

08_DESIGN RESOLUTION:



URBAN RESPONSE

PROBLEMS + OPPORTUNITIES



1. Lack of formal infrastructure in area
2. Multiple existing urban form and structure
3. Unplanned urban growth
4. Unplanned urban growth
5. Lack of clear urban boundaries
6. Lack of clear urban boundaries
7. Lack of clear urban boundaries
8. Lack of clear urban boundaries
9. Lack of clear urban boundaries
10. Lack of clear urban boundaries

PROPOSAL + INTERVENTIONS



1. New Urban form
2. New Urban form
3. New Urban form
4. New Urban form
5. New Urban form
6. New Urban form
7. New Urban form
8. New Urban form
9. New Urban form
10. New Urban form

THEORY: LAYERING AS

PROBLEMS + OPPORTUNITIES

PALIMPSEST
 1. Planning - bringing plan and raising a written parchment, of which traces remain. Palimpsests are several layers of overlapping text.
 2. Reverse Image - Overlaying of their meaning the sequence of events in a scene.
 3. Psychology - Overlaying of memories in the subconscious.
 Architecture - Palimpsest is the layering of building and time and how through their juxtaposition the various forms can be revealed and exposed.

ARCHAEOLOGY by Foucault
 - Process of dissemination/ decomposition of experiential systems.
 - Plan a visual system for system of layering/ layered layers.
 - Cannot just study the object, but also the layers of knowledge of the object.
 - The layers after themselves in a discontinuity over time, whose reading is contingent on the object's history to reality in our present.
 - Analysis and comprehension of the process of progression/ alteration/ reorientation of the layering.

CARL SCARPA
 - Process: Superimposition, Spaces and Formations (containing the elements)
 - Volume consists of planes. Scarpa decomposes the volume into planes and the planes into layers.
 - The form of a structural element is also the architectural element (as suggested in floor, wall and ceiling).
 - Points of transition and interface are very important.
 - Scarpa creates a visible cross section.



ADAPTIVE RE-USE



OPEN UP: EXTENDING THE PUBLIC REALM

- The topography of opening up can that be achieved through:
 - exposing the original form/structure/condition
 - juxtaposing the old and new to make the different layers clearly visible
 - explicitly open the building into new or improved structure
 - visually connect the system to the viewer
 - enhance usability through circulation
 - expose the functions of an architectural component into its individual elements
 - allow the city's nature also to come to allow for the natural movement of people
 - allow natural light into the building and make use of reflection
 - materials and construction connect with the context
 - a programmatic use is informative and educational to the user
 - improve user numbers by implementing water elements and recreational areas
 - improve legibility of the building, subsequent giving it a new edge.



