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PROJECT FEATURE

ROSEBANK LINK

Rosebank Link is a new office development located at 173 Oxford Road, Rosebank - next to the Gautrain Station, The Zone and Rosebank Mall. The building was planned for a total rentable area of 18,744m² of office area and 1,553m² of ground floor retail area. The brief was to transform the current existing building into an expressive steel and glass clad office building, making it a uniquely imposing icon of the Rosebank skyline. Standing at a total of 15 stories above ground the building consists of 2 basement parking levels, a ground floor public/retail level, 5 parkade levels and 9 stories of offices above a podium level.

Developed by Redefine Properties and designed by Paragon Architects, this is one of the last remaining ongoing projects in the R7 billion facelift of the Rosebank precinct. Identified as one of 35 priority development areas in greater Johannesburg, with the focus on improved service delivery and infrastructure, recent projects have included Rosebank Towers and the Rosebank Fire Station, and additional work at the Rosebank Galleria and The Mews.

Unique Design

"As a building standing foremost in the centre of a developing cosmopolitan area, it was important to have a unique design that served the needs of the client and its neighbours, as well as the public, in a new, exciting, and smart way," Paragon Senior Project Architectural Technologist Warren Wesson comments.

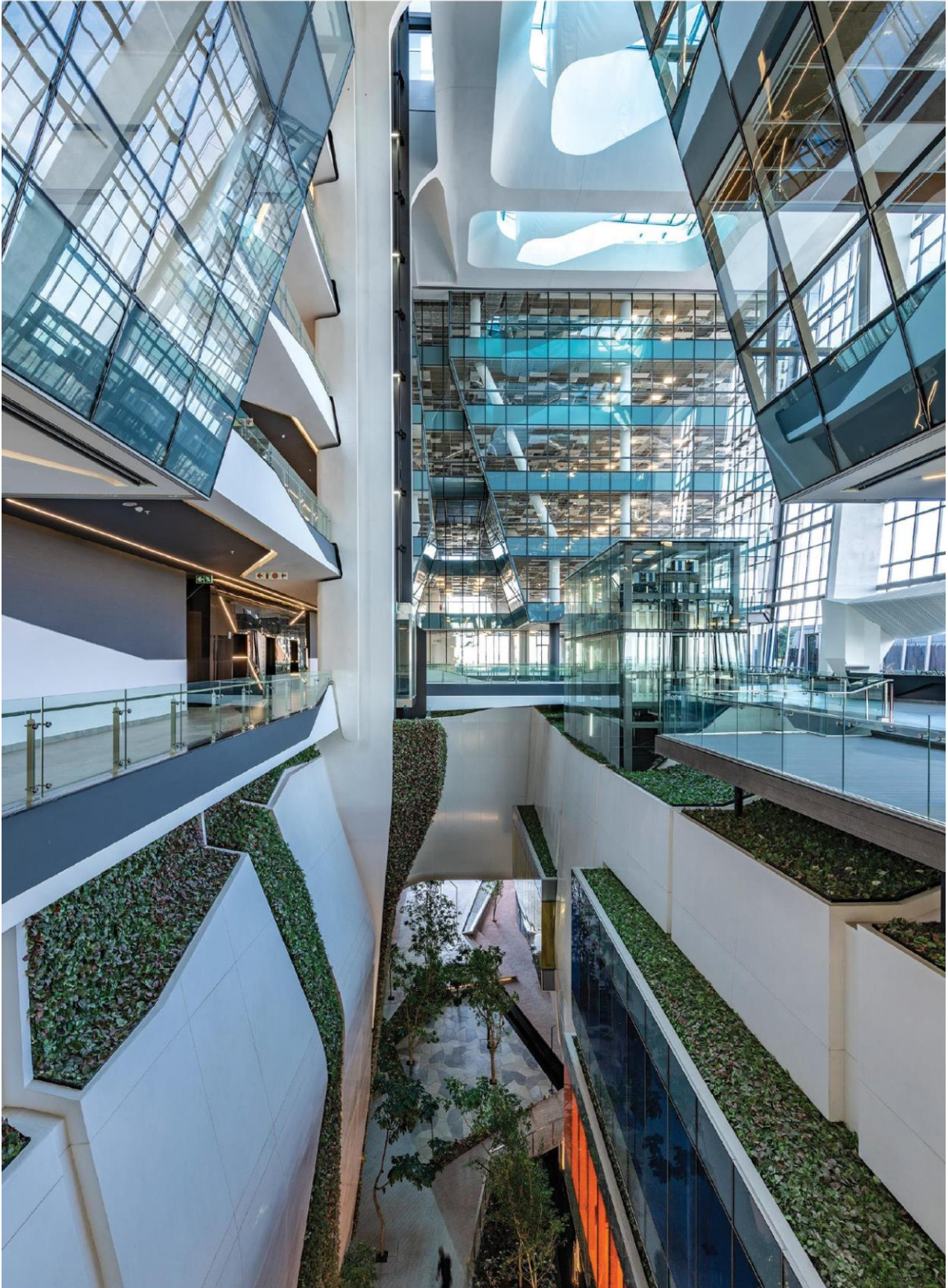


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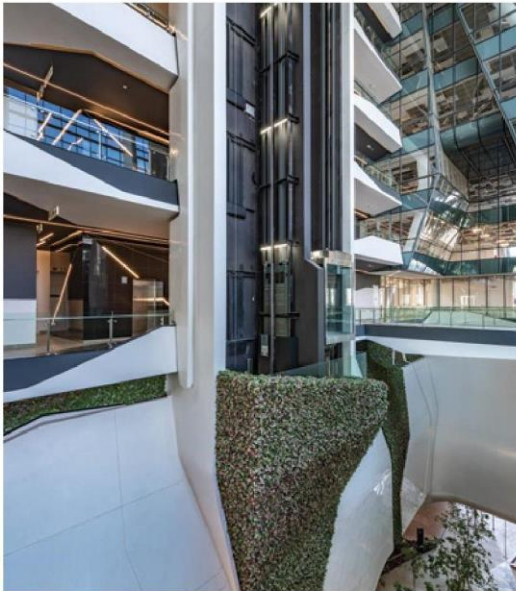
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The East and West façades consist of a composite aluminium-clad shell with articulated strip windows to allow light and views to filter into every office module. These faceted façades have a visual quality emphasised by the articulated strip windows, which transform from day to night. The flush-glazed north and south façades allow for uninterrupted views over greater Rosebank.

The backdrop to these façades is a smooth and glossy flat finish that transforms itself into the underbelly of the building. The organic vaulting architecture of the underbelly raises the building from the ground, affording users an unimpeded

thoroughfare between the Gautrain Station and the shopping area.

At the heart of the building is a multi-storey enclosed, north-facing atrium fashioned to capture the sunlight filtering down into a unique fluid underbelly of the ground-floor thoroughfare. This creates a conduit for a combination of green walls and indigenous planting brought to life in executive roof gardens, podium-level gardens, and parkade-wall gardens that result in a tranquil oasis within the bustling Rosebank precinct. Suspended Meeting Pods can be viewed from the landscaped thoroughfare. The architectural intent is for the



