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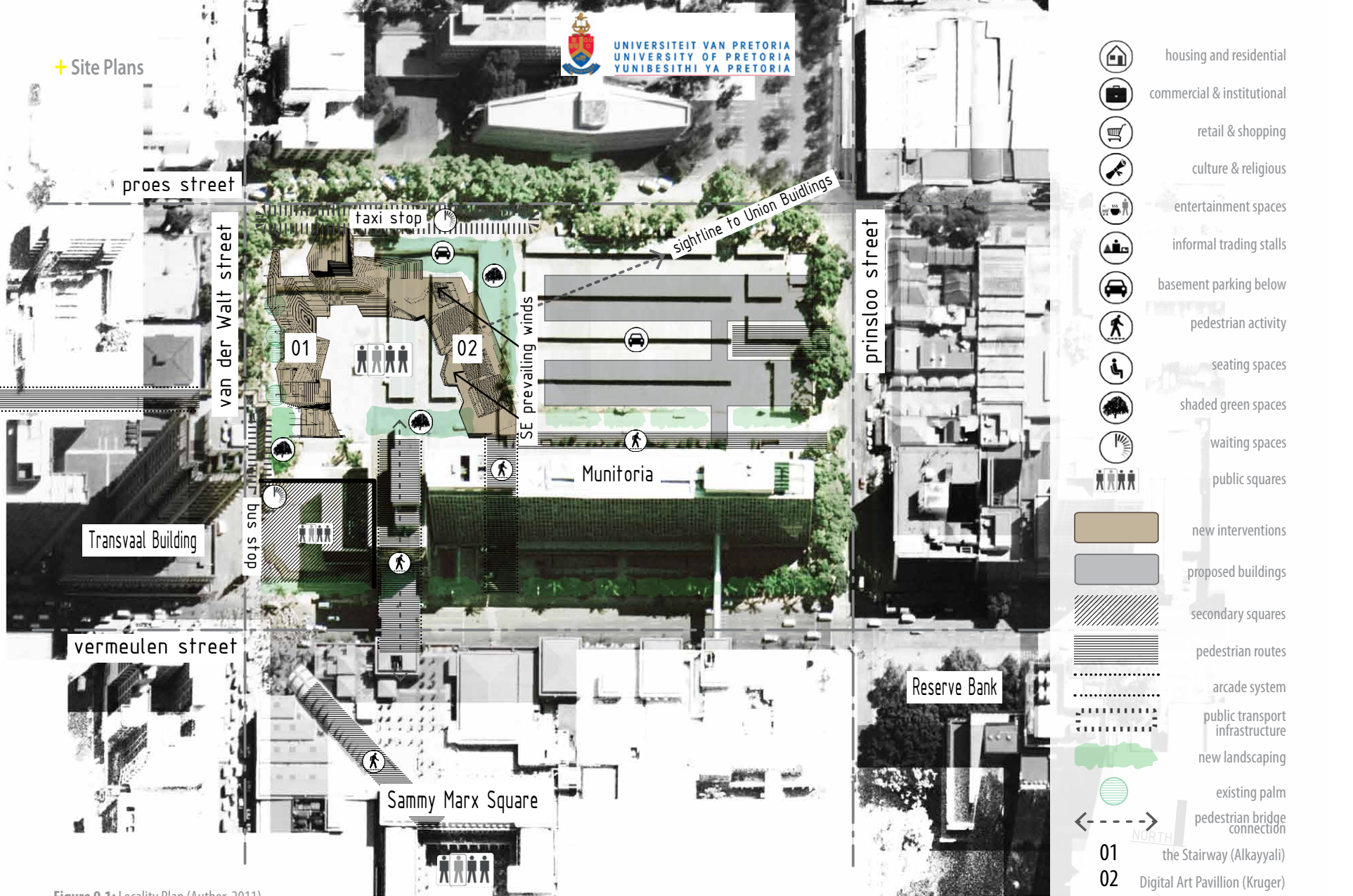


Figure 9.1: Locality Plan (Author, 2011)

