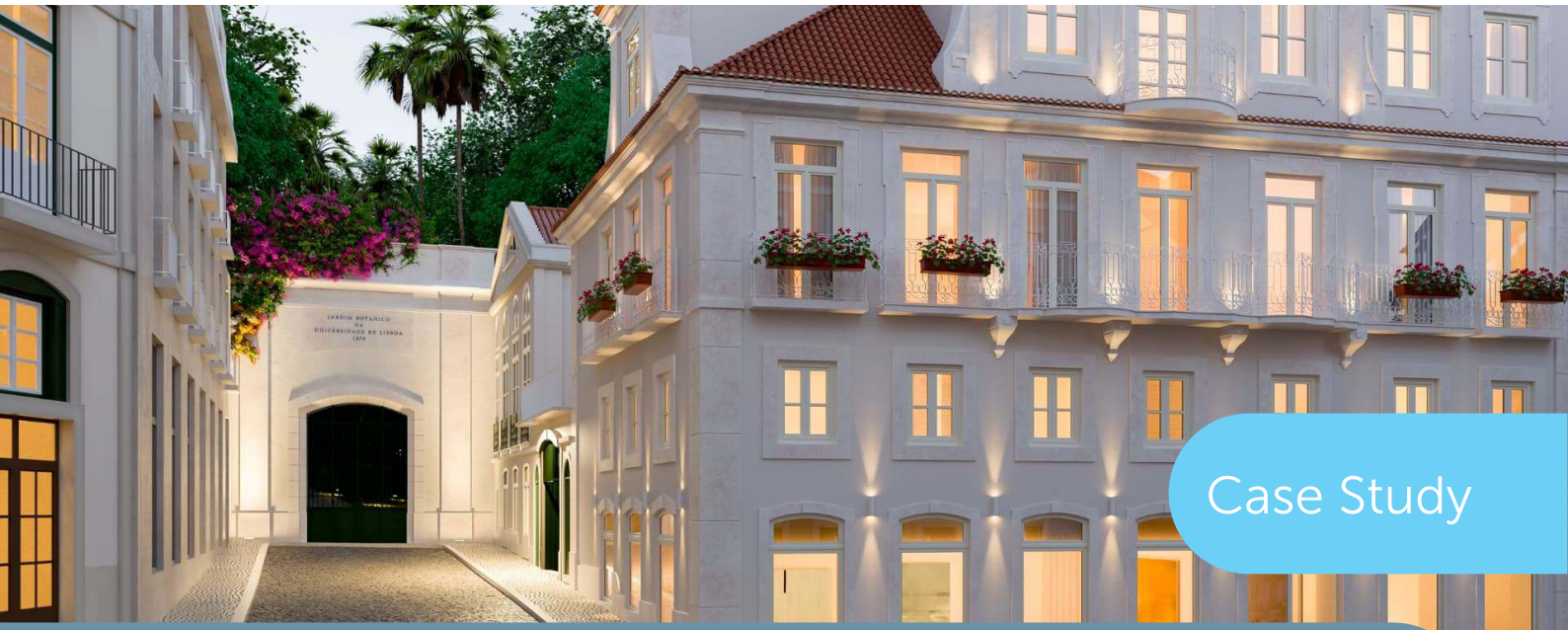
Condominium Rua da Alegria
Lisbon, PT

cdm stravitec
Making your world a quieter place



Case Study

Property Owner
Eastbanc

Main Contractor
Alves Ribeiro

Acoustic Consultant
Certiprojecto

Architect
Frederico Valsassina

Structural Engineer
A2P

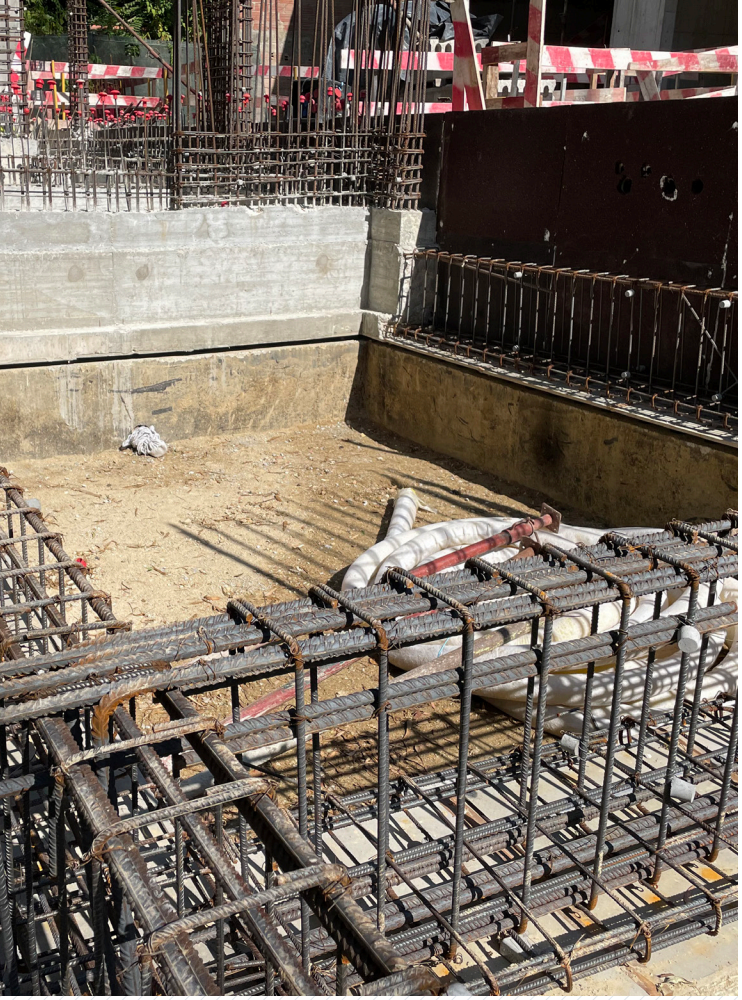
OVERVIEW

Situated strategically on Alegria Street, this housing and retail development is positioned as a corner building along the street that links Praça da Alegria to Príncipe Real. Its prime location places it in close proximity to notable city landmarks such as Avenida da Liberdade and Parque Mayer.

The project's objective is to imbue the buildings with a contemporary function while preserving the morphology and the historical significance tied to the distinct uses associated with the three separate structures. This involves the restoration of façades and architectural elements to maintain the overall memory and identity of the site.

Stravibase SEB

- Bespoke structural elastomeric bearing for the structural isolation of buildings and other structures
- Series of elastomer pads laminated to formwork



