

# Without Borders



Unifying Modern  
patchwork Cities



# WITHOUT BORDERS: UNIFYING MODERN PATCHWORK CITIES

A Design Thesis Submitted to the  
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By

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Title: Without Borders: Unifying Modern Patchwork Cities

Summary: This thesis examines the question, how can American cities be designed or modified to create a more unified city, making it available to anyone who wishes to live or work within the city? A neighborhood within a city is the typology for examining the answer to the thesis question. The Theoretical Premise driving this research is 'to create a better sense of social cohesion within the city,' and to minimize the borders that create the economic 'patchwork effect' while maintaining the cultural richness and bricolage that lures many people to live and work within its boundaries.' The Justification for the project is that social groups should not be forced into isolation from one another if the economic patchwork effect is ever going to be minimized. People should have access to the same amenities regardless of class and race, which can improve the living standards of low-income residents.

In order to retain the character and appeal of Chicago and other cities, the connections within the city should be strengthened rather than weakened by the economic patchwork effect. The citizens, developers, private landowners, and the government will all be potentially affected by the thesis project, and could benefit from the strengthening of connections throughout the city. Major components of the project include identifying residential areas that can be improved within the selected neighborhood. Improving residential, community, park spaces, and water quality will be the other major components. One neighborhood will be identified and analyzed in the larger context of the city based on the economic and social status of the neighborhood. This thesis is about understanding the reasons why the neighborhood is disadvantaged and what conditions the residents live in; as well as how this neighborhood relates to the city as a whole. This project will explore ways to increase the living standards of the economically disadvantaged by creating a healthier living and working environment, which will allow for more social cohesion within the neighborhood and increase the social mobility of the residents. A mixed-method, qualitative, and quantitative approach will be used to research and analyze the site. A concurrent transformative strategy will be used to guide the premise. Graphs, charts, sketches, text, GIS maps, digital models, and montages will be used to illustrate the analysis.

Typology: A neighborhood within a city

Key Words: Patchwork City, Unity, Eliminating Borders, Citizens, Chicago, Social Cohesion, Economically Disadvantaged, Developments, Neighborhoods, Connections, Water Quality

# STATEMENT OF INTENT

People of all social groups should have access to the same resources, amenities, and cultural richness that the city has to offer. Differing social groups should not be forced into isolation from one another, if the patchwork effect is ever going to become an attribute rather than a way to isolate groups of people.



## Problem Statement

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How can American cities be designed or modified to create more mobility within a city that can improve the lives of people who have little choice in where they live?

# Statement of Intent

## The Project Typology

A city that has experienced recent revitalization will be the medium for examining this thesis. Within the city, a neighborhood will be selected that consists of mostly low-income residents, and is surrounded by neighborhoods that consist of mostly middle-income residents.

## The Claim

A better sense of unity can be created by developing a design to make economic boundaries within the city less visible, or non-existent. Boundaries between different classes have become a prominent feature of today's cities, and has subsequently created an economic 'patchwork' effect. People tend to be distinguished by the location and conditions in which they live, no matter what city they live in.

## Premise

People have long been defined by where and how they live. This, among other things, tends to lead to stereotyping among different social groups, regardless of character. Economic and social boundaries have always influenced how people judge other people.

If the different economic groups such as low-income and middle-income were mixed throughout the city, economic and social boundaries could potentially be minimized. If people felt they belonged to a larger group that could not be defined by race or class, a better sense of social cohesion could be established. If these boundaries could be minimized, the character would become more important than the location and conditions in which a person lives.

## Theoretical Premise/Unifying Idea

Economic status creates a pattern effect within a city that promotes the degradation of social cohesion. In order to create a better sense of social cohesion within the city, the borders that create the economic 'patchwork effect' must be minimized, while maintaining the cultural richness and bricolage that lures many people to live and work within its boundaries.

## Project Justification

Revitalization of cities has become a huge movement in the late 20th and early 21st centuries and if city officials want more people to move into their city, it stands to reason that the citizens should take pride in where they live. People of all social groups should have access to the same resources, amenities, and cultural richness that the city has to offer, which can help increase the living standards of low-income residents. Social groups should not be forced into isolation from one another due to income, if the economic patchwork effect is ever going to be minimized. This project is about helping the economically disadvantaged by increasing living standards and creating a healthier environment that allows for more mobility within a society.



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Proposal



## Narrative

I grew up in the southwestern suburbs of Minneapolis. I live in Victoria, a small bedroom community on the edge of the suburbs and the country. I've seen my hometown change its landscape drastically. When we first moved in, we could see farm fields as far as the eye can see; now they have been replaced with overpriced million dollar houses that make my neighborhood look tiny by comparison. Never have I seen so much disparity between the have and the have-not's as I've seen in Minneapolis and its suburbs, and I live in a town where the majority of the population is middle to upper class.

Ever since the revitalization movement has hit the smaller towns near my home, the sense of place and overall atmosphere has been diminished. We used to know everyone in the community and hold community events like the annual Smelt Fry at the local fire station people would meet on the street and at the local restaurant and swap hunting stories, our family and friends would go snowmobiling around town and on the lakes and warm up at the end of the day at Schmitt's Bar and Grill for some cheeseburgers. Now it just feels like Snob-Ville where everything is about status... Cars, homes, clothes, and toys. Most snowmobiling paths have been eliminated due to the new housing and complaining residents; the local bars have become places with cover charges and packed with people who act as if they're the only ones in the bar. Although the downtown area looks nicer now, you won't see much wildlife, and certainly not any deer anymore. When I graduated high school, the student parking lots were full of Escalades, Mercedes, Audis and new Suburbans; it looked like a car sales lot. And then there was my beater car: rusty, old, and a '98 model. I felt so embarrassed driving my car to school, and I was only 16. While all of my classmates were sporting Coach, Steve Maddens, and Calvin Klein, I was sporting Kohl's finest, with the occasional American Eagle. Housing and development is no exception to this rule and way of thinking. Even when I was in fourth grade, my two best friends and I weren't allowed to hang out when their families saw that I didn't live in a new million-dollar development; my house was only worth \$300,000. While other kids were flying to Jamaica or Europe for their summer vacations, we went cross country in motor homes to visit all that the United States had to offer. My friend's parents have paid for all of their study abroad trips and Ivy League colleges; I will forever be indebted to US Bank and the government for my college education. My family is very financially stable and can afford many things, but my parents didn't spend their money on material goods.

Any new development in the surrounding towns as well as my own is upper class. To be a middle class citizen living in this town is difficult; we are the highest taxed county in Minnesota. All the old affordable houses and farms are getting either bought out or forcibly taken by the developers and flattened to make way for housing and commercial development. I remember picketing along the side of the road to try and prevent the city from taking farm land from a family friend. A large chunk of that farmland is now all cookie cutter housing.



## User/Client Description

The people potentially affected by this project are those who live and work in the area of Chicago, Illinois specifically those who live in areas surrounded by people in different social and economic groups. Developers and the government will also be affected by this project. The people who live within the city will benefit because this project will provide the citizens with the opportunity to help themselves and create a healthier community. This thesis will provide citizens with a sense of ownership, a sense of safety, places to socialize, and improved water quality. Maintaining the character and sense of place within the city will be important as this project is implemented. The character of a city is important because it is what helps define a city; it is what is unique about the city or individual area and what separates it from other areas. It provides a sense of place such as the type of atmosphere and the first impressions a person gets about that particular area.

This project is about the city as a whole. It will explore one particular area that can be used as a case study, where the same ideas and principles can be adapted to any other part of the city. It's about understanding the connections or lack of connections within the city, and strengthening those connections while minimizing the economic patchwork effect. It's about attempting to de-segregate the city and mixing different economic groups. It's about enhancing the social cohesion within a city. Through the implementation of both small and large changes, I believe that a more cohesive city can be achieved and the connections within the city can be strengthened.

# Major Project Elements

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## Neighborhoods

A neighborhood of low economic status will be selected for further research and analysis. This neighborhood will be redesigned to address the economic, social, and environmental needs of the community. This design will provide the residents with opportunities to increase the standard of living which can create social cohesion throughout the neighborhood and surrounding areas.

## Residential Design

The areas within the low-income housing units will be designed in a way that will give each individual a sense of ownership and the opportunity to take pride in where they live. This area will not only provide people a semi-private yard that they can design and maintain how they wish, but a reason to socialize and communicate with their neighbors. These spaces will address the water issues that have been a long-standing problem with the city of Chicago and will serve as irrigation, recreation, and re-distribution for the residents. This will be the first part in creating a community that is economically, environmentally, and socially healthy.

## Street Spaces

The streets will be designed to provide a safe and attractive passageway from one area to another. The street will provide areas to socialize with the community while feeling a sense of safety and comfort. Stormwater runoff will be addressed and the design will be developed to handle and mitigate the amount of stormwater runoff flowing into the sewer system for treatment.

## Public Park

Parks and other public spaces should benefit the local community as well as bring people from outside the community to utilize these spaces. The park space will be an innovative design that not only addresses the residents desire for a safe gathering space, but will also naturally treat stormwater runoff from the streets of the housing projects. This will be a space that will expose and educate people on natural water treatment processes in a creative way.

## Site Information Macro

### Chicago, Illinois

Illinois has a temperate climate with snowy, cold winters, and humid, hot summers. Tornado activity is high in Illinois partly due to the flat plains. The Mississippi River borders the west side of the state. Over 9,000 miles of rivers run through Illinois (City-data.com).

Chicago is the largest city in Illinois and is located on the northeastern side of the state next to Lake Michigan. It is the third most populated city in the country with an estimated 2,725,206 people, according to the 2008 US Census Bureau, and receives more than 86 million tourists each year. Chicago is known for its cultural diversity and recognized as an enthusiastic sports town. Chicago is known as the Windy City because some leaders were considered loudmouth and windy. Chicago was founded in 1833, and its founding removed the Potawatomi Tribe. Chicago is a French version of the Native American word shikaakwa, meaning "wild onion." (Facts and Statistics, CityofChicago.com)

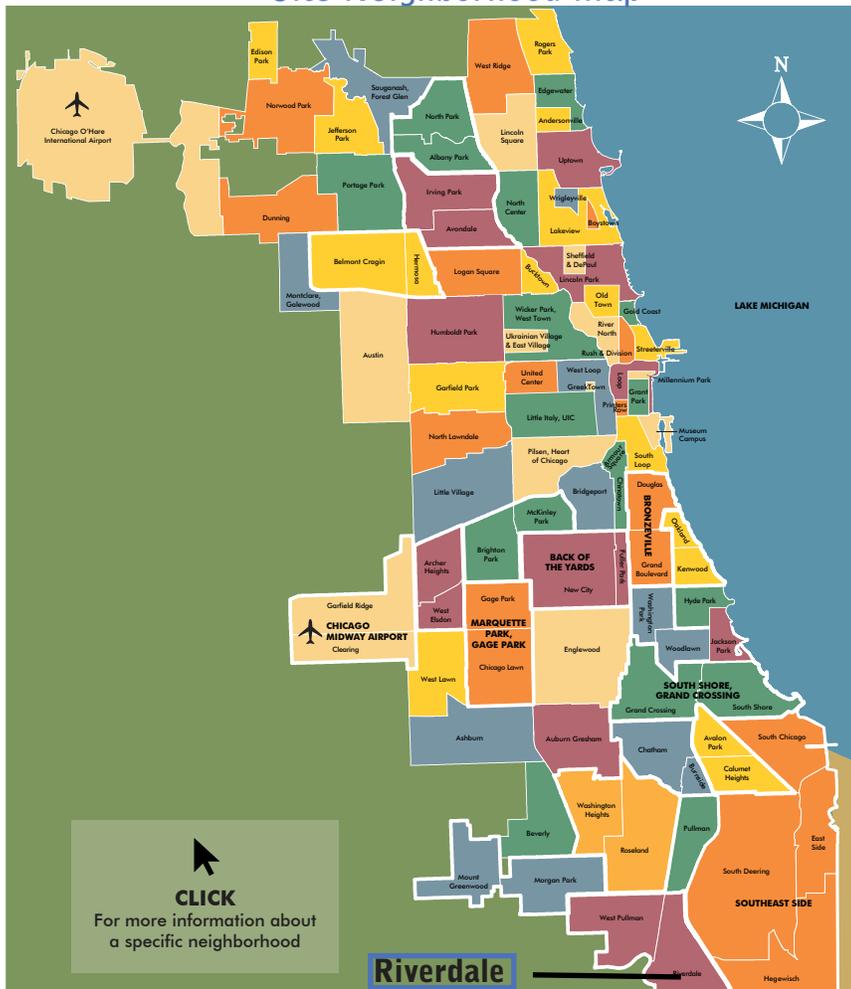
According to Blair Kaman, an architecture critic for the Chicago Tribune, "Chicago is a laboratory for charting the future." With the city beautiful movement and now the push for sustainable design, the city of Chicago is a good choice for my thesis topic. According to the "Green Machine" documentary in the E2 series, Mayor Daley is a big proponent of sustainable design and has helped push for a greener and healthier living environment for the citizens of Chicago.



Courtesy of Google Earth

## Site Information Micro

### Site Neighborhood Map



<http://www.explorechicago.org/city/en/neighborhoods.html>

This neighborhood was at one time a completely industrialized area. After WWII, this area was transformed into a low-income residential area for the veterans returning from the war.

During the 1970s and 1980s this area transformed into a mostly black community. Since the 1970s the crime rate has gone up and it is now seen as a dangerous neighborhood.

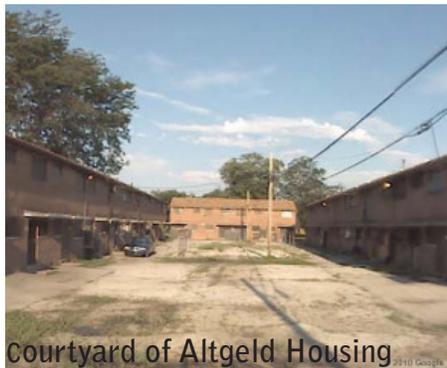
The Chicago Housing Authority owns and manages the Altgeld Gardens Community Housing Project. These housing units consist of row-style rental units. The rentals are only available to low-income residents.

The neighborhood chosen for the thesis study is the Riverdale Neighborhood. The Riverdale Neighborhood is at the southern edge of the Chicago city limits. To the south of the Riverdale Neighborhood lies Dolton, a suburb of Chicago.

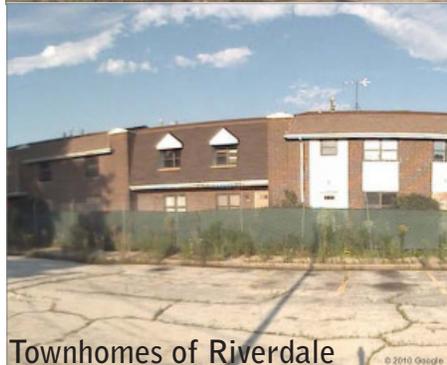
This neighborhood is among the most poverty stricken and dangerous neighborhoods within the city of Chicago. For this reason, I have chosen to explore and attempt to understand why this neighborhood is the way it is, and if it is possible to help the residents raise their living standards and reduce the danger within the neighborhood.

## Site Information

### Micro



Courtyard of Altgeld Housing



Townhomes of Riverdale



Homes in Higher Income Level



Streets of Single Family Homes

Images Courtesy of Google Earth

I chose Chicago as my site because of its large population and diversity. Chicago is one of the biggest and well-known cities in the United States and brings in millions of tourists each year.

These photographs represent the different types of housing found within the residential neighborhood of Riverdale. The two photographs on the top are homes to people with an average income level of \$15,423 or less.

These two photographs show that there is very little vegetation in the area and most of the ground is poorly maintained concrete. The top photo shows the Altgeld Gardens Housing Project. The second photo from the top shows townhomes that are not part of the housing project.

The bottom two photographs are of areas in the neighborhood where the average household income is higher than that of the top two photographs. These areas have an average income range of \$24,940 - \$53,930.

The two photographs on the bottom show that there is a significantly higher amount of vegetation than the top two photographs. The streets and properties are better maintained than the lower-income areas. There is more canopy cover and green space as well in these two photographs.

The different income levels within this area are apparent from the photographs and the living conditions shown.



## Project Emphasis

This project is about exploring ways to help the economically disadvantaged by increasing their living standards, and creating a healthier atmosphere that can aid in creating more mobility between the economic classes. The Riverdale Neighborhood currently has very few amenities available to residents. Most of the lower-income residential areas are monotonous and poorly maintained. The emphasis of this project is to create areas that give the residents a sense of ownership, pride, and safety while addressing the long-standing problem of water treatment.

The project will be designed on three different levels within the community. The first will focus on the individual and how individuals can strengthen the community and create a healthy environment. The second will focus on the neighbors and creating a safe, attractive, and social environment within the community. The third will focus on the community as a whole and how, by design, an entire community can be transform and become healthy.

This project will explore ways to provide residents with an economically, socially, and environmentally healthy community to live in. As designers, we can't tell people to take pride in where they live or to take care of their residence, but maybe we can give them the opportunity. By providing the community with the opportunities to increase their living standard; after time, they have the means to be more socially mobile within the larger community. With a sense of ownership and maintained areas, more residents would consider the neighborhood a viable option to live and slowly create a more mixed income neighborhood. If more people choose to live in this neighborhood, there will be a higher need for a number of amenities within the neighborhood; thereby creating a healthy mixed-use and mixed-income neighborhood that is not as isolated as it once was.

## Plan for Proceeding/Documentation

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The thesis will contain research regarding the theoretical premise, typology, historical context, site analysis, and programmatic requirements. The following design methodology will be used to conduct research on the thesis site: a mixed-method, qualitative and quantitative research approach, as well as a graphic and digital representation and analysis of the site. People who live and work within the city will be interviewed, along with any urban planners, policy makers, and developers who work to better the city. The qualitative information will be gathered by experiencing numerous places within the site and by researching articles and archives relating to the site. Quantitative analysis will be performed by gathering demographic statistical data from the city of Chicago. Statistical data will be represented graphically and digitally by comparing different demographic statistics between neighborhoods and showing corresponding locations on a neighborhood map. Text will aid in analyzing the statistical demographic data.

The thesis will follow a Concurrent Transformative Strategy and will be fully guided by the theoretical premise. The qualitative and quantitative information will be gathered simultaneously and in incremental phases. This information will be continually analyzed and reviewed during the entire thesis process, eliminating and adding information that is needed to further guide the theoretical premise. The information will be displayed and interpreted through a variety of means: graphs, charts, sketches, text, GIS maps, digital models, perspectives, and montages.

The majority of this project will be based on new design development that will help increase the social cohesion within the community while maintaining the bricolage. The economic and social borders are partly responsible for segregating the citizens into different social groups, and in order to create more mobility between the classes, the environments which the residents with the lowest mobility should be explored. The neighborhood should be designed to create an environment that provides a more cohesive sense of place and to create transitional spaces rather than distinct borders. This project will be a guide to Chicago and other cities that are focused on revitalization to show how cities can be modified to attract more citizens and better the community while maintaining the character that distinguishes one great city from another. This design will create a city that anyone can choose to live and work in and not be excluded just because of economic class and race.



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Program



Economic status creates a pattern effect within a city that creates the degradation of social cohesion. In order to create a better sense of social cohesion within the city, the borders that create the economic patchwork effect must be minimized, while maintaining the cultural richness and bricolage that lures many people to live and work within its boundaries.

My research focuses on the sociology and environment of urban spaces. How people are affected by the environment in which they live and how the people effect the environment. How certain economic classes become isolated from other classes which helps create economic and social boundaries throughout the city. Through research, I have found that many of the problems facing the citizens are interconnected and must be addressed simultaneously.

If cities are to become more livable, it will be by design: not just through the design of built projects-homes and workplaces, gardens and parks, streets and sewer systems-but also through visions that may never be realized. Urban design is a process of envisioning and describing the shape of the future, of posing alternatives from which to choose. Without visions to guide their development, cities will be shaped by the politics of expedience. (Spirn, 2000, pg 297)

According to Spirn (2000), many of the challenges facing urban areas, such as the deterioration of inner-city neighborhoods, polluted water, unkempt parks, and growing public dissatisfaction are all part of a single, larger failing: the failure to recognize the critical importance of the public realm." (pg 301) Today, it is recognized that the public realm must be taken into account and focused on if the current challenges plaguing many cities throughout the United States can be resolved. The solutions to these challenges must be dealt with economically, socially, and environmentally.

As designers, we can't just focus on one aspect of the problem, we have to consider everything. It is crucial to design to understand how an urban environment, such as the Riverdale Neighborhood of Chicago, has become the way it is; how the various social, economic, and environmental conditions have aided in the degradation of the neighborhood, how an industrial environment that pollutes a river detracts residents and shopkeepers from moving in, how the wealthier citizens can afford to move out of the area to better environmental conditions, and how this causes an isolation of lower-income residents who can't afford to move out of the area. This means that less tax revenue is generated by the residents so less money goes into the maintenance and enhancement of the area.

Anne Spirn focuses her essay "Reclaiming Common Ground" on the water and sewer systems within Boston. Much of the area has poor sewage treatment facilities and "every problem embodies an opportunity...for constructive change" (Spirn, 2000, pg 300). She provides insight for how public spaces and new sewer treatment facilities can work together to resolve both the water and sewer problem and create parks, which increases the amenities, job opportunities and enhances the environmental, social, and economic problems that can plague an urban environment.

Water pollution is a major concern for public health within urban environments, and by cleaning up the water, these health problems can be minimized. Like Boston, Chicago has a combined sewer and stormwater system. When the stormwater runoff causes the sewer systems to overflow, the environment and health of the city rapidly declines. Spirn argues that decentralizing the sewer treatment system could have many benefits in addition to decreasing the water pollution. She argues that wastewater facilities could become parks. Parks are open to sunlight and provide air and plants, which are necessary ingredients to the treatment of wastewater.

The sewage sludge is overwhelming in the Boston area, but it is also very rich in nutrients. By combining the sewage sludge with compost such as wood chips, leaves, and other organic matter, it becomes a nutrient-rich amendment to the soil. With the influx of new soil amendments, the residents can use this fertilizer to create gardens and maintain healthy park spaces.

## Theoretical Premise Research

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Gardens and park, not only provide food for the residents, but also provide activities and reasons to socialize. If more people in neighborhoods have the opportunity to socialize, it creates a less dangerous environment because of the increase of eyes constantly surveying the area. This can increase the feeling of safety within an area, making it a more desirable place to live and work.

When places become more desirable, outside residents see opportunities to live within these places. These residents can be from middle-income groups as well as lower-income groups, which creates a higher diversity of economic and social groups.

According to Jonathan Rose of Jonathan Rose Companies, creating mixed-use and mixed-income neighborhoods are vital for the overall health of cities. "Economic, ecological, and social health all stem from diversity. Healthy cities are diverse cities" (Neighborhood, 2011 rose-network.com). Rose was featured on "Affordable Green Housing" in the E2 documentary series for his development project "Via Verde" in the South Bronx neighborhood of New York.

By creating mixed-use developments, communities can provide a broader range of resources. A healthy balance between jobs and housing, can reduce commuting time and costs for the residents. This also creates revenue that stays within the neighborhood, thereby allowing for more growth and development. The revenue will also provide the city with more opportunities to maintain and enhance the overall neighborhood economically, environmentally, and socially.

Twenty minute neighborhoods are neighborhoods that have all the basic amenities: commercial and governmental buildings, public spaces for recreation and housing developments. Turning the Riverdale neighborhood into a 20-minute neighborhood can increase the overall health and social well-being of the citizens.

Creating mixed-income housing also creates social benefits for the community. It provides an increased tax revenue and better upkeep of the neighborhood public spaces as well as the housing developments. More appealing neighborhoods means that more people will be attracted to living there.

Creating green, affordable housing that is near affordable transit is also important for neighborhoods, especially low-income neighborhoods. People spend about half of their income on housing and transportation costs. If that number can be reduced by bringing transportation within walking distance and bringing the housing closer to the transit lines, less money would be spend on transit and more time spent for enjoying activities near the home.

Sustainable housing not only reduces the consumption of energy, but creates a healthier environment for the residents. Less pollution gets into the air, soil, and water., which then improves the health of the population.

“Life flourishes only to the extent of accord between the two contradictory principles that govern the human personality: the individual and the collective” (The Athens Charter, 1973). One of the most important aspects of urban society is the sense of identification, and being part of a community needs to be strengthened to prevent neglect and decay of properties and the surrounding areas. As designers, we can’t make people feel connected to the city and feel a sense of belonging; but maybe we can influence people and give them a better opportunity to feel like they’re a part of something larger. By increasing the sense of community and minimizing economic isolation, borders within the city can be minimized and the connections between different areas can be strengthened.

City dwellers in western nations have a deep –seated hostility and suspicion of cities themselves, “based on a view of the city as the centre of the web of bureaucracy... devouring and exploiting the surrounding countryside” (Heywood, 1974 pg 15). However, much of this deep-seated hostility is being reduced due to an increased transparency of government. Public opinion and citizen groups have a larger influence on public policies and other citywide concerns than they have in the past.

One of the largest social issues facing urban environments is the “existence of large impoverished minorities, the prevalence of crime, and a mounting sense of isolation and alienation among many who are neither poor nor criminal” (Heywood, 1974, pg17). Just as a substantial number of well-to-do families have moved to the suburbs for a better lifestyle, the impoverished have been stuck in the inner cities. As the wealthier and middle-income families leave, the living standards are lowered. Crime tends to increase when similar groups of people are clustered. According to the Athens Charter, when the density of residents increases to more than 240 people per acre, it tends to turn into a slum.

According to the Athens Charter, the nucleus of the old cities were (and still are) clustered with tall structures deprived of parks. These verdant spaces were set on the outskirts of the nuclei of the city, easily accessible from the nuclei. Over the centuries, urban 'rings' have accumulated, spreading out further and further from the nucleus of the city. These rings have replaced verdant spaces with structures, replacing plants and trees with concrete and brick. The increase of structures in these 'rings' has resulted in a lack of green space at the core of the city. The city growth replaced the rural areas which were a proxy for parkland.