Technical Resolution

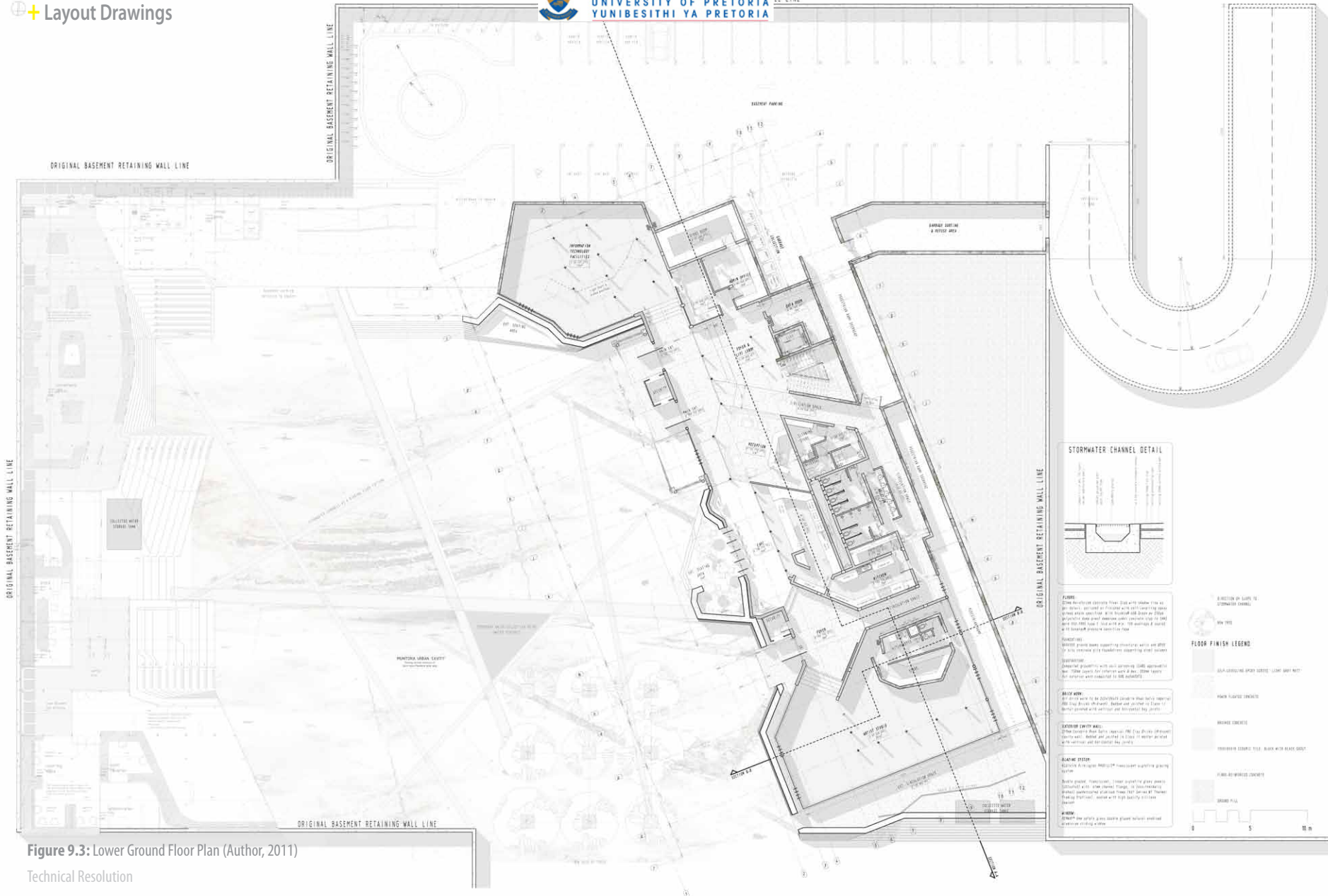
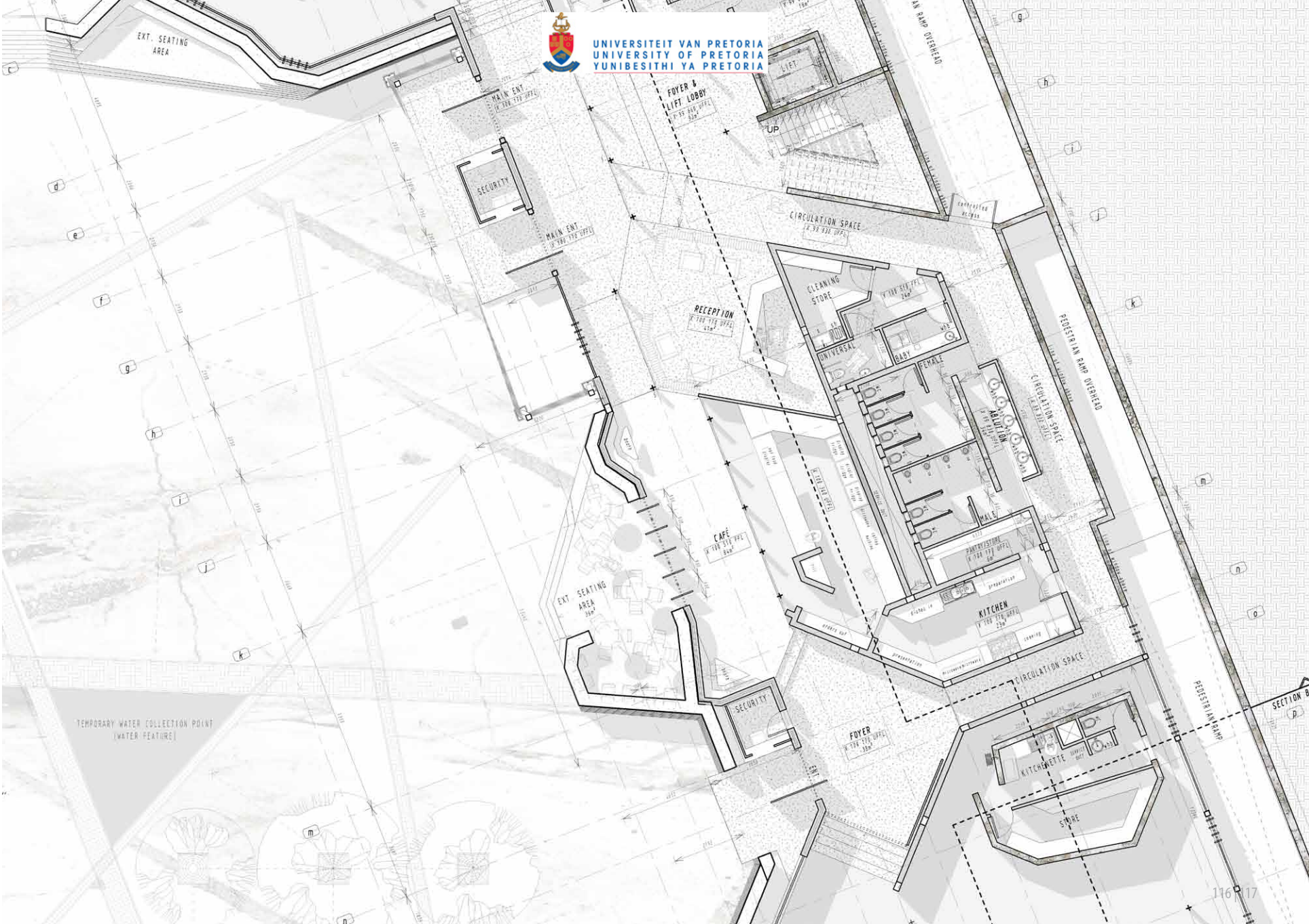


Figure 9.3: Lower Ground Floor Plan (Author, 2011)

Technical Resolution



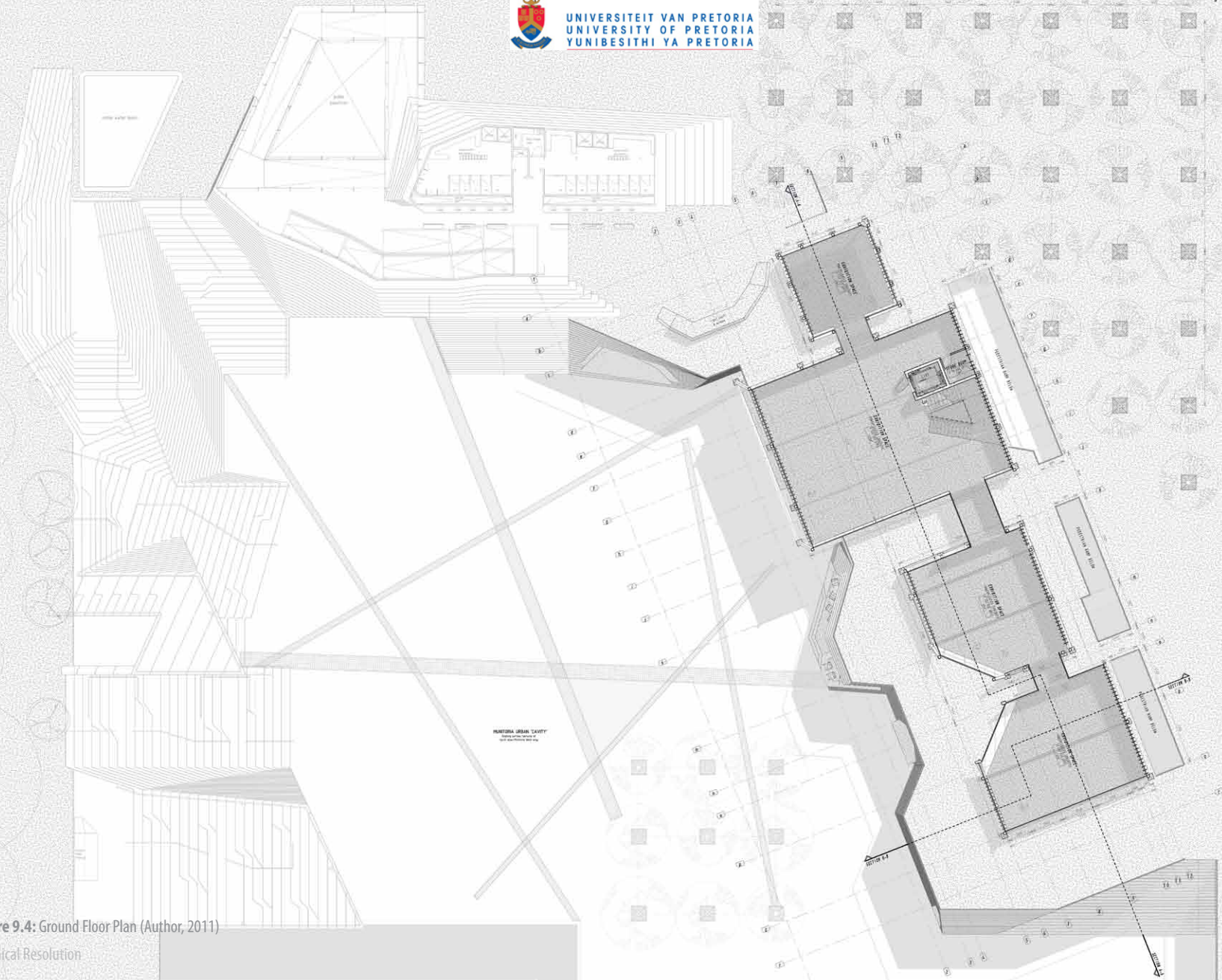


Figure 9.4: Ground Floor Plan (Author, 2011)