CHARTERS USED

Urban Charter 1999
 Urban Charter 2007
 Urban Charter 2007

ARCHITECTURAL RESPONSE PARTI-DIAGRAMS + CONCEPT + DESIGN DEVELOPMENT



APPLICATION OF LAYERING

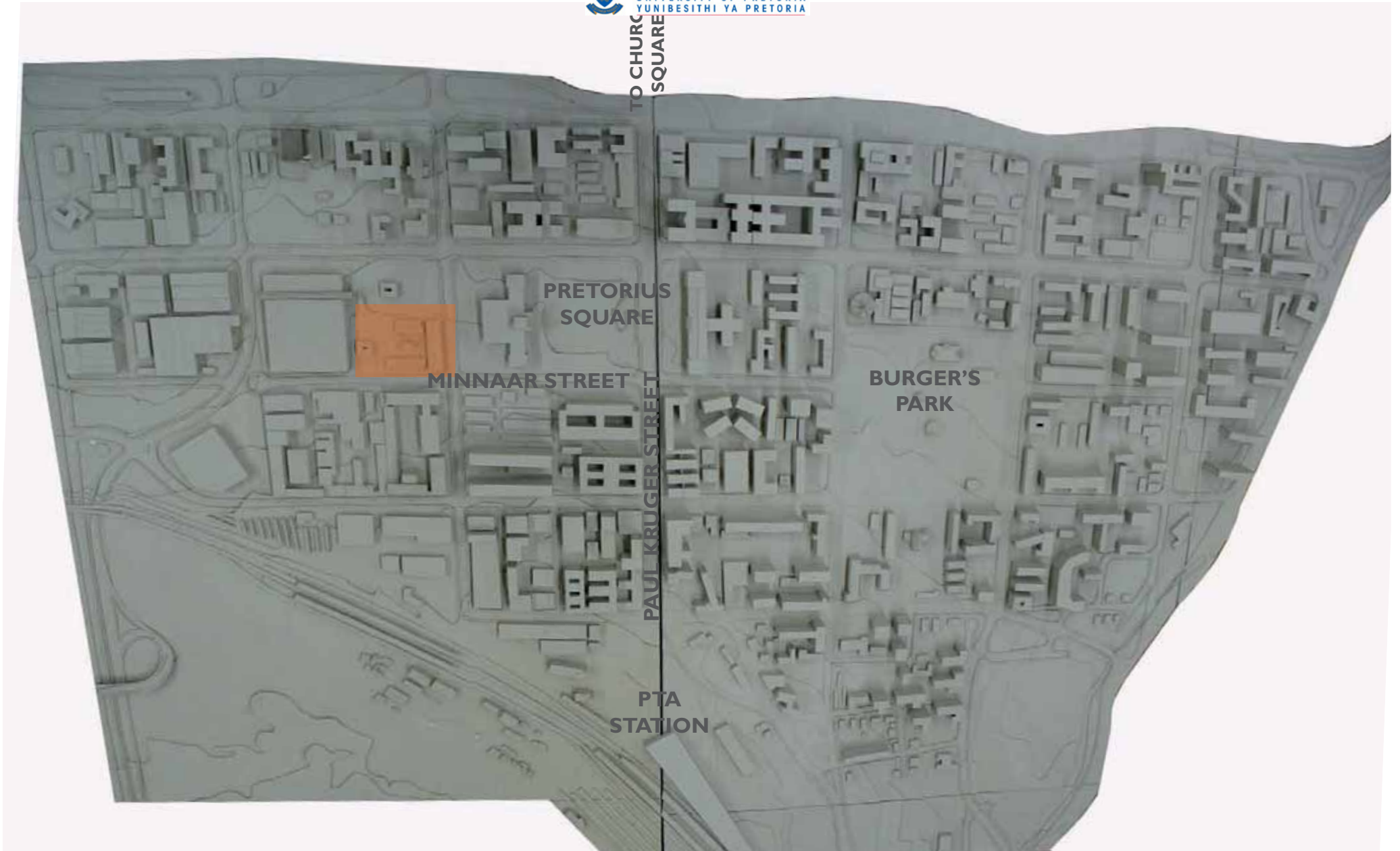


PROBLEMS + OPPORTUNITIES



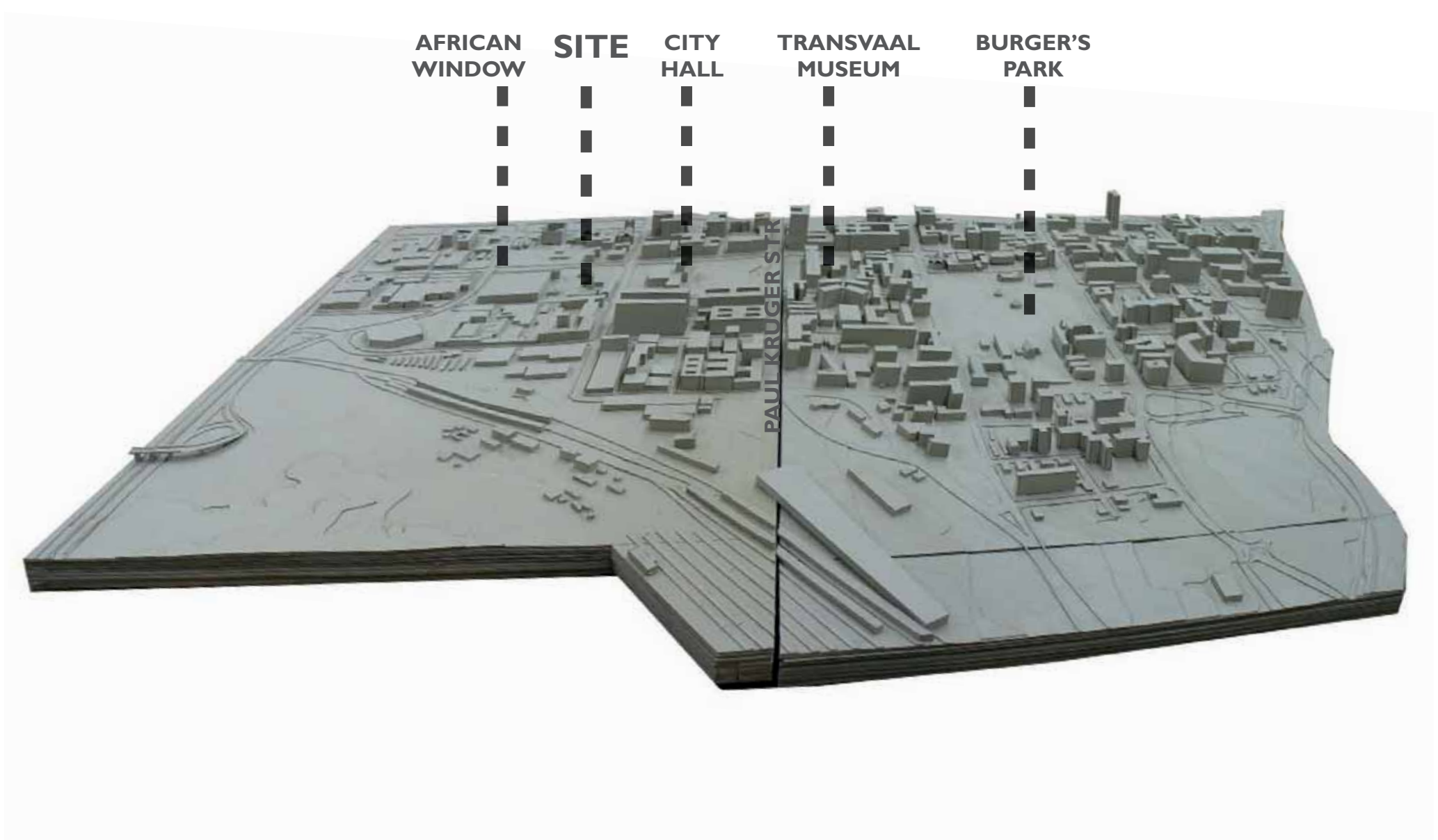
APPLICATION OF LAYERING





CONTEXT MODEL_BURGER'S PARK FRAMEWORK AREA





CONTEXT MODEL_BURGER'S PARK FRAMEWORK AREA 

BURGER'S
PARK

TRANSVAAL
MUSEUM

CITY
HALL

SITE

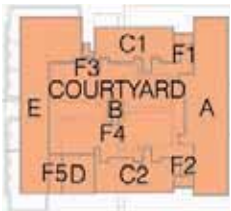
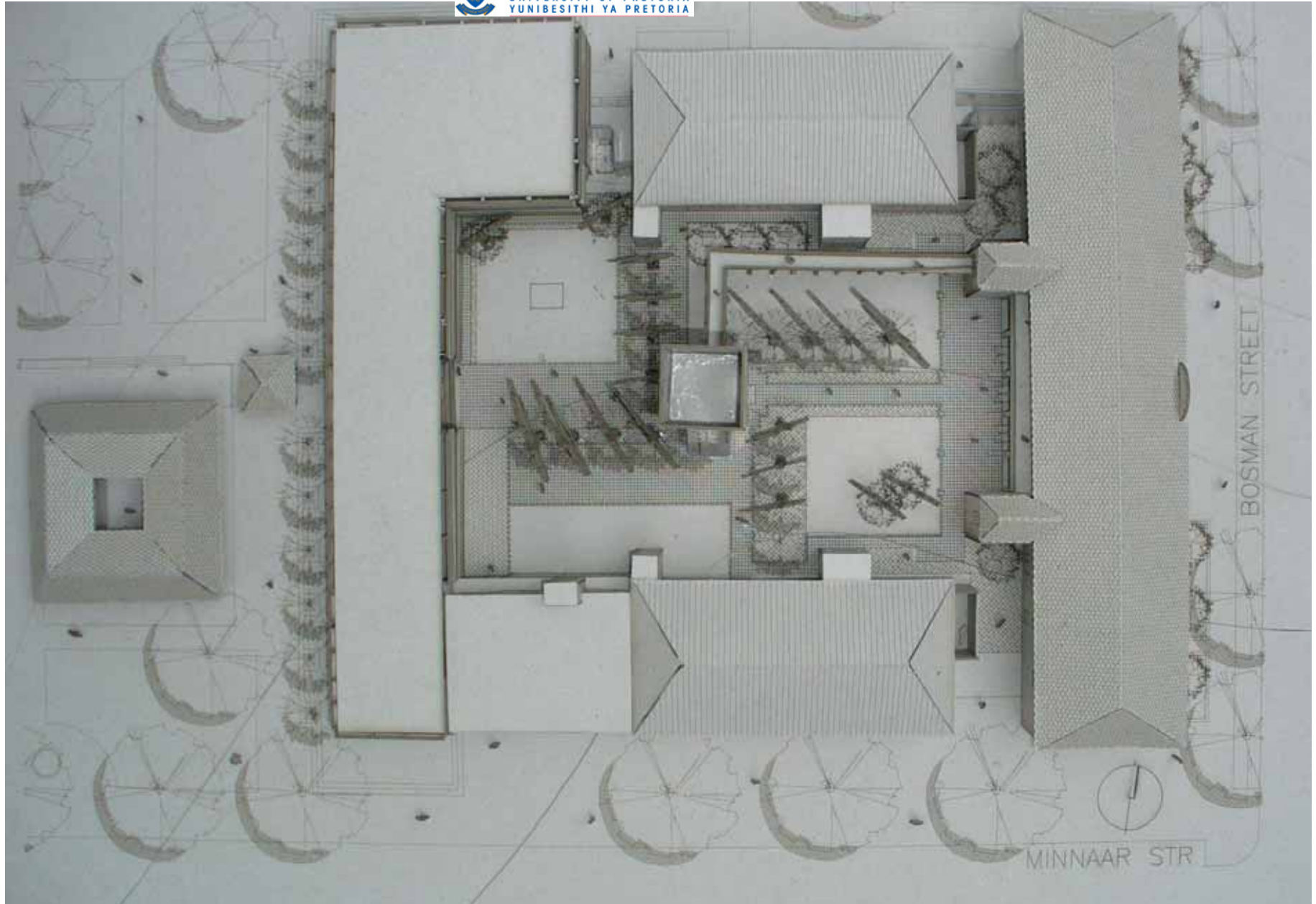
AFRICAN
WINDOW

NEW
PROPOSED
NODE

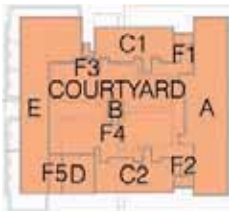
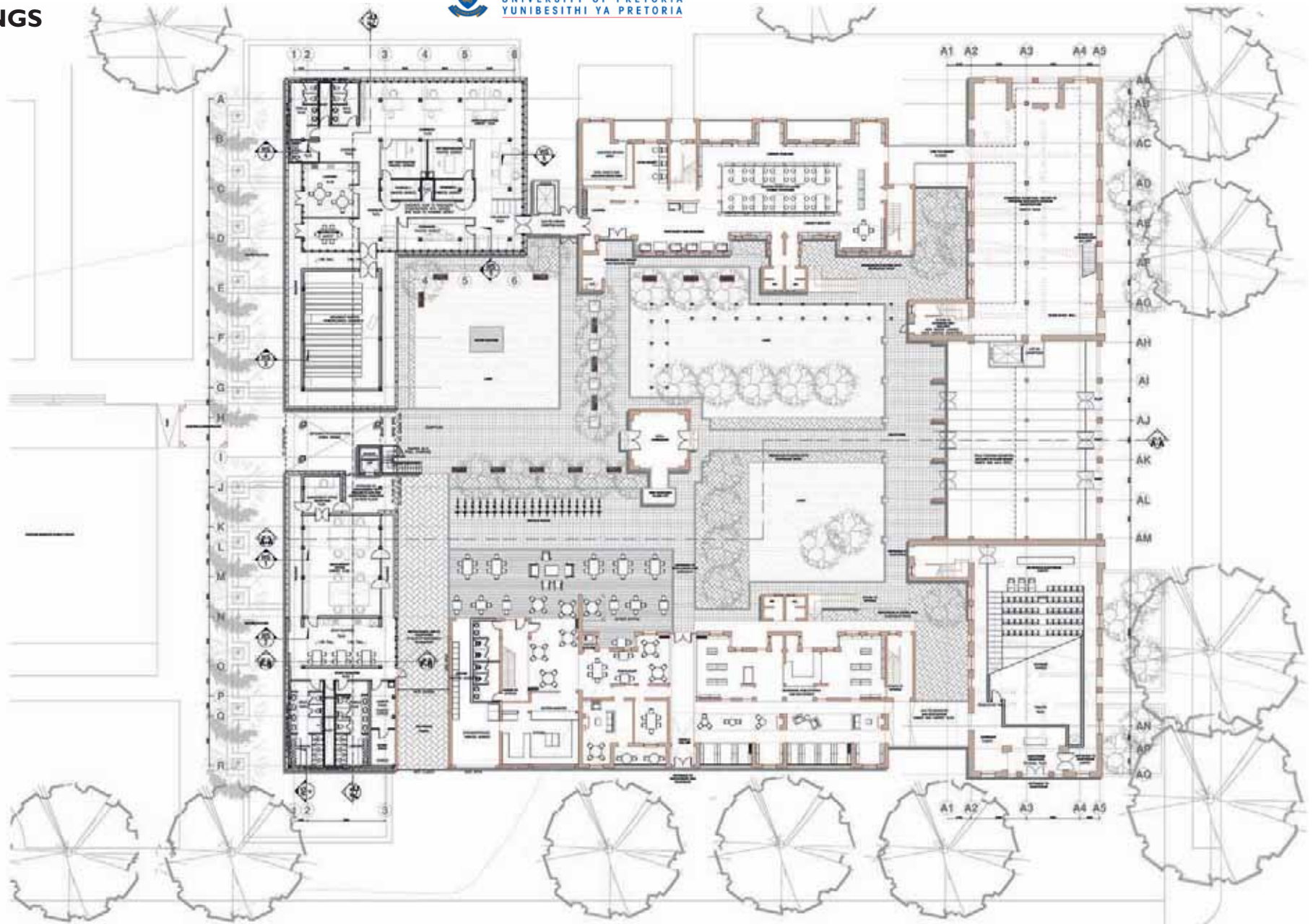


CONTEXT MODEL_MINNAAR STREET

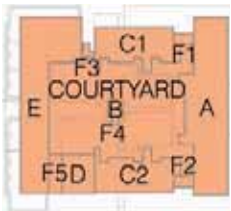
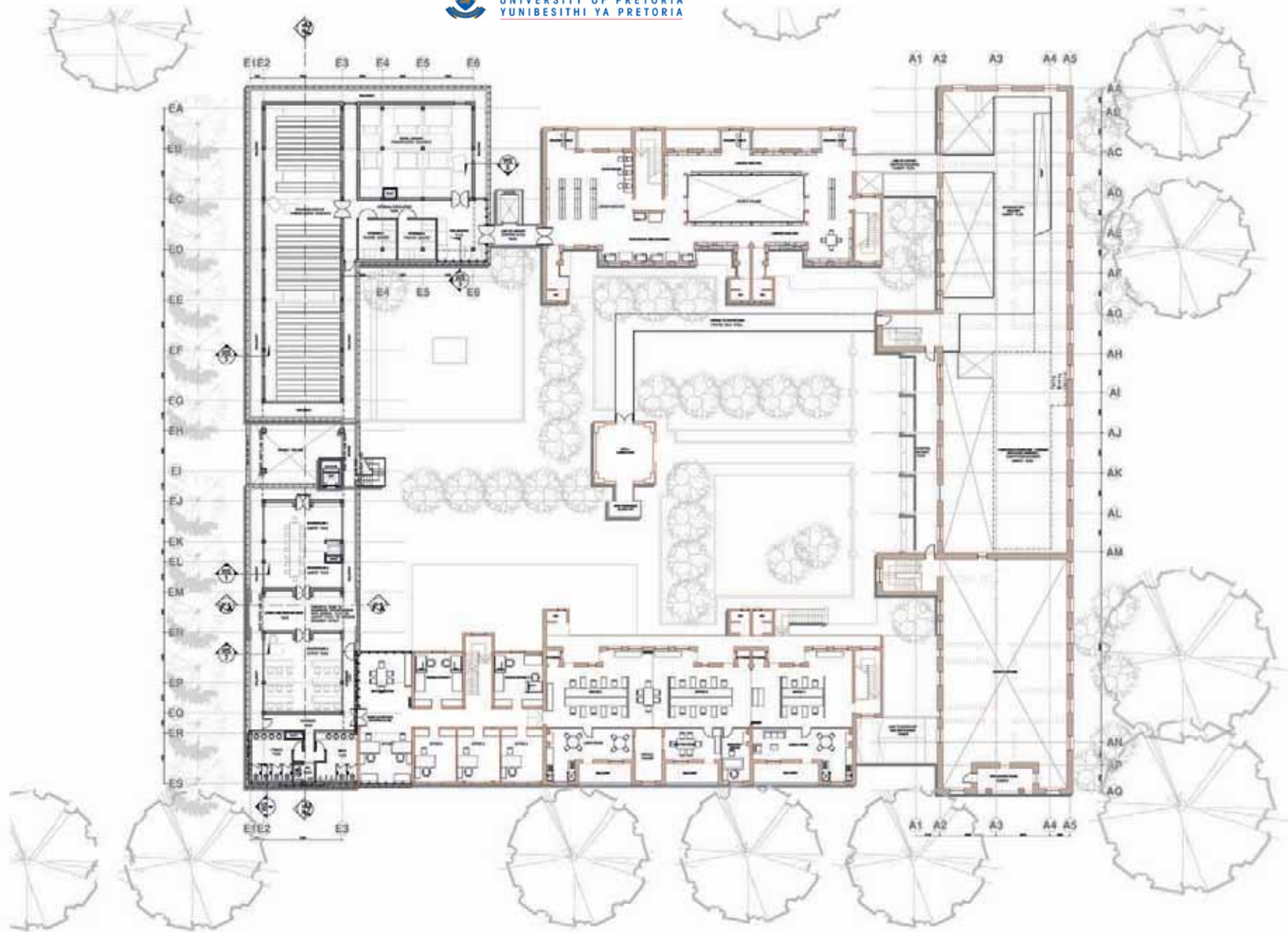




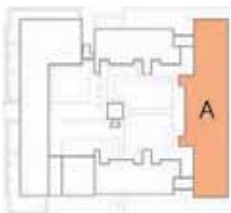
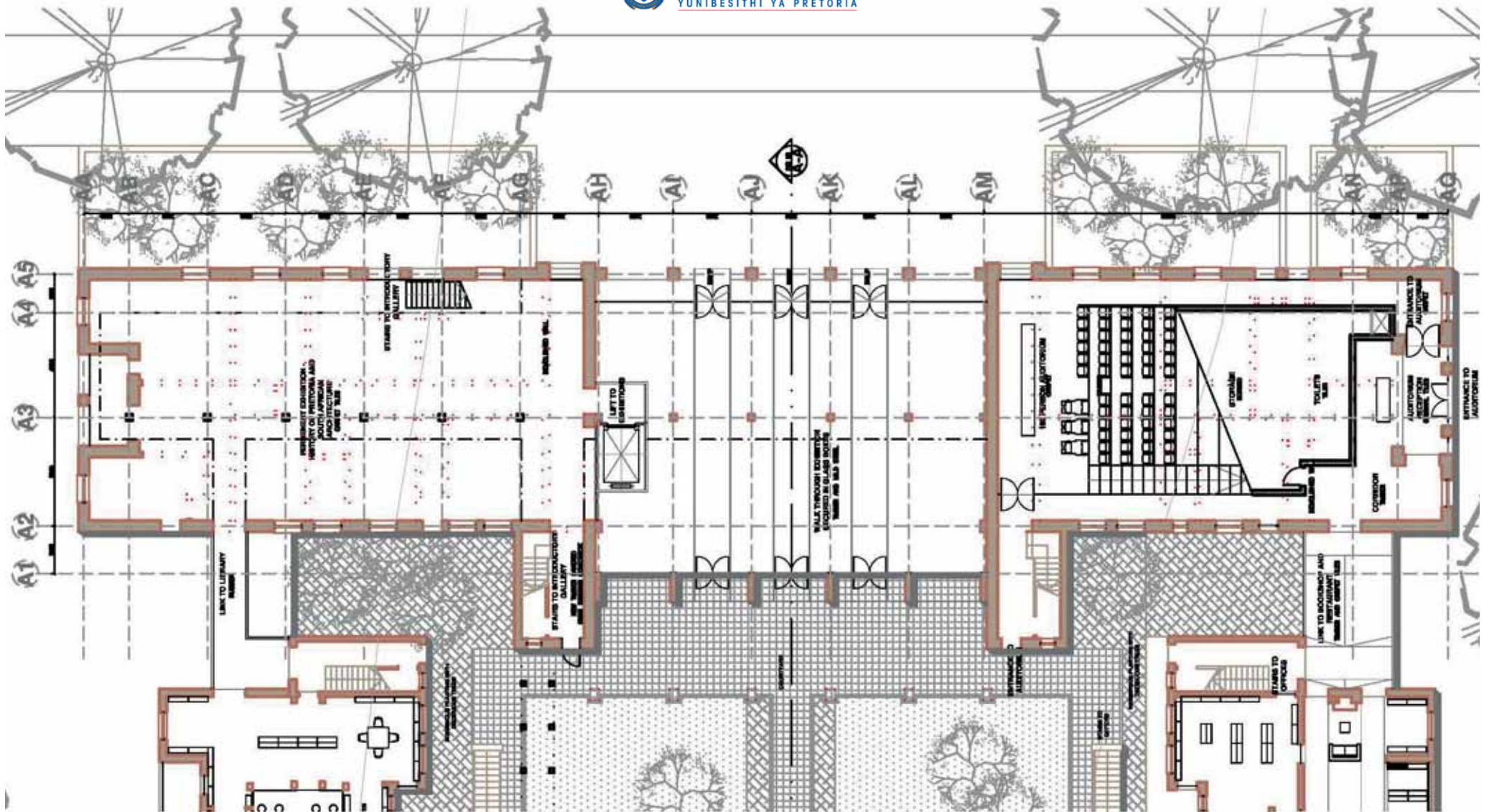
8.2 DRAWINGS



GROUND FLOOR PLAN_n.t.s. 

