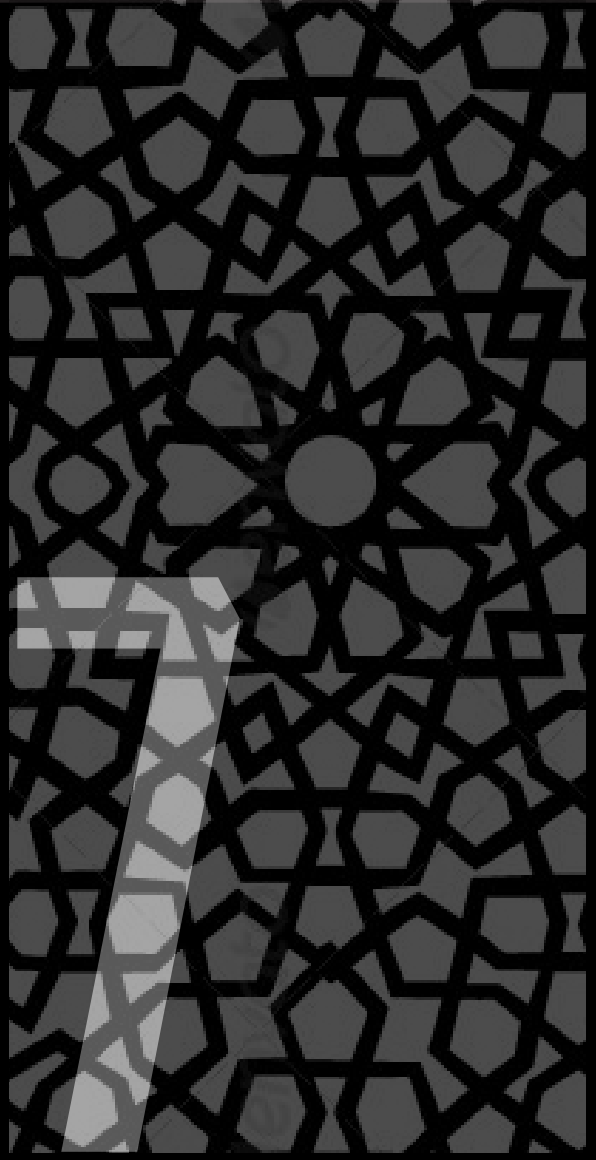

TYPOLOGICAL CRITIQUE | PRECEDENT STUDY

Comprised of three categories of precedent studies:
Theory related precedent- abstraction of symbolism
Programmatic precedent- mosque as public space
Spatial precedent- allowance for men and women
Issue related precedent- the mall configuration

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07.1 ‘STYLE’ IN ISLAMIC ARCHITECTURE

Rasdi (2014, 30) states that one of the major problems in the discourse of Islamic Architecture is the significance of the idea of a ‘style’ as opposed to a more fundamentalist approach of vernacular revivalism, or the approach of interpreting Islamic scriptures and the Sunnah of the Prophet Muhammed.

The question of the use of style in architecture being a effective approach to design was critically questioned by the early modernists in Europe and America. (Rasdi; 2014). Le Corbusier attacked the Ecole de Beaux arts approach and criticized them of stylization as being frivolous and wasteful. Louis Sullivan and Frank Lloyd Wright both warned about the artificiality and futility of reviving classical styles for American buildings (Rasdi; 2014).

Rasdi (2014, 30) further elaborates and explains that rapid urbanisation, the world energy crisis, the spirit of nationalism, the idea of Islam as a comprehensive way of life, and the rise of local academic scholarship concerned with the validity of vernacular architecture calls for a ‘new’ kind of Islamic architecture.

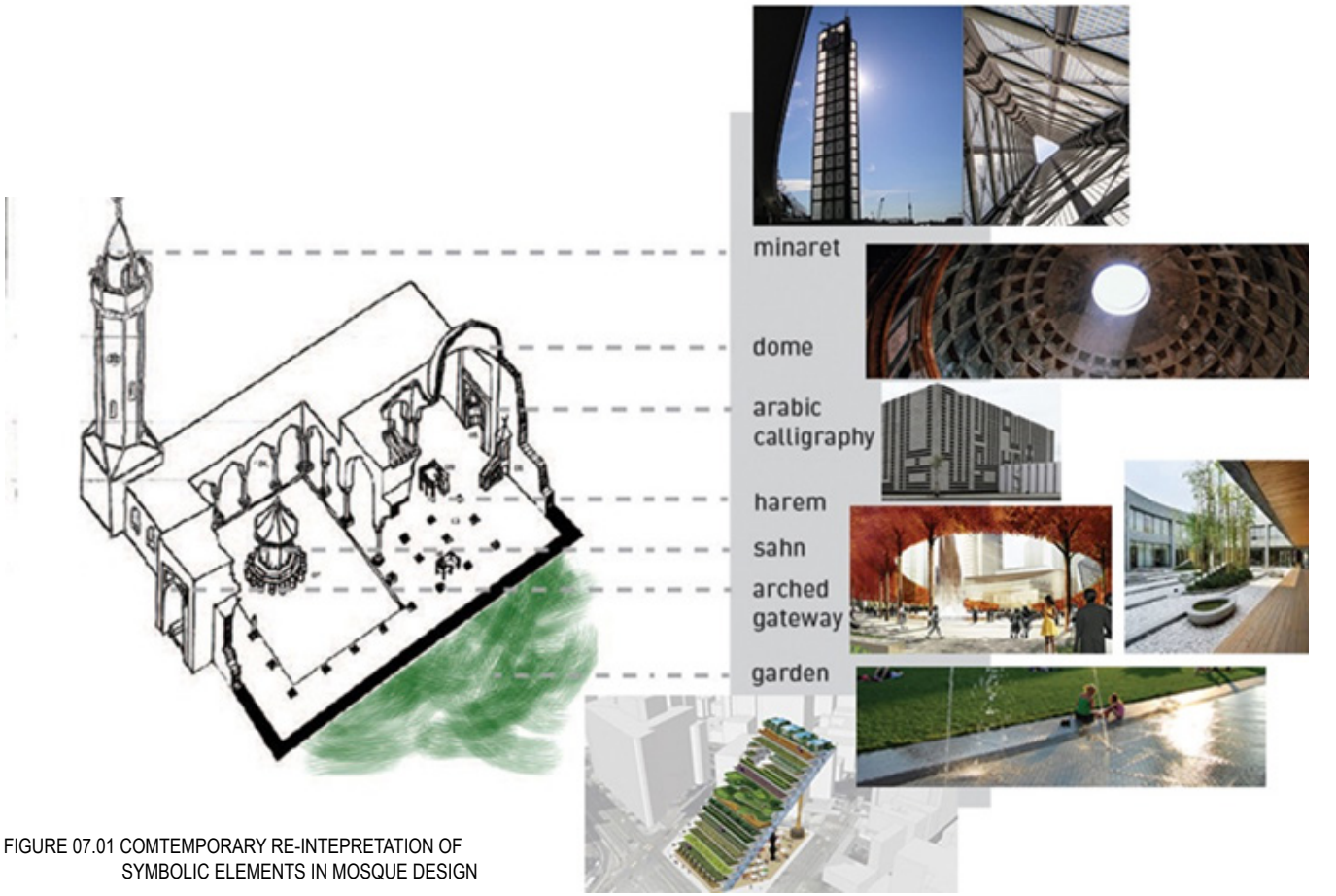

FIGURE 07.01 COMTEMPORARY RE-INTEPRETATION OF SYMBOLIC ELEMENTS IN MOSQUE DESIGN

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07.2 MOSQUE IDENTITY AND MEMORY

The following figure (Chohan; 2012:8) illustrates the spatial development of mosque architecture through its history, dating back to the first Prophet Muhammad's (May peace be upon him) mosque in Medina, Saudi Arabia. Epitomized by its simplicity, practicality and humility, formal elements- such as the courtyard typology- has remained consistent, yet the dome and minaret emanated from Iranian and Turkish influence.

There have been many questions related to the idea of what physically and metaphysically constitutes Islamic Mosque architecture. The most consistent perception of Islamic architectural vocabulary is represented by the many community and monumental state mosques that make evident use of Middle Eastern or Central Asian architectural apparel as dutifully exemplified in its extravagant splendour as the Turkish Mosque in Midrand and the Tshwane Muslim School in Laudium.

The predominant understanding is that it possesses a distinct set of architectural vocabulary that is unquestionable. This is however false as there is only one Quranic condition for a Mosque; that it faces the Ka'ba in Makkah.

Razak (1973) states that the actual architecture has more to do with issues of identity, than with the function of the Mosque.

Serageldin, Frishman & Khan (1994;72) state that even though mosques have a particular functional requirement of providing space for prostration, its architecture needs to "speak to the community providing both spiritual uplift and an anchor for the communities identity". The method in which a building converses with its community is dependent on the particular code and imagination forged by the evolution of its society.

The development of technology and architectural innovation has thus rendered- in my opinion- the dome and minaret redundant and unnecessary. Apart from its mere identifiable and symbolic nature, domes are not anymore the only means of spanning large distance in order to create vast internal spaces. Also, tall minarets are not required any longer as electronic devices and technological speaker systems have replaced this traditional method of calling the community to the mosque for prayer.

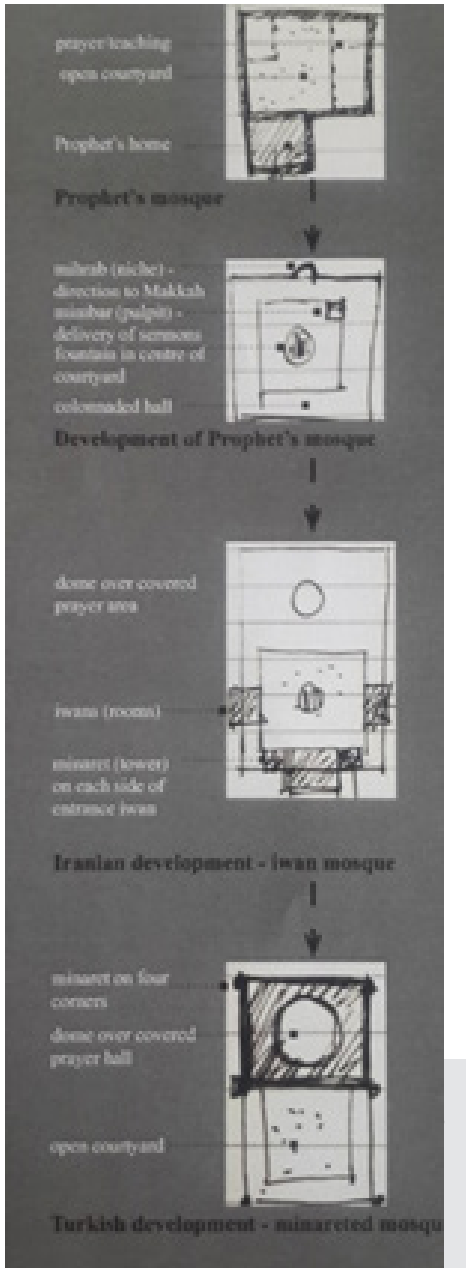

FIGURE 07.02 SPATIAL DEVELOPMENT OF MOSQUE PLAN OVER TIME

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07.3 SYMBOLISM AND MOSQUE PLANNING IN ARCHITECTURE

Traditionally the mosque has played a dominant role in most Muslim environments acting as the physical organiser of space and society. It also acts the definer of its people's identity, providing of a point of reference for citizens, passers-by, as well as travellers (Serageldin and Steele; 1996).

Nawawi (2014) states that while generic symbolism of the Masjid-around the world- as an icon lies in its definitive domes, arches and minarets, however the definitions and abstract implications of the Masjid as objectively states within the Holy Quran and the traditions of the Prophet S.A.W. do not address the issue physically.

Serageldin and Steele (1996) state how mosques are designed as impressive monuments which certainly do provided a sense of identity, but paradoxically sometimes for societies living in a culture of mass poverty. They suggest that the notion of symbolic reproduction related to an architectural iconography is reflected primarily in monumentalism and opulence, void of any social and contextual significance. This architectural conception needs to be refined and is thus a project intention of this dissertation.

"People cling onto an archetype of a mosque with a dome and a minaret, but this is not the typology of a mosque" (Janmohamed, n.d.). Although the rites of prayer are identical for the different schools of thought within Islam, Serageldin and Steele indicate that there is no strictly prescribed architectural vocabulary as each element allows endless combinations and permutations, bounded only by the the responses of the community and inventiveness and imagination of the architect.

One has to recognise the need to re-symbolise the existing environment in Muslim societies as a fundamental task of contemporary intellectuals in the Muslim world, and no architectural expression is more likely to re-symbolise the built environment of Muslim societies than mosque architecture. The continuity of key symbolic elements, such as the minaret. dome; gateway and muqarnas can be transformed without eliminating the deep imagery inherent in them.

The specific liturgy and functional requirements of the mosque do not dictate and particular architectural and physical layout. Thus architects are bounded only by their imaginations in what they can propose. If some have preferred to go back to the classical forms then this has been by choice rather than limitation. If some have broken radically with tradition they have been able to do so while remaining faithful to all the requirements for prayer and worship in the Muslim liturgical doctrine.

Nawawi (2014) states that -as the Holy Quran has quoted- the Masjid may be every place on earth, then no matter what architectural form it assumes, if it is used as a Masjid, it is a Masjid in whatever name or form it may portray.

The marriage of technology and architectural convention has opened up new avenues and developed a wide variety of new interventions that merit attention

Inherent tension between innovation and tradition in the architectural expression of mosque design
It is clear that from this rich background three trends have emerged which seek to anchor contemporary expression in a reinterpreted idiom of the past

It is realised that there are many other ways of providing mosques which respond to the need of Muslim societies as well as its social and historical context in order to anchor one's self-identity within the structures we build today, and which represents itself as eloquently as earlier symbols have to past generations.

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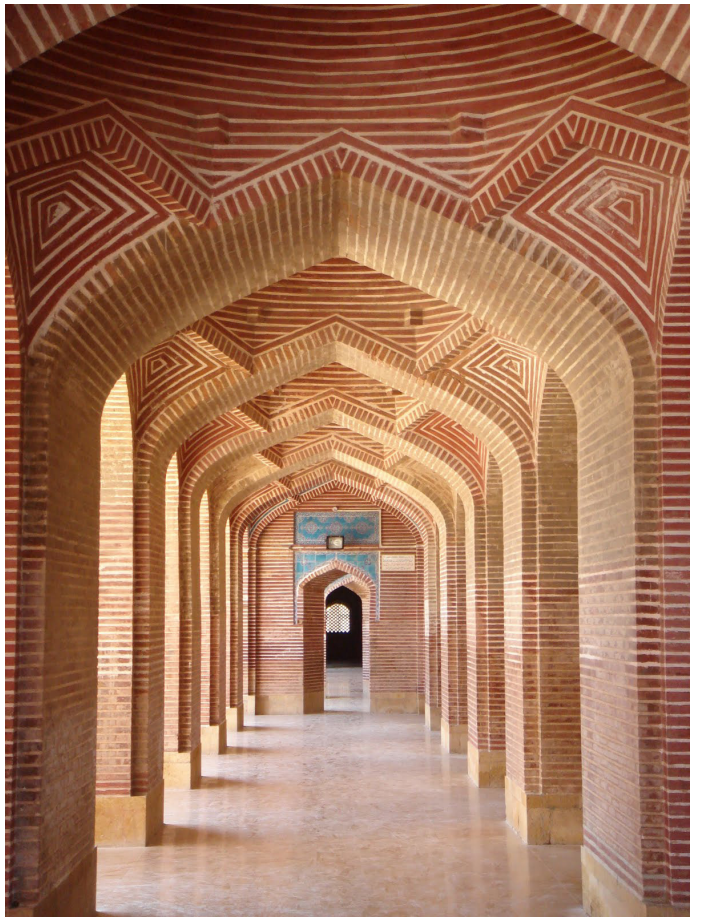

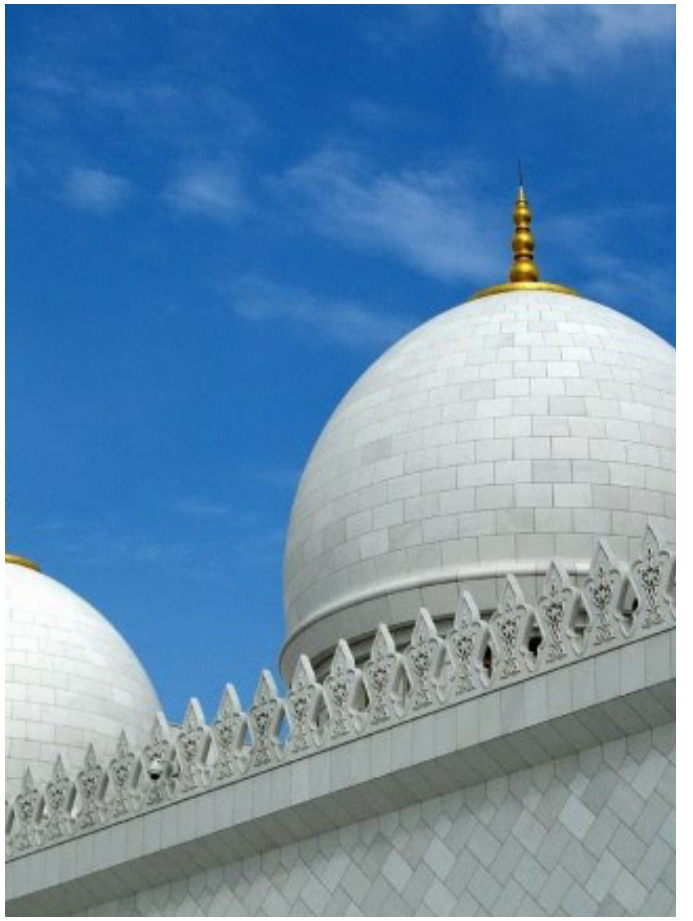

FIGURE 07.03 ARCHITECTURAL ELEMENTS CONSTITUTING TRADITIONAL MOSQUE DESIGN

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07.4 THEORY RELATED PRECEDENT- ABSTRACTION OF SYMBOLISM

MOSQUE OF PRISTINA

Architects: Victoria Stotskaia, Raof Abdelnabi, Kamel Loqman- Invert Studios
Categories: Mosque, shrine
Dates: 2010
Status: unbuilt
Address: Pristina, Kosovo
Hours: Always open to Muslims

FIGURE 07.04 3D PERSPECTIVE WITHIN CONTEXT

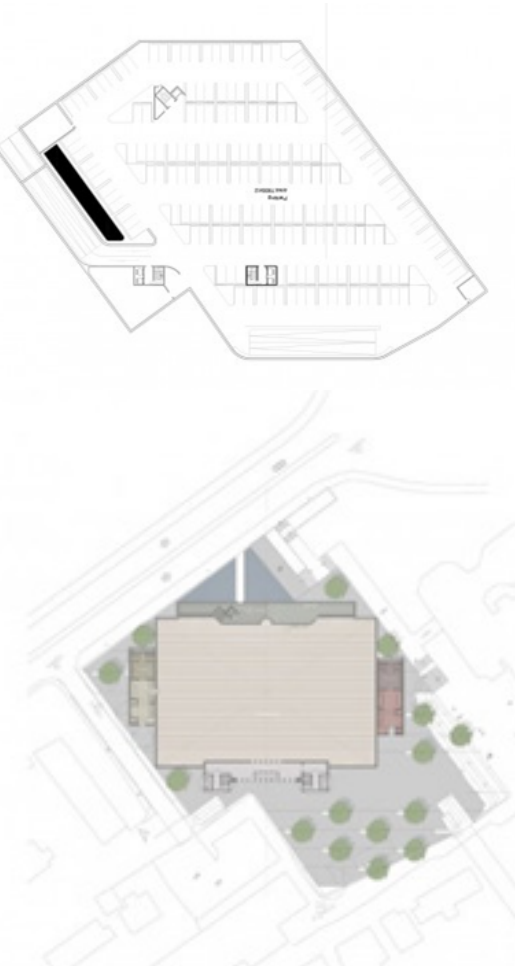

FIGURE 07.05 UNTRADITIONAL PLANNING OF MOSQUE

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The project explores notions of surrounding itself with its context, playing in harmony with its neighbourhood. The proposal aims to integrate itself with the urbanity of Pristina, yet also to stand out as a monumental structure that acts as an icon for the city.

Unconventional and uncommon shapes are intentionally spatially manipulated in a conscious effort to change public perceptions on mosque design and external shaping. The proposal therefore aims to reflect the Islamic Architectural Heritage whilst simultaneously standing out with its high technological character (Furuto, 2013).

The deficient prayer space has resulted in a trend of building extensions to the existing mosques with the community's intension to gain more space and even using the public spaces near them especially for the Friday prayers. This issue of lack of adequate prayer space and disproportionate mosque coverage over parts of the new and old city of Pristina is attended to in the design of the mosque proposal servicing the vast number of worshippers on all days of the week.

The consideration of building a central Mosque as one with extraordinary importance to the Muslim Community of Kosovo has served as a crucial guide in the design process. Traditional Ottoman architectural elements were evaluated and considered, then simply merged the shape of the dome and minaret in order for the design of its new-found shape. The mosques iconic nature therefore lends itself to the technologically merged shaping of the dome and minaret, integrated with a tower to create a large presence towards the main road, consequently tying itself in with the urbanity of the site, interacting with all circulation and approaching points to it (Furuto, 2013).

The specific angle oriented to Mecca is purposely emphasized in order for the public to understand its importance within its landscape. Solid and transparent skins facing north and south protect the monument from climatic concerns and create a sense of privacy.

Principles adopted from this design include the ability of transformation and abstraction of symbol within design. Its contemporary interpretation from a traditional Ottoman approach is one of value and has thus been a key informant for the design of this dissertation. Lessons in terms of the precedents monumentality (conscious alternate axis, scale of the roof and tower, siting within the landscape) have been understood and consciously worked against in the design of this dissertation in order to fulfil the projects intentions to de-monumentalise and hybridise that of sacred and profane space.

FIGURE 07.06 UNTRADITIONAL FORM AND MATERIALITY OF MOSQUE

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07.5 PROGRAMMATIC PRECEDENT-MOSQUE AS PUBLIC SPACE

THE VANISHING MOSQUE

Architects: Rux Architects
Categories: Mosque, public square, arcade
Dates: 2009
Status: concept, unbuilt
Address: Proposed for the UAE
Hours: Always open to Muslims, and non-Muslims

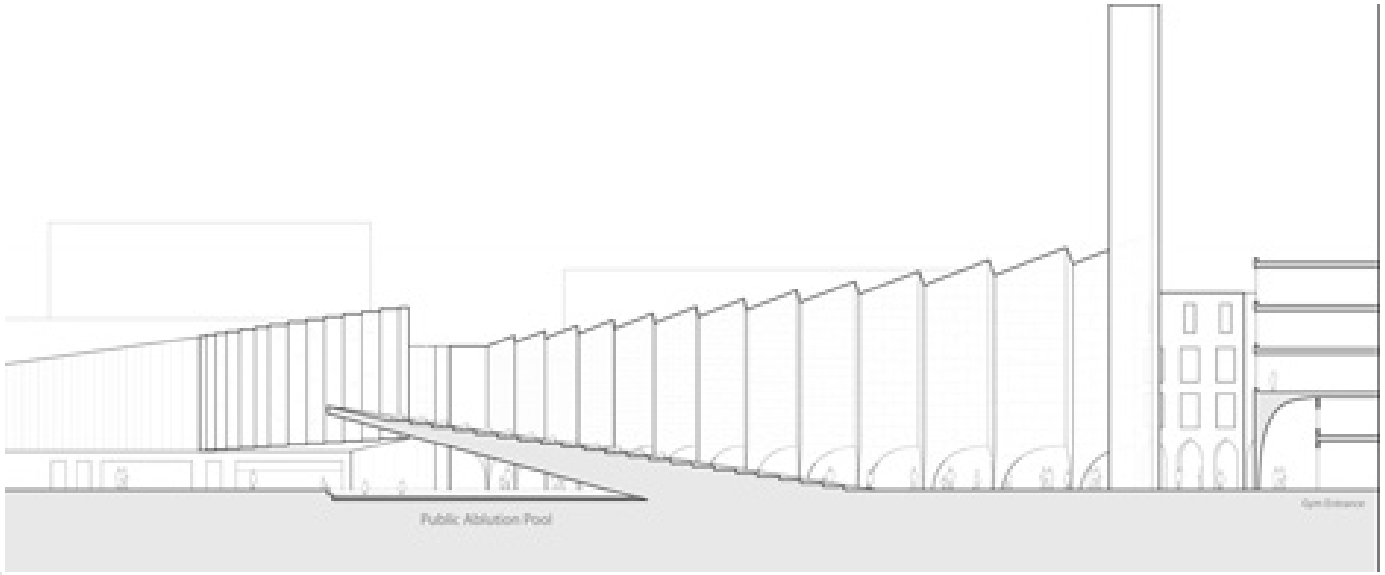
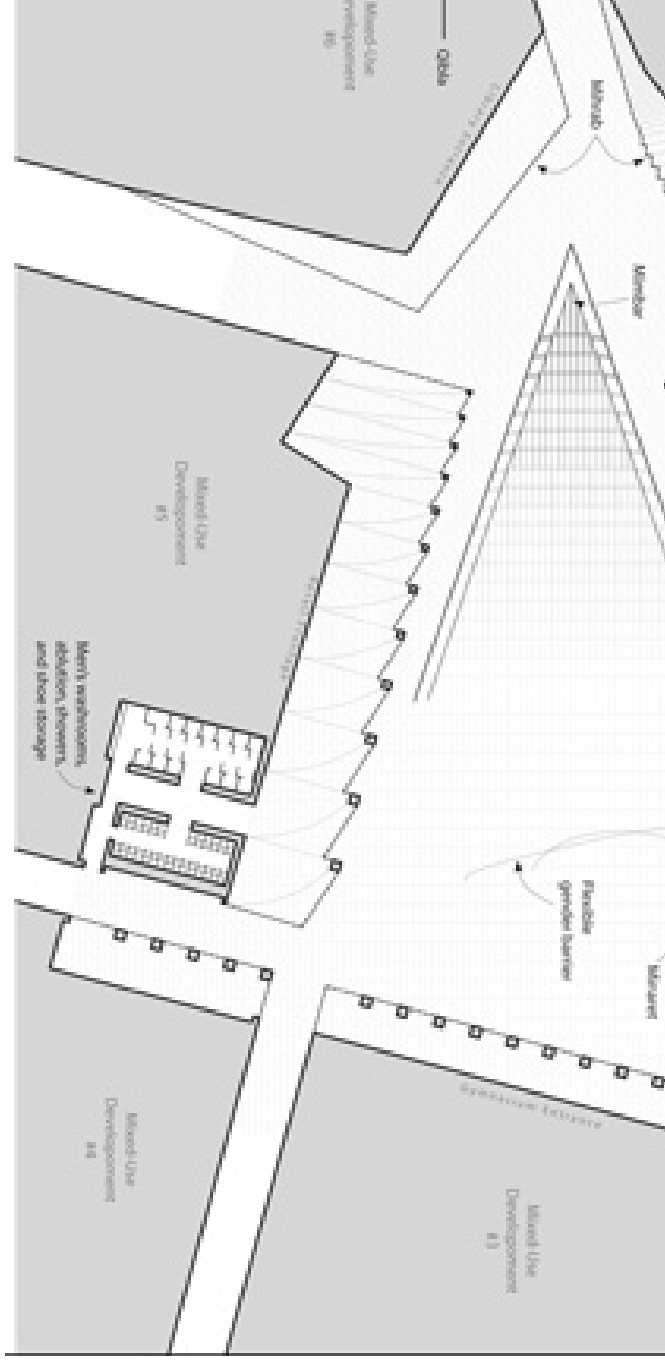


FIGURE 07.07 SECTION OF URBAN PLAZA/ MOSQUE



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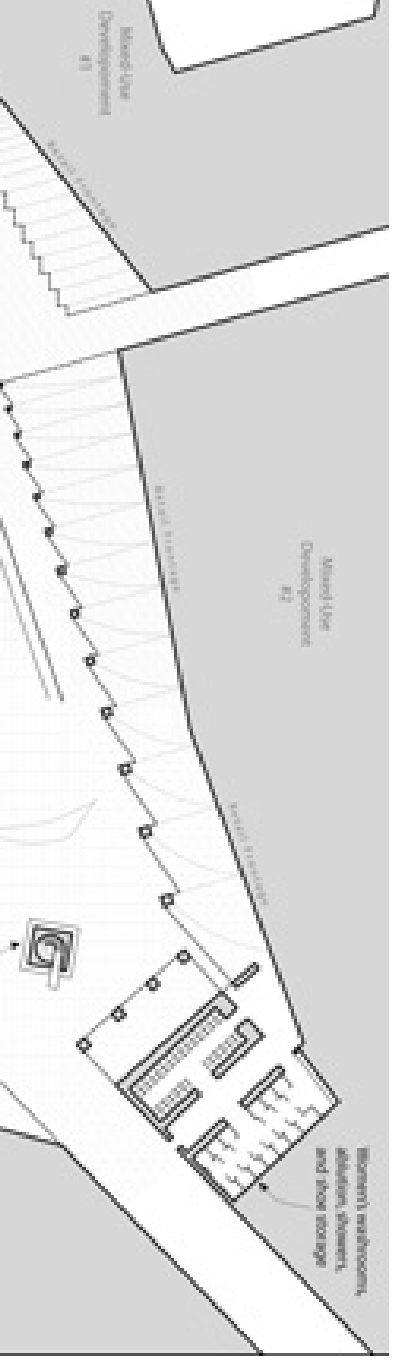

In 2009, an international design competition called “Design as Reform Volume 2” was held in order for concepts for the re-invention of the traditional mosque to be investigated. The overall aim of the competition was to re-evaluate and evolve the formal and programmatic offerings of a traditional mosque in a way that was both sensitive to history and tradition, acting as visionary and innovative in its reinterpretation (Etherington, 2010).

The design response was not a building, but rather a space that vanished into the fabric of the city. Seamless with the streets, connected directly to the pulse and energies of daily life, and welcoming to anyone and everyone at any time. The proposal is seen to become more visible, more iconic, and more integral to the spiritual and cultural workings of the community than any building with doors and walls ever could.

The design became a strategy, acting as a “developer’s tool” for integrating spiritual space within new urban developments in the Middle East. The raised prayer plinth facing Mecca, and the deep shaded arcades allows for the hustle and bustle of city life to slip around and beneath the mosque during prayer time without disrupting the congregation. When not in use as a mosque, the space functions as a place for casual lounging and chance interaction amongst people within the community (designboom | architecture & design magazine, 2014).

FIGURE 07.08 FLOOR PLAN OF URBAN PLAZA/ MOSQUE

Principles adopted form this precedent include lessons of superimposing the function of a mosque (sacred space) within an urban plaza (profane space) increases the social value of public spaces, increases the monetary value of adjacent properties, also fostering a powerful sense of community for residents. This precedent effectively relates to the dissertations overall project intention of linking the spiritual with the secular workings of the city in, in order to make the practice of Islam a transparent and inviting one to all those who come across it.

FIGURE 07.09 MOSQUE SPACE IN USE

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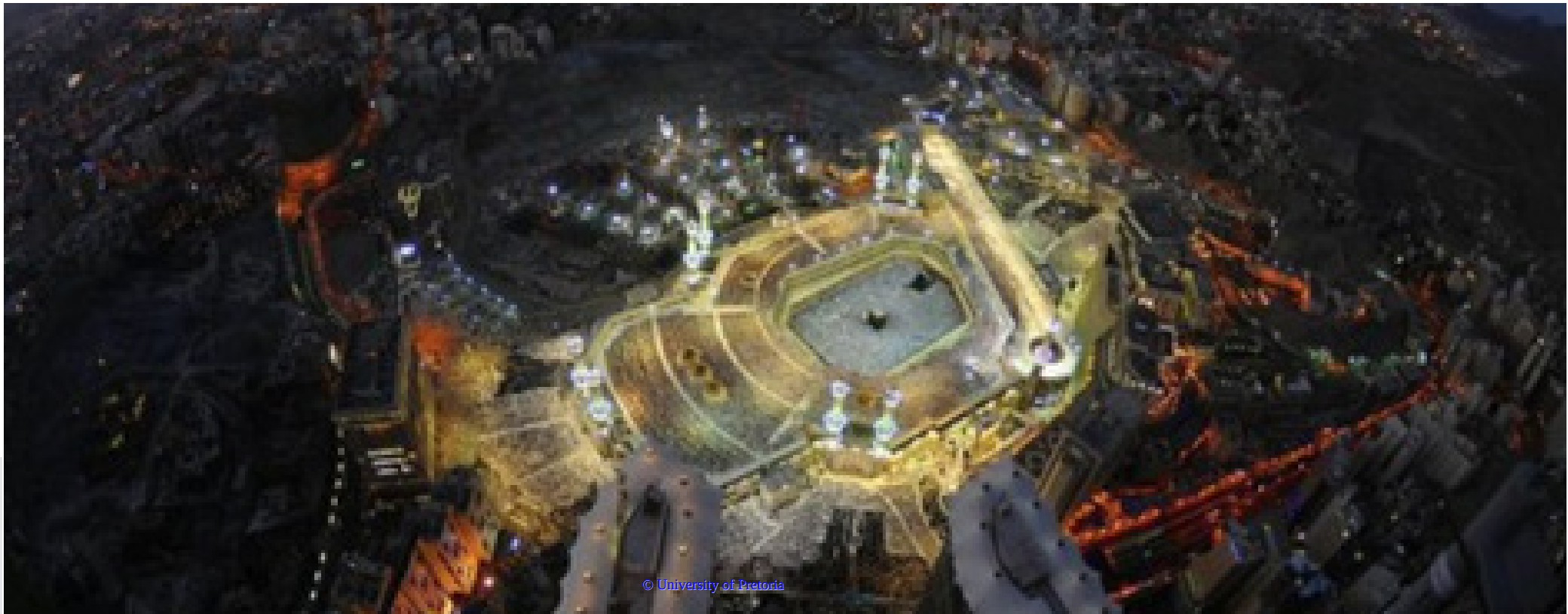
07.6 SPATIAL PRECEDENT- ALLOWANCE FOR MEN AND WOMEN

MASJIDIL HARAM

Names: al-Haram Mosque, Al-Masjid al-Haram , Al-Masjid al-Haram (The Holy Mosque) Haram • Masjid al-Sharif • The Holy Mosque
Categories: shrines; mosques; pilgrimage destinations
Dates: 16th C, 20th C
Status: active
Address: Mecca, Saudi Arabia
Hours: Always open to Muslims. Non-Muslims are not permitted to enter Mecca or the mosque

FIGURE 07.10 BIRD'S EYE VIEW OF HARAM



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Al-Masjid al-Haram in Mecca, Saudi Arabia, is the holiest mosque in the world and the primary destination of the Hajj pilgrimage, previously outlined as one of the five Pillars of Islam. The mosque's prayer complex covers an area of 356,800 square meters and can accommodate up to 820,000 worshippers during the Hajj pilgrimage which occurs annually in September through to October.

