

## INTERNATIONAL DESIGN COMPETITION FOR INCHEON GEOMDAN MUSEUM · LIBRARY CULTURAL COMPLEX DESIGN

### *Incheon Geomdan Müzesi - Kütüphane Kültür Kompleksi Uluslararası Tasarım Yarışması*

İnanç ERAY \* 

\* Architect, Designer, Partner at SOUR Studio and Seoinn Design Group | Mimar, Tasarımcı, SOUR Studio ve Seoinn Design Group Ortağı

#### Statement | Beyan:

SOUR Studio and Seoinn Design Group have won 4th prize in the international design competition for the Geomdan Museum Library Cultural Complex in Incheon, South Korea. The competition received 75 entries from all around the world, and SOUR was selected among the Final 5 to present their proposal to the international jury. The design team's proposal aims to shift the paradigm in landmark architecture, where energy endurance and climate resiliency should be the driving factors in form-making and design criteria. | SOUR Studio ve Seoinn Design Group, Güney Kore'nin Incheon kentindeki Geomdan Müze Kütüphane Kültür Kompleksi için düzenlenen uluslararası tasarım yarışmasında 4. 'lük ödülünü kazandı. Yarışmaya dünyanın dört bir yanından 75 başvuru yapıldı ve SOUR, önerilerini uluslararası jüriye sunmak üzere Final 5'e seçildi. Tasarım ekibinin önerisi, enerji dayanıklılığı ve iklim esnekliğinin form oluşturma ve tasarım kriterlerinde itici faktörler olması gereken dönüm noktası mimarisindeki paradigmayı değiştirmeyi amaçlıyor.

*How might we use low-tech strategies for the (re)discovery of sustainable landmark architecture?*

*How might we evolve beyond energy-intensive technologies and high cost construction methods to generate scalable solutions in the built environment?*

## ARCHAEOLOGICAL PARK

Today we are living in a volatile, uncertain, complex and ambiguous world. Climate and energy crises, the global economic downturn, and the COVID-19 pandemic urge us architects to re-evaluate our priorities and methods in the generation of signature architecture. High-tech dependent, Starchitect-led visions for architectural landmarks are no longer viable nor sustainable. Any and all proposals for the built environment need to present purposefully viable solutions that address issues around energy usage, material waste, supply chain inefficiencies, and carbon footprint.

We believe the Geomdan's Museum and Library Cultural Complex Project is a great opportunity to reform landmark aesthetics to be informed by climate resilience and to rediscover low-tech strategies to generate sustainable architecture.

While this proposal is about connecting and integrating urban space and the landscape on a morphological level, it also brings forward historically proven yet overlooked methods of construction for energy endurance and climate resiliency.

The proposal therefore becomes fully immersed in the history, nature and "archaeology" of architecture. What better fit to create an archaeological park, in the form of an archaeological museum and a library that will become a visual and archival complex for the region and a unique public building.

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Correspondence | İletişim:  
inanc@sour.studio  
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## URBAN INTEGRITY: A BRIDGE FOR SCALE, NATURE and PEOPLE

The main principle of the proposal is to ensure a seamlessly integrated urban space that will support activities for all visitors as well as local residents. Therefore, connecting the project site with the no.3 Cultural Park on the North and the elevated eco bridges was key.

In line with the existing grand scale of 8 lane transportation infrastructure, and the future surrounding high rise residential point block development, the museum park will consist of a library structure rendering East to West, connecting the eco bridges on the roof as a green elevated plaza (horizontal), and a cluster of museum spaces that will ensure porosity and connectivity with the park from South to North.

The silhouette of these “rocks” on the park will communicate a distinct image of this unique landmark, which will turn this park into a destination for years to come.

## A NEW ARCHITECTURAL LANDMARK: LOW-TECH, HIGH IMPACT

The proposal for this new urban landmark prioritizes low-tech sustainability measures and environmentally responsible design. The form is not about making form for the sake of form, but rather it is making an architectural image through climate impact design. So is the form of the building directly connected to the sustainability of the building, to low keep natural performance.

