2015 FIRST PLACE

Jiawei Mai

LYCEUM
A traveling fellowship in Architecture
integrate me softly

Tomorrow's aging city today
The existing reality of aging, whether people or city, share one thing in common - isolation. Within an institutional environment, senior citizens can easily become isolated, depressed and inhibited from living up to their full potentials. The increasing aging population and a wider variety of lifestyles bring new possibility for aging. Buildings, once solely designed to create an isolated and homogeneously conditioned environment, consume resources faster than nature can ever reproduce. Our urgent need to reduce carbon footprint and mitigate climate change, push us to rethink the connection between the built environment and nature. Therefore, the proposal for the 2015 Lyceum competition examines ways that an iconic, aging skyscraper can become a framework for social and natural system integration.
a vertical city fabric benefits those with limited mobility

Mix
different sections of the existing building will be re-zoned for a mixture of purposes.

Divide
the main residential volume is divided into a number of four-story-high communities.

Interconnect
shared social space on each floor function as the visual corridor that connects to the sky lobby.

Focus
each community is paired with a neighborhood-focused program, opens to both the residents and the public.

Exchange
all neighborhood programs are connected through a public ‘street’ that encourages social exchange.
Typical Residential Floor

Each typical floor consists of residential units on the southern half of the building and a narrow band of offices on the northern part, with consideration of heating of the residence and cooling of the offices.

Every four residential floors make a unique community. Each floor is interconnected via a common space which bridges the exterior wall to the interior core and staggers each floor to allow for visual connection throughout the entire community.
Unit A 300sf
suitable for retired couples, singles, college graduate, young professionals, frequent travellers.

Unit A+B 800sf
merged from two smaller units, suitable for couples, family, and those who have guest sleep overs. The sliding wall also allows for live-work scenarios.

Unit B 500sf
suitable for retired couples, singles, college graduate, young professionals, frequent travellers, both for living and working.

Unit D 700sf
the most luxurious unit with ample daylight and views. Suitable for single, couples, family, particularly those who are willing to pay a little more.
Section through Residential Community
39th - 81st Floor

Each 4-story residential community is paired with a large community program that serves as the focus. Such program encourages not only interaction between residents, but also allows the public to freely interact with the residents.

Double facade (southern portion only) shades the most vicious sun in July and August and allows for passive ventilation.

Operable facade opens during rainy season, allowing for the building to collect, filter and manage storm water of the city.
The Timeline of Integration

Single Monolith
1950 - 1986
100% conditioned

Energy Retrofit
2009 - 2016
80% conditioned

Increased Porosity
2015 - 2020
70% conditioned

Integrated System
2021 - 2045
50% conditioned

Integrated City
2046 -
30% conditioned

The Empire State Building served as a public monument and symbol of New York.
The building went through major retrofit, including glazing replacement and building system renewal.
The building enclosure shrinks while the building open up its skin to interact with solar, wind and precipitation.
The building enclosure continue to shrink while the mid facade is completely removed to allow for integration with nature.

Skyscrapers became the main structural support for an eco-mesh system, which allows the urban environment to be integrated with natural system. The eco-mesh demonstrates potential to mitigate air pollutions, manage storm water, and revitalize the urban ecosystem, while the intact spire of the Empire State Building continues to demonstrates its 'new' monumentality.
a city of integration

seniors re-connect with society
cities fuse with the metabolism of nature