UNEC: A MONUMENT FOR SUSTAINABILITY

SADD

Sean (Xiaohui) Zhong P5 presentation
1. ASSIGNMENT
2. AMBITION
3. URBAN DESIGN
4. BUILDING FORM & SKIN
5. INTERIOR SPACE
1. ASSIGNMENT
1. ASSIGNMENT

UNEC: The 6th Council For The United Nations
1. ASSIGNMENT  Responsibility of UNEC

UNEC As a Negotiator between people and planet

Awareness

Protection

Livable

Cherish

UNECA As a Negotiator between people and planet
2. AMBITION: WHAT DOES THE BUILDING NEED TO ACHIEVE?
ESTABLISHMENT OF THE UNITED NATIONS
26 June 1945, San Francisco

2. AMBITION

TO SAVE SUCCEEDING GENERATIONS FROM THE SCOURGE OF WAR, ... TO REAFFIRM FAITH IN FUNDAMENTAL HUMAN RIGHTS, ... TO ESTABLISH CONDITIONS UNDER WHICH JUSTICE AND RESPECT FOR THE OBLIGATIONS ARISING FROM TREATIES AND OTHER SOURCES OF INTERNATIONAL LAW CAN BE MAINTAINED, AND TO PROMOTE SOCIAL PROGRESS AND BETTER STANDARDS OF LIFE IN LARGER FREEDOM. (UN, 1945)
2. AMBITION

The Primary Idea of UN Headquarters is to be An Entirely Isolated city & Extreme monumentality.
2. AMBITION

ESTABLISHMENT of UNEC:
LEAD THE PLANET TO A SUSTAINABLE FUTURE

MISSIONS: a. CREATE AWARENESS to citizens.
   b. EXCHANGE KNOWLEDGE with countries.
   c. PRODUCE POLICIES for environment.
2. AMBITION

UNECE building needs to be a monument that represents its great significance.
2. AMBITION

TO ACHIEVE THE AMBITION THROUGH DIFFERENT DESIGN SCALES

3. URBAN DESIGN

4. BUILDING FORM

5. INTERIOR SPACE
3. URBAN DESIGN:

Bring The Public to the site
MONUMENTS are the expression of man's highest cultural needs... The most vital monuments are those which express the feeling and thinking of this collective force- the people.

- S. Giedion, F. Leger & J.L. Sert "Nine Points on Monumentality" (1943)
3. URBAN DESIGN

Location

CURRENT: ISOLATED

CITY — SITE — RIVER

NATUREURBAN PARK
3. URBAN DESIGN

NEED FOR SQUARE

GATHERING/ CELEBRATING/ ACQUIRING INFO...

NEED FOR PARK

LEISURE/ PLAY/ SPORT...
3. URBAN DESIGN

Location: CONNECTED

CITY

URBAN

SQUARE

NATURE

PARK

RIVER
3. URBAN DESIGN

Location

CONNECTED

URBAN  UNEC  NATURE

CITY  SQUARE  PARK  RIVER
3. URBAN DESIGN

SQUARE CONCEPT

TO EMBRACE:
UN AND UNEC ARE TAKING CARE OF WORLD
3. URBAN DESIGN

Square
3. URBAN DESIGN

Square
3. URBAN DESIGN

Square
3. URBAN DESIGN

Park
4. BUILDING FORM:

CREATE A SIMPLE & ATTRACTIVE GESTURE
4. BUILDING FORM

UN PLOT COMPOSITION

Current UN Plot Composition:
1. Buildings sit on one podium
2. Secretariat building as the icon of the plot
3. Emphasizing an horizontal extension
   that breaks Manhattan Grid

Entrance zone
Public square
Green park
47th Street
Build An Isolated Object:
1. Competing with the Secritariat Building
2. Breaking the horizontal extension

Competing & Isolated
Build An Enlongated Object:
1. Emphasizing the Secrétariat Building
2. Emphasizing the horizontal extension