The term 'slum' is determined by the condition of the housing units, but if the housing units and commercial areas are dilapidated, the area surrounding them will also most likely be dilapidated. Many of the areas surrounding the slums have dismal streets, that are dark and narrow. There is usually a lack of verdant spaces surrounding the housing units. The most favorable areas are taken up by the well-to-do citizens, who can afford living in places with higher land value.

Economic borders within the city are largely due to housing locations. If the well-to-do prefer the most desirable locations, and the poor have no choice but to live in the least desirable conditions, economic borders will be created and the city will become more segregated. This in turn can foster the notion that the lower class is a detriment to society.

The well-to-do citizens do not want to live or work in areas close to the lower class. Therefore, the lower class is clustered in areas segregated from those in the middle and upper class in dilapidated housing.

“What we are dealing with here is a universal notion of isolation that extends over all scales” (Salingaros, 2004, pg 2). The contemporary, high-tech look of buildings disconnects people emotionally and physically from the urban environment. These same buildings that alienate people from their own community are the ones that are being boasted by city officials as great designs. The sense of identity and community has been degraded by creating an urban environment that is built at a scale much larger than human. “The twentieth century had as its principal goal the isolation of people, from buildings and from each other” (Salingaros, 2004, pg5) The job of urban planners is to create a better living environment for the citizens and to look at the older philosophies of designers and evaluate and adapt them to the present. In this we can look at the past and try to understand what the future holds in designing urban environments. Just like the cities, the philosophy of design may be altered over time.

The New Athens Charter created in 2003 has identified “28 new elements of a new urban philosophy:”

3. The majority of buildings ought to be mixed-use, combining different functions. This could be implemented by legislation or promoted by tax subsidies.
4. A “neighborhood” is defined by its geography as a compact region where each point is no more than a 15-minute walk from any other point...
5. Zoning regulations should encourage every neighborhood to be mixed-use. This includes an area with buildings of different uses, in rather close proximity (distinct from, and in addition to, mixed use in a single building).
6. City areas that are vacant at night will be populated during that time by marginal elements of the population and by the underclass. This is a natural phenomenon, in which an urban void is filled by available people.
7. Urban life occurs on the surface (sidewalk) level. This domain contains pedestrian activities, and has to be protected from stronger urban elements. It is also where links to other forms of transport must originate.
8. Building fronts must act as connecting interfaces between private and public space, not as barriers. The more permeable the interface, the more intense street life it can support.

9. Walls that are not perforated should instead be folded like a curtain, to provide a greater surface area for pedestrian nodes and interactions. Smooth, flat walls are essentially anti-urban.
13. There is no sense in having strictly pedestrian areas larger than about 50 meters. It is essential, however, to protect primarily pedestrian areas from adjoining traffic by using physical structures such as high sidewalks, low walls, and bollards.
14. A city, like the human body, works through network flow. Connect points within every neighborhood by alternative means of transport: pedestrian, private car, taxi, tram (if existent), and local buses (privately run jitneys or minibuses as well as public buses). Transport has to integrate into a linked set of networks, each working on a distinct scale and speed and requiring different infrastructures.
16. Physically incompatible forms of transport, such as highways, the subway, and trains, should be located on a neighborhood's periphery or be vertically separated from pedestrians, trams, and small local buses -- which is necessarily expensive.
18. Neighborhoods within the metropolis have to repave local roads to reduce traffic speed, thus making it possible to extend human life onto the street. Excellent solutions have been provided by the Dutch in their woonerven, which are vehicular streets accommodating both pedestrians and cars.

20. Primarily pedestrian areas (such as sidewalks lined with stores and apartments) have to be fed by transport such as cars and buses; otherwise they will die off. That requires slowing traffic and making sufficient parking available nearby. The pedestrian urban element must be accessible to all transport networks.

21. Parking in the dense urban core can only be accommodated by underground garages or vertical stacking, so that it doesn't encroach onto the ground-floor pedestrian realm. Multilevel parking garages ought to devote their ground floors to commercial use.

22. Neighborhoods need to be connected to each other by multiple transport, including cars, long-range buses, trams, subways, and trains. While the priority here is on non-pedestrian connections because of the larger scale, there must be at least one protected pedestrian connection between any two neighborhoods.

23. The government has to invest in creating crossover points between different transport types to make all these competing transport types possible, and to ensure their seamless interconnection.

24. The city naturally divides into the car web surrounding and feeding pedestrian sidewalks and squares. The enclosed areas give priority to pedestrians, while being crisscrossed by cars constrained to specific paths. Cars are intentionally slowed down within a primarily pedestrian area, but are not excluded. Occasional access to all points in pedestrian areas for delivery and emergency vehicles must be guaranteed not by a wide road, but by a road surface that gives priority to pedestrians: vehicles should be allowed access, not speed.

25. The car web contains all those functions that optimize fast automobile traffic, but are essentially hostile to human beings, including wide roads that connect non-pedestrian nodes such as heavy industry, military installations, warehouses, giant parking lots, car dealerships, garages and gasoline stations, among others.

26. The present trend to locate office buildings as isolated nodes in the car web must be reversed by tax incentives, so that offices can relocate within the pedestrian urban element. Isolating nodes that contain many people makes sense only if their activities conflict with residential and other uses, for they create a dangerous dependence on cars.

27. Using tax subsidies, light industry must be encouraged to relocate within mixed-use regions. Only heavy industry should be isolated from the city.

A large component of this thesis deals with improving neighborhoods within an urban context. Many of the challenges facing the urban environment stem from the larger issue of the public realm. This area has been neglected in the past, but is now starting to take precedence in urban planning and design. Social, economic, and environmental issues all need to be taken into consideration while designing.

By modifying and improving the water and sewage treatment facilities, citizens are exposed to a much healthier environment. The treatment facilities have the potential to operate alongside and in conjunction with parks and green space which will not only treat the water but allow for more social activities throughout the area. Since the Riverdale neighborhood lies within a large industrial area and a forest preserve, this is a very feasible possibility to improve the lives of the citizens and increase the health of the environment.

Mixed-use and mixed-income areas which contain diversity have been shown to help the economic and social status of an area and can bring in more revenue to the neighborhood, allowing for more maintenance and enhancement opportunities within the neighborhood.

The research goes on to discuss the sense of identification and its importance within living environments. One of the largest issues facing urban environments is poverty and the classes within these impoverished areas and how it affects the city as a whole. The standards of living for impoverished people are much lower and affect the physical and mental well-being of these groups. This research explains the city and its 'rings,' which have spread from the nuclei of older cities. This affects the location of lower-income families and provides them with fewer amenities than the well-to-do families that can afford to live on the outer rings of the suburbs.

This school of thought is partly responsible for the borders that exist within a city and prevent strong connections between neighborhoods within a city. Finally, I discuss how, as urban designers, our goal should always be to improve the design of cities, including the needs of the residents. Just like cities, our design philosophies need to evolve and adapt to the present condition of an urban environment and pave the way for the future. The 28 elements in urban planning from the new Athens Charter of 2003 are also presented in the research findings.

This research is applicable to the theoretical premise because it explains the sociological aspects of urban environments, which are important in understanding and reducing borders within the city that create the 'patchwork effect.' Understanding the sociological aspects will help to identify how to strengthen the connections between urban areas. By allowing more people, including lower income residents, to live in more favorable areas within the city, the borders can start to break down. This would also disperse lower income classes (if they so choose) which can help substantially reduce the crime rate in cities. Many people in lower income housing don't have as much access to the basic necessities for a healthy lifestyle, specifically sunlight; creating a way to allow everyone equal access to these necessities can improve the well-being of lower-income social groups.

If these social groups have an improved physical and mental health, they have a higher potential to be valuable contributors to society. This could mean that the current school of thought adopted by a substantial amount of people (that lower class and lower income housing is a detriment to the city) could transform into a more positive school of thought that recognizes the value of citizens in the city. With a more positive outlook on society, the feeling of isolation would be decreased and there would be a stronger sense of community and place within the city as a whole. With a stronger sense of community more social groups could intermingle within the city and could live side by side, without judging each other; furthering the connections and bonds that create a city.



## Results from Typological Research

# Toronto, Canada

## Case Study 1

The city of Toronto is a thriving metropolis in the Ontario Province of Canada. This city lies on the northwestern side of Lake Ontario. The current population of Toronto is 2.48 million people with 5.5 million people in the GTA (Greater Toronto Area).

According to the the *Places Rated Almanac 2010*, Toronto is one of the most multi-cultural cities in the world. It is also the safest metropolitan area in North America. Over half of the city's population was born outside of Canada and 30% of all immigrants who have moved to Canada since 2001 now reside in Toronto. There are more than 140 languages and dialects spoken in Toronto. One reason this case study is unique is that it is home to such a diverse group of people and these people are welcomed with open arms into the city. One of the aspects Toronto prides itself on is its diverse culture.

Toronto has seen a large influx of residents. Between 2001 and 2006 the number of residents grew by 9% in the GTA. By 2031 the expected population will be around 7.6 million in the GTA.

This case study, like two of the other case studies, is an urban environment along a waterway. Like the other case studies Toronto has a narrow band of skyscrapers while most of the other buildings are smaller and allow for better living environments. This is a very green city with pleasant views of the lake.

This case study differs in that this city is growing at a rapid rate and there is a need to accommodate the population expansion.



<http://pgbshowcase.com/toronto.html>



[http://www.webluxo.com.br/menu/turismo/toronto\\_capital\\_cultural\\_canada.htm](http://www.webluxo.com.br/menu/turismo/toronto_capital_cultural_canada.htm)



[http://www.treehugger.com/files/2007/05/sites\\_on\\_bikes.php](http://www.treehugger.com/files/2007/05/sites_on_bikes.php)

# Toronto, Canada

## Case Study 1

### Environment:

This city was built in a largely forested area of Canada, which is evident throughout the city. Large parks and pockets of green are intermingled within the concrete and steel that make up the city. Since this site is on a lake, the most desirable view will be overlooking the lake. What the city has done, rather than crowding the edge of the lake with tall skyscrapers, is create large areas of public space. The stretch of skyscrapers and other high-rise buildings are placed perpendicular to the lake, which allows more people to view the lake, rather than reserving the view only for those who can afford it.

Many of the buildings near the waterfront are shorter, as the distance between the buildings and lake increases, the buildings gradually increase in height. The large areas of public parks and plazas along the lake allow anyone to enjoy the lake and all its attributes.

### Social:

Many of the residential areas are within a block or two of a public park. This means that nearly everyone has equal access to a park or other green space. Giving people equal access to the 'favorable' areas, rather than saving them exclusively for the well-to-do families who can pay a premium for land, allows for a better environment socially. The mental health tends to be better and people can perform at their optimum levels.



<http://www.arnewde.com/architecture-design/cascade-house-by-paul-raff-studio-in-toronto-canada/>



<http://www.gotheregide.com/High+Park+Toronto-picture,toronto/>



[http://www.tripadvisor.com/Attraction\\_Review-g155019-d591344-Reviews-University\\_of\\_Toronto-Toronto\\_Ontario.html](http://www.tripadvisor.com/Attraction_Review-g155019-d591344-Reviews-University_of_Toronto-Toronto_Ontario.html)

## Toronto, Canada

### Case Study 1



<http://www.2camels.com/photos/thai-culture-and-food-festival.php>

#### Culture:

Toronto is the most multi-cultural city in North America and this is reflected as such. The community of Toronto dedicates much of its time to the unique cultures and has a high concentration of public art displayed throughout the city. In 2008, "Creative City Planning Framework" was developed. This framework discusses how Toronto can gain a competitive advantage in the international labor market over other cities with a robust cultural emphasis. It also states that an increase in productivity and economic growth is easier to achieve if the city has a 'healthy creative sector.' The goal is to become internationally recognized for the creative and open city.

#### Political:

Currently, Toronto is backing the Liberal Party and has no current members from the Conservative Party or the Progressive Conservative Party. The current mayor is Rob Ford. One of his campaign promises was cutting unnecessary government spending and increasing businesses within the city.

## Case Study 1: Analysis



<http://prince.org/msg/100/298513>

A small portion of skyscrapers perpendicular to the waterfront, buildings increasing in height as one moves further inland, public access to the waterfront, and many green spaces throughout the city provide the structural framework of Toronto. Natural light reaches many areas of the city due to the building heights and their proximity to one another. The skyscrapers and taller buildings are massed together, which minimizes the number of buildings overshadowed by these buildings.

Numerous greenways allow residents to travel from the north end of the city to the south end toward the lake, creating a desirable environment for traveling. Balance is evident within the city. The city is laid out in a grid pattern, only changing for the highway. It is clear that the hierarchy of the city has been given to the pedestrians.

The majority of this city is at a human scale, creating a strong sense of identity and strengthening the sense of place. By adding numerous green ways and making the most favorable areas of the city available to the public, a healthier society can be created where people are flocking by the thousands to move to this location. Different cultural identities are acknowledged and celebrated. Celebrating different cultures by creating public art and holding public events allows everyone to experience and understand different cultures, increasing the sense of unity while maintaining the cultural heritage that makes up the character of the city.



# Vienna, Austria

## Case Study 2

The city of Vienna is located on the north-eastern side of Austria, near the Slovakian border. Vienna resides on both sides of the Danube River, east of the Alps. Vienna currently has a population of 1.8 million.

Vienna is known for its devotion to culture and other sophisticated pleasures; a true cosmopolitan center. The architectural style is predominantly from the baroque period. This city became the showpiece for the Habsburg Dynasty.

Vienna is similar to two of the other case studies because of its location and proximity to the waterfront, in this case the Danube River. This city has designed the buildings in a way that allows for maximum sunlight for all residents. Large greenways travel around the city.

One of the differences is that unlike Toronto and Perth, there are no skyscrapers and very few high-rise buildings that overshadow the rest of the city. The buildings are all similar in scale and do not block favorable views of the mountains and river. This city is very traditional in its architectural style, and has been very successful in maintaining the cultural integrity and historical character that forms the identity of the city. Visitors travel to Vienna for the rich history it has to offer: museums, churches, palaces, and parks are all reasons tourists are attracted to Vienna. Because of the unique buildings and their condition, Vienna has been designated as a UNESCO World Heritage Site.



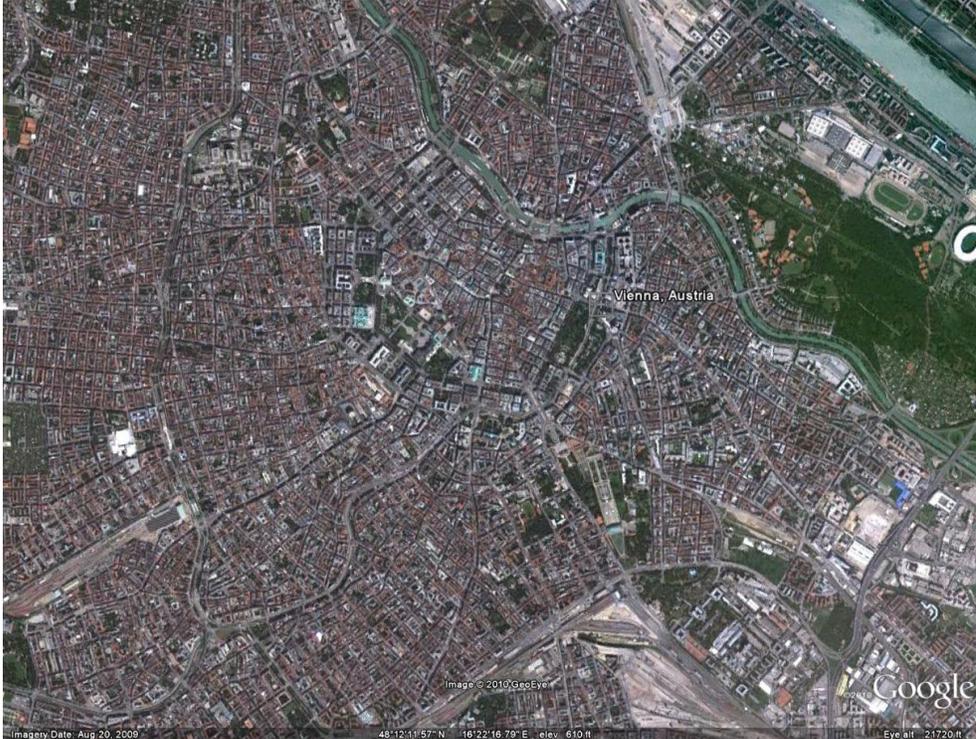
<http://www.travelwithachallenge.com/Vienna-Ten-Tips.htm>



<http://infohostels.com/notizia.php?chiave=519>



<http://www.fitforeurope.com/austria/vienna/>



Google Earth

Vienna is located at the foothills of the Alps, along the Danube River. Because of this, the land is very fertile, meaning that there is a substantial amount of farming that occurs just outside the city limits. Vienna is a radial city, where the nuclei is located adjacent to the river. From this center, city blocks and buildings surround the northern, eastern, and western portion of the center, and to the south is a large park, and plenty of green space that follows the Danube.

As sprawl has continued to expand further in the foothills, the density of buildings has decreased and more forested areas are noticed. Because the majority of these buildings are similar in scale, nearly everyone has access to the pleasant view of the Alps. This luxury is not just available to the well-to-do citizens, but to anybody. Along both sides of the Danube, the waterfronts are open to the public, rather than taken by tall skyscrapers and expensive condos blocking the view from other citizens.

Unlike Toronto, Vienna does not have a significant amount of diversity and most of the residents are either Roman Catholic or not religious at all. Because of the lack of diversity, the identity throughout the city is strong; much of the city has the same style, culture, and sense of place.

## Vienna, Austria

### Case Study 2: Analysis



Google Earth

The structures in Vienna are of similar scale and style. This similarity in scale allows more people to have access to sunlight which, according to the revised Athens Charter, is the master of life. Most of the buildings surround a block, rather than taking up the entire block, which is important because it gives residents open green space just outside their homes. This also provides each residential unit with a maximum amount of sunlight each day to help increase mental health and well-being.



<http://www.2flyeasy.com/vienna/>

Many of the buildings in Vienna are designed in the Baroque style. This older architecture is built at a human scale, rather than modern architecture where many buildings have lost the 'human element.' This makes traveling by foot or by any other non-motorized means a more pleasant experience.

There are numerous greenways within the urban center, and because many of the buildings are at a human scale, ample sunlight reaches the green corridors, providing a lush and healthy environment in which to travel. One of the goals for the future is to reduce motorized traffic use from 37% to 35% (Semela, 2001).



<http://haydnphil.org/en/newsletter/hallwrlld.htm>

This city is an appropriate case study for the theoretical premise because the form and scale of the city allows for ample sunlight to filter down to the street level. According to World Interesting Facts (2010), Vienna is the second best city to live in. An Economist Intelligence Unit study stated that this city shares the first rank (along with Vancouver) in terms of quality of life.



# Perth, Australia

## Case Study 3

The city of Perth is located in Western Australia, near the southwestern coast of the Indian Ocean. The city itself is located inland off of the Swan River. The 2009 population estimate was 17,093. The population of the Greater Perth Area as of 2009 was more than 1.6 million. The entire waterfront of Perth is public green space and is un-inhabited by large high-rise buildings.

This city is known for its numerous gardens, shopping, and lights. Not unlike the two previous case studies, this is an urban city that values public space. What is different is that this is a significantly smaller city than Toronto and Vienna. The city of Perth (excluding the suburbs) is only 1,209 hectares with a density of 13.04 people per hectare (City of Perth Community Profile, 2010).

Perth and its suburbs have emphasized the beauty of the Swan River. The urban plan has designated the waterfront to be enjoyed by everyone. Throughout the urban environment, there are numerous pocket parks which give everyone a close location to enjoy the outdoors. This is essential for creating a healthy, livable city. The form of the city is in a gridded pattern, but also conforms to the path of the river. Three major freeways border the city and the city's size makes it easy to navigate.

Giving the public large spaces of land to enjoy in the most favorable areas enhances a sense of belonging with the larger community, and prevents the isolationism felt by many who are in different social groups.



<http://nocameranointervention.wordpress.com/2009/02/02/australian-courts-should-know-no-means-no/>



Google Earth



<http://top-things-to-do.com/south-pacific/travel.html>

### Case Study 3: Analysis



<http://videos.funpub.net/funny-pictures/Fantasy/21299/>  
Perth+Australia

The city of Perth is laid out in a grid format. Aside from the skyscrapers, most buildings are smaller in scale and more residential; this means there is a lot of natural light that filters through the city, providing more people with this essential life-giving element. This city is composed of residential and commercial properties; the high-rise commercial buildings are in proximity, whereas the majority of buildings are residential and not as close to one another.

The majority of residents use motorized vehicles as their main mode of transportation. Within the city and its surrounding suburbs, there is a balance of green space to buildings which provides a healthier and more livable environment for the citizens. Even though this smaller city has a high number of high-rise buildings, the density of the city is still very low, being offset by the number of public spaces.

The hierarchy has been given to people. This city is known for its retail shopping and gardens; both of which are dependent on people.



## Bogota, Colombia

### Case Study 4: Analysis



[http://streetswiki.wikispaces.com/file/view/bogota\\_plaza1.jpg/126647279/bogota\\_plaza1.jpg](http://streetswiki.wikispaces.com/file/view/bogota_plaza1.jpg/126647279/bogota_plaza1.jpg)

Bogota, is the capital city of Colombia in South America. This city was once dominated by the automobile and catered to only 15% of the population. Today, however, this city is known for its radical push toward other transportation alternatives (Bogota, E2:Design, 2007). Enrique Penalosa became the mayor in 1998, and since then, this city has changed from catering only to the 15% of the population who own a car, to catering to the other 85% of the population who can't afford cars. He has developed one of the most extensive bus rapid transit systems called the TransMilenio.

With the development of the Transmilenio bus system came newer, cleaner facilities, color-coded buses, and a cheaper way to travel. Mayor Penalosa wanted to think big for the long-term health of the citizens. This transit system can carry 160 passengers on a single bus and is always running at full capacity, even during peak hours; during the day, fewer buses run to save on energy and expenditures. Each bus has a GPS (Global Positioning System) tracking system to let riders know when the buses will arrive and there are exclusive dual bus lanes for both directions of traffic. This system runs throughout the city and around the periphery, reaching the less populous areas as well. Using the TransMilenio, people save an average of 200 commuting hours and 10% of their income each year.

# Bogota, Colombia

## Case Study 4: Analysis

Not only has Penalosa been a strong proponent of the mass transit system, he has also transformed the city into a pedestrian-oriented downtown. Penalosa recognized that many of the citizens could not afford entertainment, so creating public space was crucial to the health of the population. From this need came the Alameda, is a pedestrian corridor 17 kilometers long that runs through the city. This corridor connects to the major areas of the city.

At one time, the Alameda ran through the most dangerous part of the city, but since the construction, it has become less dangerous. This is due to all of the people traveling through at any given time and socializing, which then improves the quality of life thereby legitimizing the system (Bogota, E2:Design, 2007).

Streets were turned into bike and pedestrian lanes and priority shifted to the pedestrian. In some areas of the city, the pedestrian paths are paved, while the vehicular streets are gravel.

By focusing on the pedestrian rather than the vehicle, the city has become a healthier place to live and work. This is important to my thesis because my site currently has very little access to affordable transportation and very few amenities are within walking distance. If the lives of the residents can be improved by making affordable transit more available and giving priority back to the pedestrian in these low-economic areas, then it is an option that must be explored.



<http://lisastown.com/inspirationwall/2009/07/19/through-design-we-can-change-the-world-bogota-colombia/>



<http://lisastown.com/inspirationwall/2009/07/19/through-design-we-can-change-the-world-bogota-colombia/>



<http://lisastown.com/inspirationwall/2009/07/19/through-design-we-can-change-the-world-bogota-colombia/>



## Minor Case Studies

### Shanghai Houtan Park



<http://www.turenscape.com/english/projects/project.php?id=443>

Information found at:

<http://www.turenscape.com/english/projects/project.php?id=443>

### Living Water Park



<http://www.margieruddick.com/projects/lwp2.html>

Information found at:

<http://www.margieruddick.com/projects/lwp2.html>

### Netherlands Housing



<http://www.flickr.com/photos/7839903@N02/2890002145/>

Information found at:

“Adaptive Reuse in the Netherlands.” *E2: Design: The Complete Second Season*. (2007)

## Minor Case Studies

### Via Verde - Bronx, New York, NY



Information found at:

<http://www.rose-network.com/green-urban-solutions-landing/green-urban-solutions#GreenAffordableTODHousing>

<http://www.cooltownstudios.com/2007/02/01/truly-triple-bottom-line-urban-village-coming-to-the-bronx/>

### Tanner Springs Park, Portland, OR



Information found at:

<http://www.portlandonline.com/parks/finder/index.cfm?PropertyID=1273&action=ViewPark>

[http://www.boora.com/projects/mixed-use/the\\_metropolitan\\_condominiums](http://www.boora.com/projects/mixed-use/the_metropolitan_condominiums)

### Sherbourne Park, Toronto, Canada



Information found at:

<http://www.greenarchitext.com/2010/03/torontos-sherbourne-park-water-treatment-as-green-infrastructure.html>

<http://www.greenarchitext.com/2010/03/torontos-sherbourne-park-water-treatment-as-green-infrastructure.html>



## Typological Research Results

### In summary

Throughout history, people have been searching for a way to creating a 'utopian' society. Though people still strive to this day for the answer to create a utopian society, no perfect solution has been found.

The theoretical premise has not been changed because of the case studies series, but the focus on sunlight and allowing equal access to public amenities will be highlighted throughout the thesis process and will be emphasized at the completion of the thesis project. This case study series has merited the value of sunlight and revealed how favorable areas can be accessed or viewed by everyone without diminishing the value of the area.

Toronto, Canada, Vienna, Austria, and Perth, Australia have all been researched because of the way the cities have been designed. The case studies selected for this project were chosen because of their sizes and population densities, as well as the plans and layouts. Each case study is a good example of an urban environment that still allows ample sunlight to penetrate the city down to the streets.

These case studies also merited further research because of the conscious effort to create public access to the favorable areas within the city, as well as allowing many people to experience scenic views. If people have access to the same favorable spaces within an urban environment, the boundaries that segregate the city start to diminish.

