GROWING CITY
Research book from G5-Yinxin Bao  Totor:Roberto Cavallo Barend Koolhaas
Contents

Site ................................................. 003
SOM plan ......................................... 017
Farming ........................................... 028
University ....................................... 054
Trail ............................................... 066
Strategy .......................................... 078
Individual ....................................... 108
Appendix ......................................... 124
INTRODUCTION

SOUTH CHICAGO

SOUTH CHICAGO

Median Household Income (2009)

- Illinois: $55,010
- Cook County: $52,539
- City of Chicago: $46,195
- South-Chicago: $34,001
South Chicago Area: 1.764 square miles
South Chicago Population: 31,198
Median Household Income (2009): $34,001
Chicago: 11,877 people per square mile
Block Condition
**Block Condition**

**Block of High Density**
- Block Number: 29
- 1-Storey Building(m²): 1818
- 2-Storey Building(m²): 1882
- 4-Storey Building(m²): 11871
- Covered Area(m²): 53066
- Block Area(m²): 34284
- Floor Area Ratio: 1.55

**Large Block with Public Facility**
- Block Number: 233
- 1-Storey Building(m²): 1818
- 2-Storey Building(m²): 8171
- Covered Area(m²): 58294
- Block Area(m²): 80220
- Floor Area Ratio: 0.73

**Block of Low Density**
- Block Number: 272
- 1-Storey Building(m²): 2229
- 2-Storey Building(m²): 1429
- 3-Storey Building(m²): 662
- 4-Storey Building(m²): 266
- Covered Area(m²): 8137
- Block Area(m²): 36739
- Floor Area Ratio: 0.22

**Block with More Internal Roads**
- Block Number: 334
- 1-Storey Building(m²): 9151
- 2-Storey Building(m²): 1227
- Covered Area(m²): 11605
- Block Area(m²): 39074
- Floor Area Ratio: 0.3

**Large Block**
- Block Number: 68
- 1-Storey Building(m²): 3223
- 2-Storey Building(m²): 7661
- 3-Storey Building(m²): 1212
- 4-Storey Building(m²): 2883
- 5-Storey Building(m²): 1978
- Covered Area(m²): 43903
- Block Area(m²): 58974
- Floor Area Ratio: 0.74

**Block With Secondary Roads**
- Block Number: 165
- 1-Storey Building(m²): 7373
- 2-Storey Building(m²): 2662
- 3-Storey Building(m²): 1212
- Covered Area(m²): 12697
- Block Area(m²): 34654
- Floor Area Ratio: 0.37

**Block With More Internal Roads**
- Block Number: 34
- 1-Storey Building(m²): 9151
- 2-Storey Building(m²): 1227
- Covered Area(m²): 11605
- Block Area(m²): 39074
- Floor Area Ratio: 0.3
Vacant Buildings

Distribution of Vacant Properties and Red Flag Properties in the City of Chicago, as of September 2010

Density of Vacant Buildings

- Low
- Med
- High

Vacant property
Red flag property
Vacant Plots
South Works Site - Specifics

Ore walls and old foundation is still found on the site and is hard to remove.
The site contains some slopes, created by industrial waste, foundations and crushed concrete.
The land near the water is owned by the city and therefore has to be part of the lakefront.

Lake Michigan experiences tidal fluctuations. However, the tidal fluctuations are so small that much greater fluctuations of lake levels produced by wind and air pressure changes mask them. Measurements indicate twice-daily tides of 0.5 to 1.5 inches.
LAND USE

Planned development A
FAR 5

Business/ Commercial
FAR 1.2/ 2.2/ 3/ 5

Industry
FAR 3

Planned development B
FAR 0.45

Residential
FAR 0.65/ 0.9/ 1.2/2

Parks and open space
TIF = TAX INCREMENT FINANCING

- TIF is a tool used by municipalities to finance development in blighted areas, by
  borrowing money against any future increase in the areas property tax
- The amount of tax is frozen for at least **23 years**, the difference goes into the TIF

The way TIF works

- The TIF-areas are devised by city council
- TIF-areas are created, then expire and get renewed or new ones are created
- TIF-funds pay for public projects, like schools, streetscape, affordable housing, rehabilitating land, government building renovations, privat development projects etc.
- Private investors can also create public benefit, by jobs, eliminating eyesor, redevelop vacant sites or vacant buildings

Requirements to become a TIF-area

- **#1 BLIGHTED**
  - Old/not well maintained
  - Declining property value
  - Excessive vacancies

- **#2 The BUT FOR rule**
  Municipalities must prove that the area would not develop BUT FOR the use of TIF’s; Little redevelop activity -> Little market interest