Six exhibition spaces and a multi-purpose hall sprout from the archaeological park, organized distanced to each other, enabling nature to continue on the interior space, blurring the boundaries of indoor and outdoor, like a traditional Korean house. These green areas, while penetrating the building toward the no.3 Cultural Park on the North, allow users to cleanse their palettes in between exhibitions and activities.

The “Rocks” will be constructed with a double skinned facade, the outer material being sand cast concrete panels that will be constructed in situ using the vast park landscape. Through the outer and inner facade, a void allows for air to flow through. The height of these spaces achieves optimal circulation for hot and cold air to flow around the spaces for natural ventilation and climate control of the space with principles of a “wind catcher”.

A similar concept of letting air flow through between building elements repeats in the double-slab construction between the Pedestrian Bridge and the roof of the library, where an “air pillow” leaves a void of 1m throughout the building allowing for air to flow through and passive thermal mass management.

## Interior Design Principles

The goal is to create a versatile and low maintenance Library and Museum that is able to adapt and evolve, and works with the natural elements.

Visitors are welcomed to the Archaeological Park and Museum as soon as they enter the site - from whichever direction this may be, encountering historical relics and excavations on their way. Inside the building, Exhibition spaces are immersive, utilizing state-of-the-art technology to interact with the past, present

and future of the Incheon region, in which visitors can freely roam inside and out, always enjoying being in close proximity to the lake and green. The ceiling of these 12-15m high vertical spaces is closed with skylights facing North, to preserve the historical artifacts and allow for further immersion.

The design for the library features a flexible, open floor plan that accommodates the needs of individuals and groups and is designed for future expansion. It addresses current needs while also taking into consideration future technological advancements. Located facing north, the library's glass facade allows for homogeneous, ample natural lighting for reading halls, and views towards the park throughout.

The main circulation spine that connects all programs within the building is a double-height gallery space that aims to maximize multi-sensory interaction and exchange of information between users. These lobby spaces are flexible, inclusive and accessible through multiple doors, giving the building the opportunity to flexibly coordinate open or closed areas at different schedules and seasonal programming. This enables each exhibition space or the multi-purpose hall to act independently, which supports economic resiliency of the complex.

The first floor Gallery also includes flexible spaces for workshops, seminars, and children's experience centres, making the Museum a kid- and family-friendly destination. These flexible spaces allow for place-making and citizen co-creation, transforming the Museum into a dynamic urban canvas with diverse programming options for both day and night.

The storage of the Museum's artifacts is directly connected through elevators from the 1 Basement floor to the first ground floor exhibitions. Similarly, the preserved conservation library is also located in the basement with direct access to the library via vertical transportation. The basement also includes a parking area for 200 cars and a truck (un)loading area.

### **Uplifting Places**

Staying true to its archaeological concept, the proposal is inspired by and reflects on The Korean Peninsula's Dolmen sites, which account for approximately 40% of the world's total stock. The preparation of the sand casted facade panels therefore becomes an opportunity for community engagement during construction, that will build a sense of belonging.

Fostering community co-creation, “Rocks on the Park” will communicate a distinct architectural image while blurring the boundaries of indoor and outdoor like a traditional Korean House. This will generate a seamlessly integrated urban space that will support activities for all visitors as well as local residents.

### **Thriving Communities**

The design process for the proposal incorporated participatory design methods such as ideation sessions with community members that have diverse professional and lived experiences. The concept continues to carry the generative approach by endorsing community engagement during construction, co-creation of cultural events and public interaction in its parks.

The design of the site incorporates inclusive design principles, acknowledging the presence of diverse age groups, physical abilities and cognitive conditions. As environment impact human behaviors, building a site with a culture of co-creation and inclusion will promote equitable practices throughout its daily operations.

### Viable Economics

The proposal is designed to optimize initial investment and operating costs through low tech energy strategies such as passive cooling, natural ventilation through wind catchers, water recycling, heat recovery, and thermal mass through double skin ventilated cavities a.k.a “air pillows”. As the majority of energy consumption occurs during fresh air conditioning and heating/cooling, heat pump systems will be utilized to complement the passive systems through the building skin.

The multiple entries and routes allow for various open/closed use zones for seasonal and day / night activities, which enables fiscal resiliency and economic viability for the museum library complex.