The Holy Mosque is the only mosque that has no qibla direction, since Muslims pray facing this holy mosque from wherever they are in the world. This particular site is therefore the basis on which the particular axis to Mecca is formed. The Haram –originally built in the 7th century- has been spatially modified, rebuilt, and expanded on a regular basis ever since.

A major extension consisted of a new wing and an outdoor prayer area on the southeast side of the mosque where air conditioning circulates below the tiled floors, supplied through ventilation grids located at the base of each column. The monumental King Fahd Gate consists of three arches with black and white voussoirs, elaborately decorated with carved white marble and two colossal new minarets matching the older ones. Windows are covered with brass and framed with carved bands of white marble (Sacred-destinations.com, 2014).

Spatial transience and adaptability are principles adopted within the dissertation's design. The floor plan shows how men and women are mixed within this large building, separated only by hijab (veil covering in order to maintain modesty).The spatial layout is in tune with the hadith, where the Prophet (pbuh) stated that the "women should pray behind the men, the masjid thus provides women's spaces behind the men on the left and right side of the prayer hall" (Nawawi; 2014, 8).

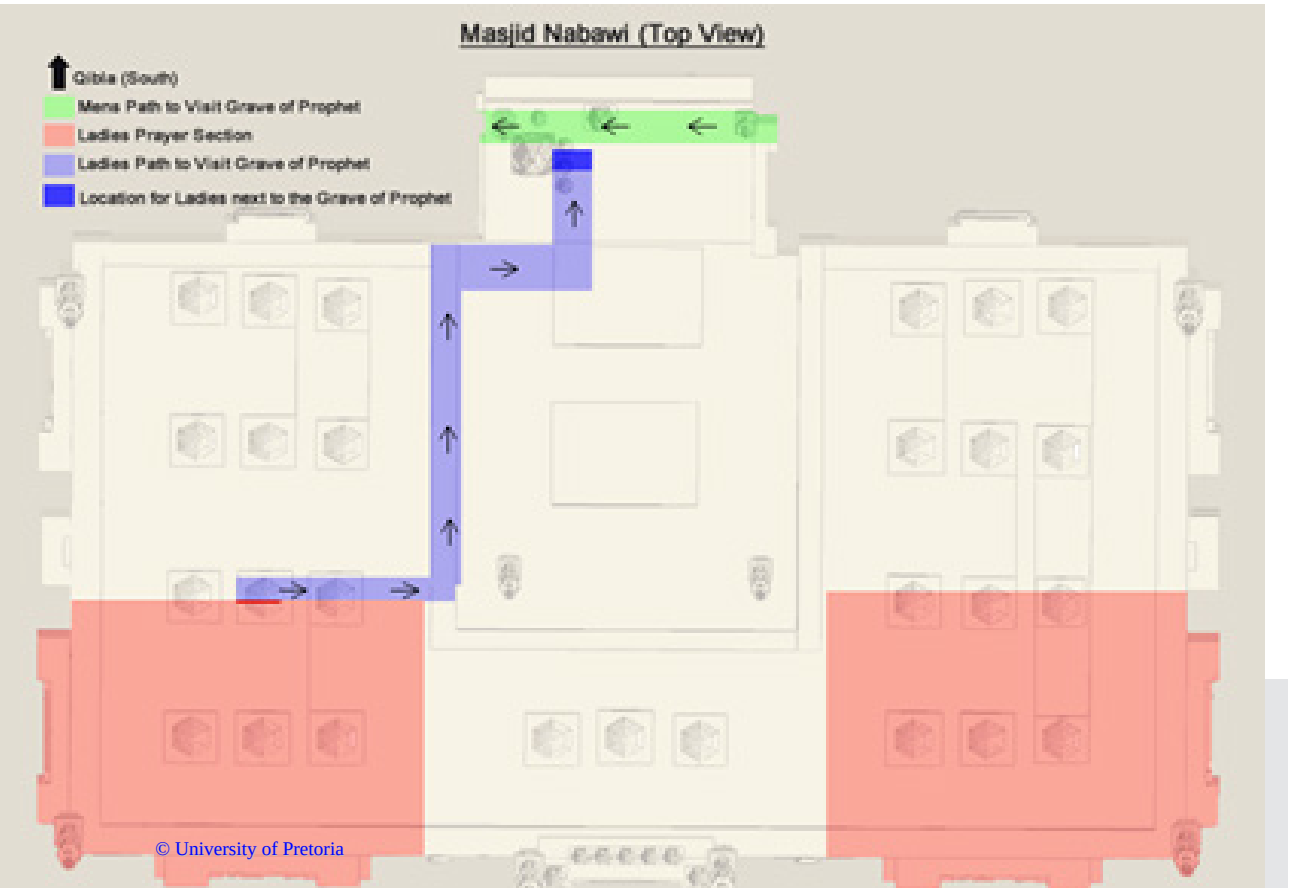

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FIGURE 07.11 FLOOR PLAN ILLUSTRATING NO DISTINCTIVE SEPERATION BETWEEN MALES & FEMALES

07.7 ISSUE RELATED PRECEDENT- THE MALL CONFIGURATION

AN ARCHITECTURAL CRITIQUE - THE MALL TYPOLOGY:

The Oriental Plaza- an unrealized mall configuration

The proverbial architectural configuration of the Mall- especially within the context of Gauteng- is comprised of a series of internalised corridors of a specific width, usually six to seven meters, which radiate out in various configurations but are always linked to facilitate movement. Larger anchor tenants are strategically planned at the end of a run of small scale shops that line the corridors on either side. (Noble: 2000)

Crawford appropriately explains certain tactics employed by mall designers: ‘All the familiar tricks of mall design - limited entrances, escalators placed only at the end of corridors, benches and fountains carefully positioned to entice shoppers into stores - control the flow of consumers through the numbingly repetitive corridors of shops. (Sorkin, 1992: 14 - 15)’

As much as the Plaza was an instrument of control in its socio-political conception of apartheid supremacy, Toffah suggests that its design fulfils the above mentioned strategic tactics and physical layout in order for consumer control in order to entice shoppers.

The mall therefore acts as an internalized architectural device of consumerism and manipulation within which a disconnection with one’s context exists. Its insular nature does not allow for much permeability with the urban fabric of Fordsburg.

FIGURE 07.12 3D PERSPECTIVE OFTHE OPEN-NATURE OF MALL TYPOLOGY

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WILLOWBRIDGE SHOPPING CENTRE

Categories: Mall, shopping centre, entertainment hub
Status: Built
Address: Tygervalley, Cape Town
Hours: Mon-Thurs 09:00- 18:00
Fri-Sat 09-20:00
Sun 09-17:00

Conceived of as a new-concept retail and shopping centre that would not only reflect the uniqueness of the site,responding sensitively to its context, it was also the clients' objective to challenge traditional insular retail models of other popular regional shopping malls.

Vivid Architects and the client shared similar design aspirations and philosophies in the realization that even though shopping centres are not only designed to entice customers to shop, they also need to reflect the growing desire to experience environments that both supports and encourages the human need to gather and socialise within a stimulating place enhanced by natural light, fresh air and open skies above. (Low: 2006)

The site sits on a greenbelt and was thus the key informant for the design of a 'high street' for shopping. Influenced by the linear nature of the site, the centre also acts as an interface between the urban edge of the Tygervalley business district and the natural splendour of the rehabilitated Elsieskraal River that it borders. (Low: 2006) Major tenants typically anchor the centre on either end while the overall length of the open street is articulated by three 'Village Squares' with a series of pedestrian bridges that cross the street at first floor level. The squares are the focus of the restaurants and are enhanced by specially designed landscape elements. (Low: 2006)

Principles adopted by this precedent include its sensitivity to site and its external nature that promotes stimulating and encouraging interaction between people and landscape. Healthy environments are created to allow for moments of reflection, recreation and contemplation, allowing the traditional shopping centre to become more than just a consumerist plot of persuasion and influence. This dissertations proposal ties itself well with this new-found vision of shopping mall as it is believed that the experience should be designed to be all-encompassing and invigorating for its users.

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07.8 EVALUATION & WAY FORWARD

Nothing generates a higher degree of critical polemicism today that the question of the appropriate connection between the spiritual and secular aspects of religious architecture in Muslim societies. (Serageldin and Steele;1996)

Serageldin and Steele (1996) suggest their position that 'tradition' is usually represented as the recapturing of a romanticised and idealised past- making use of symbolic elements, while 'modernity' is associated with the contemporary- adopting new ways and means of architectural expression .

Serageldin and Steele mention how on one side of the debate are those architects and designers who use a select range of easily recognisable, traditional forms, purposely choosing to limit the architectural vocabulary. On the other are those who contest and believe that the only other way to truly express the central role of the mosque in a 21st century contemporary culture is to be iconoclastic by utilising a range of industrial materials and technology available, in the search for a new and innovative architectural language.

The design encompassed by this dissertation contests the existing Mosque, consequently opting for the latter option with regard to the above-mentioned debate.

Joe Noero has defined two types of contextualism;

1. 'pathological contextualism' which is inspiration by context
2. 'progressive contextualism' which shifts from inspiration by context to provision of upliftment. (Marchall & Kearney 2000; 1726)

The latter example - progressive contextualism, is achieved by understanding the context in terms of what it is lacking, what it needs, the types of spaces that would improve the context by adding uniqueness and a sense of place. (Razak, 1973)

Khalid Asfour, a PHD student at Massachusetts Institute of Technology in Boston USA, has outlined three approaches that have been used by contemporary Muslim architects when looking at history:

1. 'Visual Abstraction'- whereby architects imitate past forms either -dimensionally or three-dimensionally.
2. 'Conceptual Abstraction'- here the architect deciphers rules/formulas from the past and applies them (such as proportion, sequence of space, etc.).
3. The third approach is a combination of the first two, where the architect "seeks from history a design attitude and not an end product" (Razak, 1973).

Rasdi (2014,29) explains that the term 'modernistic' relates to the notion that a true architecture is one that rejects historic revivalism, rejects ornamentation, celebrates abstraction, and rejoices in structural expression in architecture. He further explains that phrase 'modernistic expressionism' relates to any form of architecture that carries a metaphoric message through the use of structurally expressive form.

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This dissertation aims to adopt an alternate/ third approach as means to create an appropriate architecture.

The relationship between tradition and modernity, the eastern and western, and how it might be possible to combine two elements together rather than be forced to choose one or the other gives indication into a third condition (Janmohamed, n.d.).

This third condition (in relation to the conceptual approach of creating a third space) is conceptualised through Joe Noero's theory of progressive contextualism, along with Khalid Asfour's third example of seeking from history as a design attitude – as mentioned above. These outcomes have been tabulated.

the mosque

was	is	should be
important	disconnected	inviting
internalized	internalized	transparent
central	on periphery	central
connected to community	connected to car-park	interaction with community
passively heated/cooled	air-conditioned	technological/sustainable

the human [islamic] condition

was	is	should be
no existence of groups	isolated existence	integrated existence
workers	owners/entrepreneurs	educators/practitioners
religious	indifferent	mutually religious
unity amongst muslims	independence	unity in society at large

FIGURE 07.13 TIME COMPARISON OF THOUGHT METHODOLOGY

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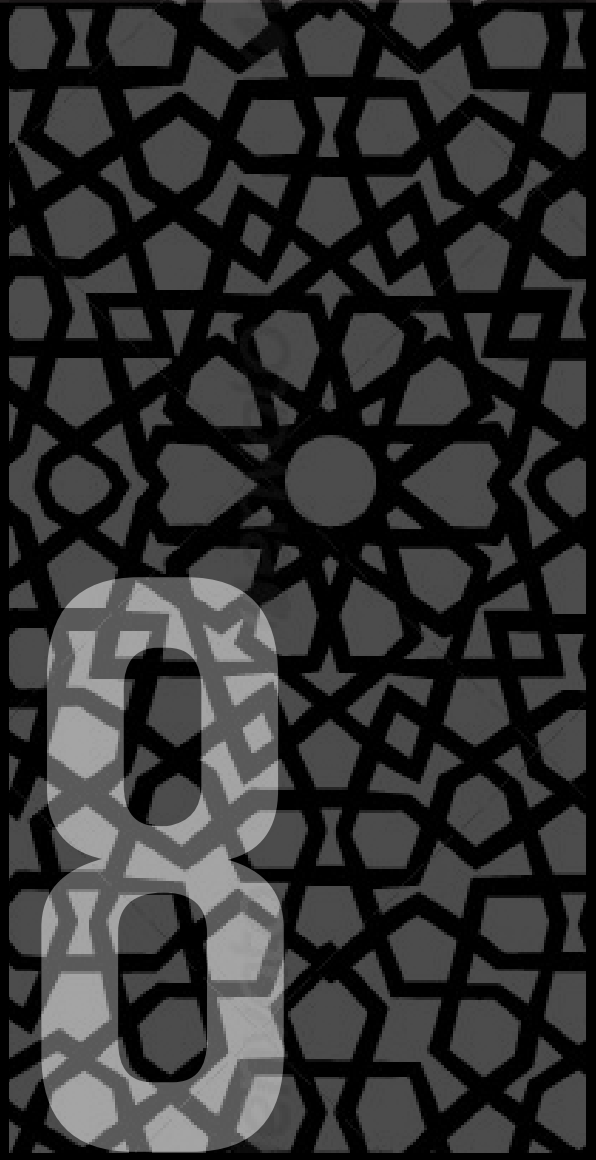

CONCEPT | THEORY

Translation of the findings above into a concept appropriate to theoretical underpinnings. These notions and ideas are translated into a number of conceptual scenarios that are weighed up according to the intentions previously outlined. The chapter also explores the main design generators and substantiates the decision-making within the theoretical, practical and contextual realms.

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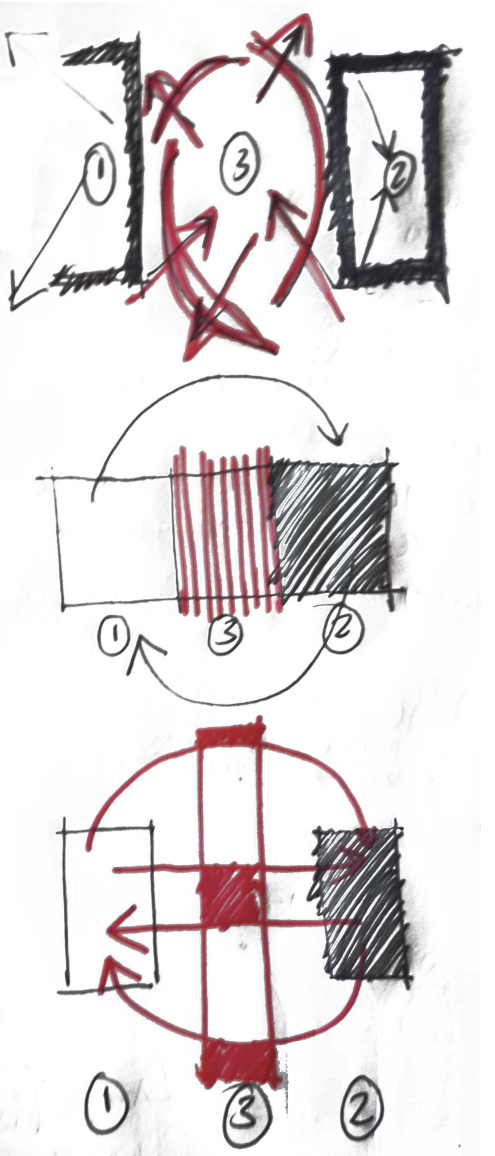

FIGURE 08.01 CONCEPT SKETCH SHOWING JUXTAPOSITION OF THIRD SPACE BETWEEN THAT OF THE FIRST AND SECOND SPACE

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08.1 CONCEPT FORMULATION

Contextual tangible and intangible mapping (chapter 4) has given indications of possible programs that may fulfil the project intention of re-linking the secular with the religious.

These include:

RELIGIOUS	SECULAR
-congregational prayer space -cleansing/ bath facilities -ladies prayer facility -islamic library -eid prayer space -lecture hall	-formal and informal market/souk -green reflection space -civic congregational area -restaurants -community hall -donation/collection area

An overlap of these programs is proposed in order for the de-monumentalisation of both the Masjid and the Mall typology to occur. This overlap of religious and secular is envisioned to create hybrid spaces which may create a third space. These in-between third spaces are neither private nor public, but are rather social spaces, transparent spaces, and liminal spaces which are- according to reference- envisioned to reinforce the dialectic interaction between the first space and second space.

08.1.1 CONCEPT THEORY

In order for there to be a third space, a first and second space has to be clearly defined.

The first space refers to that of the urban fabric of Fordsburg while the second space refers to that of the Oriental Plaza- the internalized mall-both of which refer to the secular. A third condition- a religious space- is envisioned to create “a dynamic tension between the first proposition and its alternative: this juxtaposition reinforces the dialectic interaction between the positions rather than a duality of opposites.” (Arendt; 1959, 25)

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08.1.2 THE SOCIAL REALM

Hannah Arendt (1959, 26) refers to the emergence of the social realm, a space that is neither public nor private. This concept is a relatively new phenomenon whose origin coincided with the emergence of the modern age. This social realm- a third space- between that of spaces one and two, between private space and public space, between family space and social space, between cultural space and useful space, between space of leisure and that of work, all of which are oppositions outlined by Michel Foucault- of other spaces.

These third spaces –in support of the author's argument- may be characterized by Foucault's notion on Heterotopias

These principles include:

- Heterotopias take quite varied forms
- May have one function or another
- Is capable of juxtaposing in a single real place several incompatible spaces
- Are most often linked to slices in time
- Always presuppose a system of opening and closing that both isolate them and make them penetrable
- Have to function in relation to all the space that remains

08.1.3 LIMINALITY

In the context of this dissertation and with reference to theory related readings, liminiality is understood to:

- point to a thirdspace
- be seen as as a midpoint of transition, between two positions and as a temporary phase rather than a permanent state.
- be thought as "the realm of conscious and unconscious speculation and questioning- the 'zone' where things concrete and ideas are intermingled, taken apart and reassembled- where memory, values, and intentions collide".Fred Koetter (1980:69)
- be an ambiguous space that is by definition a transitional space that exists between two contradicting poles (Viljoen; 2012,102).
- to be a "phase in social life in which this confrontation between activity which has no structure and its structured results produces in men their highest pitch of self-consciousness"
- While in the liminal state, human beings are stripped of anything that might differentiate them from their fellow human beings."
- Muslims are liminal figures because they believe they are temporary residents of the world. This liminal state only ends with death, and thus the liminal state lasts for their entire lives on earth."
- Theories of liminality point towards the zone of blurring between the making and experience of spaces"

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08.2 CONCEPTUAL AND CONTEXTUAL THEORY & RESPONSE

08.2.1 DEFINING THE THIRD CONDITION

In order for there to be a third space, a clear definition of first and second space must be established.

Within the context of this dissertation, the first space refers to that of the islandified mall-like Oriental Plaza which exists in isolation and grandeur surrounded by its vast and unvaried parking lot. The second space refers to that of the urban fabric of Fordsburg along Lilan andd Dolly Rathebe road. Varied and dynamic, this space is more permeable and provides more opportunity for the integration and stitching of a new sacred space.

Juxtaposed between the secular first and second space lays an inserted new third religious space. This space mediates between, acting as a liminal space between those that are existent. Furthermore, new third spaces- amongst, between, above and under- are created within the new third space which are intended to mediate between the sacred and profane in order to create new relationships and to blur the boundaries between the two poles.

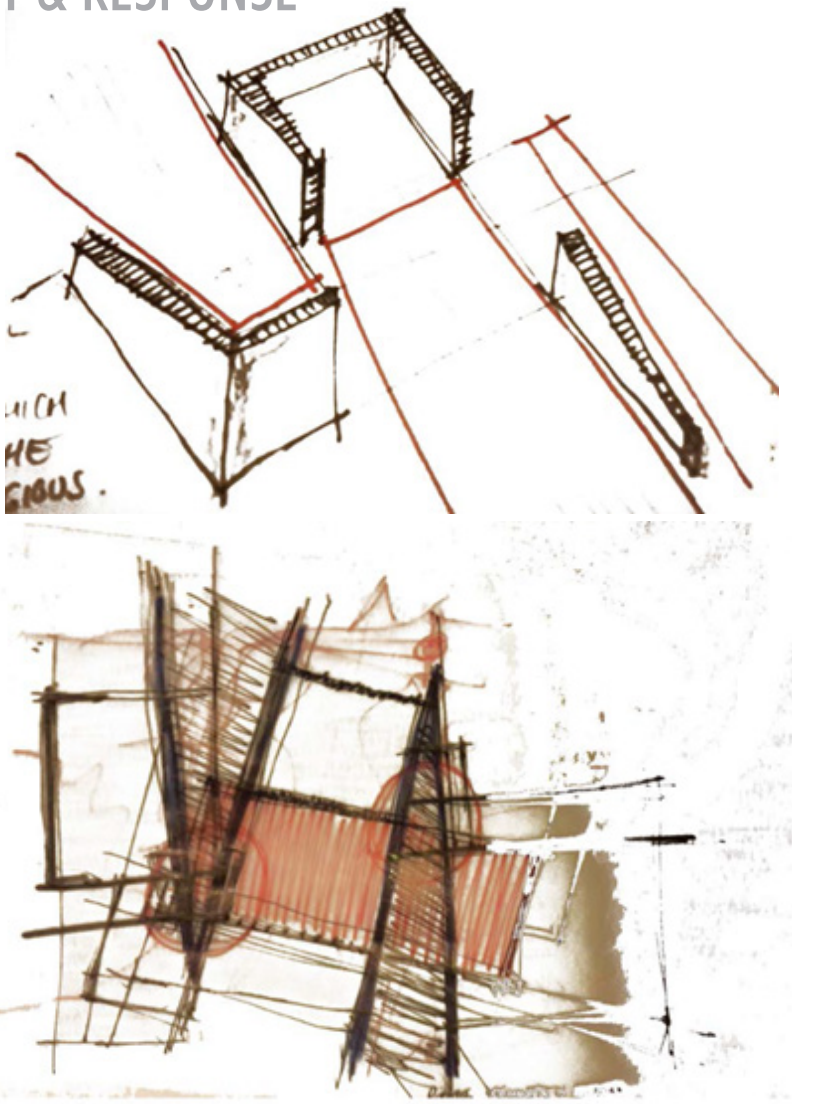

FIGURE 08.02 CONCEPTUAL EXPLORATIONS
DEFINING 3 CONDITIONS

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08.2.2 THEORETICAL PREMISE- TRADIONAL PATTERN-MAKING- GEOMETRY AND PROPORTION

The Oxford English Dictionary (2011) defines the word geometry as the science of properties and relations of magnitudes such as points, lines, surfaces, or solids in space and the way the parts of a particular object fit together. Geometry, according to Plato, can also refer to the science of stereo-metry or “spatial measurements”. Tradition holds that, “Only he who is familiar with geometry shall be admitted here” as engraved over the entrance to Plato’s Academy, (Critchlow, 1976). Critchlow (1076) further states that the very laws of how things were allowed to be by the “Divine will” are the laws of “Harmony of Being”.

The use of geometry has existed in many architectural forms, across centuries. The first confirmed record of geometric usage in design, acting in relationship to astronomy, human and music may be traced back to the ancient Greeks, in particular, Pythagoras and Plato. These geometric ratios and proportions (such as the golden section) were employed in the design of ancient sacred and ceremonial sites in all traditional civilizations, together with elaborate depictions of the participants and their stories from religious scriptures and beliefs.

In Islamic art-making, however, geometric patterning has always- since its origin- involved the primary usage of geometric formation, serving as the underlying structure of Islamic design process (sciencedirect.com, 2014). This is due to the prohibited use of human depiction in Islam, considering instead the relationship between cosmology and geometry, manifested in Islamic patterns where geometry acts as the vocabulary underpinning the pattern language.

Proportions serve two main objectives (sciencedirect.com, 2014). These include:

1. “Proportions are strongly linked to geometry which in itself may be viewed as a self-guiding method of aesthetically proven design”.
2. “Geometric proportions regulate the order and rhythm of patterns. It also mediates between the two poles of order and diversity”.

Islamic art favors geometry because of its intelligible aspect. Geometry possesses abstraction and the capacity to express and reveal objectively immutable and spiritual truths. Geometry involves proportions and prime roots that are considered the most beautiful proportions (the proportions of beauty). As such, beauty, for the Muslim artists, is objective and self-expression of truths, which is the essential nature of beauty as Plato stated, “Beauty is the splendor of the truth” (Burckhardt, 1987).

Geometric proportions regulate the order of patterns based on mathematical ratios, which is influential in understanding the universe, man and nature; these proportions are, by their nature, the essential ingredients in sacred geometry, as Pythagoreans stated that these harmonic ratios render music in a balanced pattern (sciencedirect.com, 2014).

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08.2.3 GEOMETRIC OVERLAY

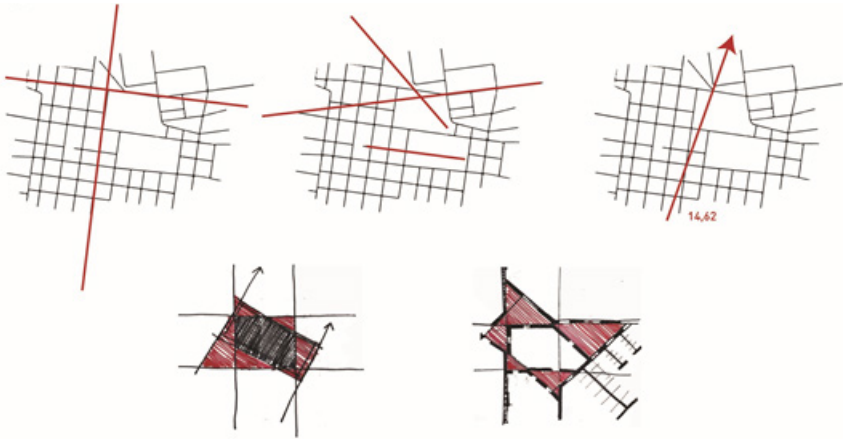
“Geometric proportion is strongly linked to Islamic cosmology, philosophy and metaphysical dimensions. It brings meanings and spiritual exercises for the viewer, deconstructing the meanings underpinning the geometric framework. As such, the viewer is more than an observer; he or she is a participant in the establishment of a strong link with geometry symbolizing man, nature and cosmos” (sciencedirect.com; 2014).

Geometry- Since the use of art with human depictions is forbidden in Islam, innovations within geometry as an art were expertly explored within Islamic art. The art employs strategies of repetition, symmetry and change in scale, producing a mystifying effect. Doctor Keith Critchlow further validates the strong use of geometric pattern in mosques and other Islamic buildings to an idea of a relationship between islam, cosmology and pattern formation. (Chohan; 2010, 10)

The concept of 3rd spaces, places and conditions is manifested in the overlay and superimposition of two grids. The former being that of the secular (the profane), linking to the fabric of the city and its current orientation, where the latter is in relation to that of the religious (the sacred) which faces 14,62 degrees north east toward the contextual axis of Mecca.

This contextualised juxtaposition represents an alternate design language, as words do in a spoken language. This hybridised grid determines the framework within which elements may be arranged into a pattern, create a relationship between one elements and another, or generate a proportional relation within another element. It thus guides the design and its subsequent technification in that of the roof structure, the ceilings, walls and openings, the structural grid and column placement, as well as the floor pattern and its materiality.

FIGURE 08.03 OVERLAY OF RELIGIOUS AND SECULAR GRIDS



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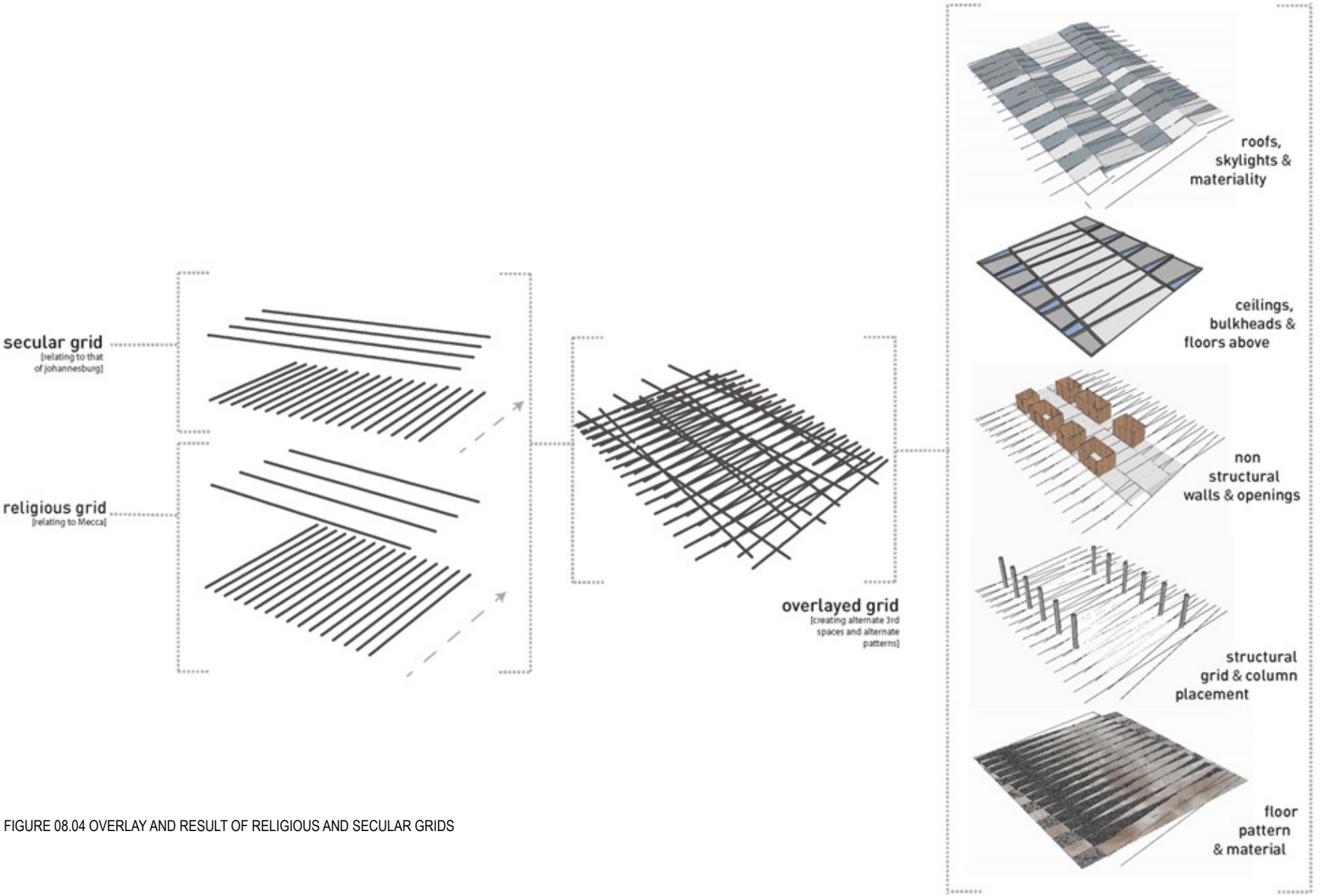

FIGURE 08.04 OVERLAY AND RESULT OF RELIGIOUS AND SECULAR GRIDS

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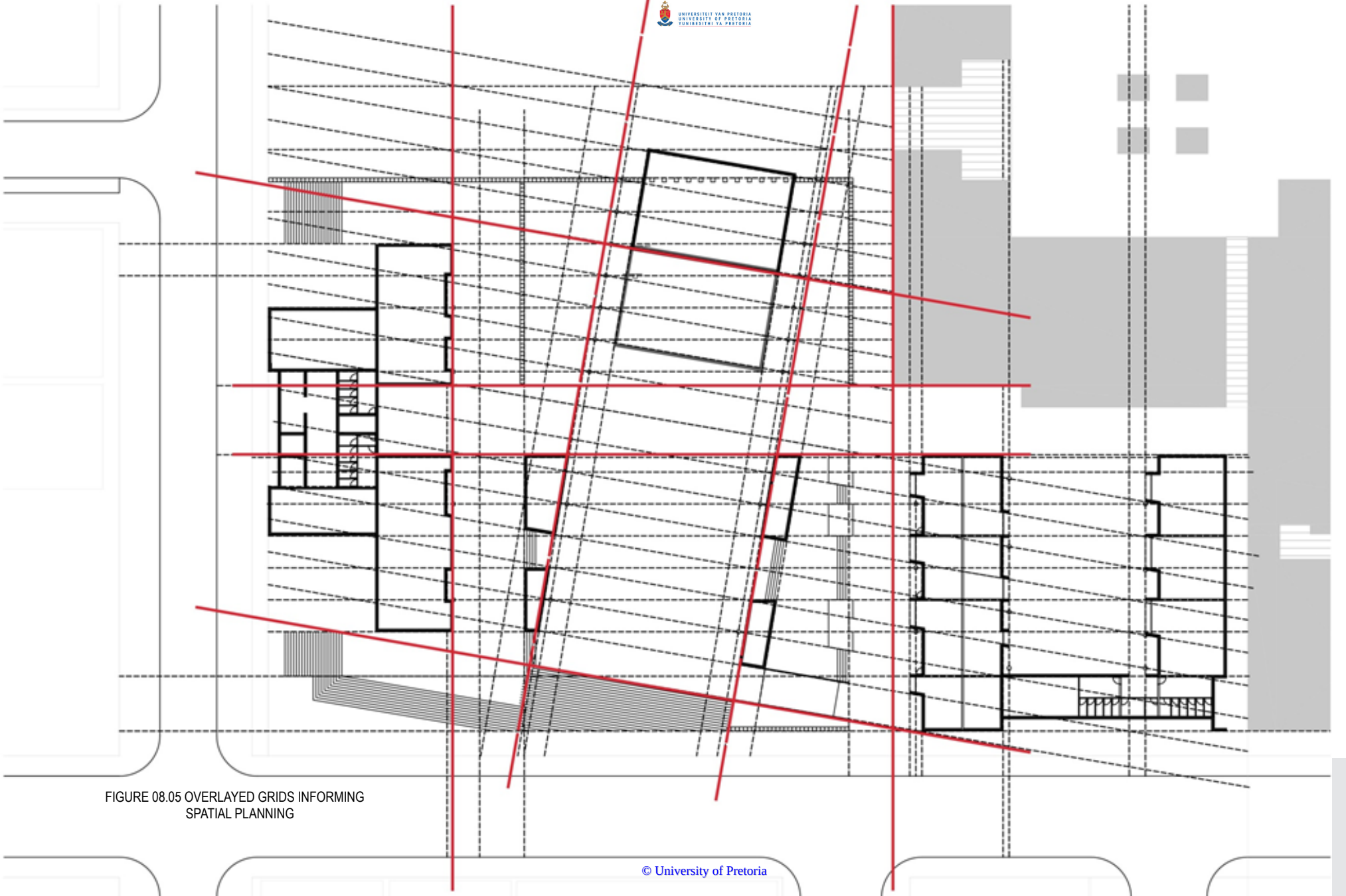

FIGURE 08.05 OVERLAYED GRIDS INFORMING SPATIAL PLANNING

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08.2.4 TRANSPARENCY OF RITUAL

“Instead of the architecture becoming the spectacle, can the revered act of worship in itself not become the exhibition?” (Author)

The idea of transparency manifests in the many ways the design allows for the non-Muslim to get a glimpse of the ritual occurring within prayer spaces. Thresholds of level differences and materials allow for people engaged with acts other than prayer to look within and beyond prayer spaces while the use of glass as a transparent and soundproof material allows for the spectator to engage with and learn from the procession being witnessed, yet still allowing the prayer to occur in a respectfully sacred environment.

