Workshop on

EARTHQUAKE RESISTANT PRACTICES FOR UNDERGRADUATE STUDENTS OF ARCHITECTURE

July 22-29, 2023, IIT Kanpur

National Information Centre of Earthquake Engineering (NICEE) at IIT Kanpur is committed to furthering earthquake safety in the built environment by empowering stakeholders involved in the building delivery process by sharing and disseminating state-of-the-art earthquake engineering. NICEE has also actively engaged in awareness, sensitization and training programmes for faculty in architecture and civil engineering disciplines in colleges all over India through the NPEEE program that was in operation from 2003 to 2007. The National Advisory Committee of NICEE unanimously felt the need to target the future architects by offering training modules to the students of architecture in colleges all over India. The primary objective of this workshop was to equip the participants with the necessary expertise to incorporate earthquake load resistance into architectural designs at a conceptual level.

To fulfill this objective, a pilot Workshop for Undergraduate students of Architecture in Earthquake Resistant Design Practices was introduced in 2008. The success of the initial workshop led to its transformation into an annual event. The 15th National Workshop for Undergraduate Architecture students of was held at IIT Kanpur from July 22 to July 29,2023. The 8-day workshop welcomed 61 students who had completed six semesters of their respective architecture programs, representing 15 institutes from 12 cities across India.

Workshop 2023

The overarching aim of the workshop was to raise awareness among students about earthquake safety issues and to provide them with foundational knowledge in earthquake-resistant design at a conceptual level. Through lectures and hands-on studio sessions focused on a design assignment, students were expected to internalize earthquake-resistant practices as integral components of their design decision-making process. The resource faculty for the workshop included experts from the fields of architecture and structural engineering, aiming to simulate real-life architectural practice as closely as possible. Before attending the workshop, each selected participant received a NICEE publication titled "Earthquake-Resistant Confined Masonry Construction," authored by Svetlana Brzev and Keya Mitra. The participants were advised to go through the book before coming to the workshop.

Distinguished faculty members such as Prof. Keya Mitra from IIEST Shibpur, Prof. Vasudha Gokhale, Sujata Mehta, and Meera Shirolkar from Dr. B.N. College of Architecture for Women in Pune, Prof. Atanu Dutta from Jorhat Engineering College, Prof. Ruchira Das from Women's Polytechnic Chandernagore, and Prof. Bhavana Vimawala along with Nehal Desai from Sarvajanik University in Surat served as resource persons for the workshop.

The following faculty members, Prof. Keya Mitra IIEST, Shibpur, Howrah; Prof. Vasudha Gokhale, Sujata Mehta & Meera Shirolkar of Dr. B.N. College of Architecture for Women, Pune; Prof. Atanu Dutta, Jorhat Engineering College, Jorhat; Prof Ruchira DasWomen's Polytechnic Chandernagore, West Bengal; Prof. Bhavana Vimawala & Nehal Desai, Sarvajanik University, Surat were the resource persons of the workshop.

Additionally, practicing architect Ar. Vikram Hundekar from Pune elaborated on the use of Confined Masonry in the design of the IIT Gandhinagar Hostel. Notable experts like Dr. Shailesh Agarwal, Executive Director of BMTPC in New Delhi, discussed the "Vulnerability Atlas of India," while Dr. Hari Kumar from Geo Hazards in New Delhi delivered a lecture covering various aspects of earthquakes.

Design Problem

The workshop's design problem involved creating a Co-working Office Complex on a site in Guwahati, Assam, the largest city in the state of Assam and a major metropolis in northeastern India. This site was proposed for a Trade Centre by the National Building Construction Corporation (NBCC). The participating students, organized into thirty groups of two members each from different institutes, were tasked with developing a design proposal that balanced functionality, structural integrity, and aesthetics. While innovative design approaches were encouraged, the primary focus was on assessing their grasp of earthquake-resistant architectural principles and their application in a practical design project.

Evaluation of Design

A jury panel comprising experts such as Ar. Balbir Varma from New Delhi, Ar. Vikram Hundekar from Pune, Prof. Meenu Varshney from NIT Jaipur, Prof. Mayank Varshney from VIT Jaipur, and Prof. Vaibhav Singhal from IIT Patna evaluated the designs prepared by the participants. Six designs that effectively incorporated earthquake-resistant features without compromising other crucial factors like functionality and climate were shortlisted in the initial round by the Jury Board.

The jury particularly looked for a clear comprehension of structural systems capable of withstanding earthquake loads. The award-winning designs included:

First Position

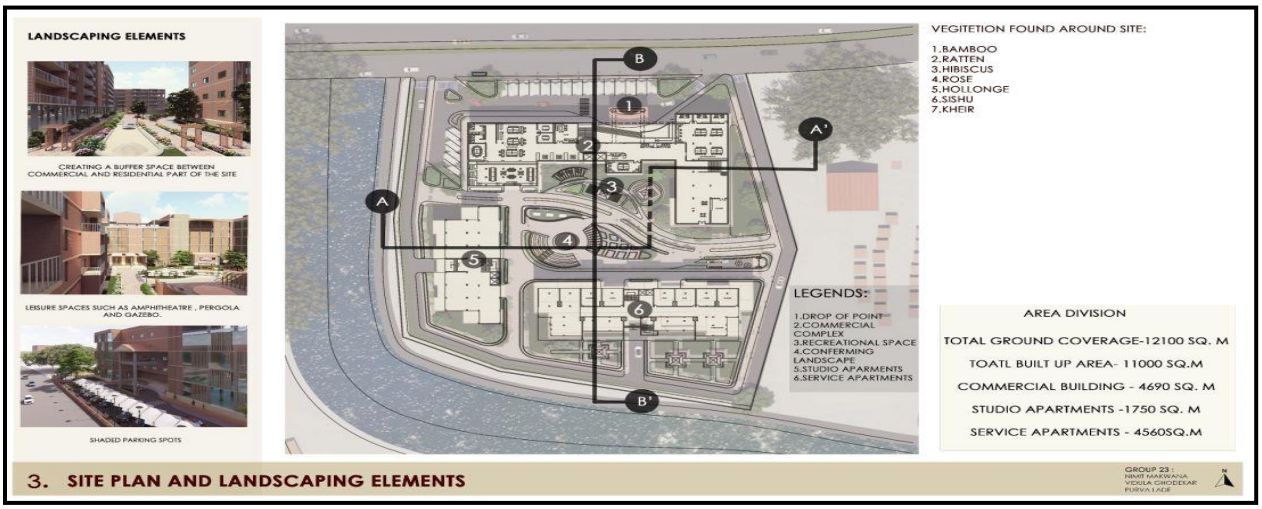
Shriya Sushil Patil, Thakur College of Architecture and Planning, Mumbai
Garima Agrawal, D.Y.Patil School of Architecture, Navi Mumbai

1st

Second Position

Vidula Nitin Ghodekar, Pillai College of Architecture, Navi Mumbai
Nimit Kartik Makwana, Inst. Of Design Planning and Technology, Surat
Purva Anand Lade, Pillai College of Architecture, Navi Mumbai

2nd



Third Position

Yashasvi Ketan Bhavsar, Inst. Of Design Planning and Technology, Surat
Sanika Dalvi, D.Y.Patil School of Architecture, Navi Mumbai

3rd