CRITIQUES

- Areas where the redevelopment is already done the TIF is doing best
  People don’t see how, for example Michigan Avenue and State are considered blighted, when looking at conditions in their own neighborhood and seeing how schools are in trouble
- Companies that have been given TIF-funds have:
  - Sold TIF project property for a profit
  - Shut down within a year
  - Gone bankrupt
  - Moved to another state or suburb
SOM PLAN
LAND USE

By six distincts

Residential
- Central Park
  - Organized along centrally located linear park
- Lakefront
  - Lakefront access
  - Ideal for higher densities
  - Views to downtown Chicago
- US 41
  - Full range of uses
- Ore Wall
  - Mixed use
  - Forms northern edge of neighborhood

Business
- Market Common
  - Retail and centertainment destinations
  - Variety of housing options
  - Lakefront access
  - Community gathering
- The North Slip
  - Full range of uses
  - Unique waterfront
  - Boat access and docking

Research
- Research&Development
  - Innovation zone
  - Energy test field
  - Living laboratories.
LAND USE
By blocks

Residential
- RM 5.5
- RM 6
- RM 6.5
- RT 4

Business
- B 22
- B 23
- B 35

Open space
- POS 1
- POS 3

Research
- Solo Cup
FINANCIAL MODEL

PHASE 1  →  WHOLE PROJECT 50 YEARS

City of Chicago

- 98 Million dollars TIF subside

All the infrastructure and horizontal work like Lakefront Park and Lake Shore Drive Extension

McCAFFERY Interests

- Private Investment like Walmart as tenants

Local retail and grocery space

McCAFFERY Interests

- Private Investment like technology company

Mixed use development

Energy, office, housing...

20% housing as affordable
The Market Common
GFA: 74,322 m²

Q: Why there’re a lot of parking lots in phase 1?

A: When I talk about phase one, even phase one has three phases. Land is abundant right now. Even those three towers down here are not yet economically feasible. So what we need to do is bring in tenants and big box and commercial retailers in order to bring in economic and commercial development.
## TRANSPORTATION

In and arround the site

<table>
<thead>
<tr>
<th>Light rail tram</th>
<th>Bus</th>
<th>Car</th>
<th>Bike</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Lakeside light rail tram service to loop on existing Metra lines</td>
<td>Expanding CTA bus services</td>
<td>Implementing BRT services</td>
<td>Extending Lakefront bike network</td>
</tr>
</tbody>
</table>
Making Lakeshore Drive into a great boulevard promoting a strong sense of community.

How to create this boulevard with sense of community as the Lakeshore Drive is such a road with heavy traffic?

SUSTAINABILITY

Advanced infrastructure as a catalyst for development

- Energy: A District energy approach
- Water: Conserve, re-use and return water
- Waste: Getting to zero waste
- ICT: Connecting with the world and ICT (Data center)
- By using a variety of alternative and renewable fuel sources Lakeside can develop a flexible way to generate heat and electricity.
- Lakeside will facilitate the deployment of new technologies and renewable energy sources as they become more cost competitive.
- To unleash Lakeside’s potential to achieve global interest and investment, the site will establish energy innovation centers, which will be positioned as a “living laboratory.”
SUSTAINABILITY
"Finger parks"
Every day, Chicago sends an average of 2.05 billion gallons of water down the Mississippi River to the Gulf of Mexico. Lakeside can promote water-efficient living and restore balance with the lake through strategies that conserve, reuse and return 90% of storm and waste water to Lake Michigan.
FARMING
Food Deserts in Chicago

Food desert: area lacking access to fruits, vegetables, and other foods for a healthy diet.
Diseases and Food Balance

Lack of fresh food deteriate the situation of the people who suffer these diseases.

DISEASE RATIO

FOOD BALANCE SCORES

CANCER

CVD

DIABETES

Cancer YPLL by Chicago Community Area

CVD YPLL by Chicago Community Area

Diabetes YPLL by Chicago Community Area

Food Balance Score

Worst

Average

Best

Fig. 44

Fig. 46

Fig. 48

Fig. 45

Fig. 47

Fig. 49
Why urban farming?----Any policy supports that?

MAYOR EMANUEL LAUNCHES NEW “FARMERS FOR CHICAGO” NETWORK FOR CHICAGO URBAN FARMERS

FOR IMMEDIATE RELEASE
March 15, 2013

Under a recently-announced new agriculture plan, vacant lots on Chicago’s South Side could be transformed into thriving — and profitable — urban farms in just three years.
Why urban farming?----As a response to the policy
Why urban farming? --- What are the advantages?

Simple & easy to do
- easy to spread

Close to daily life
- easy to be accepted

Environment-friendly
- sustainable

Visible achievement
- easy to advertise
Why urban farming? --- What can it bring?