Two poles of sacred and profane are thus brought together to create a hybrid situation of mutual inter-dependence where the religion of Islam is put on show for a sense of awareness to be created. The mosque is no longer exclusive to just Muslim worshippers, but is a place for learning, introspection, and analysis by all who wish to do so.

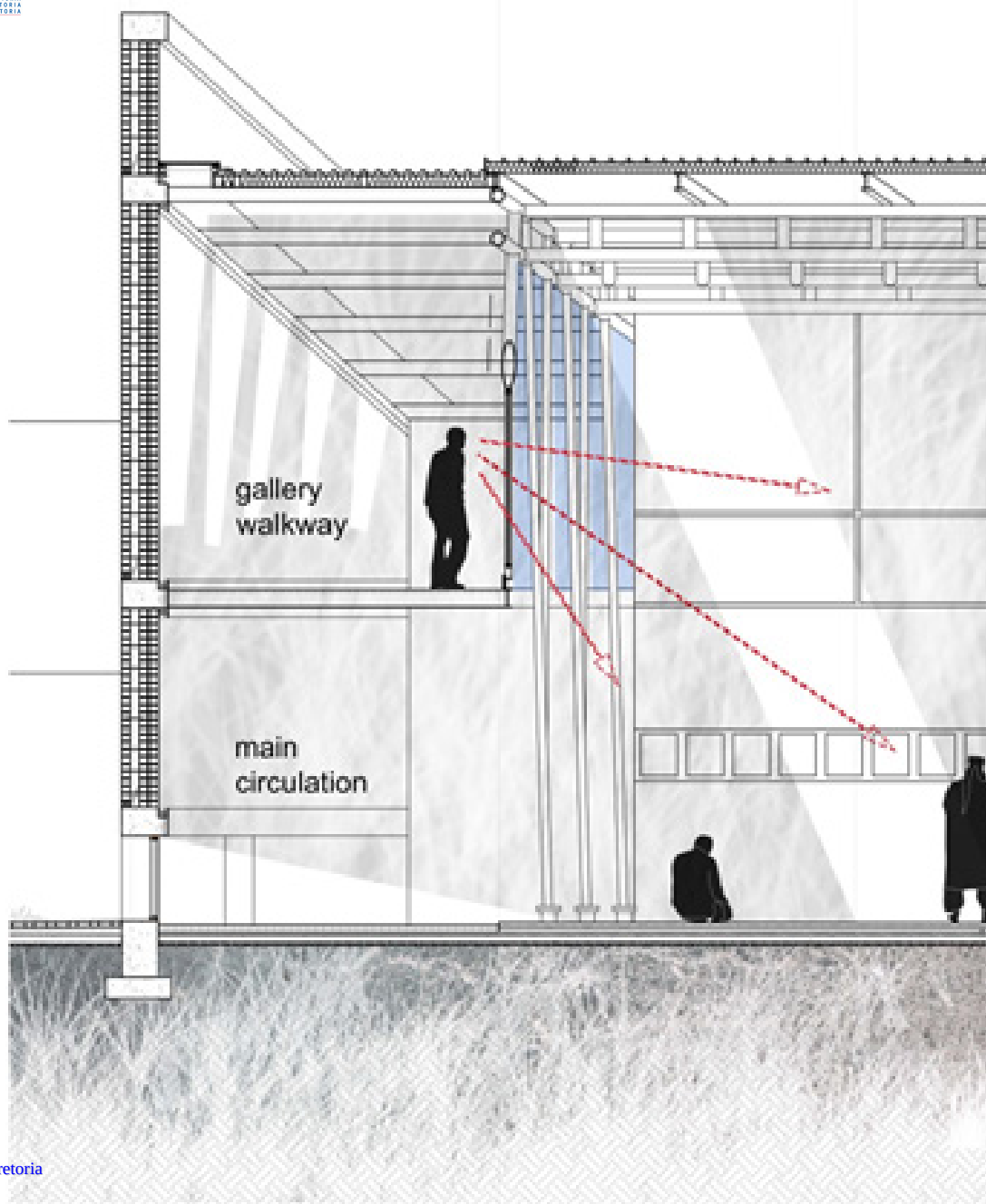

FIGURE 08.06 VANTAGE POINTS FOR OBSERVATION THROUGHOUT INTERVENTION

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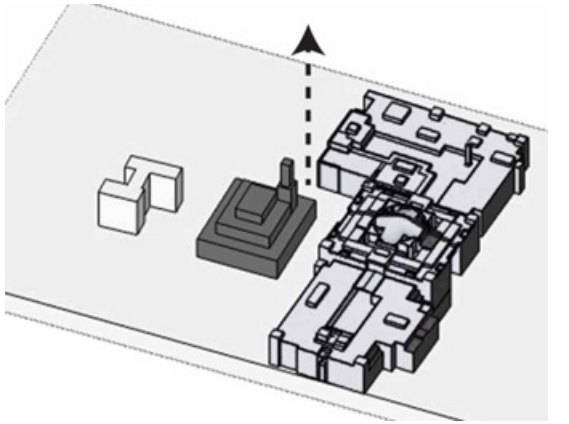
08.2.5 INVERSION OF THE MINARET/DOME

Traditionally, the dome and minaret had close associations to the divine heavens, linking to that of the sky. This notion is turned on its head whereby inverting the hypothetical dome and minaret would thus give the entire ground floor linkages to the sky as sunlight and a connection to one's context would now be possible.

This inversion also gives opportunity for the creation of public space, a project requirement as discussed above.



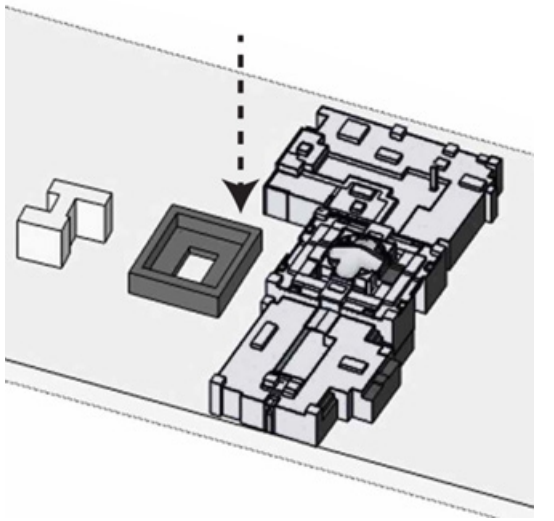


FIGURE 08.07 INVERTING TRADITIONAL SYMBOLIC ARCHITECTURAL ELEMENTS

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08.2.6 THREE MOSQUES

The objective of flexibility and multi-use in architecture is to provide spaces with an allowance to change its primary use, required performance and application. Though architectural spaces could be restricted through physical elements such as walls and planes, it's proximity, floor, ceilings and finishes, along with its openings allow it to become permeable, adaptable, and to be used for more than one purpose.

The design of three mosques (often used as other spaces) is proposed to limit wasted space when not in use. The bi-annual Eid celebration, along with Friday prayers require the most occupied space, where early morning prayers, for example, require very little space.

It is for this reason that the three mosques have been designed of different intimicies; also as a spatial division betwen men and women, worshipper and observer, muslim and non-muslim.

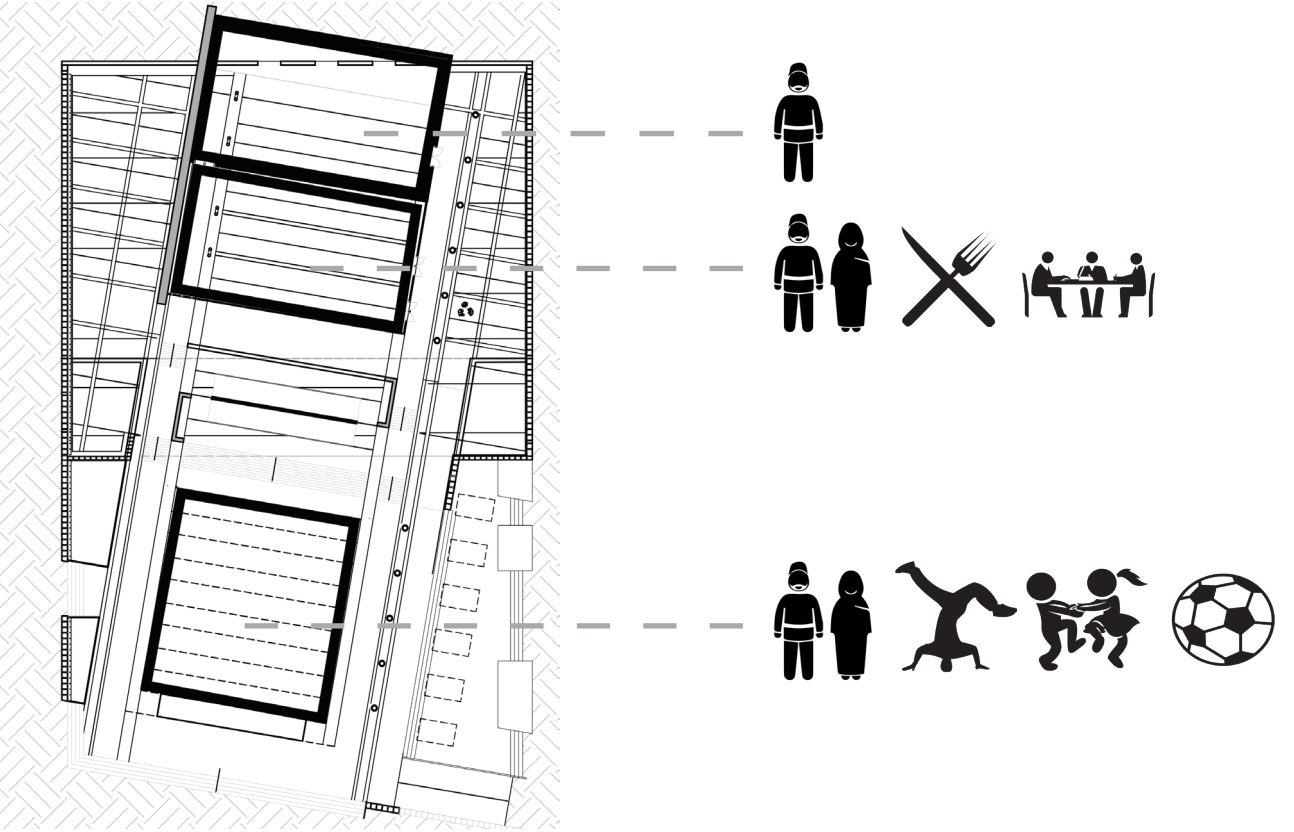

FIGURE 08.08 PROPOSED MULTI-USE PROGRAMMING OF 3 MOSQUES

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08.2.7 THEORETICAL PREMISE- FEMALE SPACE IN MOSQUES

Nawawi (2014, 9) mentions that, at the time of the Prophet Muhammad (pbuh), women occupied the back rows of the Masjid, behind the menfolk. Women could be seen and heard by the entire congregation. The Prophet (pbuh) said:

"The best of the rows for the men are the front rows and the worst of them are the last ones, and the best of the rows for the women are the last ones and the worst of them are the first ones."

Nawawi (2014, 9) explains that Masjid designs have evolved from the simple and humble division of prayer and ablution spaces into modern solutions which cause segregation and a definitive division in spaces, transformed into a separated network for access, circulation and ablution. The following case studies have shown that women –within contemporary mosques- receive the secondary entrance which is architecturally uncelebrated. They in turn receive spaces that are sometimes not within visual or audible contact with the Imam (priest) and his sermon.Nawawi (2014, 10) indicates how space provision for women is most often blatantly separated from the main prayer hall. She further notes that although most contemporary mosques do provide for women, it is done insensitively as other needs are still prevalent in the physical interpretation of mosque.

SPACE REQUIREMENTS FOR WOMEN

Al-Sindi's commentary on hadith has indicated that at the time of the Prophet Muhammed (pbuh), there was no need for a partition- neither of temporary nor of permanent nature- between males and females within the Masjid. It is however important to note that Muslim women who prostrate and congregate within public gatherings must be in proper Islamic dress, observing propriety (Nawawi (2014, 4)

Hatem Al Haj (2011) Indicates that the barrier provides privacy and comfort to women who seek to relax; breastfeed their babies, or take off their Islamic dress in a hot day Nawawi (2014, 5)

It is evident from both views that Masjids may be designed with or without walls, satisfying either opinion. It is however- according to Nawawi (2014, 5) that within all designs of Masjids, the location of women is behind the imaam (priest), behind the men or alongside the men, with distinct separation wither physically or by placement in space. There needs to be a visual and audible connection with the Imam- that which the case studies above has failed upon.

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08.2.8 GENDER SENSITIVITY

And from the hadith of ‘Aisha in al- Muwatta’, it is said that “the women would pray Fajr (the dawn prayer) with the Prophet. The men and women at the time were not separated completely in the mosque. The women prayed in rows behind the men.”
(huffingtonpost.com/imam-khalid, 2014)

Trationals notions, along with the liberal and contesting outlook of this disseration, space has been divided similarly for men and women, allowing an equally dignified entrance and ritualistic circulation route. Spatial planning takes congisance of gender equality and places the wudhu (ablution before prayer) area next to that of the men, where the female prayer area is desiignated right behind that of the male -as Islamically pointed out in the above quote extracted from Islamic writings. This is in contrast to existing trends where architectural spatial planning makes sure that women are not within site at any point of the ritual, consequently allowing them the side entrance and no spatial importance within the mosque facility.

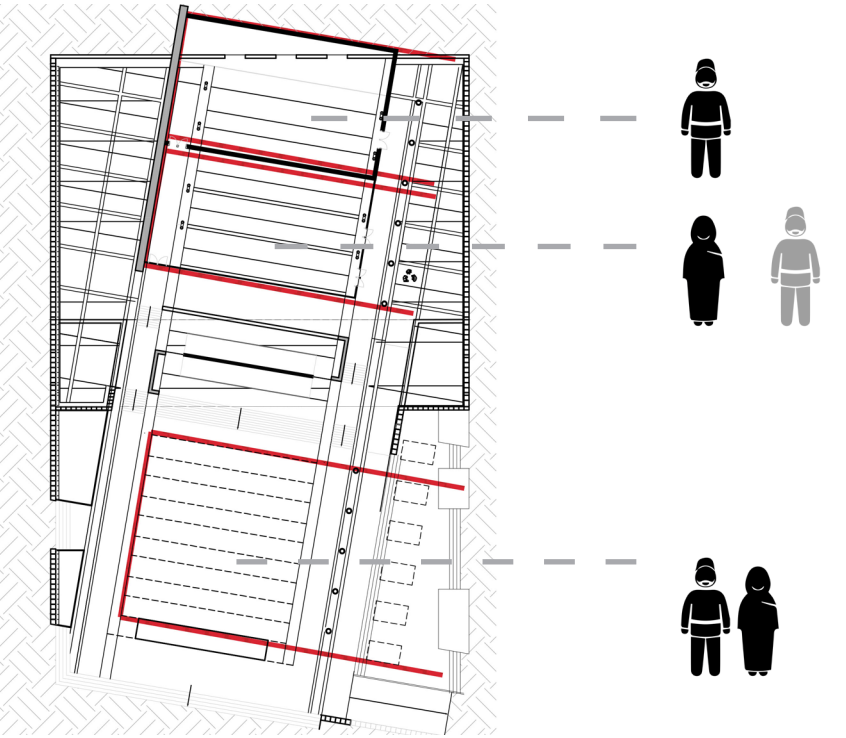

FIGURE 08.09 SPATIAL DEFINITION FOR WOMEN DIRECTLY BEHIND MEN

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08.2.9 SPATIALITY OF ABLUTION TO PRAYER ROOM

Salaah (prayer) is a means of the physical and spiritual transitioning from the profane to the sacred, from an earthly, consumerist realm towards the celestial heavens where man enters into conversation with his Lord (Chohan; 2010, 35).

Wudhu (ablution) is the means by which such a relationship is established. This procession creates a series of thresholds which one engages with within a process of prayer. The processes act as moments of transition, having direct spatial implications on the design of a mosque.

A sense of order and hierarchy is established as the design of the circulation and adjoining spaces instil a sense of procession and ritual as the user is intended to move between them. Awareness is created which intensifies the spirituality of the worshipper as he moves further away from the outside world (Chohan; 2010, 35).

Figure 09.13 shows the typical procession of one's journey between that of profane and sacred space.

Mokhtar (2005) defines the spatiality of the mosque in terms of the prayer space and ablution space in three scenarios:

1. Access to ablutions is from outside the clean zone , shoes are removed before entering the clean zone

2. Access to ablutions is from inside the clean zone, shoes are removed at the border of the clean zone already

3. Access is from inside the clean zone, however a corridor between the two spaces provides a separation

Each of these scenarios have their spatial advantages and disadvantages. Scenario one has however been chosen due to the multi-functional intended usage of spaces within the mosque proposal for this dissertation.

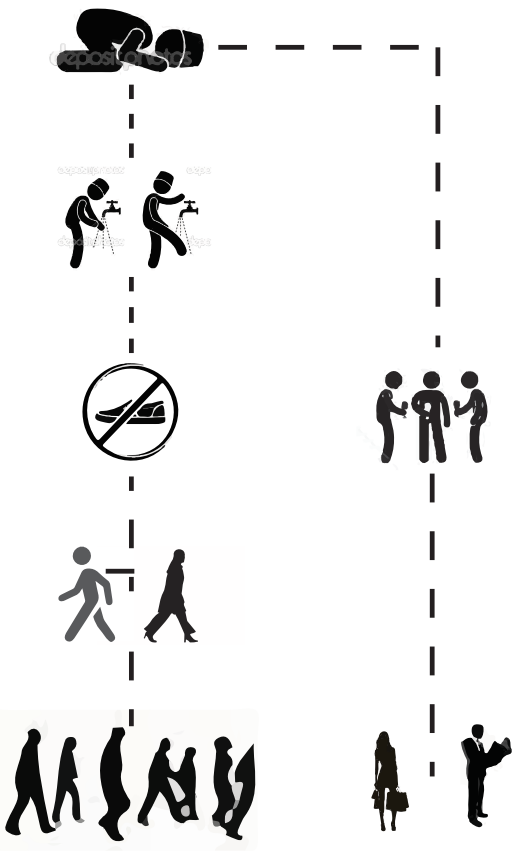

FIGURE 08.10 RITUALISTIC PROCESS FROM SECULAR TO RELIGIOUS

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08.2.10 ARCHITECTURAL ALLOWANCES

FIGURE 08.11 PROCESS OF ABLUTION BEFORE PRAYER

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The matrix below indicates the basic elements that constitute the ethical and visual characteristics of mosque building (Chohan; 2010: 9)

MANDATORY	AESTHETIC	IDENTIFIABLE YET ADAPTABLE
-cleanliness- space for ablution -center- a main prayer hall -orientation in space- cosmic alignment of the Kaaba (house of God in Mekka) and the earthly alignment of mosques towards Makkah expressed hrough the architectural device of the mihrab social directional axis as the focal point which stabilises entire muslim community +liturgical directional axis -mimbar- situated to the right of the mihrab, it is used by the imam when conducting sermons	-evolution of the minaret- development of a tower to project the call to prayer (need for height) -repeated patterns of geometric shape	.-principle of introversion expressed architecturally through the courtyard and central dome -the dome instated to define direction externally as well as to provide natural lighting internally. Also noted as a celestial symbol in almost every religion. Within islam, its symbolically represents a connection to heaven -the gateway or portico as a positive space -The circle- usually in the form of domes symbolising heaven and eternity

Chohan (2010:2) states that iconoclastic solutions to re-defining mosque building should not be radical in the search for an entire new architectural language or methodology. Where recognisable, traditional and revivalist designs sit at the other end of the spectrum, the challenge lies in conceptualising an appropriate architecture that is situated somewhere between these two extremes and acts as a “mirror of the socio-economic, cultural and technological reality of the society that it serves” (Chohan; 2010:3).

Given the above information, less obvious symbolic representations of Islamic architecture are interpreted and thus designed with. These elements include:

- Geometry
- Poetics of light
- Water
- Gardens

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08.2.11 RITUALISTIC TRANSITIONING- PROGRAM

"Ismail Serageldin elaborates further by introducing two new concepts; societal specificities and overlay, the latter referring to the process by which Islamic Culture enriched local cultures it interacted with, and the former being defined as local geographic, climatic, socio - political context" (Razak, 1973).

Observation through local assimilation of the ritual being performed in its secular towards its spiritual environment provides a wealth of data and assists in understanding the culture of the Muslims of this specific place without making use of one's perceptions that dangerously distort the simple reasoning.

The introverted nature of the courtyard was weighed up against the extroverted nature of the public square in an attempt to design a seamlessly integrated cultural route which shapes the urban framework layout, as well as that of the architectural intervention itself.

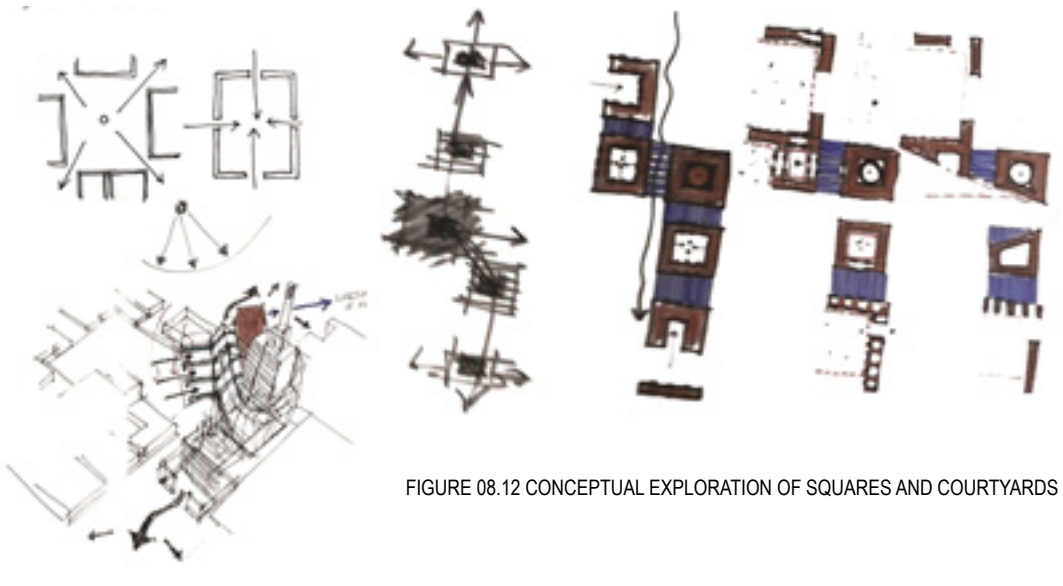


FIGURE 08.12 CONCEPTUAL EXPLORATION OF SQUARES AND COURTYARDS

Transitioning between secular and religious environments acted as a primary design informant when mapping out the physical context. The ritual of prayer is intended -in its appropriation within the design - to seamlessly integrate itself with that of secular life, blurring the very evident boundaries between the religious and profane.

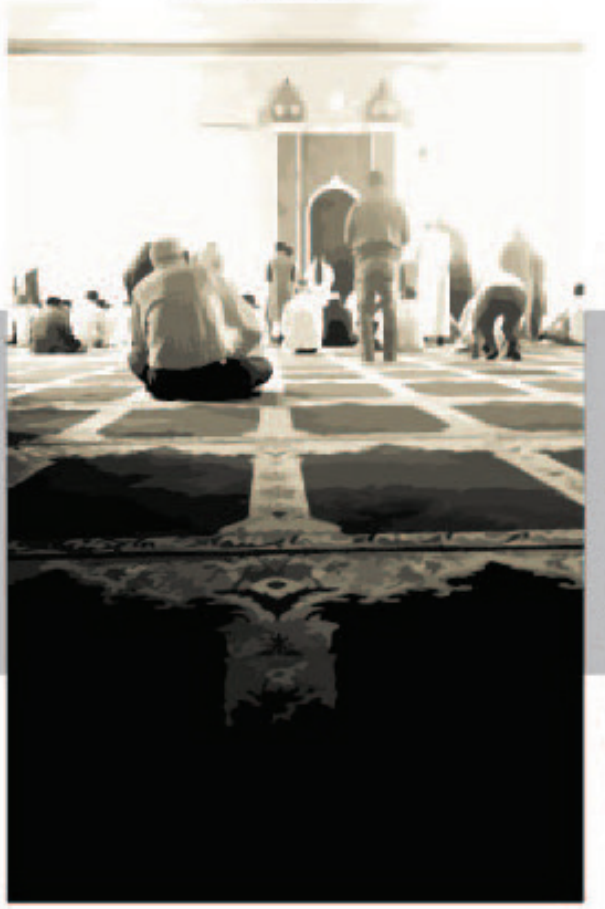
FIGURE 08.13 RITUALISTIC MAPPING OF THE TRA
BETWEEN SECULAR AND RELIGIO

© University of Pretoria

refreshing
cleansing
purifying

ANSITIONING

calm
peace
serenity



ENSE_OF_PLACE

content
humble
social

ANSITION
US

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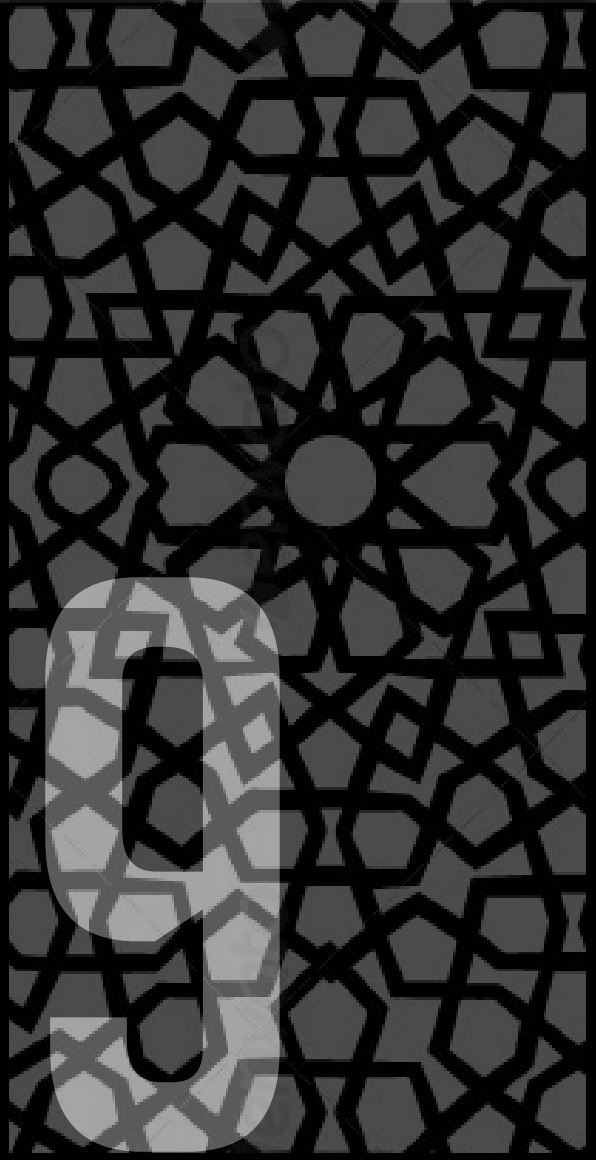

DESIGN SYNTHESIS

The building is discussed as an assimilated response to theory, concept, programme and the hypothesis as outlined previously.

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“Architecture may, paradoxically, be most suggestive when we do not know how to occupy it.”
(Hill, n.d; 85)

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The design was shaped as a reaction to the main design generators -as outlined above, resulting in a succession of architectural responses and iterations. Responses to these influences were layered and assimilated to eventually form the hybridized Islamic precinct.

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09.1 PREVIOUS ATTEMPTS AND ITERATIONS

09.1.1 ATTEMPT 1- A RATIONALLY CONTEXTUAL

CRITICISM:

- Process too rational
- Lacks intuition
- Design scheme lacks poetics
- Architecture for the sake of architecture
- Monumental- contradicting project intentions

LESSONS LEARNT:

- Architecture is not just bricks and mortar
- Spaces need to be more poetic and sacred
- Design more intuitively
- De-monumentalize by fragmenting

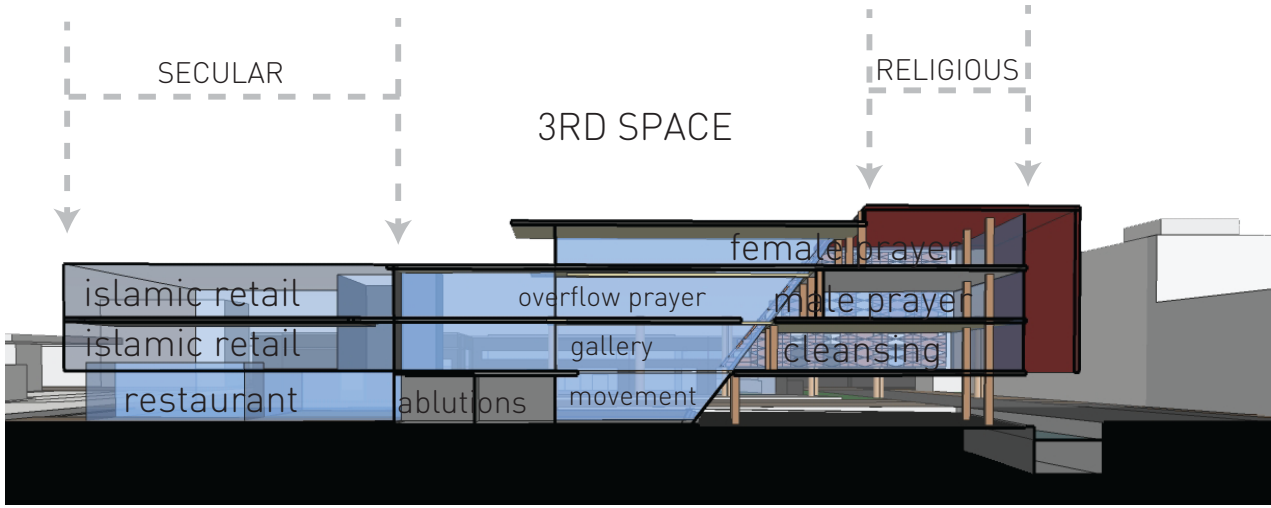

FIGURE 09.01 3D RITUALISTIC VERTICAL PROGRAMMING OF BUILDING

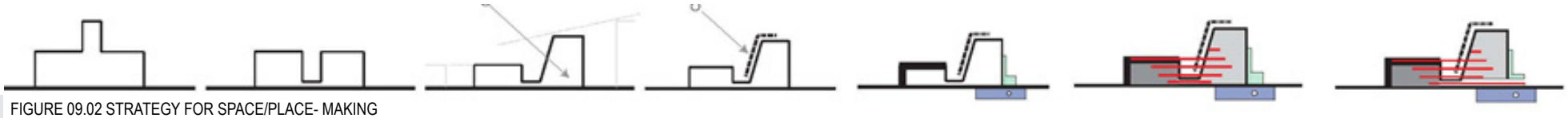

FIGURE 09.02 STRATEGY FOR SPACE/PLACE- MAKING

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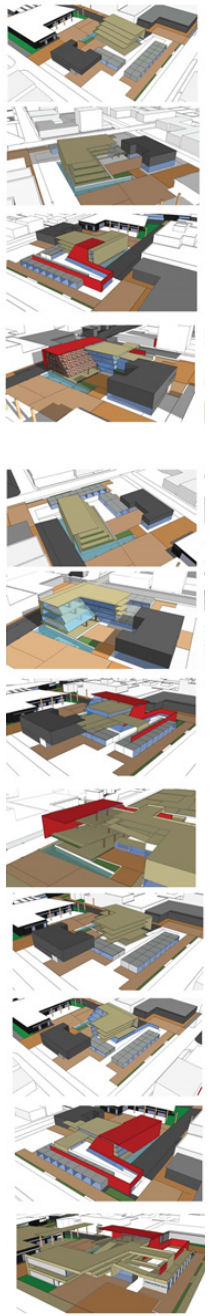

FIGURE 09.03 3D PERSPECTIVES OF STRATEGY FOR SPACE/PLACE- MAKING

FIGURE 09.04 3D PERSPECTIVES OF INTERVENTION

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09.1.2 ATTEMPT 2- POETIC AND SYMBOLIC PLACE-MAKING

CRITICISM:

- Structural aesthetic too literal and symbolic
- Contradiction of project intentions

LESSONS LEARNT:

- Think more contextually
- Form does not/ should not relate to religious iconography