Synergy & Connection
One UN podium

Current UN Plot Composition:
1. Buildings sit on one podium
2. Secretariat building as the icon of the plot
3. Emphasizing an horizontal extension that breaks Manhattan Grid

Build An Enlongated Object:
1. Emphasizing the Secretariat Building
2. Emphasizing the horizontal extension

Synergy & Connection

Build An Isolated Object:
1. Competing with the Secretariat Building
2. Breaking the horizontal extension

Competing & Isolated

entrance

zone

public

square

47th Street

River

City
Invite people to the River
Invite people to the City

Current UN Plot Composition:
1. Buildings sit on one podium
2. Secretariat building as the icon of the plot
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Build An Enlongated Object:
1. Emphasizing the Secretariat Building
2. Emphasizing the horizontal extension

Synergy & Connection

Build An Isolated Object:
1. Competing with the Secretariat Building
2. Breaking the horizontal extension

Competing & Isolated

entrance zone
green park
entrance zone
green park
entrance zone
public square
public square
entrance zone
public square

River City 47th Street

4. BUILDING FORM LOCATION & FORM
Current UN Plot Composition:
1. Buildings sit on one podium
2. Secretariat building as the icon of the plot
2. Emphasizing an horizontal extension that breaks Manhattan Grid

Build An Enlongated Object:
1. Emphasizing the Secritariat Building
2. Emphasizing the horizontal extension

Synergy & Connection

Build An Isolated Object:
1. Competing with the Secritariat Building
2. Breaking the horizontal extension

Competing & Isolated

entrance zone
public square
green park
entrance zone
public square
River City
47th Street
Connect City and River

Current UN Plot Composition:
1. Buildings sit on one podium
2. Secretariat building as the icon of the plot
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Build An Enlongated Object:
1. Emphasizing the Secretariat Building
2. Emphasizing the horizontal extension

Synergy & Connection

Build An Isolated Object:
1. Competing with the Secretariat Building
2. Breaking the horizontal extension

Competing & Isolated

entrance zone

public square

green park

47th Street

City

River
4. BUILDING FORM

LOCATION & FORM
Create a simple and attractive gesture
Invite people to the City

Invite people to the River

URBAN \(\leftrightarrow\) UNEC \(\rightarrow\) NATURE
4. BUILDING FORM

COMMUNICATIVE

- Entrance: 930 M² (6%)
- Collect: 1835 M² (12%)
- Produce: 1224 M² (8%)
- Propagate: 3536 M² (22%)
- Exchange: 3330 M² (21%)
- General: 2680 M² (17%)
- Facilities: 2300 M² (14%)

PUBLIC, GUESTS, PRESS
Representative

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4. BUILDING FORM
PROGRAM ORGANISATION

Delegates, Diplomats
4. BUILDING FORM

SUPPORTIVE

PROGRAM ORGANISATION

EMPLOYEES, RESEARCHERS, SECRETARY & STAFF

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- ENTRANCE: 
  - 1.1 Entrance Hall 100 M²
  - Safety Control 100 M²

- COLLECT: 
  - Deposit Room 100 M²

- PRODUCE: 
  - Offices 500 M²
  - Offices 1000 M²

- PROPAGATE: 
  - Press Room 500 M²
  - Auditorium 1500 M²

- EXCHANGE: 
  - Conference Hall 1400 M²

- GENERAL: 
  - Conference Room 500 M²
  - Meeting Room 200 M²

- FACILITIES: 
  - Restaurant 300 M²
  - Kitchen 200 M²
  - Storage 500 M²
  - Landscape Design 1000 M²
  - VCT Room 200 M²
  - Exercise Room 200 M²
  - Offices 500 M²
  - Offices 1000 M²
  - Offices 1500 M²
  - Offices 2000 M²
4. BUILDING FORM

REPRESENTATIVE

EXCHANGE

serve

serve

SUPPORTIVE

OFFICES

serve

serve

COMMUNICATIVE

PROPAGATE

ENTRANCE

COLLECT
CONCEPT OF FACADE: A GEMSTONE IN A ROCK

“SUSTAINABILITY” IS A TREASURE THAT WE HAVE DISCOVERED IN THE HISTORY...
The massive concrete walls of the west, north and south facade give a fortified appearance in keeping with the existing General Assembly. It seems that a monolith was cut on the west facade to reveal its hidden secrets.