Technical Resolution

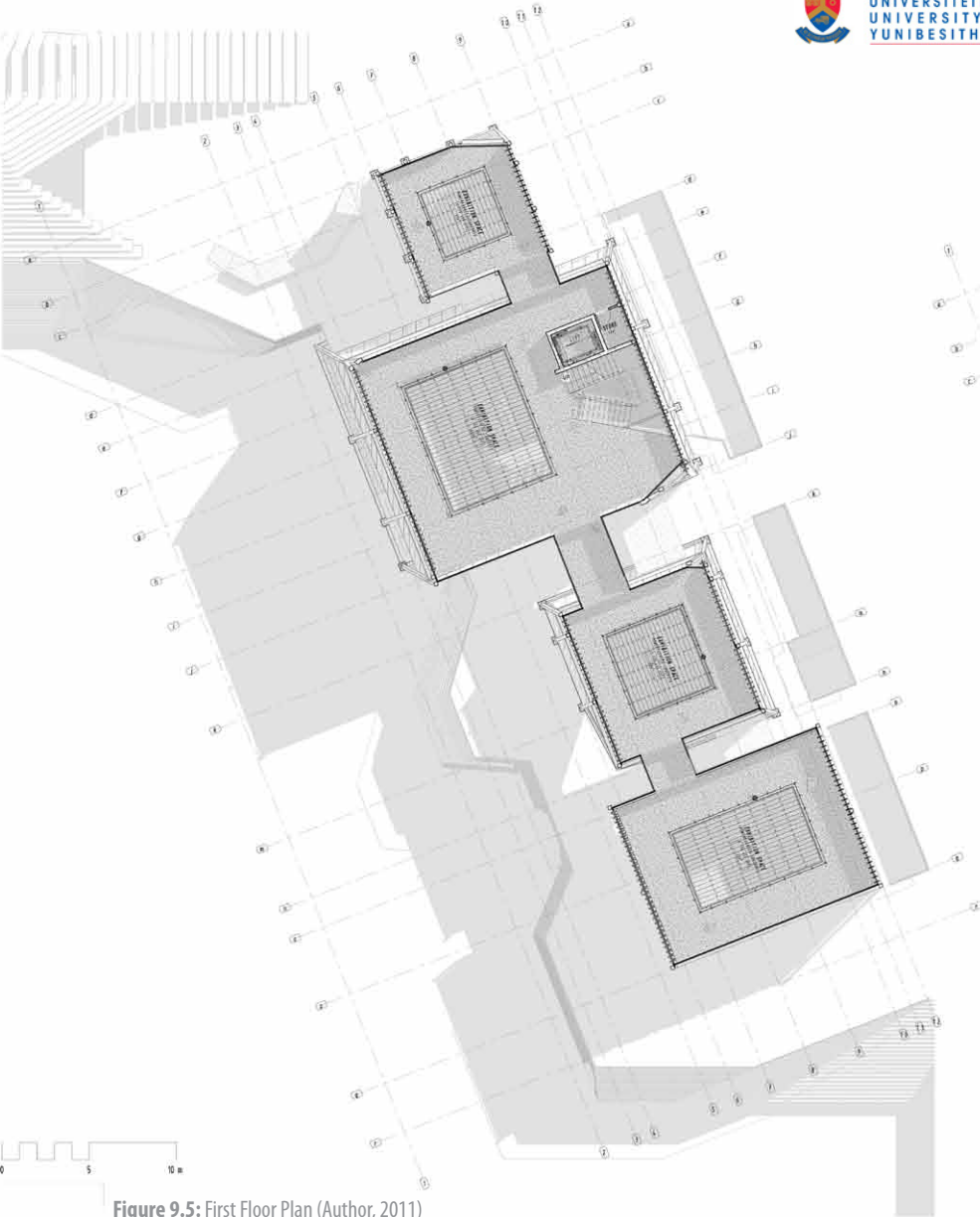


Figure 9.5: First Floor Plan (Author, 2011)



Figure 9.6: Second Floor Plan (Author, 2011)



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YUNIBESITHI YA PRETORIA



Figure 9.7: Perspective of Section A-A (Author, 2011)

Technical Resolution



LIGHTWEIGHT STEEL ROOF AS PER DETAIL
200X200 SQUARE HOLLOW SECTION STEEL
STRUCTURAL FRAME

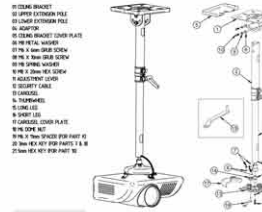
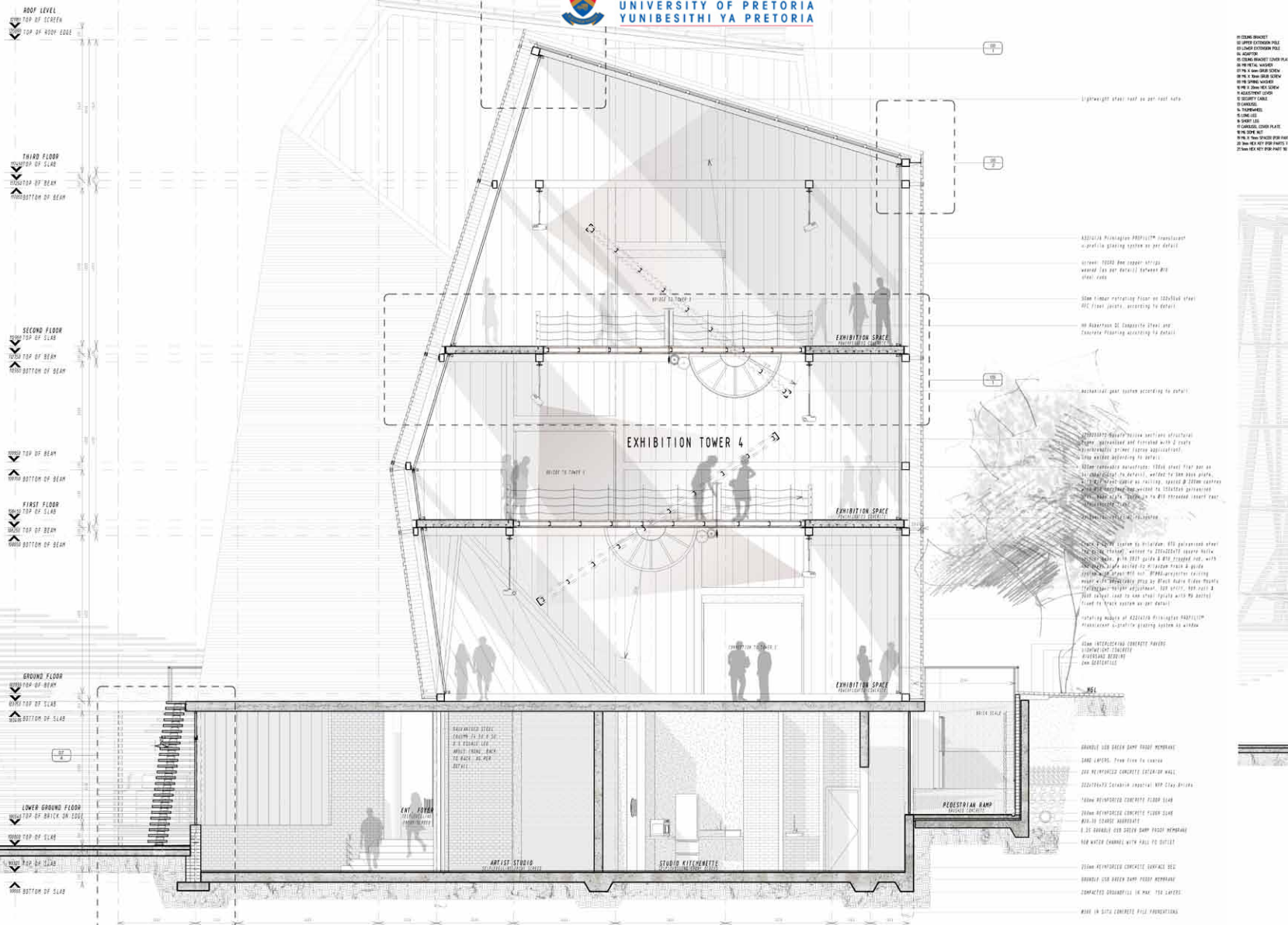
PILKINGTON U-PROFILE GLAZING SYSTEM

