

Interior Exterior®

VOL.6 ISSUE 24 THE MAGAZINE FOR INDIAN CONSTRUCTION INDUSTRIES www.interiorexteriorgroup.com OCTOBER / NOVEMBER / DECEMBER-2018 ₹-200/-



STRATEGIC ALLIANCE PARTNERS



Design Interwoven with Flexibility and Modernity in a All-Encompassing Sporting Facility



Designed to create a versatile sporting facility comparable to international standards that reflects the energy and vibrancy that the intended usage, the building interweaves scale and modernity with flexibility of space and vibrancy of form to make it stand out as a one-of-its-kind sports facility in India. The essence of the design lies in the balance it achieves between structure and interior space design brought by vivacious use of colors and bold graphics juxtaposed with the pronounced muscular form of the building.

PRINCIPAL DETAILS

Principal Architect	: INI Design Studio
Location	: Greater Noida
Principle designer	: INI Design Studio
Client	: Shiv Nadar Foundation
Project Name	: Indoor Sports Complex
Structural Consultant	: Parvati Consultants

FACT BOX

Design Team	: Jayesh Hariyani, Rakhi Rupani, Adi Mistri, Harsh Goel, Saumil Mevada, Ashish Dave, Bhargav Bhavsar
Build Area	: 1,16,000 sq. ft
Site Area	: 165685.6 sq.ft
Photography	: Purnesh Dev Nikhanj