### Healthy Planet

The project is about using physics, aerodynamics, and natural phenomena to generate a path for a healthier planet. Low tech strategies on multiple scales aim to generate high impact. At urban scale, the proposal connects two neighbourhood parks through green roofs and eco bridges that will promote biodiversity and continuous natural life, elevating this park to a destination.

A versatile and low maintenance material palette selection for the Library and Museum spaces to minimize the environmental impact and carbon footprint is key. Management of materials, energy, water and waste flows is optimized, while net positive solutions, recovery and regenerative paths are explored and pursued.

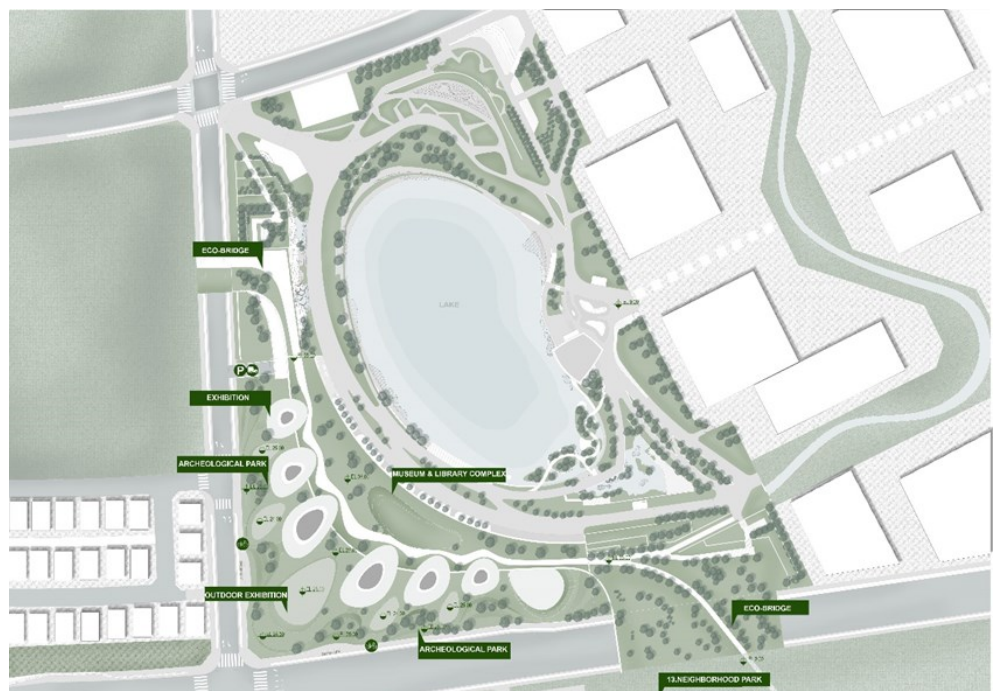


Image 1. SOUR  
Archaeological Park– Site  
Plan

Note. Arkitera



**Image 2.** SOUR  
Archaeological Park

Note. [Sour Studio](#)



**Image 3.** SOUR  
Archaeological Park

Note. [Sour Studio](#)

#### Project Info

Project Name: Geomdan Museum & Library Cultural Complex

Location: Incheon, South Korea

Size: 27.863 m<sup>2</sup>

Status: Concept Design

Client: Incheon Metropolitan City, Incheon Housing & City Development Corporation

Type: Cultural Building

Typology: Archaeology Museum & Library

#### Project Credits

Architects: SOUR & Seoinn Design Group

Design: Inanc Eray with Dong Kyu Choi

Design Team: Pinar Guvenc, Alex Yoo Chul Choi, Marianna Evangelista, Derin Sahin, Merve Akbay,

Merve Guven, Pinar Gursoy, Marianne de Zeeuw, Nicholas Doghlass, Irem Gocmenoglu, Gamze

Gurgenc

Collaborators: Seoinn Design Group (Local Architects)

#### Conflict of Interest Statement | Çıkar Çatışması Beyanı:

There is no conflict of interest for conducting the research and/or for the preparation of the article. | Araştırmanın yürütülmesi ve/veya makalenin hazırlanması hususunda herhangi bir çıkar çatışması bulunmamaktadır.

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