WEAVED COPPER STRIP SHADING SCREEN

HELP DESK
CERAMIC TILE

STORE ROOM
CERAMIC TILE

BASEMENT PARKING
BRUSHED CONCRETE



Lightweight steel roof as per detail note

Additional Pilkington PROFILIGHT™ translucent skylight glazing system as per detail

100mm x 100mm x 3mm copper ceiling welded to steel deck between R10 steel axes

100mm timber waterproof floor on 100mm steel R10 floor joists, according to detail

600 Aluminium 30 Channels in steel and stainless steel according to detail

Mechanical plant system according to detail

200mm x 200mm x 10mm perforated steel mesh panels, galvanized and finished with 2 coats of epoxy resin primer (factory application). See notes regarding waterproofing to detail.

100mm concrete screed finished 100mm steel deck as per detail. See detail for steel deck and waterproofing to detail.

100mm x 100mm x 10mm perforated steel mesh panels, galvanized and finished with 2 coats of epoxy resin primer (factory application). See detail for steel deck and waterproofing to detail.

100mm x 100mm x 10mm perforated steel mesh panels, galvanized and finished with 2 coats of epoxy resin primer (factory application). See detail for steel deck and waterproofing to detail.

100mm x 100mm x 10mm perforated steel mesh panels, galvanized and finished with 2 coats of epoxy resin primer (factory application). See detail for steel deck and waterproofing to detail.

100mm x 100mm x 10mm perforated steel mesh panels, galvanized and finished with 2 coats of epoxy resin primer (factory application). See detail for steel deck and waterproofing to detail.

Figure 9.8: Section B-B (Author, 2011)

Technical Resolution

FLOORS:
250mm Reinforced Concrete Floor Slab with shadow line as per detail, polished or finished with self-leveling grout spread where identified with Gravelled HDG Green or 250mm aggregate concrete ground membrane under concrete slab to 500mm max. 1500-1500 Page C, laid with min. 150 overlaps & sealed with Dimplex pressure sensitive tape

BRICK WORK:
All brick work to be 220x70x43 Cathedral Plain Salin 'Imperial' F20 Clay Bricks (Imperial). Bedded and pointed in Class II mortar pointed with vertical and horizontal key joints

STEEL WORK:
All steel work to be galvanized and finished with 2 coats electrochromatic primer (factory application). All steel fasteners to be galvanized steel. All welding to be shop welded where possible & all bolting to be done on site

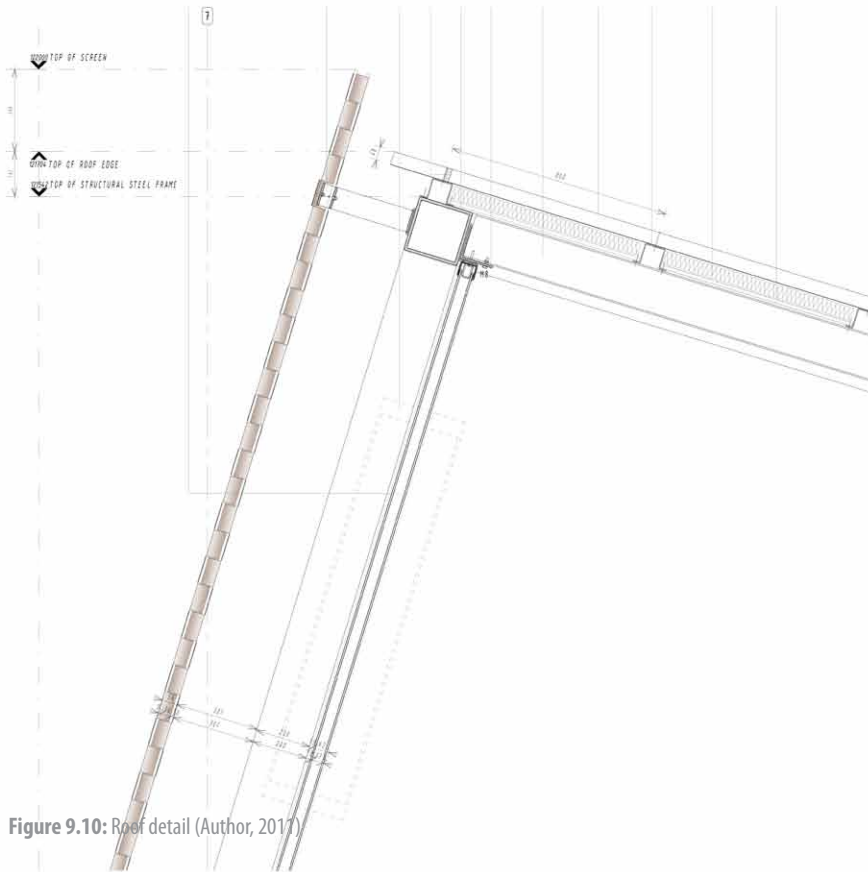


Figure 9.10: Roof detail (Author, 2017)

43224766 Polystyrene insulation 40mm
specify glazing system as per detail (leaf 9.16)

weaved shading screen as per weaved screen detail (leaf screen note)

specification of 43224766 Polystyrene insulation 40mm
specify glazing system as per detail (leaf 9.16)

cross-section polystyrene polystyrene

200x200x10 steel hollow section structural frame

120x120x8 galvanneal steel equal leg angle iron, welded to 200x200x10 square hollow section structural frame & bolted to top of roof beam with 10mm steel bolts

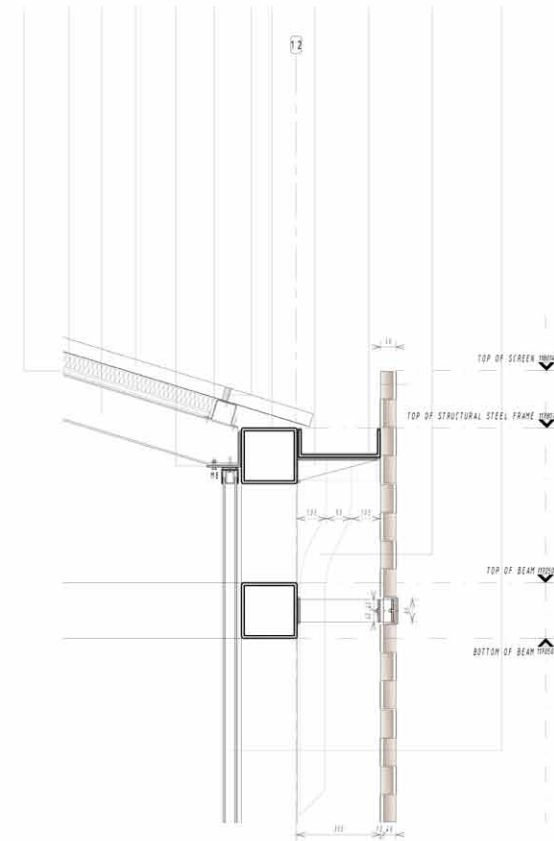
100x100x6 flat bar sections @ max. 1000 centres fixed to roof beams with self tapping screws