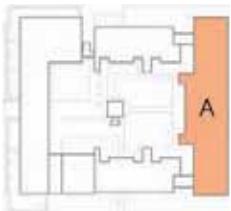
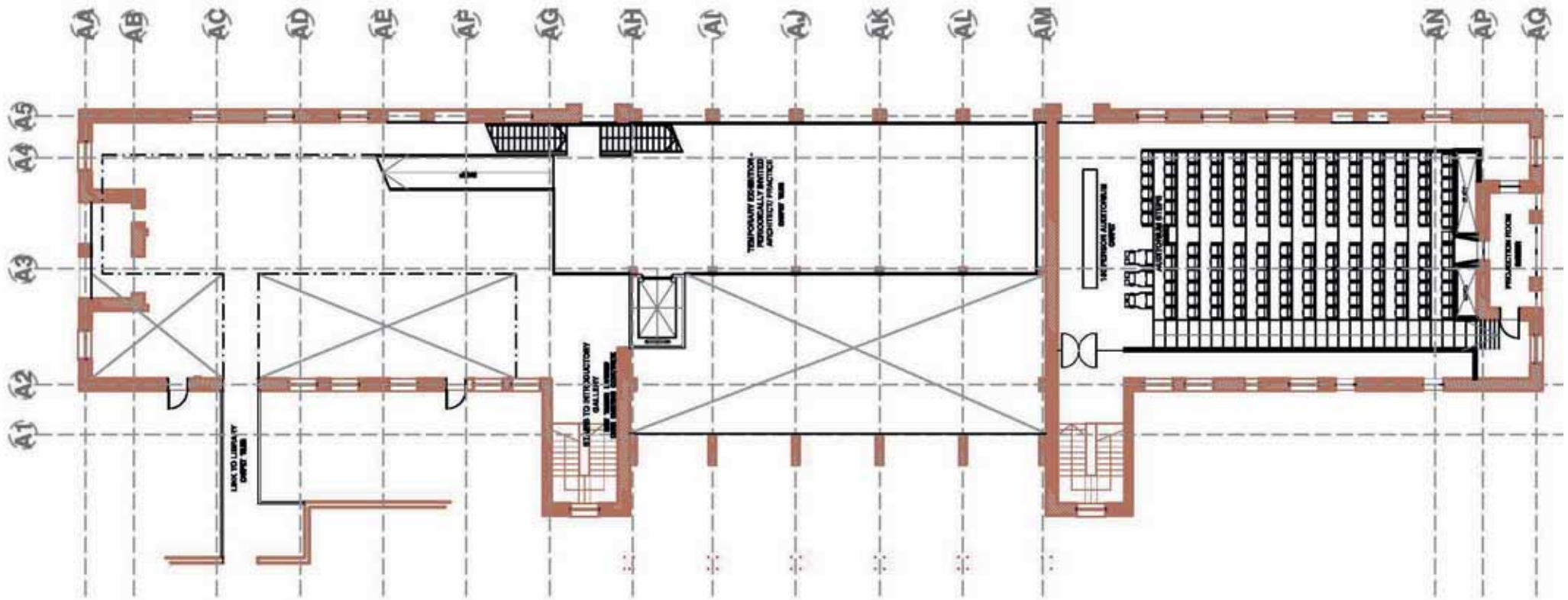


FIRST FLOOR PLAN_n.t.s. 



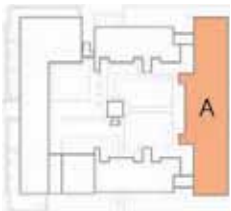
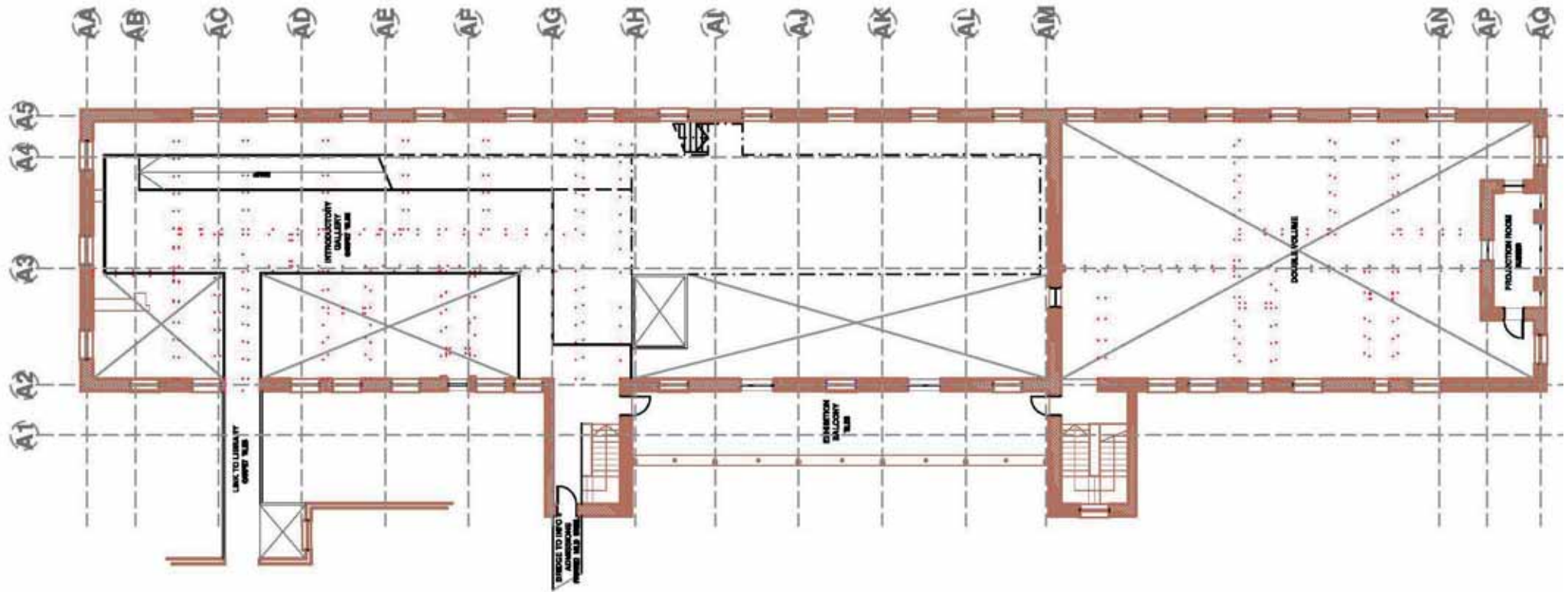
BLOCK A: GROUND FLOOR PLAN_1:250





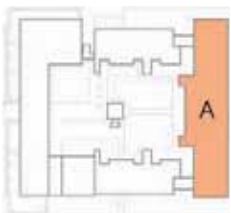
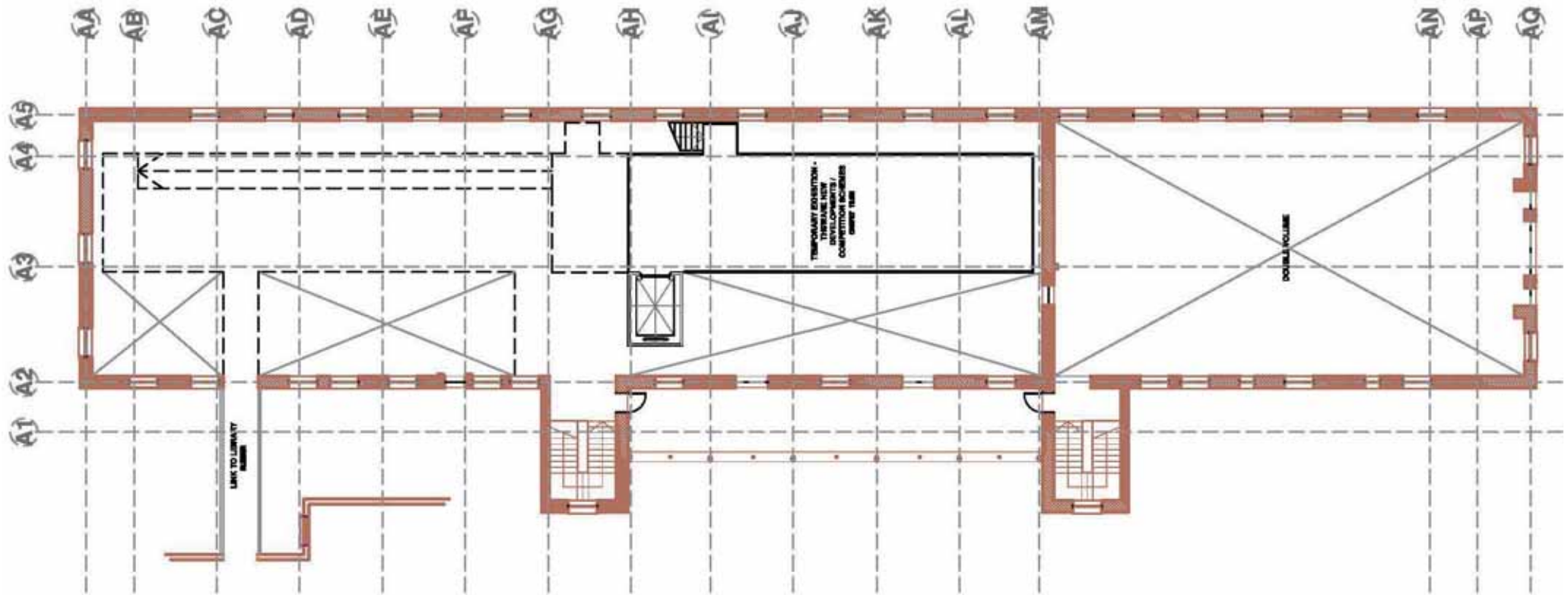
BLOCK A: MEZZANINE LEVEL I _ 1:250





