G5 GROWING CITY
-----FARMING PARK VISITOR CENTER

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CONDITION OF SITE

LOCATION

Illinois
Cook County
City of Chicago
South-Chicago
CONDITION OF SITE

LOCATION

10 Miles Distance from Loop
20 Minutes Drive from Lakeshore Drive

SOUTH CHICAGO

THE LOOP

Urban development

GROWING CITY

FARMING PARK VISITOR CENTER
CONDITION OF SITE
SITE IMAGE OF 1990

US STEEL SOUTH WORKS
CONDITION OF SITE
PROBLEM AND ADVANTAGE

BAD IMAGE

NEIGHBOURHOOD
High Crime Rate
High Unemployment
Low Education
Low Income
Food Desert

SITE
Huge Empty Land
Lakeside
Lakefront Park
Canal
Ore walls

EMPTY & NICE VIEW
KICK-OFF PROJECT PROPOSAL
--- URBAN FARMING
KICK-OFF PROJECT PROPOSAL
--- URBAN FARMING

FOOD DESERT---- LACKING ACCESS TO FRESH FOOD
Mayor Emanuel Launches New “Farmers For Chicago” Network For Chicago Urban Farmers
(March 15, 2013)
KICK-OFF PROJECT PROPOSAL
--- URBAN FARMING

NON-PROFIT URBAN FARMING SUPPORTING ORGANIZATION

Growing Power is a national nonprofit organization which help people grow, process, market and distribute food in a sustainable manner.
KICK-OFF PROJECT PROPOSAL
--- URBAN FARMING

USING URBAN FARMING TO SOLVE NEIGHBORHOOD PROBLEMS

- FOOD DESERT
- VACANT PLOTS
- LOW EDUCATION
- UNEMPLOYMENT
- CRIME
- BAD IMAGE

URBAN FARMING

- Fresh food
- Farms & plant nursery
- Training
- Job
- Adolescent education
- Tourism
KICK-OFF PROJECT PROPOSAL
--- URBAN FARMING

USING URBAN FARMING AS TEMPORARY STRATEGY TO CATALYZE URBAN DEVELOPMENT ON THE SITE

- LOW COST
- FAST CONSTRUCTION
- EASY TO MOVE
- ATTRACT PEOPLE
CONCEPT OF DEVELOPMENT

VACANT PLOTS IN THE NEIGHBOURHOOD
CONCEPT OF DEVELOPMENT

FILL VACANT PLOTS WITH URBAN FARMING TO TREAT PROBLEMS IN NEIGHBOURHOOD
CONCEPT OF DEVELOPMENT

INSERT SEVERAL PROGRAM SEEDS INTO THE VACANT SITE TO DRIVE THE DEVELOPMENT
CONCEPT OF DEVELOPMENT

A BALANCE BETWEEN URBAN EXPANSION AND URBAN FARMING
DESIGN STRATEGY

EXTEND THE EXISTING INFRASTRUCTURE IN THE NEIGHBORHOOD IN TO THE SITE
DESIGN STRATEGY

CREATE LINEAR LANDSCAPE BARS TO ATTRACT PEOPLE
DESIGN STRATEGY

DECENTRALIZE PROGRAM SEEDS TO ENSURE THAT THEY CAN FUND BY DIFFERENT INVESTORS TO KEEP THE DEVELOPMENT GOING.
The steel factory occupied the lakefront of South Chicago neighborhood 30 years ago.
After the steel factory was shut down, all the buildings were demolished. What remains are only the foundations and the ore walls.
In the initial stage, some of the left foundations are used as the foundations of greenhouses and the rest of the site are filled with different plant which can treat the soil polluted by the factory.
The community center, market and the research center are as the first three seeds to drive the development.
Other program seeds will be added after a few years to keep the development going smoothly.
The program seeds help to development their nearby district inside a existing grid which extend from the neighborhood.
After this site is completely developed, the linear landscape are left to growing urban farming.
CENTRAL FARMING DISTRICT

- OFFICE AND COMMERCIAL DISTRICT
- EDUCATION CENTER
- RESEARCH CENTER
- RESIDENTIAL AND RETAIL DISTRICT
- VISTOR CENTER
- MARKET&MUSEUM
- OFFICE
- RESTAURANT

G5 GROWING CITY    -----    FARMING PARK VISITOR CENTER

Urban development
PERSONAL PROJECT
FARMING PARK VISITOR CENTER
0~5 YEARS

The Central Farming District is the start of the whole masterplan. **Market and farmland** can attract the people from the old neighborhood to the vacant site to work from the beginning. **The research center** can attract the researchers to establish a new research center of urban farming to support the development in the next years.
AFTER DEVELOPED

The Central Farming District will be the most outstanding part which displays an urban farming experimental field. A theme park will be the heart of the whole masterplan. It will show the achievement of urban farming and at the same time it can offer opportunity to people who want to own a field.
PROGRAM

INFORMATION CENTER

VISITOR CENTER

Provide information and make advertisement for the project to attract people to move in or invest money on the site.

Provide information and service for the visitor to experience a specific urban farming park.
LOCATION

It is at the beginning of the farming park and adjacent to canal, lakeshore drive and ore walls.
The ore walls divide the urban farming park into different strips, every strip has its own character.
Two high walls can not provide a closed feeling by themself.