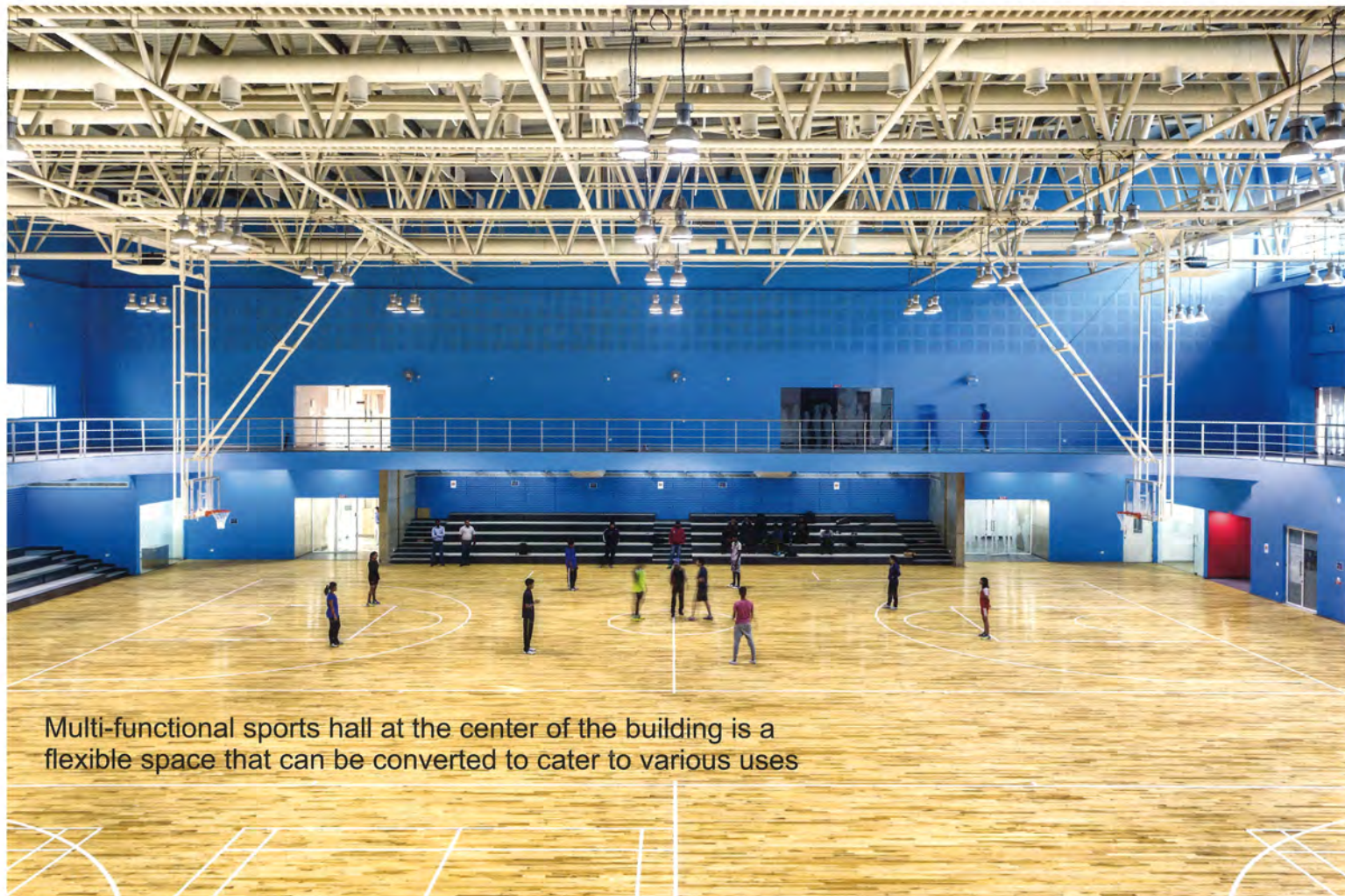
INI DESIGN STUDIO

AHMEDABAD • MUMBAI • PUNE • LONDON

www.inidesignstudio.com

Large-scale buildings often cater to multiple uses. Flexibility in spaces brought in by design and materiality in the Indoor Sports Complex makes it a very efficient, and at the same time, an aesthetic structure.



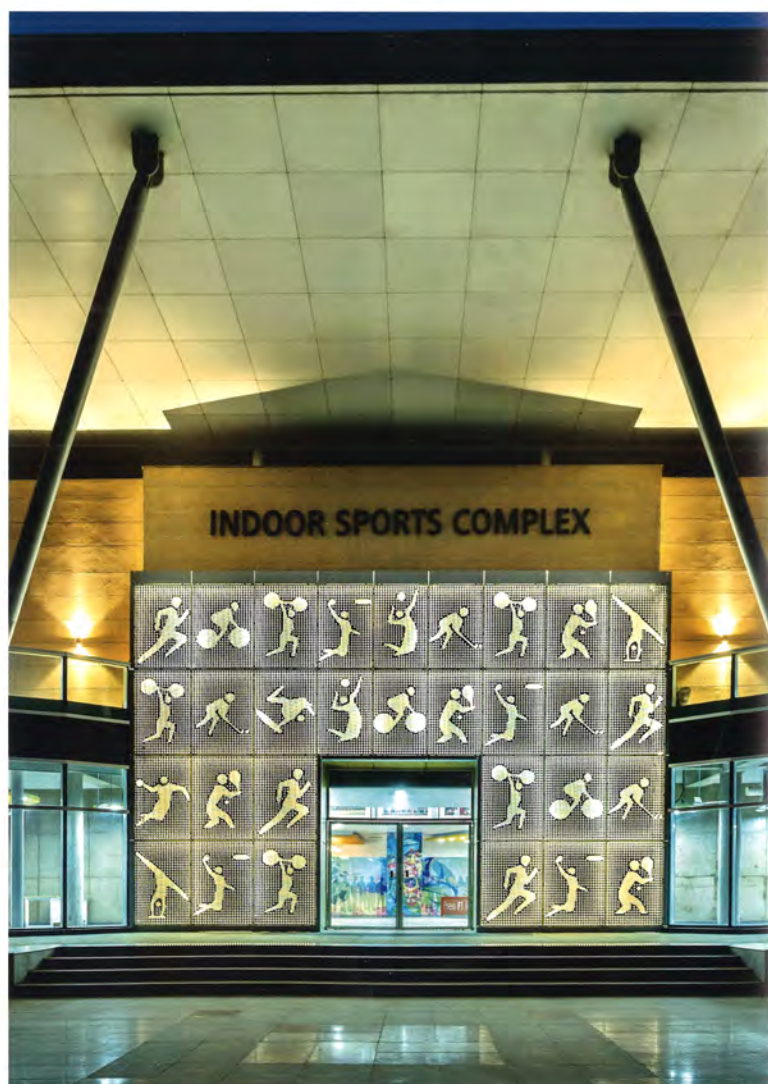


Multi-functional sports hall at the center of the building is a flexible space that can be converted to cater to various uses

