A physical collective memory: a new United Nations building in an former highway
<table>
<thead>
<tr>
<th></th>
<th>CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ASSIGNMENT</td>
</tr>
<tr>
<td>2</td>
<td>INTRODUCTION</td>
</tr>
<tr>
<td>3</td>
<td>URBAN ANALYSIS</td>
</tr>
<tr>
<td>4</td>
<td>URBAN MASTERPLAN</td>
</tr>
<tr>
<td>5</td>
<td>URBAN CONCEPT</td>
</tr>
<tr>
<td>6</td>
<td>ARCHITECTURAL DESIGN</td>
</tr>
<tr>
<td>7</td>
<td>USERS</td>
</tr>
<tr>
<td>8</td>
<td>PUBLIC SPACE</td>
</tr>
<tr>
<td>9</td>
<td>DELEGATES</td>
</tr>
<tr>
<td>10</td>
<td>EMPLOYEES</td>
</tr>
</tbody>
</table>
ASSIGNMENT
Structure of the United Nations organisation

INTERNATIONAL COURT OF JUSTICE

THE HAGUE

GENERAL ASSEMBLY

NEW YORK

SECURITY COUNCIL

NEW YORK

ECONOMICS & SOCIAL COUNCIL

SECRETARIAT

ENVIRONMENTAL COUNCIL

(UNEC)

NEW YORK
"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"  

WCED, Our common future, 1987

1) New Sustainability department  
2) Regulator of future common policy  
3) Collect, analyse and exchange of data

Create awareness under public about sustainability!
INTRODUCTION TO NEW YORK AND THE UNITED NATIONS
CURRENT SITUATION

SITUATION URBAN SCALE MANHATTAN

INTRODUCTION NEW YORK AND UN

EAST RIVER

LOCATION

HUDSON RIVER
An Architectural landmark

INTRODUCTION NEW YORK AND UN

CURRENT SITUATION

EAST RIVER

build: 1948-1952
URBAN ANALYSIS

CONCLUSIONS
CONCLUSION: lack of green in Manhattan

CURRENT SITUATION
REACTIONS: new forms of urban green: the ‘High line’ and the ‘Low line’..
Manhattan is disconnected from waterfront: UN plot = exception
Highway around Manhattan as barrier between city and current green waterfront

Current Situation

The current highway belt
The current green waterfront
City is disconnected with waterfront!
URBAN MASTERPLAN
An GREEN BELT and BIKE PLAN: masterplan Manhattan

ARO & dandistudio proposed wrapping Lower Manhattan with wetlands to regulate storm surge.

GREEN FOR WATER REGULATION

GREEN FOR RECREATION AND TRANSPORTATION
**MASTERPLAN PROPOSAL**

**STEP 1: Connect old green with new green!**

Creating a GREEN BELT

Bikeplan
Pedestrian boulevards

**STEP 2: Connect Green Belt with City!**

Connections: BELT NODES
BELT NODE: Activate the new Green Belt with functions

RELATE NEW FUNCTIONS TO CURRENT FUNCTIONS

CONCENTRATE THEM INTO ‘STRONG’ POINTS

CONNECT POINTS!
‘BELT NODES’: ABSORB PUBLIC BEFORE THE HIGHWAY BARRIER

DESIGN PLOT

EAST RIVER

BELT NODE 1

UN

BELT NODE 2

MASTERPLAN PROPOSAL
HELP PUBLIC CROSS EASILY OVER THE HIGHWAY ONTO THE GREEN BELT

DESIGN PLOT

NEW GREEN BELT
URBAN CONCEPT
Current situation: highway is a threat to conference building
Masterplan proposal: replace the FDR highway

CURRENT UN PARK = NOT PUBLIC
A public park to connect city and Green Belt and to unite the UN buildings.
Construction of former FDR esplanade will be kept and former FDR will be turned into a sunken Garden.
A PHYSICAL MEMORY: construction is a memory of the past: Negative becomes positive!

DESIGN PROPOSAL

BEFORE

AFTER

Cheonggyecheon Park, Seoul, 2003, SeoAhn Total Landscape designers
BUILDING CONCEPT
<table>
<thead>
<tr>
<th>Users</th>
<th>Public</th>
<th>Delegates</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>Short stay: creating a place for everyone (locals, tourists), a place where public life can express itself.</td>
<td>Short stay: functional, efficient and save an in and out policy.</td>
<td>Long stay: creating a healthy, modern and inspirational work environment. An office that invites the best to come to work.</td>
</tr>
</tbody>
</table>
Current users and the Rose Garden: a strategic location

DESIGN PRINCIPLES: FUNCTIONING

LEGEND
PUBLIC  EMPLOYEES  DELEGATES

OFFICES  DELEGATES  PUBLIC  1 AVANUE  ROSE GARDEN
1 = EXTENSION: relate new functions with current functions: strong indoor connections

DESIGN PRINCIPLES: FUNCTIONING
2 = A PUBLIC PARK with an office PAVILLION

LEGEND

PUBLIC  EMPLOYEES  DELEGATES

DESIGN PRINCIPLES: FUNCTIONING
Design SOLUTION = 3 elements, design CHALLENGE = 2 connections
STUDY VARIANTS: UN PARK - FDR GAP - GREEN BELT -> DESIGN BOOKLET

VARIANT STUDIES

‘Under passageway’

Variant 1

‘Down and up’

Variant 2

‘Straight ahead’

Variant 3

‘In between’

