

MALNAD COLLEGE OF ENGINEERING, HASSAN
DEPARTMENT OF CIVIL ENGINEERING
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MALNAD COLLEGE OF ENGINEERING, HASSAN

(An Autonomous Institution Affiliated to VTU, Belgaum)

VISION OF THE INSTITUTION

To be an institute of excellence in engineering education and research, producing socially responsible professionals

MISSION OF THE INSTITUTION

Create conducive environment for learning and research Establish industry and academia collaborations. Ensure professional and ethical values in all institutional endeavors.

VISION OF THE DEPARTMENT

The Department of Civil Engineering will be a centre of excellence in industry-oriented teaching, training, research, professional ethics, social responsibility, and continuing education for practicing engineers through sponsored research and consultancy services

MISSION OF THE DEPARTMENT

To improvise the curriculum to include contents pertaining to situational experience of variety of sites and develop a sense of social responsibility and to enhance research orientation of students through internship programs.

To enhance sponsored research and consultancy works to achieve effective industry-institute-interaction and conduct Continuing Education Programme for practicing engineers.

To inculcate professional ethics through quality and modern construction practices.

To switch over to modern methods of material testing, Engineering analysis and design.

TechBridge: Recent Advances in Civil Engineering and Social Concerns

(July 2021 -Dec 2021)

TechBridge brings you a comprehensive magazine that delves into the recent advancements in civil engineering from July 2021 to December 2021. The world of civil engineering has witnessed incredible progress in various fields, from sustainable infrastructure to cutting-edge technologies. Additionally, this issue highlights the social concerns that have come to the forefront during this period and the role civil engineers play in addressing these challenges.

1. Wormhole Library, China, by MAD

From a coastal library by MAD to an adaptive reuse project by Tadao Ando, we've rounded up 12 of the most interesting architecture projects that are slated for completion in 2021.



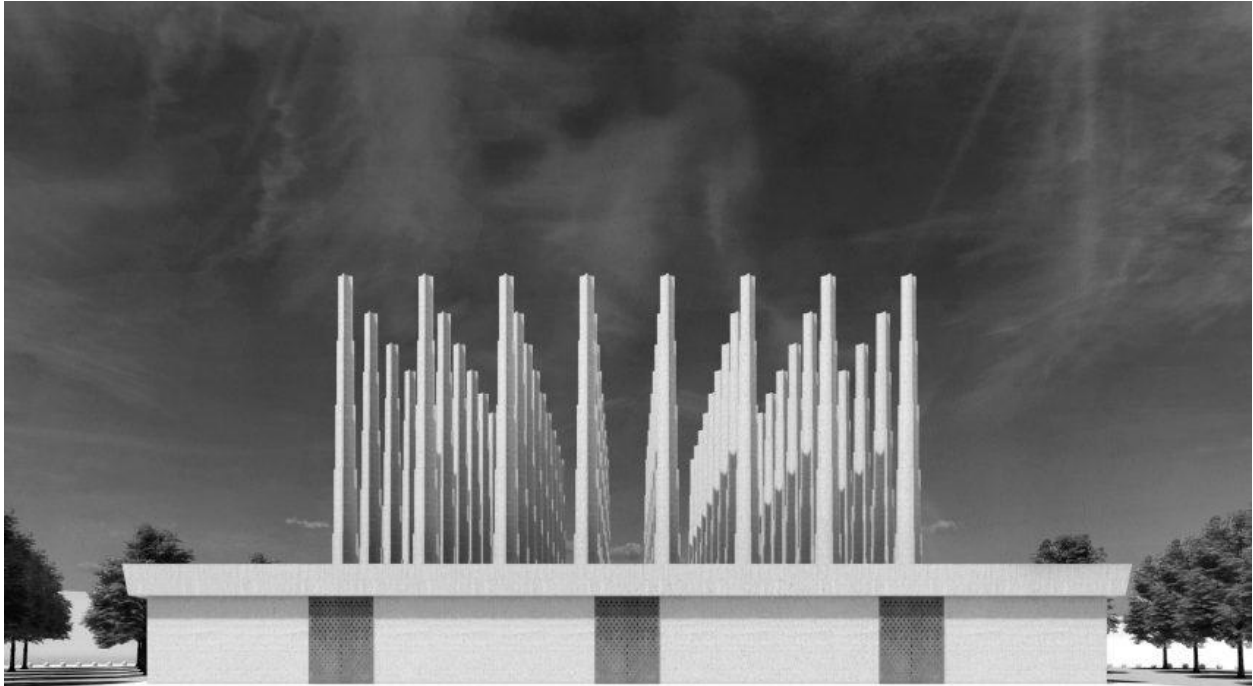
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Being built as part of a rejuvenation plan to improve public space along the coastline of Haikou Bay, the curved concrete building will house a library and facilities for users of the park. The building will be split in two with a large covered foyer dividing the library from the facilities block, which will contain toilets, showers and bike storage. The library will have a cafe, reception area, office and VIP room will also be located on the ground floor, while a tunnel-like children's reading room and sea view reading space will be built on the floor above. All will be built around a central, two-storey reading room that will have space for 10,000 books. According to the studio, all of the building's electrics and plumbing will be built into the concrete form to reduce clutter inside the building. Curved sliding doors will have retracted into the walls as will windows that can be opened to let the sea air circulate within the building. The building is topped with a rooftop terrace that has views of the South China Sea, while a reflecting pool and white-sand filled area will be built on either side of it. Wormhole Library is the first in a series of seven pavilions that are going to be built along the coast of Haikou Bay as part of the rejuvenation plan.