Pods to be as open as possible, embedded in the glass. These pods are also cantilevered from the concrete frame. The atrium structure formed part of the glass façade, spanning over six stories and additionally it formed a part of the glass skylight structure on the atrium roof. The structure spanned large distances and had to be as slender as possible while limiting deflection.

Atrium Structural Engineering

The inner—and bottom chord of the atrium vertical truss and roof truss were determined by architectural constraints. The outer chord is braced by transom beams for the façade glass, however, the inner chord had a large unbraced length due to the omission of regular knee-bracing. Similarly, the bottom chord had a large effective length for the uplift load case, due to knee bracing not being able to pierce the bulkheads of the skylights butting up snug to the truss either side. This resulted in a relatively large PFC inner chord and large I-section for a bottom chord. The purlins (bracing for the top

chord) of the roof had to step, due to the skylight glass line and sheeting line being on different levels. Additionally, the purlins form part of the skylight substructure. The load path was fairly two dimensional and an RHS section was used. For the atrium glass transoms, large SHS were used due to the wind, and gravity load cases being very similar correlating the sections' similar radii of gyration in each direction, it was also aesthetically preferred.

Smart Lighting Installation

Thanks to a unique collaboration between Paragon Architects, the building owners and digital display services company, Primary Colours, Rosebank Link now features a dramatic full-colour RGB video screen that has been custom-designed to be an integral part of the building's fabric, and to contribute to the building's striking appearance.

The installation features two distinct elements. The first of these is the LED screen, which is noteworthy for being one of the largest in South Africa. The second is the strip screen display



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that forms part of the building's exterior lighting. The largest of its kind in the country, the strip screen display can be controlled and manipulated remotely. Rather than being composed of individual lights, it is in fact made up of narrow strips of video screen. "Using this new DigiLED technology, we've been able to create an exceptionally flat screen that offers maximum viewing angles to both pedestrians and drivers using this major city artery," explained Primary Colours directors Ashendra Singh and Grant Neill. "With no off-angle colour shift, this new screen offers advertisers a unique way to tell their stories in the most impactful way possible," they added.