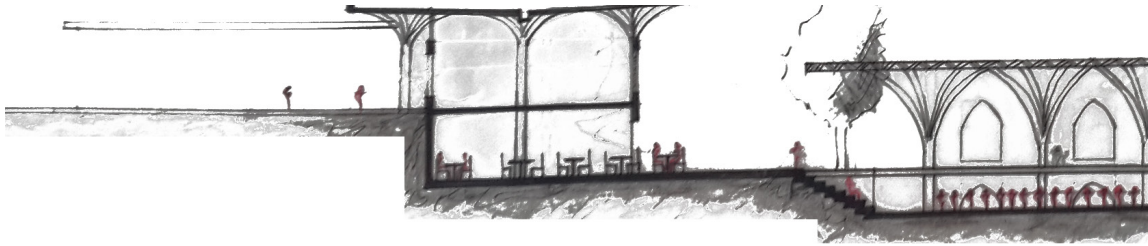

FIGURE 09.05 SECTION/ ELEVATION ACROSS ENTIRE SITE

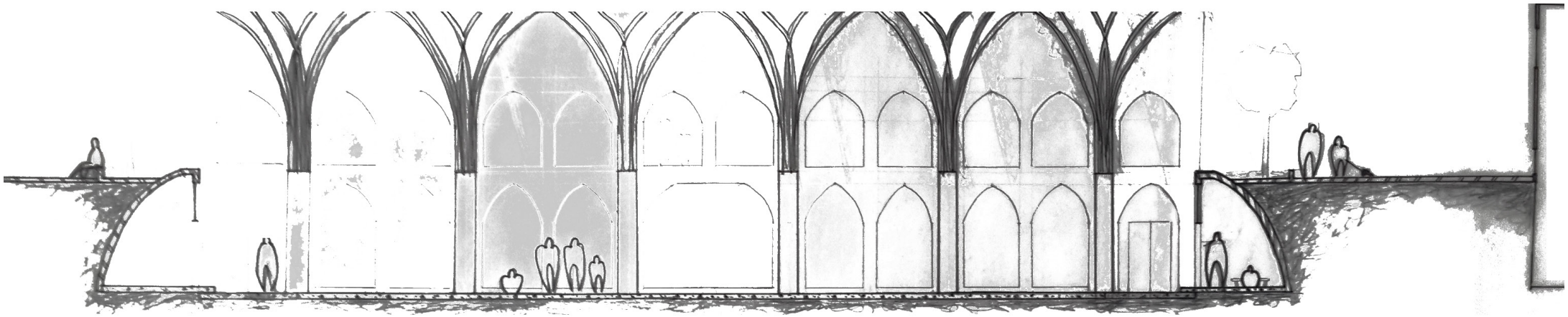

FIGURE 09.05 SECTION/ ELEVATION OF MOSQUE SPACE

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FIGURE 09.06/07 3D PERSPECTIVE OF INTEVENTION WITHIN CONTEXT

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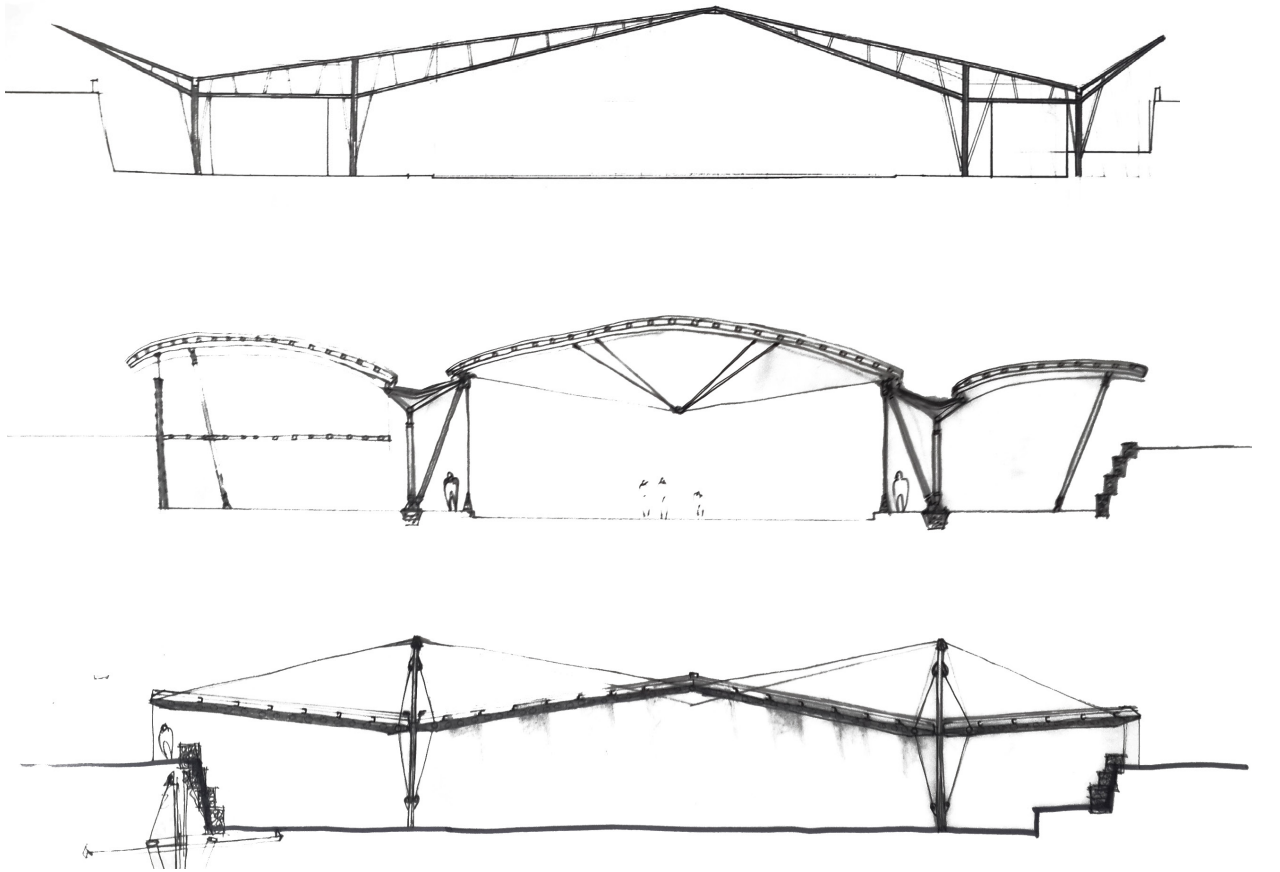
09.1.3 ATTEMPT 3- IN SEARCH FOR AN APPROPRIATE STRUCTURAL SYSTEM

FIGURE 09.08 SECTION OF PROPOSED ROOFING STRUCTURES



CRITICISM:

- Spaces are too fragmented because of separated roofs on the site
- Internal spaces are not sacred

LESSONS LEARNT:

- Structural engineering solutions not appropriate

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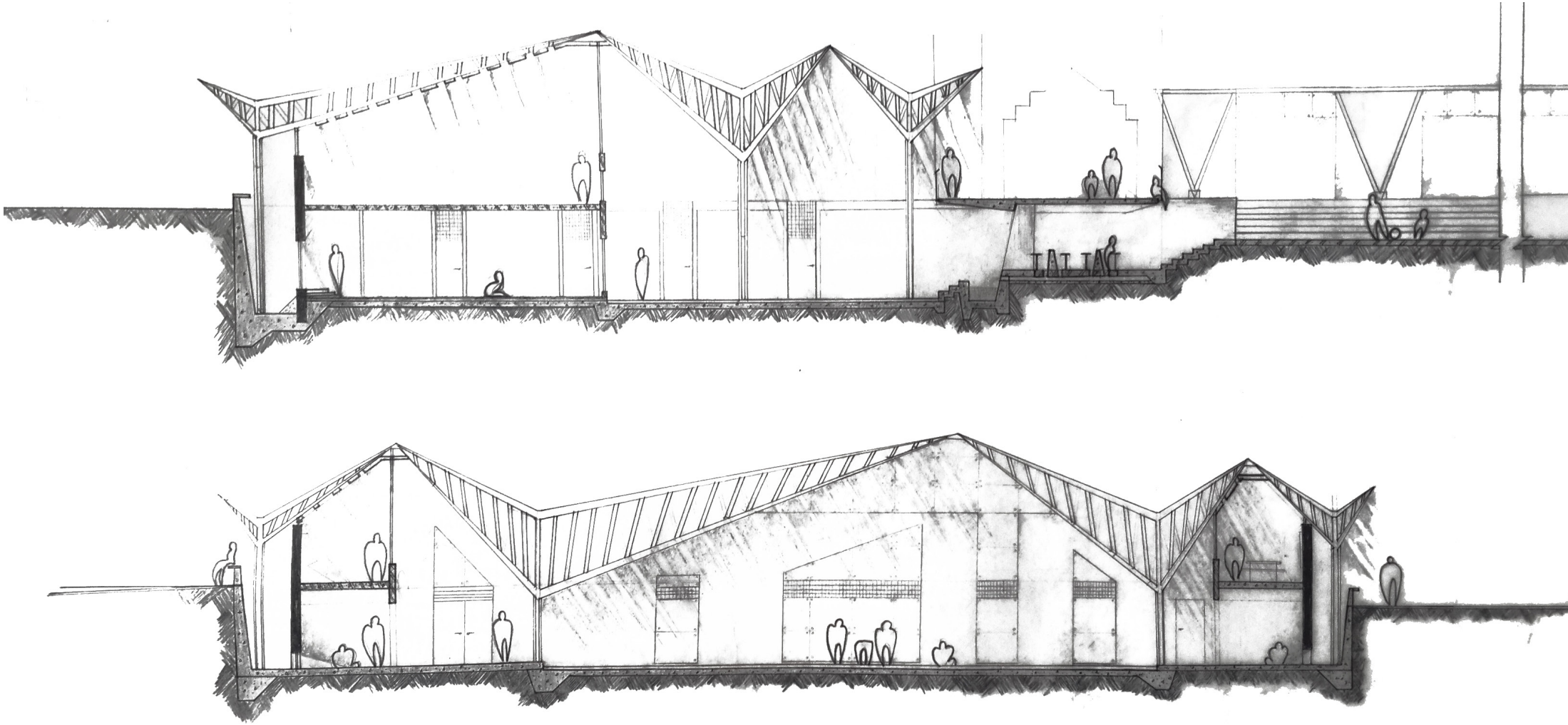

FIGURE 09.09 SECTION OF INTERNAL SPATIALITY BENEATH TECTONIC ROOFING STRUCTURE

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09.2 SPATIAL LAYOUT

NODAL DEVELOPMENT AND CIRCULATION

The design aims to promote pedestrianisation between the secular and religious.

A connection between the new insertion with the existing is an integral part of creating this physical connection. Opportunity for nodal development has risen from the existence of retail shops and restaurants directly across the road. Public squares are therefore proposed to slow down traffic and to promote the pedestrianisation of people towards the public intervention.

The circulation across site has therfore been primarily influenced by the existing energies found on site such as existing entrances and potential squares and courtyards. It aims to create hybridised religious and secular routes that take the user across a paths which cross these opposing conditions. A new entrance has therefore been proposed to create permeability between the religious and secular where transparency of ritual is on display, creating an intangible tapestry of connection between the worshipper, visitor and wanderer.

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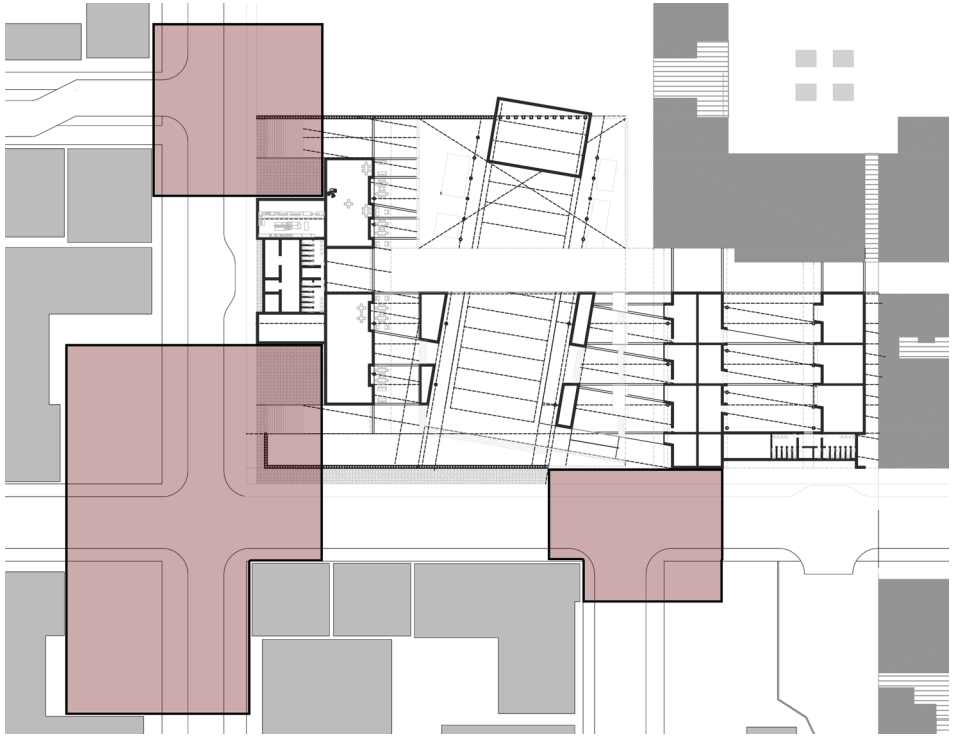
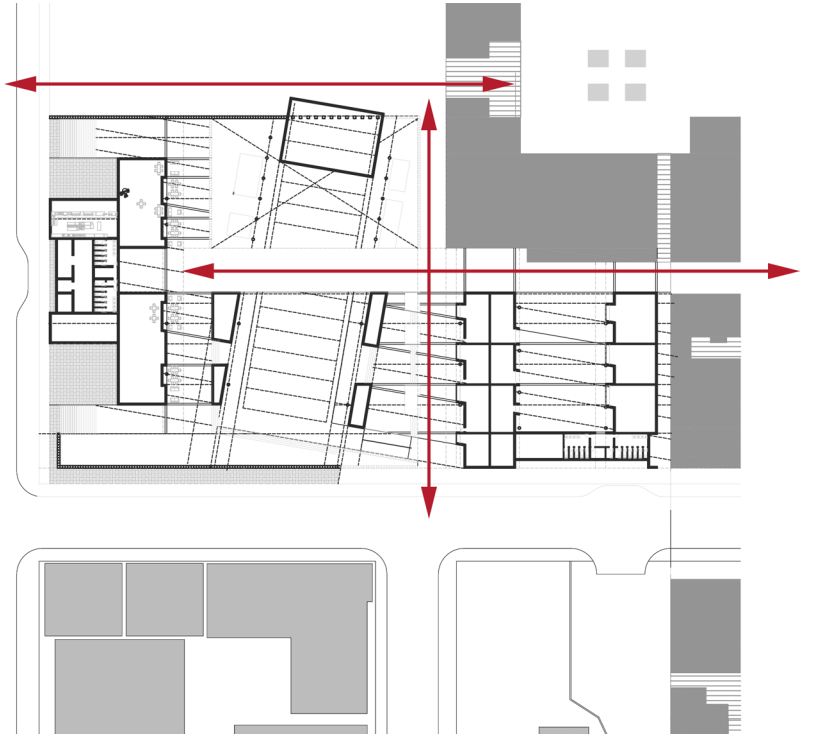


NODAL DEVELOPMENT



SITE CIRCULATION

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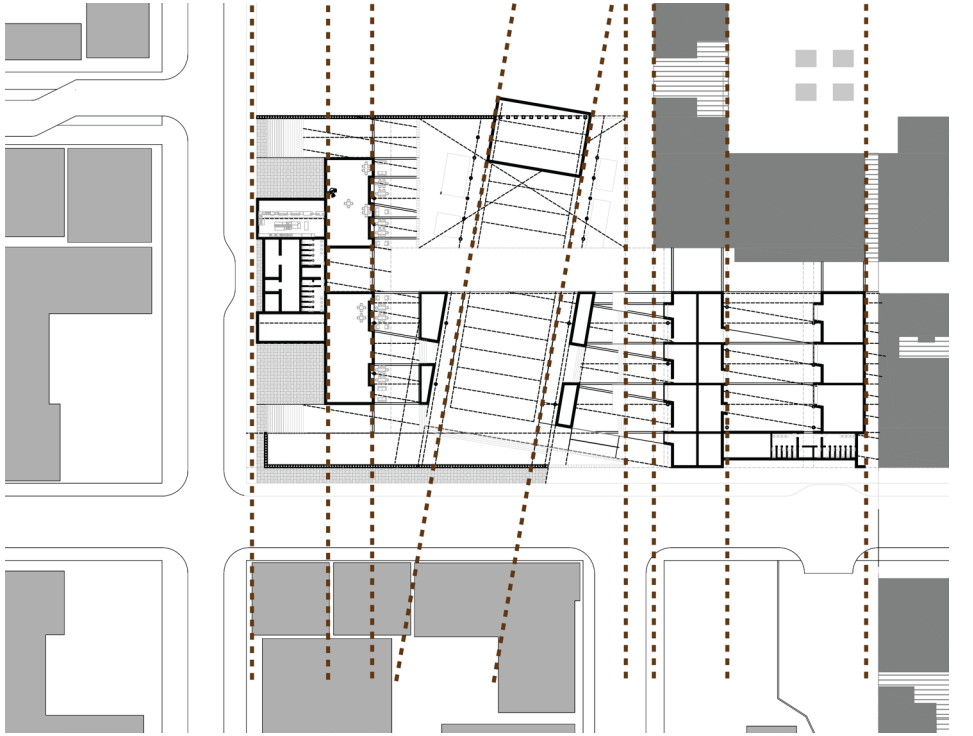
SPATIAL LAYERING

By shaping the building along public routes that are formulated between the urban fabric of Fordsburg and that of the Oriental Plaza, a connection between Fordburg and Newtown West is created, assisting in creating a pedestrianised city centre- that which the urban vision aims to achieve. Spatial arrangements articulated by public movement across the site and within the building itself are layered according to existing site opportunities and restraints.

The juxtaposition of a religious space that hierarchically sits between that of the Oriental Plaza and the urban fabric acts as a culmination point where the strategic siting of a depressed urban plane -an urban square- allows for a multitude of activity to take place; viewed and protected by eyes looking directly into it.



SPATIAL LAYERING

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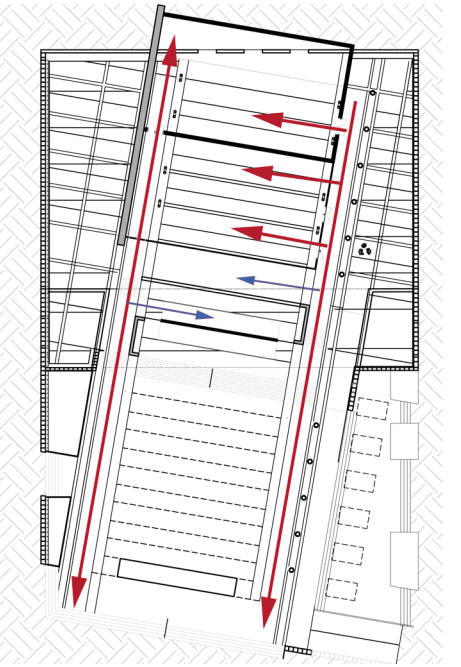
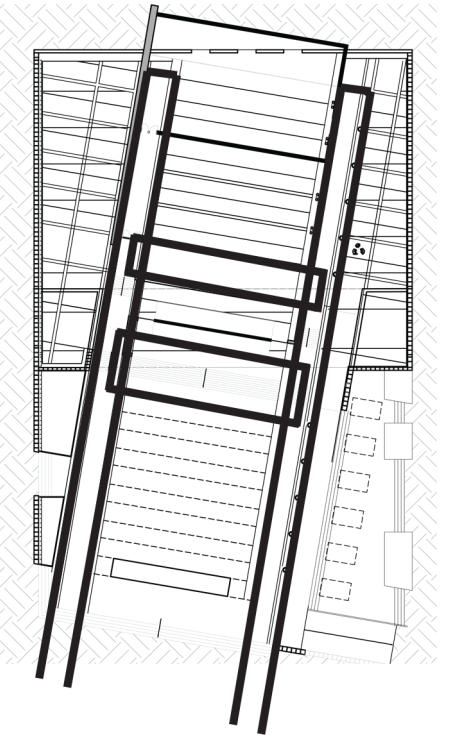
The route from an ablution space or entrance hall towards the prayer hall should allow for access preferably from the back so as not to disturb other worshippers engaged in prayer (Chohan; 2010,36). Similarly, a person's prayer is interrupted and must start again if someone walks directly in front of them while he/she is engaged in prayer.

These notions, along with the ritual between the profane and sacred -as mentioned above- acts as the primary determinant for the circulation and juxta-position of spaces within the courtyard and mosque spaces.

Thresholds are designed to divide spaces into zones wet and dry zones, carpeted and hard sur-faced floor finishes, social and sacred spaces, all along a ritualistic route as previously outlined.



MOSQUE CIRCULATION



THRESHOLD

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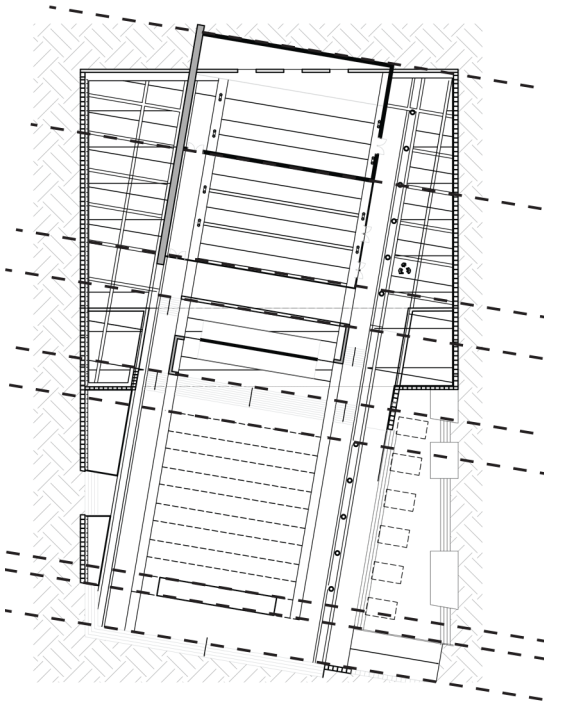
The spatial layering of the mosque space was determined by the ritualistic transitioning between similar and dissimilar programs in close proximity to each other.

A division between natural and unnatural environments creates a physical and metaphysical divide which satisfies contextual concerns of sustainability (at the overexposed western facade) as well as traditional Islamic interpretations of the garden as being a calm and serene religious space of solitude.

Conceptual notions of transparency allow for the precinct to be publically viewed from numerous vantage points and along circulation routes.



SPATIAL LAYERING

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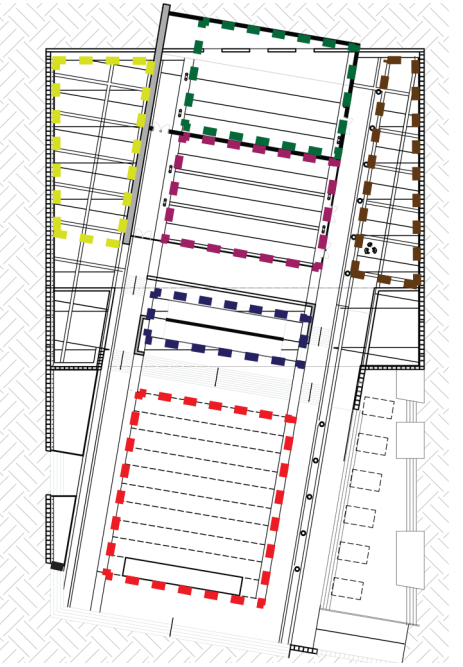
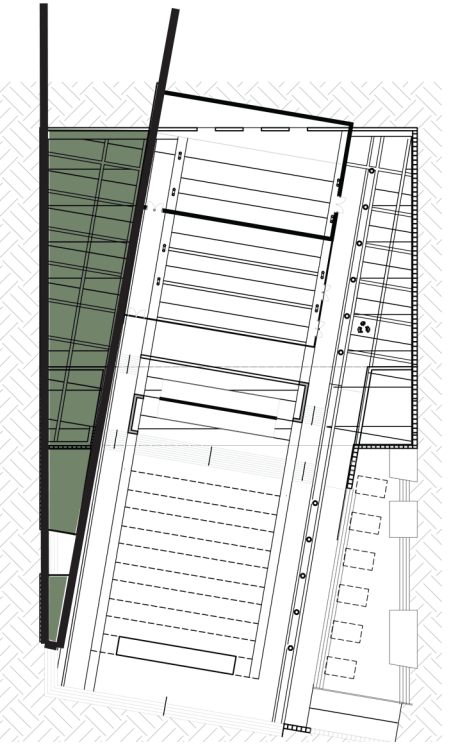
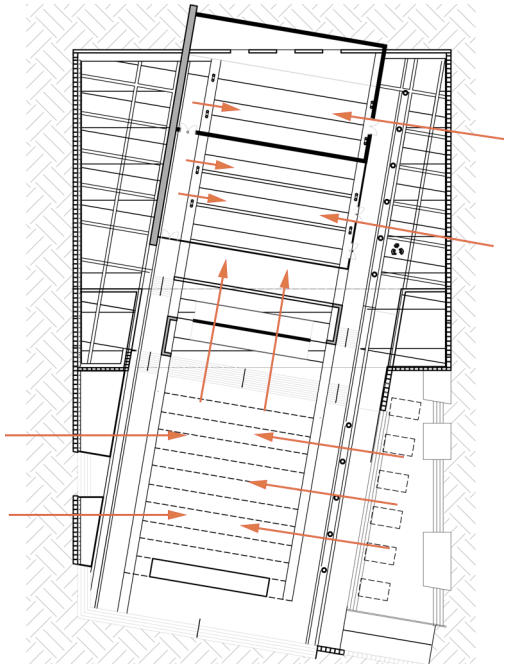


PROGRAMME



GREEN



VISUAL ACCESS

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Ground/ First Floor Panorama| Liminal Space for Informal Activity_ Gallery Entrance_ Oriental Plaza Entrance_ Fordsburg Urban Fabric

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Ground Floor Panorama | High Street_Oriental Plaza Entrance_Gallery Entrance_Restaurants

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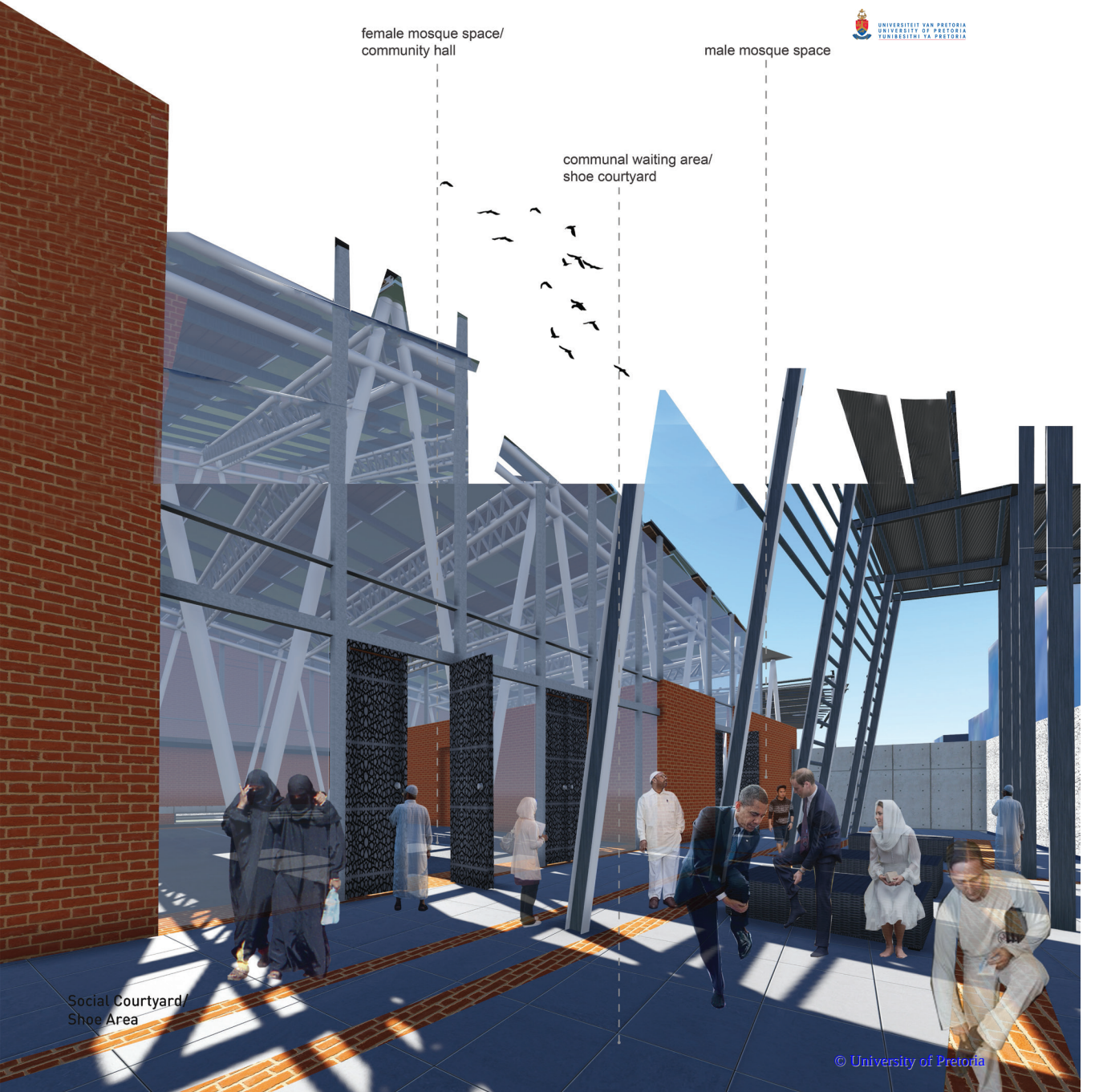

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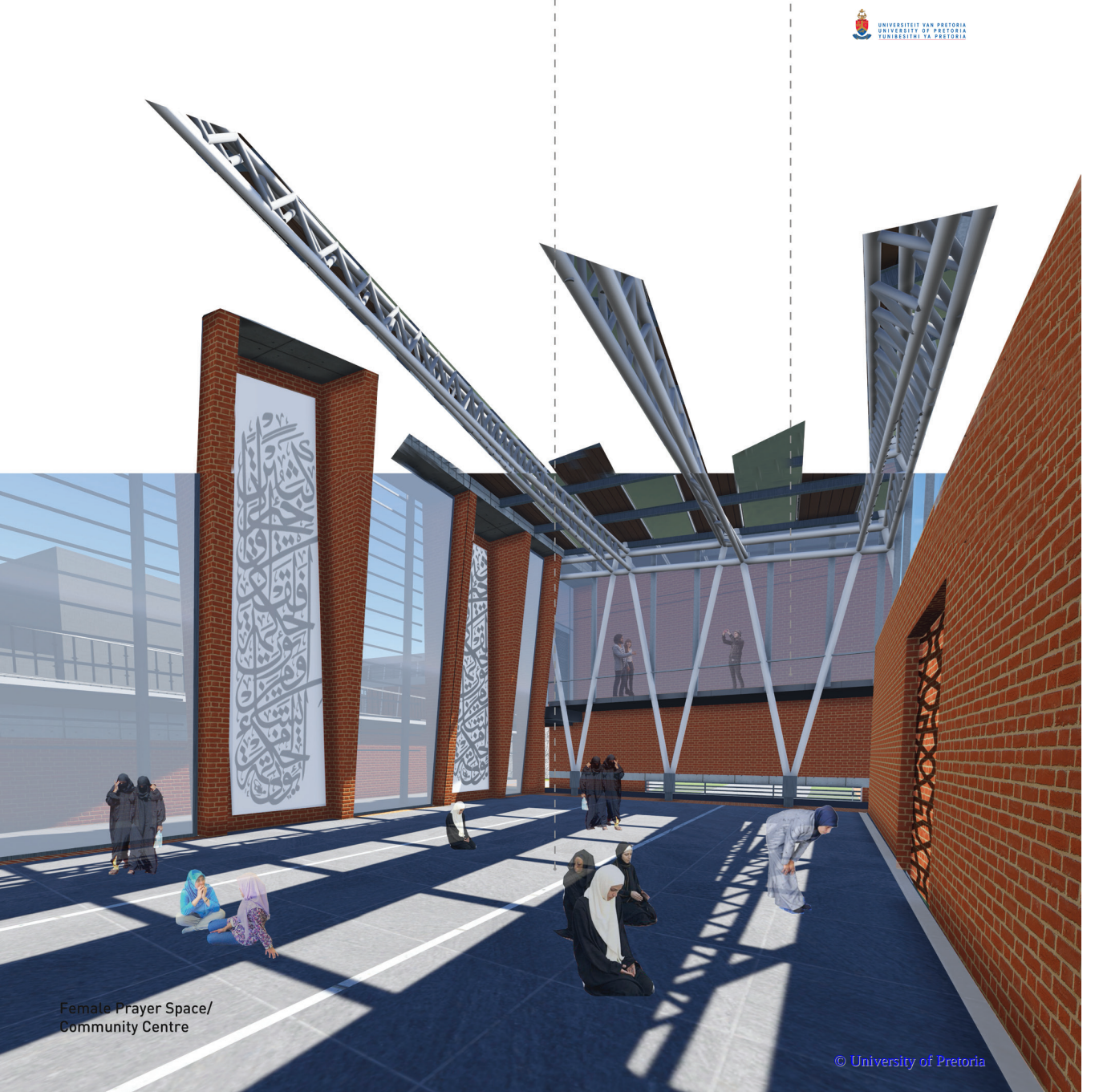

Female Prayer Space/
Community Centre

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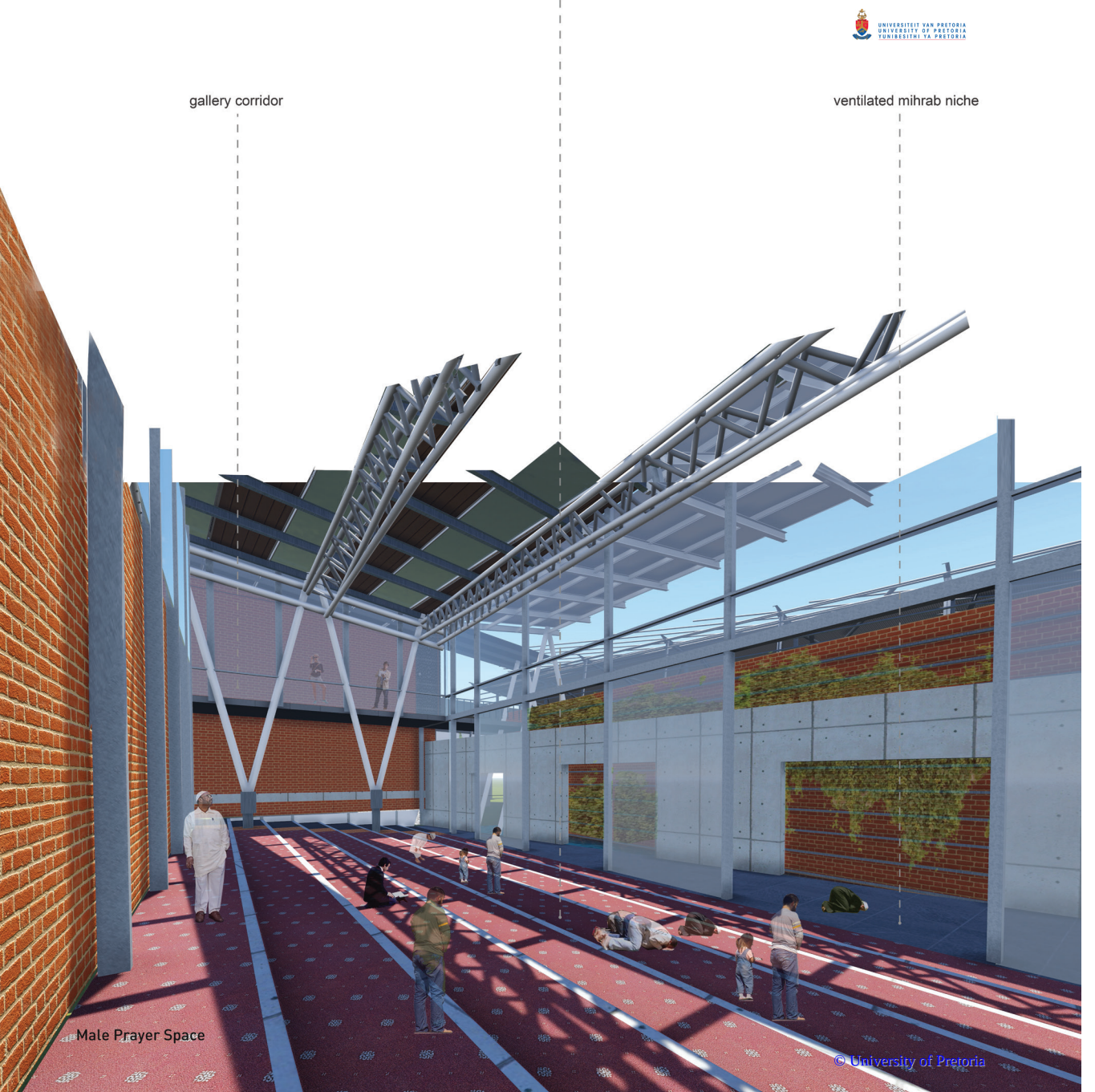

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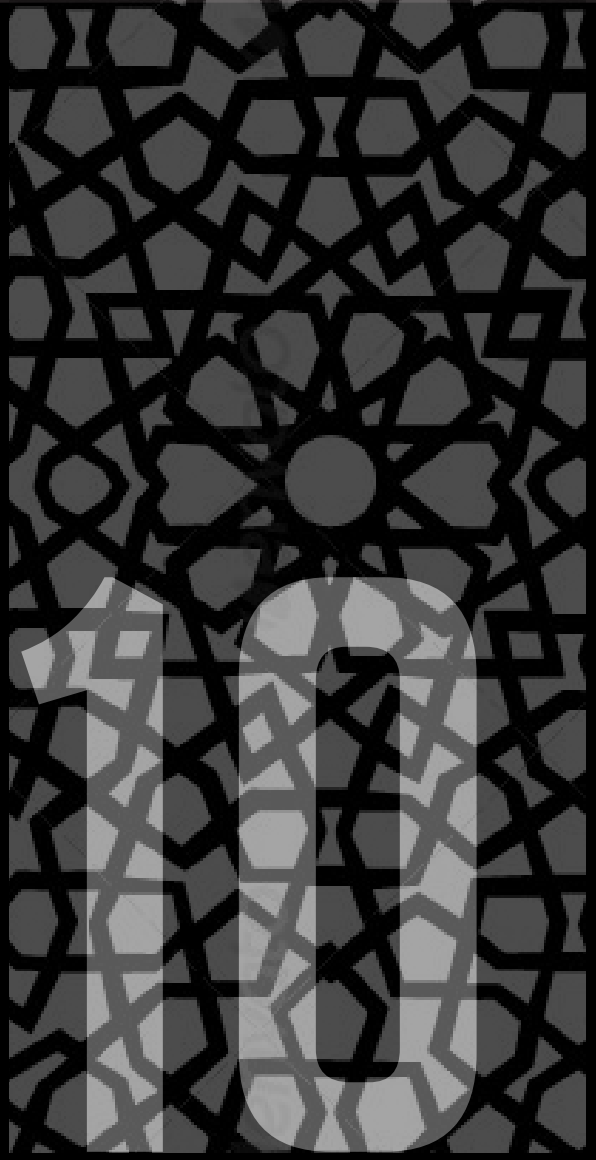

TECHNICAL RESOLUTION

Explorations of the technical assembly of the Islamic precinct as a result of theoretical and conceptual principles, together with contextual and sustainable underpinnings. The structural intention, materality and systemic responses are discussed with reference to iterative thermal and lighting tests undertaken in Ecotect.