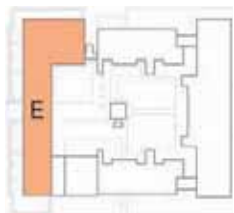
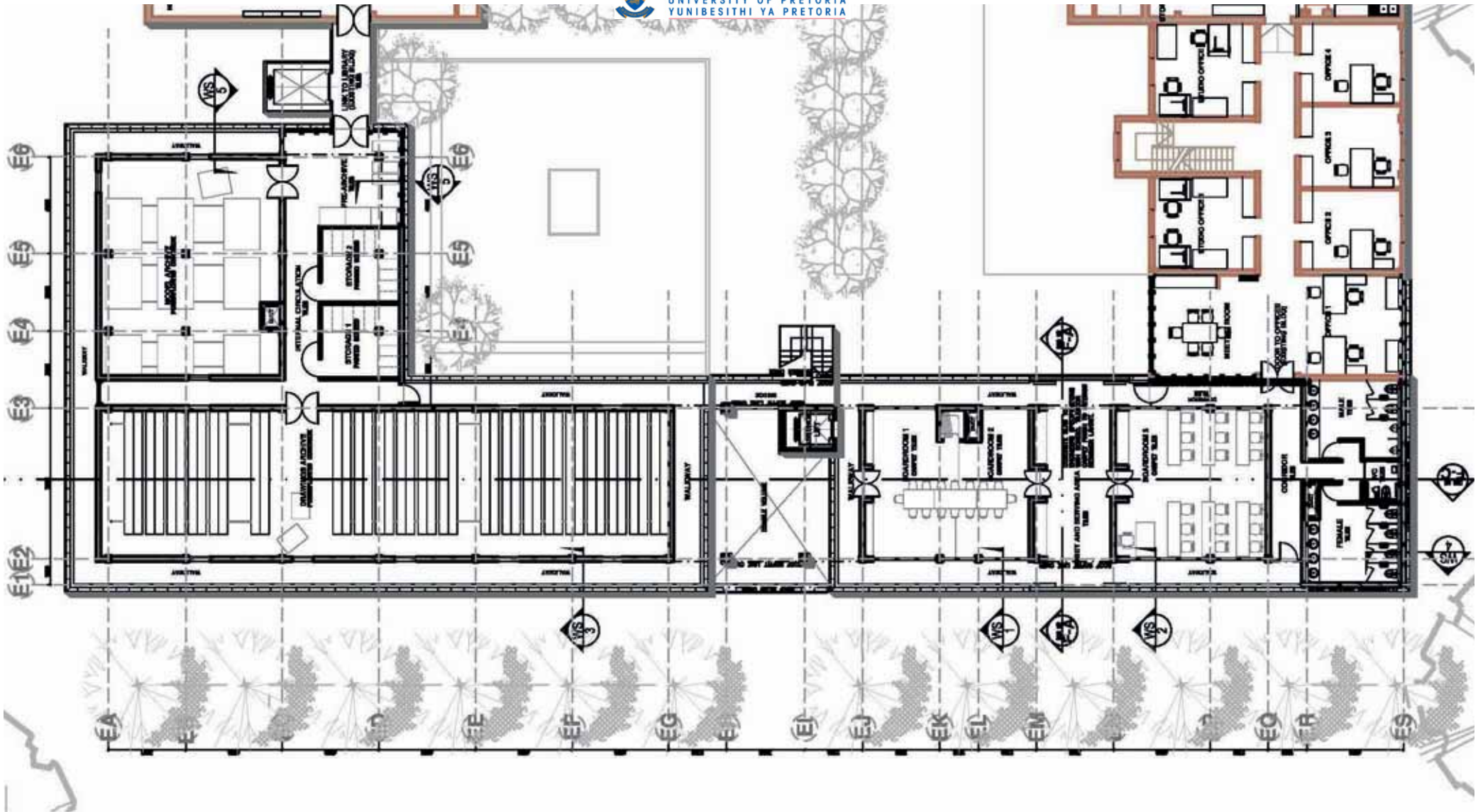
BLOCK A: MEZZANINE LEVEL 2_1:250





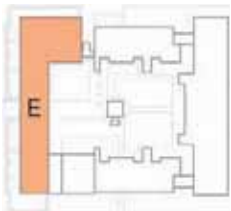
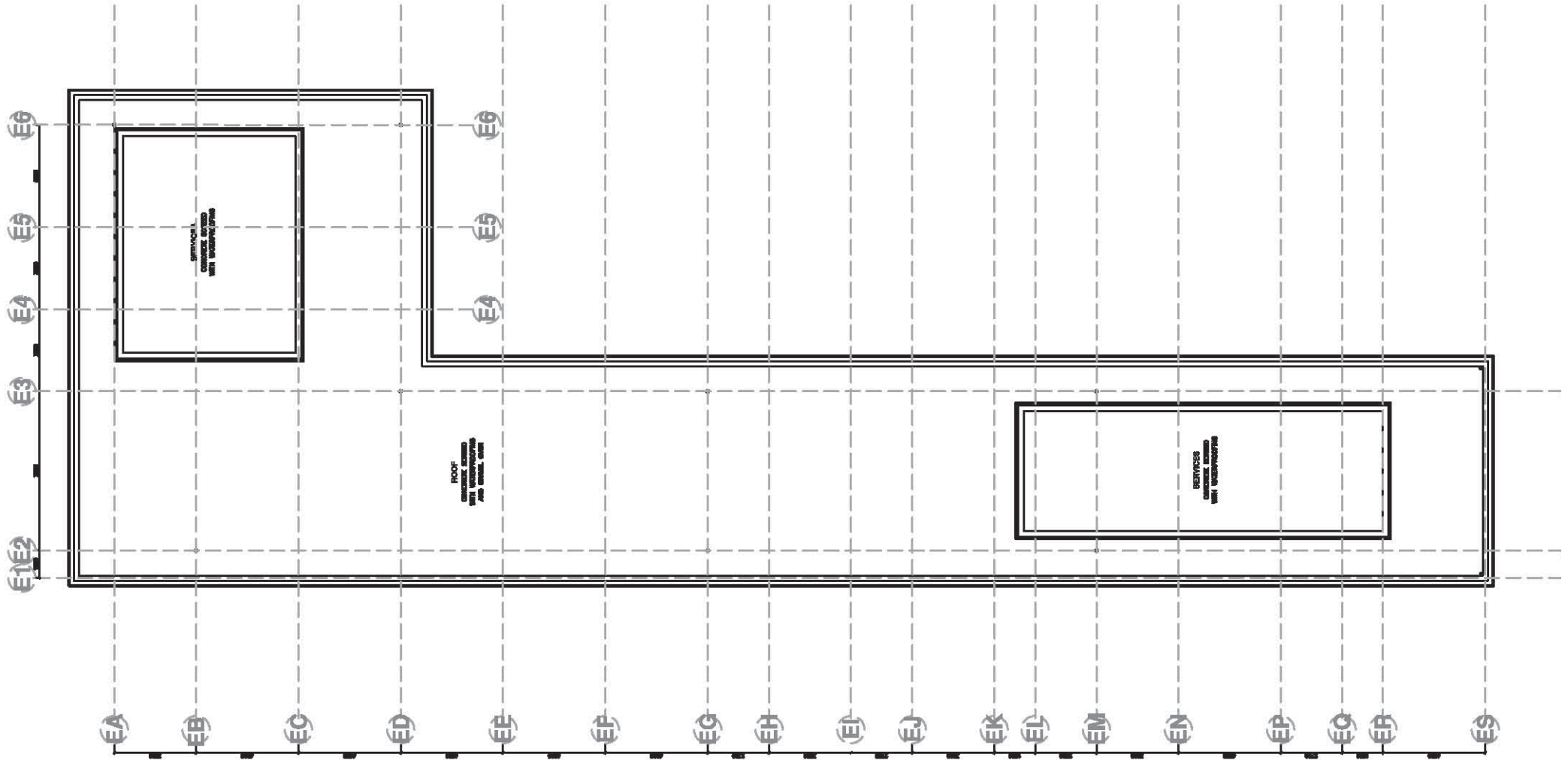
BLOCK A: MEZZANINE LEVEL 3_1:250





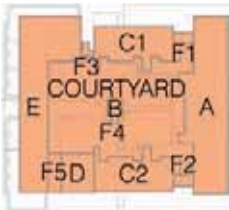
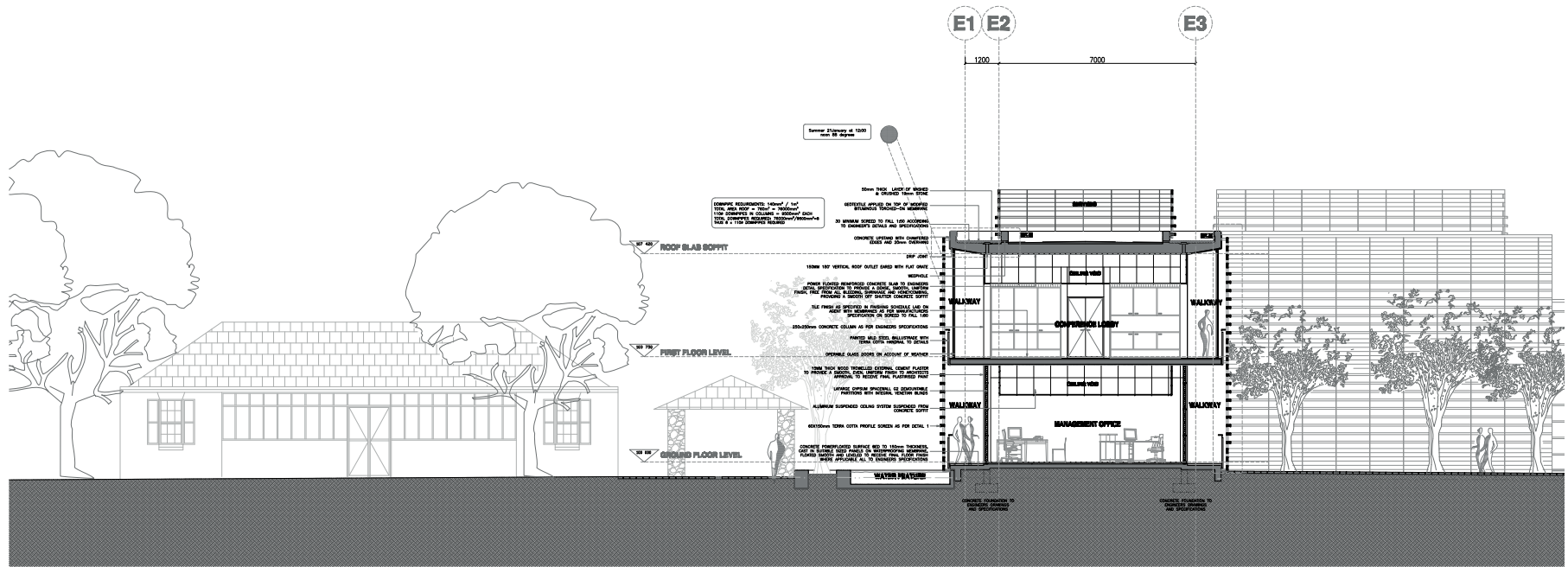
BLOCK E: FIRST FLOOR PLAN_1:250

