SADD_ UN Headquarters for Sustainability in the New York City
P5 presentation, Thursday 27/06/2013

Tutors: Engbert van der Zaag, Hubert van der Meel, Peter Koorstra

Sofia Zournatzidou_ 4187148
Content:

1. Urban position
2. Programmatic requirements
3. Architectural position
4. Sustainability
5. Building Technology
1. Urban position
Masterplan proposal, Waterfront- Green Belt
Strict grid, Green islands, Density
2. Programmatic requirements
<table>
<thead>
<tr>
<th>Activity</th>
<th>Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance</td>
<td>930m²</td>
<td>5.7%</td>
</tr>
<tr>
<td>Collect</td>
<td>1765m²</td>
<td>10.8%</td>
</tr>
<tr>
<td>Produce</td>
<td>1240m²</td>
<td>7.6%</td>
</tr>
<tr>
<td>Propagate</td>
<td>3545m²</td>
<td>21.7%</td>
</tr>
<tr>
<td>Exchange</td>
<td>3330m²</td>
<td>20.5%</td>
</tr>
<tr>
<td>General</td>
<td>2680m²</td>
<td>16.5%</td>
</tr>
<tr>
<td>Facilities</td>
<td>2790m²</td>
<td>17.2%</td>
</tr>
</tbody>
</table>

Total Nett Floor Area 16,280 m²
<table>
<thead>
<tr>
<th>Public/Private</th>
<th>Entrance</th>
<th>Collect</th>
<th>Produce</th>
<th>Propagate</th>
<th>Exchange</th>
<th>General</th>
<th>Facilities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public/</td>
<td>95%</td>
<td>55%</td>
<td>0%</td>
<td>63%</td>
<td>88%</td>
<td>0%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Private</td>
<td>5%</td>
<td>45%</td>
<td>100%</td>
<td>37%</td>
<td>12%</td>
<td>100%</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>
3. Architectural position
The city and the site
The city in the site
Mass and Void
Circulation axes
Intermediate spaces
Materialization of the axes
Materialization of the walls
Different color on the walls
Different texture- same material- hanging circulation axes
Section A-A
North Elevation
South Elevation

URBAN POSITION               BUILDING PROGRAM           ARCHITECTURAL POSITION               SUSTAINABILITY                  BUILDING TECHNOLOGY

/68

37/68
West Elevation
4. Sustainability
• Design
• Light
• Materialization
• Ventilation
• Heating
• Cooling
Toplighting
Natural Ventilation
Green Planting
Concrete - thermal mass
Low rice building
Room 1 / Light scene 4 / Floor / Greyscale (L)

Grid: 128 x 128 Points

L_av [cd/m²] 74
L_min [cd/m²] 13
L_max [cd/m²] 247

Height of Room: 5.000 m, Maintenance factor: 0.80

<table>
<thead>
<tr>
<th>Surface</th>
<th>ρ [%]</th>
<th>E_av [lx]</th>
<th>E_min [lx]</th>
<th>E_max [lx]</th>
<th>u0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplane</td>
<td></td>
<td>1011</td>
<td>148</td>
<td>3700</td>
<td>0.146</td>
</tr>
<tr>
<td>Floor</td>
<td>20</td>
<td>1169</td>
<td>203</td>
<td>3884</td>
<td>0.173</td>
</tr>
<tr>
<td>Walls (4)</td>
<td>11</td>
<td>397</td>
<td>77</td>
<td>1747</td>
<td>/</td>
</tr>
</tbody>
</table>

Values in Lux, Scale 1:194

Grid: 128 x 128 Points

E_av [lx] 1169
E_min [lx] 203
E_max [lx] 3884
u0 0.173
E_min / E_max 0.052
contaminated air

cold air -15 °C

Heating System

water heat exchanger

ground source pumps
5. Building technology
Fragment of the East Elevation
Fragment of the West Elevation