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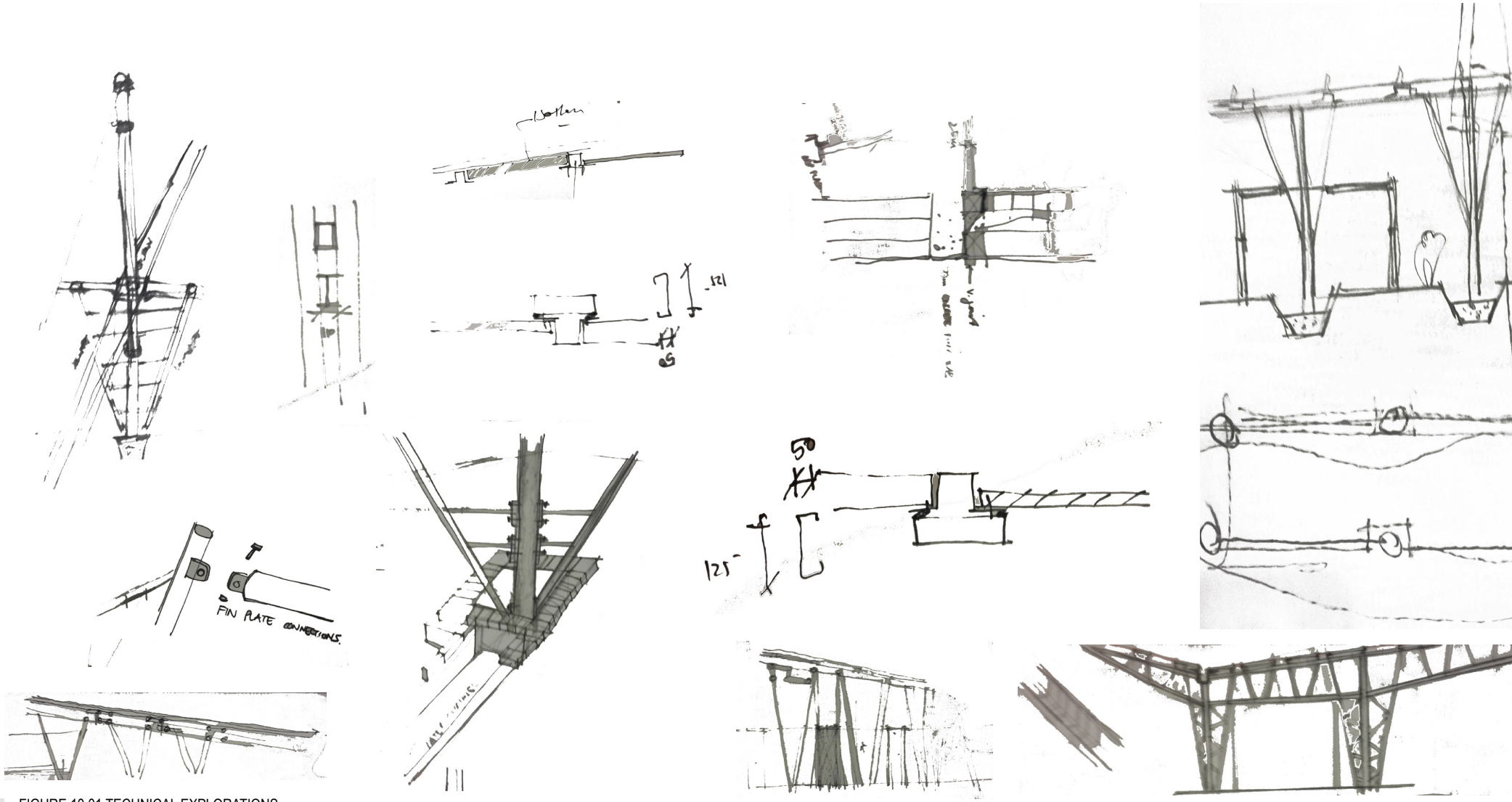

FIGURE 10.01 TECHNICAL EXPLORATIONS

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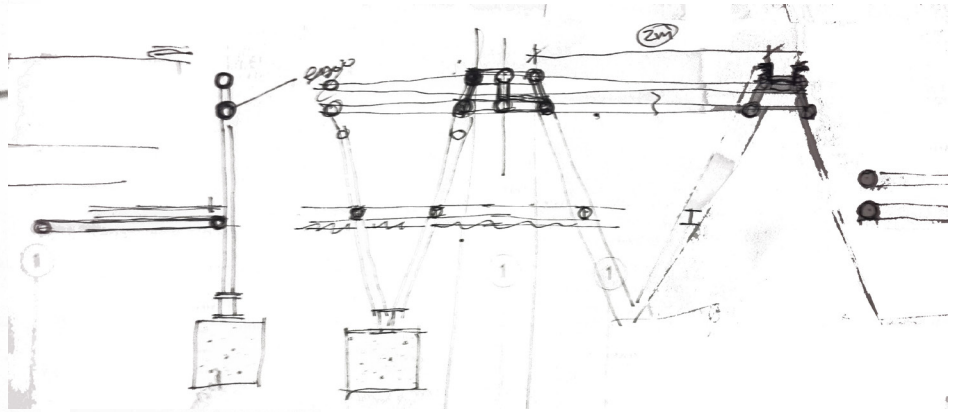

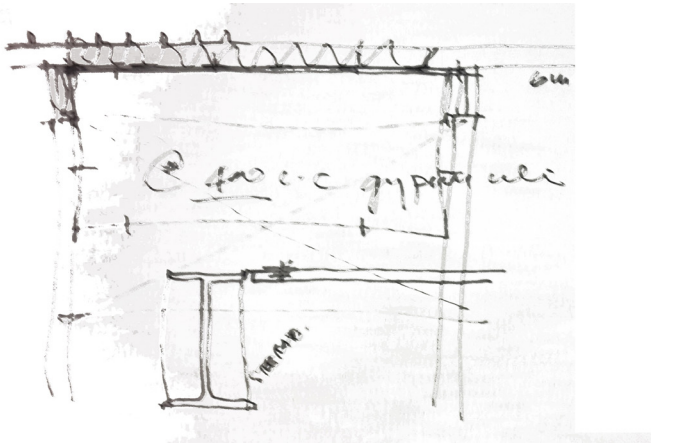

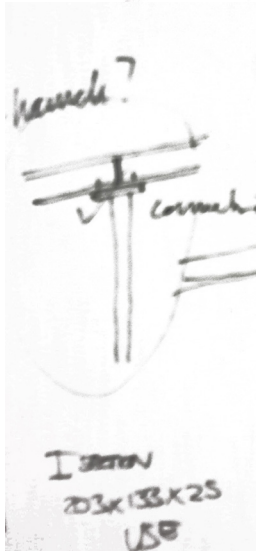

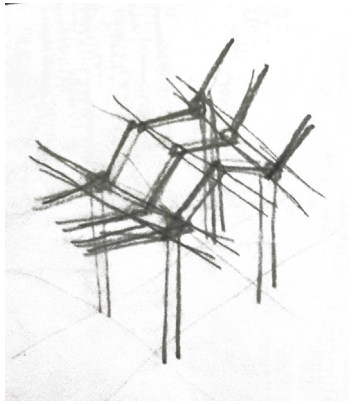

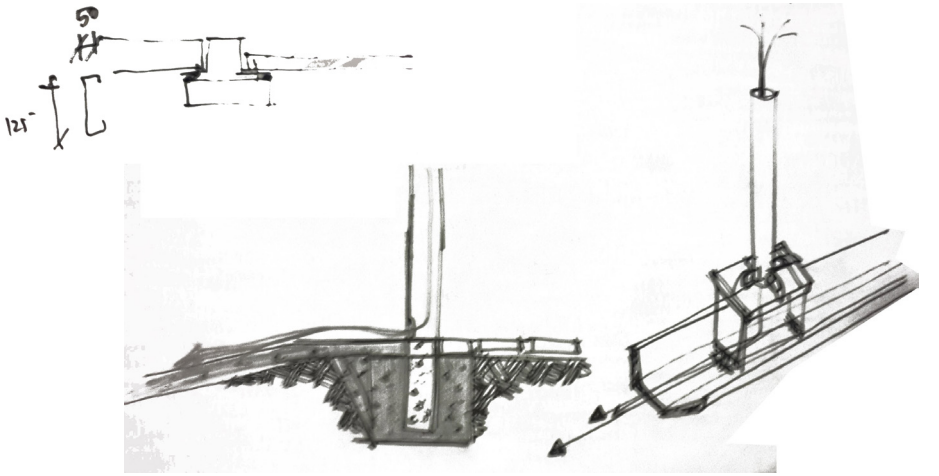

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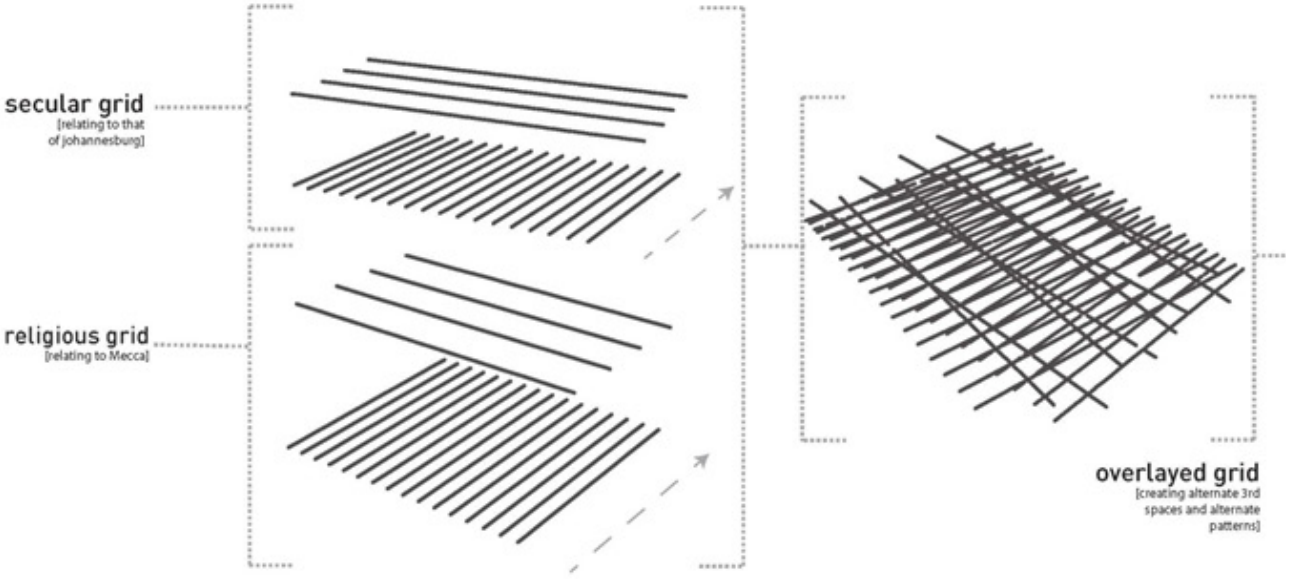

FIGURE 10.02 OVERLAY OF SECULAR & RELIGIOUS GRID INFLUENCING TECTONIC RESOLUTION AND DECISION-MAKING

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10.1 TECHNICAL CONCEPT

The conceptual approach manifests in the merging of the two grids: that of the secular related to the existing city grid, and that of the religious which faces to Mecca. The subsequent superimposition/ overlay of opposing axis creates opportunity for pattern-making, closely linked to that of its specific context.

This juxtaposition creates a new grid which has influenced the structural formulation of technical elements and their placement and use thereof. Column placement, beam direction, girder support/ bracing placement and use, materiality - together creating a new patterned system, an alternate structure that satisfies third space theory.

- **TECHNICAL CONCEPT**
  -MATHEMATICS AND PATTERN-MAKING
  -CONTEXTUAL PATTERN-MAKING
- **STRUCTURE**
  -AESTHETIC
  -ITERATIONS AND PREVIOUS ATTEMPTS
  -MAKING
- **A SUSTAINABLE SYSTEMS APPROACH- SYSTEMIC APPROACH**
  -ECOTECT TECHNICAL ITERATION AND RESULTS
  -HEATING/COOLING
  -WATER
  -VENTILATION AND LIGHT
- **MATERIALITY**
  -CONCRETE
  -STEEL
  -STONE
- **IN DETAIL**
  -ASSEMBLY
  -PLANS
  -ELEVATIONS
  -SECTIONS

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10.2 STRUCTURE

10.2.1 PREVIOUS ATTEMPTS

These notions of pattern-making have manifested into a technological system that has incorporated a girder truss system that spans an 18m space. Iterations in terms of its construction, its form, its constructability and design has led to a new technological scheme which intends to create a more poetic internal space that uses its structural members overlayed on both grids, to create a patterning system that poetically brings in light.

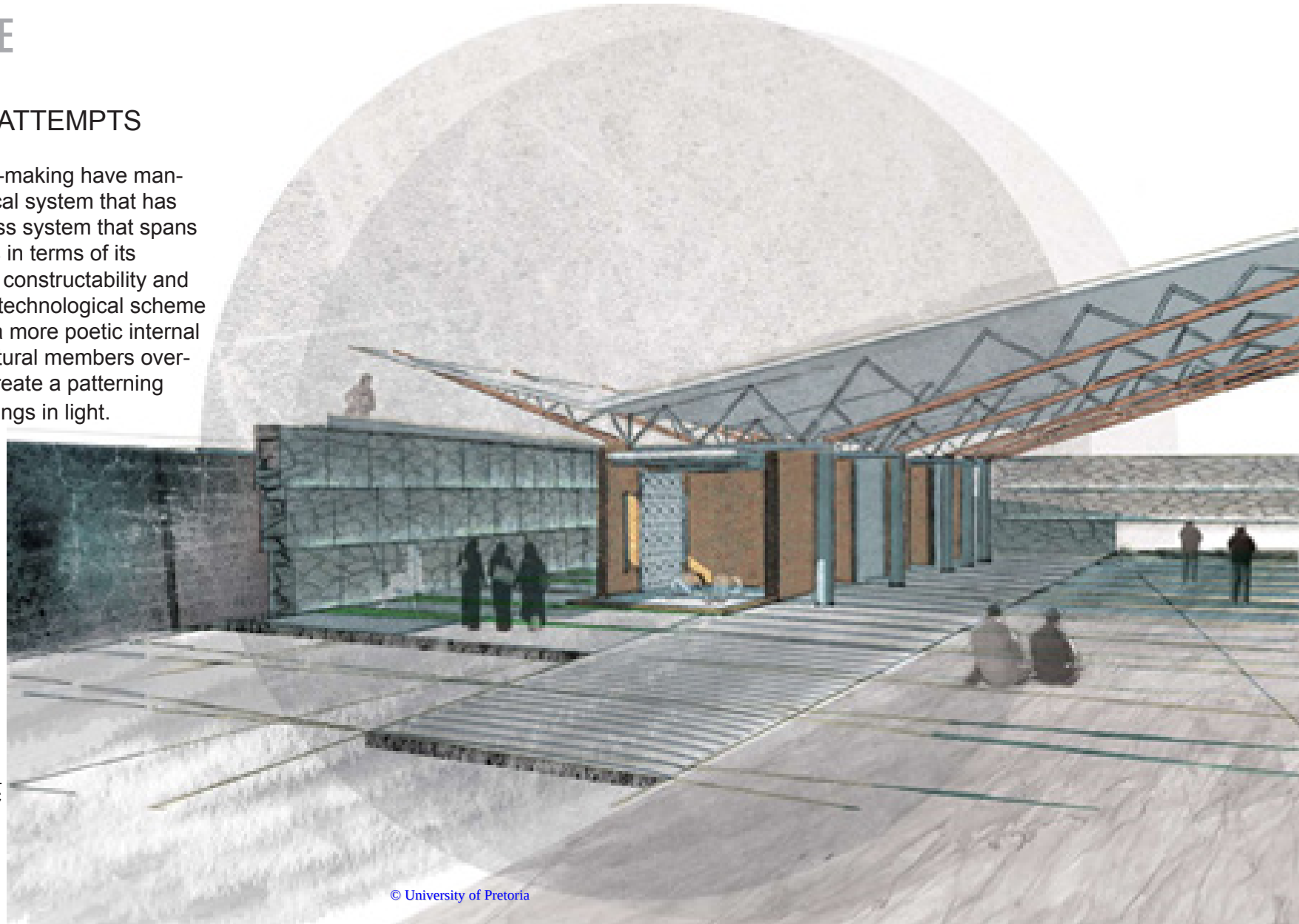

FIGURE 10.03 TECHNOLOGICAL AESTHETIC

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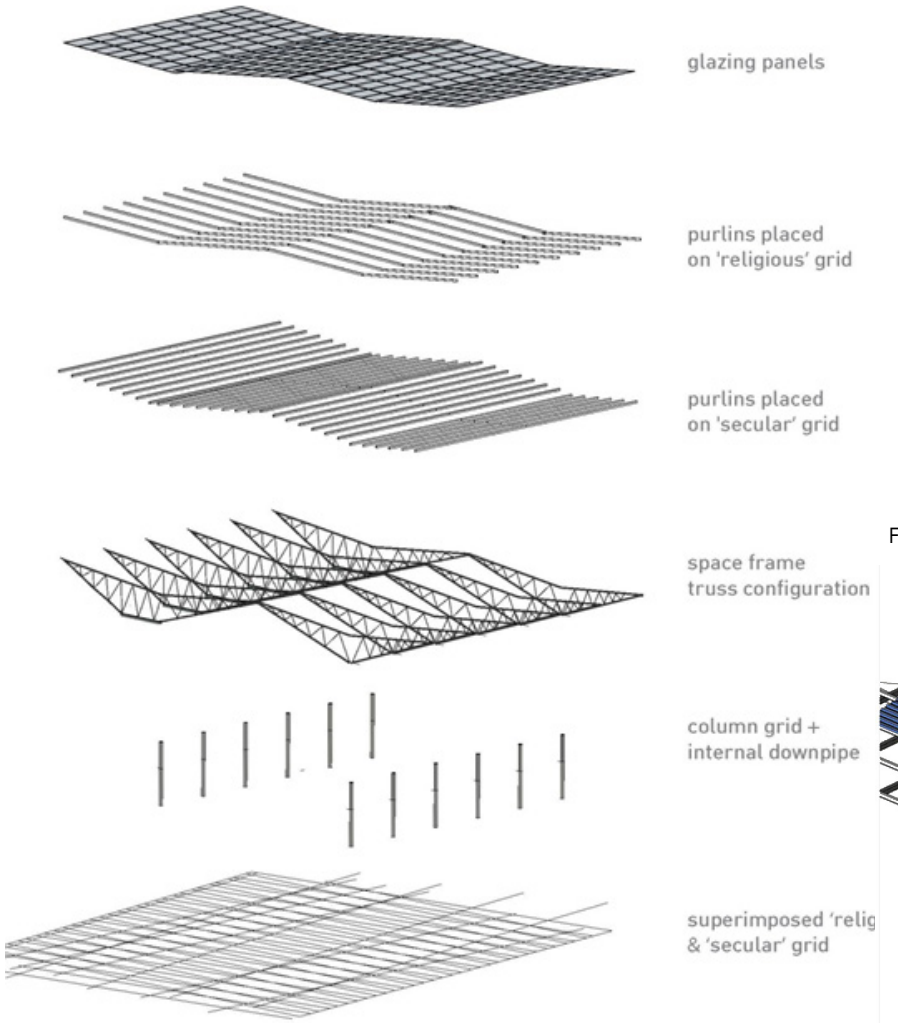

FIGURE 10.04 MATERIAL OVERLAY OVER OPPOSING GRIDS

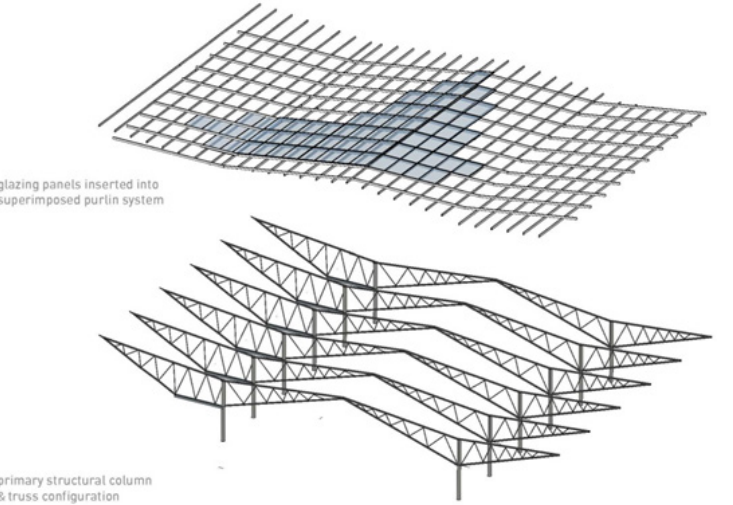

FIGURE 10.05 TECTONIC GIRDER TRUSS ROOFING PROPOSAL

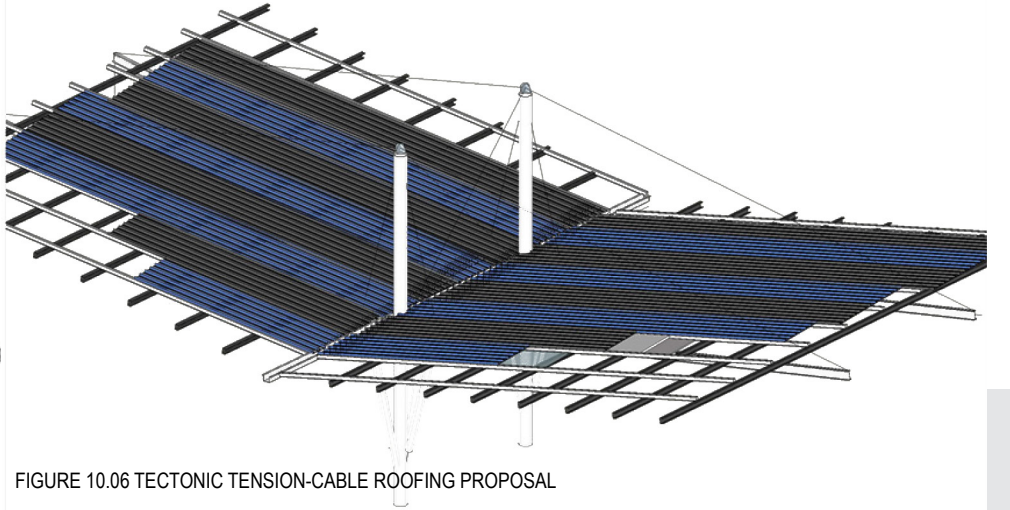

FIGURE 10.06 TECTONIC TENSION-CABLE ROOFING PROPOSAL

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10.2.2 STRUCTURAL SYSTEM

The structural system is articulated as a hybrid as it aims to introduce a new tectonic pallete over its stereotomic base that blends into its context. An intricate steel framed roofing structure supported by tubular steel columns is proposed, influenced by the overlay of a religious and secular grid- allowing the opportunity to exist at different angles and in different directions.

Members are fixed at these different grids, subsequently creating a new-found patterning system, existing in relation to that of traditional Islamic patterning systems. Light entering at strategic points will create a poetic internal quality as the geometric patterning system will produce an intricate ever-changing shadow at the different prayer times.

Because of its eighteen metre span, depth was required by beam members in order to increase the stiffness and strength, allowing bracing members to follow the interplay of grids, creating a uniquely patterned girder truss system.

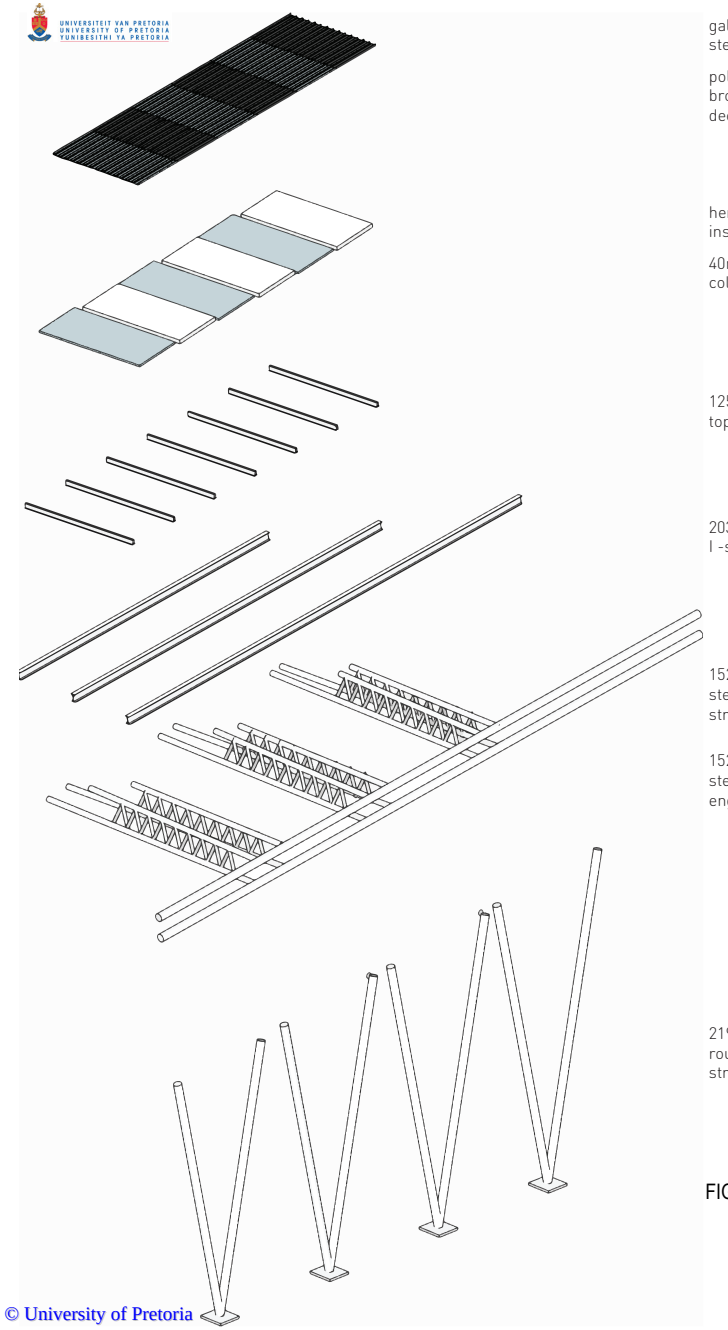

FIGURE 10.07 STRUCTURAL OVERLAY OF MEMBERS

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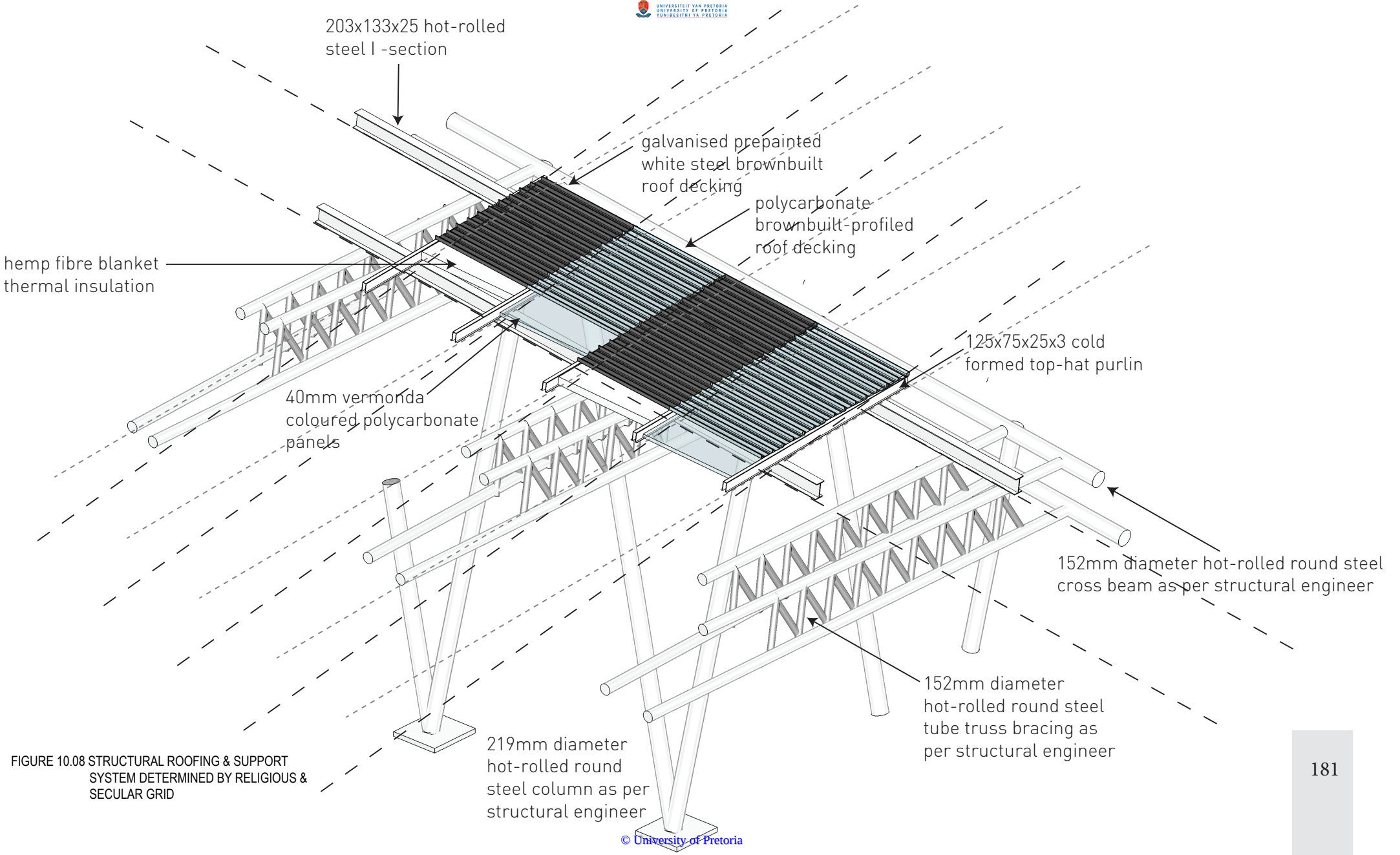

FIGURE 10.08 STRUCTURAL ROOFING & SUPPORT SYSTEM DETERMINED BY RELIGIOUS & SECULAR GRID

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10.3 A SUSTAINABLE SYSTEMS APPROACH- SYSTEMIC PRINCIPLES

10.3.1 ECOTECT TECHNICAL ITERATION AND RESULTS

A base hourly thermal analysis on the warmest and coldest days have proved that the space is overheated in the summer months. Passive means of cooling the interior is suggested and explored.

