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ASSIGNMENT

Design a sustainable building that houses the Environmental Council of the United Nations in the urban context of the current UN site in Manhattan, New York. The building will represent the necessity for a sustainable environment.
UNITED NATIONS
World Peace
Human Rights
International Security
Economic Development
Social Progress

International Court of Justice
General Assembly
Security Council
Economic & Social Council
Secretariat

THE HAGUE
MAHATAN
Global warming, heat island, air and water pollution......
THE PROGRAM

TOTAL
15.300 m²
THE BUILDING PERFORMANCE

PROPAGATE AND EXCHANGE INFORMATION FOR SUSTAINABLE DEVELOPMENT

MOTIVATE: GIVE THE PEOPLE AN IMPULSE

GENERATE A CREDIBLE AND RECOGNIZABLE IMAGE
LOCATION NEW YORK
ANALYSIS OF MIDTOWN EAST

THERE US A SHORTAGE OF PUBLIC GREEN
ANALYSIS OF TRAFFIC SITUATION

THE FDR DRIVE IS A LARGE SECURITY RISK
SOLUTION

REPLACING ROAD
NEW MASTERPLAN

MOVE HIGHWAY ACCESS RAMP & CREATE TRAFFIC JUNCTION
ANALYSIS OF OLD MASTERPLAN
ANALYSIS OF OLD MASTERPLAN

LE CORBUSIER

OSCAR NIEMEYER

OSCAR NIEMEYER

FINAL
RESTORE THE ORIGINAL DESIGN

RAISE GROUND FLOOR LEVEL
NEW MASTERPLAN
URBAN PRINCIPLES

NOT MAKE A BLOCK BETWEEN THE CITY AND RIVER FRONT
ARTIFICIAL CANTILEVERED over the F D. R Drive

UN Plot

FDR Drive

East River
BUILDING PRINCIPLES

KEEP THE RECOGNIZABLE SYMBOLS OF THE WORLD ORGANIZATION
CREATE LESS BUILDING VOLUME BY BUILDING UNDER THE GROUND
REMAIN THE OUTLINE OF UNITED NATION
ANALYSIS OF **ENTRANCE**

THE UN PLOT IS INTROVERT
URBAN DIAGRAM

CREATE ENTRANCE TO MAIN PUBLIC FLOW BY LIFT UP THE CENTER

STREET VIEW OF 47th STREET
BUILDING VOLUME DIAGRAM

A UNDERGROUND BUILDING WITH LARGE INNER GARDEN
INTEGRATE NATURE WITH DAY-TO-DAY EXPERIENCE
SITUATION DRAWING

- Drawing day light enter into the building

Assignment | Master Plan | Design Intentions | Users of the Building | Organisation & Design | Building Technology & Design

Public Entrance
**USESERS OF THE BUILDING**

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<th>COUNCIL ROOM</th>
<th>AUDITORIA &amp; MEETING</th>
<th>RESTAURANT &amp; FOYER</th>
<th>OFFICE</th>
<th>LIBRARY &amp; EXPOSITION</th>
<th>PUBLIC AREA</th>
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<tr>
<td>DELEGATES</td>
<td>1400 m²</td>
<td>2700 m²</td>
<td></td>
<td></td>
<td>1600 m²</td>
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<tr>
<td>BUSINESSMEN</td>
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<td>PRESS</td>
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<td>EMPLOYEES</td>
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<td>PUBLIC VISITORS</td>
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VISITORS

-EXPOSITIONS

-LIBRARY
PRESS & BUSSINESSMEN & DELEGATES

- MEETINGS

-CONFERENCES

-INFORMATION
FUNCTION ZONES

LOBBIES

REPRESENTATION SPACES

EXPOSITION SPACES

LIBRARY

READING ROOMS

CANTEEN

RESTAURANT

FLEXIBLE WORKING SPACES

WORKSHOP UNITS

WORK SPACES

OFFICES

BRAINSTORM ROOMS

MEETING SPACES

AUDITORIUM

CONFERENCE HALL

SUPPORTING FUNCTIONS

MAINTANANCE

ICT

ARCHIVE
DIVIDE ZONE + CORRIDOR

SPACE-TO-SPACE CONNECTIONS ARE ACHieved
WITHOUT CORRIDORS
office
auditorium
900 m²
flexible workspace
200 m²
auditorium
400 m²
auditorium
400 m²
exposition space
150 m²
workshop
150 m²
workshop
300 m²
canteen
150 m²
delegate lounge
reading
library
1000 m²
restaurant
300 m²
meeting room
meeting room
meeting room
video
flexible workspace
200 m²
press room
300 m²
meeting room
300 m²
press room
300 m²
auditorium
900 m²
auditorium
400 m²
auditorium
400 m²
office
ASSIGNMENT | MASTER PLAN | DESIGN INTENTIONS | USESERS OF THE BUILDING | ORGANISATION&DESIGN | BUILDING TECHNOLOGY&DESIGN
SPATIAL STUDY MODEL
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<th>BUILDING TECHNOLOGY&amp;DESIGN</th>
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<td>52</td>
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SUSTAINABILITY
OUTDOOR CLIMATE - GEOGRAPHY

United Nations
New York

50° N
74° W
From November until April the predominant direction is north-west.

From May until August the wind is most of the time coming out of the south direction.
OUTDOOR CLIMATE - WINTER & SUMMER

55% R.H.

11% of the year

28°C

89% of the year

99% of the year

- 7°C

1% of the year
NATURAL SLOPE OF UN PLOT
SUSTAINABILITY

YAO DONG IN SHAANXI, CHINA

ASSIGNMENT | MASTER PLAN | DESIGN INTENTIONS | USESERS OF THE BUILDING | ORGANISATION&DESIGN | BUILDING TECHNOLOGY&DESIGN
Kandovan, a Dug-in City

Kandovan is a village in the province of Azarbaijan, Iran. It is popular for its troglodyte dwellings. Some of the houses are at least 700 years old and are still inhabited. It is similar to Cappadocia in Turkey. In this village people have carved out the rocks and made their houses inside these rocky cliffs.

Kandovan is a very primitive but original sample of dug-in project. These People have tried to benefit the most from their surrounding natural infrastructure and make their houses by reducing the mass of the cliffs and excavating them.
SOIL TEMPERATURE DISTRIBUTION OF SHALLOW LAYERS

Soil temperature distribution - deep layers

Soil temperature distribution - shallow layers
CLIMATE DESIGN DIAGRAM

SUMMER

WINTER

ASSIGNMENT | MASTER PLAN | DESIGN INTENTIONS | USESERS OF THE BUILDING | ORGANISATION&DESIGN | BUILDING TECHNOLOGY&DESIGN
CLIMATE DESIGN DIAGRAM - HEATING

Solar Heat Gain

Air -condition System

Air Cooling/ Heating

Climate Design Diagram - Heating

-5°C

24°C

10°C

ASSIGNMENT | MASTER PLAN | DESIGN INTENTIONS | USESERS OF THE BUILDING | ORGANISATION&DESIGN | BUILDING TECHNOLOGY&DESIGN
CONCRETE CORE ACTIVATION

1 LIGHTING FIXTURE IN ACOUSTICAL PANEL
2 RADIATION HEAT FROM CONCRETE ACTIVATION
3 WARM AIR FROM EXHAUST
4 EXHAUST AIR
AUDITORIUM STRUCTURE - DOUBLE TEES
FACADE
QUESTIONS?