The design of the indoor sports complex was led by the vision of creating a versatile sporting facility comparable to international standards. The design inspiration came from the idea of creating a vibrant, active, flexible, sustainable, stout yet aesthetic structure that reflects the activities it was intended to host. Thus, while the building was designed to adhere to international standards, it incorporated the contextual requirements that a university culture in India envisages. Hence, the sports complex, along with the facilities at par with global standards incorporated the elements such as break-out spaces, bold and lively graphical treatment of the interior spaces and an engaging cafeteria that made it relevant for the university context.

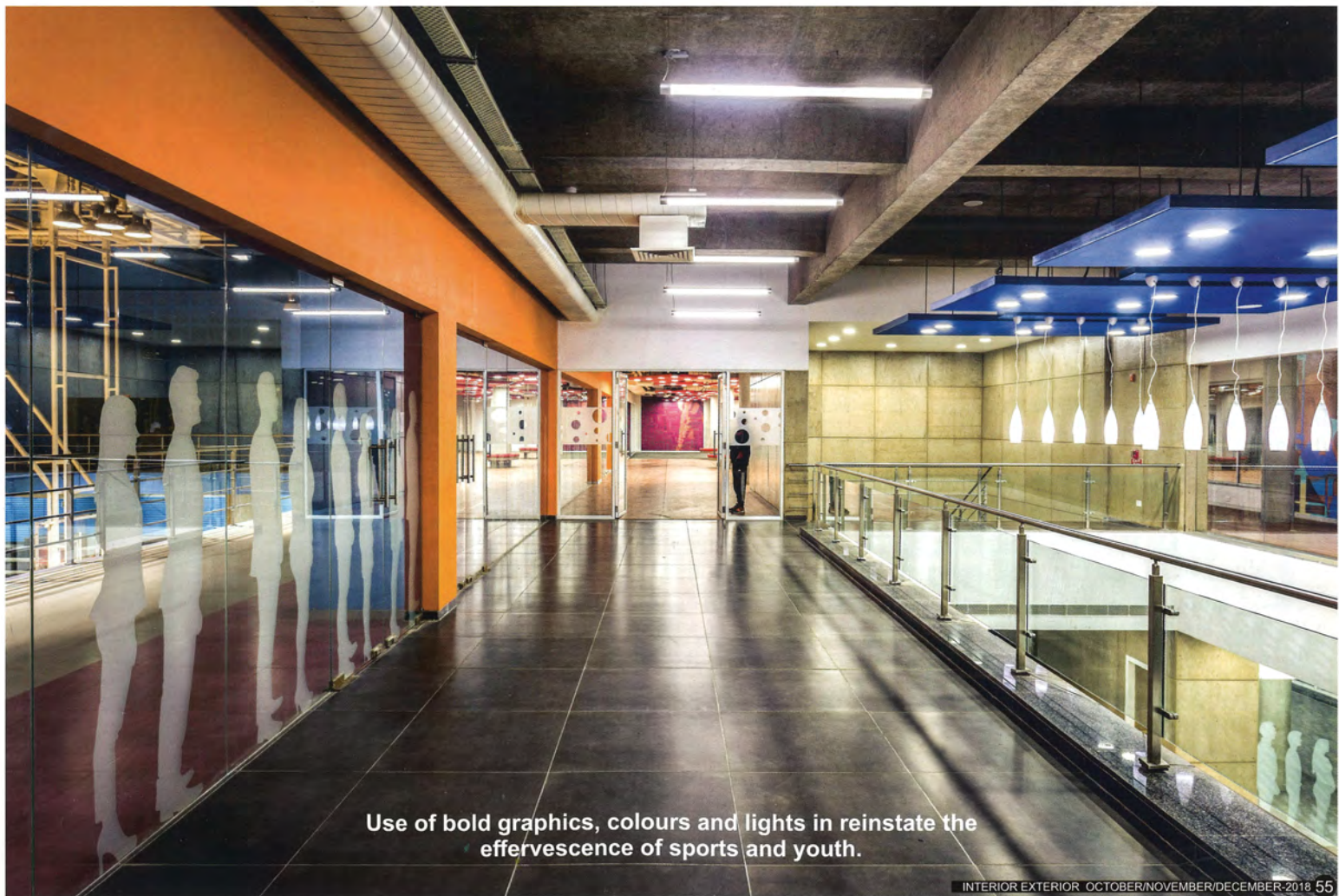
A curvilinear canopy supported by steel columns and lightweight transparent glazing in the front add flare to the stout structure. The glass façade provides a visual connect between the inside and the outer space. A multi-functional sports hall forms the core of the building. This flexible hall takes various forms from two fully-functional basketball courts to eight badminton courts. Strategically designed to include a 10 Ft. wide & over 150 Mts. long jogging track, the hall doubles up as a viewing balcony.