## Typological Research Results

### In Summary

If different social groups are enjoying the same amenities and desirable views, they are less likely to judge each other and wonder about their social standing within society, whether they're upper class or lower class. Instead, similarities are emphasized rather than differences.

The case studies researched were also selected because of their differences, particularly in scale. Toronto is a large city with many different buildings scales; Vienna is a large city with buildings of similar height and scale; and Perth is a small city with varied building sizes. Both the population size, and buildings sizes are different in all three case studies, yet they all have found successful solutions to some of the same goals within this thesis project.

All three cities are located along a waterfront, and these cities have allocated much of that area as public parks and plazas. These cities also have numerous green spaces within the city. In most areas of these cities, a public green space can be accessed within 2 or 3 blocks of any residential area. This emphasis on creating areas for residents to relax and enjoy the city has placed the people at the top of the hierarchical pyramid. For this reason all three cities have been listed as some of the best cities in the world to live.

Within these cities, there are very few noticeable boundaries where people are segregated. The identity and sense of community within the areas are strong. People want to live in communities with a strong identity. This is one of the reasons these cities have been named the most livable cities, partly because of the sense of community and an inherent desire to be part of something larger.



## Historical Context

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During the eighteenth and nineteenth centuries, the western world saw urbanization grow at a rapid rate, so much so that keeping up with the growth became a constant battle for urban designers and the citizens as well. How to keep up with population changes, both increases and decreases in a city, is a question that has been and still is asked.

Urban planners, sociologists, economists, and politicians have been exploring ways to accommodate urban environments to fit the changes in society throughout the decades. Countless theories have been developed to create the ideal urban environment, but as times change, theories developed in the past are revisited and re-developed to accommodate the present and future, and new theories are formed. There are two theories in particular that have been

widely publicized and have had a large influence on the theories of urban planning in the modern era. The first is Plan Voisin by Le Corbusier in 1925 and the second is "The Death and Life of Great American Cities" by Jane Jacobs in 1961.

Le Corbusier developed "Plan Voisin" as a response to the slums of Paris and aimed to increase the quality of life for the lower class that lived within Paris. The Plan Voison was a city that would flatten a large portion of Paris on the banks of the Seine River and replace the city with a series of 60-story buildings designed in the shape of an 'X'. These buildings were both for commercial use as well as residential use. This shape was used to increase the amount of sunlight to each residential unit. Large areas of public green space surrounded each of these buildings.

## Historical Context

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Pedestrian pathways and vehicular pathways were segregated to minimize interaction. Though the theoretical premise behind Plan Voisin has the best of intentions, the plan itself addresses the theoretical premise and would potentially increase the quality of life for the lower class citizens, however, it fails to incorporate other elements that increase the quality of life for all of the citizens of Paris: a sense of place and character. By demolishing a large portion of Paris, the character of the city would be degraded to a detrimental extent and would be replaced by 'sterile' buildings lacking details and character that Paris is known for. This plan also continued to segregate the lower class citizens from the upper and middle class citizens, which maintained the social boundaries within cities, thus inhibiting the sense of identity and the human need to feel that one is a part of something larger.

This plan has had a strong influence on numerous cities and urban planning projects in the past, the Chicago Public Housing Project, for example. This housing project is located near the shores of Lake Michigan south of downtown Chicago. This housing project, which was modeled after Plan Voisin, has been deemed unsuccessful. The city has found that creating high density living spaces for lower class citizens, and segregating them from other classes has had a negative impact on the citizens.

The new plan for addressing lower class citizens is moving them to mixed use residential areas with both public and private housing.

## Historical Context

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This theory has been highly criticized in the public sphere. One such person to criticize Plan Voisin is Jane Jacobs.

Jacobs thought of cities as ecosystems as opposed to Le Corbusier's philosophy that cities are machines for production and efficiency. She viewed cities as living organisms that grow, change, and respond to the people who inhabit them.

She felt that all development should be mixed use and should integrate old buildings with new buildings rather than demolishing them and starting fresh. She felt that the "intermingling of city uses and users was crucial to economic and urban development" (Jane Jacobs, 2010, pps.org).

Jacobs believed in bottom-up community planning and hiring local planners and experts who intimately know and understand how the city works.

She also believed that cities with higher densities are vital for city life, economics, and prosperity. A high-density area can support a more vibrant and diverse community. She has explained how overcrowding is not the same as higher density and that they should not be used synonymously.

Though both of these theories on urban planning differ greatly, the intentions are similar in trying to create a better environment. This is the goal for urban planners. A question that is constantly asked and will be asked continuously into the future is: how can we design a city that creates a better life for everyone?

## Historical Context

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Mark Twain once said, "It is hopeless for the occasional visitor to try and keep up with Chicago. She outgrows his prophecies faster than he can make them."

Chicago historically has been a city of rapid growth and it is as true today as it was in 1883 when Mark Twain wrote his observations. Chicago is a city that has been able to constantly reinvent itself and accommodate the influx of people coming to the metropolis. For this reason, Chicago is a hub of cultural diversity, welcoming anyone who wishes to live in the city and its suburbs.

Chicago has been burned to the ground numerous times, and despite this, it has always risen to the occasion and conquered the setbacks. The determination and pride of the citizens was always strong enough to overcome the fires.

In 1857, Fort Dearborn was burned to the ground by Native Americans. Chicago was an ideal location for a trading center between the expanding west and the established east. The Illinois and Michigan Canal was the first link between the Great Lakes and Michigan River until the railroad. Today, Chicago remains one of the biggest trading centers in the world. Chicago's O'Hare and Midway International airports have ranked Chicago as the busiest aviation center in the world.

## Historical Context

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The most notable fire in Chicago was the Great Fire of 1871. The citizens are known for the heroic measures they took to fend off the fire, though unsuccessfully. Once the debris was dumped into Lake Michigan, Chicago began to rebuild immediately. Twenty-two years later Chicago hosted the World's Columbian Exposition of 1893, proving to the world the strength and determination of the citizens who called Chicago home.

The city of Chicago welcomes immigrants looking for a better life. In 1900, more than 35% of Chicago residents were foreign born. In 1889, Jane Adams founded the Hull House, which gave assistance to struggling immigrants. The Hull House was located in an area densely populated with struggling immigrants. "The mission of the Hull House was to assist immigrants by providing a center for a civic and social life, improve the quality of education, and to investigate and improve the conditions in the industrial districts of Chicago" (Jane Addams, 2010 [holeinthedonut.com](http://holeinthedonut.com)).

## Historical Context

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By the end of the 19th century, the land value within the city had skyrocketed. For this reason, buildings began to be built taller to accommodate the influx of residents.

The world's first skyscraper was the Home Insurance Building and was built by William Le Baron Jenney in 1885. The skyscraper was 55 meters tall and was built with the structural frame that is still used today. "This building marks the start of Chicago as a pioneering architectural city" (A View on Cities, 2010).

Even during the Great Depression, Chicago proved to the world how amazing and strong it was. In 1934 Chicago hosted the Century of Progress Exposition, which was just as successful as the World's Columbian Exposition in 1893.

On July 4th, 1909, the Chicago Plan (nicknamed "Paris on the Prairie") was developed. This was the first urban plan for the city of Chicago. "Not only did it act as the blueprint for a transformation of Chicago and its region, but it was instrumental in establishing worldwide, the idea that planning was essential for the efficient growth of cities" (Reardon, 2009).

Chicago is a city of progress, innovation, determination, and culture. These are the reasons for which I have used Chicago for my thesis research.



## Thesis Goals

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1. Clearly articulate the theoretical premise. The theoretical premise is the driving force behind the thesis. The theoretical premise provides a question to be researched and solved through design.

2. The typology will be examined and explored to the greatest extent possible. The typology will be meticulously evaluated and analyzed based on case studies that will be of significant value to the theoretical premise.

3. Fully understanding the social, political, economic, and environmental context within the typology will be necessary to develop a successful solution to the theoretical premise posed. By researching both successes and failures of urban planning in the past, and understanding the consequences incurred on the social, economic, and environmental aspects of urban living, a successful design solution is possible.

4. Develop a thesis program document that meets the requirements set out in the Request for Proposal distributed in LA 563. To compose narratives that are concise and easily understood, and to graphically represent the thesis on a professional level with supplemental text to provide further necessary information.

7. Developing a schedule for the thesis project in a timely manner that will aid in creating a design that addresses the theoretical premise to the fullest extent possible.

## Thesis Goals

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8. To accurately and thoroughly illustrate the ideas and solutions that represent the theoretical premise will be essential to explain the reasoning behind the factors that have influenced the design solution to the theoretical premise.

9. A solution to the theoretical premise that will be a valuable contribution to the larger population as a whole and a design that clearly reflects the contribution of professionals in the past, while improving on the current theories of urban planning.

10. The thesis will include high caliber graphics that will represent every aspect of the designed thesis.

11. The theoretical premise behind this thesis is one that has been evaluated and provoked a lot of theories in the world of urban planning. I hope that by completing this thesis and addressing the theoretical premise, I can make a valuable contribution to the urban planning profession at large. This thesis isn't an attempt to solve all the problems of urban planning, but to provide a solution that can be used in addressing some of these problems. I hope that this solution can be a catalyst that sparks new theories and ideas on urban planning for both the present and the future.



### Narrative

As a student, I have visited Chicago numerous times. Every time has been an enjoyable experience from a tourist's perspective.

My first experience in Chicago was as a high school student participating in a Model United Nations conference by the University of Chicago. It was there that I got an intimate view of the downtown area. Most of the time was taken up by the conference, so we were confined to the downtown area along Michigan Avenue, near the Palmer House Hilton where I lodged. We interacted with many people from different levels of society.

As a student attending the conference, dress code was strictly enforced; business attire complete with heels and a business jacket was the only attire allowed during the trips. This attire allowed me to blend in rather than being perceived as an outsider coming to experience the sights. While wearing this attire and exiting from the Palmer House Hilton on a daily basis, I was treated differently than other times I have visited. At the Palmer House Hilton and commercial areas of downtown, we experienced the upper levels of society. Taxis drove up to offer rides, people opened the doors for me, and I was always immediately offered help at department stores. Along with all of these 'perks,' I was also haggled for money from the homeless population. Some would even follow me for blocks trying to get some money from me, complimenting me the entire way.

### Narrative

The last trip that I took to Chicago was a drastically different experience than what I've had before. Again, I was a student, but this time I was in college and was visiting purely as a student touring the city. During this trip, I was not wearing professional clothing and was viewed more as a tourist. I was able to experience the Greater Chicago Area rather than being confined just to the downtown area.

It was on this trip that I noticed the disparities between the have and the have nots. In the outer areas of the city, the average income level of the residents was lower. There was very little sun in the area, even during midday. The area had more litter and felt more damp. Within some of these areas, I kept my camera out of view and steered clear of the residents. A number of the people I went with put their cameras away as well and most of the conversation stopped or voices got quieter. There were also far fewer people walking around than elsewhere I had traveled in the city.

I noticed then that I was judging some of these residents unfairly, that I had no idea if they were people of questionable character or not. The atmosphere was far less pleasant than in the downtown area near Michigan Avenue and Millennium Park. These areas had interesting positive buildings and other features but was simply overpowered by the atmosphere. With fewer people visiting this area, these buildings and other features had become under-appreciated.

## Site Analysis

### Qualitative



Chicago is known for its cultural diversity and its location relative to the rest of the United States. This city is a major trading hub and material goods travel through the city daily. Chicago is also known for its location relative to Lake Michigan.

Chicago has relatively flat topography but is known for the variety of buildings and their scale. The topography may be flat, but the building scales create a diverse topography of their own. Because this city is located adjacent to Lake Michigan, the climate of Chicago is relatively temperate.

This city is known to be busy, where something is always going on and people always have places to be. However, a few blocks over, at Millennium Park, the atmosphere can be tranquil and serene, where time seems to stop and a person can relax and enjoy the small things in life. The view of the downtown area from the Sears Tower is a remarkable view displaying the best of the Chicago area.

## Site Analysis

### Qualitative

The Riverdale neighborhood has become one of the most dangerous neighborhoods in the city of Chicago. For this reason, I have chosen to explore and attempt to understand why this neighborhood is the way it is, and if it is possible to help the residents raise their living standards and reduce the danger within the neighborhood.

The Riverdale Neighborhood is at the southern edge of the Chicago city limits.

This neighborhood was, at one time, a completely industrialized area. After WWII, this area became transformed into a low-income residential area for the veterans returning from the war.

According to City-Data.com:

Total Area: 4.604 square miles

Total Population: 9,683, about 1/6 of the average density in Chicago per square mile.

Majority of residents are between ages of 1 and 20.

96% of the residents of Riverdale are black.

38% of the residents don't have a high school degree.

28% of residents have a high school degree or GED.

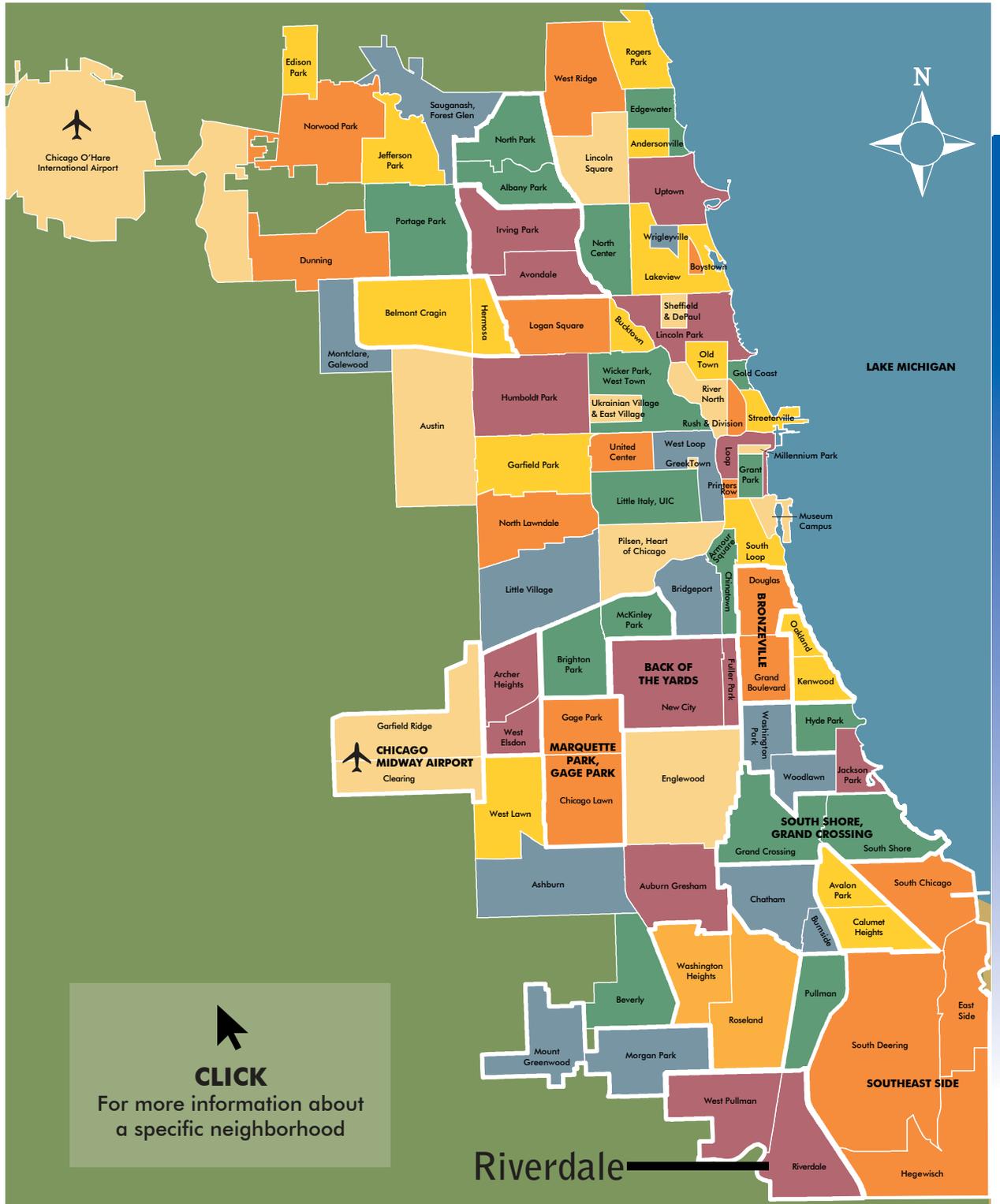
56.6% of residents live below the poverty level.

6/8 schools within the neighborhood are performing poorly, according to the City of Chicago's official website.

According to the *Every Block Chicago* website, most of the crimes committed are burglary and theft. These crimes are concentrated in the wealthier areas of the neighborhood.

# Site Analysis

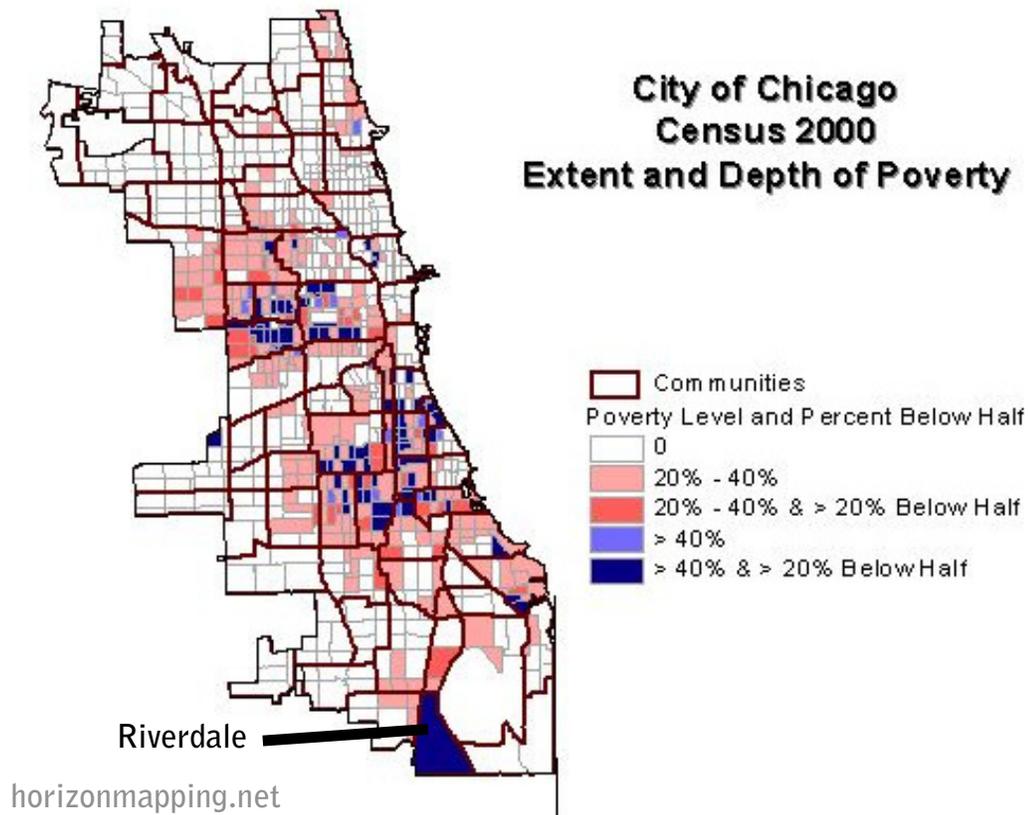
## Quantitative: Neighborhood Map



<http://www.explorechicago.org/city/en/neighborhoods.html>

## Site Analysis

### Quantitative: Poverty Map



After analyzing both the "Extent and Depth of Poverty" map and the "A Taxonomy of Transitions" map, there is a general correlation between the percentage of people living in poverty in a given area and the racial/ethnic majority that live in the area.

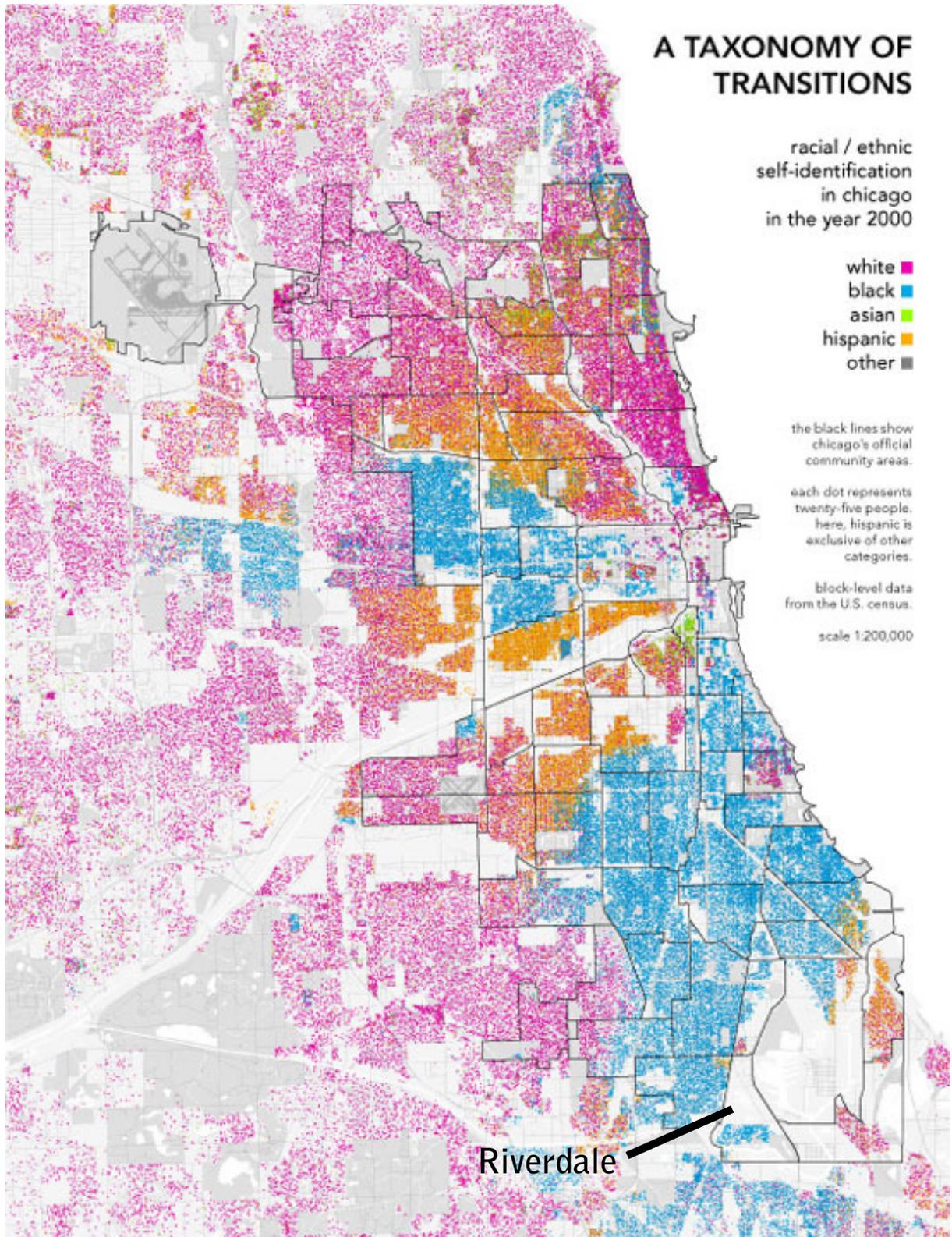
Riverdale is the only neighborhood within Chicago where every section within the neighborhood is represented as having 40% of the population below the national poverty level. This is also a neighborhood where nearly all of the residents are black, according to the 2000 U.S. Census.

This neighborhood is also in an area where there is not much poverty to the east and south. South of the neighborhood lies the suburb of Dolton.

After looking at these maps, I decided to look into this neighborhood further to find out how and why this neighborhood is economically and socially disadvantaged.

# Site Analysis

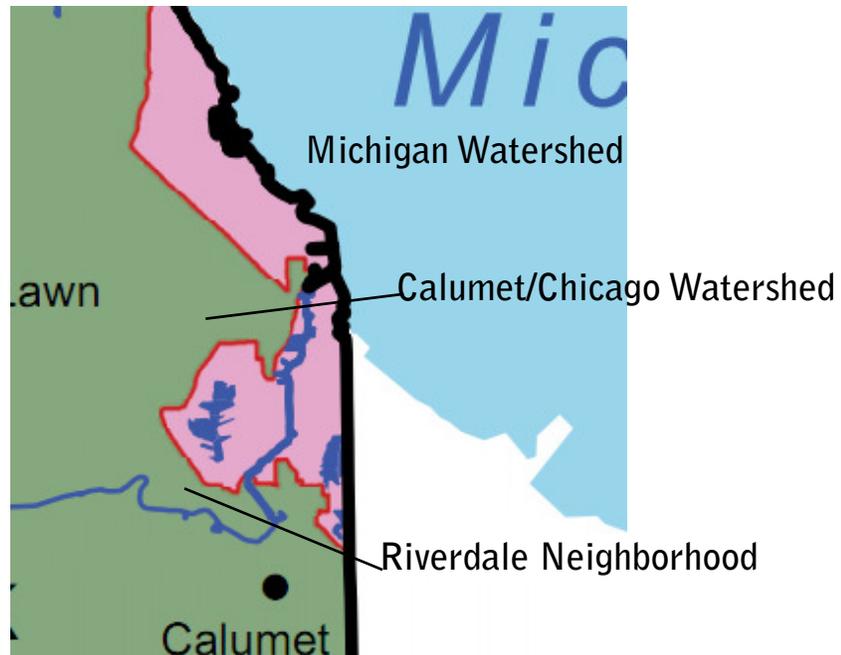
## Quantitative: Racial/Ethnic Distribution



<http://dd.dynamicdiagrams.com/category/maps/>

## Water Analysis

### Watershed Map



Watershed Map of South Chicago  
<http://www.isws.illinois.edu/iswsdocs/maps/ISWSMS2000-01.pdf>

The Riverdale Neighborhood is within the Calumet/Chicago Watershed and lies immediately next to the Michigan Watershed. The Little Calumet River that runs through the Riverdale Neighborhood flows downstream from the Michigan Watershed to the Calumet Chicago Watershed. This means that the storm water runoff from the Lake Calumet industrial area flows through the river and has helped deteriorate the water quality within the river.