400x400x8 Brownbush 80mm thick roof sheathing, with 50mm thick insulation to both sides. With 20 finishing clips and 53 finishing clips at ends

100x100x6 flat bar sections @ max. 1000 centres fixed to roof beams with self tapping screws

100mm polystyrene thermal insulation, 40mm thick fixed to IPE 160 roof beams with self tapping screws

12.5mm Rhinobond Flash Jacking Ceiling board @ 600mm centres fixed to roof beams with self tapping screws through polystyrene insulation board



12.5mm Rhinobond Flash Jacking Ceiling board @ 600mm centres fixed to roof beams with self tapping screws through polystyrene insulation board

100mm polystyrene thermal insulation board fixed to IPE 160 roof beams with self tapping screws

100x100 (100x20) steel roof beams, ends cut & welded to detail

400x400x8 Brownbush 80mm thick roof sheathing, with 50mm thick insulation to both sides. With 20 finishing clips and 53 finishing clips at ends

120x120x8 galvanneal steel equal leg angle iron, welded to 200x200x10 square hollow section structural frame & bolted to IPE 160 roof beams with 10mm steel bolts

100x100x6 galvanneal steel top bar sections @ max. 1000 centres fixed to roof beams with self tapping screws

cross-section polystyrene polystyrene

200x200x10 galvanneal steel hollow section structural frame

100x100 galvanneal steel roof top edge iron fixed to detail

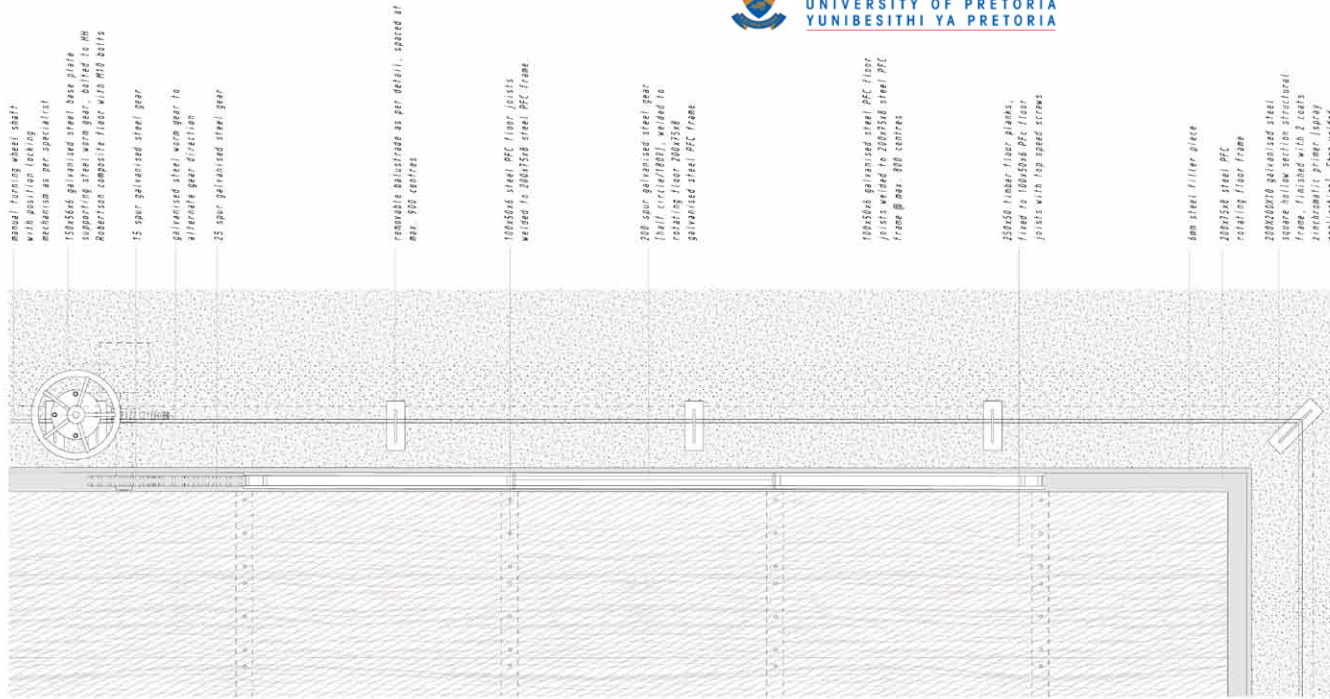
welded to 200x200 steel hollow section structural frame

100x100 (100mm thickness) galvanneal steel PFC gutter, sloped to downpipe (leaf)

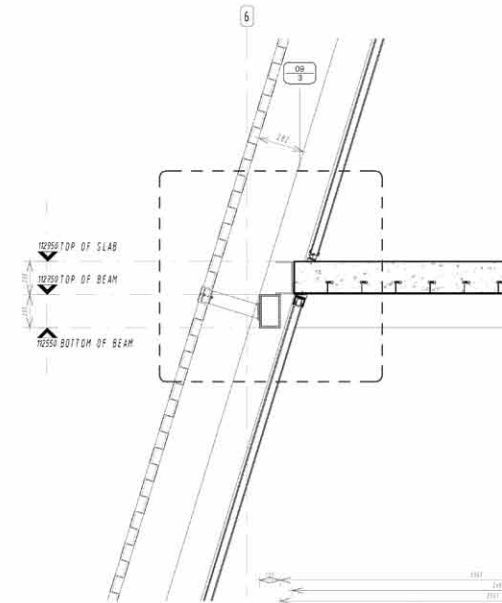
80x80 galvanneal steel top edge iron fixed to 200x200x10 square hollow section structural frame column

43224766 Polystyrene insulation 40mm
specify glazing system as per detail (leaf 9.16)

- ROOF:**
Lightweight steel roof
400x400x8 Brownbush 80mm thick roof sheathing, with 50mm thick insulation to both sides. With 20 finishing clips at ends and 53 finishing clips at ends and closed-cell polystyrene polystyrene. On 120x120 galvanneal steel top bar sections @ max. 1000 centres, fixed to IPE 160 roof beams with self tapping screws, ends cut to detail. With 100mm polystyrene board insulation.
- STEEL WORK:**
All steel sections to be galvanneal and finished with 2 coats zinc chromate primer (spray application). All steel fasteners to be galvanneal steel. All welding to be shop welded where possible & all bolting to be done on site.
- STRUCTURAL FRAME:**
200x200 Square hollow sections, galvanneal and finished with 2 coats zinc chromate primer (spray application). Shop welded according to detail.
- WEAVED SHADING SCREEN:**
80x80 galvanneal steel rod spaced @ min. 1000 centres, with 100x6 copper strips weaved between rods as per detail, supported by 60mm steel flat bar (bolted to detail) rods fixed to flat bar element with self tapping 100x6 steel u-bolts. Flat bar element to be welded to structural steel frame