Variant 4
ARCHITECTURAL DESIGN
Overview design plot
Connection between city and waterfront. Extension and Pavilion

DELEGATES
PUBLIC
UN PARK
OFFICES
NEW GREEN BELT
BOULEVARD
FDR GARDEN
Public space on 2 levels: UN PARK and FDR GARDEN
FDR GARDEN: leads to the new public entrance of the extension
New entrance public extension: public space at 2 levels
United Nations boulevard: absorbing the public and transition between city and UN park
A first view on the UN Park
An entrance to the park
Public space city level: the UN Park
Public space city level: UN Park

OPEN AIR STAGE: for recreational, cultural and political gatherings
Transition between public space at city level to sunken FDR Garden
Public space at the former FDR level: sunken FDR Garden, remainings of old construction
The UNEC public entrance: public space at 2 levels connected with stairs
Public extension UN building: The FDR Exposition Hall, former esplanade construction is visible
Height differences between the different users
FDR Hall: public exposition space between the old construction of the FDR esplanade: a physical memory
Extension: strong indoor connection with current building: New public entrance for current UN building

PUBLIC PART
EXTENSION

(DELEGATES PART)
DELEGATES HAVE THEIR OWN PRIVATE STAIRS
STAIRS UP: DIRECTION THE SECURITY COUNCIL AND CURRENT DELEGATES LOUNGE

DELEGATES PART

LEGEND

PUBLIC
EMPLOYEES
DELEGATES
GREEN ROOFS
OFFICE OUTSIDE SPACE

A
OFFICE PAVILLION
The office pavillion: surrounded by green, atrium view to FDR Darden
Office entrance: minimum obstruction to the public space

LEVEL 0: UN Park

LEVEL -1: FDR Garden

stairs up = offices
stairs down = FDR corridor
stairs up = UN Park Level
An office pavillion in a Park
OVERVIEW

OFFICE PAVILLION

Offices, corridors and loggia's
Impression of the corridor, offices and loggia
The office CORRIDOR ending in a LOGGIA: walk to the light and green!
LOGGIA’S: multifunctional spaces, interior always in contact with the exterior!
Office layout organisation example: a study to a flexible grid

1.5m grid (5feet)
Roof openings: light and views

South Serre: 2nd Floor has roof openings for daylight in the loggia’s
The south serre: large gatherings and workshop spaces
The south serre
CONSTRUCTION

(office pavillion)
Site before construction
Concrete cores: stability, escape stairs, lifts and installation shafts
Main structure = steel, a dry building method: quick, demountable and flexible
Prefabricated steel elements, steel insulation
Floor = Wooden Lignatur elements on top of steel structure: quick, demountable and flexible

A variant of floor direction

Lignatur element
2nd Floor

CONSTRUCTION

MONTAGE
Roof construction
Rooftop

CONSTRUCTION

MONTAGE
CLIMATE
(office pavillion)
Ventilation air intake through the floors: 2 different spaces = 2 systems

Office Corridor: central ventilation intake

Offices ‘strip’: decentralized air intake

More stable demands

Spaces are directly connected with the exterior!
Maximum personal controllability,
Only activated in the presence of users.
Climate principles: ventilation, cooling, and sunshading.
Ventilation offices: decentral heat exchange unit

Example: heat exchange unit
Offices: sunlight in and heat out!
For extreme heat loads: chilling ceiling = most effective and comfortable
DECENTRALIZED VENTILATION: flexibility layout 1

CLIMATE

BUILDING TECHNOLOGY
Centralized air exhaust to the 4 cores: heat recovery

CENTRAL AIR EXHAUST: plenum plan

OFFICE STRIP

FRESH AIR FROM THE 4 CENTRAL CORES

FRESH AIR DIRECTLY FROM OUTSIDE
ENERGY PLAN: East River: the use of warm/cool water system
FACADE

(office pavillion)
Facade: sun protection and a exterior corridor
Facade: a close up

FACADE CLADDING: IPE WOOD (hardwood)

NEW

15 YEARS

ROTATABLE SUN SCREEN: STEEL MESH
Green wall serre and exterior corridor

DETAIL

BUILDING TECHNOLOGY

DETAIL
Green wall serre
View from inside an office
1: Memory of and old highway turned into a park = Singal to the world, upgrade your environment with powerful vision

2: New building works strongly with 'Old Building', it's not only a new building that stands alone but builds up on current one.

3: Public Space: invest in a attractive public space is an investment for future attractiveness of future generations in the New York

4: Masterplan is sustainable because it relates with the current situation: functions, strong connection points

5: Masterplan and design invest in a strong Green Belt: this promotes biking!

6: Green in general is of mayor importance: for water regulation, urban heat effects, fresh air.

7: Office pavilion: has been designed thinking about employees who work there every day:

1: Fresh natural air which you can regulate each in each office, and also create an floor to floor air stream = most comfortable
2: Views and natural light: maximum depth of office is 6 meters
3: Workspace qualities: gathering spaces, outside spaces
4: Construction: dry building methods are chosen intentionally: thinking about demountability and recycling
5: Office pavilion is cut off from the sewega system by placing Constructed wetlands
Overview: Manhattan is connected to the waterfront!
I want to design a building that could only fit in this context that means: revalue the ‘negative’ FDR drive into a positive object, preserve the unique spatial quality of the UN-park and use the latter to unite all the UN buildings into one complex and which can ‘absorb’ people from Manhattan and help them crossing the FDR barrier onto the new Green Belt.