# Water Analysis

## Aquifer Map

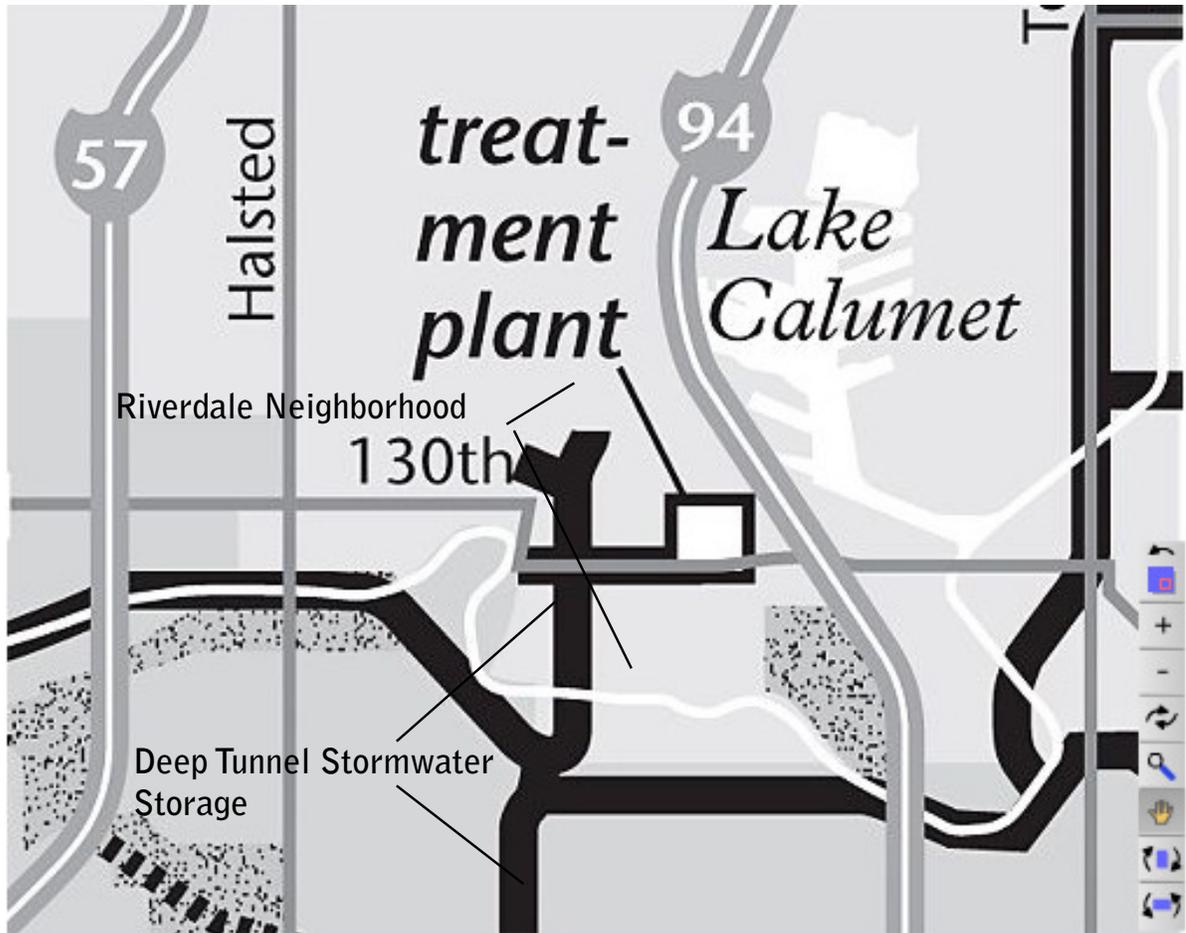


The Riverdale Neighborhood lies on top of a major sand and gravel aquifer and deep bedrock aquifers and a series of water wells for the city. Finding a way to recharge these aquifers with as much storm water runoff as possible is an important issue that should be addressed.

Water Wells

<http://www.isws.illinois.edu/iswsdocs/maps/ISWSMS2006-01.pdf>

- Communities
- Shallow Bedrock Wells
- ▨ Major Sand and Gravel Aquifers (<500ft)
- ▨ Major Deep Bedrock Aquifers (>500ft)



Chicago's Deep Tunnel System- 2003

<http://www.encyclopedia.chicagohistory.org/pages/3720.html>

The stormwater and sewage system are all connected within the City of Chicago. Dealing with all the water that needs to be treated has created many problems for the city, in an attempt to minimize this issue, the city created a series of deep underground tunnel systems that hold excess stormwater runoff until it can be treated at the water treatment facility in the northern part of the neighborhood. This system illustrates the severity of the water issues that plague the city. Minimizing the stormwater runoff within the neighborhood can help reduce the pressure on the water treatment facilities.

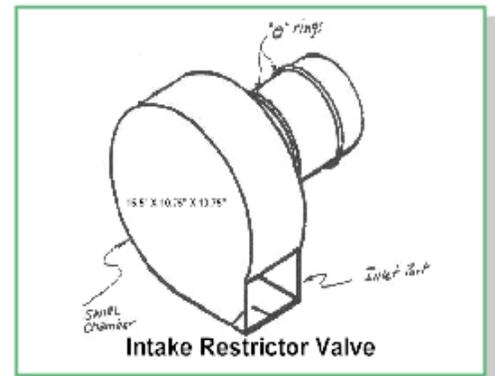
## Water Analysis

### Rainblocker Program

The combined sewer and water runoff system of Chicago has created more water than the water treatment facilities can handle. An additional attempt to address this problem has resulted in the implementation of the 'Rain Blocker Program.' This solution restricts the amount of water runoff that can flow into the sewers at any given time. (City of Chicago) This program has become a major liability for the property owners and is now facing a lawsuit, "Costello vs. City of Chicago" according to the Chicago Clout Website.

Three neighborhoods that have the most amount of flooding have been used for a pilot study for the program. Each sewer drain has been fitted with an intake restrictor valve that restricts the water flow into the sewers, leaving the water runoff to remain on the streets longer. This causes property damage and street deterioration by water flooding over the streets and into yards and foundations. A build up of trash is typically found near the valves and further clogs the water outlets to the sewer drains.

This further illustrates the need for a solution to the excess stormwater runoff throughout Chicago. Though the city has spent around \$60 Million in implementing this program, it is clear that it will not be a viable solution for the long term.



[http://www.cityofchicago.org/city/en/depts/bldgs/supp\\_info/blocking\\_rainwaterandpreventingsewerbackup.html](http://www.cityofchicago.org/city/en/depts/bldgs/supp_info/blocking_rainwaterandpreventingsewerbackup.html)



[http://www.chicagoclout.com/weblog/archives/2006/09/chicago\\_sewer\\_rainblocker\\_upda.html](http://www.chicagoclout.com/weblog/archives/2006/09/chicago_sewer_rainblocker_upda.html)

# Water Analysis

## Topography Map

This map is the topography map by the United States Geological Survey website. This shows that the area within the neighborhood is relatively flat. The topography does slope towards the river. With the flat terrain, there is an excellent opportunity to retain stormwater run-off on-site.



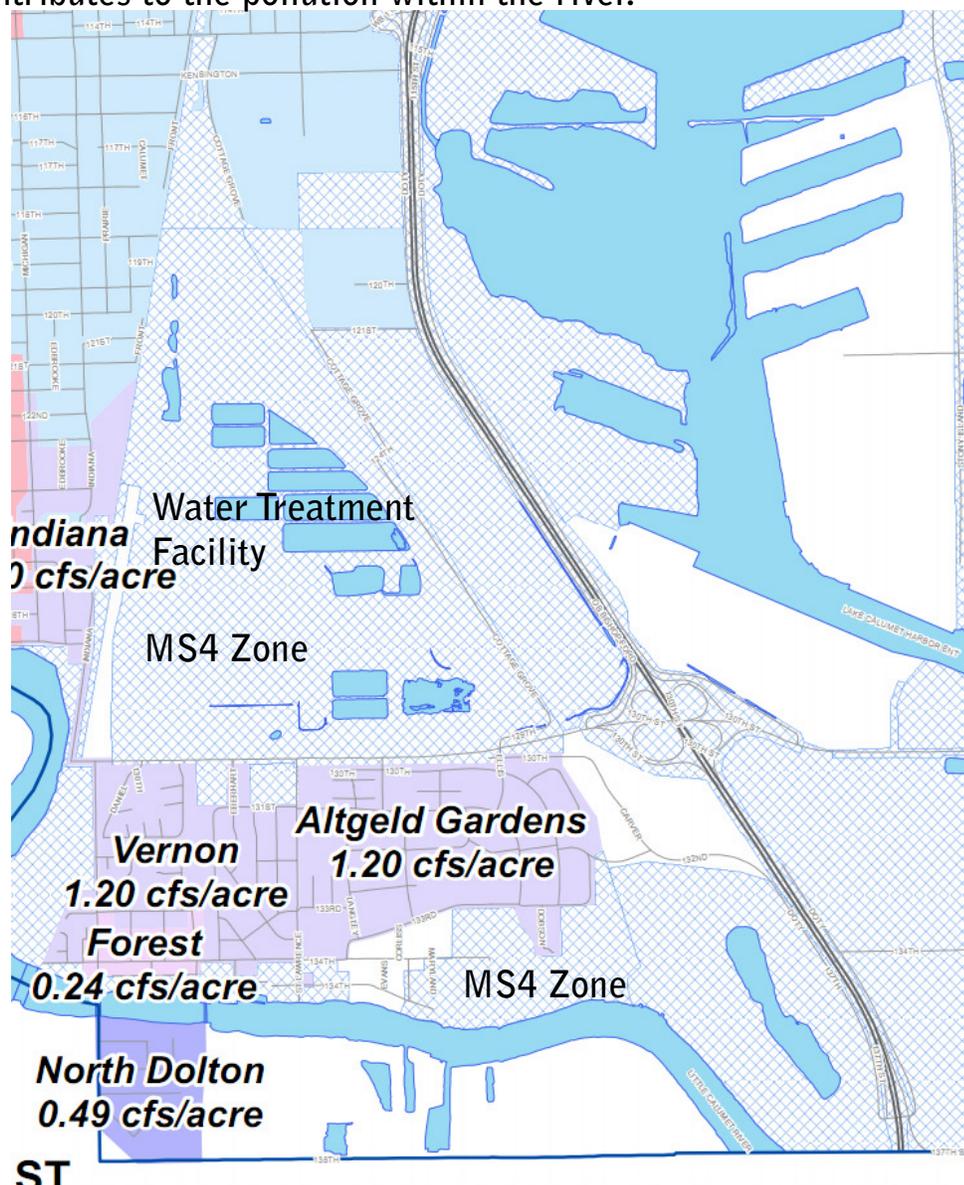
Topography Map of Riverdale

[http://store.usgs.gov/b2c\\_usgs/usgs/maplocator/\(xcm=r3standardpitrex\\_prd&layout=6\\_1\\_61\\_48&uiarea=2&ctype=areaDetails&care=%24R00T\)/.do](http://store.usgs.gov/b2c_usgs/usgs/maplocator/(xcm=r3standardpitrex_prd&layout=6_1_61_48&uiarea=2&ctype=areaDetails&care=%24R00T)/.do)

# Water Analysis

## Water Runoff

This map shows the storm water release rates of each area. These areas flow into the sewers where they sit in the deep tunnel storage until they can be treated at the water treatment facility. The water treatment facility omits an unpleasant odor due to treatment of sewage and storm water. The areas that are not solid blue area areas declared MS4 Zones. Because these areas lie adjacent to a river, the stormwater runoff must flow directly into the river rather than be treated at the water treatment facility. (City of Chicago Stormwater Manual) This contributes to the pollution within the river.



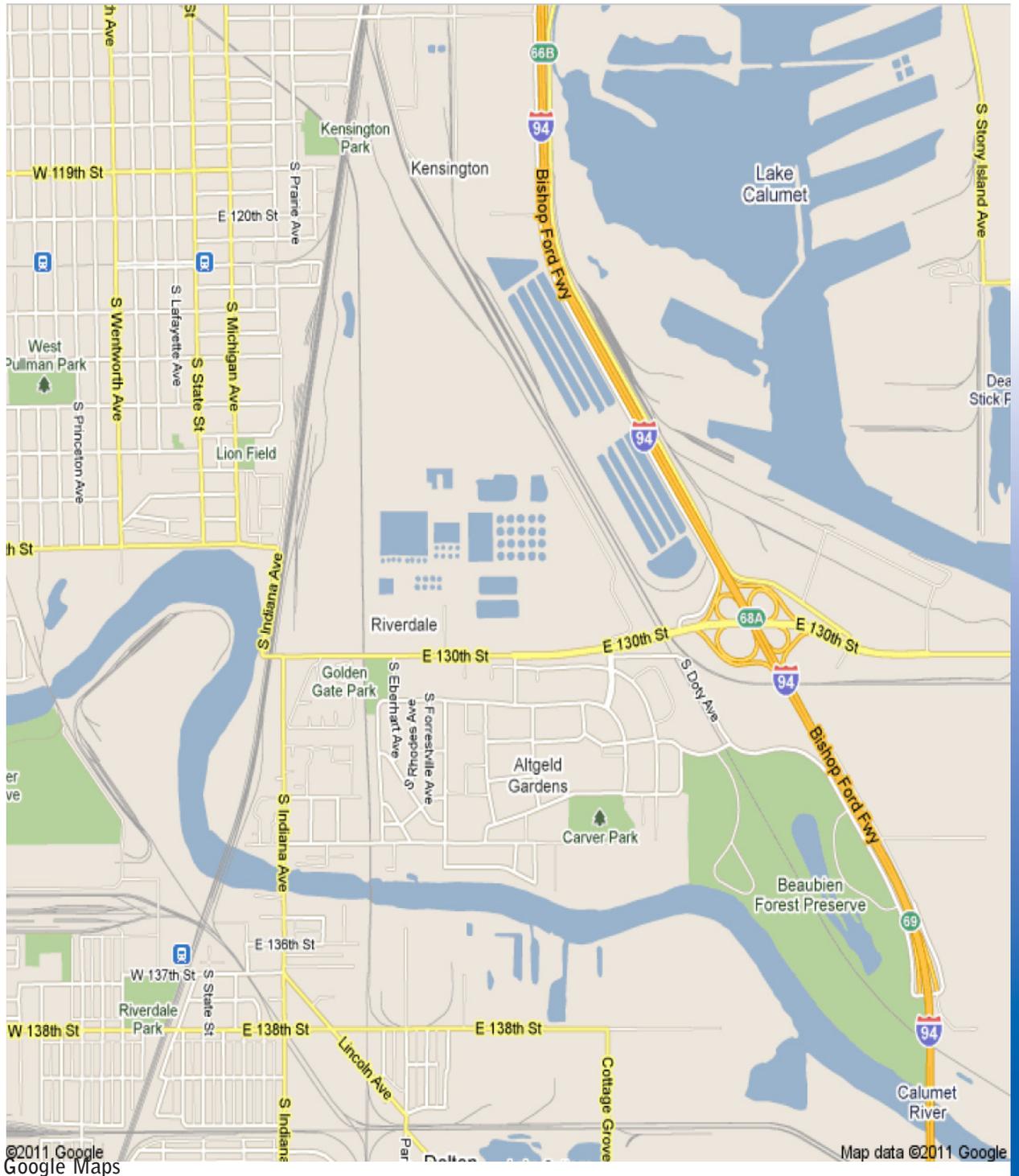
ST

Storm Water Release Rate Map

[http://www.cityofchicago.org/content/dam/city/depts/water/general/Engineering/SewerConstStormReq/Release\\_Rate\\_Map\\_South.pdf](http://www.cityofchicago.org/content/dam/city/depts/water/general/Engineering/SewerConstStormReq/Release_Rate_Map_South.pdf)

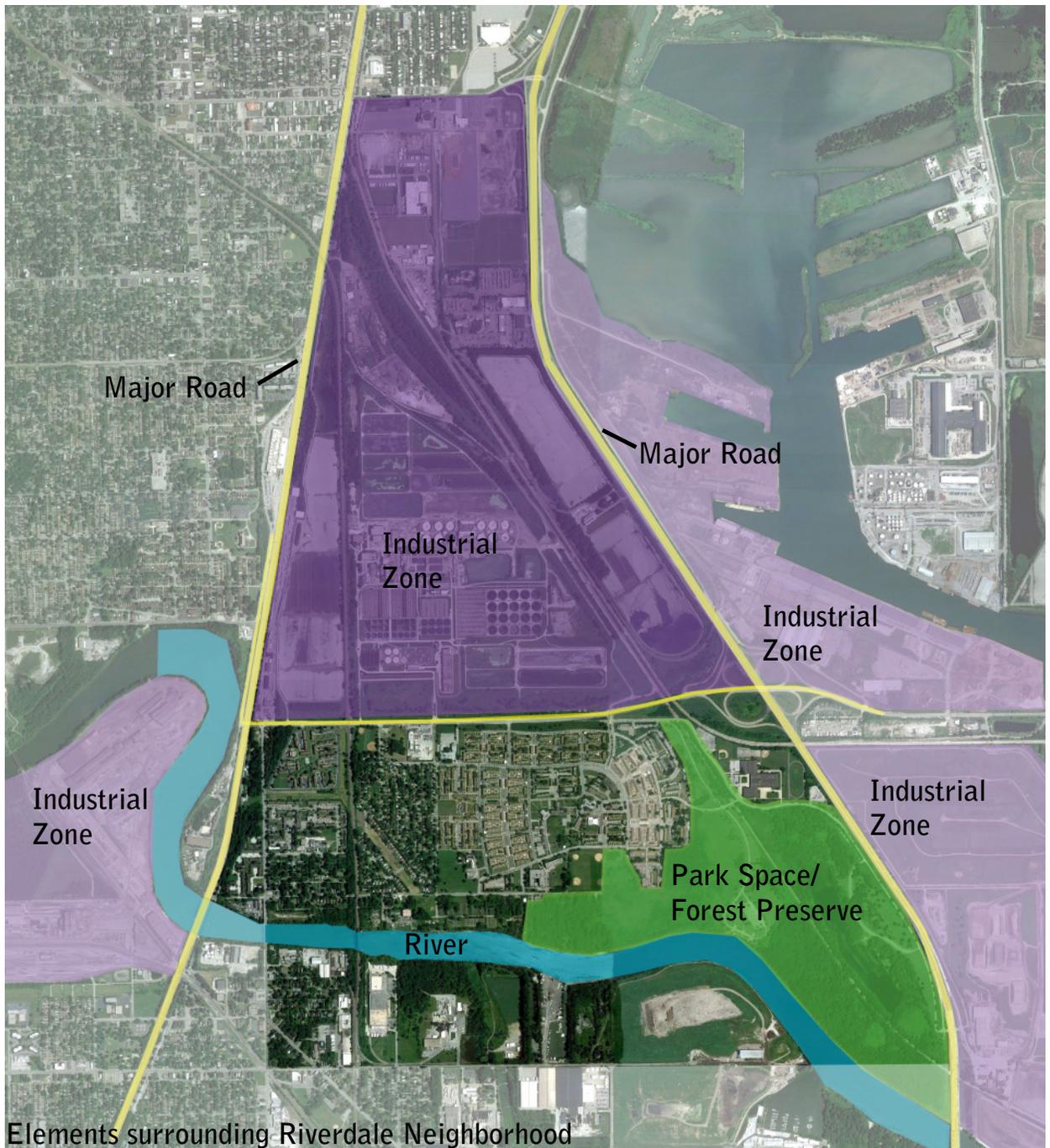
# Site Analysis

## Quantitative: Street Map



## Site Analysis

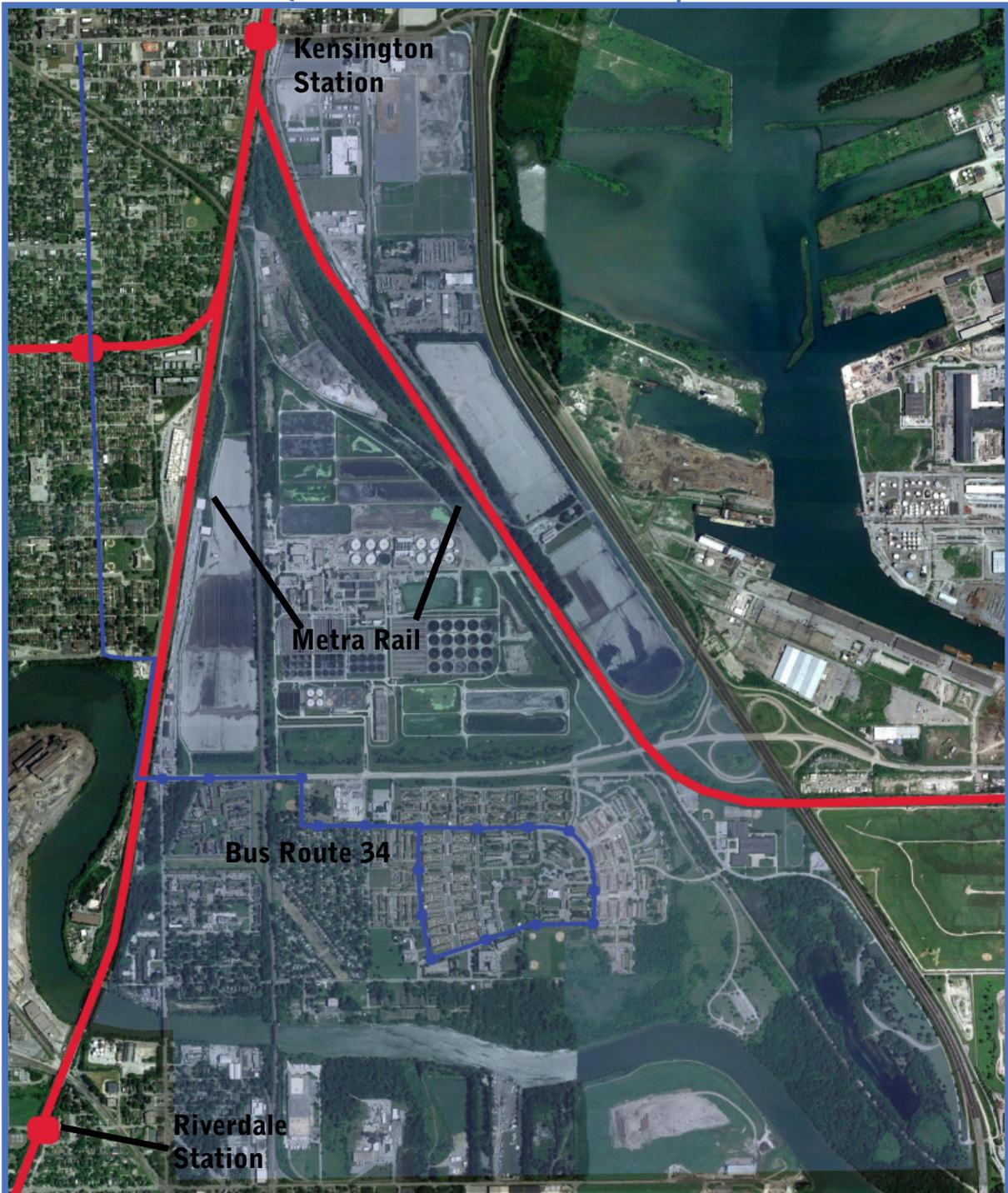
### Quantitative: Neighborhood Barriers



This neighborhood is relatively isolated from its surrounding area. According to the City of Chicago website, this isolation has been a contributing factor to the danger. Most of the middle-income residents are separated from the low-income residents by the river, and live next to Dolton.

## Site Analysis

### Quantitative: Transit Map

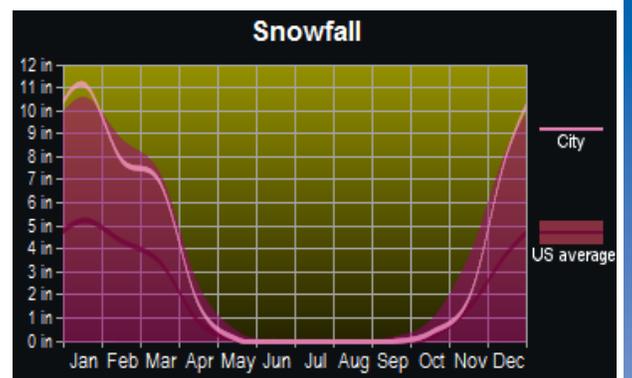
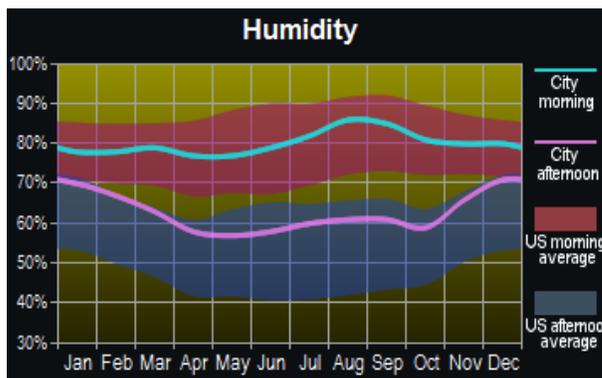
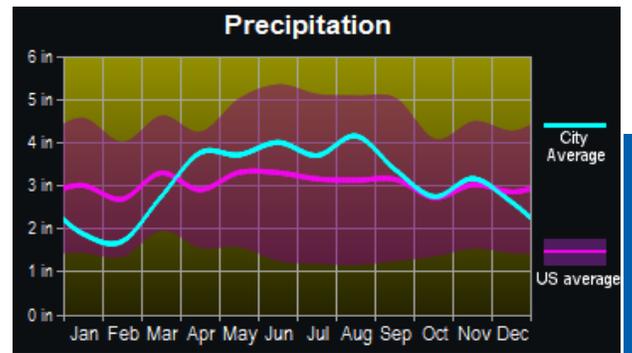
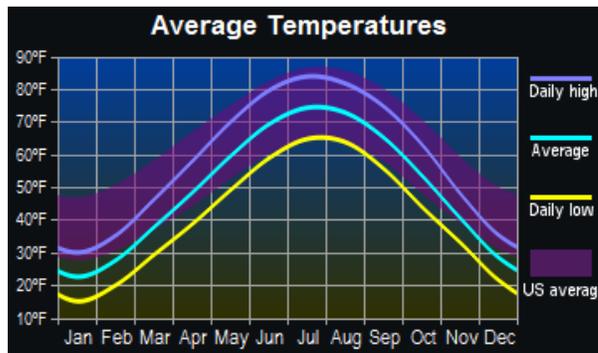


Information Provided by Metrarail.com and Google Earth

Two Metra Rail lines run along the border of the Riverdale Neighborhood, but the two stops on the rail are not within walking distance for most of the residents. The bus route runs almost exclusively for the Altgeld Gardens residents but not for most of the other residents living in the neighborhood.

