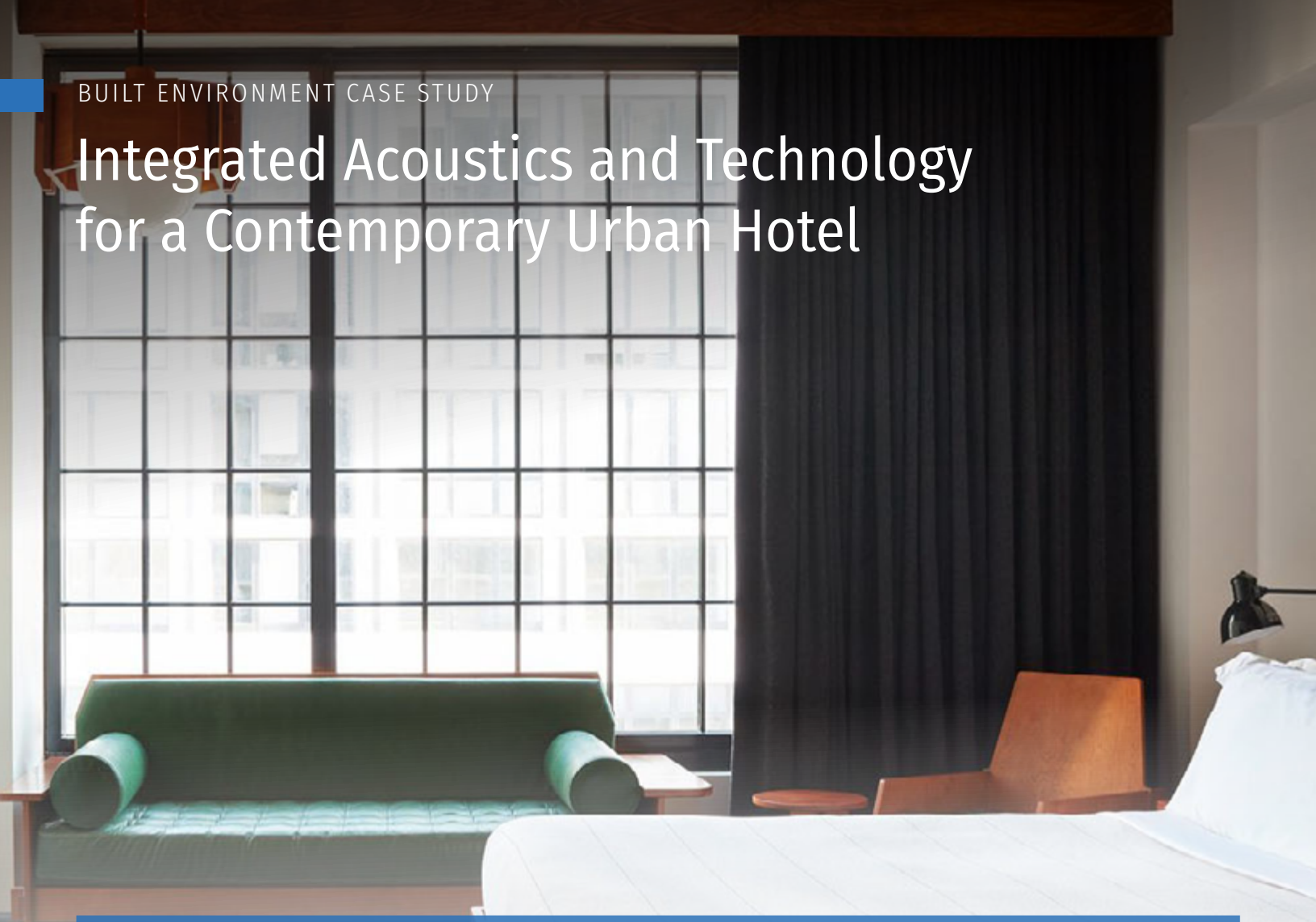
BUILT ENVIRONMENT CASE STUDY

Integrated Acoustics and Technology for a Contemporary Urban Hotel



VISION

Create a hotel environment that supports guest comfort and privacy while accommodating active public areas, events, and retail uses within an urban setting.

PARTNERSHIP

Collaborate with the project team and local authorities to establish acoustic criteria, technology standards, and code-compliant solutions across the hotel.

VALUE-ADD

Deliver acoustic and vibration control strategies that protect guest comfort in a dense urban environment while supporting active public and event spaces, and coordinated audiovisual, IT, and security strategies that support a unified and seamless guest experience.

Ace Hotel Downtown Brooklyn is a 13-story hotel development located at 30 Bond Street, featuring 288 guest rooms alongside conference spaces, restaurant venues, and retail areas. Positioned within a dense urban environment, the project required careful coordination of building systems to balance guest comfort with the activity and energy of public-facing spaces.

Trinity Consultants was engaged to provide acoustical, audiovisual, IT, and security consulting services for the project. The scope addressed both architectural conditions influenced by surrounding noise and vibration as well as the integration of technology systems supporting hospitality, events, and day-to-day operations throughout the hotel.

Trinity Consultants

VISION

The Ace Hotel Downtown Brooklyn project sought to balance the demands of a lively hospitality environment with the need for acoustic comfort and functional technology infrastructure. With guest rooms, conference spaces, and public venues coexisting within a compact urban footprint, the project required performance criteria that addressed both privacy and flexibility.

PARTNERSHIP

Trinity Consultants partnered with Stonehill & Taylor Architects and Roman and Williams to support design and planning efforts across the hotel. The team conducted site surveys to measure existing noise levels within and around the property and coordinated with local authorities to confirm applicable building code requirements. Interviews with the client and project team informed the development of IT infrastructure, audiovisual, and security requirements.

VALUE-ADD

Trinity Consultants developed architectural acoustical design criteria to support guest comfort and privacy throughout the hotel, addressing both airborne noise and structure-borne vibration. The building is immediately adjacent to, and partially above, an active subway line, with a station located approximately one block away. As a result, vibration-induced noise posed a significant risk to guestroom comfort and sleep quality.

Trinity provided building isolation design strategies to mitigate vibration transmission into occupied spaces, balancing performance requirements with project budget considerations. The team remained engaged through design and construction to support implementation of vibration control measures and confirm alignment with the established criteria.

Audiovisual services included a building-wide distributed audio system providing house music throughout public areas, along with a high-quality sound system and temporary DJ input location within the Bar Hall. Event and meeting spaces were supported by high-definition projection and wall-mounted displays with localized input systems, as well as audio presentation and speech reinforcement capabilities. Digital signage and assistance with an in-room on-screen entertainment system were also included.

IT and security services addressed infrastructure and systems requirements, including cabling system for all IP-based building systems, access control and alarm monitoring, and video surveillance. These systems were designed to support hotel operations across public, private, and back-of-house areas without interfering with guestroom acoustic performance.

ARCHITECT
Stonehill & Taylor Architects

INTERIOR DESIGN
Roman and Williams

ACOUSTICS, AV, IT, SECURITY
Trinity Consultants Built Environment