ARCHITECTURAL EXPRESSION

The search is not for a certain expression where sustainability and natural hard materials are combined. The existing UN Headquarters is clearly showing classical architecture having in its expression of authority in using natural stone and making the building look as if it is carved out. If you would lift such a solid, the expression of the weight or the mass increases. It becomes a floating object that is no longer an object, but more an expression of timelessness.

The mass has a lot to do with the deep expression. A door shape like the Secretary Building of the UN complex expresses this very well. Even though it has a transparent outer wall facade, the shape and material is responsible for its recognition by the people that enter or pass by. The uniformity is linked with the same height, the same material and the same shape. Even though there are two materials, a lot of the shape is made of glass. Even though the material is glass, the shape is the one that gives the expression.

In the design of the UNEC building it is very important to preserve the expression of the materials and the mass. The materials are very heavy but the expression has to be modern. Even though it is a modern building, it is not responsible for the image. That will be the marble which expresses the timelessness. The UNEC building will have white marble. In tone and texture very similar but the marble is cut very thin which allows for light to pass. This allows for a ‘solid wall’ where light can pass through both sides of the wall.

The goal for the design of the UNEC building is to bring back this quality of natural stone in the expression of the architecture both as mass and the ability to store thermal energy. Looking at the existing buildings of the UN complex, you can see that this is very well expressed. Even though it has a ‘transparent’ curtain wall facade, the material on the outside makes it look like it is an object, a monolith. It stands firmly on the ground looking as if it is carved out. If you would lift such a solid, the expression of the weight or the mass increases. It becomes a floating object that is not longer an object, but more an expression of timelessness. As a result, the shape and material will be cut very thin which allows for light to pass. This allows for a ‘solid wall’ where light can pass through both sides of the wall.

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SUSTAINABILITY

This ‘roof’ is where in the building protective role of the UNEC is experienced; sheltering for the elements of nature; a simple roof where the public can shelter and where sustainability is expressed in a combination of form and material. This is something that is very easy to recognize in the building, something that is very important for the expression of the building. The ‘roof’ will be the expression of the building where the public can shelter from the elements. The water basin will act as a ‘mirror of water’ where the auditoria as island seem to be floating in. People can walk over this water basin experiencing atriums in the slab. The play of light and reflection will create an expression of what its role is in the world.

This role of the mass has gotten less important over time resulting in the mere cladding of buildings with stone and leaving the roles of loadbearing and insulation to other (often more fit) materials. At this point the search is for a timeless expression where sustainability and architectural quality are combined. The existing UN Headquarters is clearly referring classical architecture basing its expression of authority on using natural stone and giving it a timeless expression.

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SECTION

The red area shows the soil that is suited for artificial aquifers. The building is located in a former bay so the rock bed is relatively low.
1. ENTRANCE
2. MAIN HALL
3. COUNCIL CHAMBER
4. AUDITORIA
5. DELEGATES LOBBY
1. Construction of Vierendeel Trusses allowing for an open plan layout
2. Dividing the space into a grid structure
3. Adding shared functions into the program
4. Atriums provide daylight into the offices
DETAIL A

1. 8.5 mm marble panel
2. 8.5/15/7 mm insulating glass unit
3. 2d framework mullion
4. 25/25 mm fire insulation
5. IPE 990 beam

DETAIL B

3. Finishing
   50 mm concrete screed with floor heating
   Bubbledeck BD 500 floor

4. Exterior insulated metal panel

5. Stablux structural glazing profile
   2d framework mullion
   25/25 mm fire insulation
   IPE 990 beam
   120 mm insulation
The Classic Wall Recomposed
The buildup of the facade is a recomposition of the classical wall where the functions are both expressed and experienced.

To comply with modern day rules of insulation and construction, the wall has to be recomposed and build up with all the functions expressed in different ways.

- Loadbearing is done with a steel profiles
- The facade is cladded with marble panels glued on glass panels that are fixed to a structural glazing construction. Light is able to pass through the marble resulting in a diffuse light inside the wall.
- Translucent phase change materials collect the solar heat passing through the wall and releasing it when the temperature of the surrounding drops below it's own.
- The glass fins accentuate the vertical seams in the marble cladding expressing the tectonic of the secondary construction behind it.

Balance the temperature during the day/night cycle.