# Site Analysis

## Quantitative: Weather



All graphs provided by City-data.com

### Average Temperatures for Chicago:

The coldest temperatures are in January and December with a low of 15 degrees Farenheit and a high of 30 degrees Farenheit. The temperatures in the winter remain temperate partly due to the air moving off of the lake. The warmest temperatures usually occur in July with a high of 85 degrees Farenheit and a low of 65 degrees Farenheit. The humidity in Chicago is consistantly high compared to the U.S. average humidity. This is due to Lake Michigan lying directly east of the city.

Since Chicago has a temperate climate, there is oppportunity all year for people to enjoy public parks and spaces. Parks designed should provide activities not only in the summer months, but the winter months as well.

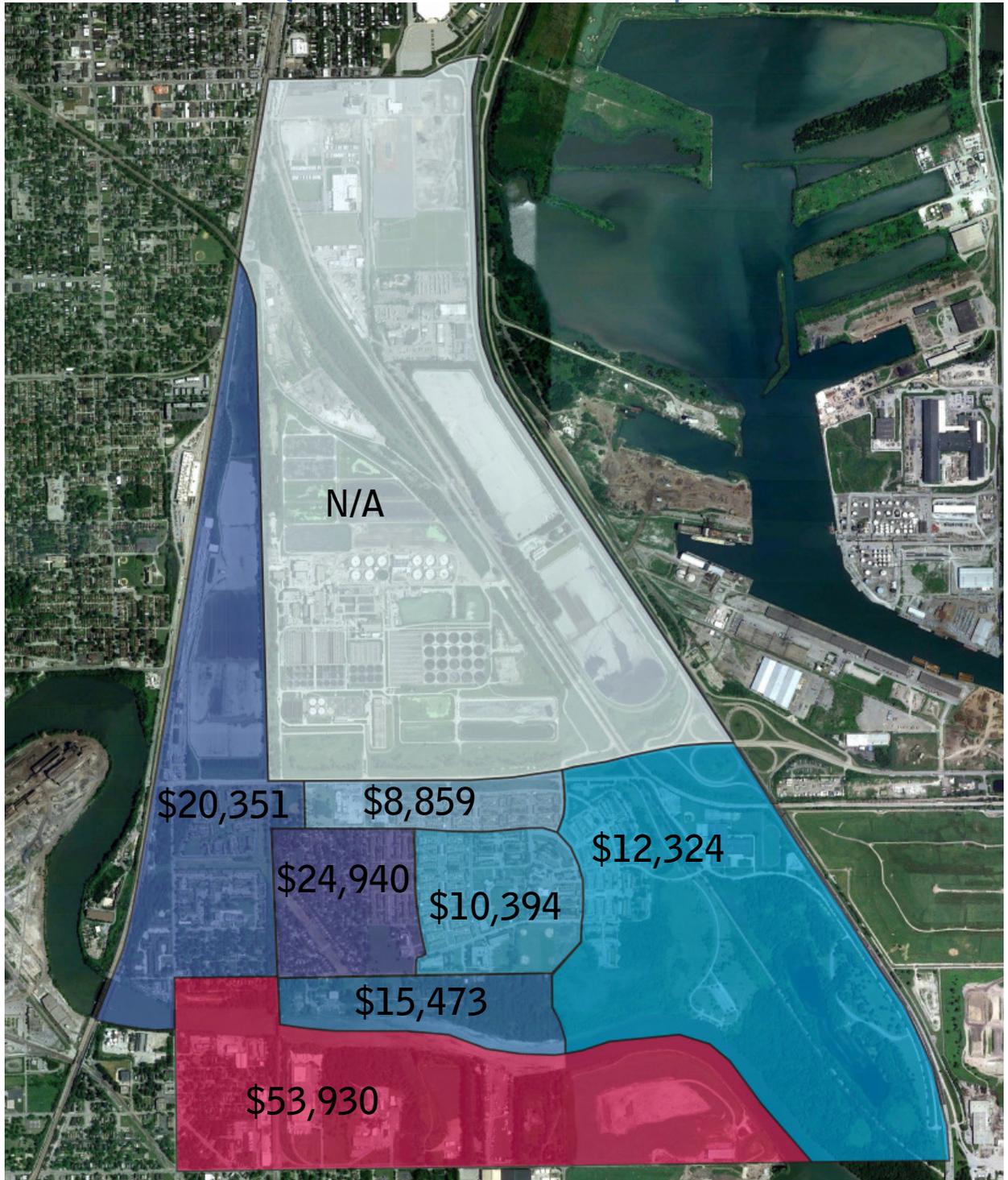
The average precipitation in Chicago ranges from 1.5 inches in February to 4.2 inches in August. In the winter months, the city sees less than average rainfall, and in the summer months, the city sees more than average rainfall.

Chicago also recieves more than average snowfall throughout the year, with the highest amount of snowfall in January and December at 10 and 11.2 inches. This is due to Lake Michigan directly east of the city.

Since the snowfall is significant around Chicago, there is an oppportunity for people to go outside and participate in winter activities such as snow fort building and building snowmen; this is a good way to keep kids active all year long.

## Site Analysis

### Quantitative: Income Map

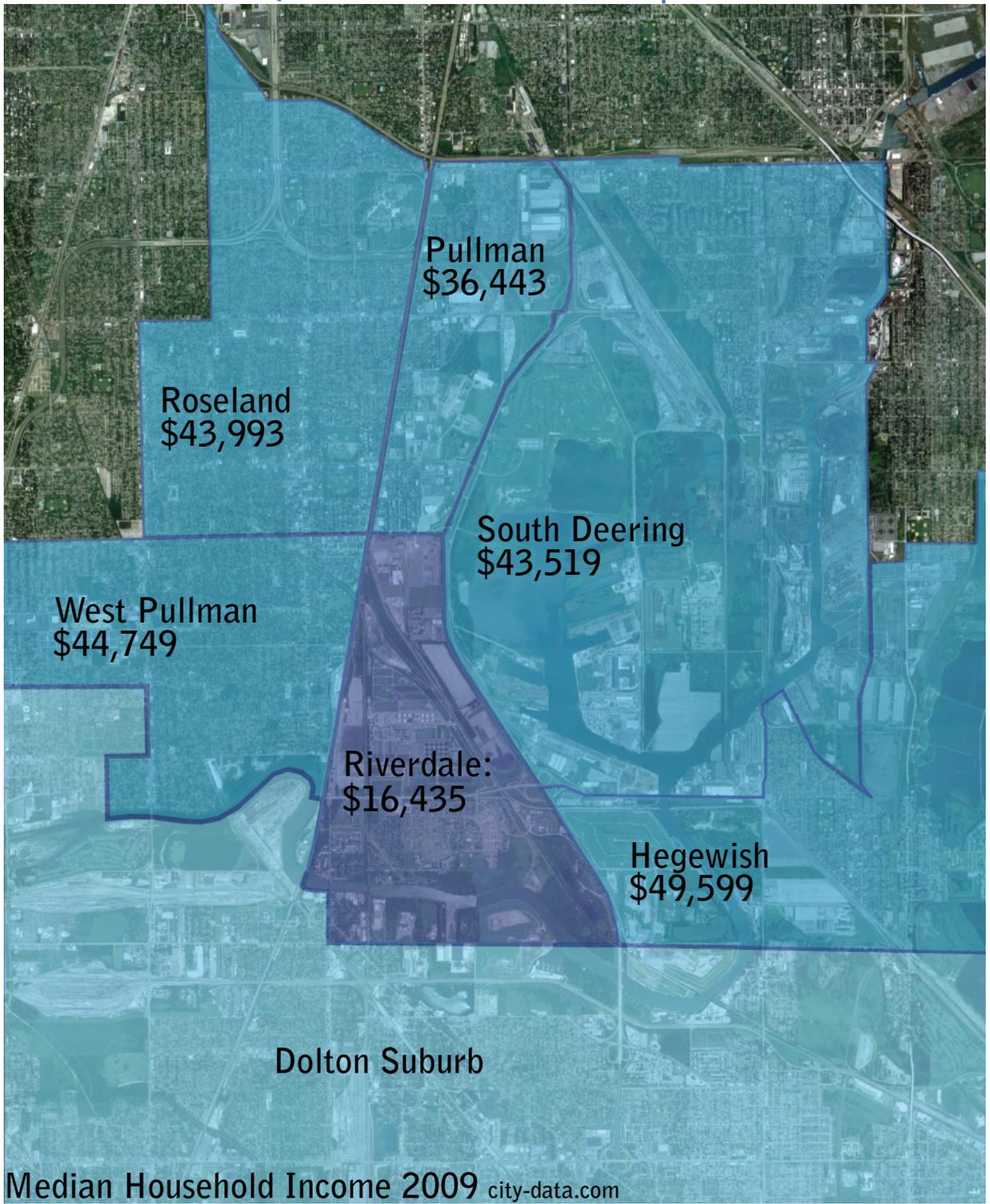


Riverdale Median Household Income 2009 City-data.com

The Riverdale neighborhood has been broken down into areas where the median household income is similar. The incomes range from \$8,859 to \$53,930.

## Site Analysis

### Quantitative: Income Map

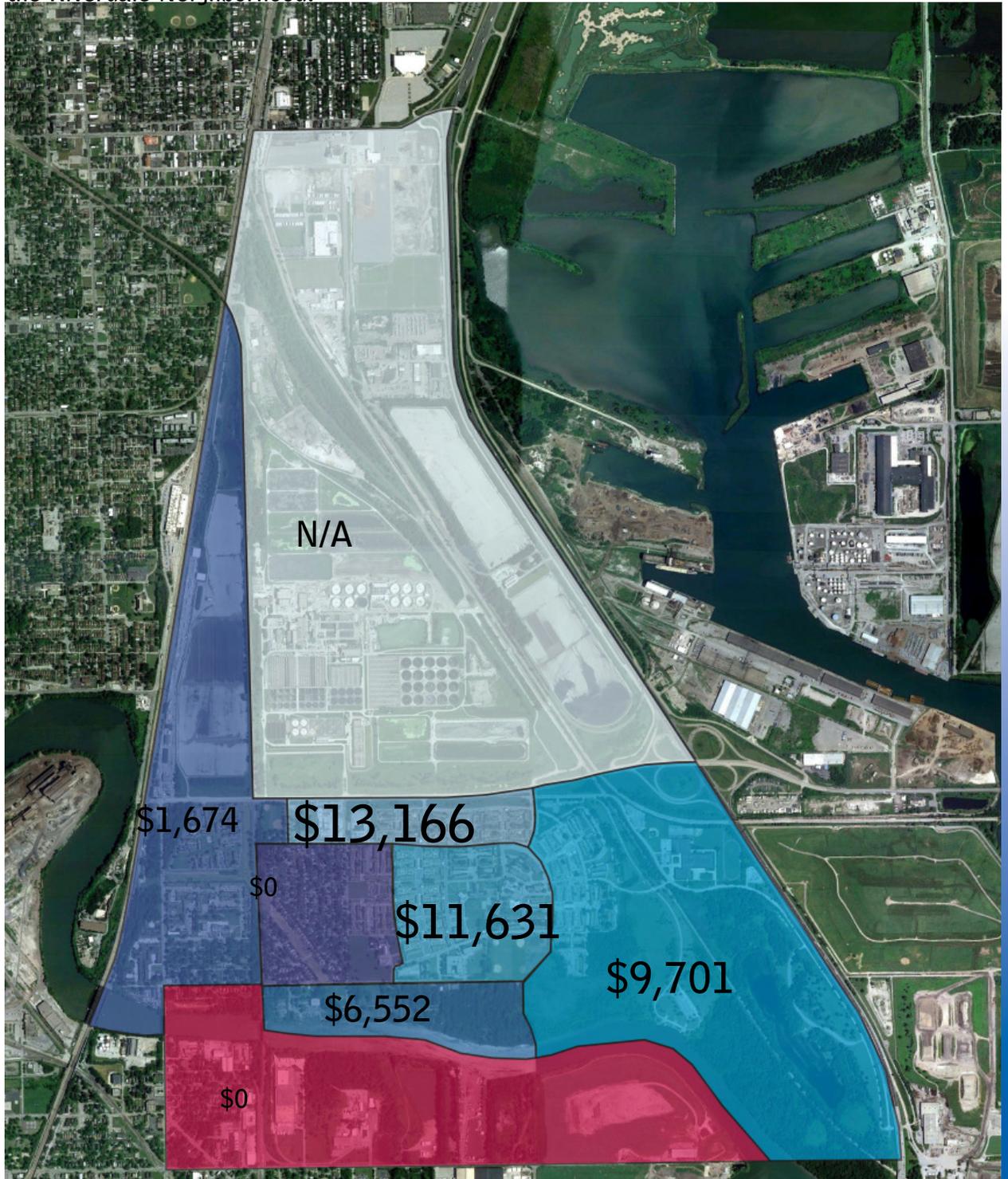


This map shows the average median household income for Riverdale and the surrounding neighborhoods. The neighborhoods surrounding Riverdale all have a significantly higher income level than that of Riverdale.

## Site Analysis

### Quantitative: Extent Below Poverty Map

This map illustrates how far below the poverty level the average household income is with the Riverdale Neighborhood.



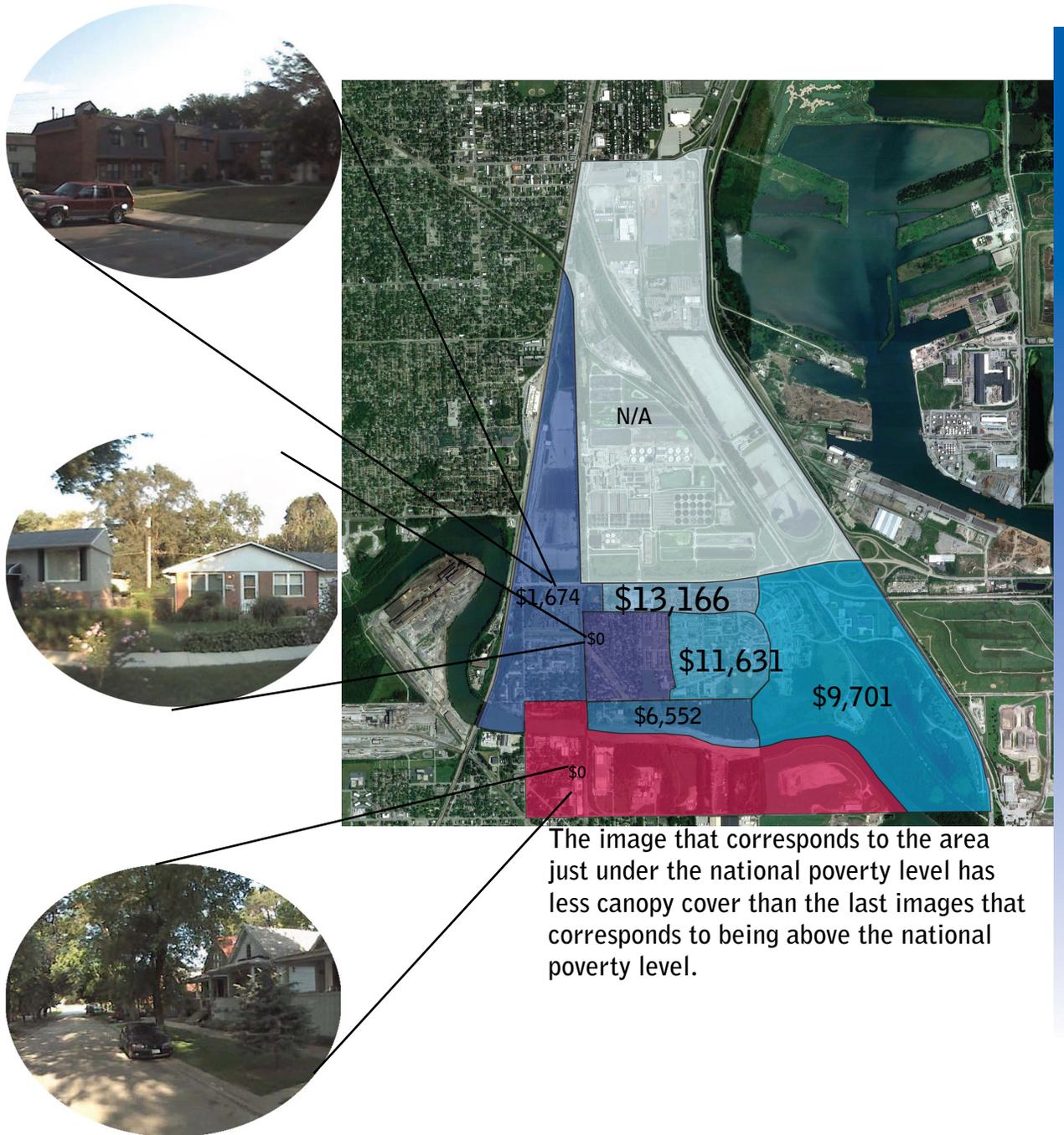
Extent of Average Household Income Below Poverty Level

Information provided by the U. S. Census Bureau and City-data.com

# Site Analysis

## Quantitative: Extent Below Poverty Map

The images shown are taken from the higher income areas within the neighborhood that are either above the national poverty level or just under the national poverty level. These areas are well maintained and have an adequate amount of canopy cover.



# Site Analysis

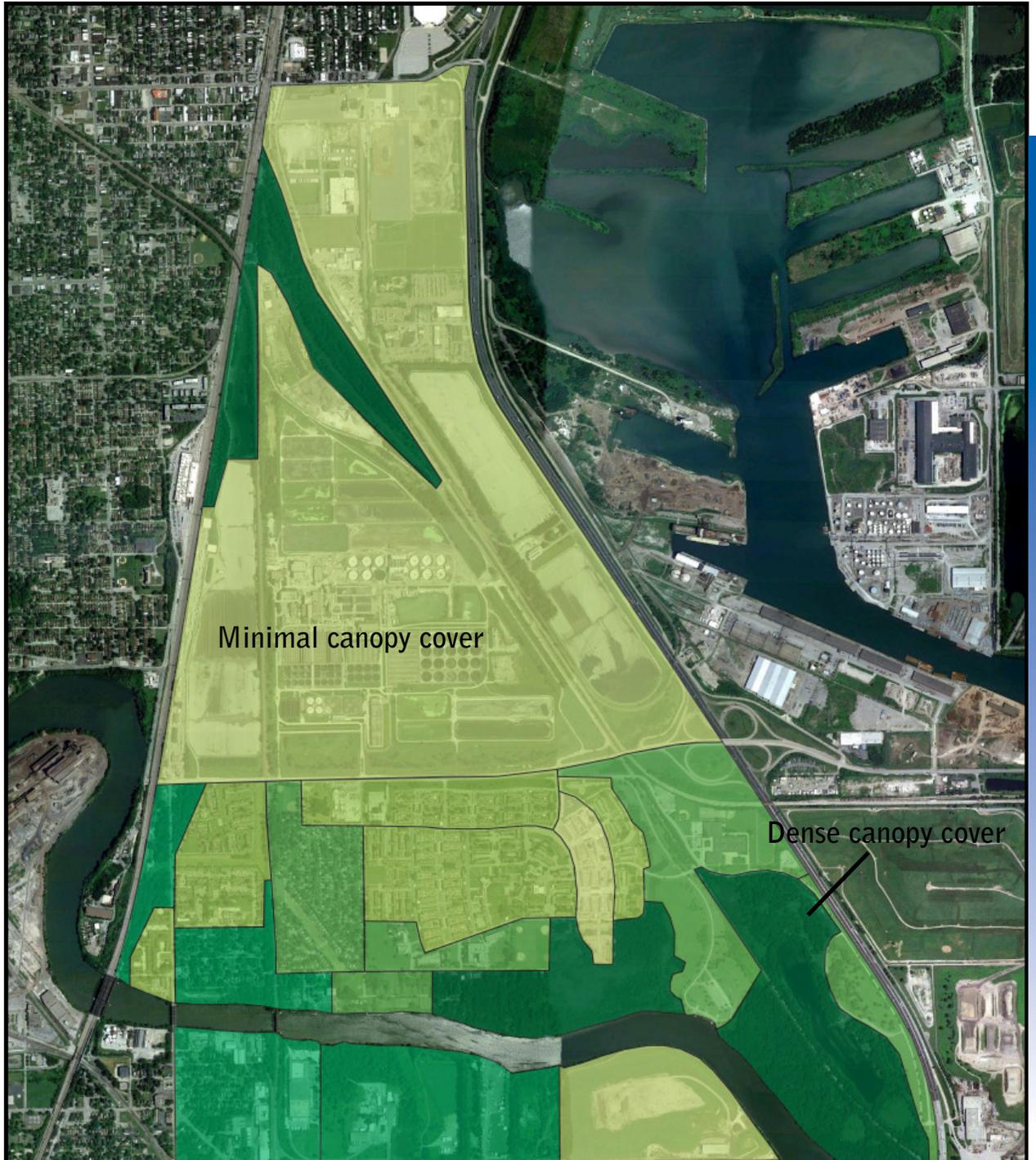
## Quantitative: Extent Below Poverty Map



These images that correspond to areas within the neighborhood that are significantly under the national poverty level, and are poorly maintained. The top image is an exception and has been recently remodeled within the housing projects and is better maintained.

## Site Analysis

### Quantitative: Canopy Cover

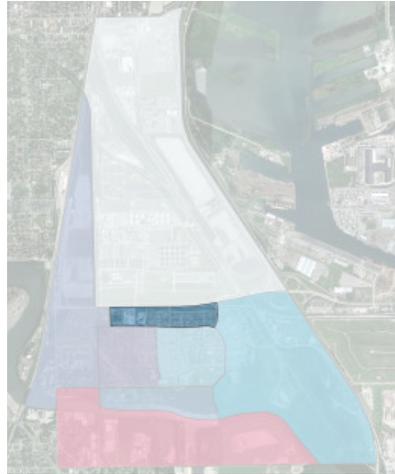


Map showing the different levels of canopy cover within Riverdale

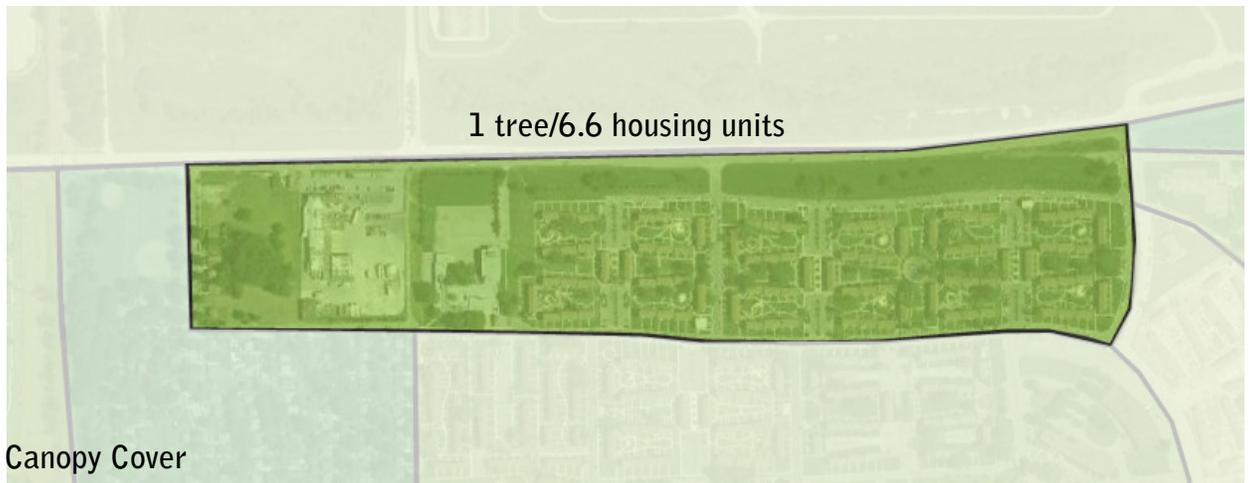
After analyzing and calculating the number of trees and building units within each income level, I have found that there is a correlation of income level and canopy cover within the neighborhood.

## Site Analysis

Quantitative: Income Level - \$8,859



This area of Riverdale is part of the Altgeld Gardens Housing Projects operated by the Chicago Housing Authority.