- Healthy food: alleviate food desert, reduce food-related diseases, self-sufficiency, money saving
- New lifestyle: lower crime rate, more positive attitude, better health, better identity
- Jobs: income, medical insurance, better living conditions
- Training: nurture self-employment career, social network
- Attraction: visitors/plant lovers, food-related companies, other business
- Adolescent education: fun, extracurricular activities, social platform
The Administration has made an annual investment of $750,000 in transitional jobs programs with Chicago nonprofits in the urban agriculture sector. The incubator network will help train people interested in farming, processing, marketing, selling and distributing produce.
Self-Support and Make Profits

FAMILY FARMING

COMMUNITY FARMING

INSIDE COMMUNITY

PROCESSING PLANT

MARKET

MARKET

NEIGHBORHOOD

OTHERS
How does a family farm work?

Buy compost and seeds at low price from nonprofit organizations like Growing Power, Inc.

Get very basic training almost for free from them/get more advanced training and assistance at affordable prices.

Establish a small farm at home. It could be several seedbeds or a simple greenhouse. Grow organic produce according to basic criterion.

Despite self-consumption, some surplus produce can be sold at local farmers' markets, directly to restaurants or small-scale wholesalers under the help of local farming organizations.

Share and get information about growing and market on the websites of local farming organizations.
Adding green house to the existing house type

BEFORE
WORKERS COTTAGE

ARCHITECTURAL FEATURES:
- Backyard
- Storage at the back
- Kitchen facing back yard
- First floor, 1.5m
- Garden facing the street
- Front entrance over stairs
Adding green house to the existing house type

AFTER

ARCHITECTURAL FEATURES:

- Kitchen facing back yard
- Raised first floor for 1.5m
- Front entrance over stairs
- Greenhouse facing the street
- Storage at the back
Family Farming---Adding green house to the existing house type

FEATURES OF THE BLOCK
BEFORE
Family Farming---Adding green house to the existing house type

GOALS
- Activate the back alley
- Community Supported Agriculture (CSA)
- New life style
- New neighborhood identity
Growing Power

![Graph showing growth in Worth of Crops from 2010 to 2012]

2012 HIGHLIGHTS

OVER 30,000 VISITORS, OVER 5,600 VOLUNTEERS, 1,700 BEGINNING FARMERS, 371 YOUTH CORPS GRADUATES, 10 NEW PARTNERSHIPS, 7 WEEKEND LONG WORKSHOPS, GRADUATED 48 COMMERCIAL URBAN AGRICULTURE FARMERS, COMPOSTED 43 MILLION POUNDS OF WASTE, PROVIDED FRESH PRODUCE SNACKS FOR 45,000 MPS STUDENTS, OFFSET 40 TONS OF CARBON & NITROGEN, 10,000 YARDS OF NEW SOIL PRODUCED, ACQUIRED NEW FOOD MANAGEMENT & GROCER ACCOUNTS: LEVI, BON APPETITE, PIGGLY WIGGLY, AND GARDEN FRESH, TRAINED 27 INTERNS, BUILT OVER 81 HOOPHOUSES, PRODUCED MORE THAN $750,000 WORTH OF CROPS ON 200 ACRES OF GROWING SPACES, HARVESTED OVER 600 POUNDS OF OYSTER MUSHERS, RAISED 50,000 FISH INCLUDING TILAPIA, PERCH, PACU, AND KOI, RAISED 34 GOATS, 2 SHEEP, 500 CHICKENS, THOUSANDS OF BLACK SOLDIER FLIES, AND MILLIONS OF RED WIGGLER WORMS!
CASE STUDY---Community Food Center

The prototype for Community Food Centers is the Growing Power facility at 5500 W. Silver Spring Drive in Milwaukee, Wisconsin.

Planting
- 6x Traditional Greenhouses
- 2x Aquaponics Hoop Houses
- 7x Hoop Houses of Salad Greens

Breeding
- 1x Apiary with 14 Beehives
- 3x Poultry Hoop Houses
- 1x Outdoor Pens for Livestock

Environmental & Water Treatment
- 1x Anerobic Digester
- 1x Rain Water Catchment System
- 1x Composting Operation
CASE STUDY---Urban Farm and Garden in Chicago

Iron Street Urban Farm
Established 2010
Located at 3333 S. Iron Street, Chicago, Illinois 60608

SCALE
Iron Street Urban Farm is a 7 acre site on Chicago's south side that will produce local, healthy, and sustainable food year-round with a focus on serving, training, and engaging vulnerable populations.

JOBS
This facility will have the capacity to feed thousands of individuals annually and teach even more on the inner-workings of an urban farm. Within the first year, the site has already trained over 150 at-risk youth!