2 | PLAN: Rotating Floor System | 1:10

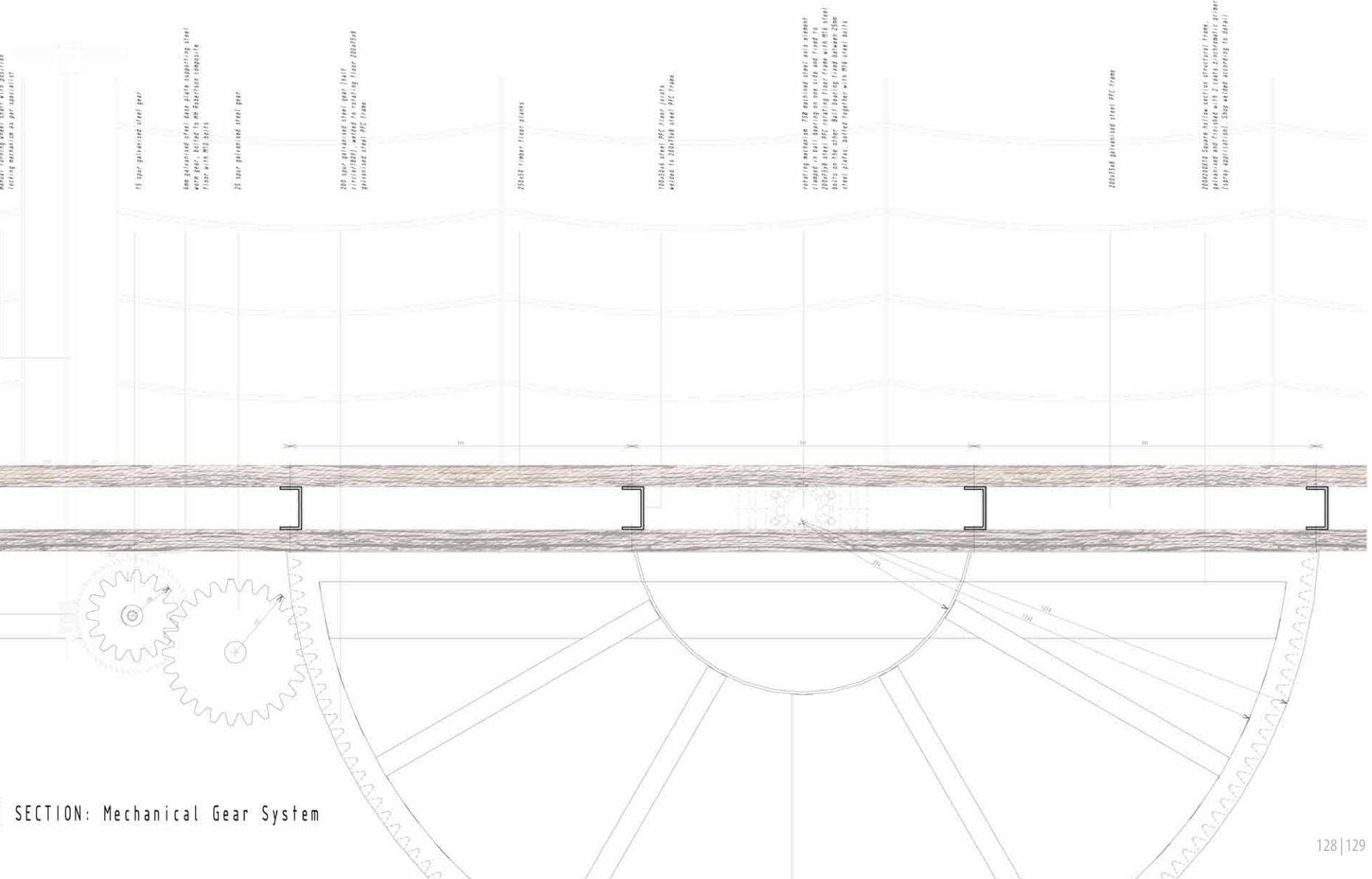


1 | SECTION: Rotating Floor

Figure 9.11: Rotating floor details from Section B-B (Author, 2011)



RENDERING OF STEEL JOIST WITH BRASS LINING
RENDERING SPECIFICATIONS PER SPECIFICATION



15 mm galvanized steel plate

10mm galvanized steel base plate supporting steel work gear, bolted to an Robertson composite floor with M16 bolts

35 mm galvanized steel plate

100x100x10mm steel plate (max 10mm) attached to steel joist, welded to existing floor 200x25x8 galvanized steel PFC frame

150x60 timber floor joists

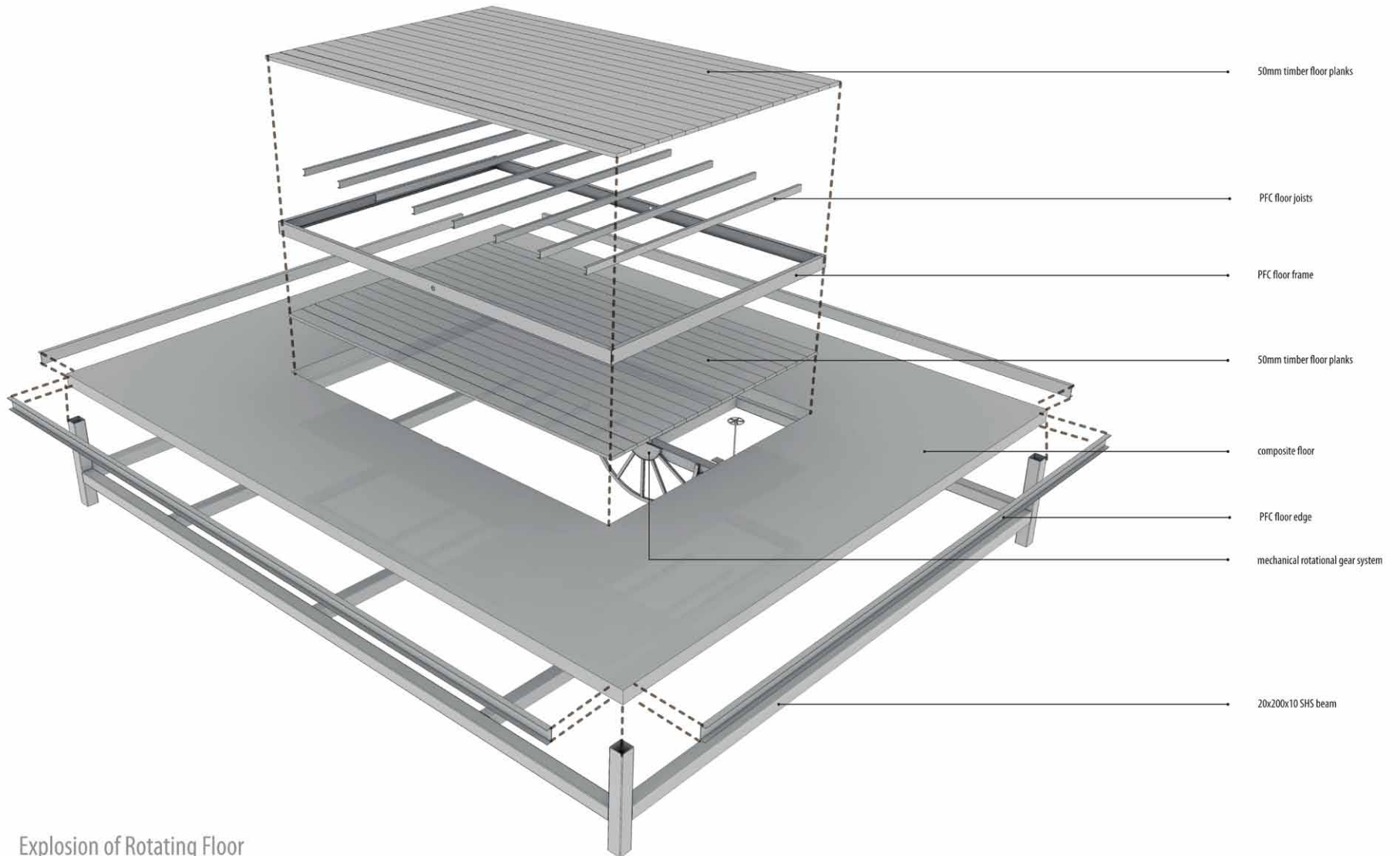
100x100x10mm steel PFC floor joists, welded to 200x25x8 steel PFC frame

CONCRETE WORKING: TOP REINFORCED STEEL BARS ALIGNED CLIMBER IN EACH DIRECTION ON ONE SIDE AND FLOOR IS 200x25x8 steel PFC, existing floor frame with M16 steel bolts on the other. Ball bearing load between 25mm steel plates, bolted together with M16 steel bolts

200x25x8 galvanized steel PFC frame

200x25x8 square hollow section structural frame, galvanized and finished with 2 coats of inorganic primer (spray application). Shop welded according to detail.