## Site Analysis

Quantitative: Income Level - \$8,859



Remodeled Streets



Remodeled Row Houses

Attributes:  
Recently Remodeled  
Some canopy cover with newly planted trees  
Green Space



Grocery Store

Negatives:  
Buildings and spaces are monotonous  
No activities in the area  
No reason to get people to go outside and socialize  
No mixed-use buildings  
No mixed-income housing  
Recycling plant is unappealing and has a slight odor  
Aldridge Elementary is one of the six poorly performing schools in Riverdale



Aldridge Elementary

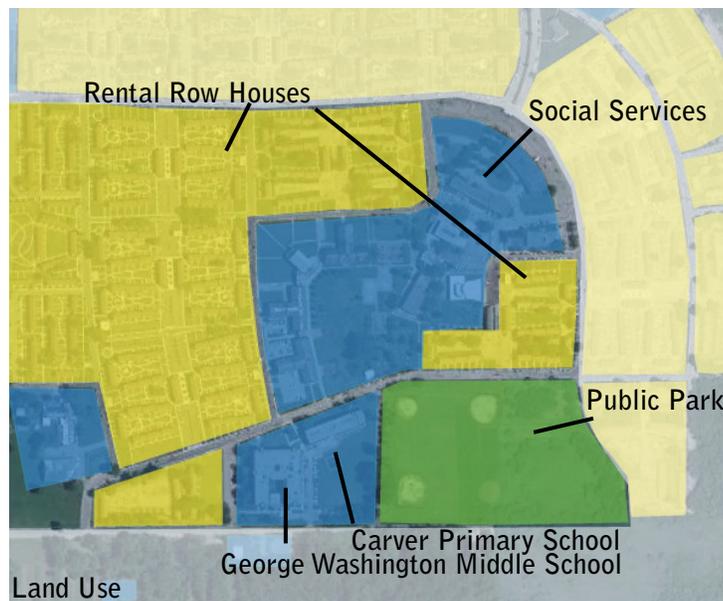
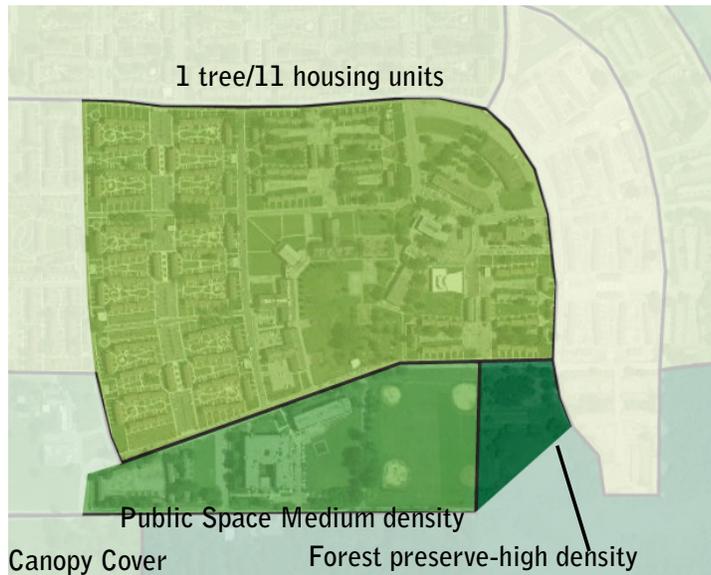
Photos provided by Google Earth

# Site Analysis

## Quantitative: Income Level - \$10,394



This area is also part of the Altgeld Gardens Housing Project. The park space is along the southern edge of the development which provides little incentive for those on the northern end to travel to the park.



## Site Analysis

### Quantitative: Income Level - \$10,394

#### Negatives:

Buildings and spaces are monotonous  
Very few activities in the area  
No reason to get people to go outside and socialize  
No mixed-use buildings  
No mixed-income housing  
The middle and primary schools are two of the six poorly performing schools in Riverdale  
Some trees are old and in decline, very little vegetation  
Forest preserve becomes a haven for unethical activity, can be dangerous  
Area is poorly maintained, bad sidewalks and parking lots

#### Attributes:

Public Park  
Some Canopy Cover  
Green Space  
Social Service Buildings  
Youth Center



Old Concrete by Housing



Abandoned Looking Building



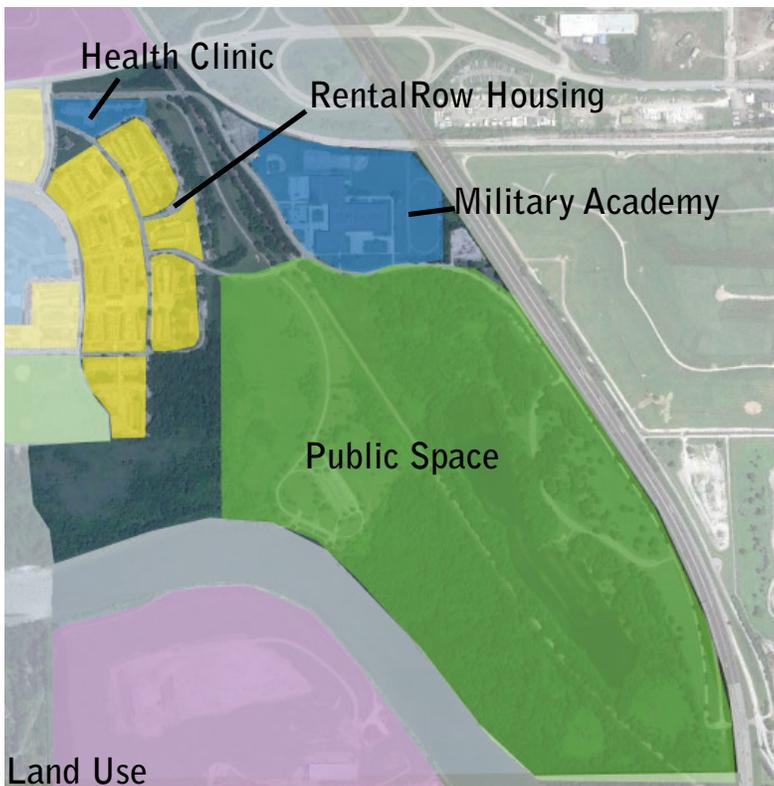
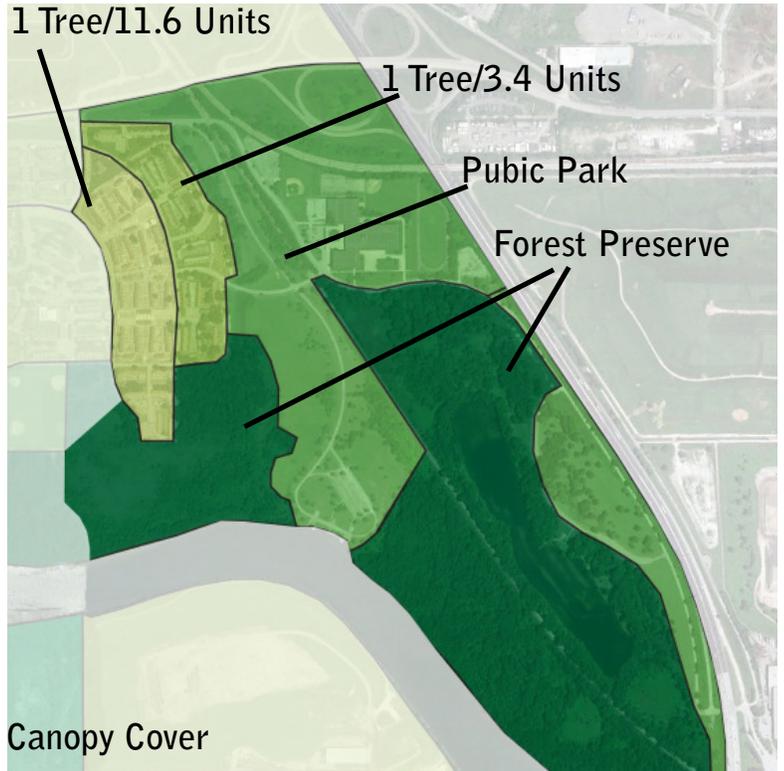
Parking Lot at Row Houses  
Photos provided by Google Earth



Streetscape in front of School

# Site Analysis

Quantitative: Income Level - \$12,324



## Site Analysis

Quantitative: Income Level - \$12,324

### Attributes:

The parks and green space on the edge of the neighborhood provides the housing units with more appeal than those toward the middle of the neighborhood.

Next to a large public park which provides some activities

### Negatives:

Buildings and spaces are monotonous

No reason to get people to go outside and socialize

No mixed-use buildings

No mixed-income housing

Park can provide haven for unethical activity

Poor upkeep

Aldridge Elementary is one of the six poorly performing schools in Riverdale

Significant amount of hardscape



Housing toward the east



Streetscape of east housing



Streetscape of south housing



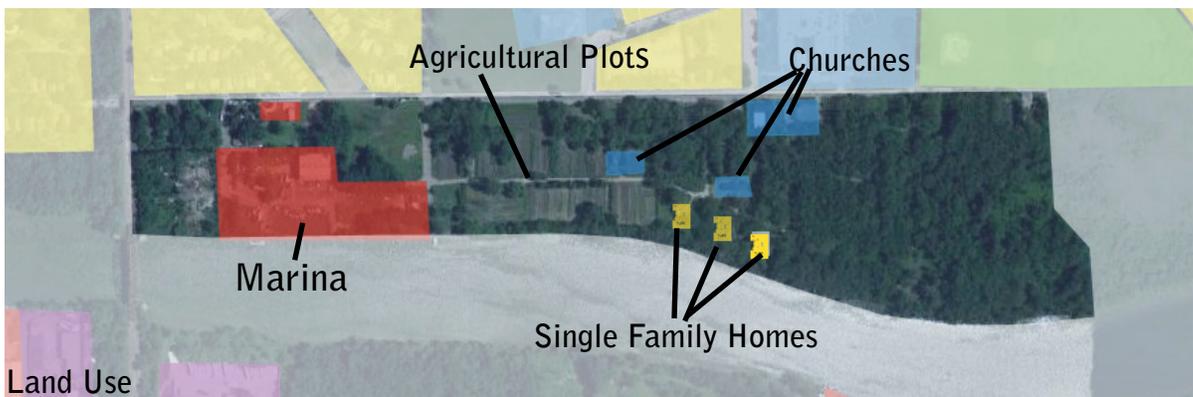
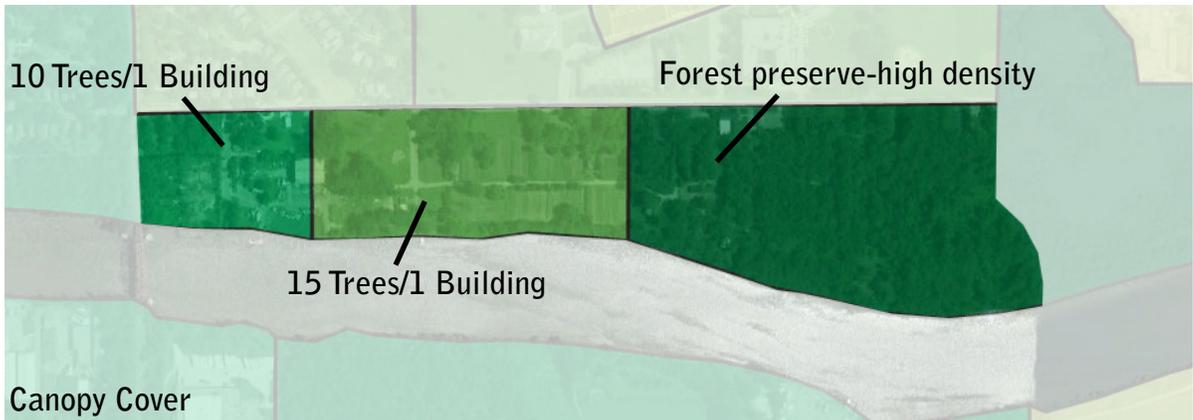
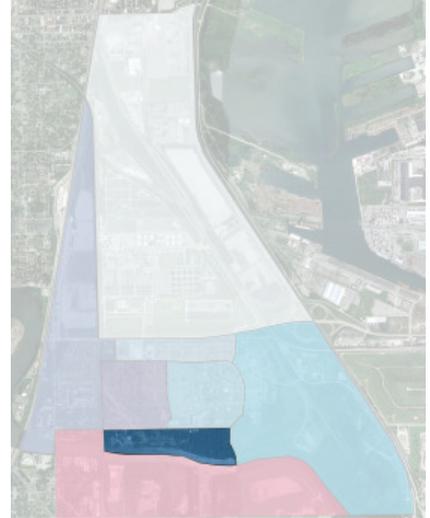
Interior of housing

Images provided by Google Earth<sup>100</sup>

## Site Analysis

Quantitative: Income Level - \$15,423

This area lies along the river and has a dense canopy of trees throughout the area. There is potential for new development of single family low and middle-income housing. Since the forest preserve can be a dangerous area, creating additional housing can decrease the danger of the forest preserve.

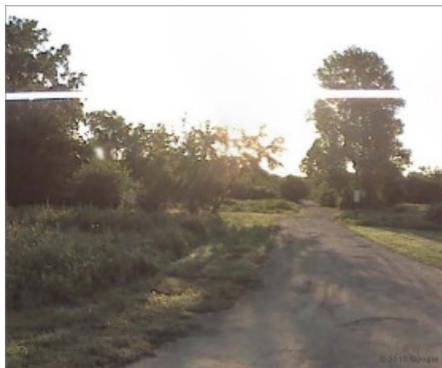


## Site Analysis

Quantitative: Income Level - \$15,423

**Attributes:**  
Significant Canopy Cover  
Green Space  
Along the River  
Numerous Churches  
Possible River Activities

**Negatives:**  
Forest preserve becomes a haven for unethical activity, can be dangerous  
Very few residential homes



View of Agricultural Plots



Church Adjacent to Forest Preserve



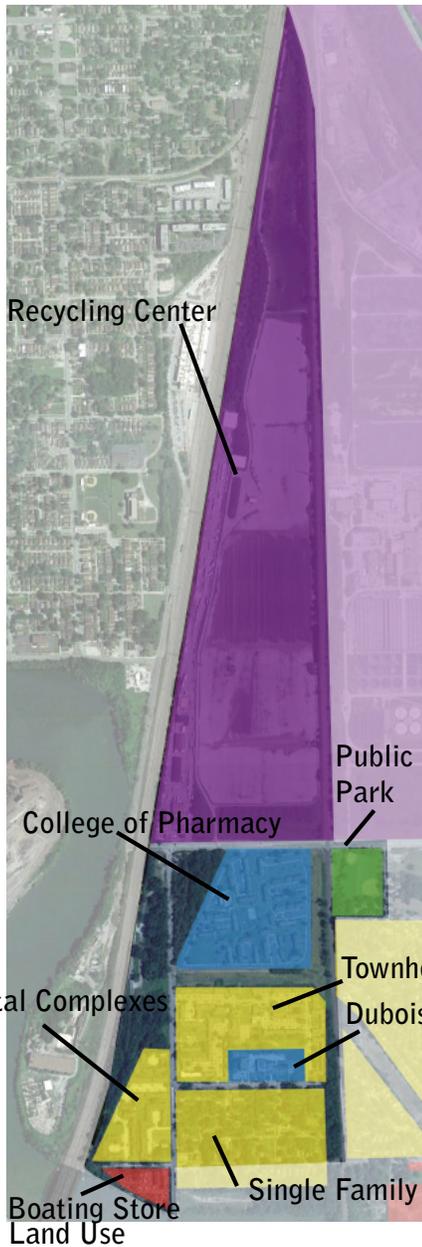
View of Marina  
Photos provided by Google Earth



View of Single Family Home

# Site Analysis

## Quantitative: Income Level - \$20,351



## Site Analysis

Quantitative: Income Level - \$20,351



Southwest Rental Units



College of Pharmacy



Townhomes near the College

### Attributes:

- Moderate - dense tree canopy
- Public park to the north
- Variety of housing units and styles
- Most housing is well maintained

### Negatives:

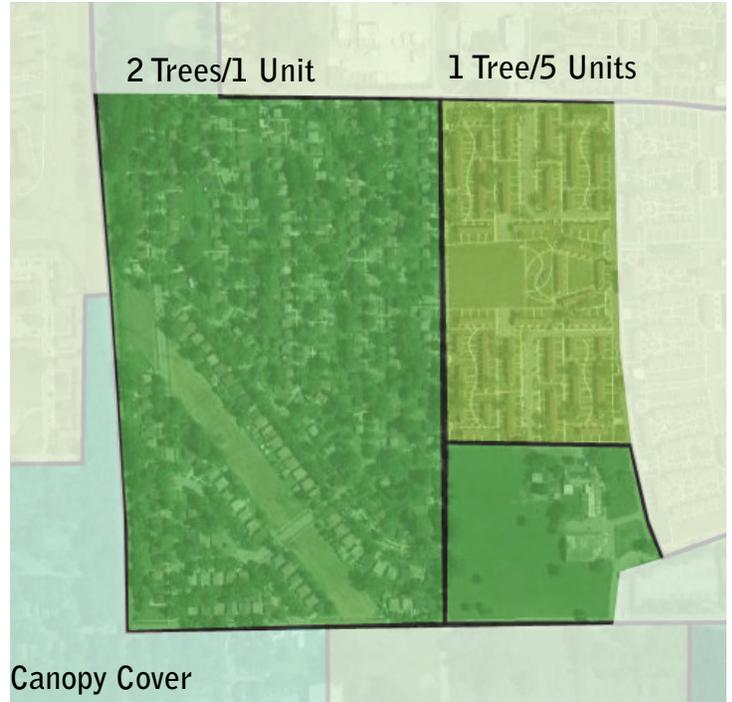
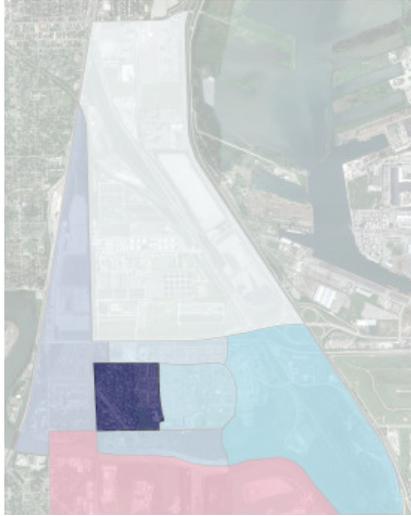
- No mixed-income housing
- No reason to get people to socialize
- No mixed-used buildings



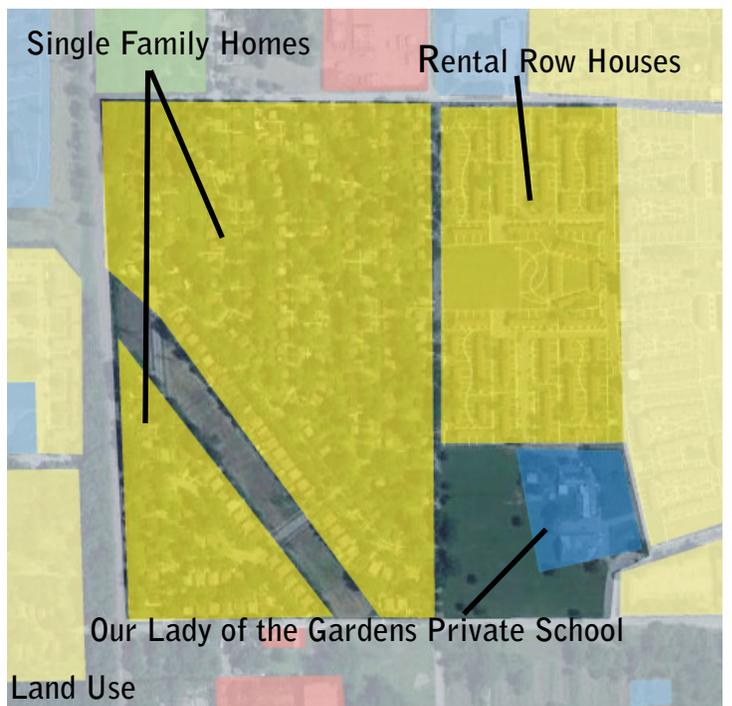
Debois Elementary  
Images provided by Google Earth

# Site Analysis

Quantitative: Income Level - \$24,940



Canopy Cover



Land Use

## Site Analysis

Quantitative: Income Level - \$24,940



Typical Street View

**Attributes:**  
Significant canopy cover  
Green Space  
Maintaining an owned property supports socialization within an area  
Well maintained  
Variety of housing units



Single Family Housing

**Negatives:**  
No mixed-use buildings  
Electrical poles run through area which creates a barren landscape



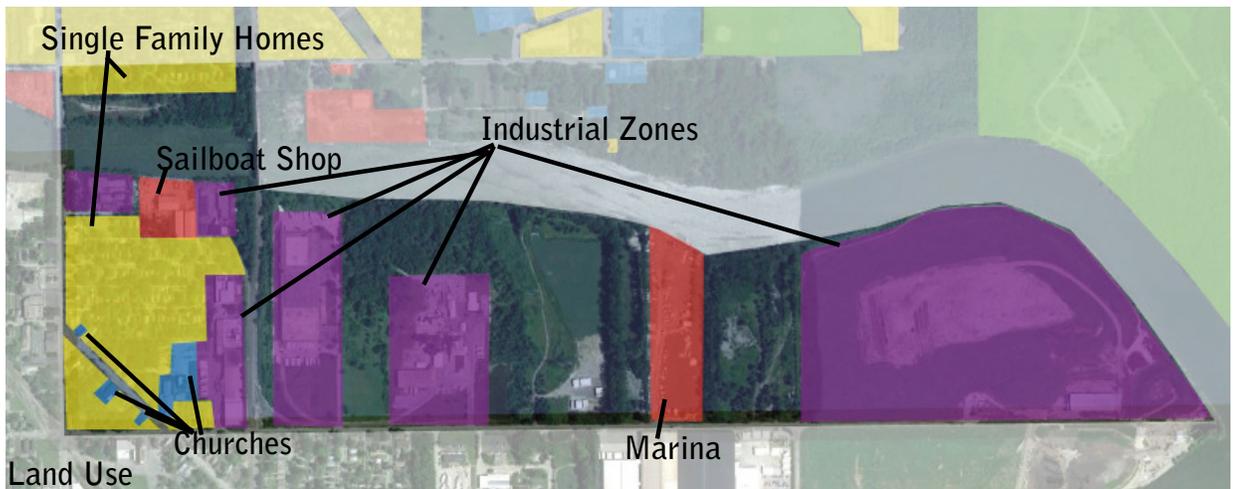
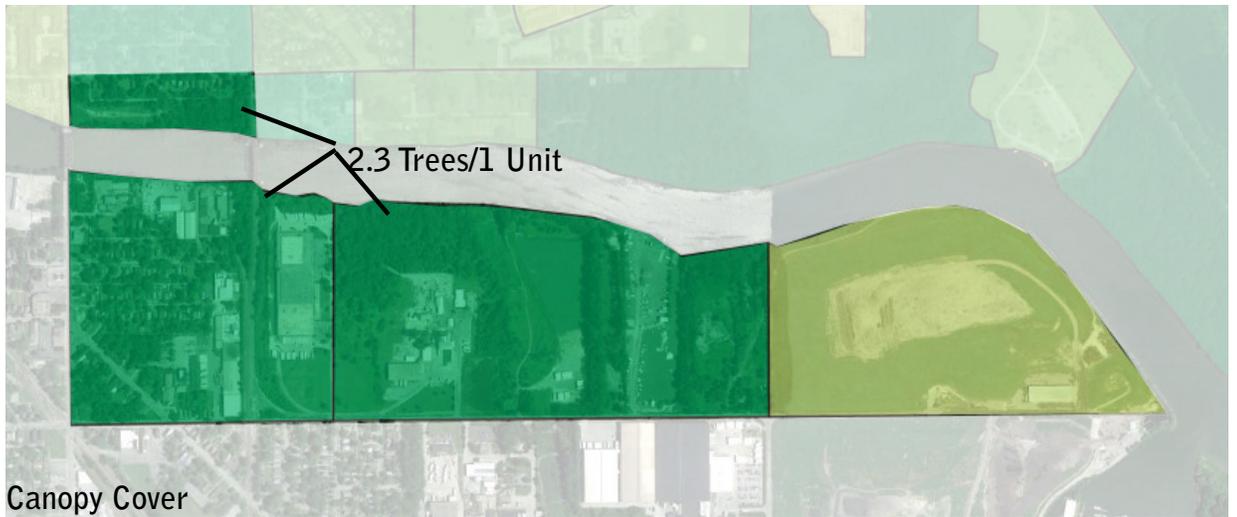
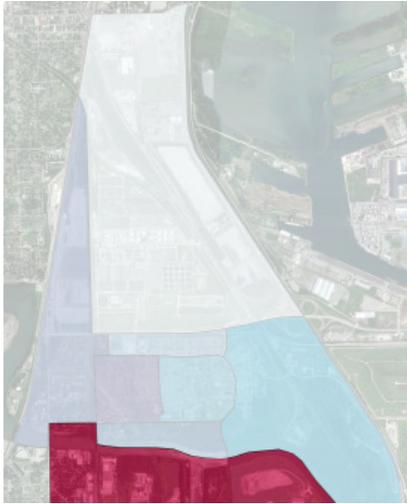
Electrical Poles  
Photos provided by Google Earth



Private School

# Site Analysis

Quantitative: Income Level - \$53,930



## Site Analysis

Quantitative: Income Level - \$53,930



Image of the river



Street north of the River



Marina north of the river



Two homes south of the river  
Images provided by Google Earth

### Attributes:

Dense canopy cover

Along the river

Most of the area is south of the river but some of the area flows north of the river

Numerous churches, which promote social activity

Detached housing creates opportunity for socializing and maintaining property

### Negatives:

Separated from the majority of the neighborhood

## Site Analysis

### Quantitative: Conclusions

- \* There is a correlation between the density of tree canopy, and income level in a residential area; the greater the density, the higher the median income level.
- \* All of the park space is on the outer edges of the residential area, rather than toward the center.
- \* The higher income level areas are better maintained than the lower income level areas.
- \* There are very few opportunities for socializing in low-income areas.
- \* There was very little activity on the streets .
- \* The Metra Rail stops were not within walking distance for most of the residents.
- \* The bus stops catered only to some of the residents.



## Site Analysis

### Quantitative: Conclusions

- \* The large expanse of park space on the edge of the neighborhood becomes a dangerous area.
- \* There is very little to no streetscape in the lower income neighborhoods, which makes the area look desolate and uninviting.
- \* There are very few commercial buildings.
- \* There are no mixed-use buildings.
- \* There are no mixed-income buildings.
- \* The lower-income housing units have little to no landscaping.



## Programmatic Requirements

---

Explore and design a way to increase the quality of life of the residents of the Riverdale Neighborhood.

Design more landscaping and gardens around the developments. This will provide a more desirable living area and gardening will increase the social activity and strengthen the social cohesion within the neighborhood.

Give residents a space of their own, that they can maintain and develop a sense of ownership and pride within the area.