With HD 720 resolution and the ability to display 16 million colours, the complete screen measures 18m wide and 7m high (1,728 pixels wide x 745 pixels high). Geometric-pattern cladding was used to underline the fact that the screen is an authentic part of the building's fabric.

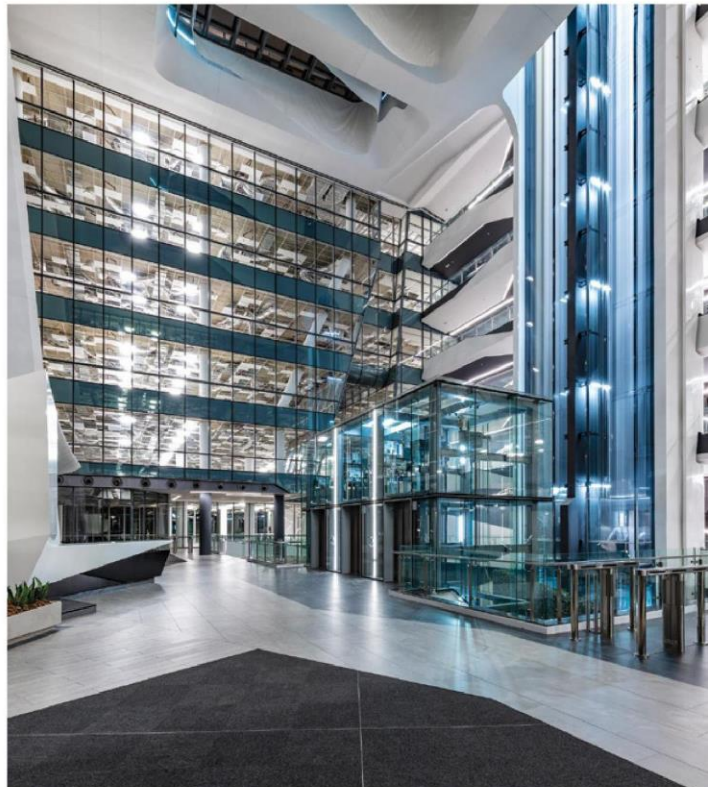
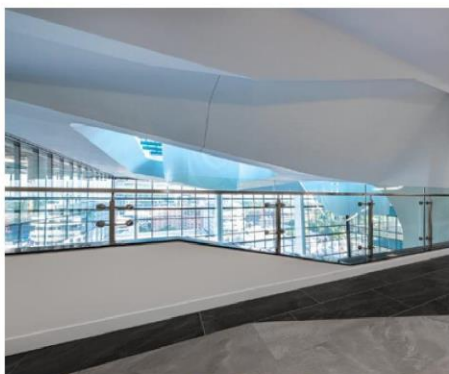
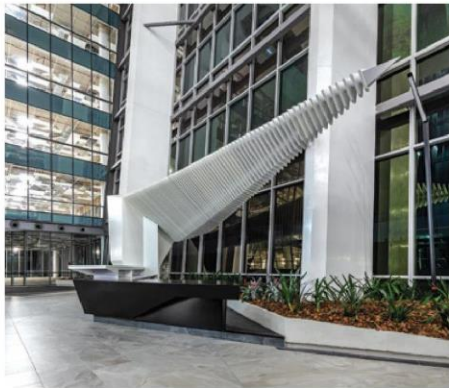
While the screen itself represents cutting edge technology, it is arguably the building's strip

lighting - attached via watertight perforations in the building façade, that is the most exciting aspect of this project. Most impressive when viewed at night, the ribbons of coloured video displays are designed to reflect from the building's edges, giving a more harmonious 'wash' effect. This 'smart lighting' has a total length of 226m and stretches across 15 floors of the building.

Sustainability

The building is designed and will be operated in an environmental and sustainable way. Passive building design techniques and environmental considerations will meet a 4 Star Green Star rating, creating a healthier and more productive environment.

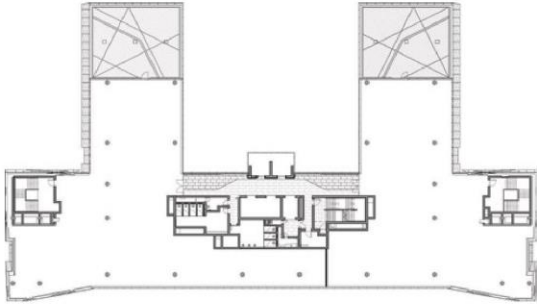
Rosebank Link is one of the last additions to the redevelopment of the Rosebank CBD. The area now houses some of the most modern office buildings in the country and serves as an example for future redevelopment in other CBD's throughout the country.