On the east facade, a flat fully glazed curtain wall wraps it and reflects its natural surroundings - the sky, the river and the park. It seems to reveal the cut surface of a massive rock and there was a gemstone hidden inside. Giant columns are hidden further inside.
4. BUILDING FORM

natural 1

natural 2
4. BUILDING FORM

natural 1

natural 2
4. BUILDING FORM

FACADE RESULT

WEST FACADE

- KEEP THE ORIGINAL SHAPE
- STRUCTURAL COLUMNS
4. BUILDING FORM

FACADE DETAILS

- Walkable roof with 60mm thick concrete block paving
- Height adjustable piers
- 100mm insulation
- Water proving membrane
- Screed forming slope
- Steel plate
- 400 mm HEB profile

Post-rail façade:
- Aluminium cover coated with micaceous iron oxide
- 50/100 mm laminated timber member
- Double glazing (6 mm toughened safety glass + 16mm cavity + 6 mm laminated safety glass)
- Double glazing (6 mm toughened safety glass with solar-control printing + 16mm cavity + 6 mm laminated safety glass)
- Aluminium profile
- 13 mm perforated sound-absorbed plasterboard
- Water-based pre-heating & cooling ventilation unit
- Controlable ventilation box

West facade fragment 1:20
Horizontal section 1:20
Vertical section 1:20
Critical detail 1:5
walkable roof with 60mm thick concrete block paving

height adjustable piers

100mm insulation

water proving membrane

screed forming slope

steel plate

400 mm HEB profile

post- rail façade:
alum. cover coated with micaceous iron oxide

50/100 mm laminated timber member

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double glazing (6 mm toughened safety glass with solar-control printing +16mm cavity + 6 mm laminated safety glass)

aluminum profile

13 mm perforated sound-absorbed plasterboard

water-based pre-heating & cooling ventilation unit

controlable ventilation box

natural ventilation

• CONTROLABLE LOUVRES
• PRE HEATING & COOLING VENTILATION UNITS, WATER COILS
4. BUILDING FORM

FACADE RESULT

NORTH FACADE

• VERTICAL ELEMENTS REACT TO GENERAL ASSEMBLY
4. BUILDING FORM

FACADE RESULT

EAST FACADE
walkable roof with 60mm thick concrete block paving
height adjustable piers
100mm insulation
water proving membrane
screed forming slope
steel plate
400 mm HEB profile
post-rail façade:
alum. cover coated with micaceous iron oxide
50/100 mm laminated timber member
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double glazing (6 mm toughened safety glass with solar-control printing + 16mm cavity + 6 mm laminated safety glass)
aluminum profile
13 mm perforated sound-absorbed plasterboard
water-based pre-heating & cooling ventilation unit
controlable ventilation box
horizontal strips of solar control on glass printing
5. INTERIOR SPACE:
SPACE TUBES BRING LIGHTS IN, FUNCTIONAL CORES, STRUCTURAL ELEMENTS
Light column also contributes to expression of monumentality
5. INTERIOR SPACE

TYPES OF TUBES

stair and elevator

ventilation duct

toilet

interior green
5. INTERIOR SPACE

FLOWER
Centralized
FOREST
Decentralized
STRUCTURE DESIGN
CLIMATIC DESIGN:

A. VENTILATION THROUGH TUBES:
   NATURAL & MECHANICAL

B. HEATING & COOLING:
   CONCRETE CORE ACTIVATION AS MAIN APPROACH
   FACADE VENTILATION UNITS FOR PEAK LOADS
SUMMER SITUATION
WINTER SITUATION
THANKS

SADD

Sean (Xiaohui) Zhong P4 presentation