Design gated areas within the housing developments that will give the residents a feeling of safety, which will make them more willing to go outside and socialize.

Improve the streetscape and parking lots within the neighborhood by adding more canopy cover, landscaping, and fixing the roads; making for a better walking environment.

Add fruiting trees within the neighborhood to provide fresh fruits and nourishment to the residents.

Contain the stormwater runoff within the area and to minimize the stress on the water treatment facility to the north. Treat the water on-site and utilize in a variety of ways.

Design a park that is safe, innovative, and a water treatment area to provide recreation for the community.



Without Borders



Unifying Modern  
patchwork Cities



Design



## Goal

---

The goal of this project is to explore ways to help the economically disadvantaged by increasing their living standards, and creating a healthier atmosphere which can help in creating more mobility between the economic classes.

All too often low income housing becomes neglected by both the residents and the cities as a result of low funding from the city and taxes as well as low income revenue from the households. This neglect tends to create an unhealthy living environment for the residents and lowers the quality of life.

The problems being addressed in the Riverdale Neighborhood are problems that occur in many low income areas throughout the world; lack of vegetation, safety, recreation, commercial areas, environment, and transportation (not necessarily in that order). By addressing these issues and understanding how they are all interconnected I hope to achieve the project goal by creating a healthier atmosphere and increasing the living standards of the residents.

Lines of theory: Urban Theory, Jane Jacobs- "Eyes on the Street"

## Conceptual Ideas

### Initial Programmatic Requirements

Initially, the scope and design of the project extended in areas all around the Riverdale neighborhood. These are my initial goals after researching and analyzing the neighborhood.

**Increasing the population density:** this will provide more eyes and ears within the community to help **prevent crime** and reduce the danger around the community.

By providing **mixed-income residential units** within the neighborhood, it can bring more people into the community, thereby helping to increase the living standards.

Developing housing and commercial buildings in a **sustainable** way. According to the "Affordable Green Housing" on the E2 Series, sustainable buildings are not only more environmentally responsible, but they pay for themselves after an average of 5 years. Since this area is located next to numerous recycling and industrial areas, it is important that new buildings can **give back to the environment** instead of solely taking from it. This can increase the living standards of residents.

**Ownership:** giving low-income residents the chance to own their own home. This can give people a **sense of pride** and ownership, and the owners will be more inclined to maintain their property. The Chicago Low-Income Housing Trust Fund gives people the opportunity to own their own home.

By increasing **commercial development** within the neighborhood brings more amenities and goods to the citizens instead of making them travel to get basic goods and services.

Increasing commercial development creates **job opportunities** for the residents of the community. Local jobs will allow residents more time to spend relaxing rather than commuting to work every day.

Turning Riverdale into a **20-minute neighborhood**. Twenty-minute neighborhoods provide residents with all the basic amenities and services needed to create a thriving community.

**Green Space:** By increasing the green space and enhancing the streetscape; the area will become **inviting** and be an enjoyable space to walk through.

Provide more trees for more shaded areas around the residential units.

**Gated communities** will allow residents to feel safer outside their home.

**Community Garden:** within each gated complex, community gardens can be developed which will increase socialization and overall health of the community.

# Conceptual Ideas

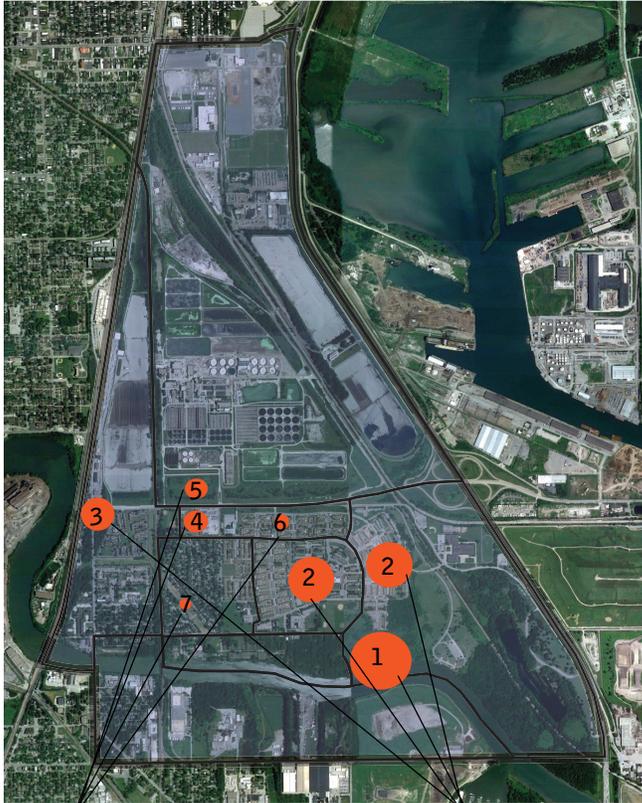
## Initial Map of Design Areas

### Map of Design Priorities



# Conceptual Ideas

## Design Priority Areas



Areas with a greater extent of poverty have a higher design priority with a few exceptions which will be discussed further on.



**1. Forest Preserve:**  
Create water treatment wetlands and recreational trails within the Forest Preserve



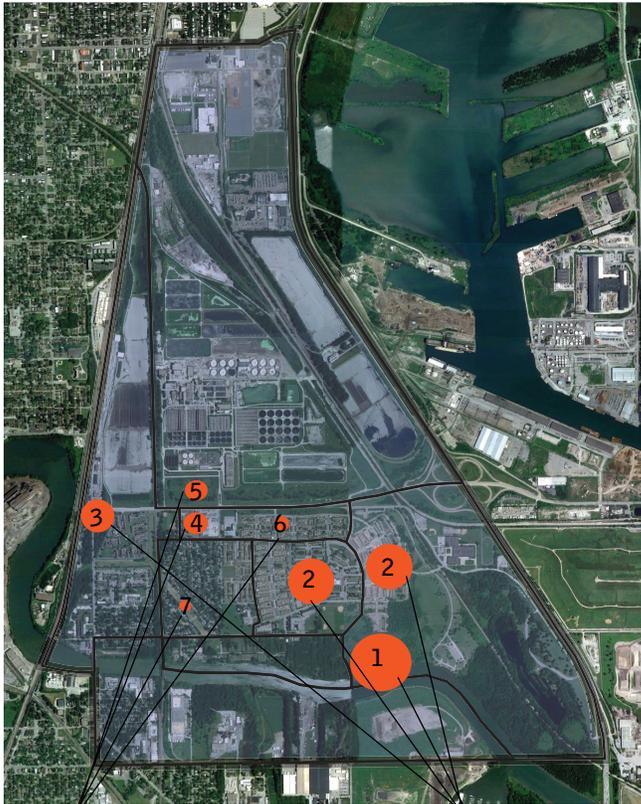
**2. Altgeld Gardens Housing:**  
Design community gardens within each courtyard, Street cutouts with rain gardens, adding fruit trees along the streets.



**3. Metra Rail Stop:**  
Create a Metra Rail transit stop at the cross section of the bus route and Metra Rail line, add a place to display art.

# Conceptual Ideas

## Design Priority Areas



**4. Grocery Store:**  
Add commercial buildings for the residents.



**6. Remodeled Algeld Garden Housing:** Add curb cutout rain gardens.



**5. Water Treatment Facility:** Add water treatment wetlands



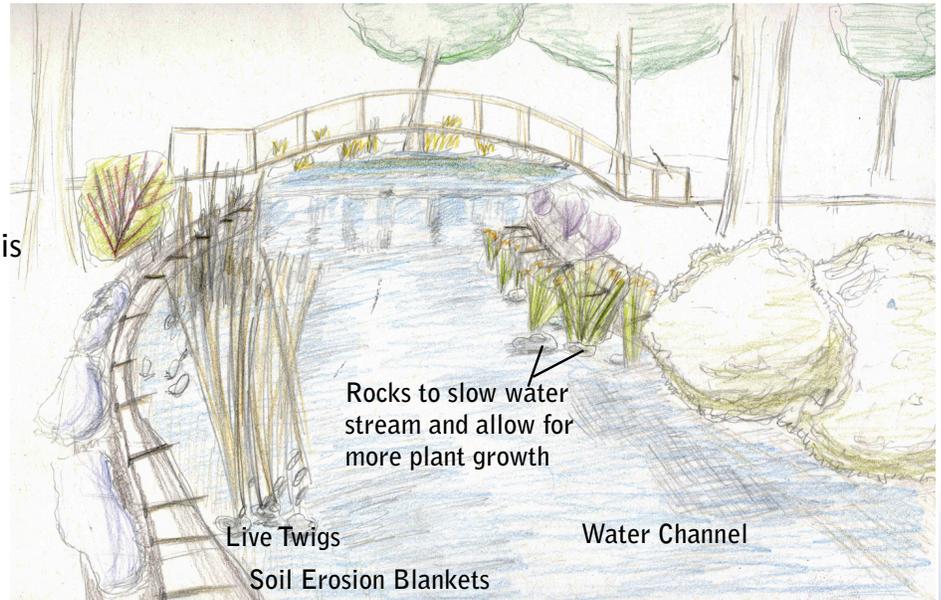
**7. Electrical Lines:**  
Add a green corridor

## Conceptual Ideas

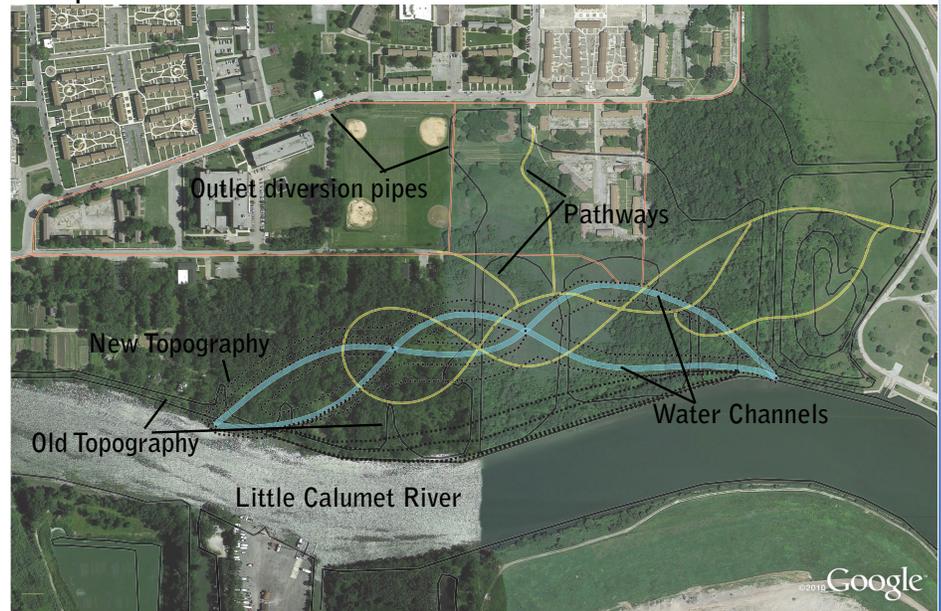
### Water Treatment Parkland

#### Problem:

The Little Calumet River is polluted for a number of reasons included the amount of stormwater runoff that is allowed to flow into the river without filtration. This helps facilitate an unhealthy environment which can affect the lives of the residents.



Perspective of Water Channel



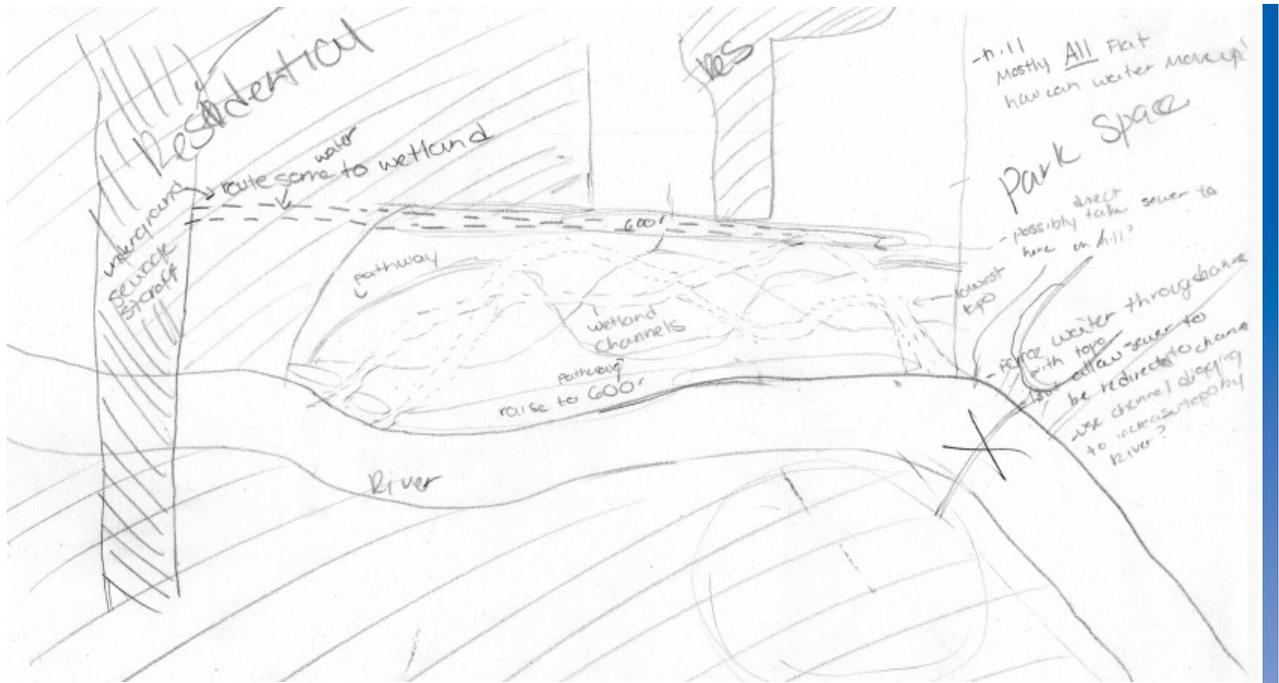
Schematic of Wetland Park System

#### Solution:

Creating wetland channels within the forest preserve to filter water that flows from the river and the storm water runoff from the residential area. Re-directing the storm water runoff from the sewer system to the forest preserve would lessen the strain on the water treatment facility. Pedestrian paths would be incorporated into the forest preserve for recreational activities and provide an understanding to the importance of clean water. This would also create more eyes within the preserve to increase safety.

# Conceptual Ideas

## Water Treatment Parkland



### Reasoning:

Creating wetlands are an excellent way to eliminate contaminants from stormwater runoff. According to Ann Spirn, author of "Granite Gardens," bad sewage treatment and storm water runoff are nearly all the reasons water is contaminated by pathogens. Contaminants such as heavy metals are difficult to remove by traditional water treatment facilities, but can easily be removed by certain plants. Wetlands not only clean polluted water, but they filter water in the ground and recharge the aquifers; this is important especially for this area because of the major deep and shallow aquifers in this area.

There are two types of water pollution that contaminate moving water, point and non-point water pollution. Non-point water pollution is water that does not come from a direct source but from numerous sources, and is very difficult to manage. The wetland area addresses this issue by cleaning up the non-point water. Creating a wetland park system is a sustainable way to minimize and filter storm water runoff by increasing the water quality, recharging the aquifers, reducing the pressure of the water treatment facility, and providing a recreational and educational area.



Curb Cut-outs  
Portland, OR

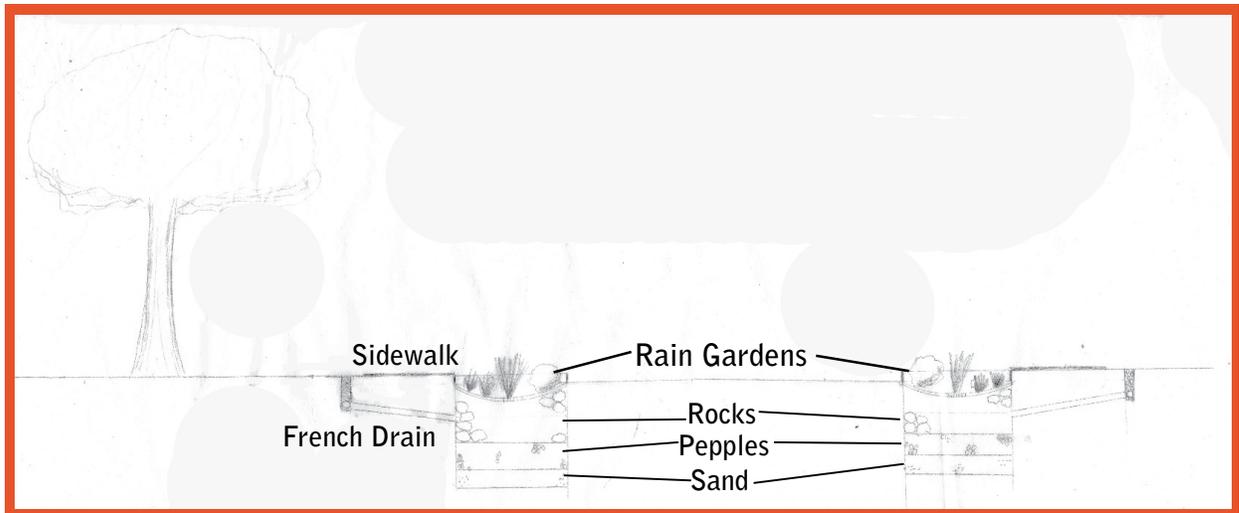
#### Problem:

The combined sewer and water runoff system of Chicago has created more water than the water treatment facilities can handle. In an attempt to address this problem, the city has created the 'Rain Blocker Program,' that restricts the amount of water runoff that can flow into the sewers at any given time. (City of Chicago) This program has become a major liability for the property owners and is now facing a lawsuit, "Costello vs. City of Chicago" according to the Chicago Clout Website.

Three neighborhoods that have the most amount of flooding have been used for a pilot study for the program. Each sewer drain has been fitted with an intake restrictor valve that restricts the water flow into the sewers, leaving the water runoff to remain on the streets longer. This causes property damage and street deterioration by water flooding over the streets and into yards and foundations. A build up of trash is typically found near the valves and further clogs the water outlets to the sewer drains.

## Conceptual Ideas

### Water Treatment Parkland



Section of Rain Gardens and French Drains

#### Solution:

The 'Rainblocker Program' shows that there is a need to slow water runoff into the overloaded sewer systems which needs to be addressed, but in a different way. I propose creating curb cut-outs with rain gardens in the streets of Riverdale to help mitigate water runoff rather than using intake restrictor valves. Alongside the curbs would also be french drains to pull water from the saturated soil and into the rain gardens.

Not only would this restrict the water flow into the sewers, but also reduce the total amount of water running into the sewer system. The rain gardens would be equipped with filter fabric to allow for water to permeate into the ground and recharge the aquifer. Not only is this a solution to address the stormwater runoff and filter water into the ground, but it would lessen the pressure of the water treatment facility and be aesthetically pleasing to the citizens.

By providing both fruit trees for canopy cover and plants in the rain gardens, more vegetation would be added which can create a safer and more pleasant environment for the residents.

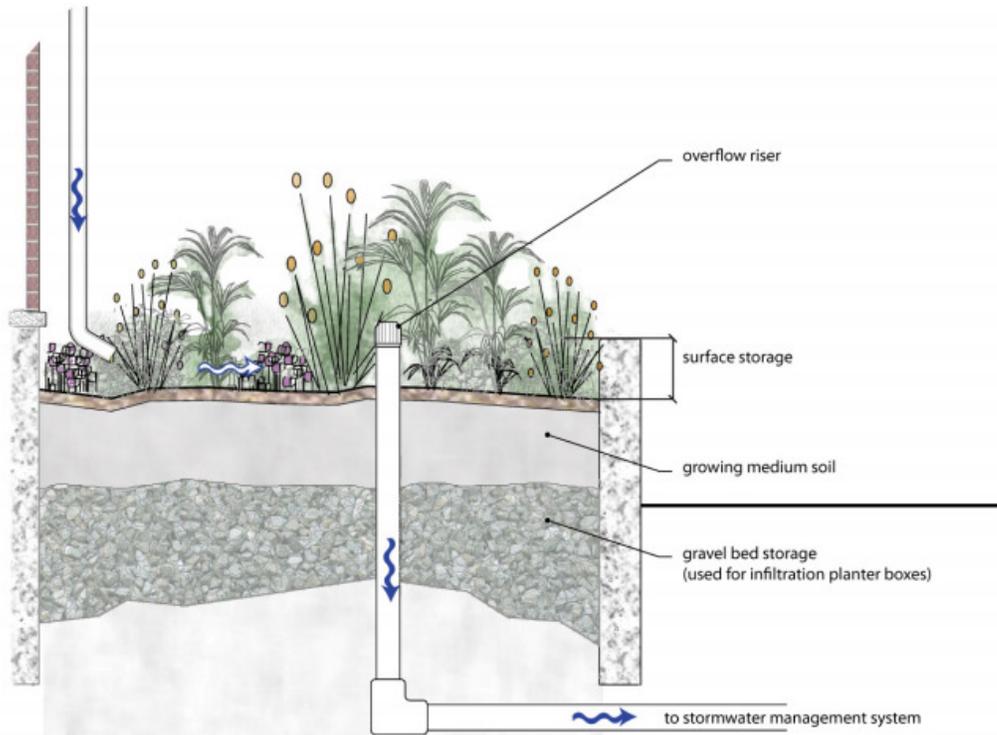
# Conceptual Ideas

## Community Gardens

### Problem:

The housing courtyards within the Altgeld Gardens Community is drab and has very little vegetation. This creates an unpleasant space to be in and a significant amount of water runoff. The residents have very few to no spaces for relaxation, recreation, and socializing near their homes.

Chicago Stormwater Ordinance Manual  
Appendix C



### Solution:

Figure 7: Flow-through Planter Box (Adapted from City of Portland, 2002)

Community Gardens within the courtyards of the housing units. Creating community gardens and an 'outdoor sanctuary' can create a more pleasant atmosphere. These courtyards would be gated to enhance the safety within the area. Community Gardens allow the residents to grow food and eat healthier for very little cost. These gardens also create an opportunity to socialize and relax with the neighbors; bringing more eyes to the streets. A garden plot would be allotted to each housing unit to do with as they please, as well as a small patio as their own space. This set up creates transitional spaces, private - semi private- and public space which promotes social activity. (Urban Planning, 2003) Alternating courtyards would focus primarily on groves of fruit trees available to all citizens.

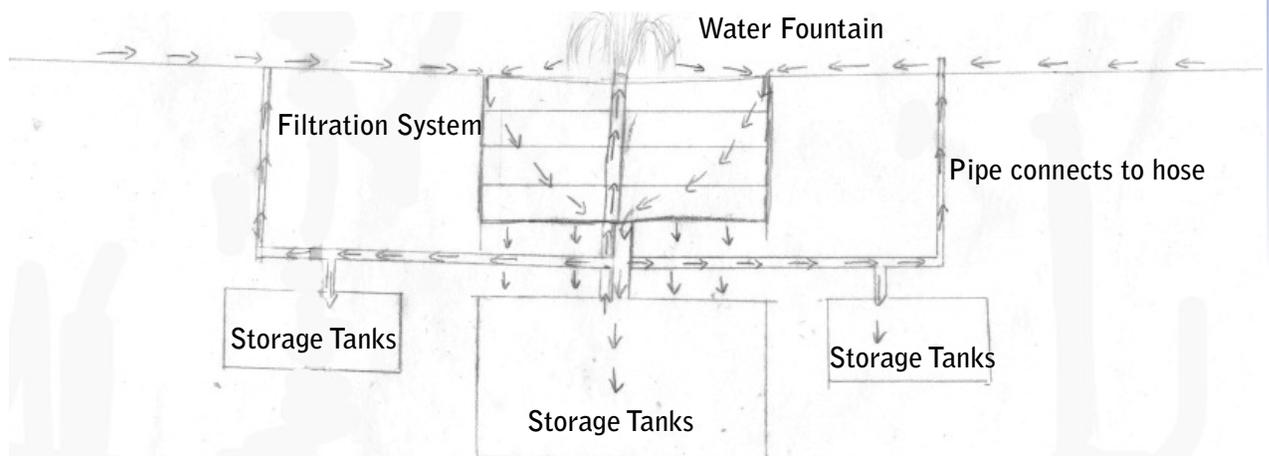
# Conceptual Ideas

## Community Gardens



Perspective of Community Gardens

Within each courtyard, would be a system designed to collect the storm water run-off to reuse and filter into the ground to recharge the aquifer. This system would not only address run-off, but would provide a way to irrigate the community gardens and provide a water fountain for recreational use. This system would help create a healthier environment and reduce the water being treated by the water treatment facility.



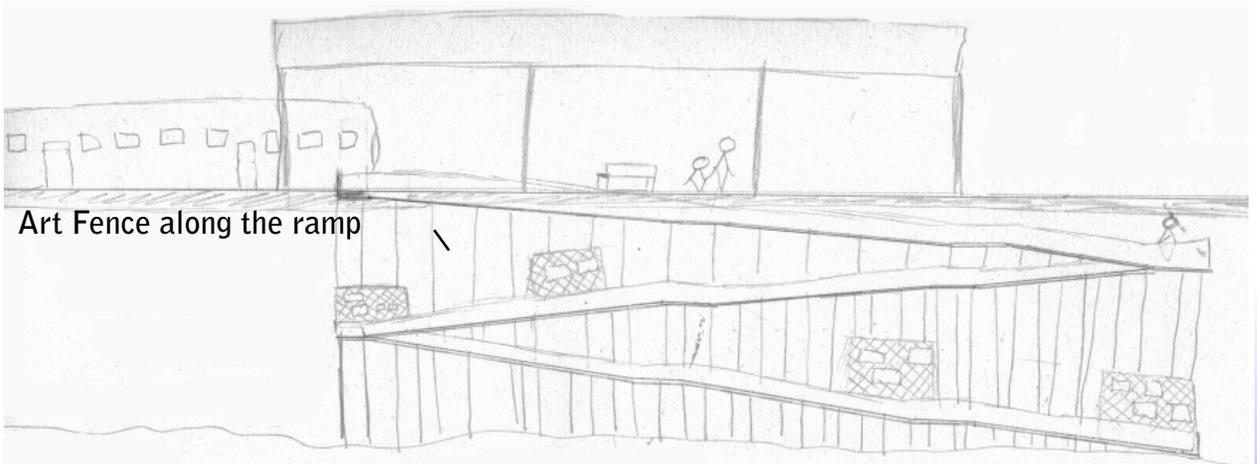
Storm Water System

# Conceptual Ideas

## Metra Rail Transit Stop

Problem:

The neighborhood is adjacent to the Metra Rail, however there is no transit stop within the neighborhood. In order to ride the metra rail, the resident has to either walk close to a mile, or take the bus to the nearest stop.