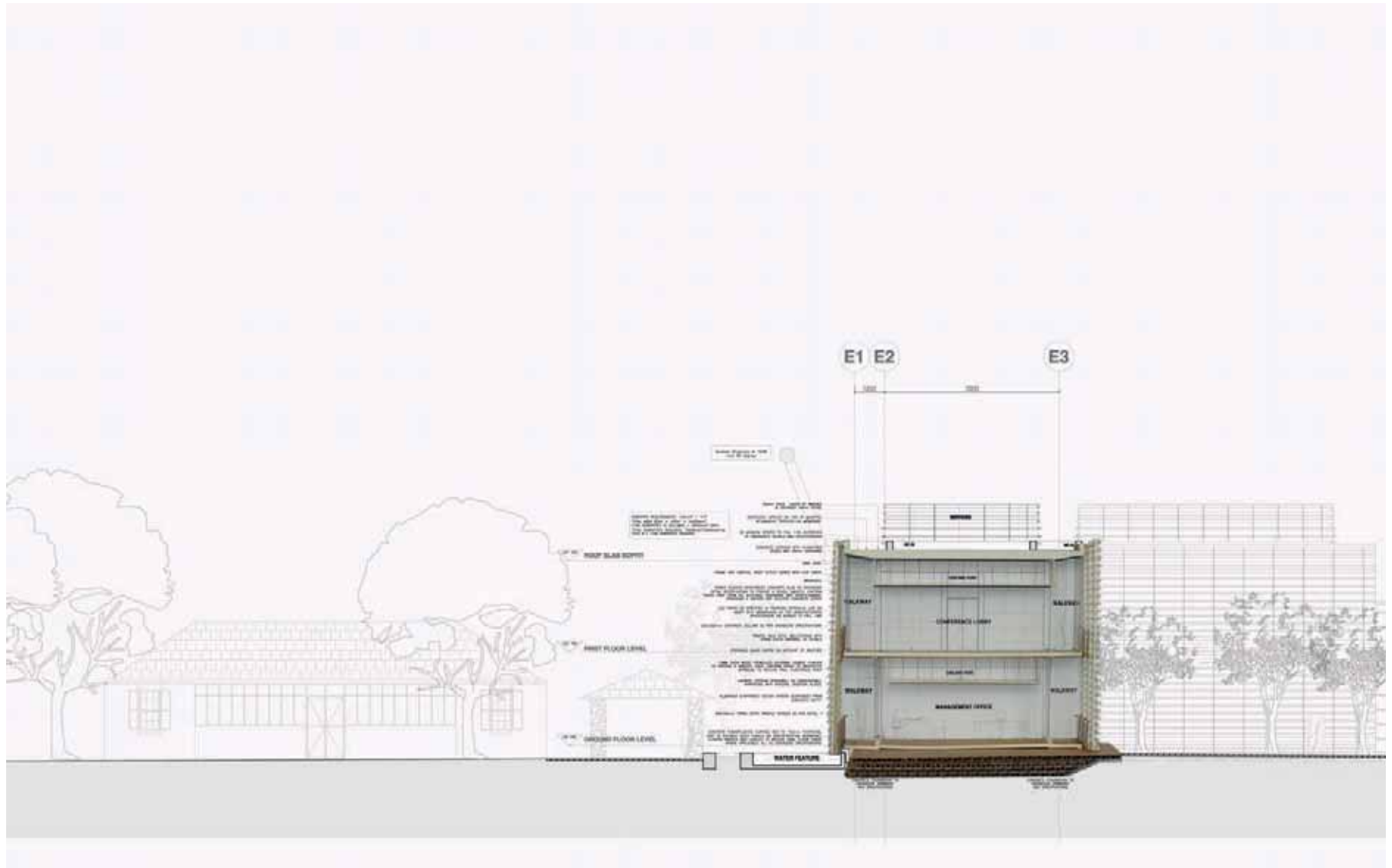


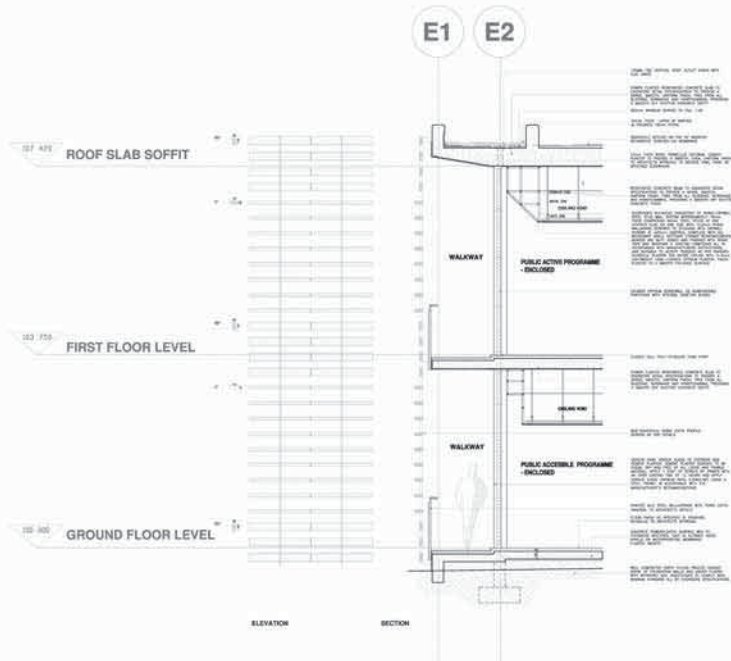


BLOCK E: ROOF PLAN_1:250

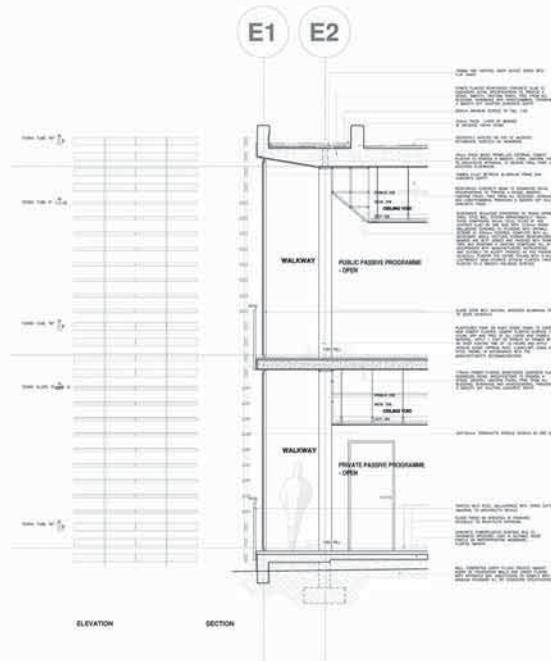




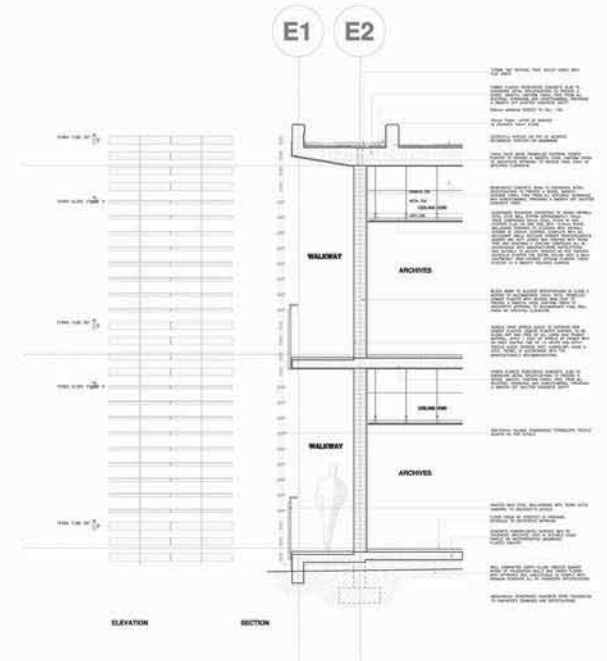




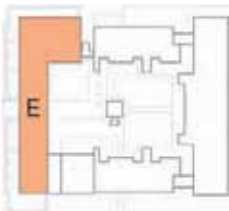
WALL SECTION CONDITION 01

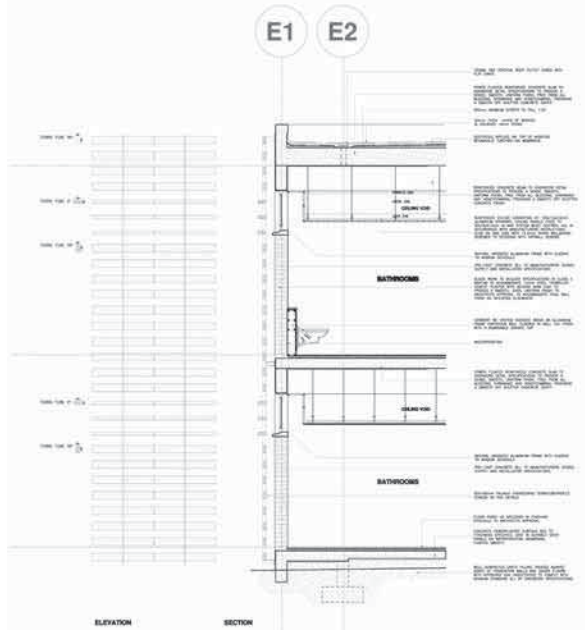


WALL SECTION CONDITION 02

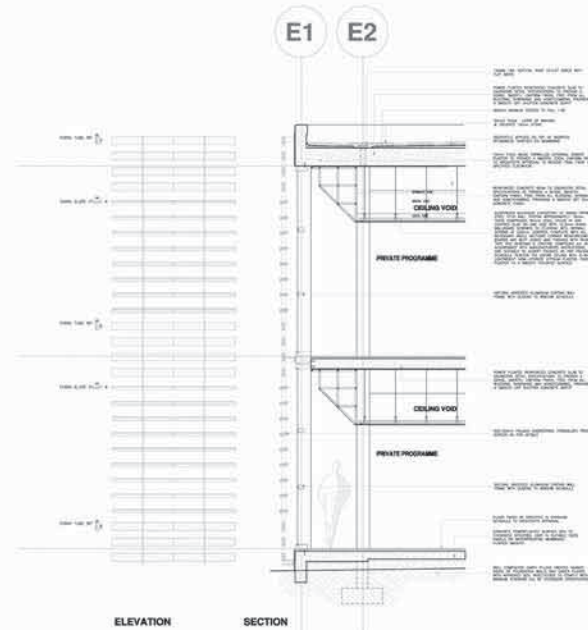


WALL SECTION CONDITION 03

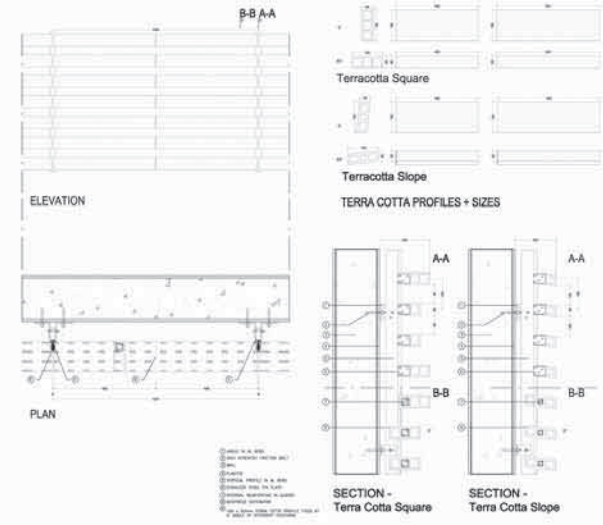




WALL SECTION CONDITION 04

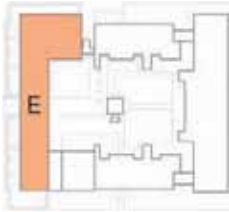


WALL SECTION CONDITION 05



DETAIL 01: SCREEN

WALL SECTION CONDITIONS_n.t.s.



E1 E2

150mm 1:80° VERTICAL ROOF OUTLET EARED WITH PLAN GRADE

POWER FLOATED REINFORCED CONCRETE SLAB TO BE FINISHED WITH A POLISHED FLOOR FINISH. ALL BLEEDING, SHRINKAGE AND HONEYCOMBING, PROVIDING A SMOOTH OFF SHUTTER CONCRETE SOFFIT

300mm MINIMUM SCREED TO FALL 1:50

50mm THICK LAYER OF WASHED & CRUSHED 19mm STONE

GEOTEXTILE APPLIED ON TOP OF MODIFIED BITUMINOUS TOUCHED-ON MEMBRANE

15mm THICK WOOD TROWELLED EXTERNAL CEMENT PLASTER TO PROVIDE A SMOOTH, EVEN, UNIFORM FINISH TO EXTERIOR SURFACE. TO RECEIVE FINAL PAINT AS SPECIFIED ELSEWHERE

TIMBER FILLET BETWEEN ALUMINIUM FRAME AND CONCRETE SOFFIT

REINFORCED CONCRETE BEAM TO ENGINEERS DETAIL SPECIFICATIONS TO PROVIDE A DENSE, SMOOTH, UNIFORM FINISH, FREE FROM ALL BLEEDING, SHRINKAGE AND HONEYCOMBING, PROVIDING A SMOOTH OFF SHUTTER CONCRETE FINISH

SUSPENDED BULKHEAD CONSISTING OF RHINO-DRYWALL THICK 6mm GYPSUM BOARD WITH 20mm x 20mm THICK COMPRESSING 64mm STEEL STUDS AT 400 CENTRES CLAD ON ONE SIDE WITH 12.5mm RHINO WALLBOARD SCREWED TO STUDS WITH DRYWALL JOINTS AND CORNER REINFORCEMENT. NECESSARY ANGLE SECTIONS CORNER REINFORCEMENTS, BOARDS ARE BUTT JOINED AND FINISHED WITH RHINO BOARD FINISH TO MATCH SURROUNDING WALL. ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND SUITABLE TO ACCEPT FINISHES AS PER FINISHES SCHEDULE TO ARCHITECT'S DRAWINGS. FINISH TO BE LIGHTWEIGHT HIGH-HYDRATE CRYSTALLINE PLASTER. FINISH PLASTER TO A SMOOTH POLISHED SURFACE



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YUNIBESITHI YA PRETORIA

GLASS DOORS WITH NATURAL ANODIZED ALUMINIUM FP TO DOOR SCHEDULE

PLASTERED PAINT OR PAINT STONE FINISH TO EXTERIOR SURFACE. FINISH TO BE CLEAN, DRY AND FREE OF ALL LOOSE AND FRAGILE MATERIAL. APPLY 1 COAT OF VERSUS SP PRIMER WITH AN OVER COATING TIME OF 12 HOURS AND APPLY AN OVER COATING (AS PER MANUFACTURER'S) USING A STEEL TROWEL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

175mm POWER FLOATED REINFORCED CONCRETE SLAB TO BE FINISHED WITH A POLISHED FLOOR FINISH. ALL BLEEDING, SHRINKAGE AND HONEYCOMBING, PROVIDING A SMOOTH OFF SHUTTER CONCRETE SOFFIT