FUNDING
Total Funding Received to Date: $9,390
Remaining Goal to be Funded: $25,610
Total Funding Goal: $35,000

First Lady, Michelle Obama, visits Iron Street!
CASE STUDY---Hantz Farms in Detroit

Same Situation with Chicago
Over five years it costs the city about $12,000 to maintain each vacant parcel -- which adds up to about $2.5 billion taking into consideration that there are 30,000 acres or 200,000 parcels vacant in Detroit.

A New Chance for Detroit
Hantz proposes investing $30 million over 10 years in creating the largest urban farm in the world. His goals are to grow fresh, natural foods; enhance the environment and aesthetics of the city; attract agri-tourists; increase the tax base; create jobs; and improve the quality of life in Detroit.
CASE STUDY---Three Phases of Hantz Farms

Phase 1
70 acres of land for simple agriculture business

Phase 2
Add education and tourism to enhance finances and make it more meaningful.

Phase 3
Create a global innovation center for urban agriculture.
CASE STUDY--- What Will Hantz Farms Be?

Transportation

Greening

Environment & Water Treatment

Education & Research

Bus Stop

Market

Tourism

Farm Land
CSA
Community Supported Agriculture (CSAs) are direct-to-consumer programs in which consumers buy a “share” of a local farm’s projected harvest. This kind of farming operates with a much greater degree of involvement of consumers and other stakeholders than usual — resulting in a stronger consumer-producer relationship.

Consumers are often required to pay for their share of the harvest up front; this arrangement distributes the risks and rewards of farming amongst both consumers and the farmer. CSA participants often pick up their CSA shares in a communal location, or the shares may be delivered directly to customers. CSA participants sometimes can visit the farm and even do some volunteer work.
Basic data:
1 acre produces 13 tons of vegetable per year
1 acre serves 3000 people per year
1 acre produces enough vegetable for 70 people per year

To serve South Chicago - 10 acres
Enough vegetable for South Chicago - 445 acres
PLANTAGE AMSTERDAM

1690s
Gardens
Orchards

1890s
Artis Zoo

Now
Mixed area
050

Botanical garden
Elderly Clinic

Park
University
Artis Zoo
Museum
PHYTOREMEDIATION PLANTS

Lead
- Highland Bent Grass
- Ragweed
- Osier
- Pennycress
- Rapeseed
- Tape Grass

Mercury
- Osier
- Rapeseed

Cadmium
- Osier
- Eel Grass
- Tape Grass

Chromium
- Alfalfa

Benzene
- Geranium
MODES OF UNIVERSITY

**Mode One**
A campus belonging to a single University

**Mode Two**
Multiple colleges from different universities
Comparison of Two Modes

**Mode One**
- Enough Funding
- Financial Crisis

**Mode Two**
- $\checkmark$
- $\times$
- $\times$
- $\times$
RELATION TO URBAN FARMING

Urban Farming

Agriculture Research

- Agricultural and Biological Engineering
- Agricultural and Consumer Economics
- Animal Sciences
- Crop Sciences
- Food Science and Human Nutrition
- Human and Community Development
- Natural Resources and Environmental Science
- Division of Nutritional Sciences
- Agricultural Communications Program
- Agricultural Education Program

......
PROGRAM CHAIN

Neighborhood Catalyst

Urban Farming
- Volunteer programs
- Farm management training
- School programs
- Farmers market
- Family farming
- Plant nursery
- Job training
- Community farming

Anchor

University
- Agriculture research
- Community based research & organizing
- Value-added products
- Academic research
- Agr. innovation lab
- Environmental education
- Food system education
- Health & Wellness education

Mix Use

Growing & Living
- Special event
- Health care
- Sports facility
- Experimental residential
- Lakeside resort
- Agr. museum
- Food production
- Rainwater harvesting
SCALE COMPARISON
CASE STUDY
UIUC College of Agriculture, Consumer, and Environmental Sciences

Population
- 3515 Students
- 1449 Staffs
- 1223 Hourly Employees

Institution
1. Mumford Hall
2. Animal Sciences Laboratory
3. Edward R. Madigan Laboratory
4. Turner Hall
5. ACES Library, Information and Alumni Center
6. Dept of Agriculture Engineering Sciences Building
7. Agriculture Engineering Science Building
8. Wood Engineering Laboratory
9. Agriculture Bioprocess Laboratory
10. Burnsides Research Laboratory
11. Plant Sciences Laboratory
12. National Soybean Research Center
CASE STUDY
UK College of Agriculture, Food and Environment

