

1. CONCEPT

The Beirut House of Arts & Culture building incorporates a good number of functional entities of great variety and multiplicity. From this point of view its architectural analogy is not a given issue, on the contrary it is a matter of investigation. Whatever idea called to represent it, might derive either from its programmatic, architectural and symbolic content, its urban environment, or the analogies and metaphors emerging from the interpretation of its internal architectural and urban context.

Parameters:

Neighborhood - prevailing axes. Located right up against and at the same level as the “Ring”, the high speed road surrounding downtown Beirut, the site of the project occupies a central position on the south front of the New Waterfront District, currently under reconstruction. Coming from the sea, the North-South axis that crosses Étoile square abuts on the eastern side of the lot, while a parallel axis crossing the lot passes through Riad el Solh Square and hits the “coup de force” tower of the “Landmark” project. The House of Arts & Culture building, in concordance with the current city master plan, could therefore fulfill a dual function: that of a public interest and importance institution and that of a symbolic cultural entrance to the new milieu.

Programmatic duality. While analyzing the given architectural program and transforming it to building volumes, one encounters almost a dichotomy between the bulk of the main performance hall and the rest of the other required functional entities (with the exception of the parking area). This dichotomy is visible in the section drawings, especially the west-east one, of the project.

Beirut’s cultural duality; the mystic Muslim-Arabic world and the rational western Christianity constitute two different poles that strive to come to terms and balance.

By considering all of the above features, stems the idea of a ruptured building divided by a **gorge - like passage** way in the form of a **tall arcade**.

The “Passage” Building. The fact that a rather small in volume public building, compared to its colossal neighbors, could stand as a main point of interest is a given which assigns it additional semantic significance. Bearing the above in mind, our interpretation of the House of Arts & Culture establishes an **internal road**, which organizes the whole complex around it. Although the lot itself consists of an independent four sided urban block, the primacy of both southern and northern sides is apparent because of the Ring road and the Riad el Solh Square respectively. In addition to the above, the remarkable difference in height between these two sides is enforced by the continuous dialogue with the view, downwards towards the piazza, and upwards to the “Ring”. So the **“inner transversal”** aspect of the site gains importance over its lateral sides. The view, through the passage is much more interesting and adventurous than looking either east or west. This renders the function of the respective facades more or less as diaphragms or screens for illumination and ventilation.

The above mentioned parameters conveyed in the project synthesis create an **inward looking structure** which is expressed by agglomerating small and big building volumes along the north-south

axis of the passage, whilst the main horizontal and vertical traffic is accomplished along this axis too. The horizontally stressed louvers along the lateral facades not only prevent from undesirable east and west solar beams, but they also express the diaphragmatic role of these facades accentuating the through movement. The main: **south and north facades** are formed as huge **window openings** overlooking the open view in front and allowing the outside space to penetrate the inner core. This enables Ring-road travelers and people on the Riad el Solh square, or the surrounding buildings, to **see into and through** the building complex, a fact that enhances its role and its symbolic presence. The diverse **functional entities balance across the interior passage** in different heights: the larger and more public along the west side, the smaller-multi varied and of more specialized uses along the east side. The **western large volume** projects over and **embraces the smaller one on the east**.

2. DESCRIPTION OF THE PROJECT

Main entrances: The Center can be approached by two entrances: The main, northern entrance, on Ghalghoul street across the Riad el Solh square (level +0) looking towards the inner Waterfront District welcomes visitors through the Reception Hall facilities, while the south entrance (level+8) connects the passage to the intermediary road enabling access from the high-speed road.

Level +0: The lot excavated to this level is bordered from west, south and east by a **green wall**, which extends the **green carpet area** of the northern side-walk in front and the Riad el Solh square. It includes the Reception Hall facilities, the Shopping area, the Small Performance Hall and the B6 Adjoining Rooms. The central passage starts here. The underground Parking and Delivery area entrance is located on the west side of the front.

Level +4: First stop of the passage way: the Cafeteria and its facilities are located to the west. The Cafeteria and its kitchen can also be accessed from outside and have respective entrances in the middle of the west front. The **Green wall** is still the background. This level, also includes the Small Performance Hall auxiliary rooms and the Technical spaces under the Large Performance Hall stage.

Level +8: The Interior passage faces the South Entrance and extends through the Performance Hall Foyer (B1), covering the area between the Large Performance Hall (B4) and the Cinema (B8). The whole level is a terrace open to the Reception Hall area below, overlooking both the Riad el Solh square and the Ring-Road. The **Large Performance Hall** (B4) is presented in two different layouts: one referring to an “Italian scene” and the other to an “arena layout”. This is possible by lowering and grading the stage level while pulling half of the step rows of the Italian layout under the higher half.

Level +12: Opening to level +8, it includes the Control & Interpretation rooms, as well as the back entrances (+11.15) to the Large Performance Hall (B4), and the B7 Meeting Rooms on the east side.