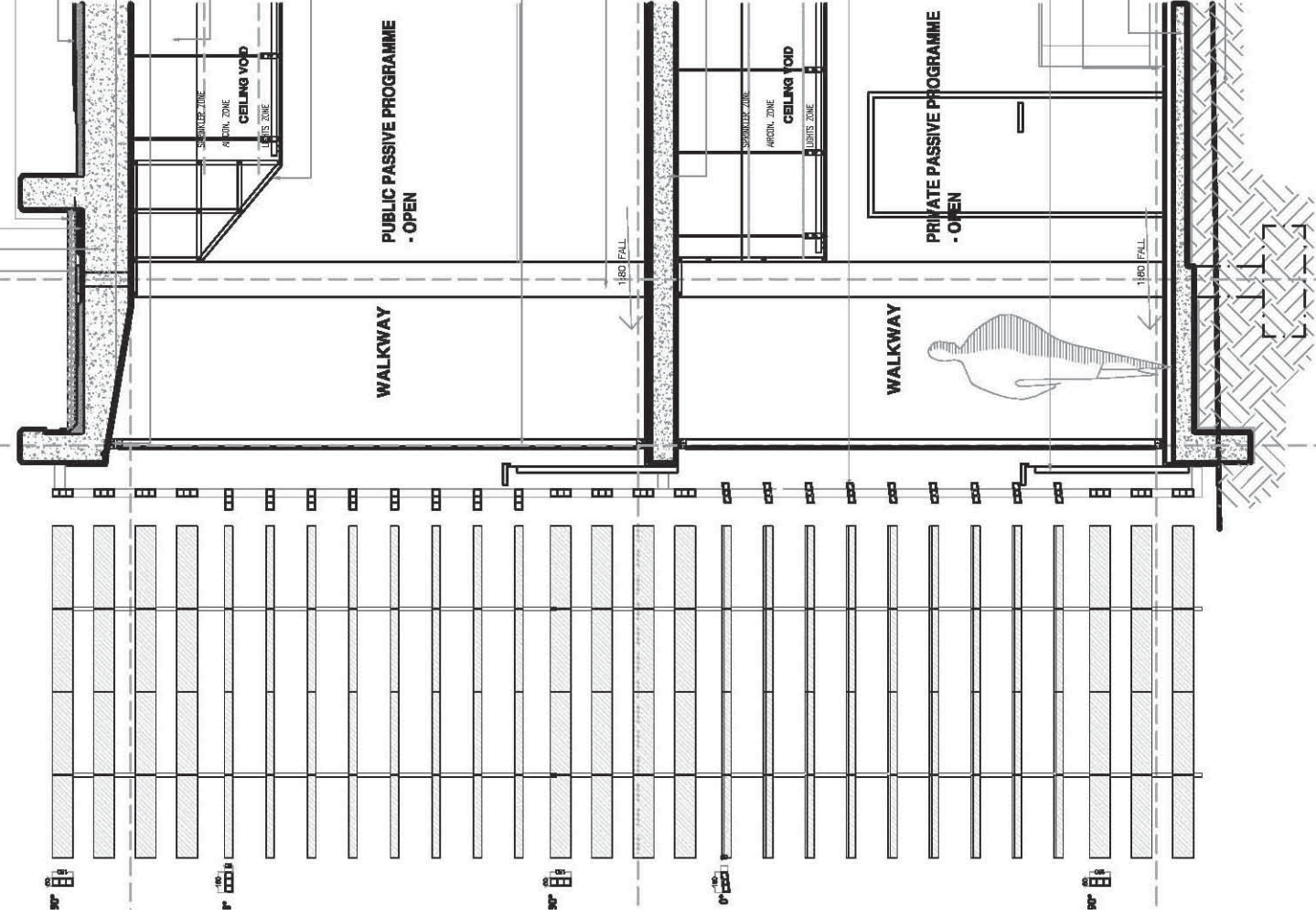
50x150mm TERRACOTTA PROFILE SCREEN AS PER DETAILS

PANKEED MILD STEEL BALLUSTRADE WITH TERRA COTTA HANDPAI TO ARCHITECT'S DETAILS

FLOOR FINISH AS SPECIFIED IN FINISHING SCHEDULE TO ARCHITECT'S APPROVAL

CONCRETE POWERFLOATED SURFACE BED TO THICKNESS SPECIFIED, CAST IN SUITABLE SIZED PANELS WITH PERFOCUS MEMBRANE, FINISHED SMOOTH

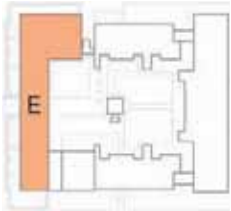
WELL COMPACTED EARTH FILLING TREATED AGAINST SETTLEMENT AND DRAINAGE. FINISH TO COMPLY WITH MINIMUM STANDARD ALL BY ENGINEERS SPECIFICATIONS.



SECTION

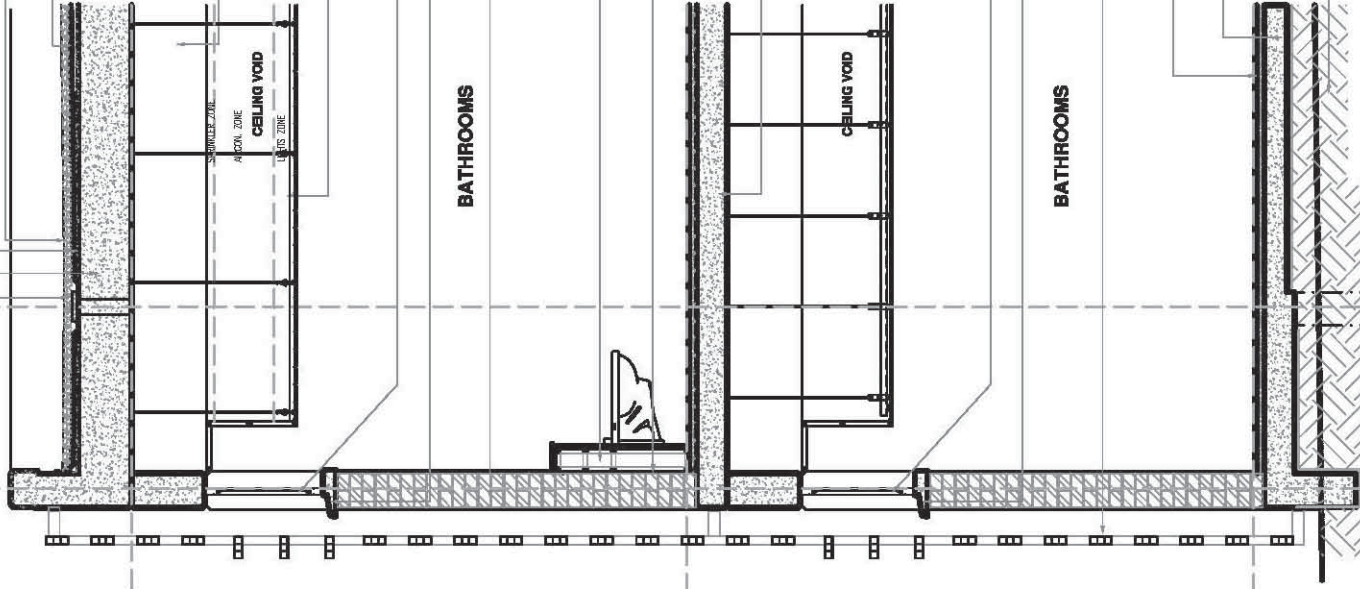
ELEVATION

WALL SECTION CONDITION 02_1:50



E1 E2

- 150MM, 180° VERTICAL ROOF OUTLET EARED WITH FURT GRATE
- POWER FLOATED REINFORCED CONCRETE SLAB TO ENGINEERS DETAIL. SPECIFICATIONS TO PROVIDE A DENSE, SMOOTH, BLEED-FREE, UNIFORM FINISH. PREPARE FROM ALL BLEEDING, SHRINKAGE AND HONEYCOMBING, PROVIDING A SMOOTH OFF SHUTTER CONCRETE SOFFT
- 300mm MINIMUM SOCCED TO FALL 1:30
- 50mm THICK LAYER OF WASHED & CRUSHED 19mm STONE
- GEOTEXTILE APPLIED ON TOP OF MODIFIED BITUMINOUS TORCHED-ON MEMBRANE
- REINFORCED CONCRETE BEAM TO ENGINEERS DETAIL SPECIFICATIONS TO PROVIDE A DENSE, SMOOTH, UNIFORM FINISH. PREPARE FROM ALL BLEEDING, SHRINKAGE AND HONEYCOMBING, PROVIDING A SMOOTH OFF SHUTTER CONCRETE FINISH
- SUSPENDED CEILING CONSISTING OF 100x100x8mm SUSPENSION SYSTEM TO BE SPECIFIED TO ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. ALL IN 50x180x5mm M-BAR SYSTEM @500 CENTRES. ALL IN 50x180x5mm M-BAR SYSTEM @500 CENTRES. ALL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. SHOWN IN THE DRAWING WITH 12.5mm RIBbed WALLBOARD SCHEDULE TO STUDING WITH SPRING WALL SCREWS
- NATURAL ANODIZED ALUMINIUM FRAME WITH GLAZING TO WINDOW SCHEDULE
- PRE-CAST CONCRETE SILL TO MANUFACTURERS DESIGN, SUPPLY AND INSTALLATION SPECIFICATIONS
- BLOCK WORK TO BUILDER SPECIFICATIONS IN CLASS MORTAR TO ACCOMMODATE 15mm STEEL IRONCELLED REINFORCEMENT TO PROVIDE A SMOOTH, EVEN UNIFORM FINISH TO ARCHITECTS APPROVAL TO ACCOMMODATE FINAL WALL FINISH AS SPECIFIED ELSEWHERE
- GERBERT WC SYSTEM ENCASED INSIDE AN ALUMINIUM FRAME PARTITION WALL CLADDED IN WALL TILE FINI WITH A REMOVABLE GRANITE TOP
- WATERPROOFING
- POWER FLOATED REINFORCED CONCRETE SLAB TO ENGINEERS DETAIL. SPECIFICATIONS TO PROVIDE A DENSE, SMOOTH, BLEED-FREE, UNIFORM FINISH. PREPARE FROM ALL BLEEDING, SHRINKAGE AND HONEYCOMBING, PROVIDING A SMOOTH OFF SHUTTER CONCRETE SOFFT
- NATURAL ANODIZED ALUMINIUM FRAME WITH GLAZING TO WINDOW SCHEDULE
- PRE-CAST CONCRETE SILL TO MANUFACTURERS DESIGN, SUPPLY AND INSTALLATION SPECIFICATIONS
- BOX 150mm PALACIO ENGINEERING TERRAZZOPROFILE SCREEN AS PER DETAILS
- FLOOR FINISH AS SPECIFIED IN FINISHING SCHEDULE TO ARCHITECTS APPROVAL
- CONCRETE POWERFLOATED SURFACE BED TO THICKNESS SPECIFIED, CAST IN SUITABLE SIZED FORMWORK ON WATERPROOFING MEMBRANE, FLOATED SMOOTH
- WELL COMPACTED EARTH FILLING TREATED AGAINST WATER PENETRATION AND SETTLEMENT TO COMPLY WITH APPROVED SOIL INSECTILES TO COMPLY WITH MINIMUM STANDARD ALL BY ENGINEERS SPECIFICATIONS.