Population
2500+ Students

285 faculty members

Institution
1. Ag Science Building North
2. Seed House
3. W.P. Garrigus
4. C.E. Barnhart
5. Plant and Soil Sciences
6. KY Tobacco Research and Development Center
7. E.S. Good Barn
8. Wood Engineering Laboratory
CASE STUDY
Depaul University

Institution
1. Barnes and Noble College Booksellers
2. DePaul Department of Geography
3. DePaul University Welcome Center
4. Clifton-Fullerton Hall
5. Department of Religious Studies
6. Health Sciences Department
7. Monsignor Andrew J. McGowan Environmental Science and Chemistry Building
8. DePaul University Richardson Library
9. Department of Women's and Gender Studies
10. Thomas P.Levan Center
11. Arts and Letters Hall
12. Centennial Hall
13. DePaul Art Museum
14. David N.Mcauliffe MA
15. DePaul University School of Music
16. DePaul University Concert Hall
17. DePaul University Student Center
18. DePaul University Community Mental Health Center
19. St. Vincent de Paul Parish
20. University House
21. DePaul University Ray Meyer Fitness and Recreation Center
CASE STUDY
Ennead Awarded for “Leading Innovation” in FAR ROC Design Competition

Multi-Family Building
1.7 million GSF
1.4 million leasable GSF
1,614 units
Estimated Population: 4,500

Retail and Commercial
267,000 GSF
235,000 leasable GSF
Daytime Population: 1,300

Community Facility
62,000 GSF

Parking
Structured Parking: 145 spaces
Residential Parking: 987 spaces
On-Street Parking: 35 spaces

Open Space
47.1 acres
Dune Preserve: 26 acres
Nature Preserve: 11.3 acres
Linear Park: 7.9 acres
Plaza and Schoolyard: 1.9 acres

1. Cinema&Parting
2. Library
3. Plaza
4. Existing School
5. School Addition
6. School Yard
7. Indoor Poll
CASE STUDY
Novartis Campus

Novartis Campus is the base of Novartis International AG, a multinational pharmaceutical company, it’s promoted as a knowledge campus mixing both working and living.

1. Diener + Diener
2. Peter Märkli
4. Marco Serra
5. Adolf Krischanitz
6. Studio di Architettura
7. José Rafael Moneo Vallés
8. Frank O. Gehry
9. Tadao Ando
10. Fumihiko Maki
11. David Chipperfield
12. Yoshio Taniguchi
13. Eduardo Souto de Moura
14. Álvaro Siza
15. Jacques Herzog & Pierre de Meuron
16. Juan Navarro Baldeweg
17. Rem Koolhaas
TRAIL
Plots

Lakeside Greenbelt
Residential & Commercial Area
Canal House Development
Waterfront commercial area
University
Broadacre Experimental Housing
Park

Grid Trial 3
Phasing

STEP 1

Adding green house to the existing house type

Urban Farming

Commercial Street

Food Production

High School

Training

Student Housing

University

Phasing
Phasing
STEP 2
Phasing

STEP 3

Adding green house to the existing house type

AFTER

Urban Farming

Student Housing

Sports Park

Community Farming Center

High School

Research Center

University

Comm. Street

Food Production

Experimental Housing

Markets & Special Events

Plant Nursery

Sludge Treatment Factory

STEP 3

Phasing
Phasing

STEP 4

- Factory and Corporation
- Student housing
- Housing
- Commercial
- Urban farming
- Public facility
- Health care center
In addition to the 83rd and 87th street as main public streets, we are also thinking about introducing a landscape axis inside the loop area for people to walk or bike from the neighborhood to the lakeside.

**85 Street axis (Walking path in the neighborhood park should be developed)**

*Advantage:* 1. Make use of the canal 2. It is at the center of our loop area

*Disadvantage:* 1. 85st in the neighborhood doesn't have the potential to become a strong landscape axis. We need to deal with the private property.

**University Campus axis**

*Advantage:* 1. Big open space extending into the neighborhood park 2. Connecting to the Metra station

*Disadvantage:* 1. Not making use of the canal
STRATEGY
GROWING STRATEGY
Transformation between urban expansion
and agricultural production
DEVELOPMENT STRUCTURE