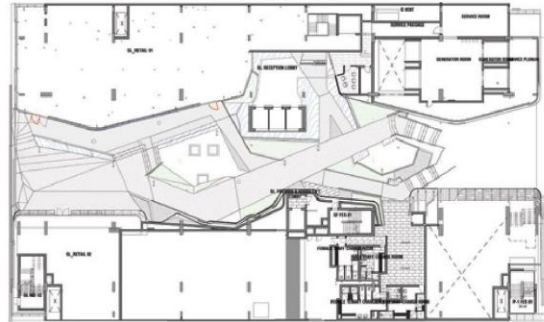
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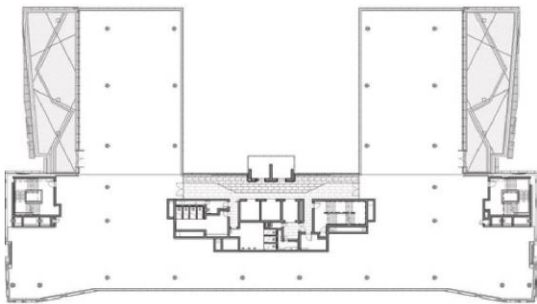
OFFICE LEVEL 8



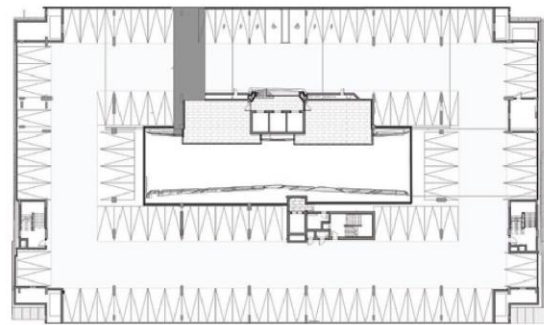
GROUND FLOOR



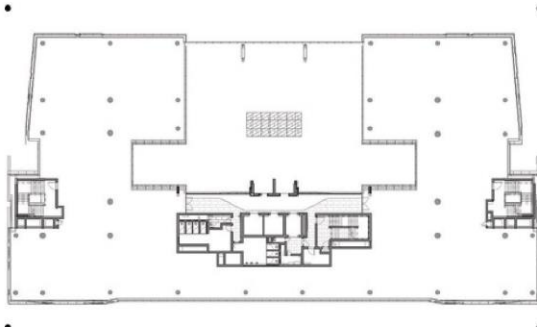
OFFICE LEVEL 7



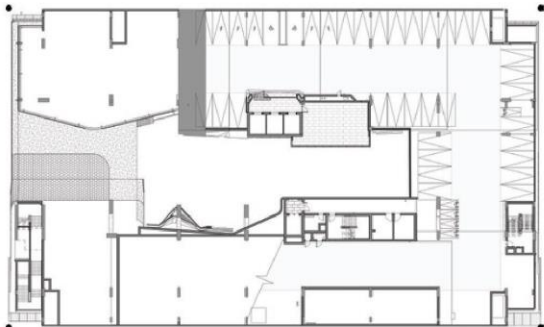
PARKADE LEVEL 2



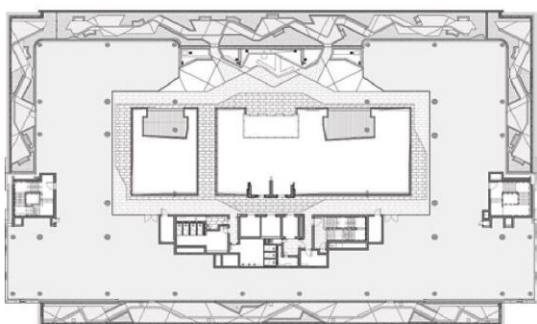
OFFICE LEVEL 1



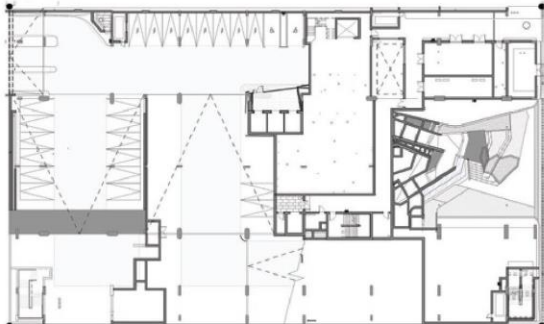
PARKADE LEVEL 1



PODIUM RECEPTION OFFICE LEVEL



BASEMENT LEVEL 1



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