Level +16: On the west side the void of the Large Performance Hall and its first balcony (+15.51). The space above the control and interpretation rooms of level +12 is available as a technical area, especially suitable for air-conditioning units. On the east side, the first Workshops area starts

including: classrooms, cinema and video editing, sound studios, photo laboratories, computer and printing rooms.

Level +20: On the west side the void of the Large Performance Hall and its second balcony (+19.63). The space above level +16 is available for technical installations. On the east side, the second Workshops area is situated including theater, music, arts, and dancing workshops.

Level +24.50: On the west side the void of the Large Performance Hall and its technical space over stage. The Administration area is located on the east side. Inner offices are helped by skylights, while Meeting Room (H4) is lighted and accentuated by a pyramid from the above terrace. Besides the central stairs and elevators tower, both Administration and Workshop areas are served by peripheral auxiliary and emergency staircases and elevators.

Level +29: The Exhibition space occupies the area over the Large Performance Hall. On the eastern and northern sides an “L” shape terrace develops providing outdoor exhibition and entertainment space served by the exhibition hall cafe. A shallow water basin with pebbles and cubes with plants on this terrace, combined with the glass cubes of the skylights, the lighting pyramid and a grid of lighted lines create a small “oasis” culminating the green areas of the project.

Level +35: Above the Exhibition space are located the Documentation center along with the Cinemateque, which also provides and preserves documents. Apart from the offices situated in the perimeter, central areas are lighted through a saw-roof supporting photovoltaic cells.

Delivery area and relevant workshop and storerooms are located on level –5. A large external platform connects vertically the delivery area with the Large Performance Hall stage, the Exhibition spaces and the book-stacks of the documentation center. **Underground parking and Technical rooms** are located on levels –4.5. –8.5 & -12.5. The total number of parking places is 237. Should a –16.5 level be added, the sum of parking places may increase to 325.

Vertical movement: The free standing stairways and the elevator groups of the central passage mostly serve visitor movement, while the five towers on the periphery are either emergency exits or serve specific purposes. The Large performance Hall audience is served both by the central passage, the symmetrical west stairway and the north tower. Actors and staff use the two towers adjacent to the stage.

3. BUILDING GEOMETRY (Grid and zones) & STRUCTURAL CONCEPT

The strict geometry of the building, proportional as well as programmatic considerations have lead to a multistoried building which is favored by the requirements for volume sizes of the architectural program and the underground parking requirements. The rectangular shape of the building is divided into parallel (to the north-south axis) zones, which above zero level become a legible three-partite layout. These three zones house the two main building volumes and the intermediate passage. The respective widths of the three zones are 16.50m, 8.50m and 22 (2X11) m. Perpendicularly the three main zones are divided into five strips of 15, 5, 12.25, 16.75 and 5m. wide. The intersecting zones and

strips form the structural grid of the building. Columns of varied dimensions from 1X1 to 1X1.6 m are placed on grid intersections. Under the ground the bearing structure is made of reinforced concrete with incorporated metallic girders. Over the ground, columns and beams become tubular lattices glazed with metallic panels. In that way they can stand bending forces, while minimizing weight and allowing technical installations to pass through. Reinforced concrete vertical elevator and stairways shafts ensure the stiffness of the structure for the receipt of lateral (seismic) forces.

Morphological elements & materials.

The classical geometry of a “stoa” (arcade) shape refers to the classical origins of the ancient and colonial architecture of the area. The East and west side view through louvers recalls Islamic architecture latticed screens (Jali). The steel and glass structure is an expression of contemporary building technology, while Woodwork recalls famous Lebanese Cedar forests. The screen has a symbolical and practical value in its own right (a public statement of information emission at any time, everyday).

4. ENERGY STRATEGY / ELECTRONICAL INSTALLATIONS

Shading louvers have been incorporated so that there are no direct solar gains in the interior of the building. These louvers are made of perforated metal sheets framed together, so as to minimize wind loads. They are placed horizontally in steps of 50cm externally. Due to their width of 50 cm, they do not let the sun pass directly into the building. Along the eastern and western facades the louvers will be movable. By being reflective and perforated, they can insert more sunlight into the building, which is, however, diffuse and with no glare. For maintenance and cleaning, grid-corridor panels are incorporated. The **central passage** has openings for natural ventilation; the cooled air from the green areas, near the ground, can be extracted through this atrium and ventilate the interior spaces due to the difference in air pressure at the bottom and top of the building. The building is predominantly **naturally ventilated** through computer controlled openings on the inner glazing, while in demanding controlled areas ventilation and humidity levels are completely controlled by the building management system. The integration of intelligent **Building Management Systems** will be a main issue during the structural study of the Center. The BMS has sensors for wind, temperature, rain and sun to exercise optimum control strategies for heating, cooling and fresh air supply. The Documentation center is also flooded with diffuse light which permeates through the roof structure, fitted with **photovoltaic cells** to provide electricity as well as solar shading. The second basement is going to house the power supply center, which will include the main high voltage breakers, the electrical transformers, the emergency generators and all kinds of power distribution panels. The air needed to warm or cool the areas of the building will be prepared in **air handling units** located above properly distributed auxiliary spaces.