EXTEND THE EXISTING INFRASTRUCTURE IN THE NEIGHBORHOOD
DEVELOPMENT STRUCTURE

CREATE LINEAR LANDSCAPE BARS
URBAN STRATEGY
DECENTRALIZED GROWING STRATEGY
PHASING

PHASE 0
PHASING
PHASE 1
PHASING

PHASE 3
PHASING

PHASE 4
PHASING

PHASE 5
TO DOWNTOWN

TO INDIANA

TRANSPORTATION

METRA
TRANSPORTATION

BRT

TO DOWNTOWN

TO METRA AND RED LINE

TO INDIANA
PROGRAM COMPARED WITH SOM

Growing Southworks
GFA: 4627507m²

Industry

Residence

Healthcare

Culture

Office

Commerce

Research

Education

5% 23% 31% 18% 4% 8% 5% 7%

Proposal of SOM
GFA: 4645152m²

Industry

Residence

Healthcare

Culture

Office

Commerce

Education

8% 25% 35% 22% 5% 5% 5%
LANDSCAPE COMPARED WITH SOM

Growing Southworks
1487403m²

Proposal of SOM
960588m²
CENTRAL FARMING DISTRICT
CENTRAL FARMING DISTRICT
CENTRAL FARMING DISTRICT
CENTRAL FARMING DISTRICT
CENTRAL FARMING DISTRICT
CENTRAL FARMING DISTRICT
INDIVIDUAL
PROGRAM CONDITION

Temporary ← Agriculture Production ← Warehouse/Market ← Urban Expansion ← Permanent

Temporary ← Warehouse/Market ← Museum ← Permanent

WAREHOUSE

Market

Office

MUSEUM

Market

Shop

Lecture hall

Office

Restaurant

Storage

Warehouse

Studio

Lecture hall

Shop

Office

Restaurant

Storage

Warehouse

Studio
SURROUNDING CONDITION
SURROUNDING CONDITION

CENTRAL FARMING DISTRICT

MUSEUM
SPATIAL CONDITION

INWARD GROWTH

Single Program/Space

Mixed Program/Space
WAREHOUSE SPACE

COMPLEX SPACE
REFERENCE PROJECT
PROGRAM BAR

Stage 1 (7000 m²)

- Warehouse: 4500 m²
- Market: 2500 m²

Stage Final (11500 m²)

- Museum: 4500 m²
- Warehouse: 2200 m²
- Market: 2200 m²
- Cultivation: 2000 m²
- Office & Service: 600 m²
First floor plan 1:1000
Stage 1 1:500

Final section A-A 1:500
DRAWINGS

North facade 1:1000

South facade 1:1000
APPENDIX
Chicago South Side Neighborhood Study

Abstract
This research is focused on Chicago south side neighborhood, which has a strong cultural characteristic but also with many social problems such as unemployment, violent crime and racial segregation. In order to have a deeper understanding about Chicago south side neighborhood, the research question is formed as: what are the determinants that are shaping Chicago south side communities in terms of life quality and public safety?

The research contains two part. The first part is urban analysis of two adjacent communities in Chicago south area, which are Hyde Park and Washington Park. These two community have similar locations but are with extremely different social characteristics. The case study includes both social evaluation and urban analysis. The second part of the research is literature study of the development of Chicago city and the history of Hyde Park and Washington Park in order to understand the issue from a historical perspective.

Through the research I found that the dominant factor making Hyde Park different from Washington Park is the University of Chicago which is bringing people from different backgrounds thus improving the urban quality of the whole community in terms of public space, public amenities and public safety. According to the result of the research my position is formed: In order to create a stable and livable community in Chicago south side area, it is crucial to import an organization like an university or a cooperation, as an "anchor" to provide jobs for the local people and attract new people from different social backgrounds at the same time.

Finally the position is carried on by the design project in South Chicago community, which now has a similar issue as the Washington Park community. The aim is to improve the situation in the existing neighborhood and connect it to the new development in the lakeside area with various public accesses.

1. Problem and Research Question
Chicago is a city with diverse neighborhood culture. On the one hand, different communities have their unique social identities and the residence can feel a strong sense of belonging. On the other hand, it can result in polarization and segregation which will lead to social issues such as unemployment and violent crime.

The contrasting condition in different Chicago communities, especially those within south area, makes me curious about this question: what are the determinants that are shaping Chicago south side communities in terms of life quality and public safety? I will first focus on the comparison study of two adjacent communities in Chicago south area. And then turn to literature study of the historical development of Chicago city. After the research I will arrive at my position and use it to guide my design work.

2. Case study
The study cases are Washington Park and Hyde Park that are two adjacent communities located in the south part of Chicago. They have almost the same distance from the downtown Chicago, which is about 11 km. The neighborhood area of the two communities are separated by the Washington park which is about 700 meters wide. Even though the physical location is similar, there is a huge difference between the two communities in many social aspects.

The method of this comparison study is first to evaluate these two specific communities according to social data. And then analyze them in terms of urban elements to see what are the dominant factors that makes the difference.

2.1 Social evaluation
In order to compare the two communities in terms of life quality and public safety, they are evaluated in five social aspects as follow according to the 2010 Census Data of the city of Chicago and Chicago Tribune.