Two short ore walls form a special space in which people can experience a certain volume. In this case, the best way to get an inside building space is to cover a new roof on the existing wall.
DESIGN CONCEPT

ROOF FORM (FROM LONG DISTANCE)

Flat roof need a volume to make an outstanding appearance.

When people are far away from the wall, the pitched roof will be outstanding from the wall to attract people to come around.
People have similar feeling of thin flat roof and pitched roof when they are near the wall because pitched roof reduces feeling of the big volume.
DESIGN CONCEPT

ENVELOPE FORM

Facade Structure: Existing concrete ore wall + New timber portal frame. (Contrast of old and new)
DESIGN CONCEPT

STRUCTURE MODEL
DESIGN CONCEPT

INSIDE SPACE FORM
DESIGN CONCEPT

INSIDE SPACE FORM
DESIGN CONCEPT

INSIDE SPACE FORM

The ore walls were used to be the container of ore and the shape of ore could be seen from outside. It forms a significant character which was a strong memory of the old steel factory. When the new functions of visitor center are filled into ore walls, different function forms different boxes. The boxes are distinct from the ore wall so it can also be seen from outside through a transparent facade.
DESIGN CONCEPT

CONDITION OF ORE WALLS
DESIGN CONCEPT

IMAGINATION OF ORE WALLS
LIGHT TIMBER STRUCTURE ATTACHED TO THE EXISTING CONCRETE WALL. (FREE TO ADD NEW FUNCTION UNDER THE SAME ROOF.)
DESIGN CONCEPT

CONCEPT MODEL
DESIGN DEVELOPMENT

ENTRANCE DESIGN

The new portal frame cover is extended to the very beginning of the farming park to make a outstanding appearance from the old wall to show there is something new.
DESIGN DEVELOPMENT

ENTRANCE DESIGN

The real entrance is sent backward to avoid overheat from the non-shading part at the beginning. Some part of the outside glass panel is removed to get ventilation in the glass box and entrance.

PERSPECTIVE OF ENTRANCE
DESIGN DEVELOPMENT

ENTRANCE DESIGN

GROUND FLOOR PLAN 1:200
FAÇADE DESIGN

In order to see the inside function box, the facade is made of double glazing panels with coloured aluminium louvers fitted in cavity. The glass from the entrance to the end is changing from transparent to translucent then non-transparent. That will made the inside function box gradually hidden by the panels, which can rise the visitor’s curiosity to get inside.
The ore wall provide a constant climate for the lower part but the glass cover will made a varying climate for the upper part. As a result, the solution of climate of the glass facade will vary too.
DESIGN DEVELOPMENT

NATURAL LIGHT

Lighting

Natural lighting in clear day

Varying angle of louvres

Natural lighting in cloudy day
DESIGN DEVELOPMENT

FACADE VENTILATION

Natural ventilation in spring and autumn combine with mechanical ventilation

Pre-cooling displacement ventilation in summer

Pre-heating displacement ventilation in winter
HEATING AND COOLING

- Floor heating in winter
- Pre-heating displacement ventilation in winter
- Pre-cooling displacement ventilation in summer
DESIGN DEVELOPMENT

INTERIOR DESIGN

The ore walls provide a rough inside atmosphere and the new additional boxes are painting with fine white latex paint. The contrast of old and new are not just on the facade but also of the interior.
DESIGN DEVELOPMENT

INTERIOR DESIGN

The rhythm of the portal frame makes a constant corridor on ore walls to connect different function box.
DESIGN DEVELOPMENT

INTERIOR DESIGN

The rhythm of the portal frame makes a constant corridor on ore walls to connect different function box.
DESIGN DEVELOPMENT

CONDITION OF INSIDE ORE WALLS
IMAGINATION OF INSIDE ORE WALLS

Keep the original space of the ore wall to make a exhibition corridor with fascinating light and shadow.
DRAWINGS

FIRST FLOOR PLAN 1:200

GROUNDFLOOR PLAN 1:200
DRAWINGS

WEST ELEVATION 1:200

NORTH ELEVATION 1:200

SOUTH ELEVATION 1:200
DRAWINGS

SECTION C-C 1:200

SECTION E-E 1:200

SECTION G-G 1:200

SECTION D-D 1:200

SECTION F-F 1:200
0.5-1.3m Reinforced concrete foundation,
100mm Insulation,
5mm Water barrier,
20mm Drainage plate,
$d=120$mm French drains.

Hydraulic elevator

SECTION A-A 1:50
Vinyl tile,
Fibermesh reinforced concrete with hydronic heating system 50mm,
Insulation 100mm,
Screed 50mm,
Bituminous membrane water barrier,
Gravel 150mm

White silicate paint,
12.5mm Plaster board,
200mm Sound Insulation,
12.5mm Plaster board,
White silicate paint,
1 Ridge vent
2 Insulating Glazing, 8mm+22cavity+8mm, light reflecting aluminium louvres fitted in cavity, stove enamelled, white
3 Timber portal frame, section 200mm*400mm
4 Timber purline, section 100mm*200mm
5 WICLINE 90SG all-glass integrated opening rail
6 Existing concrete wall
7 Cement adjustment layer for portal frame
8 Adjustment wood frame
DRAWINGS

INSIDE FACADE 1:50

FIRST FLOOR PLAN 1:50
THANK YOU!