HOURLY TEMPERATURES - SUNDAY 7TH JANUARY (7)

Zone: Space
Avg. Temperature: 20.3 C (Ground 16.4 C)
Total Surface Area: 277.131 m2 (330.3% flr area).
Total Exposed Area: 267.299 m2 (318.6% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 8.579 m2 (10.2% flr area).
Total Conductance (AU): 483 W/°K
Total Admittance (AY): 858 W/°K
Response Factor: 1.72

HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	19.9	19.1	0.8
01	19.6	18.6	1.0
02	19.3	18.0	1.3
03	19.2	17.4	1.8
04	19.0	17.1	1.9
05	18.8	16.8	2.0
06	18.8	16.9	1.9
07	19.4	18.9	0.5
08	20.6	20.6	0.0
09	24.2	22.0	2.2
10	25.5	23.4	2.1
11	26.8	24.6	2.2
12	31.3	25.4	5.9
13	36.4	26.1	10.3
14	36.9	26.3	10.6
15	33.6	24.8	8.8
16	29.5	24.2	5.3
17	26.5	23.3	3.2
18	24.2	23.3	0.9
19	23.6	21.9	1.7
20	20.9	21.1	-0.2
21	20.6	20.4	0.2
22	20.1	19.3	0.8
23	19.8	18.9	0.9

hottest day

HOURLY TEMPERATURES - TUESDAY 31ST JULY (212)

Zone: Space
Avg. Temperature: 11.8 C (Ground 16.4 C)
Total Surface Area: 277.131 m2 (330.3% flr area).
Total Exposed Area: 267.299 m2 (318.6% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 8.579 m2 (10.2% flr area).
Total Conductance (AU): 483 W/°K
Total Admittance (AY): 858 W/°K
Response Factor: 1.72

HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	11.1	9.1	2.0
01	10.8	8.6	2.2
02	10.6	8.0	2.6
03	10.2	7.2	3.0
04	9.9	6.5	3.4
05	9.7	6.5	3.2
06	9.6	6.2	3.4
07	9.6	6.5	3.1
08	10.7	8.8	1.9
09	15.1	11.0	4.1
10	17.6	13.1	4.5
11	20.5	14.8	5.7
12	22.7	16.0	6.7
13	22.7	16.9	5.8
14	20.8	17.6	3.2
15	19.3	18.0	1.3
16	17.1	17.3	-0.2
17	16.6	16.2	0.4
18	15.9	14.2	1.7
19	12.9	12.7	0.2
20	12.5	12.2	0.3
21	12.3	11.6	0.7
22	12.1	11.2	0.9
23	11.7	10.1	1.6

coldest day

Unfavourable thermal results from Ecotect testing has assisted in the design of a northern shading device to protect the interior mosque space from unwanted solar radiation which -from thermal testing- has significantly overheated the interior.

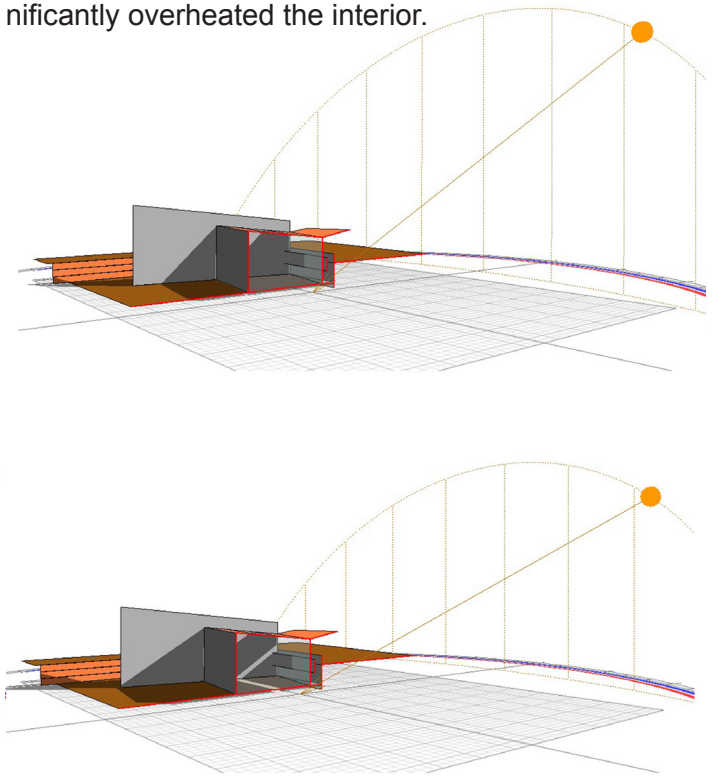

FIGURE 10.09 SOLAR SHADING TESTS & ITERATIONS IN WINTER AND SUMMER MOINTHS

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Even though the design has taken cognisance of general sun-shading principles and rules-of-thumb with regards to orientation, openings on western and eastern facades were required for access and ventilation.

Direct radiation access was iteratively tested and is thus controlled by overhangs (shown in blue) and recessed fenestration. Windows and doors are openable and allow for cross ventilation to occur at the overheated times- such as late afternoons.

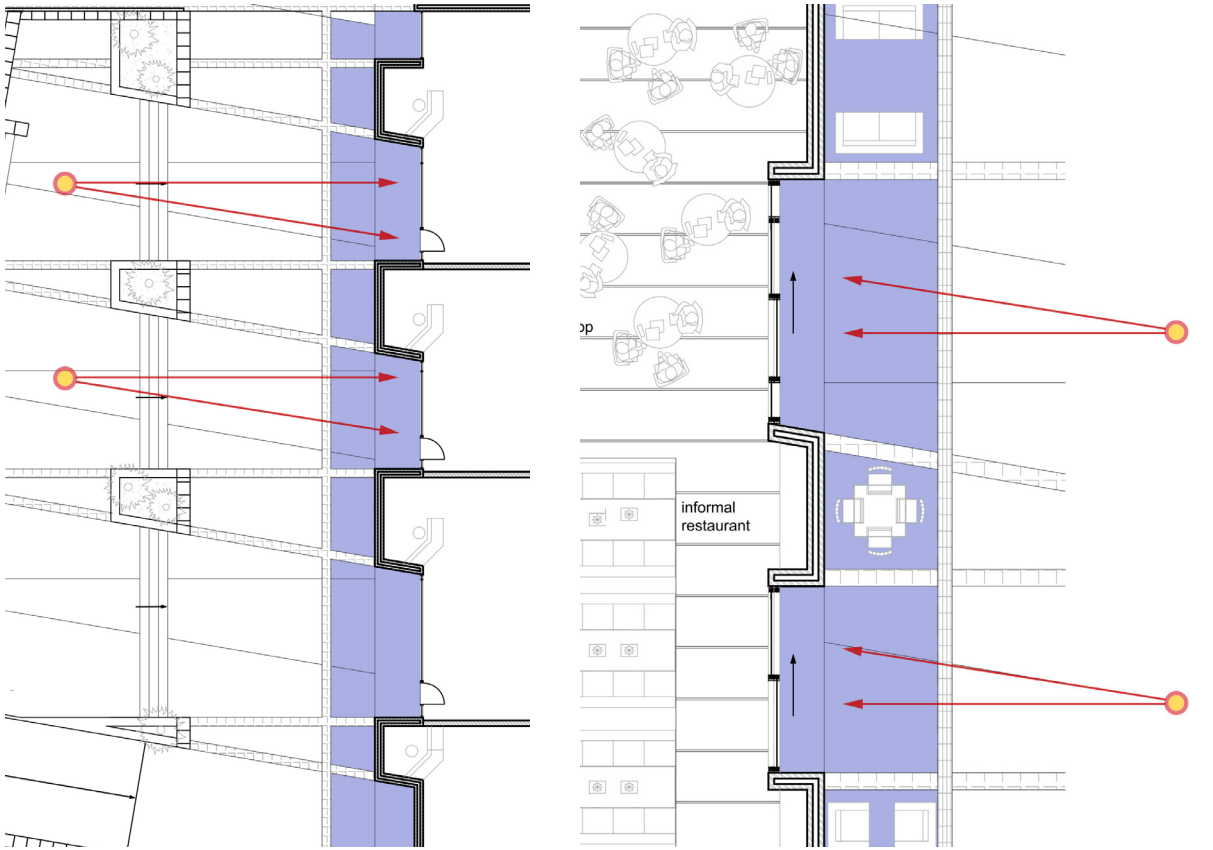

FIGURE 10.10 OVERNHANG AND RECESSED GLAZING AT EASTERN AND WESTERN FACADESOVERHANG SHOWN IN BLUE

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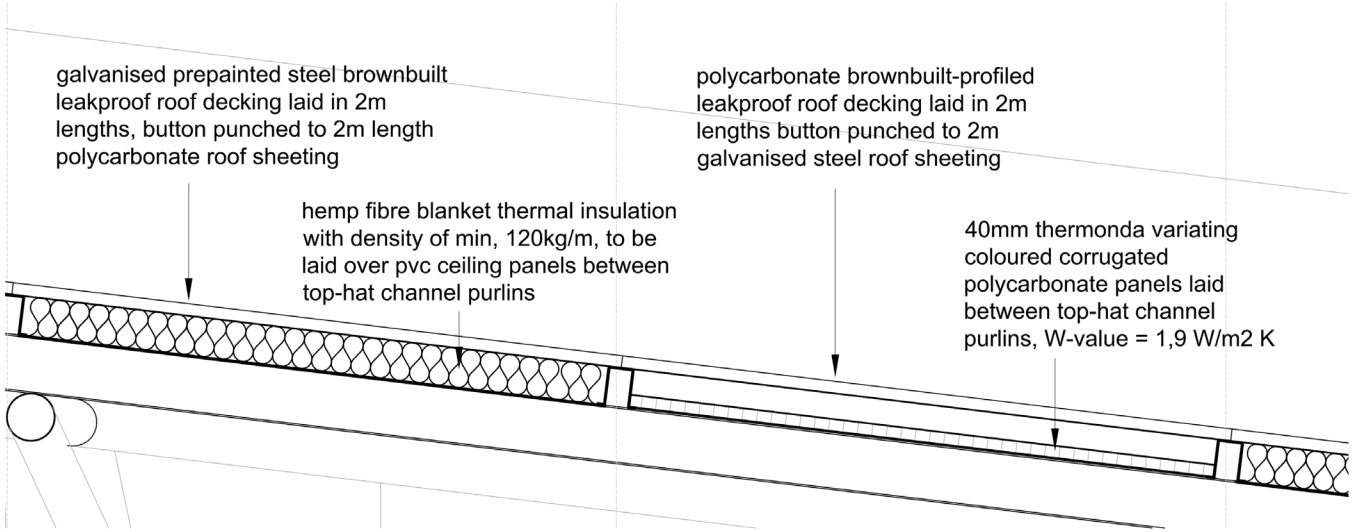
The roof is constructed of a traditional galvanised steel brownbuilt roofing system with polycarbonate panels over-layed in order to bring light into the interior at key points. Different panels of different colours, shading co-efficients, as well as different thicknesses with different u-values have been iterated.

Colour	Light Transmission (%) DIN 5036	Shading Coefficient
Clear S	68%	0.75
Bronze B	11%	0.45
Opal V	30%	0.52
Bronze Opal	8%	0.42
Heat Guard Opal	7%	0.30
Blue Opal	27%	0.54

Product Range at a Glance

Name	Gauge	Colours	Size	Weight /m²	U Value (W/M²°k)
Solid Sheets	1.3mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	1.56 kg	-
Solid Sheets	1.5mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	1.80 kg	-
Solid Sheets	2.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	2.40 kg	5.66
Solid Sheets	3.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	3.60 kg	5.49
Solid Sheets	4.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	4.80 kg	5.33
Solid Sheets*	6.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	7.20 kg	5.09
Solid Sheets*	8.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	9.60 kg	4.84
Solid Sheets*	10.0mm	Clear, Bronze, Opal & Grey Tint	1.220 x 3.050	12.00 kg	4.61

FIGURE 10.11 TECHNICAL DATA OF POLYCARBONATE GLAZING SYSTEMS



ROOF CONSTRUCTION AFTER TESTING

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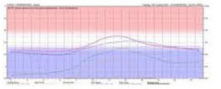
HOURLY TEMPERATURES - SUNDAY 8TH JULY (189)

Zone: Space
Avg. Temperature: 15.7 C (Ground 16.4 C)
Total Surface Area: 289.943 m2 (331.0% flr area).
Total Exposed Area: 280.111 m2 (319.8% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 7.331 m2 (8.4% flr area).
Total Conductance (AU): 523 W/°K
Total Admittance (AY): 956 W/°K
Response Factor: 1.77



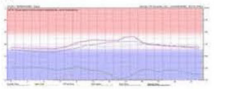
HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	13.8	11.8	2.0
01	13.7	11.6	2.1
02	13.4	11.0	2.4
03	13.2	10.6	2.6
04	13.0	10.1	2.9
05	12.9	10.0	2.9
06	12.8	9.5	3.3
07	13.2	10.7	2.5
08	14.5	12.7	1.8
09	16.6	15.0	1.6
10	19.3	16.6	2.7
11	22.7	18.3	4.4
12	24.6	19.6	5.0
13	25.3	20.5	4.8
14	24.5	21.5	3.0
15	22.3	21.1	1.2
16	19.7	20.9	-1.2
17	18.0	20.0	-2.0
18	17.0	18.4	-1.4
19	16.2	16.9	-0.7
20	15.8	16.3	-0.5
21	15.4	15.1	0.3
22	15.0	14.4	0.6
23	14.6	13.1	1.5

operating hours

hottest day

HOURLY TEMPERATURES - SUNDAY 7TH JANUARY (7)

Zone: Space
Avg. Temperature: 18.8 C (Ground 16.4 C)
Total Surface Area: 289.943 m2 (331.0% flr area).
Total Exposed Area: 280.111 m2 (319.8% flr area).
Total North Window: 0.000 m2 (0.0% flr area).
Total Window Area: 7.331 m2 (8.4% flr area).
Total Conductance (AU): 511 W/°K
Total Admittance (AY): 943 W/°K
Response Factor: 1.78

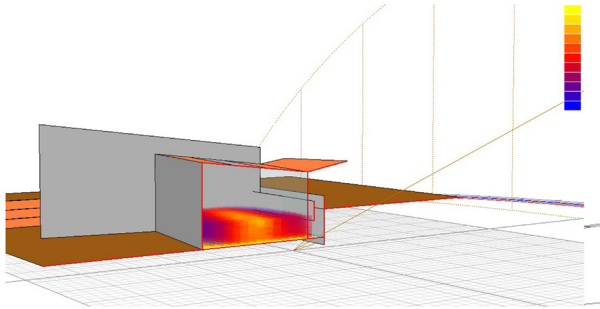


HOUR	INSIDE (C)	OUTSIDE (C)	TEMP.DIF (C)
00	17.2	15.3	1.9
01	17.1	14.9	2.2
02	16.8	14.3	2.5
03	16.6	13.9	2.7
04	16.5	13.6	2.9
05	16.4	13.4	3.0
06	16.7	14.1	2.6
07	18.3	15.3	3.0
08	21.2	16.8	4.4
09	22.4	18.7	3.7
10	23.6	19.7	3.9
11	23.2	20.7	2.5
12	23.0	21.6	1.4
13	22.9	21.8	1.1
14	26.0	22.3	3.7
15	25.3	22.5	2.8
16	22.7	20.9	1.8
17	19.3	20.4	-1.1
18	19.0	19.7	-0.7
19	18.6	18.7	-0.1
20	18.2	18.5	-0.3
21	18.1	17.6	0.5
22	17.9	17.0	0.9
23	17.7	16.2	1.5

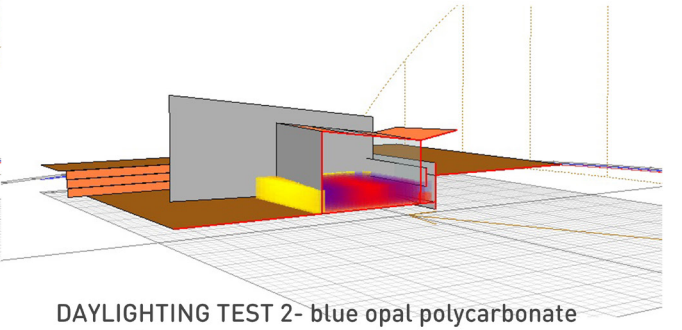
operating hours

coldest day

THERMAL ANALYSIS 3- improvement



DAYLIGHTING TEST 1- clear polycarbonate
transmittance: 68%
u-value: 5.66



DAYLIGHTING TEST 2- blue opal polycarbonate
transmittance: 27%
u-value: 4.61

FIGURE 10.12 ECOTECT DAYLIGHT TESTS & ITERATIONS

Northern and western shading iterations, along with skylight allowances, material properties and their respective transmittance and u-values have assisted in significantly reducing the overheated internal temperatures during the summer months.

Shading co-efficients and transmittance iterations of polycarbonate sheets used within the skylights have also assisted in reducing the direct sunlight and glare which has overexposed the internal space.

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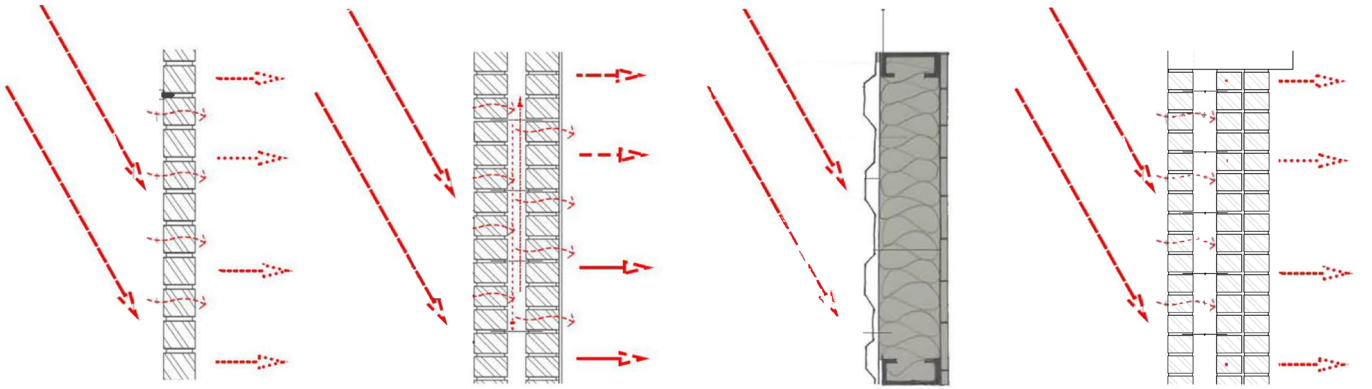

FIGURE 10.13 WALL-TYPE ECOTECT TESTING & ITERATIONS

THERMAL MASSING- for increased night time heat gain (thermal lag) and reduction in heat loss through conduction

Single skin brick, double skin brick, composite wall with hemp fibre blanket thermal insulation, and cavity wall construction were tested and iterated in terms of its thermal massing and thermal lag capabilities on the overexposed western facade.

Results proved that the cavity wall construction with a 110mm air-gap -together with its concree frame-worked best for its increased night time heat gain due to its high thermal mass and the reduction in heat loss through conduction.

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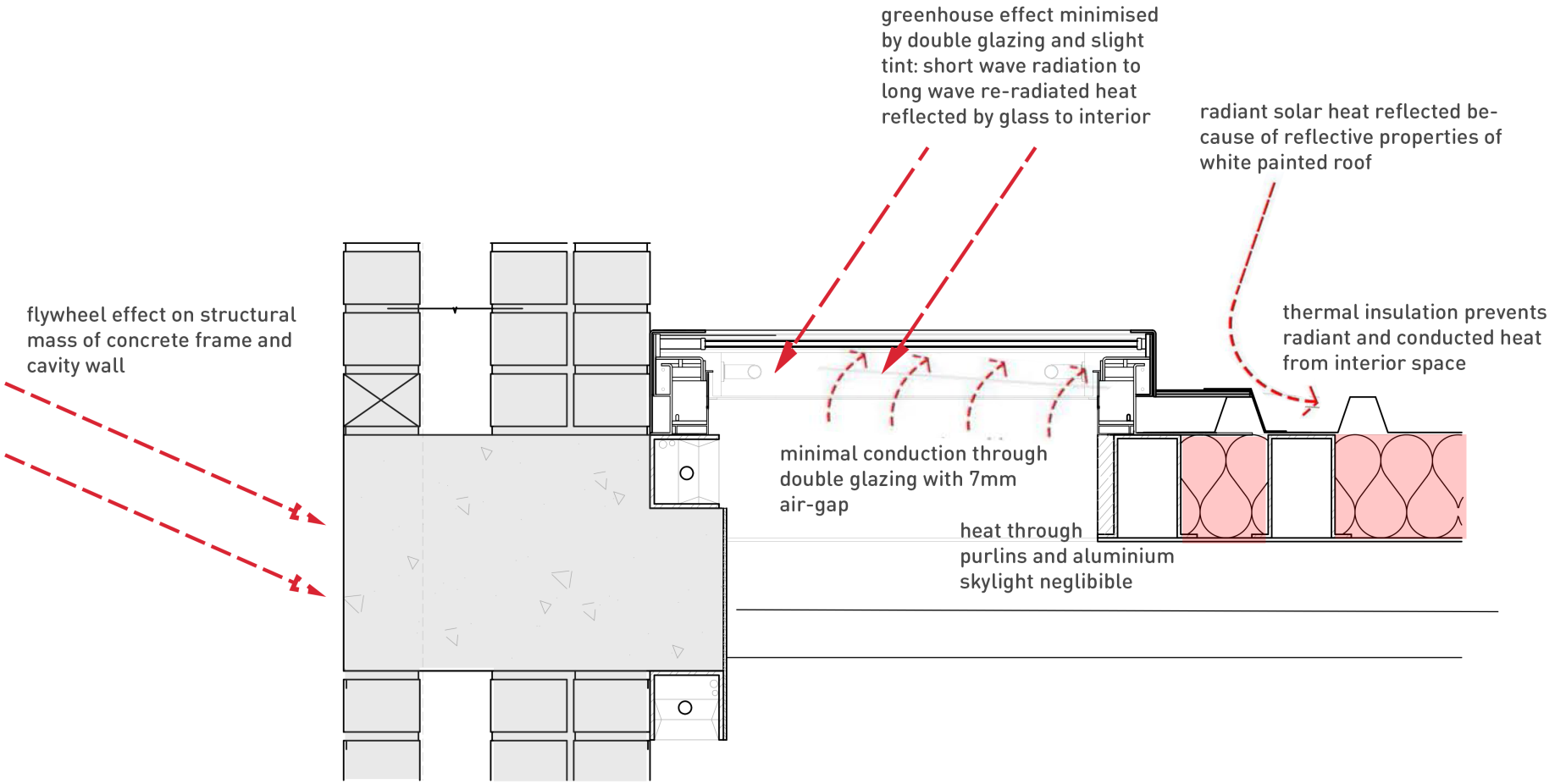

FIGURE 10.14 SKYLIGHT DETAIL SHOWING THERMAL PERFORMANCE

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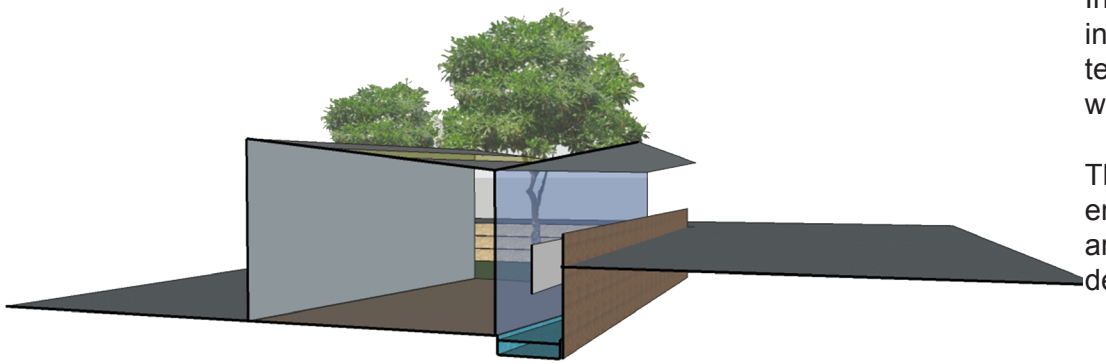

EVAPORATIVE COOLING AND BUILDING SHADING
proposal for a water body and natural vegetation
THERMAL ANALYSIS 4- negligible improvement

Incorporation of a water body for evaporative cooling and a vegetated landscape for air-cooling was tested. A reduction in the overall thermal results were negligible.

These elements, however, do contribute to the emotional well-being of the user when within and around the space. Such elements have thus been designed with.

FIGURE 10.15 APPLICATION OF NATURAL COOLING METHODOLOGIES

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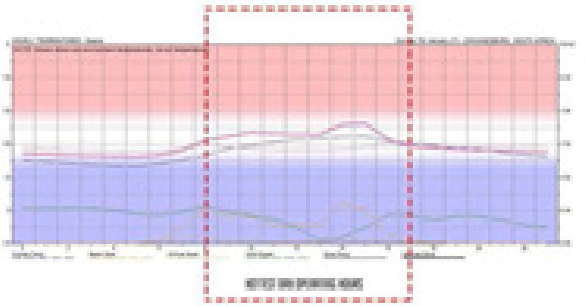

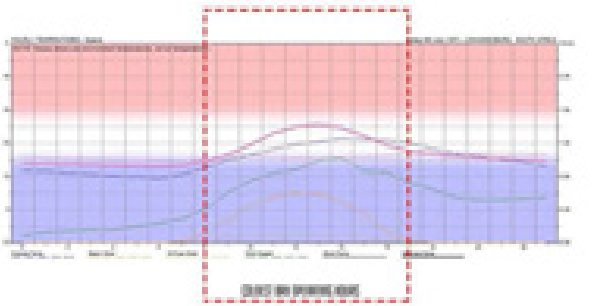

FINAL RESULTS

Wall-type, fenestration, skylight testing and iterations have resulted in favourable internal thermal conditions, whereby the final results fall within the comfort band of Johannesburg.

Although passive means have proved to be adequate, the unpredictable usage of the mosque/ multipurposed space due to unaccounted visitors and worshippers, a geothermal and hydronic system has been proposed which will assist in creating a habitable and comfortable internal space.

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10.3.2 HEATING/COOLING

A geothermal water heating and cooling system assists in supplying the adequately required water temperature for Islamic ablutions, and is also proposed hydronic system allows for radiant heating and cooling to occur through water pipes wet installed into the concrete floor used for its thermal mass.

Uponor horizontal collector geothermal pipes will be laid in the upper two metres of the ground soil. This particular heat exchanger is chosen for its low investment cost, minimum soil disturbance, and its high seasonal performance factor.

Individual 40mm diameter pipe loops are laid at distances of 0.8 metres in a similar way to the pipe loops of an underfloor heating system. The supply and return pipes of these pipe loops are routed to a heat pump which heats and cools the water routed beneath the floor of the internal mosque/ multipurpose space.

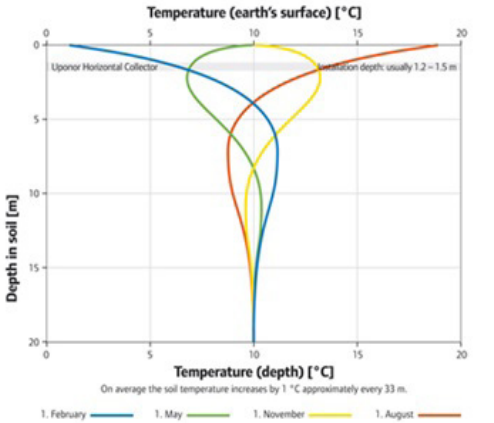

FIGURE 10.16 GEOTHERMAL COLLECTOR TECHNICAL DATA

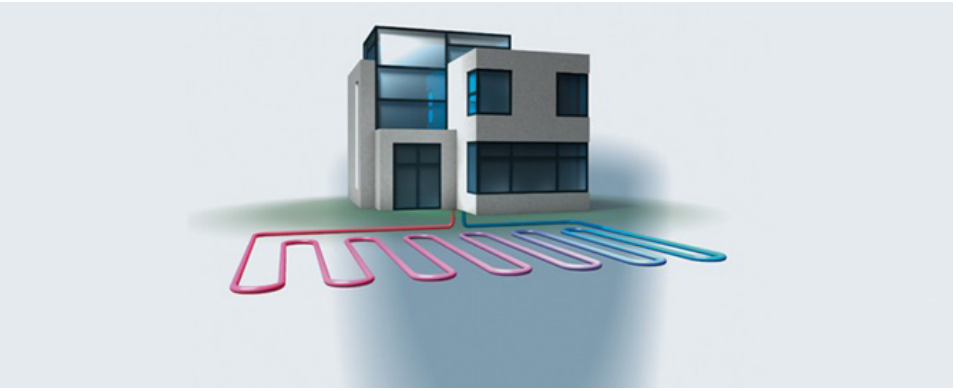

FIGURE 10.17 GEOTHERMAL COLLECTOR APPLICATION DIAGRAM

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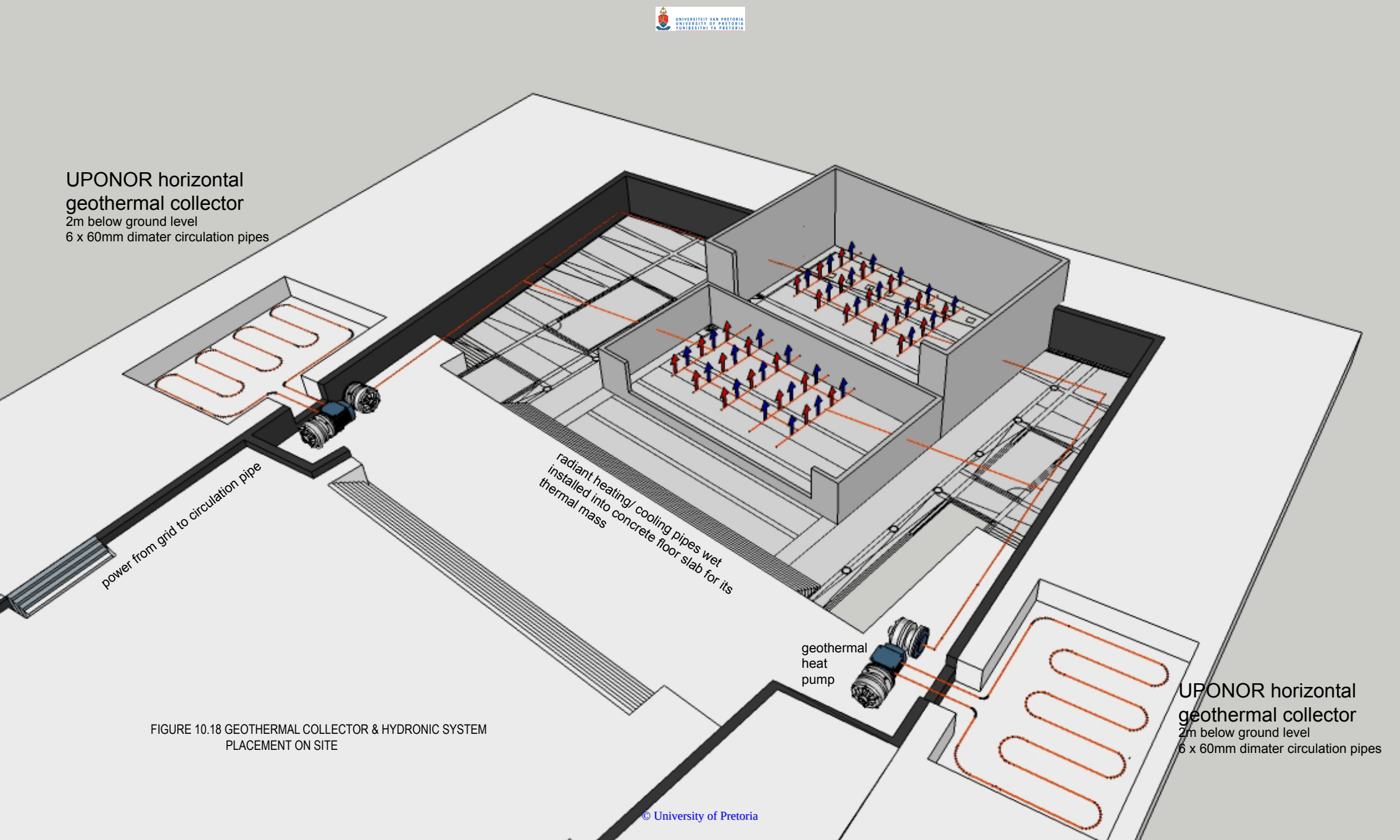

FIGURE 10.18 GEOTHERMAL COLLECTOR & HYDRONIC SYSTEM PLACEMENT ON SITE

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10.3.3 WATER

Water is seen as an almost sacramental element in Islam. It is associated with cleanliness, fertility, wealth and purity, to list a few, and is thus an essential part of Islamic architecture. The ablution ritual compulsory before praying, solidifies the important roles that water plays in the design of a mosque even further (Chohan; 2010:10)

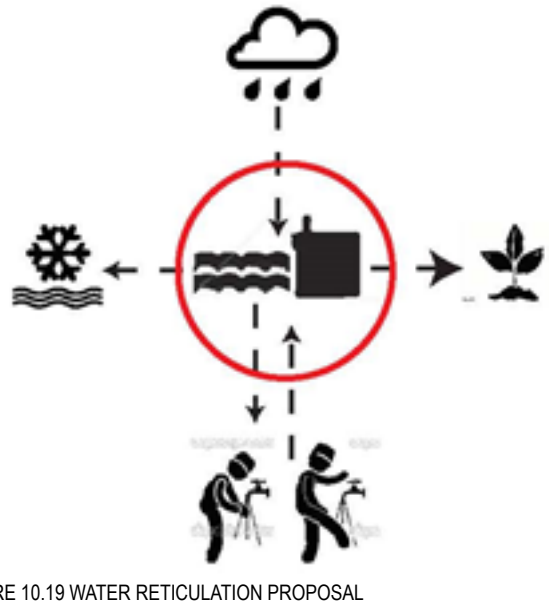


FIGURE 10.19 WATER RETICULATION PROPOSAL

Proposal for: Water harvesting and reticulation system which services a formal and informal ablution/ water fountain.

