

# SKY HIGH ELEGANCE

**DEVELOPER :** Golden Age Group  
**MAIN CONSTRUCTION COMPANY :** Hickory Group  
**ARCHITECT :** DKO Architecture  
**STRUCTURAL ENGINEER :** Robert Bird Group  
**CONSTRUCTION VALUE :** \$170 million

Sky One, Box Hill is a \$170M landmark mixed use development of 440 apartments over 36-levels with three levels dedicated to high end retail and fine dining. The building features premium stainless steel appliances, stone bench tops and designer tapware, a residents sky lounge, landscaped gardens, pool, gym, spa, sauna, yoga studio, lounges, private dining, private cinema room and an entertainment room.

**The residential tower comprises 440 apartments above a retail podium and basement carpark with space for 325 cars.**

In January 2017 Hickory was engaged on an early contractor involvement basis to assist with design development, façade and structural analysis, programming advice and value management. Hickory was then awarded the early works package, including demolition of existing structures and the construction of the 7-level basement.

“The site was next to a live rail line and twice a week we had inspections from a Rail Authority representative to make sure that our construction wasn’t impacting on their asset,” explained Project Manager, Travis Budd.

A temporary platform was constructed to allow greater access for the earthmoving equipment during the excavation. “This involved the placing six 35m high columns of 1,500mm diameter, constructing a top down slab and then excavating underneath,” said Travis.

The basement alone took 10 months to build and Hickory was then contracted for the construction of the tower. “The tower is a conventional structure with an in situ concrete core and post-tension slabs” said Travis.

“Through the value management process, we were able to find efficiencies throughout the structure, services and façade elements of the build.”

A unique feature of Sky One is the glass façade; it curves in and out creating a beautiful seamless glass envelope.

The challenges included maintaining the seamless glass facade whilst accommodating the large amount of retail services to the podium levels. The curved glass façade with the LED and the stainless steel capping adds to the impact of the exterior.

The company also had a complex task of transferring structural loads in the podium. Each retailer had a different floor plan, with support columns in different places so it required a number of transfer beams to take into account.

“We had to work to a tight time frame to ensure the apartment block was completed to schedule,” said Travis. “The 3-level podium was redesigned due to client’s wishes and the 5,000m<sup>2</sup> retail area will now be completed in March 2020.”

Established in 1991, Hickory has a reputation for their innovative construction methods

and has successfully completed projects across commercial and high rise residential sectors. Their capabilities include an inhouse formwork structures team as well as joinery and fitout services for quality interior finishes. They also have a façade team that manages the design, procurement, fabrication and installation of all steel, aluminium, window and curtain wall systems.

Hickory is well known for their prefabricated building system that integrates the core, shear walls, bathrooms and façade of a building into a unified structure which is built exsitu and in parallel with onsite works.

The Hickory Building System delivers high rise construction projects up to 50% faster with reduced cost. A feature of the Hickory Building System is their prefabricated elements such as the sync bathroom pods.

With up to 300 onsite, separable Portion 2 of the DKO designed tower was completed by the end of October 2019, taking its place as the tallest building in Box Hill.

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Below NJM Design worked on the engineering, design and documentation of the mechanical and hydraulic services.



Sky One Apartments, Victoria



**NJM Design (NJM)** is a multi-disciplinary engineering consultancy based in Melbourne. They specialise in designing mechanical, electrical and hydraulic services as well as fire protection, sustainability services (ESD) and vertical transportation.

A team of five started work at the Sky One Apartment in June 2017, for six months they worked on the engineering, design and documentation of the mechanical and hydraulic services.

“The main challenges were accommodating the ducts for the retail kitchen exhaust system and working out the smoke management strategy for the retail atrium,” said Founder and Managing Director, John Maroulis.

NJM has been working with Hickory Group since 2005, providing building services designs on up to 30 developments. They have a vast experience with different overseas construction methods successfully completing projects in over 10 countries in Europe and Asia.

Across Australia NJM services major corporations, semi-government bodies and private developers as well as architects and project managers. They provide building service designs to a range of sectors including

renovations of existing facilities as well as new constructions for commercial, residential, retail, medical and Greenfield developments.

Established in 2004, NJM provides specialist designs and consultancy in the areas of ecologically sustainable development, communications and security systems, water treatment and management, fuel systems and standby power generation. They also provide architectural and specialist lighting designs and thermal modelling.

The company delivers a package of engineering, design, documentation and project management services or provide their specialist fire engineering and ESD solutions independently. NJM also offer energy management and audits, compliance audits and feasibility studies.

A recent successfully completed project for NJM is 9-11 Cremorne Street, a 5 Star Greenstar designed and as built office building with a large basement car shuffler. The ESD features include solar power, natural ventilation louvres and rainwater collection measures.

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