AT A GLANCE

CHALLENGES

- Residential buildings located above a subway railway tunnel
- Design defined natural frequencies < 10 Hz
- Need of high lateral stiffness, providing a high lateral stability, as the project is located in a seismic zone
- Isolation at different levels

BENEFITS

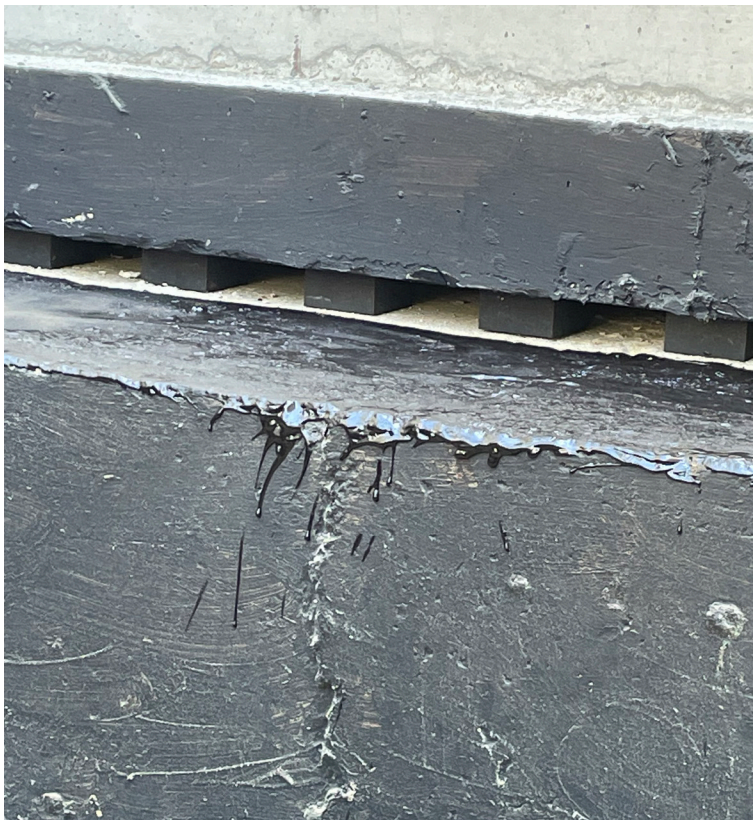
- High performance vibration isolation solution designed for a critical project

SOLUTION

This project involves a pair of identical buildings (numbered 76 and 100) situated directly above a train tunnel. Following on-site vibration tests, the acoustician specified a building base isolation (BBI) system into the foundation level of the buildings.

Stravibase SEB elastomeric bearings were recommended by CDM Stravitec and consists of a series of elastomer pads laminated on one or both sides of the formwork. These bearings are engineered to align with natural frequencies ranging from 6 Hz to 20 Hz. The elastomer pads are custom-made and available in various dimensions to accommodate acoustic design loads of up to 10 MPa.

24.480 kN
Stravibase SEB



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