SECTION: Mechanical Gear System



Explosion of Rotating Floor

Figure 9.13: Axonometric details of rotating floor (Author, 2011)

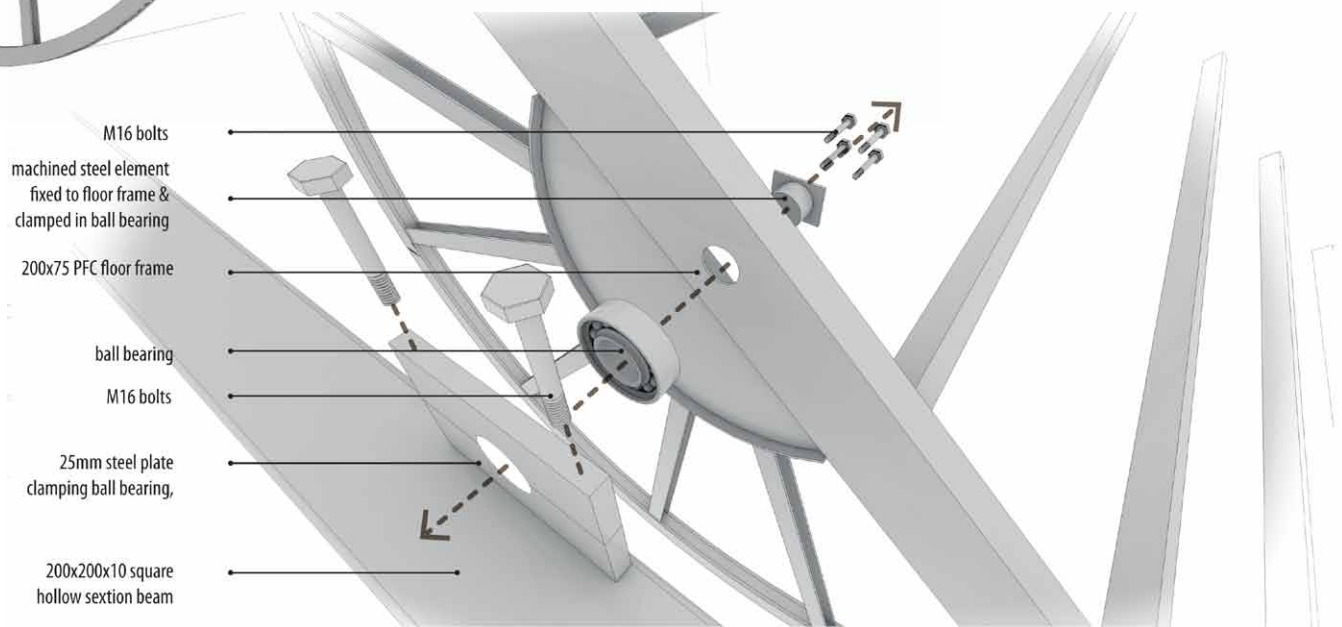
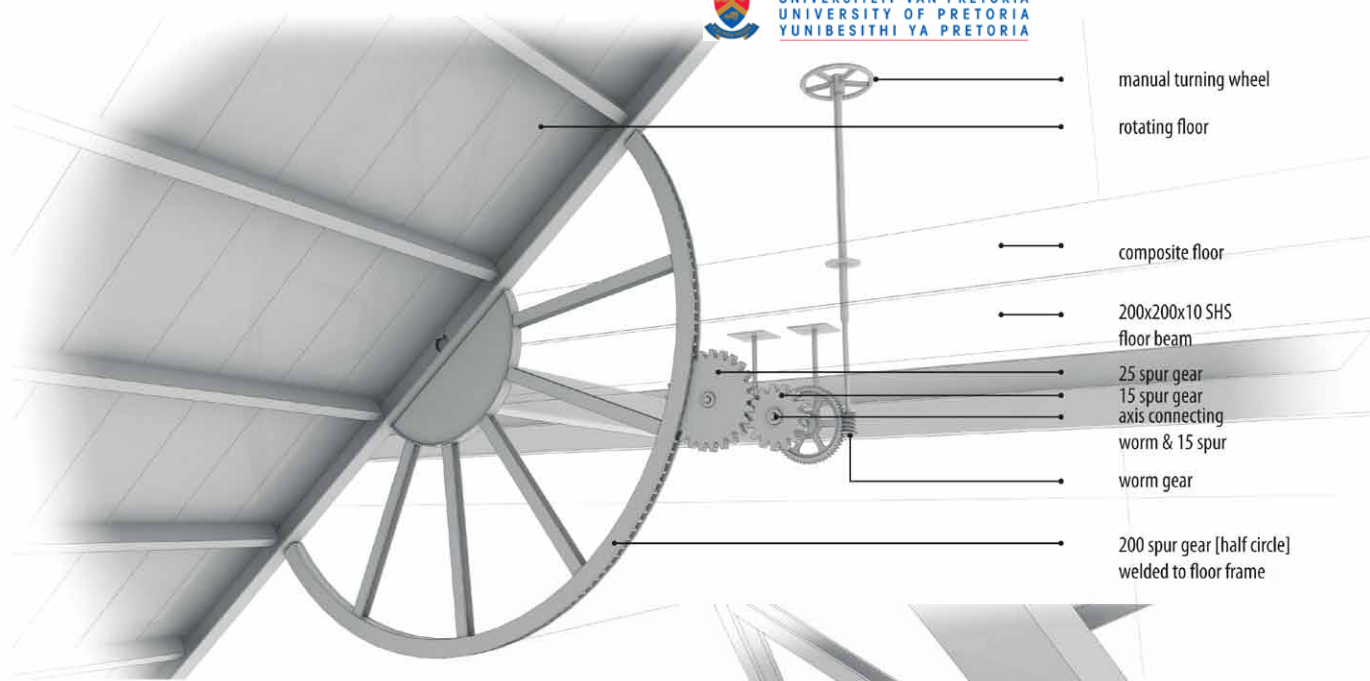
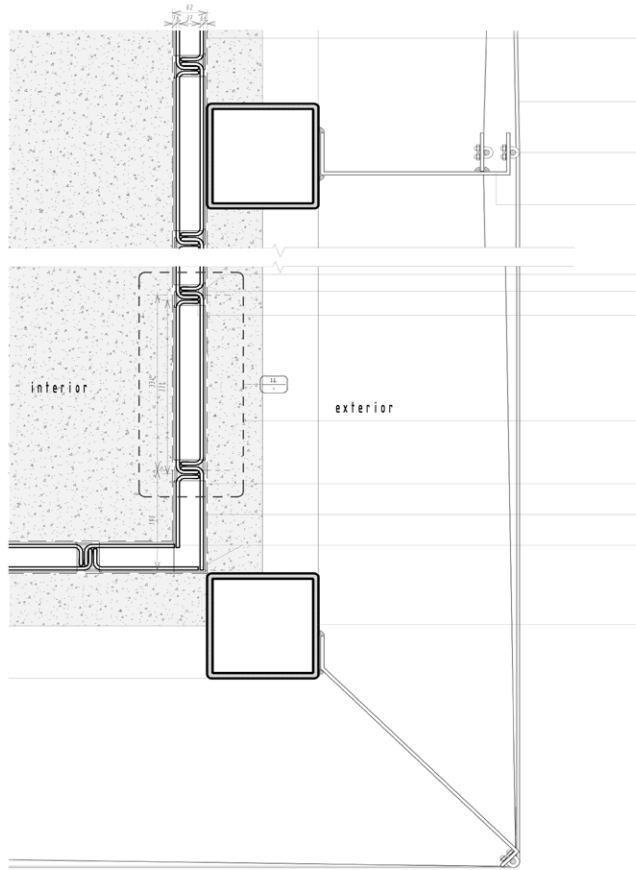