Population density
The population of Washington Park community is 11,717, and the area is 1.52 sp. mi, so the population density is 7,708/sp. mi. The population of Hyde Park is 25,681, the area is 1.62 sp. mi, the density is 15,872/sq. mi. Hyde Park has about twice the population density of Washington Park.
Unemployment
The unemployment rate of 2010 in Washington Park is 23.2%, while the number of Hyde Park is only 6.9%, which is also lower than the average number of whole Chicago 11.1%.

Education
The percentage of residence with no high school diploma in 2010 is 28.3% in Washington Park. The number of Hyde Park is 5.3%.

Demographic
The demographic composition in Washington Park is 0.74% White, 97.04% Black, 0.89% Hispanic, 0.1% Asian and 1.23% Other. In Hyde Park it is 46.7% White, 30.4% Black, 12.4% Asian, 6.3% Hispanic and 4.1% Other. Hyde Park is more mixed race community while Washington Park is mostly dominant by African-American population.

Violent crime
According to the statistics from Chicago Tribune, there has been 209 robberies, 113 batteries, 70 assaults, 18 criminal sexual assaults and 4 homicides in Washington Park during the 365 days between Oct 2012 and Oct 2013. While in Hyde park the number is 73 robberies, 16 batteries, 17 assaults, 11 criminal sexual assaults and 2 homicides. It shows that Hyde Park is more stable compares to Washington Park in term of public safety.

In conclusion, Hyde Park is a more livable and stable community compared with Washington Park. So what are the social and urban elements that are determining this huge difference between these two adjacent communities?

2.2 Urban analysis
The two communities are analyzed in the following four aspects that are transportation, building density, public space and public amenities.

Transportation
The road system and road condition for automobile is similar in the two communities. However the public transportation condition is quite different. Washington Park is connected to the city center of Chicago by the city rail line train named CTA, which runs every 5 to 10 minutes. There are two different CTA lines that ran across the Washington Park community which connect the community to the city center in a quite efficient way. Hyde park is connected to the city center by a suburban rail line train named Metra. Metra only have one stop at city center and it's far less frequent than CTA, which may take 30 minutes to an hour between two trains.

It’s quite confusing that the area more conveniently connected to the city center by public transportation is less livable. One of reason can be that the people living 11 km away from city center does not rely on the public transportation that much. As it will take 30 minutes by public transportation and only 15 minutes by car, most of citizens will prefer the latter.

Building density
From the statistics we can see that the population density differs a lot between the two communities. This can be reflected by the high vacancy rate of Washington Park area and the relatively high density in Hyde Park. The Low density of both building and population is the result of the social problems of the neighborhood, and the social problems also exacerbate the vacancy situation in return.

Public space
The most dominant public space in both communities are parks with sports facilities. In Washington Park community the big centralized park occupied about one third of the whole community area, which makes the rest part of the community homogeneous in terms of urban space. What's more, the huge empty park is separating Washington Park community and Hyde Park community which is creating a segregation not only physically but also socially.

In Hyde Park the public park system is better developed. A typical big parks has half block to one block size, and a small one can be almost the same size of one house plot. They serve the area of three or four blocks. The neighborhood near the lakeside has a more luxurious public park which is a part of the city's lakeside open space.

Public amenities
There are 6 schools, 20 churches and no hospital in Washington Park, while there are 6 schools, 7 churches and 1 hospital in Hyde Park, which seems similar. In Washington Park there is no main shopping street while in Hyde Park part of the 55th St. has some restaurant and shops on both sides. These basic amenities differs not too much in the two communities.
However, The Museum of Science and Industry Chicago and The University of Chicago are the two elements that are making Hyde Park so different from Washington Park. The university is bringing in people from different background and the museum is attracting tourists, which is creating a more mixed race community. Also the historical identity of Hyde Park is stronger because of the University of Chicago and the World's Columbian Exposition in 1893 on lakeside area.

The case study shows that the dominant factor which makes Hyde Park more livable than Washington Park is the University of Chicago which is bringing people from different background and creating a mixed race community with higher density and better public space system. While in Washington Park, even though the connection with city center is more convenient, the high vacancy rate and crime issue are driving people away. That is to say, the University of Chicago is like the "anchor" of Hyde Park community which Washington Park doesn't have. What's more, even though the two communities are adjacent, the huge park between the two communities is acting almost as an invisible wall which is consolidating this social segregation.

3. Literature Study
In order to find the underlying culture and historical causes of this urban segregation between the two communities, I went for some literature study about the urban development of Chicago city. In the book Chicago, a geography of the city and its region, I found historical description about these two communities which is related to African-American population growth and "White Flight".