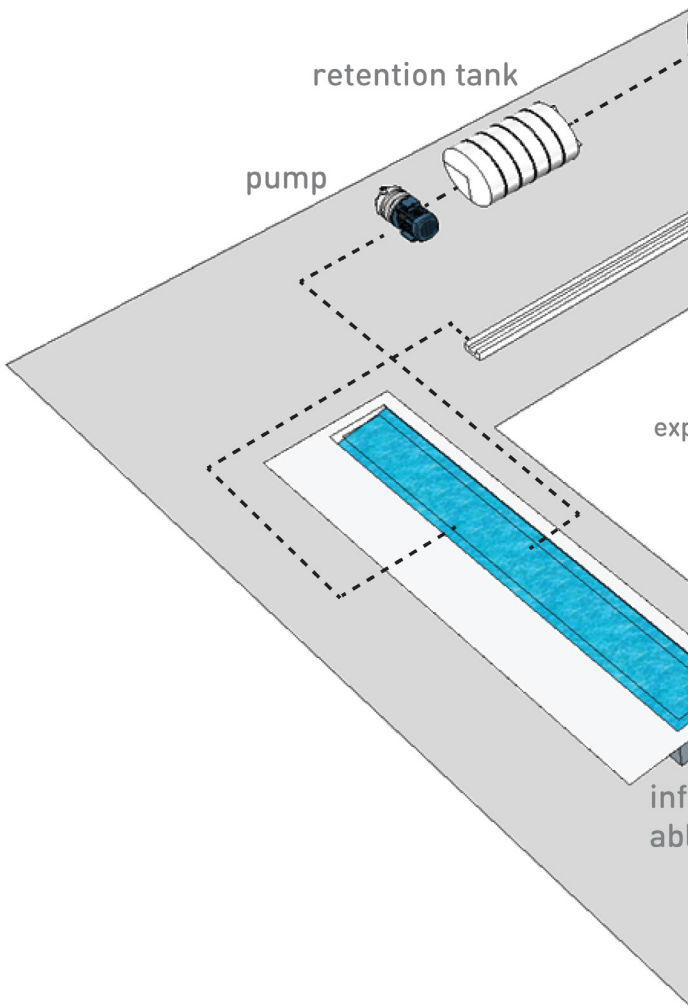
HARVESTING SYSTEM
1. Water captured by roofs, stored in 6x 20000 litre plastic Jojo underground water tanks

2. Water is filtered and chlorinated, after which water is directed by gravity through an exposed water channel with trash trap and fines filter to formal ablution area

3. Grey water is directed to an existing stormwater channel.

RETICULATION SYSTEM
1. Flowing water is directed by gravity down an exposed water channel into an unltraviolet water filtration system for disinfection

2. Disinfected water temporarily stored in retention tank until pumped back up to informal ablution feature.



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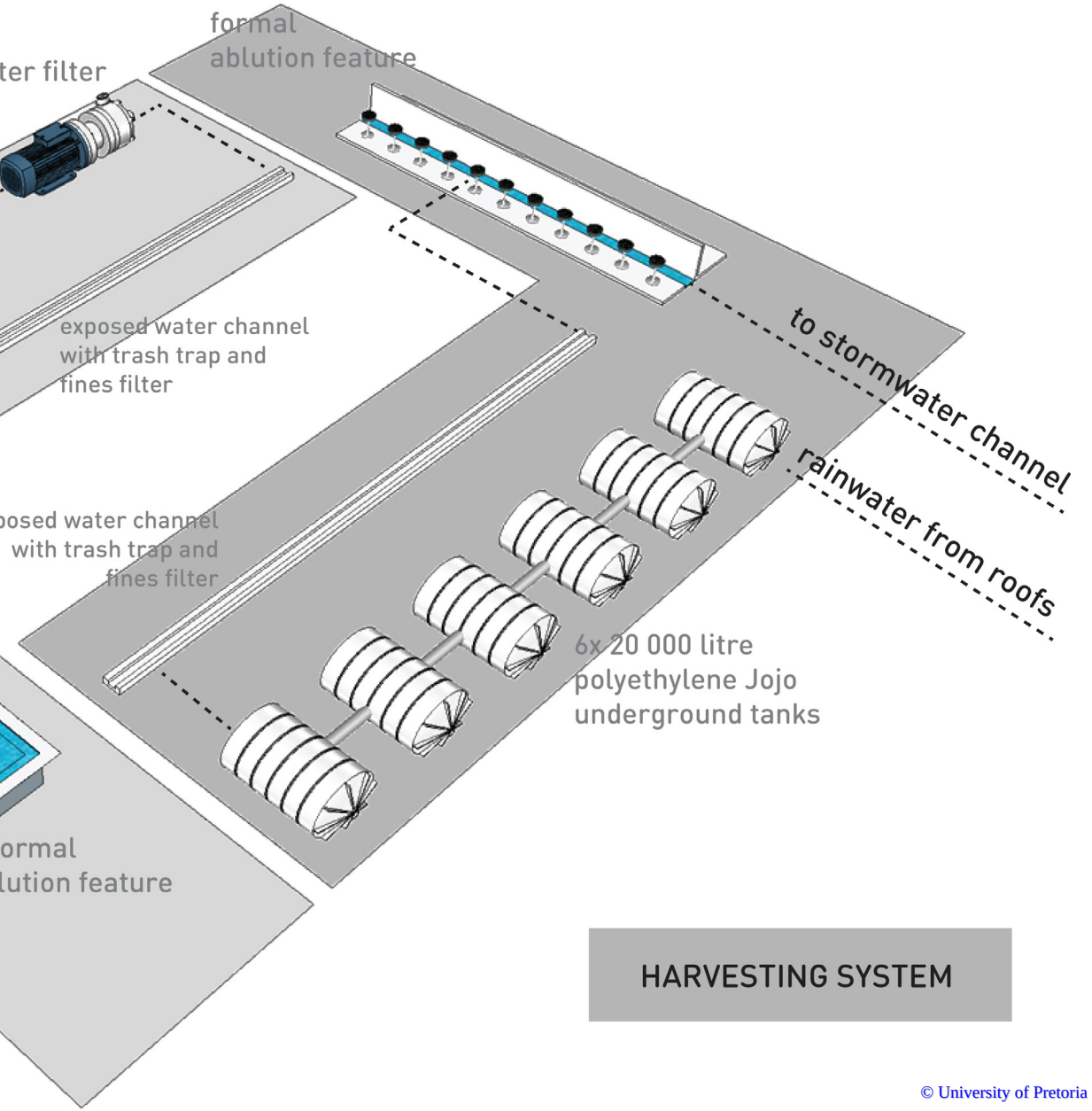

HARVESTING SYSTEM

	Occupancy	Ablutions	Drinking
Monday	110	440	22
Tuesday	110	440	22
Wednesday	110	440	22
Thursday	110	440	22
Friday	440	193600	88
Saturday	100	400	20
Sunday	80	320	16

4litres per person for ablutions
200millilitres per person for drinking

	litres
January	979738
February	785516
March	786440
April	919738
May	786440
June	919738
July	786440
August	919738
September	786440
October	919738
November	786440
December	919738

Total roof area: 1452+576+728+224+510 3490

Irrigation demand	Ablution+ Drinking Demand	Total demand
January	98.64	98.64
February	85.13	85.13
March	85.2	85.2
April	98.64	98.64
may	85.2	85.2
June	98.64	98.64
July	85.2	85.2
August	98.64	98.64
September	85.2	85.2
October	98.64	98.64
November	85.2	85.2
December	98.64	98.64
	0	

Yield	Precipitation	Roof 3490m²	Total	0.9
January	0.125	392.63	392.63	293.99
February	0.094	295.24	295.24	210.11
March	0.09	282.69	282.69	197.49
April	0.054	169.61	169.61	70.97
May	0.013	40.83	40.83	-44.37
June	0.009	28.27	28.27	-70.37
July	0.004	12.54	12.54	-72.66
August	0.006	18.85	18.85	-79.79
September	0.027	84.81	84.81	-0.39
October	0.007	21.99	21.99	-76.65
November	0.011	345.51	345.51	260.31
December	0.103	323.52	323.52	224.88
Annual ave	0.543	1705.56	1705.56	1705.56
			5400	

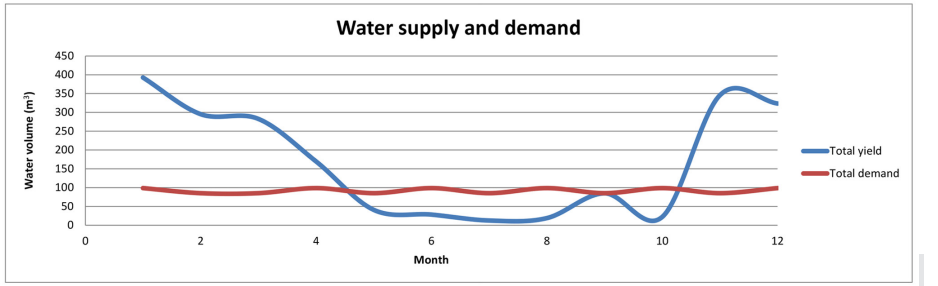

FIGURE 10.21 WATER HARVESTING CALCULATIONS PROVING SURPLUS OF RAINWATER COLLECTED FROM ROOFS

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10.3.4 VENTILATION AND LIGHT

Passive sustainable strategies make use of screens, thermal mass, vegetation, evaporative cooling, cross-ventilation, and the stack effect.

A planted brise soleil (solar screens) are designed to dissapate the direct eastern and western sunlight, reducing glare and direct solar gain, allowing light and a cross-ventilated air-flow to enter and exit the internal space -by means of stack effect and air-buoyancy principles- through openings, clerestory windows and skylights.

Northern and southern light is maximised using curtain walls (summer protected with a roof overhang) while skylights are purposely designed (check ecotect iterations) to filter light poetically into the interior prayer space.

The thermal mass of concrete and brickwork is designed with to absorb the harsh western solar radiation in order to disappate it back into the interior for early morning prayers.

Water bodies, ablution spaces and vegetated gardens provide cool environments for air to be cross-ventilated through the buildings interior.

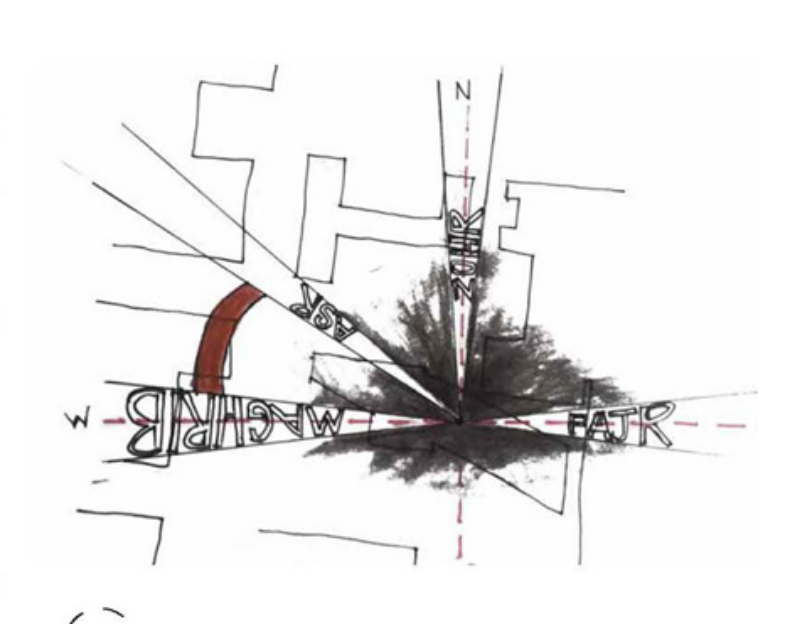

FIGURE 10.22 DIRECTION OF SUN/ DIRECT LIGHT ACCESS AT THE FIVE DAILY PRAYER TIMES

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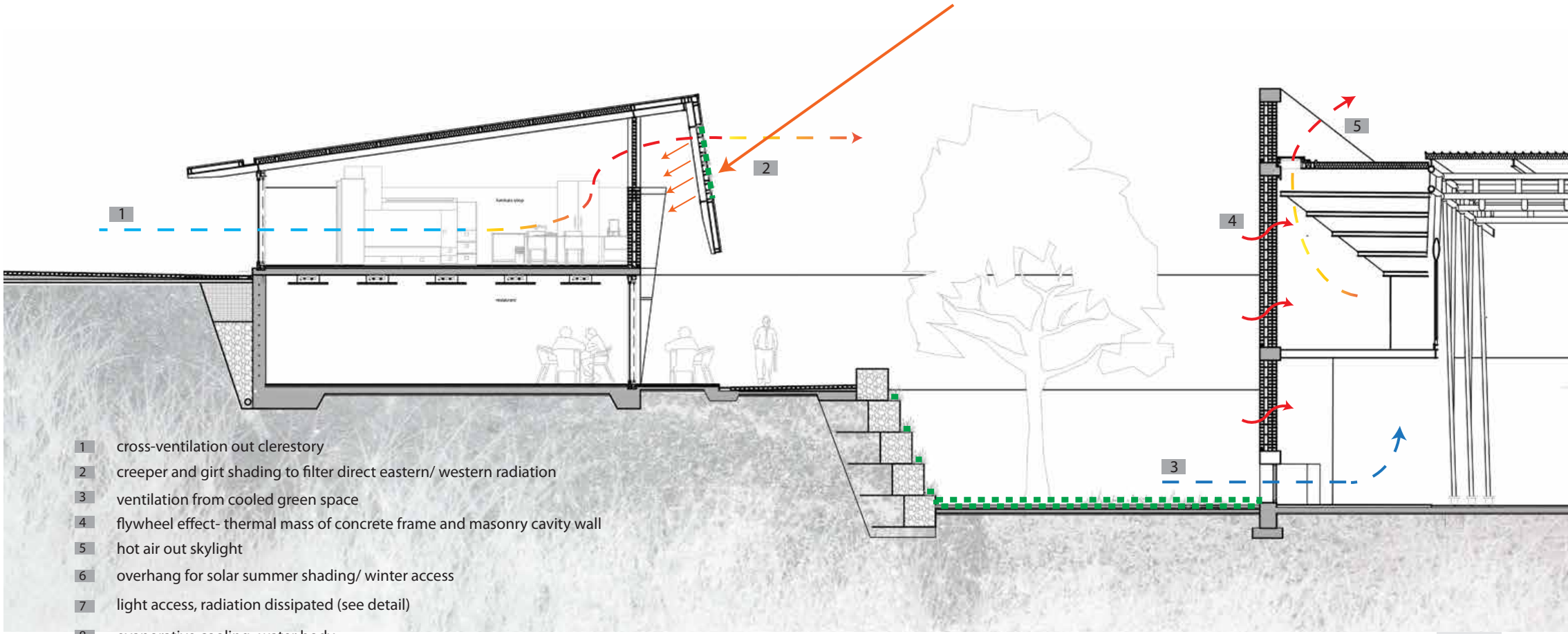

1 cross-ventilation out clerestory
2 creeper and girt shading to filter direct eastern/ western radiation
3 ventilation from cooled green space
4 flywheel effect- thermal mass of concrete frame and masonry cavity wall
5 hot air out skylight
6 overhang for solar summer shading/ winter access
7 light access, radiation dissipated (see detail)
8 evaporative cooling- water body
9 hydronic radiant heating and cooling- see sustainable systems
10 cross ventilation from cooled ablution area

FIGURE 10.23 PASSIVE SUSTAINABILITY STRATEGIES APPLIED TO BUILDING

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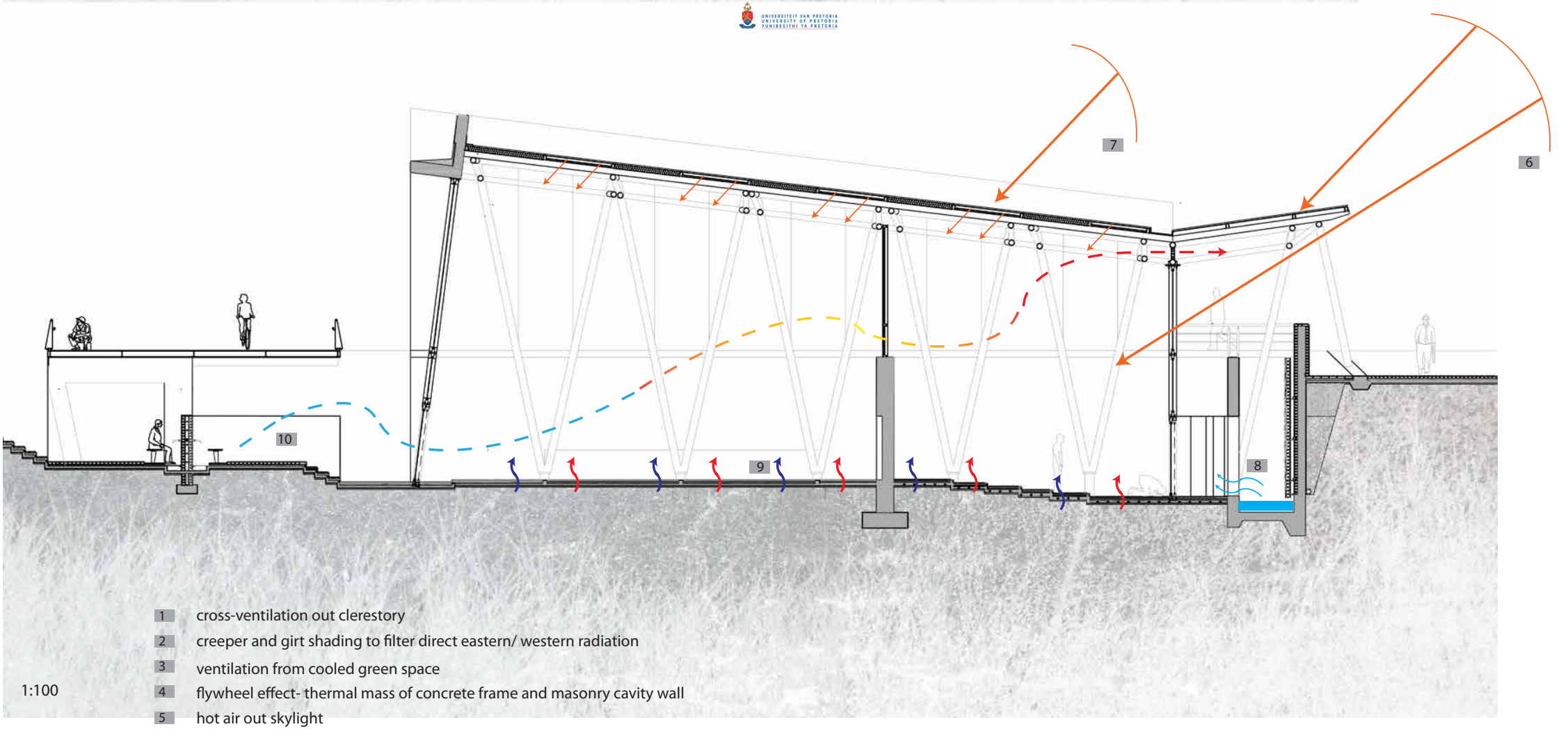

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1 cross-ventilation out clerestory
2 creeper and girt shading to filter direct eastern/ western radiation
3 ventilation from cooled green space
4 flywheel effect- thermal mass of concrete frame and masonry cavity wall
5 hot air out skylight
6 overhang for solar summer shading/ winter access
7 light access, radiation dissipated (see detail)
8 evaporative cooling- water body
9 hydronic radiant heating and cooling- see sustainable systems
10 cross ventilation from cooled ablution area

FIGURE 10.24 PASSIVE SUSTAINABILITY STRATEGIES APPLIED TO BUILDING

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10.4 MATERIALITY

“The materials used in architecture inform our experience of buildings and spaces through the interplay of aesthetic, social and historic considerations. Both structural and decorative elements have a role to play, whether immediately visceral or only on a subliminal level”, (McLuhan;2011,9).

The technological, sustainable and material responses of the Islamic precinct are a reaction to the context it finds itself in. As the context is comprised of stereotomic surroundings and a hard surfaced landscape, the site’s existing materiality is understood and responded to in its altered industrial-like state.

New proposed materiality in the Islamic precinct is specified to form a consistent dialogue with the site and its materiality, so that the mosque merges with its built context while subtly contrasting with the existing stereotomic to contribute a new layer of tectonic spatial narrative to the architectural backdrop. Materials were also selected for its geometric patterning closely associated with Islamic art, for the structural ability to span vast distances creating intricate formations, and for its honesty and durability (as a frequently used structure in an urban setting would face considerable wear-and-tear).

The predominant materials on site are brickwork, concrete and steel. Each material is discussed according to the materiality found on site, and the interpretation of the material as used in the Islamic Precinct.

FIGURE 10.25 EXISTING SITE MATERIALITY

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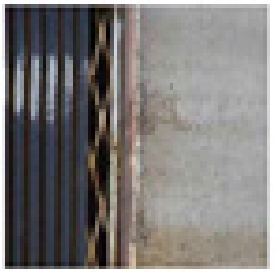
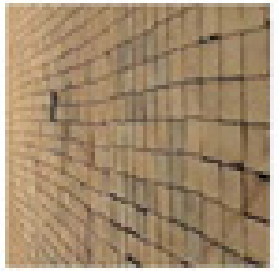
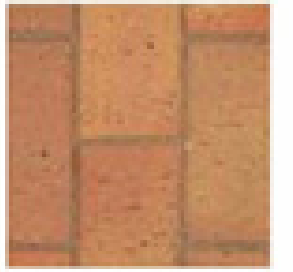
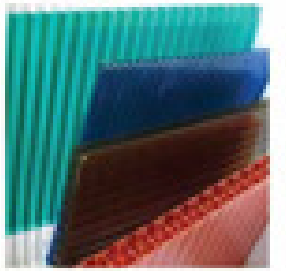
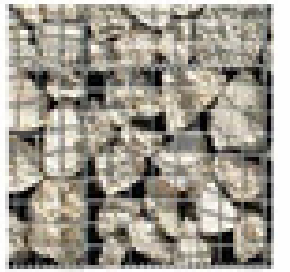
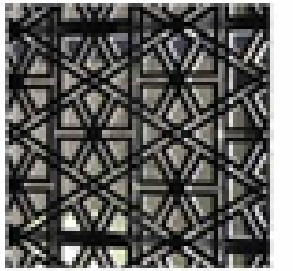
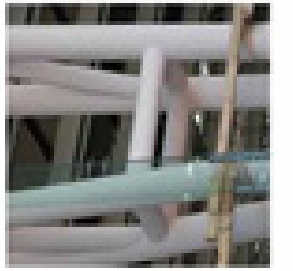



existing site materiality





proposed site materiality

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10.4.1 BRICKWORK

Corobrick cederburg coloured clay face-bricks will be used as infill for concrete framed and cavity walls within the Islamic precinct. Walls will be left unplastered so that it fits in with the unplastered Oriental Plaza and surrounding buildings within its context.

Nutmeg coloured clay paving bricks will create various patterns that define liminal and informal space, also giving the precinct a directional quality at circulation and other routes that represent the religious ritual.

Corobrick clay bricks are locally produced and have a low carbon footprint; also requiring low-skilled level workmanship as masonry is a common South African building material.

10.4.2 CONCRETE

The existing construction of the Oriental Plaza includes an off-shutter reinforced concrete frame. A similar framing method constructed if in-situ concrete will shape the wall systems of the Islamic precinct so that it -along with its brick infill- successfully blends with that of surrounding buildings.

Lafarge ready-mixed concrete suppliers are within close proximity to the site, lowering the overall carbon footprint. The off-shutter concrete framework requires low-skilled level workmanship whereby local unemployed labourers will be employed for the construction thereof.

10.4.2 STEEL

A new insertion onto the site which represents an alternate mosque-building strategy includes the use of steel to span large distances in order to create large free space.

The new steel palette incorporates the primary use of I-beams and tubular steel members, manipulated in use and scale in order for the formation of intricate patterning systems.

As its use conceptually fulfills aims of the hypothesis, acting in stark relation to outdated and aesthetically driven symbolic mosque-building elements, its usage is familiar within a South African context, locally produced and brought prefabricated to be assembled on site.

10.4.3 OTHER

Gabion walls, rubber interlocking tiles, grass and vegetation, polycarbonate, etc. are used for their ability to create pattern, for their durability and functionality, as well as their relation to a South African context.

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10.5 IN DETAIL

10.5.1 ASSEMBLY DRAWINGS

Detail assembly drawings -on a microscale- continue the application of the conceptual approach and project aims in order to create -through its assembly and allowances- a poetic quality within the internal space.

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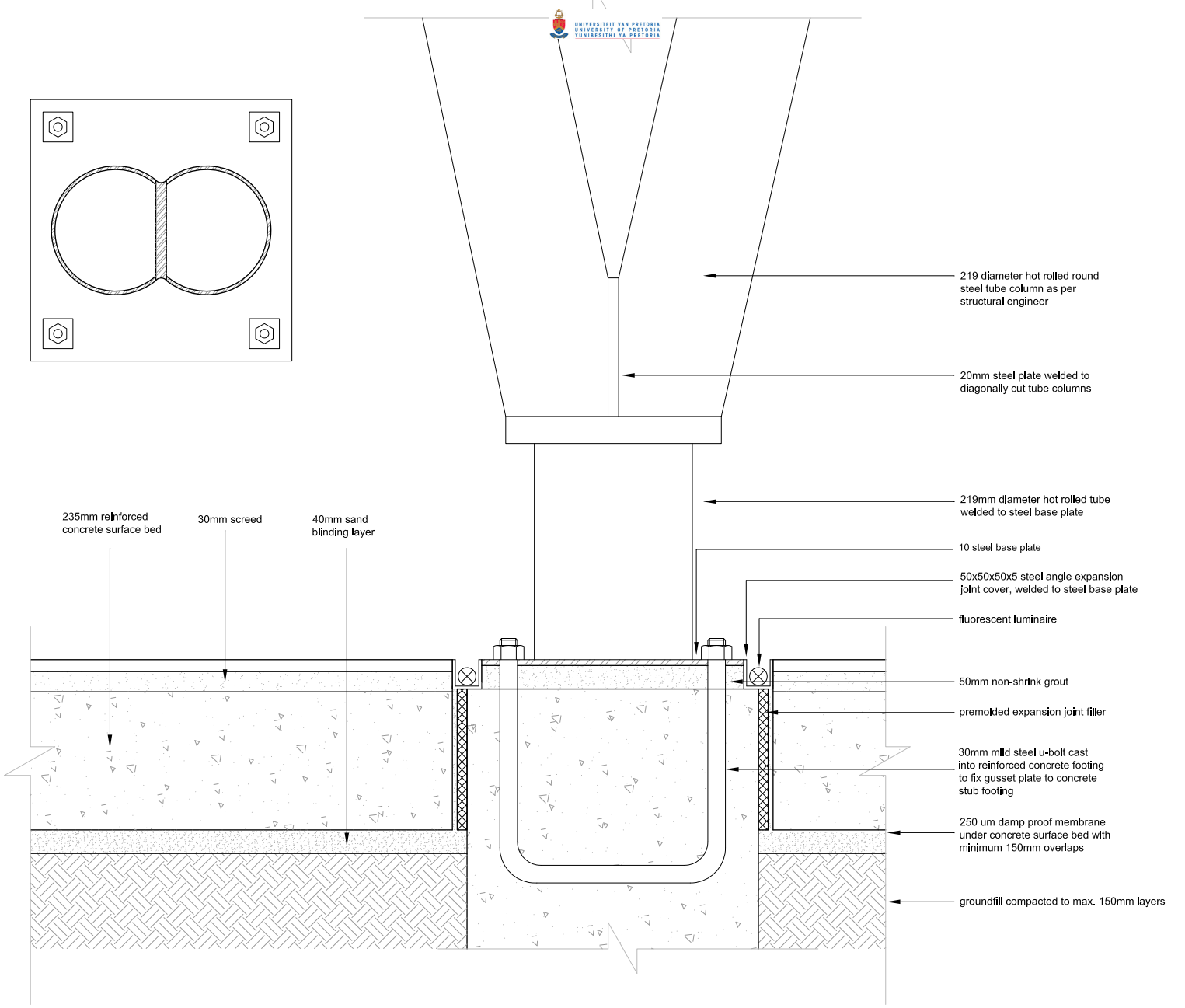

COLUMN FOOTING DETAIL
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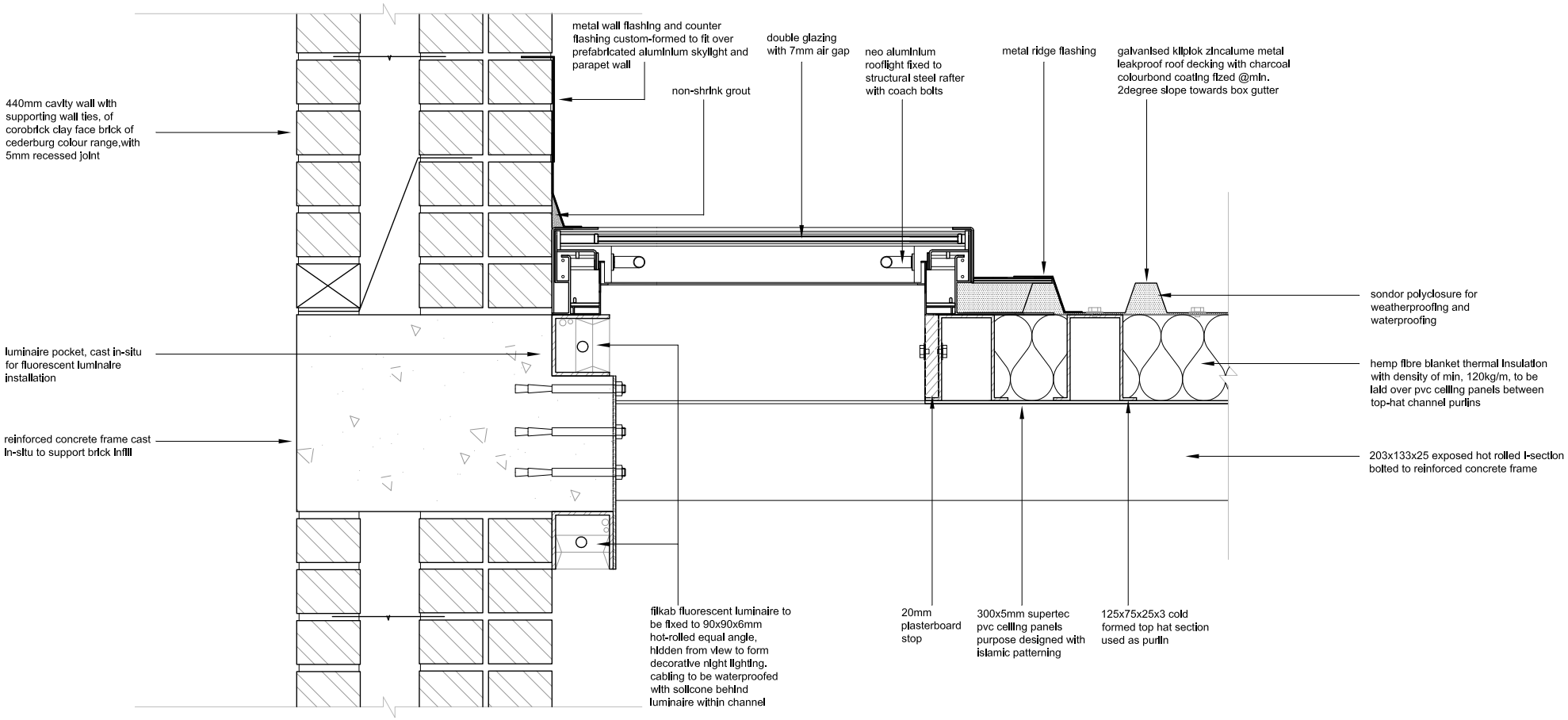

PARAPET SKYLIGHT DETAIL
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10.5.2 SECTIONS

Detailed sections illustrate the internal and external spatial relationships, incorporating the structural and sustainable systemic workings of the building that have been tested and iterated.