Figure 9.14: Typical details of the Plkington Profilat u-profile glass system (Author, 2011)

PLAN: U-profile glass façade detail



K12 series powdercoated aluminium frame (P.N. 961WA)

100X0.8mm copper strips waved (as per detail) between Ø10 steel rods

Ø10 galvanised steel rod spaced @ min. 1000 centres, fixed to flat bar with 6x13.7x33x20 (M6) steel u-bolt

6mm galvanised steel flat bar bent & welded to detail

glass shim (P.N. 41-244)

high quality silicone sealant

gasket (P.N. 166)

HH Robertson GC Composite Steel and Concrete Flooring, on 205x75x1.2 OC steel permanent formwork panels. Panels fixed joined together with clips @ 500mm centres. GC panels fastened to supporting steelwork with two self-tapping screws per unit at end bearing points

PVC insert (P.N. 961-2)

331x41x6 (K32/41/6 series) u-profile glass panels

high quality silicone sealant

200X200X10 Square hollow sections, galvanised and finished with 2 coats zincchromatic primer (Spray application). Shop welded according to detail.

SECTION: U-profile glass façade connection detail

HH Robertson GC Composite Steel and Concrete Flooring, on 205x75x1.2 OC steel permanent formwork panels. Panels fixed joined together with clips @ 500mm centres. GC panels fastened to supporting steelwork with two self-tapping screws per unit at end bearing points

P.N. 95WT non-thermally broken powdercoated aluminium frame 200X200X10 Square hollow sections, galvanised and finished with 2 coats zincchromatic primer (Spray application). Shop welded according to detail.

6mm galvanised steel flat bar bent & welded to detail

Ø10 galvanised steel rod spaced @ min. 1000 centres, fixed to flat bar with 6x13.7x33x20 (M6) steel u-bolt

100X0.8mm copper strips waved (as per detail) between Ø10 steel rods

331x41x6 (K32/41/6 series) u-profile glass panels

P.N. 95WT non-thermally broken powdercoated aluminium frame

P.N. 961WT non-thermally broken powdercoated aluminium frame

HH Robertson GC Composite Steel and Concrete Flooring, on 205x75x1.2 OC steel permanent formwork panels. Panels fixed joined together with clips @ 500mm centres. GC panels fastened to supporting steelwork with two self-tapping screws per unit at end bearing points

200X200X10 Square hollow sections, galvanised and finished with 2 coats zincchromatic primer (Spray application). Shop welded according to detail.

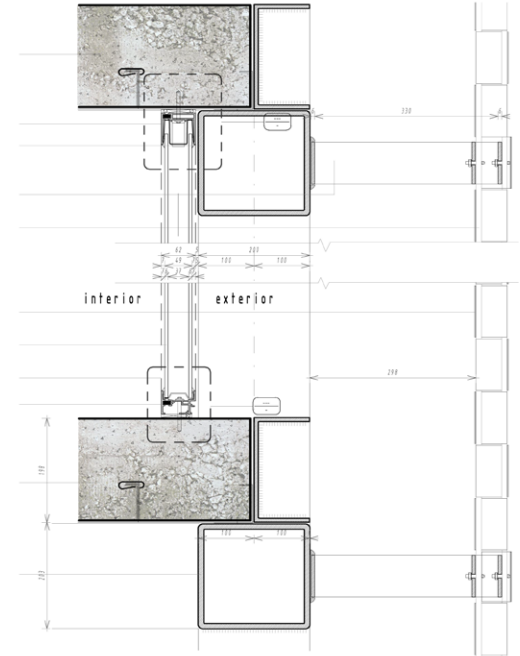
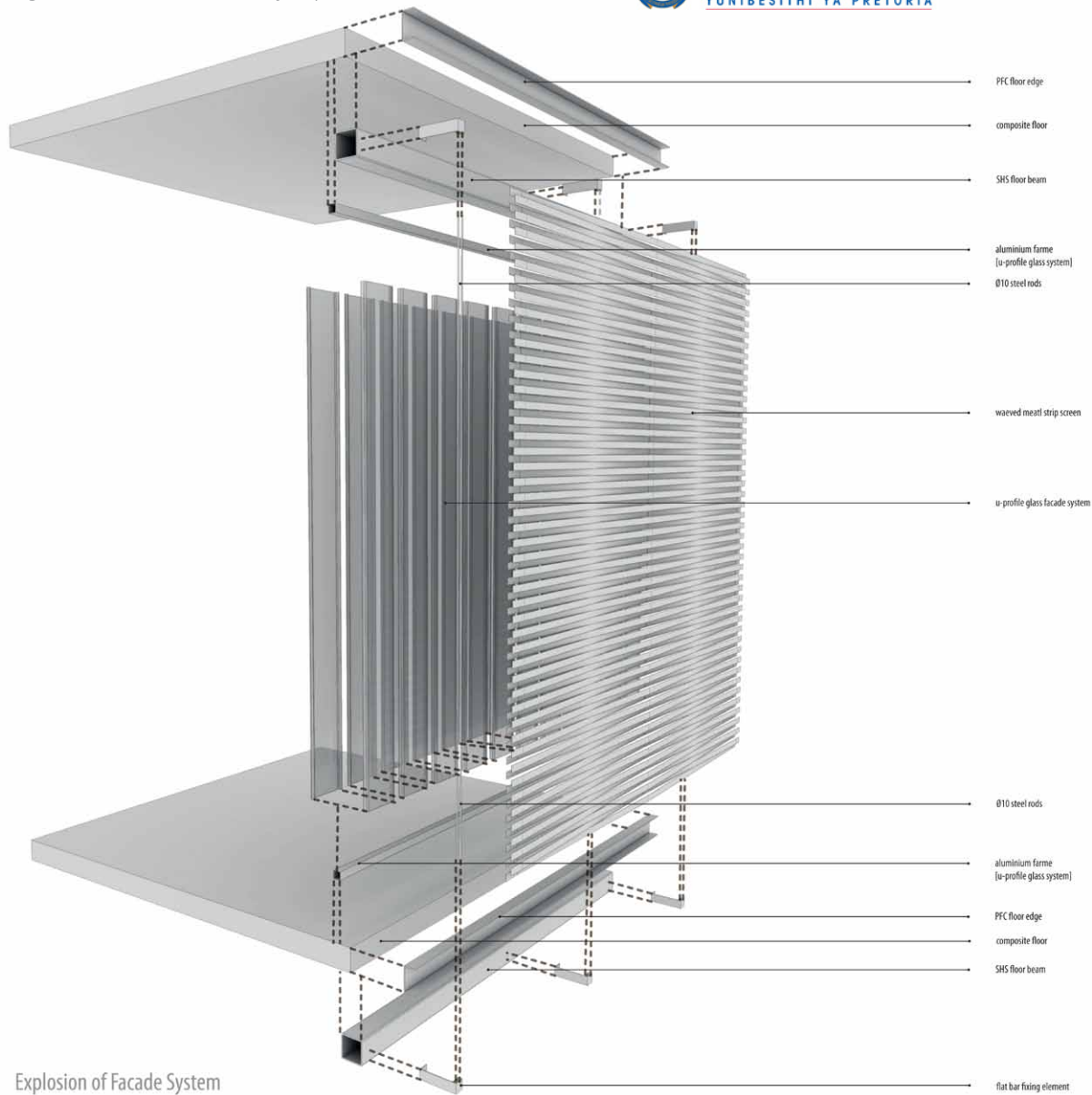




Figure 9.15: Axonometric details of façade system (Author, 2011)



Explosion of Façade System