2. Le Memorial des Martyrs, Niger

Architecture studio Adjaye Associates has revealed its design for Le Memorial des Martyrs, which is set to be built in Niamey, Niger. The foundation stone for the memorial, which is set to be built on the triangular Place du Petit Marché alongside Niamey city hall in the capital of Niger, was laid earlier this week.

The memorial will consist of a grid of 56 concrete, four-pointed-star-shaped columns that rise 20 meters into the air from a raised plaza within the triangular site. The plaza will be flanked on either side by trees that will also be planted in a gridded formation. As visitors approach the memorial, they are engrossed in a labyrinth of abstraction through a rhythmic interplay of light, shadow and geometries amplified by the form of the 20-meter-high pillars," explained the studio. "Each pillar symbolizes the individuals lost, extending towards the Niamey sky whilst grounded and situated in its urban context," continued the studio. "At night, beams of light projecting from the pillars become part of the urban skyline, acting as both a beacon of remembrance and a visual guide toward the civic heart of Niamey."



Below the raised plaza a large room will be created to be used for civic events. Described by the studio as an "underground cooling labyrinth", the space will be broken by the concrete columns that pass through it to their foundations. These columns are designed to act as thermal chimneys to reduce heat buildup around the memorial.

3. Bourse de Commerce, France, by Tadao Ando

Another revamped historic building in Paris that will open in 2021 is the Bourse de Commerce – an 18th-century stock exchange that Tadao Ando is converting into a contemporary art gallery with Niney et MarcaArchitectes, Pierre-Antoine Gatier and SetecBâtiment. All of its exhibition spaces will be contained within a circular concrete structure, positioned directly below the building's original painted dome.

Japanese architect Tadao Ando is restoring an 18th-century stock exchange building in Paris and turning it into a contemporary art gallery. Exhibition spaces are being built in a circular concrete structure that sits under the historic painted dome of the Bourse de Commerce.



The project is a collaboration between Tadao Ando Architect & Associates, Niney et MarcaArchitectes, the Pierre-Antoine Gatier architecture agency and building engineering consultant SetecBâtiment . French businessman François Pinault, founder of luxury group Kering, commissioned Tadao Ando to transform the heritage building to display some 5,000 artworks he owns.

They previously worked together in Venice, where the architect restored the Palazzo Grassi for Pinault. Built as a corn exchange in 1767 on the site of a demolished mansion, the Bourse de Commerce was turned into a stock market in the mid-1800s. Murals depicting trade between the five continents of the world dating from the 17th century decorate the underside of the dome. Ando decided to work with the existing shape of the building to create an internal gallery without disturbing the historic fabric of the building. "The circular section, faithful to its urban symmetry, includes a rotunda in its centre," said the Japanese architect. "It is within this rotunda that there has been inserted a concrete cylinder with a diameter of thirty metres and a height of nine metres." Underneath, a basement level will hold a 284-seat auditorium in a central cylinder, with a black box-style studio for displaying video and sound installation around the perimeter.

4. Ordrupgaard, Denmark, by Snøhetta

Snøhetta has a number of projects completing in 2021, but one of the most intriguing is its subterranean extension of the Ordrupgaard art museum in Denmark. The understated building, which will link to a gallery built by Zaha Hadid in 2005, is designed so that only its steel roof is visible from the outside, resembling an abstract sculpture within the museum's garden.

With an innovative yet subdued design for landscape and new exhibition spaces, Snøhetta's extension to the Ordrupgaard Museum allows for a circular movement through the museum's lush gardens and rich collection. It lives up to the highest international standards for exhibition design and art conservation and display, providing a comfortable and intuitive museum journey that is accessible and tangible for all. Situated near Jægersborg Deer Park, north of Copenhagen, Ordrupgaard houses Northern Europe's most comprehensive collection of French and Danish art from the 19th and early 20th centuries. Originally built as a three-winged country mansion in the neo-classical style during World War I, the museum was expanded by a modern 1 150 square meter glass and black lava concrete extension in 2005, designed by Zaha Hadid.

The new museum extension is to a large extent underground, carefully integrated into the park of the museum, thus merging landscape architecture and architecture. It creates a holistic and continuous path throughout the entire museum and its surrounding park and gardens, linking Hadid's extension for special exhibitions with the museum's original building and permanent collection.

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In total, Snøhetta's design comprises landscape interventions as well as five brand new, subterranean exhibition spaces, two of which create a continuation of Hadid's exhibition space, and three specially dedicated to one of the museum's main attractions: its extensive and permanent collection of French impressionistic paintings.

