



CHANGING MELBOURNE'S SKYLINE

Light House Tower; a beacon of design
and material innovation.

Project: Light House Tower
Address: 450 Elizabeth St, Melbourne CBD
Architect: Elenberg Fraser
Builder: Multiplex Constructions
Contractor: Express Interiors
Developer: Hengyi Australia
Studco products used: Studco Vortex Wall Systems, Studco
Suspended Ceilings, Resilmount Sound Isolation Systems,
EZConcept Finishing Solutions, EZYJamb Door Jamb System.



Custom suspended ceiling systems were designed for the pool and lobby areas.

Designed to look like a three-dimensional kaleidoscope that ignores the laws of physics with its luminescent appearance as a moving object; Lighthouse Tower in Melbourne's CBD is a 69-storey residential development comprising of 607 units, automated car parking stacker system, recreational facilities, resident lounge areas, and of course amazing views right across Melbourne.

Using traditional masonry techniques for achieving corners, the Light House Tower gives the illusion that it is turning on its axis, with the appearance of no corners and reflective colour

changing panels, which create a vibrant mosaic that stands out in Melbourne's urban setting. The design also maximises natural light and ventilation, whilst providing guests with privacy and dynamic panoramic views of the city.

Interior design schemes include timber veneers, natural stone benchtops, full height doors, an integrated T.V. unit, and zoned mood lighting. Residents have access to abundant common spaces, such as modern lounge and dining rooms for entertaining, a 25m indoor pool, outdoor heated spa, and gym with outdoor exercise terrace.

To ensure the interior met the luxurious needs of this demanding design, it was imperative for the developers to partner with a provider that could offer a high level of service, including fast turnaround on technical enquiries, flexibility in design constraints and a reliable supply of products.

Express Interiors Project Foreman Chan Som mentions; "Working with Studco provided Express Interiors with the confidence that we could meet specific project design requirements and deliver results on time. Studco's innovation is clearly revolutionizing the future of apartment living"

The Studco Vortex Wall System supports the weight of the 25mm thick stone wall panels that have been fixed directly to the framing system.

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Light House Tower's reflective colour changing panels create a reflective piece of art in the heart of Melbourne.



Taking into consideration the towering height of this 218 metre tall structure, wind-related noise associated with high rise buildings was a potential concern for Multiplex, as it often causes loud creaking noises throughout the internal wall structure of tall buildings. In order to overcome this annoyance, Studco engineers collaborated with partners Multiplex, PKA Acoustics and Deakin University's Engineering Research Team to research, critique and find a solution to the problem, leading to the creation of the new Studco Vortex Wall System, which eliminates the stress and tension that is attributed to noise annoyance.

Ensuring that all elements of the design criteria were met, the Studco Vortex Wall System went through various stages of design to adequately address all causes of the noise annoyance, including tension and metal-to-metal friction. In addition to removing tension, the Studco Vortex Wall System is so structurally sound it can support the weight of the 25mm thick stone panels that are fixed directly to the framing system.

“Construction methodologies have changed but not the internal wall systems and we are tackling that. In a high wind situation, modern buildings are susceptible to a phenomenon called ‘vortex shedding’. Our investigations show that resultant vibration can be dissipated through the steel stud wall. We needed to find a way to take the tension out of our product so that when that vibration comes through the slab and hits the steel frame, that frame will not be the route through which the noise is dissipated.” says Warwick McAlpin, Studco General Manager of Sales and Marketing.



Lounge and dining room provide the perfect space for entertaining.

EZYJamb door jamb systems were installed throughout the apartments for a modern finish.



Light House Tower required great attention to detail when creating the modern interiors designed by Architect Elenburg Fraser. To achieve this contemporary look, EZYJamb and EZConcept Finishing Sections were a perfect fit to create concealed door frames and square set interiors. Manufactured by Studco Building Systems, EZYJamb and EZConcept Finishing Sections are made from the world-renowned BlueScope Steel, are simple to install and meet the finished surfaces standard AS/NZS 2311:2009 to ensure they can be painted immediately.

A high priority for Multiplex was to eliminate vibration and noise throughout the building. A challenging aspect of this was how to eradicate the vibration and sound that would be caused by the automated car stacker that operates behind the apartments on the lower eight floors of the building.

In order to create high acoustic rated rooms, Studco worked closely with PKA Acoustic Engineers to develop a bespoke solution that would perform as the ideal barrier, resulting in custom Resilmount Sound Isolation Systems being implemented across these floors.

To complement the clean lines and modern interiors, Studco collaborated with prefabricators SBS to design a custom suspended ceiling system for the indoor pool and lobby of the building.

Ongoing collaboration between Multiplex and Studco was imperative to complete Light House Tower in the given time constraints. The Studco Engineering Team was readily available to answer any questions or concerns during this time to ensure Multiplex were able to complete the ceilings without complications or delays.

Apartments fitted with EZYJamb flush finish door jamb systems



“Continuous innovation is the key to keeping up with the speed that buildings are being constructed today.”

A custom suspended ceiling system was fitted to bring the architectural design to life in the lobby.

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