Chicago's African-American population grew from a few thousand in 1870 to more than 1.1 million in 1970. Especially after 1910 when the number grew rapidly, the African-American group start to take over a considerable part of South area of Chicago. The European groups used to live in this area began to moving to the suburban area which is always described as "White Flight". This turnover of ethnic groups had a strong social impact on Chicago city, especially the south part.

The Washington Park is just in the area where African-American population is most prosperous and it witnessed the turnover of ethnic groups. According to the description in Chicago, a geography of the city and its region, the process is really radical. "Washington Park had been the scene of a residential subdivision and apartment construction boom around 1910. Separate residential areas contained about 32,000 whites and 6,000 African-Americans in 1920. The race riot of 1919 led many whites to move out of the neighborhood. Black families moved in to fill the vacancies, and by 1930 Washington Park was ninety-two percent African-American. " (John C. Hudson, 2006, p. 128)

However in Hyde Park there is an attempt to control this change in order to prevent a total neighborhood turnover. "During the 1950s, African-Americans moved into the Hyde Park neighborhood in significant numbers. White population dropped from 94.9 percent of the total in 1950 to 59.7 percent in 1960. A coalition of area residents formed the Hyde Park-Kenwood Community Conference to integrate the community racially without causing further white population loss. Funds provided by the University of Chicago and several major corporations supported various community redevelopment efforts, including the construction of new private and public housing. At the neighborhood scale, Hyde Park's population has achieved a stable balance between white and black. Individual census tracts within the neighborhood are more homogeneous, either white or black." (John C. Hudson, 2006, p. 152)

This turnover create a lot of single race African-American neighborhood including Washington Park. These neighborhoods suffer a lot after the decline of manufacture industry of Chicago because most of residence were workers of the manufacture factory and the economy of these neighborhood are strongly relied on the manufacture industry. As a result, the problems such as unemployment, vacancy and violent began to emerge in neighborhoods like Washington Park. While in Hyde park, the mixed social composition keeps the neighborhood staying relatively healthy and livable.

From the literature study what I can conclude is that the social changes like the "white flight" and the decline of manufacture industry are causes of the general problem in south Chicago communities like Washington Park. But from the specific case of Hyde Park, the university as an anchor creates a mixed community which is more stable when faced
with social challenges.

4. Position
From the research I come to these conclusions that can help me in the design project in South Chicago community.
1. Single race dominant neighborhood in South area of Chicago is suffering from social problems such as violent, unemployment and vacancy, which requires the government to import some anchor to activate the neighborhood by offering more jobs.
2. Organizations like universities or corporations can offer more power in shaping the characteristics of neighborhood than unorganized single households.
3. Urban elements such as public transportation and public spaces can help to improve the neighborhood only when the social environment is stable and healthy.

In order to create a stable and livable community in Chicago south side area, it is crucial to import an organization like an university or a cooperation, as an "anchor" to provide jobs for the local and attract new people from different social backgrounds.

5. Design project
Our design studio site is located in South Chicago community which is about 7 km to the south of Hyde Park and Washington Park. On the site there used to a large steel plant which belongs to the US Steel Corporation. The steel plant used to be the anchor of the South Chicago community. At one time, about 70% of the adult men were employed in the steel industry at South Works or at other plants in nearby communities. However the steel mill closed its door at 1992 due to the collapse of steel industry in United States, which has a devastating impact on the community. It now has 17.7% unemployment. Same as Washington park, South Chicago also went through the "white flight" situation and now the demographic composition is 1.92% White, 74.67% Black, 21.71% Hispanic 0.21% Asian and 1.48% Other. In term of violent crime, it has 220 robberies, 146 batteries, 98 assaults and 13 homicides, which is even worse than Washington Park. The problem with South Chicago is similar with Washington Park. While in South Chicago there are more existing retail and public facilities. The aim is to improve the situation in the existing neighborhood and at the same time attract new people and new activities to the lakeside area. The first approach is to improve the neighborhood by introducing urban farming to people's backyard and empty plots. At the same time there will be some factories like food production factories or sludge treatment factories opening on the site which can provide jobs for the neighborhood to deal with the unemployment issue. Another important approach is to import university campus which include study of agriculture, healthcare, environment and other related topics. The university can help to attract people from different background and also attract retail and industry companies. In long term it will improve the education environment and help to create a mixed race community.

According to the research of Washington Park and Hyde Park, it is very crucial to have a mix area between the university and the neighborhood which contains a lot of public activities instead of a empty area like the big Washington Park which create a segregation. So in the design project the interface between the existing neighborhood and the university campus should be carefully designed as a mixed use area with multiple program and diverse public transportations. The aim is to have a livable new lakeside neighborhood which can help to support and improve the existing neighborhood.

References