A certified green structure, the stadium accommodates a range of contemporary sports like badminton, squash, rock climbing, table tennis alongside the typical indoor activities such as billiards, chess, carom and yoga. An engaging cafeteria space and other open spaces facilitate socializing, making this building 'one-for-all'.





Sports themed
steel screen and
glass façade in
the front bring in
vibrancy to the
entire area





Located in the city of Delhi, the building was set to experience extreme climates in summers and in winters. Design response has efficiently applied passive architecture principles to minimize the direct solar gain, regulate indoor temperatures and provide adequate shading through building design and landscaping. Glass façade in the north brings in ample diffused sunlight that lights up the interiors during the day time. The southern façade has insulated panels that block the heat gain and solar panels on the roof make the most of the long periods of sunlight that are experienced in the region. Eco friendly refrigerants have been used. The project used locally available bricks for the construction. The design incorporates rainwater harvesting system. The system also facilitates waste water treatment and reuse. Further, water efficient plumbing systems have been used inside the building.

Further, the project innovatively used steel and glass in the external facade. While the building frame was made from concrete, a curvilinear canopy on steel columns & light weight transparent glazing in the front added flamboyance to the massy built form. The glass façade added transparency to the structure. A sport-themed screening made from steel in the front façade stands out giving the building an ultra-modern look.



Combination of steel and concrete balances scale with design in the building



The ability of design to interweave scale and modernity with flexibility of space and vibrancy of form makes it stand out as a one-of-its-kind sports facility in India. The essence of the design lies in the balance it achieves between structure and interior space design brought by vivacious use of colors and bold graphics juxtaposed with the pronounced muscular form of the building. Designing of an all-encompassing sporting facility of international standards at the university level not only sets a precedent in the sector but also goes long way in promoting the culture of wholesome living. The building uses combination of building materials including locally produced bricks, glass and steel. Steel being strong but relatively light and versatile, provided flexibility to achieve the desired form. Using full potential of long spans of steel helped create flexible and unobstructed spaces. The triple-heighted multipurpose sports arena at the centre of the building uses dense steel trusses on the ceiling that provide large column-free, flexible spaces. Steel also enhanced the aesthetic quotient of the building. It provided the industrial look as was envisaged for the building. Using it in interior structures such as the staircase in the double-height cafeteria enhanced the overall ambience. Steel's inherent adaptability and flexibility also means that future changes or extensions – even vertically – can be carried out with minimal disruption and cost. Further, it allows a fast-track construction which is critical for large-scale projects. The steel sections were designed along with concrete which made the project simpler and affordable, in line with construction methods and construction cost of the project. Use of lightweight steel in canopy and screen enhances the efficiency of design. The retractable basketball loop was also made from steel for better functionality. The v shaped trusses provided have catwalks as passage in between to enable access for service and maintenance.