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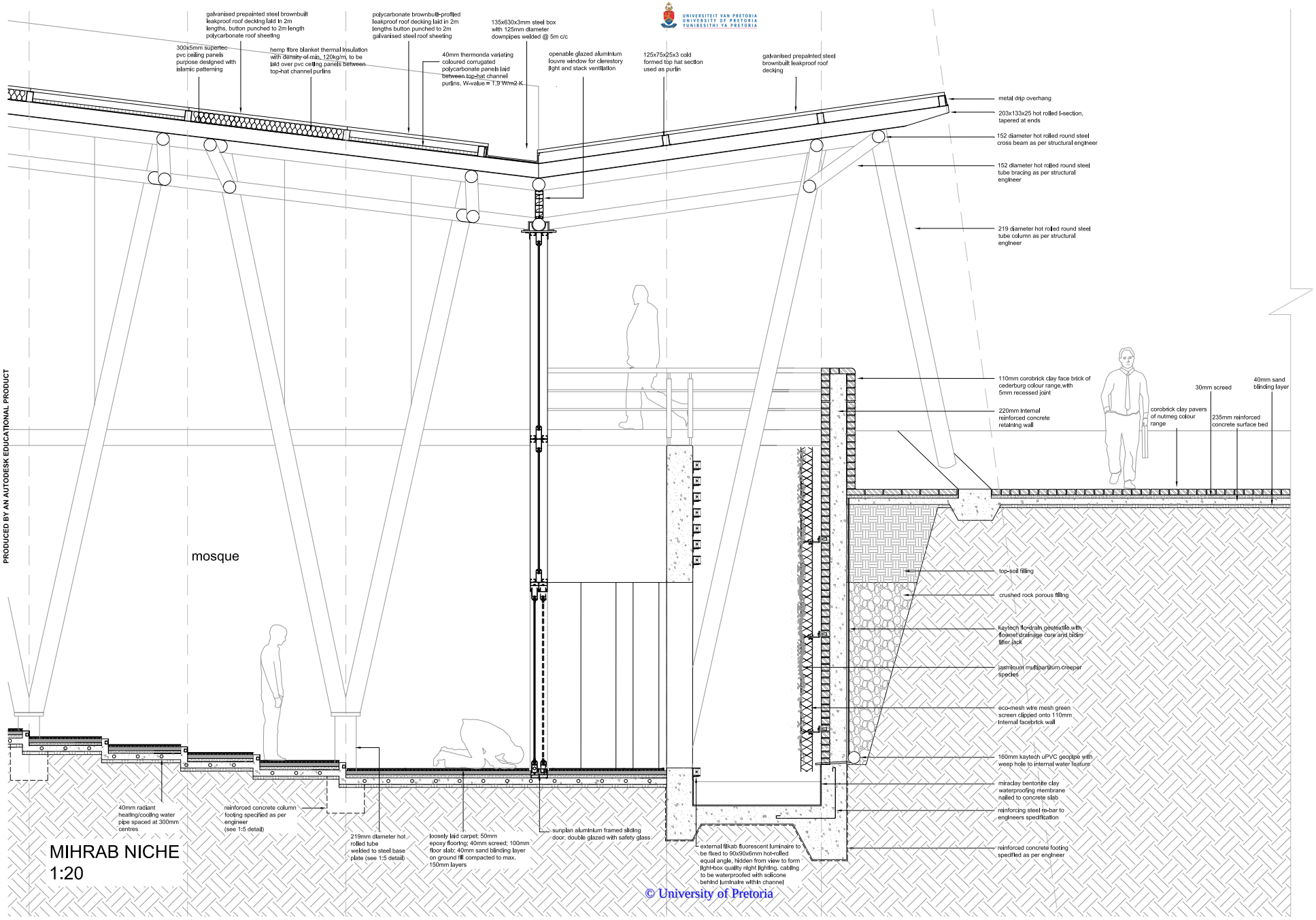

MIHRAB NICHE
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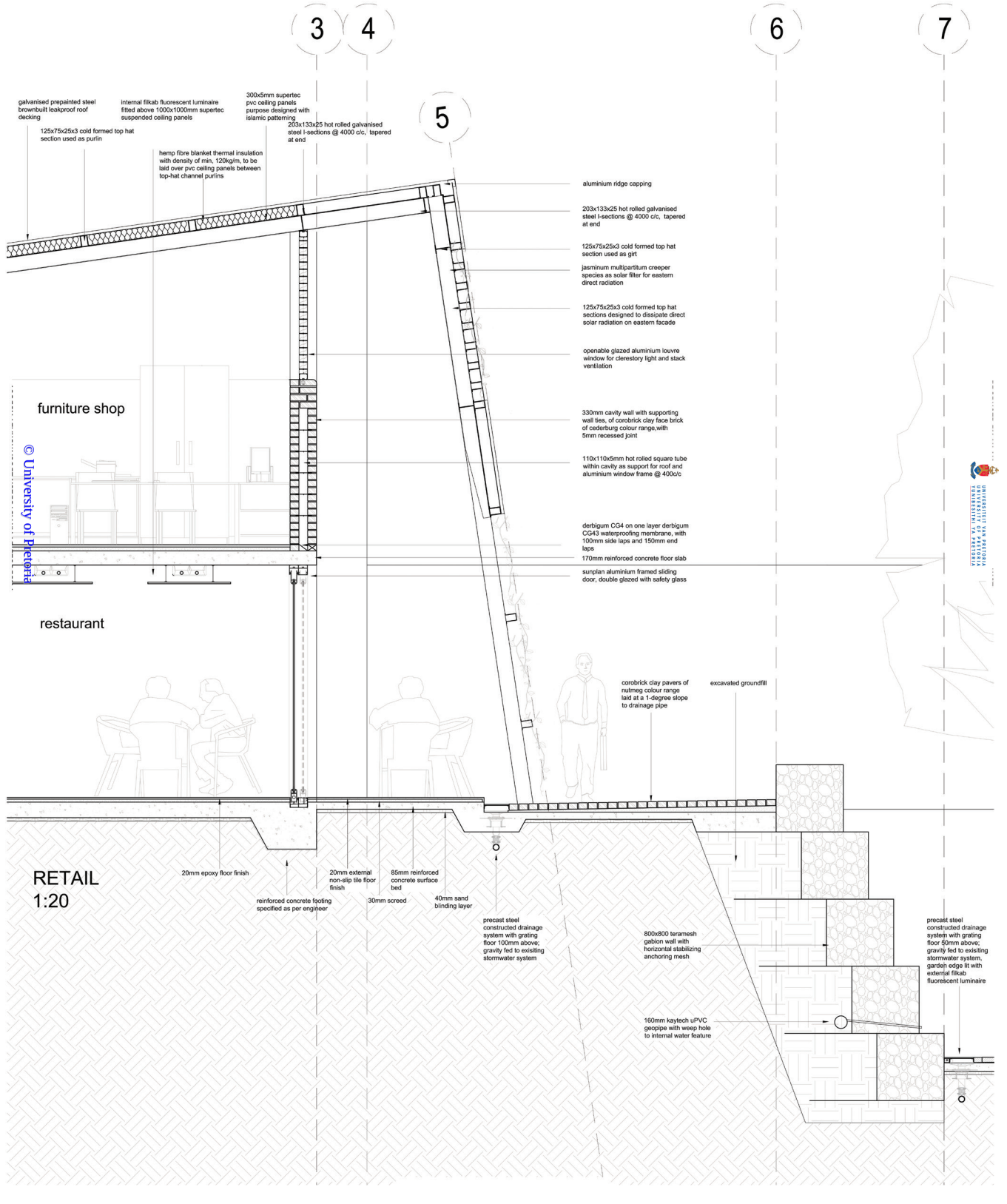

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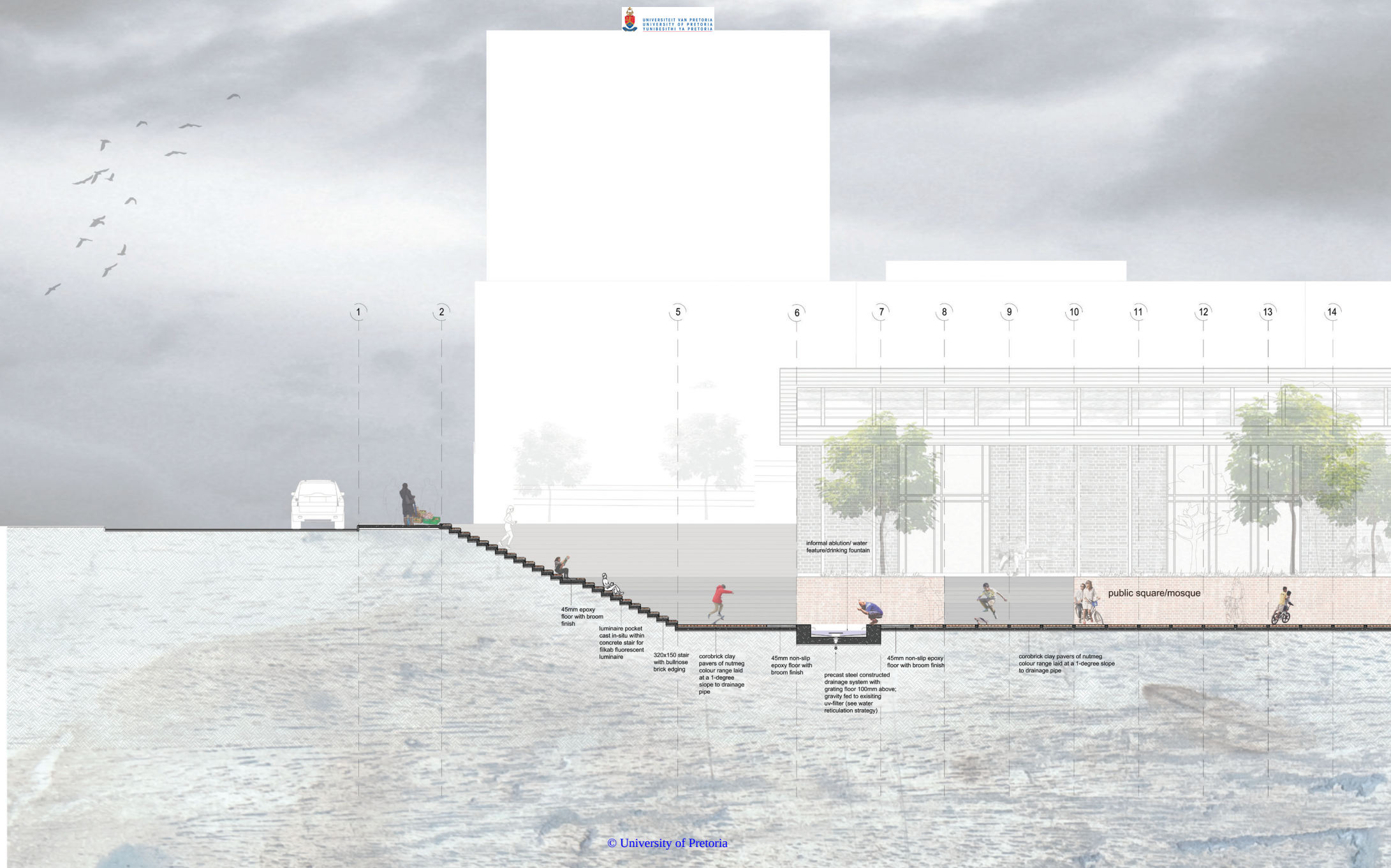

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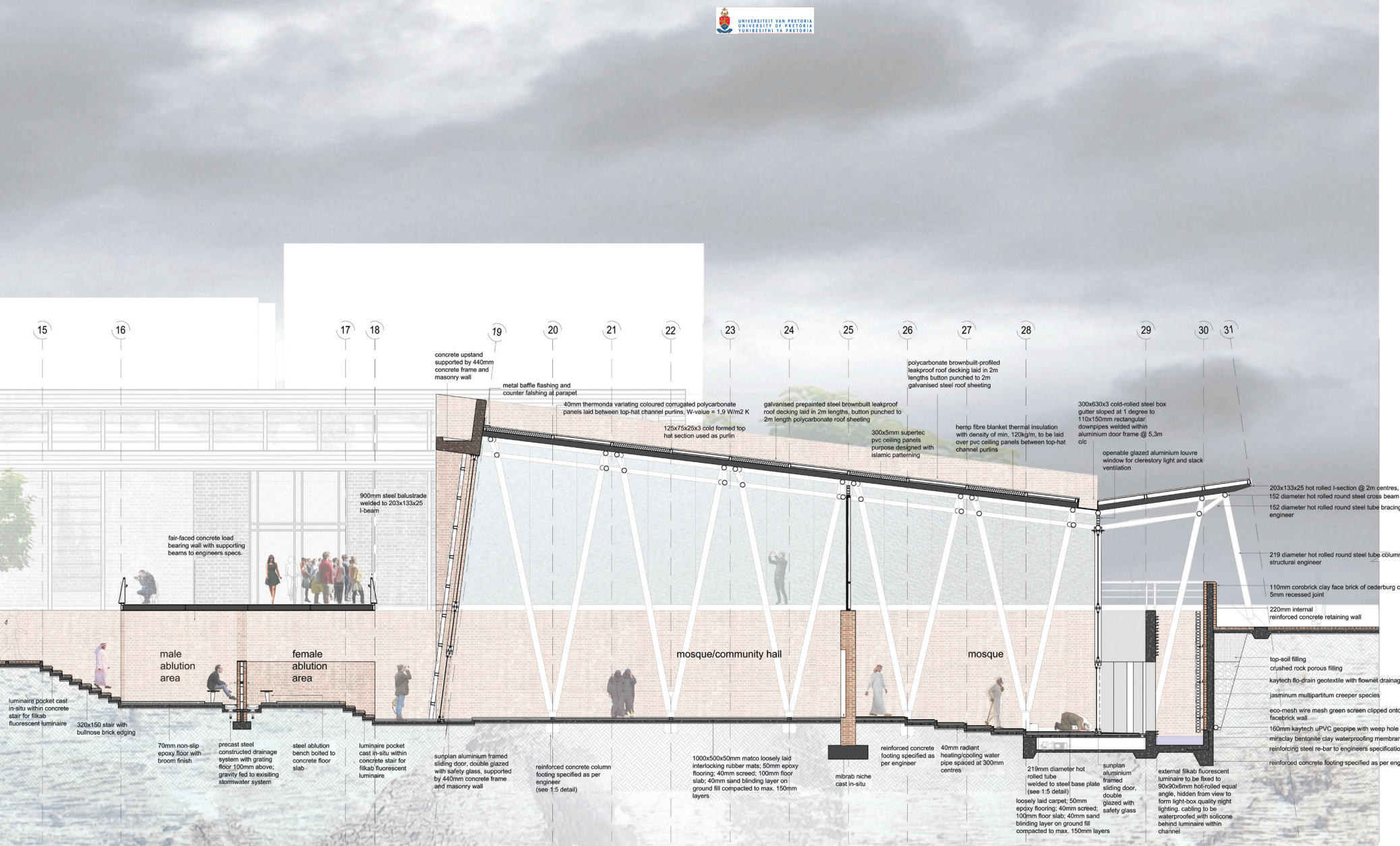

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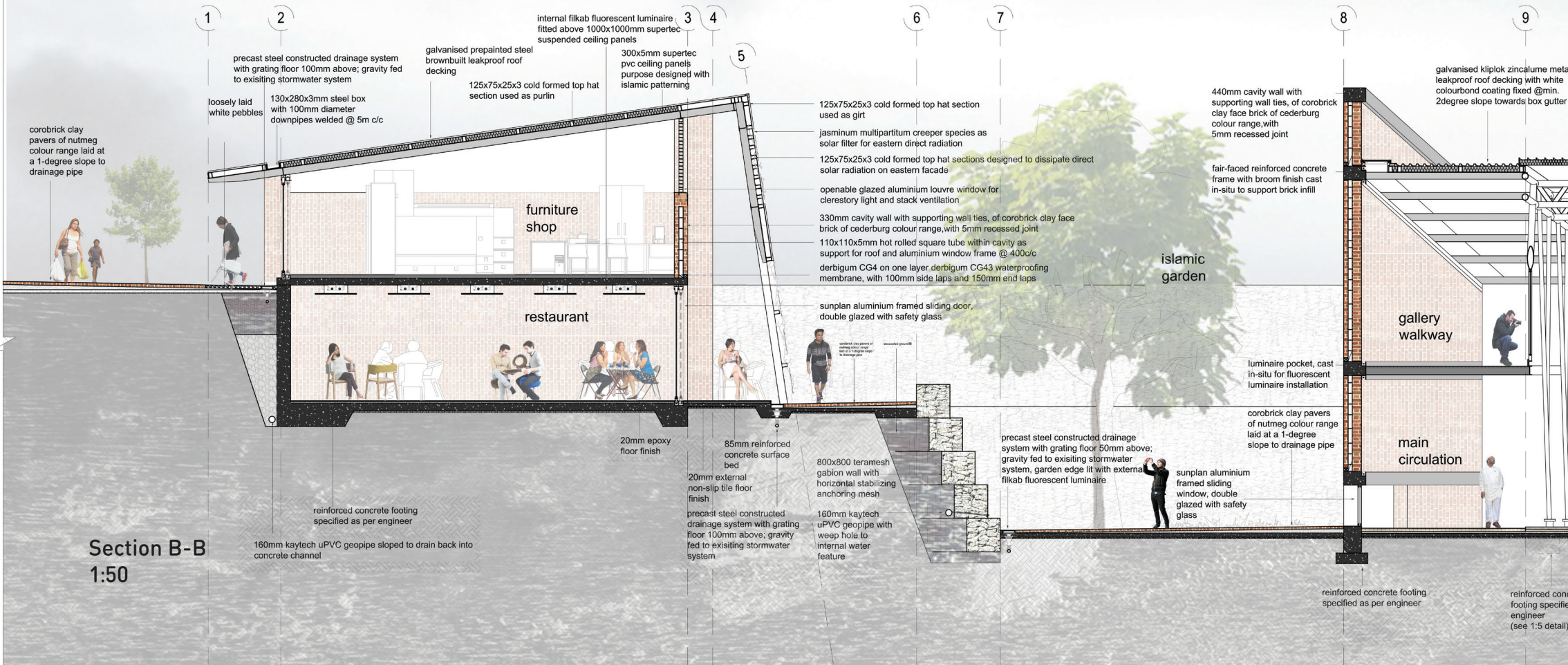

Section B-B
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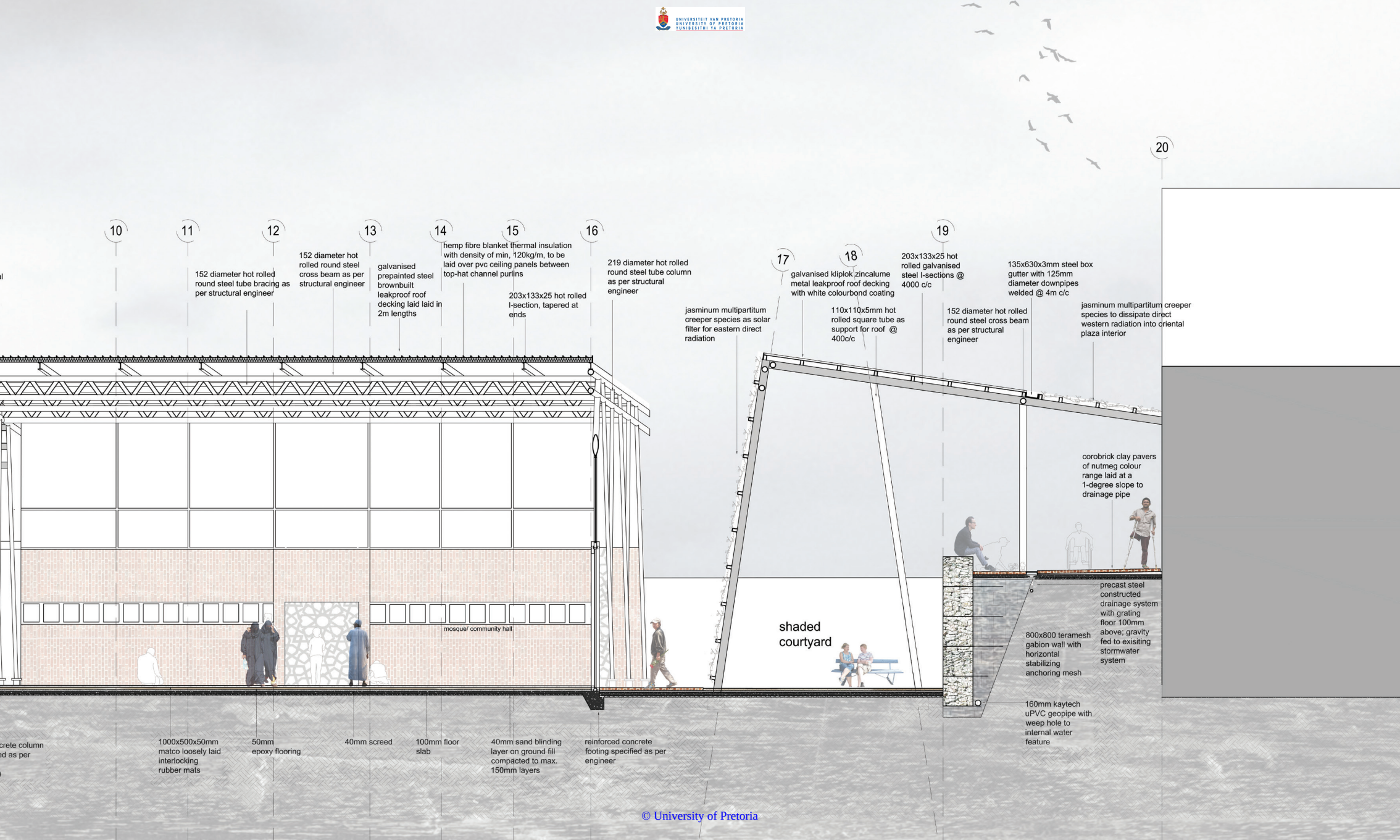

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10.5.3 FLOOR PLANS

Plans express the conceptual, experiential and systemic workings on the intervention placed within its context.

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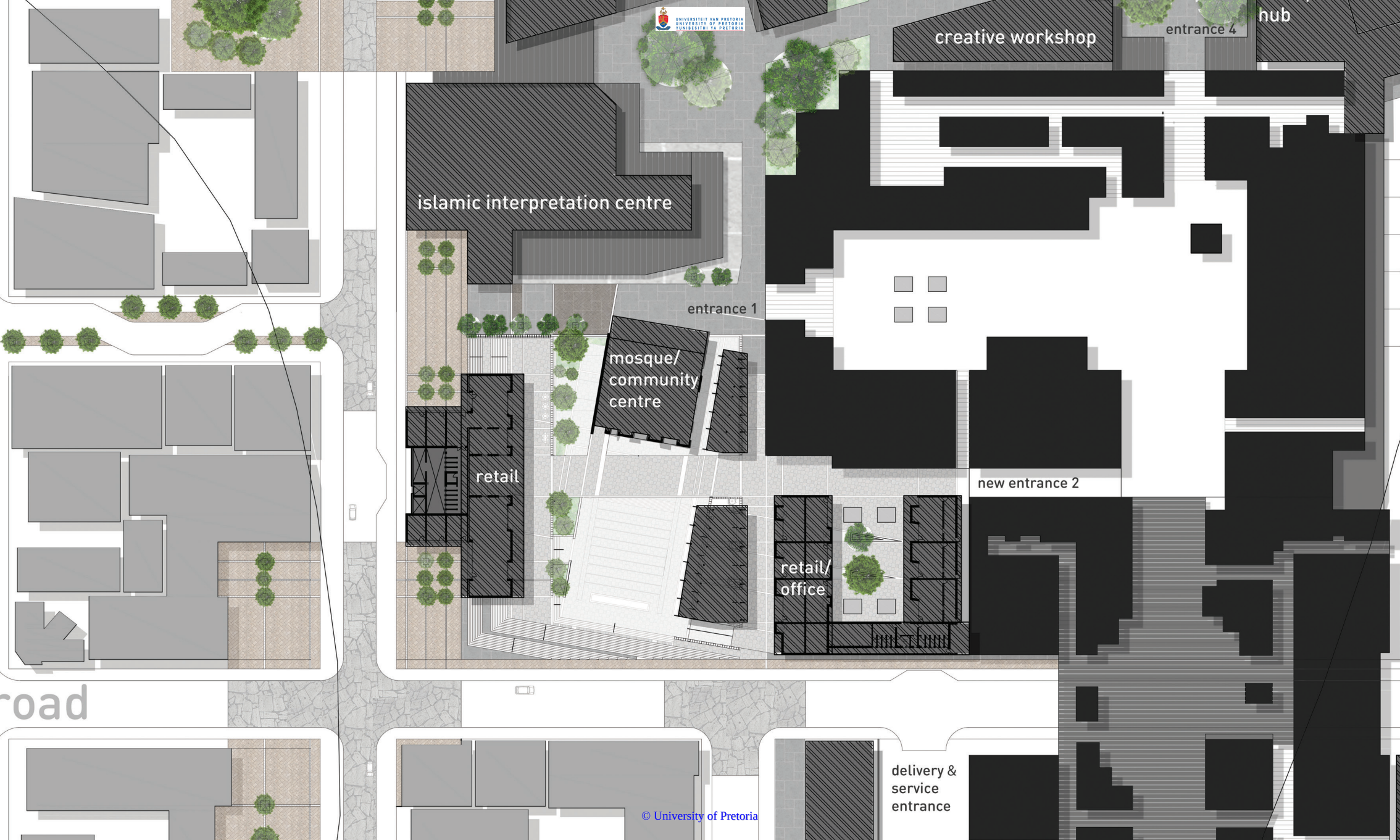

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FIRST FLOOR

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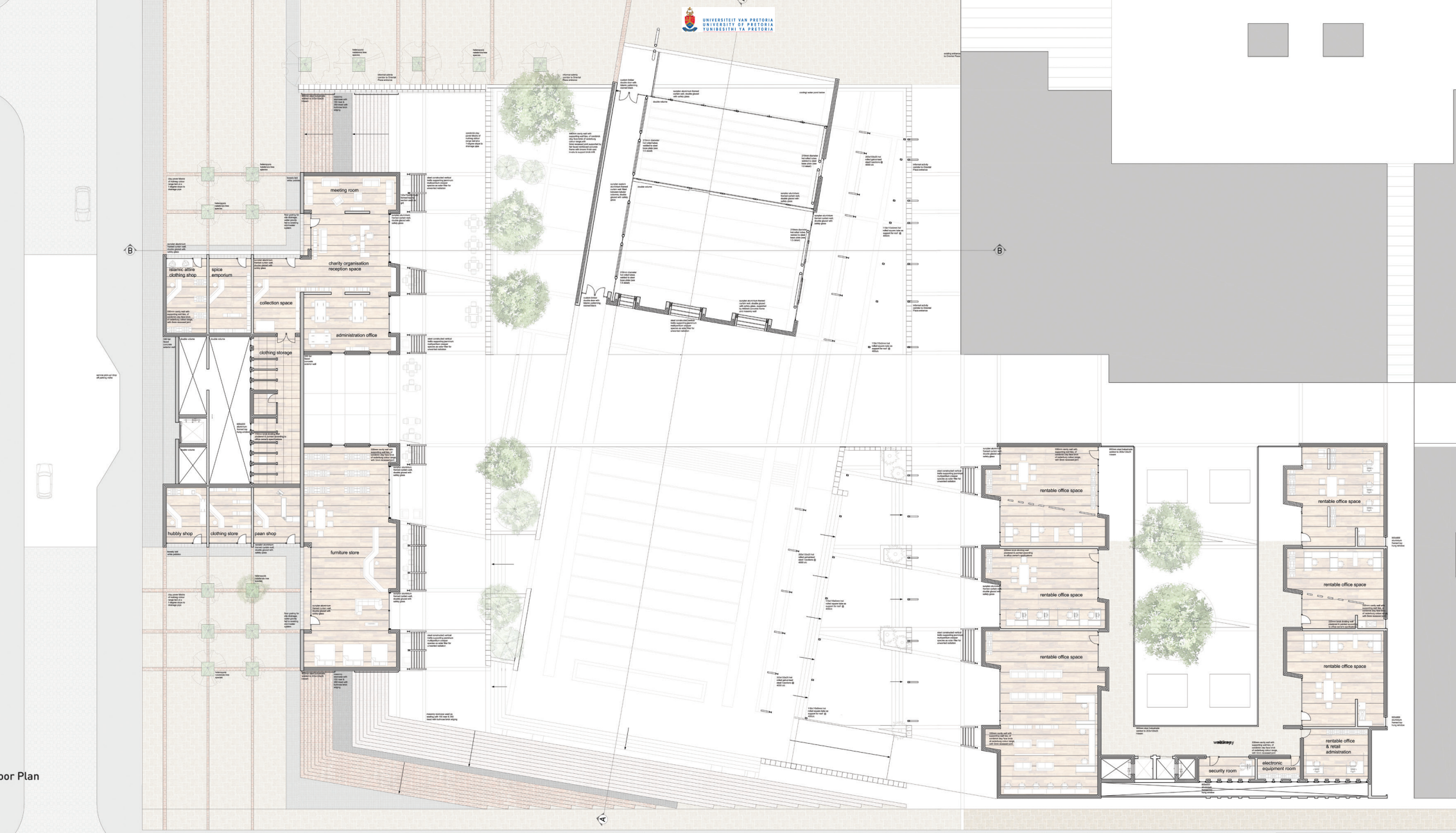

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GROUND FLOOR

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Ground Floor Plan
1:100

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BASEMENT/ MOSQUE

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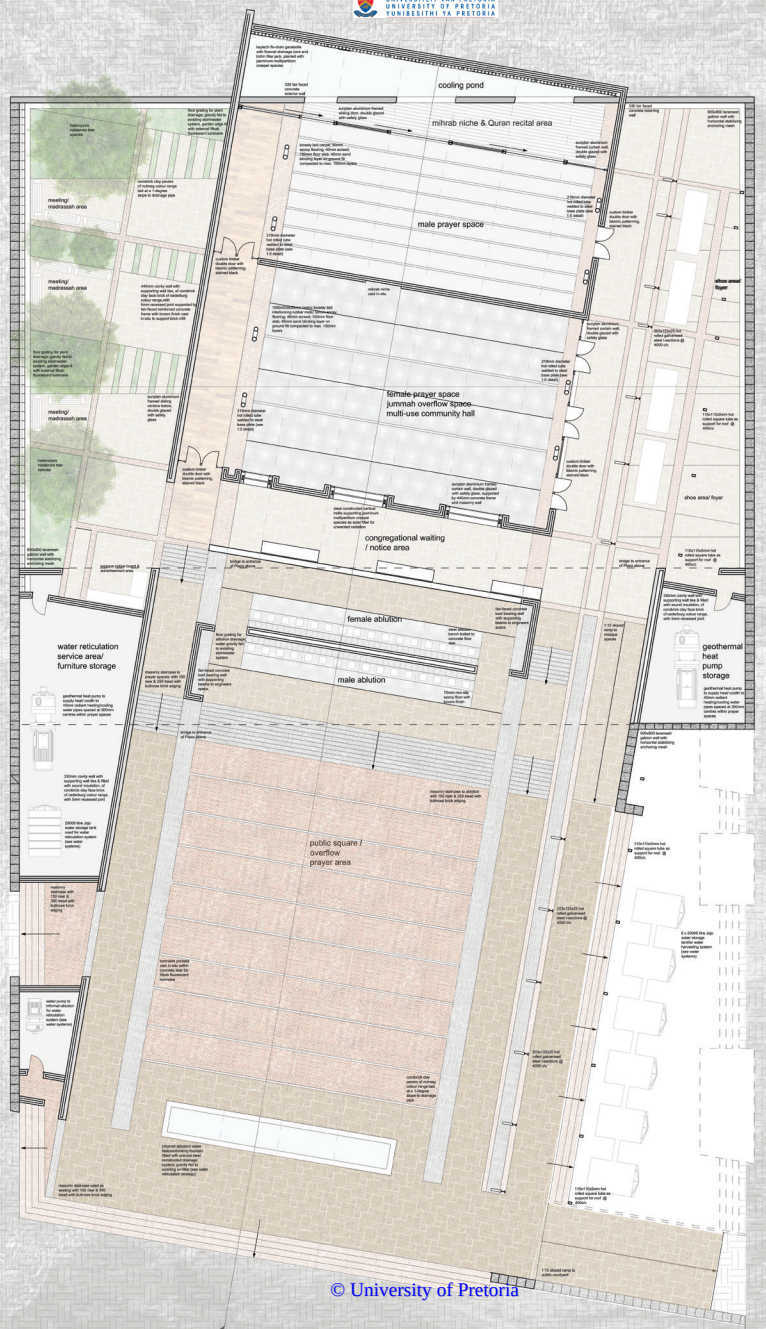

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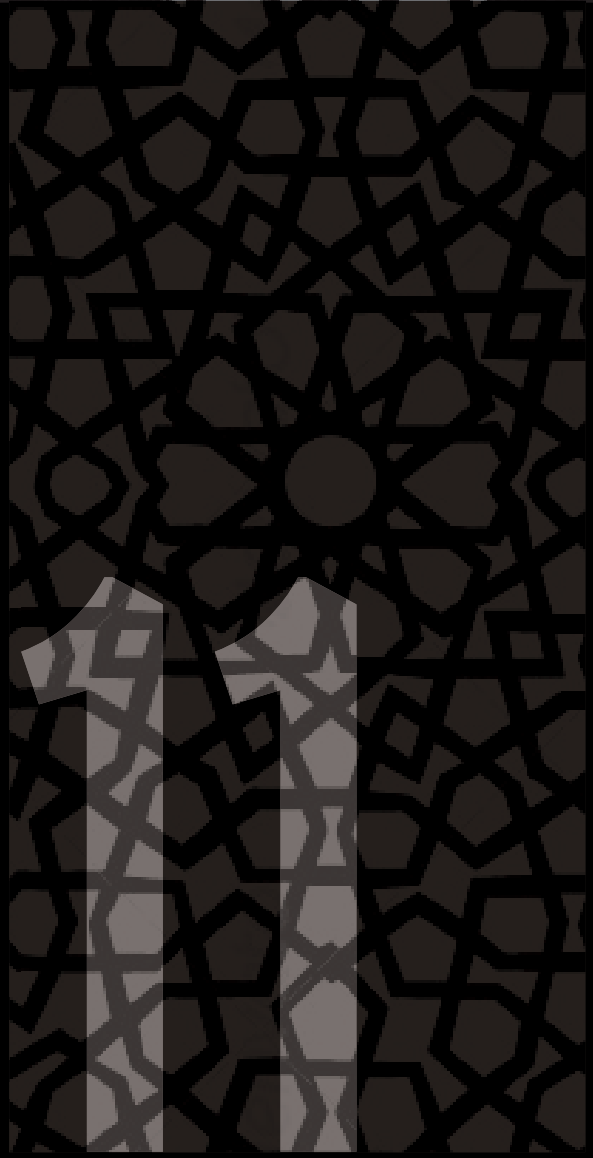

CONCLUSION

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110.1 REFLECTION

The primary objective of this dissertation was to create a place –opposed to that of iconic space- that stimulates the experiential qualities Islamic architecture may possess. In this process -within the context of Fordsburg- meaningful relationships amongst dissimilar cultural groups, different genders, and people of other religious affiliation has been fostered by the conceptualisation of a centralised public architecture, exhibiting Islam to all those who wish to view it. The consequential merge of religious and secular life was aimed to create unification amongst these two conditions, creating a hybridised physical and emotional situation amongst and within the life of the muslim citizen.

The re-definition of architectural symbol –imitatively used as superfluous decoration- was explored in order to create a new architectural parlant that narrates a redefined spiritual space. Its tectonic language, transparency, externalised and public nature has been in reaction to a contextual requisite that finds permanence within its specific context. In this way, the architecture of the intervention does not necessarily confer sanctity upon its users; instead sanctity is conferred upon the architecture in its operation by its worshippers.

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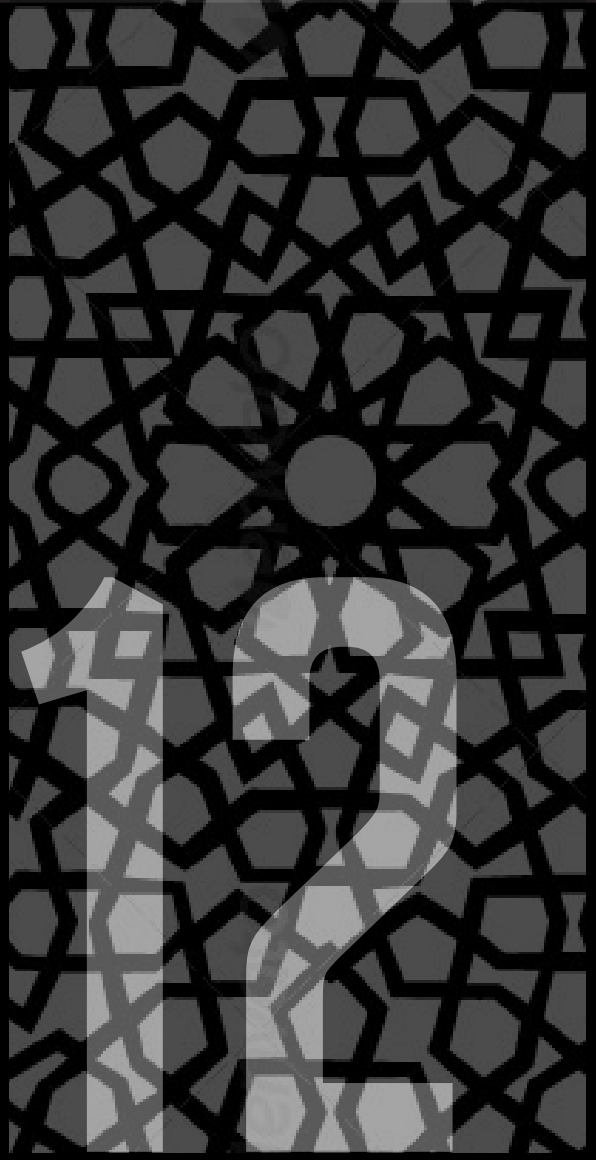

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