BATHROOMS

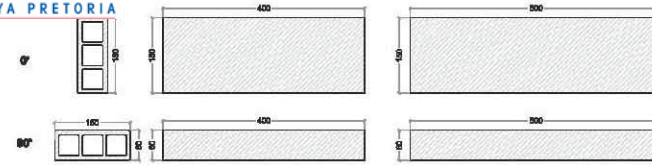
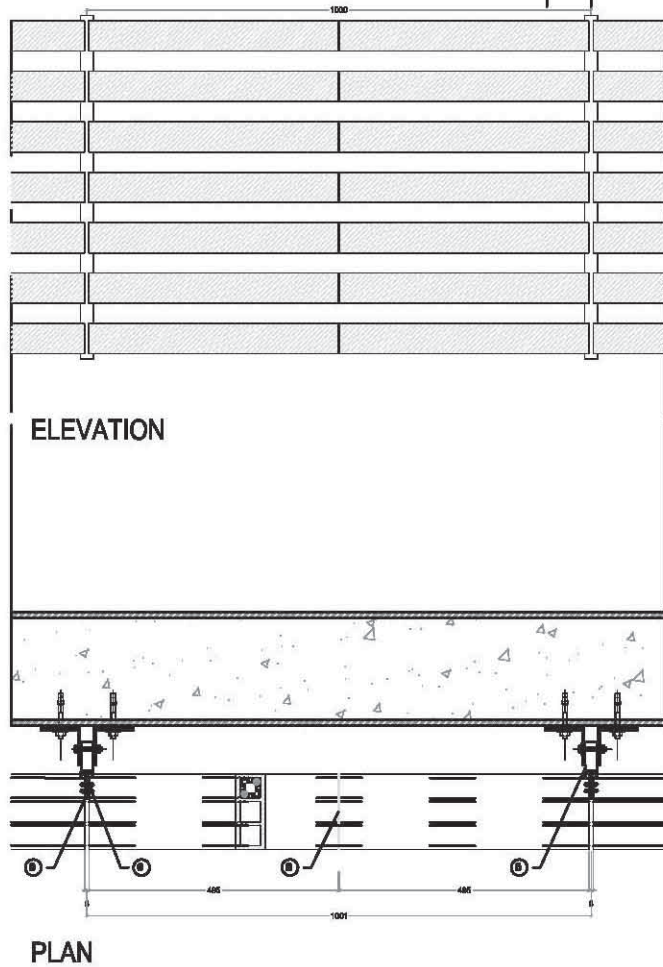
CEILING VOID

BATHROOMS

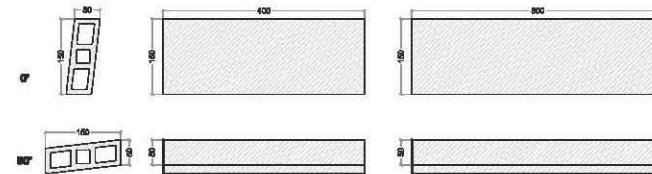
SECTION

ELEVATION

WALL SECTION CONDITION 04_1:50

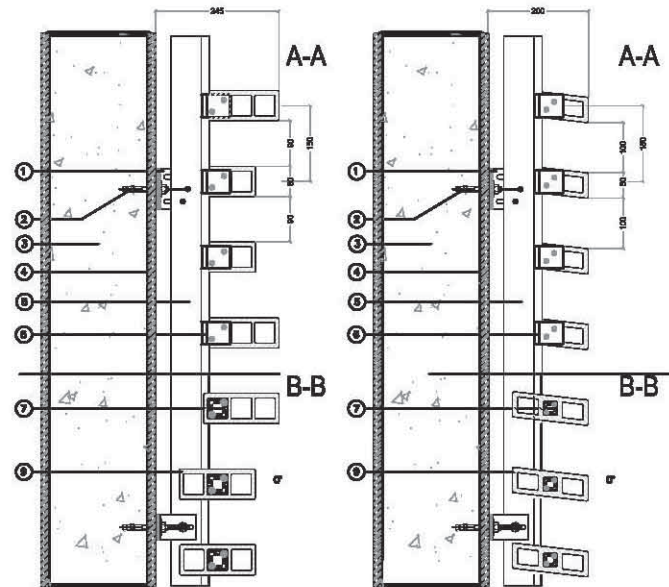


Terracotta Square

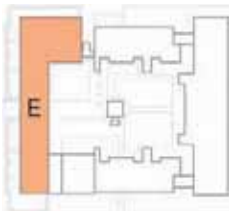


Terracotta Slope

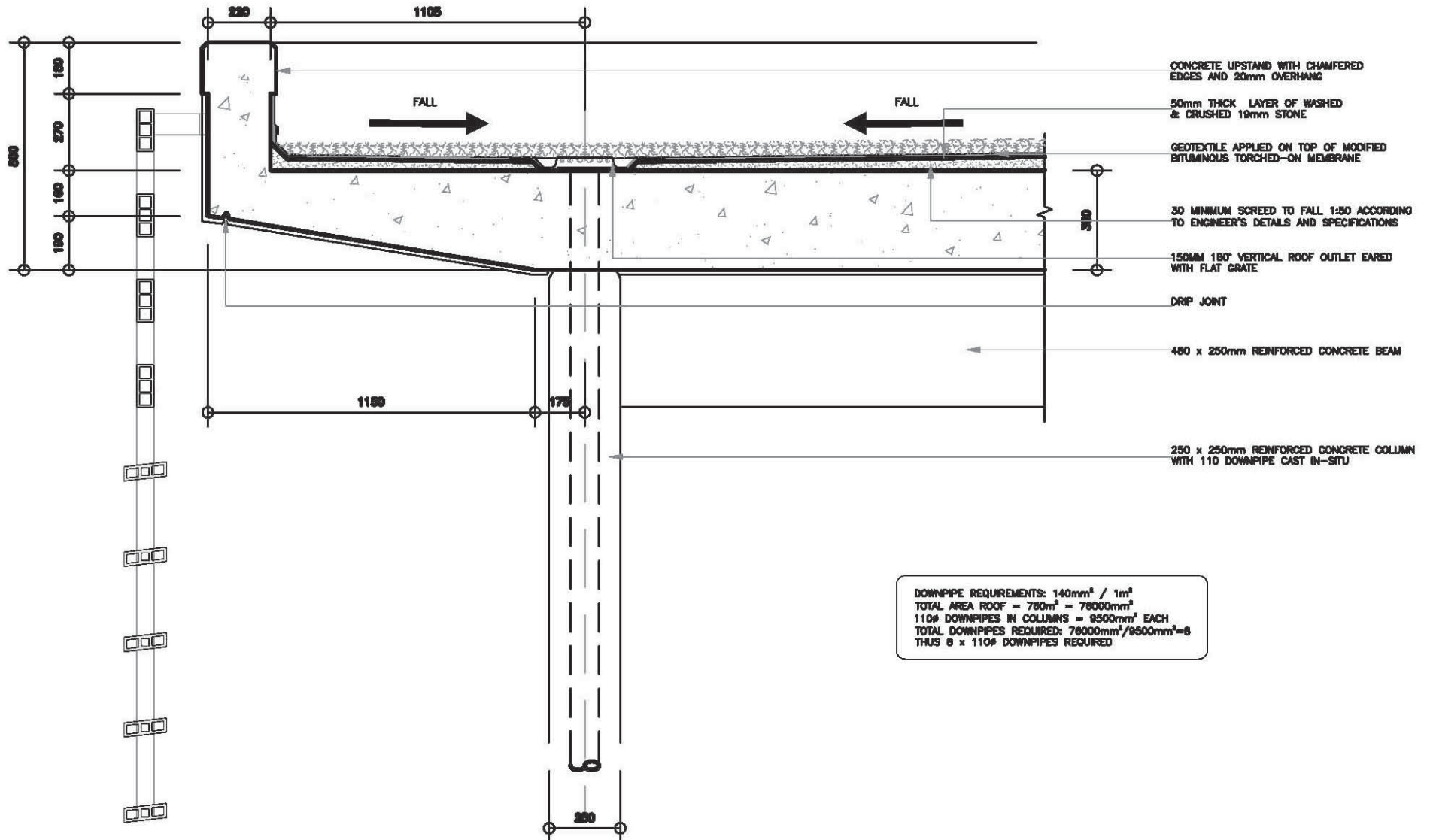
TERRA COTTA PROFILES + SIZES



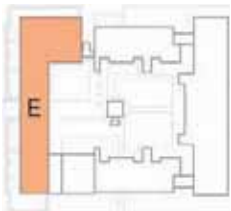
- ① ANGLE IN AL 6000
- ② HIGH STRENGTH FRICTION BOLT
- ③ WALL
- ④ PLASTER
- ⑤ VERTICAL PROFILE IN AL 6000
- ⑥ SEAMLESS STEEL FIN PLATE
- ⑦ INTERNAL REINFORCING IN AL6000
- ⑧ NEOPRENE SEPARATOR
- ⑨ 100 x 80mm TERRA COTTA PROFILE FIXED AT 0° ANGLE AT DIFFERENT POSITIONS



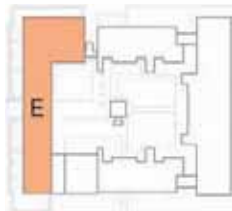
DETAIL 01: SCREEN PROFILES AND FIXING_1:15



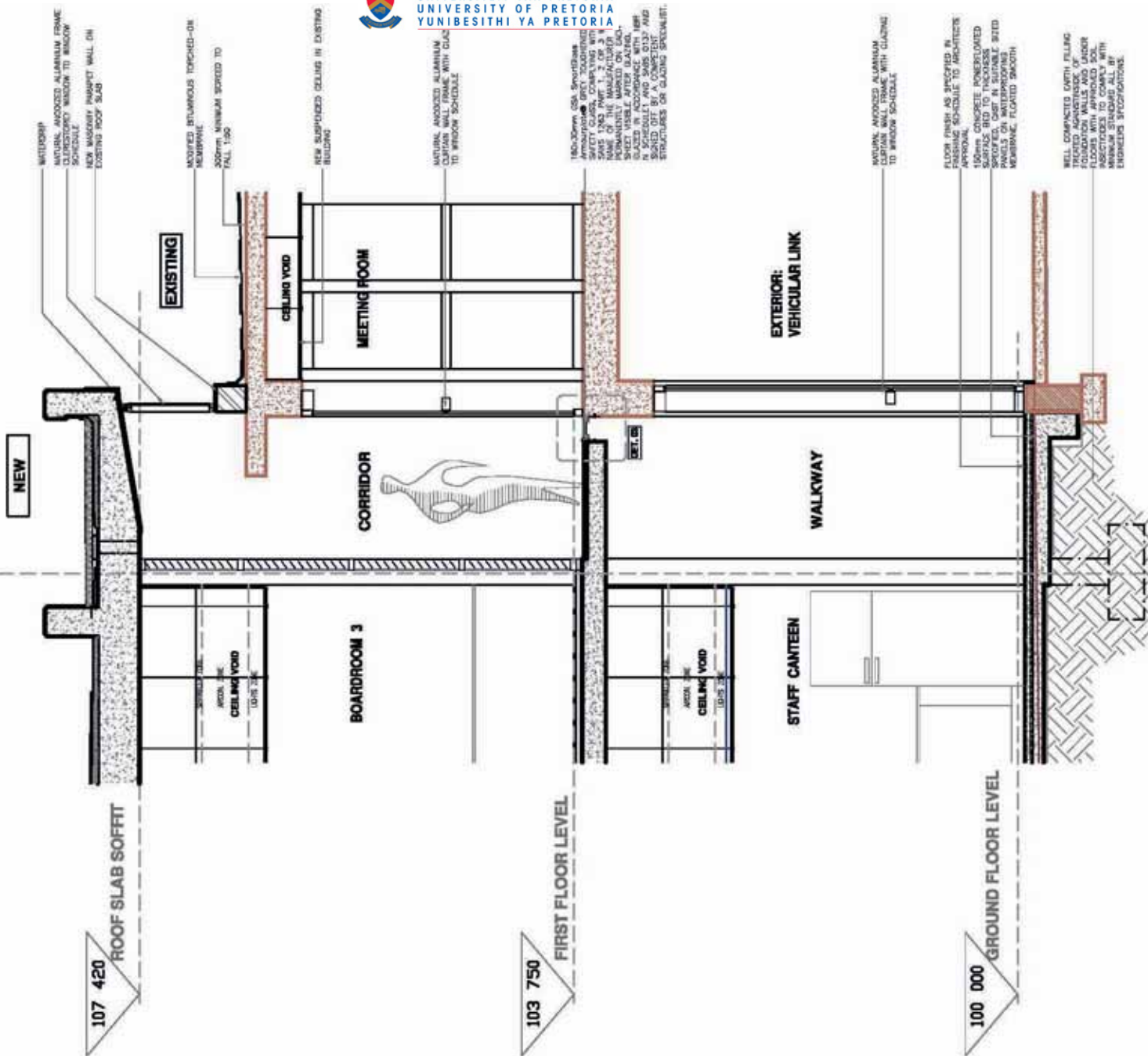
DOWNPIPE REQUIREMENTS: 140mm² / 1m²
 TOTAL AREA ROOF = 780m² = 78000mm²
 110# DOWNPIPES IN COLUMNS = 9500mm² EACH
 TOTAL DOWNPIPES REQUIRED: 78000mm²/9500mm²=8
 THUS 5 x 110# DOWNPIPES REQUIRED



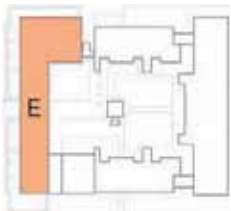
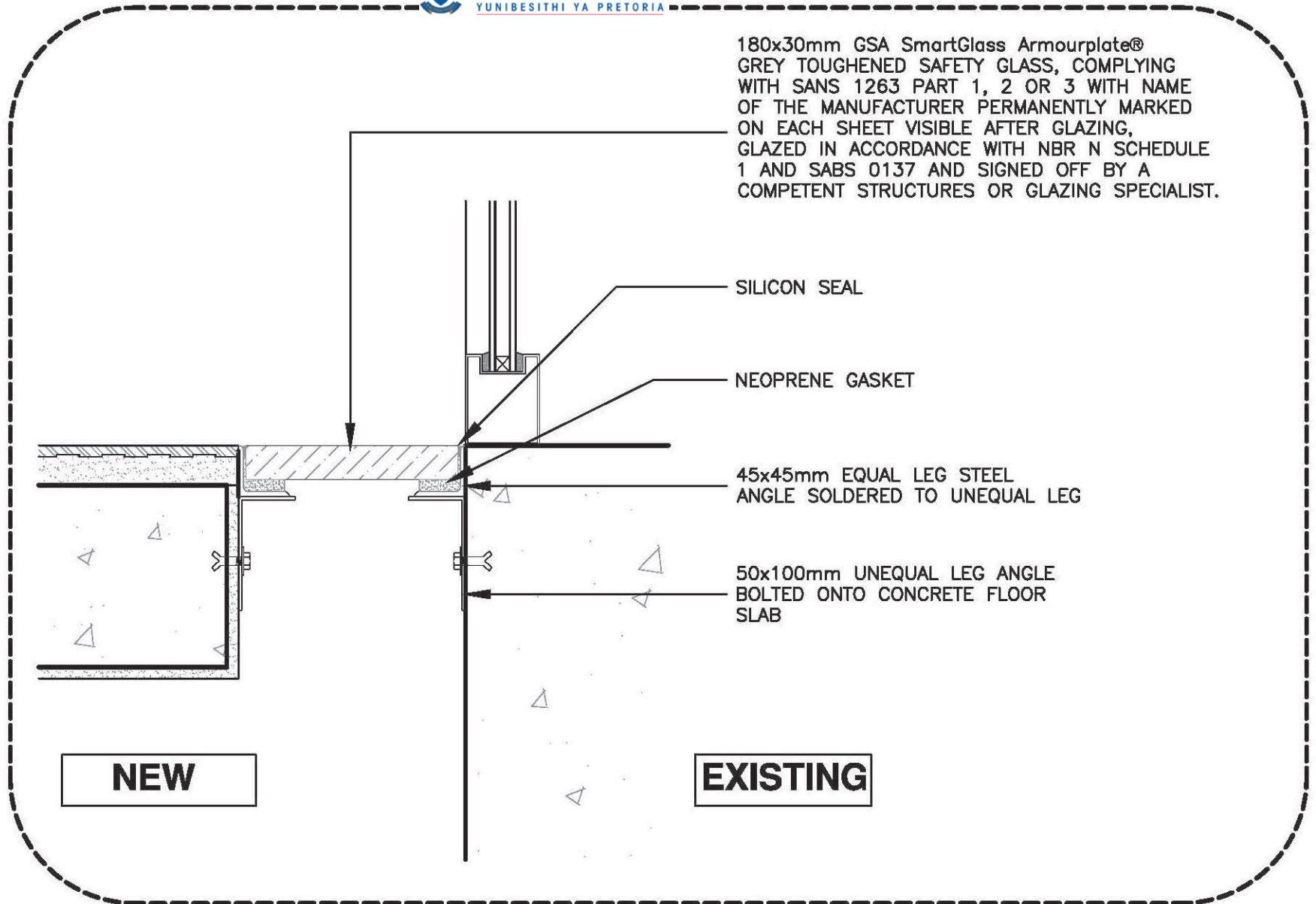
DETAIL 02: ROOF EDGE DETAIL_1:20



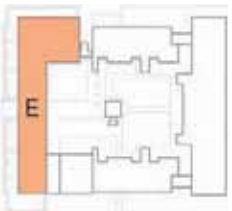
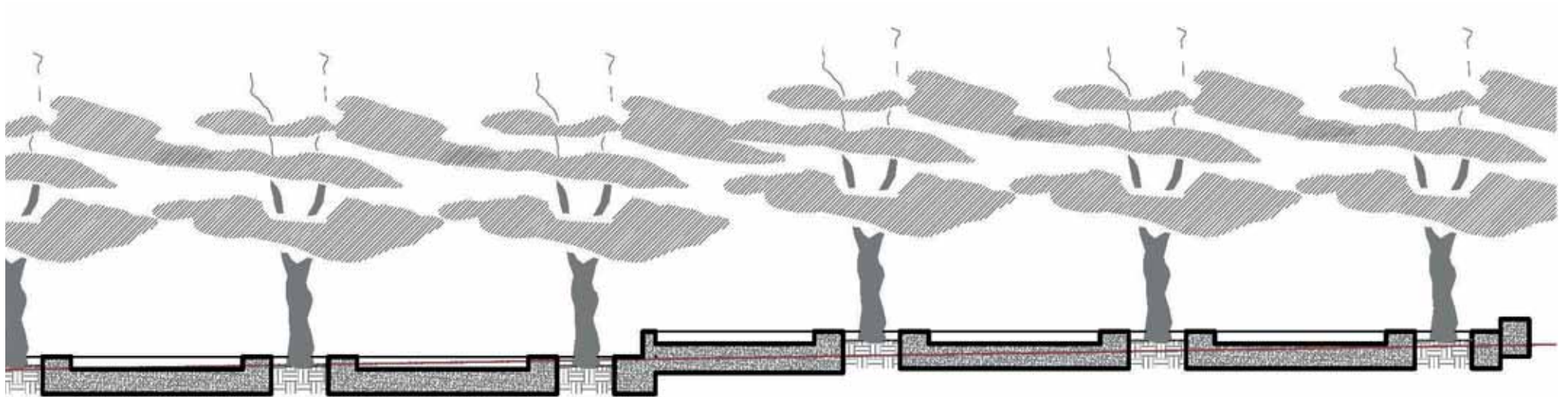
E3



SECTION EB-EB: CONNECTION BETWEEN BLOCKS E+F5_I:50



DETAIL 03: CONNECTION BETWEEN BLOCKS E+F5_1:5

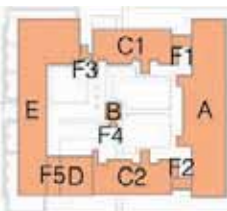
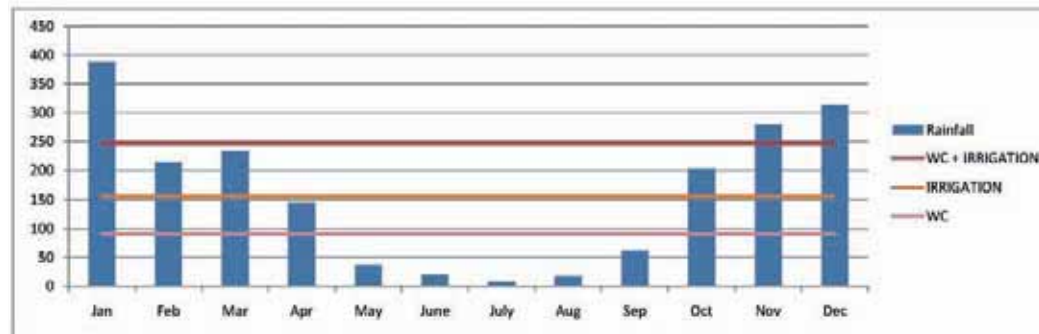


DETAIL 04: WATER FEATURE_1:100

8.3 CALCULATIONS

RAIN COLLECTION													
Env. Parameters		Roof Plan											
Month	Ave Rain (PTA)	Fire Station		Bookshop		Canteen		New building		New building		Library	
		Area (m ²)	eff. (%)	Area (m ²)	eff. (%)	Area (m ²)	eff. (%)	Area (m ²)	eff. (%)	Area (m ²)	eff. (%)	Area (m ²)	eff. (%)
Jan	136	116	0.12	69	0.07	69	0.07	92	0.09	0	0.00	43	0.04
Feb	75	64	0.06	38	0.04	38	0.04	51	0.05	0	0.00	24	0.02
Mar	82	70	0.07	41	0.04	41	0.04	55	0.06	0	0.00	26	0.03
Apr	51	44	0.04	26	0.03	26	0.03	34	0.03	0	0.00	18	0.02
May	13	11	0.01	7	0.01	7	0.01	9	0.01	0	0.00	4	0.00
June	7	6	0.01	4	0.00	4	0.00	5	0.00	0	0.00	2	0.00
July	3	3	0.00	2	0.00	2	0.00	2	0.00	0	0.00	1	0.00
Aug	6	5	0.01	3	0.00	3	0.00	4	0.00	0	0.00	2	0.00
Sep	22	19	0.02	11	0.01	11	0.01	15	0.01	0	0.00	7	0.01
Oct	71	61	0.06	36	0.04	36	0.04	48	0.05	0	0.00	22	0.02
Nov	96	84	0.08	49	0.05	49	0.05	66	0.07	0	0.00	31	0.03
Dec	110	94	0.09	55	0.06	55	0.06	74	0.07	0	0.00	35	0.03

RAIN USAGE									
Landscape								Population Est.	
A	B	C	D	E	F	G	H		
Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Office Area	Public Area
200	260	200	100	100	20	20	60	0	950
Estimated water requirement/m ³								0	950
	32	41.6	32	16	16	3.2	4.48	10	147.2
								40	112
								40	112
								5	96
								11.70	9.83
								11.06	25.87
								25.87	6.39



CALCULATIONS: RAINWATER

8.4 SITE MODEL



Figure 8.1:View from southeastern corner.

Figure 8.2:View from southeastern corner - Block A.

Figure 8.3: Eastern entrance - Block A.



Figure 8.4:View from northeastern corner - Block A.



Figure 8.5:View from east.



Figure 8.6:View from east.



Figure 8.7:View of Block E from southwest.



Figure 8.7: Southern elevation - Minnaar street.



Figure 8.8: New link to Minnaar street



Figure 8.9: Western elevation - Block E



Figure 8.10: Northeastern view of courtyard.



Figure 8.11: Northwestern view of courtyard.



Figure 8.12: Southwestern view of courtyard.



Figure 8.13:View of courtyard - bridge.

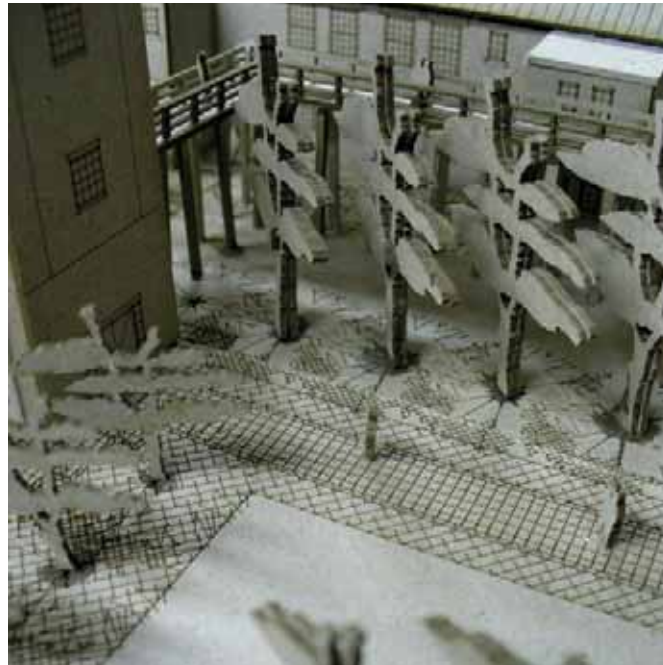


Figure 8.14:View of courtyard.



Figure 8.15:View of courtyard - main entrance east.

8.5 STRIP MODELS



Figure 8.16: Strip model - Block A

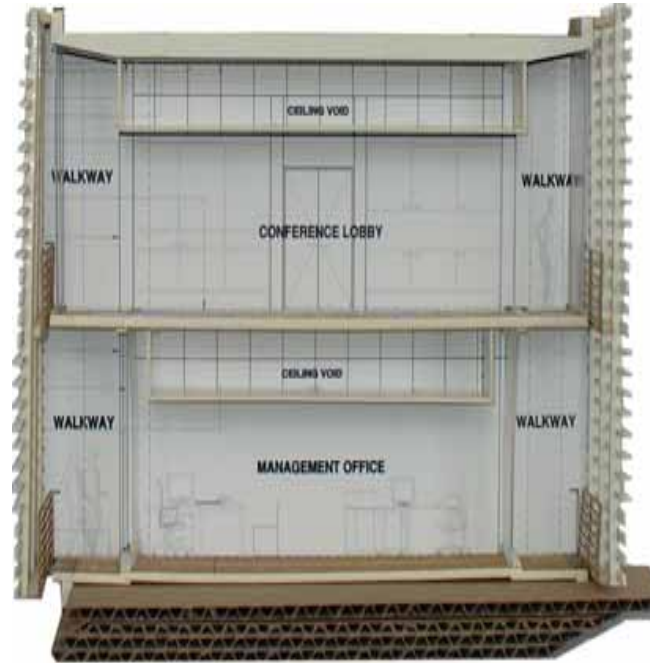


Figure 8.17: Strip model - Block C



Figure 8.18: Strip model - Block C



Figure 8.19: Strip model - Block C



Figure 8.20: Strip model - Block C



Figure 8.21: Strip model - Block C