Perspective of Metra Rail Transit Station  
Solution:

I propose a Metra Rail stop at the intersection of the Metra Rail Line and the current bus route. This stop would also display art work by local artists and a 'rock garden' made of recycled material.

Creating a transit station within the neighborhood will decrease the average commute time for the residents who work outside the neighborhood boundaries. This makes traveling easier and less expensive. With the proposed canopy cover throughout the city, it will provide the residents with an opportunity to walk to the transit stop while feeling safer. This will provide the neighborhood with more eyes on the street and create a more active and social environment.

An art based stop would provide the neighborhood with a unique space and something to look at while waiting for the Metra Rail.



Rock Garden in Chandigarh India



Art Fence in Mumbai India



## Second Phase of Conceptual Ideas

### Second Phase of Design

Initially, the thesis design focused on seven areas of interest within the Riverdale neighborhood. After further evaluation, the areas of interest were narrowed down to three main areas within the neighborhood. These areas focus simultaneously on the community and stormwater treatment and retention within the Altgeld Gardens Community Housing Project in the neighborhood.

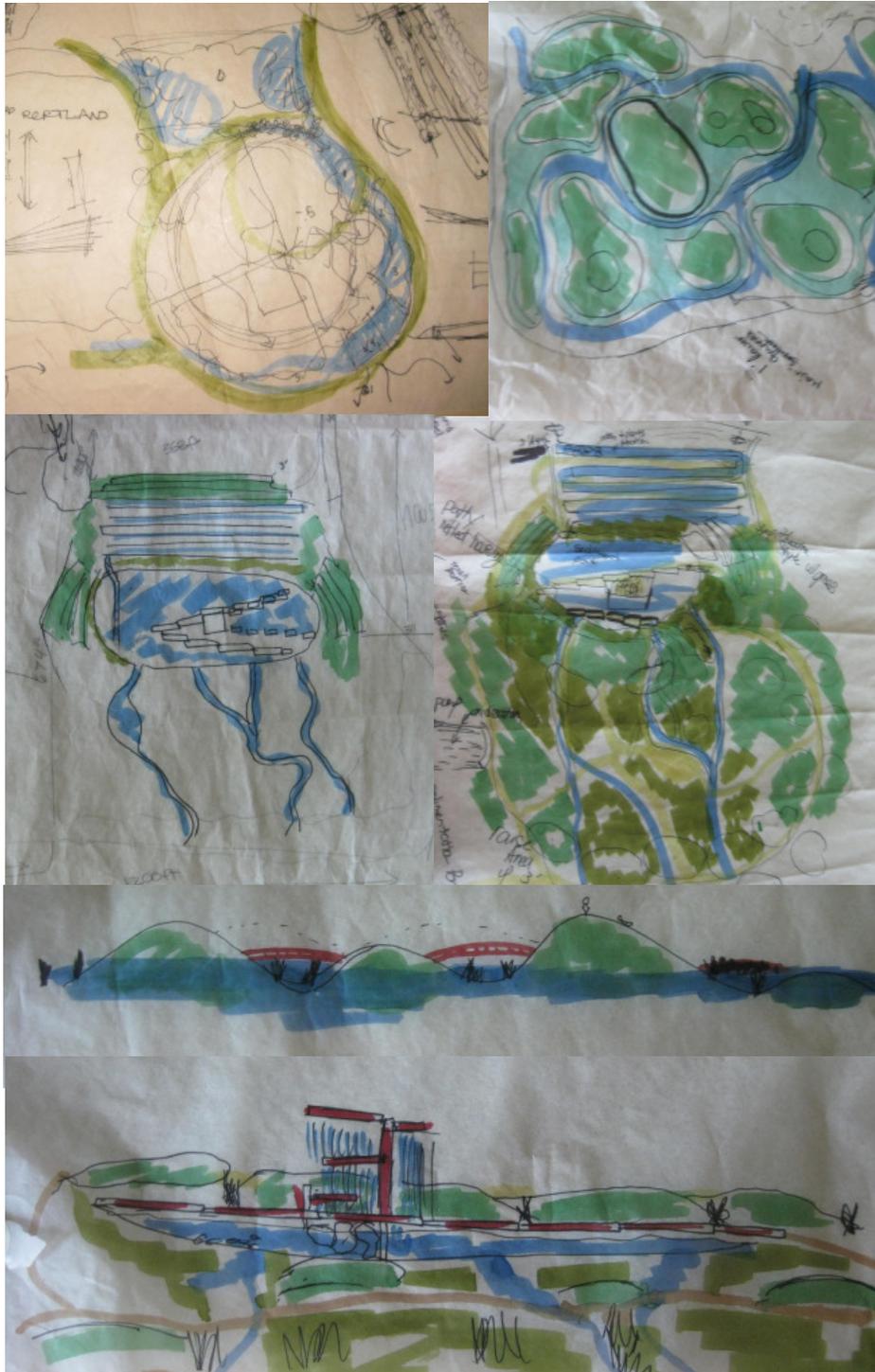
These designs focused on three different levels: the individual, the neighbors, and the community at large and how small changes that start with the individual typically have the biggest impact on positive change within an environment.

The courtyard gardens plan focused on the individual, the modification plan focused on the neighbors, and the water treatment park focused on the community as a whole.

## Second Phase of Conceptual Ideas

### Water Treatment Park

Initially, I focused on creating wetland channels that direct water from the river to the forest preserve to treat the river water. This idea transformed into a water treatment park that collects remaining stormwater runoff from the Altgeld Gardens Community Housing Project within the Riverdale neighborhood.





## Final Design Presentation

# Without Borders:

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## Unifying Modern Patchwork Cities

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By: Kylie Satterman  
LA 572: Design Thesis  
Advisor: Jason Kost  
Spring 2011

# Without Borders:

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## Unifying Modern Patchwork Cities

### PROBLEM STATEMENT:

How can American cities be designed or modified to create a desire for more mobility within a city that can improve the lives for people who have little choice to where they live?

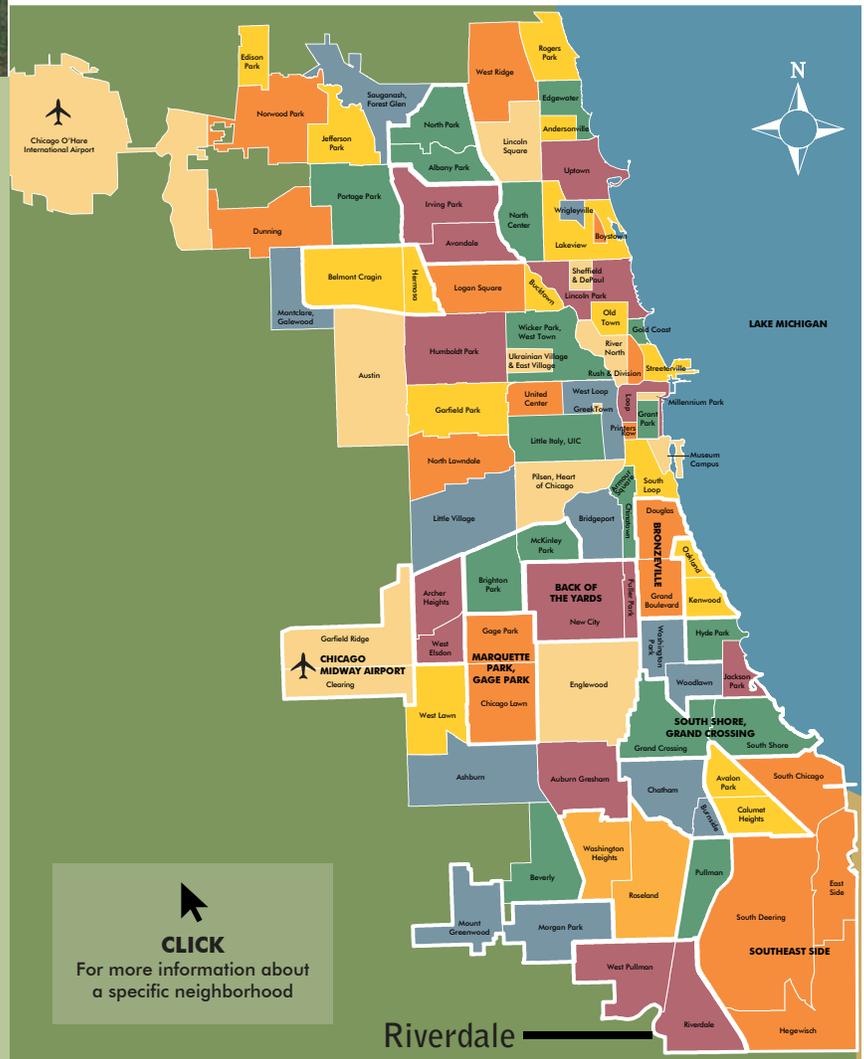


Google Earth

## Riverdale Neighborhood; Chicago, Illinois

The Riverdale Neighborhood is located at the southern most edge of the Chicago city limits. This neighborhood was at one time, a completely industrialized area.

After World War II, this neighborhood transformed into a low-income residential area for the veterans returning from the war.



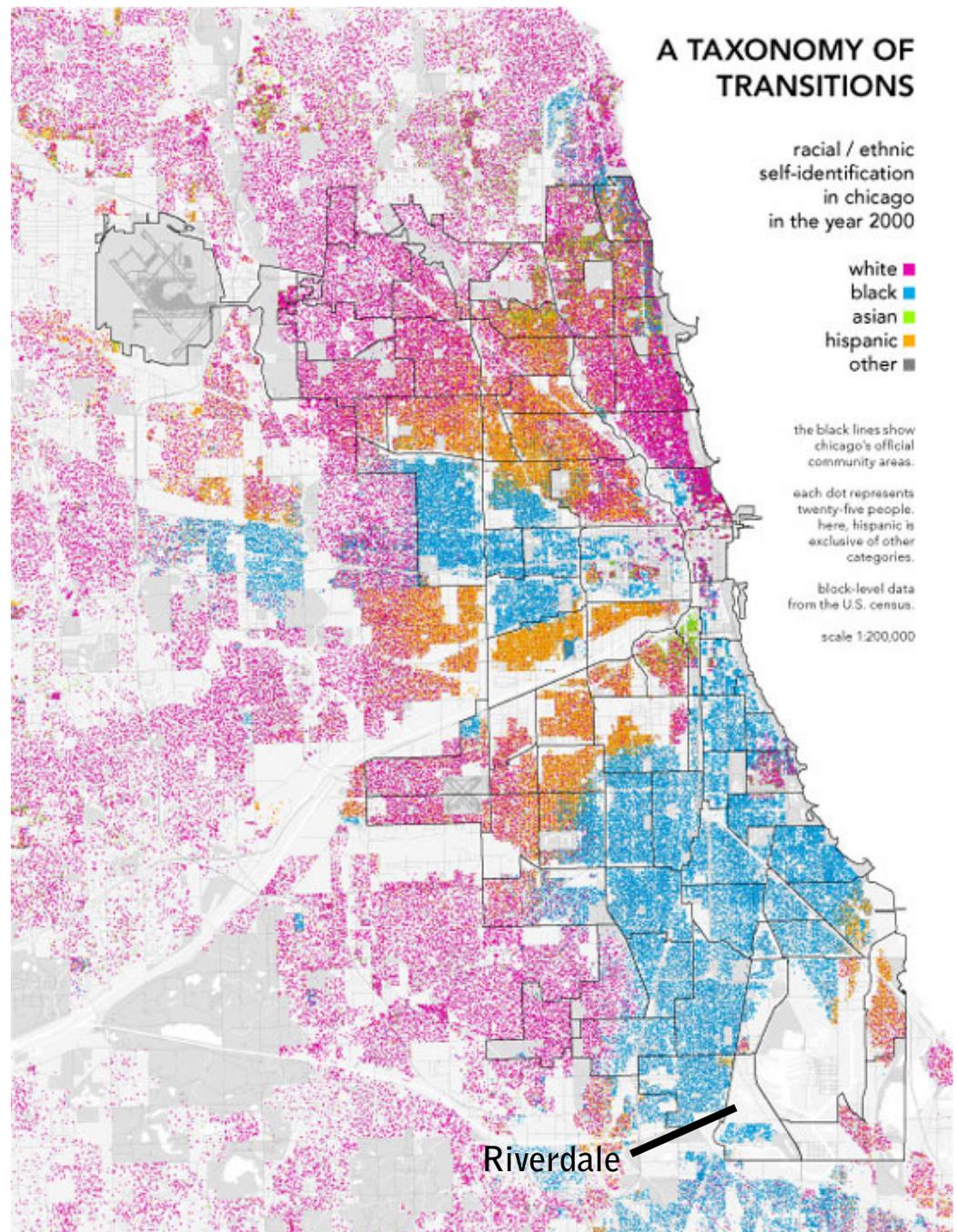
**CLICK**  
For more information about  
a specific neighborhood

<http://www.explorechicago.org/city/en/neighborhoods.html>

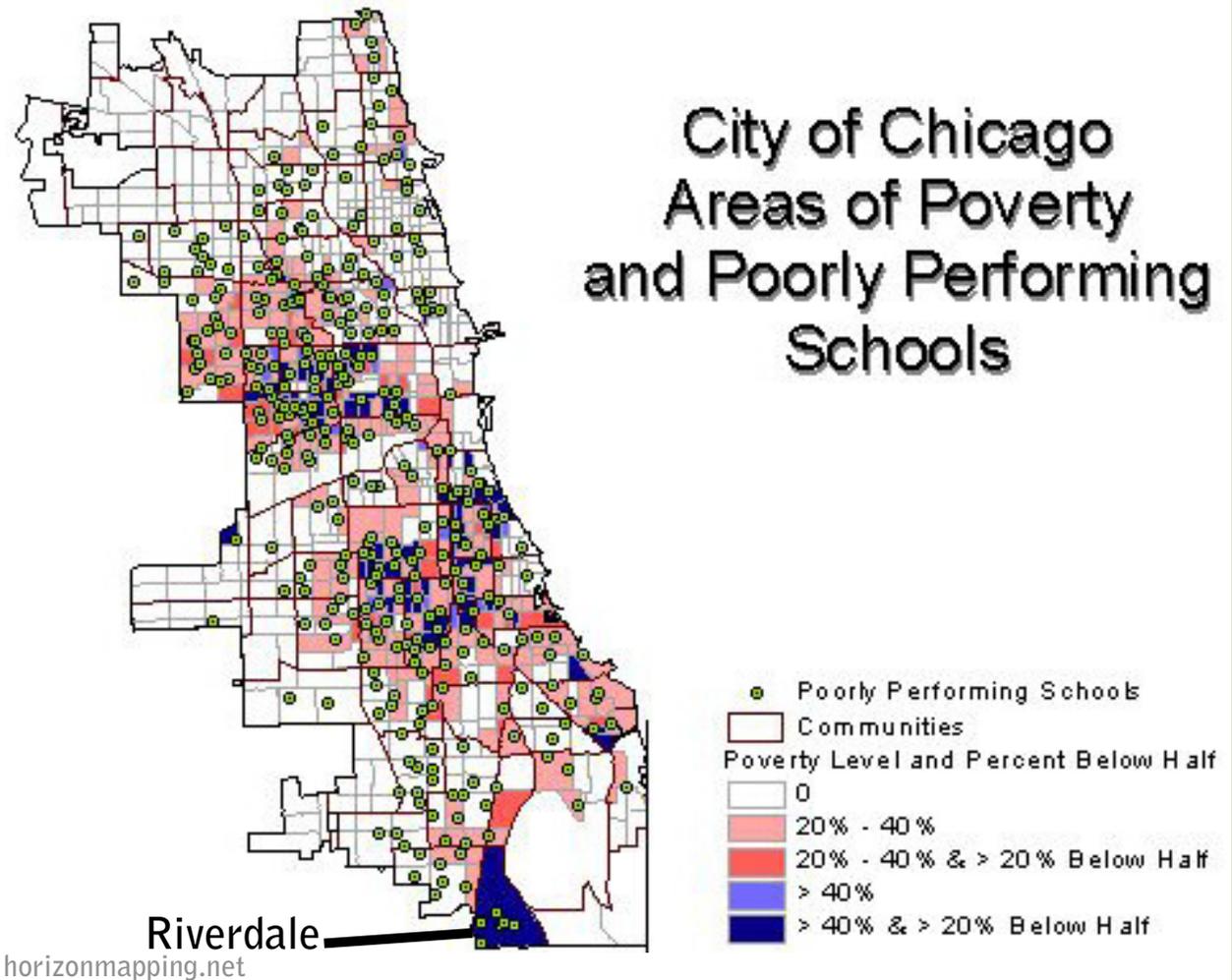
This neighborhood has become one of the most dangerous and unstable neighborhood within the city of Chicago. This neighborhood has been chosen for my design thesis based off the following analysis.

# Inventory/Analysis

The residential area of Riverdale is almost completely isolated from the residential areas of the surrounding neighborhood. 96% of the residents of Riverdale are black and 56.6% of these residents live below the poverty level. One of the reasons this neighborhood is different from the other neighborhoods is because of its isolation relative to the other neighborhoods.



# Inventory/Analysis

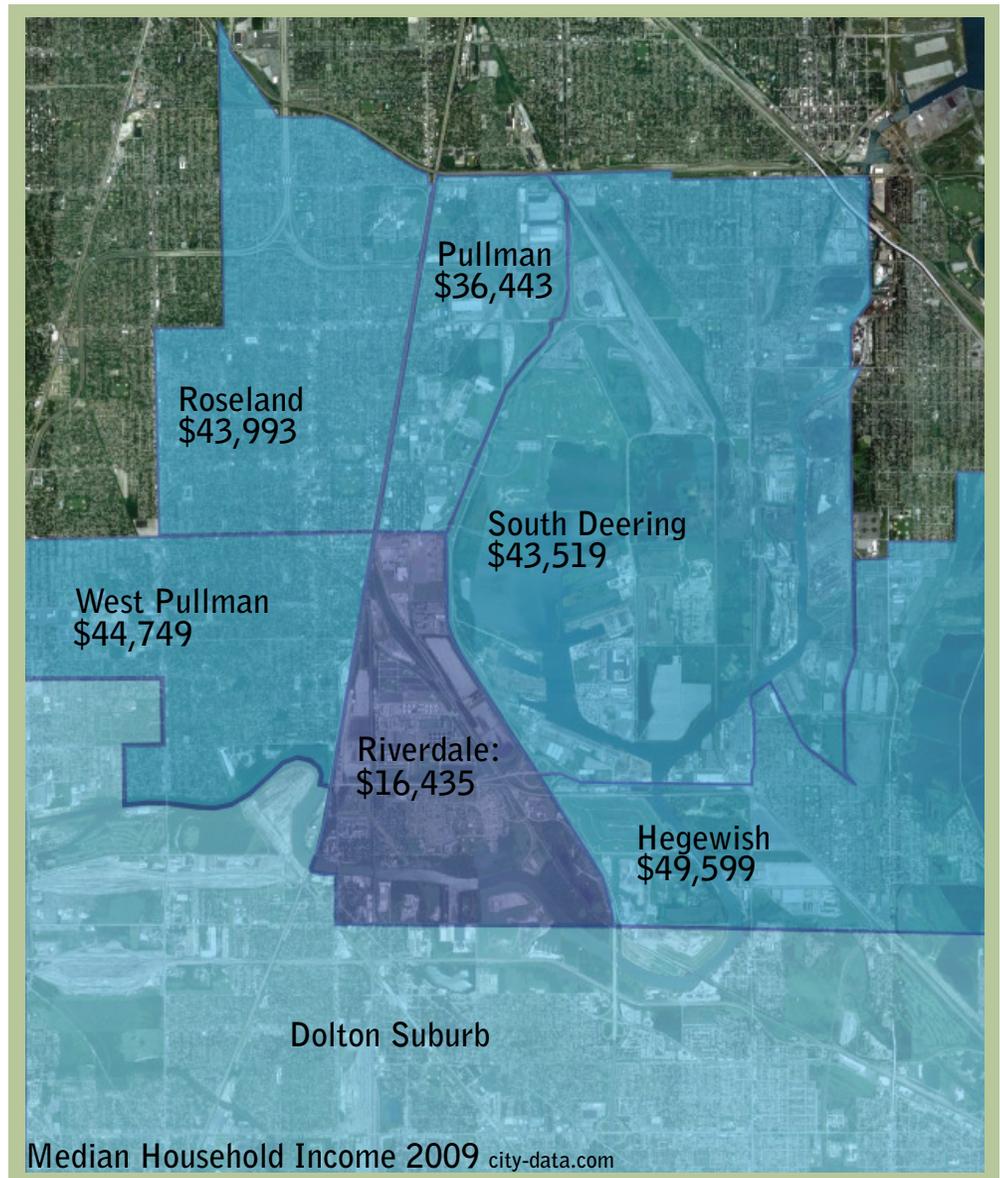


Riverdale is the only area in Chicago where over 50% of the residents live under the National Poverty Level throughout the entire neighborhood. In addition, six of the eight schools located within this neighborhood are considered to be poorly performing schools. Finding a way to increase the living standards of this particular neighborhood is important to help increase the social mobility of the residents.

# Inventory/Analysis

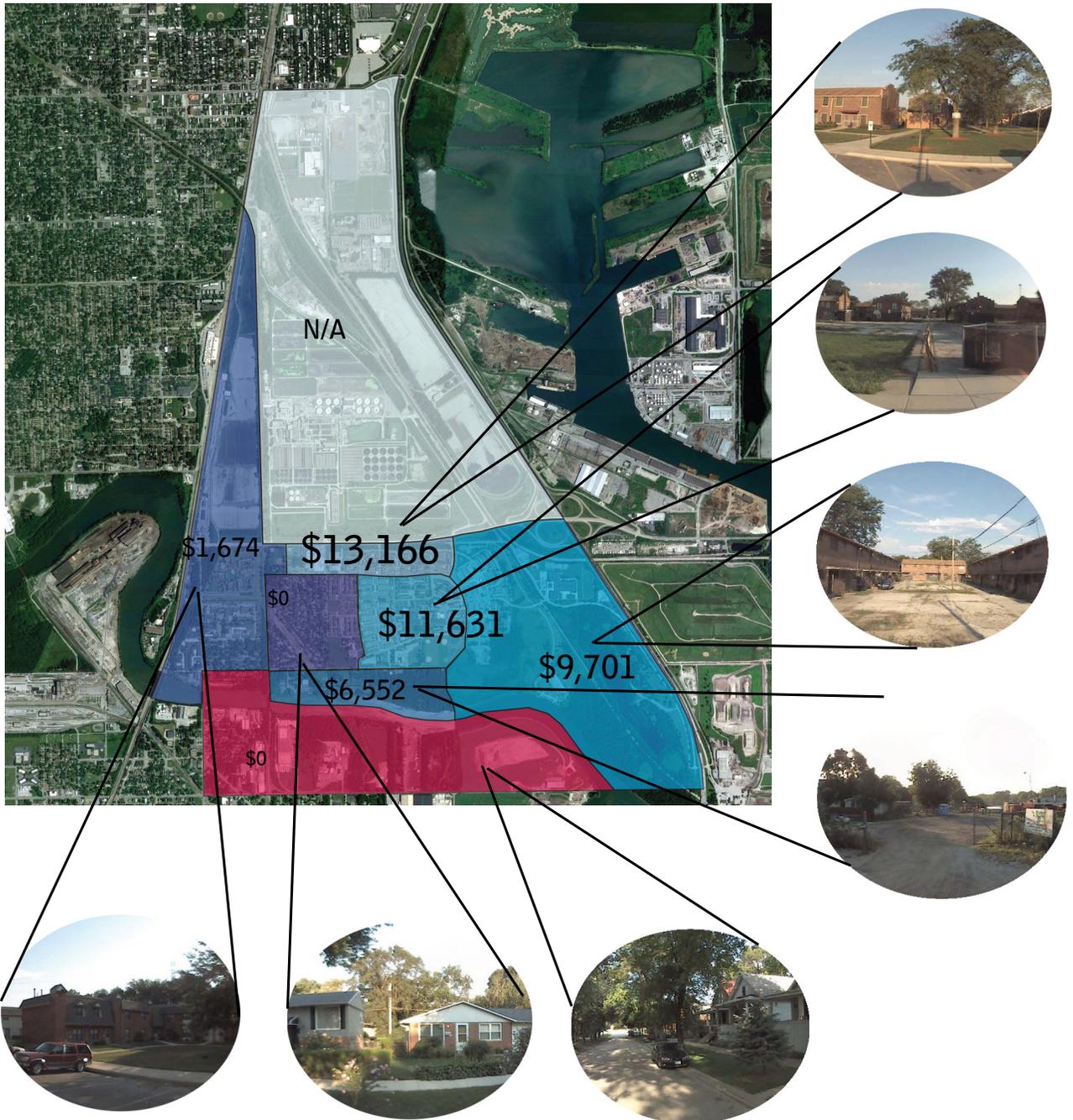
The Riverdale Neighborhood has a significantly lower household average income relative to the surrounding neighborhoods. Within the neighborhood, there are a variety of ranges of average household income levels. The area with the highest income level within lies just south of the Little Calumet River with a small portion directly north of the river; isolated from the rest of the neighborhood.

Some of the reasons this neighborhood has a significantly lower income level is because this area was designed to be low income housing for WWII veterans. The areas within the neighborhood that have an average income level of below \$15,000 are the Altgeld Gardens Chicago Housing Authority.



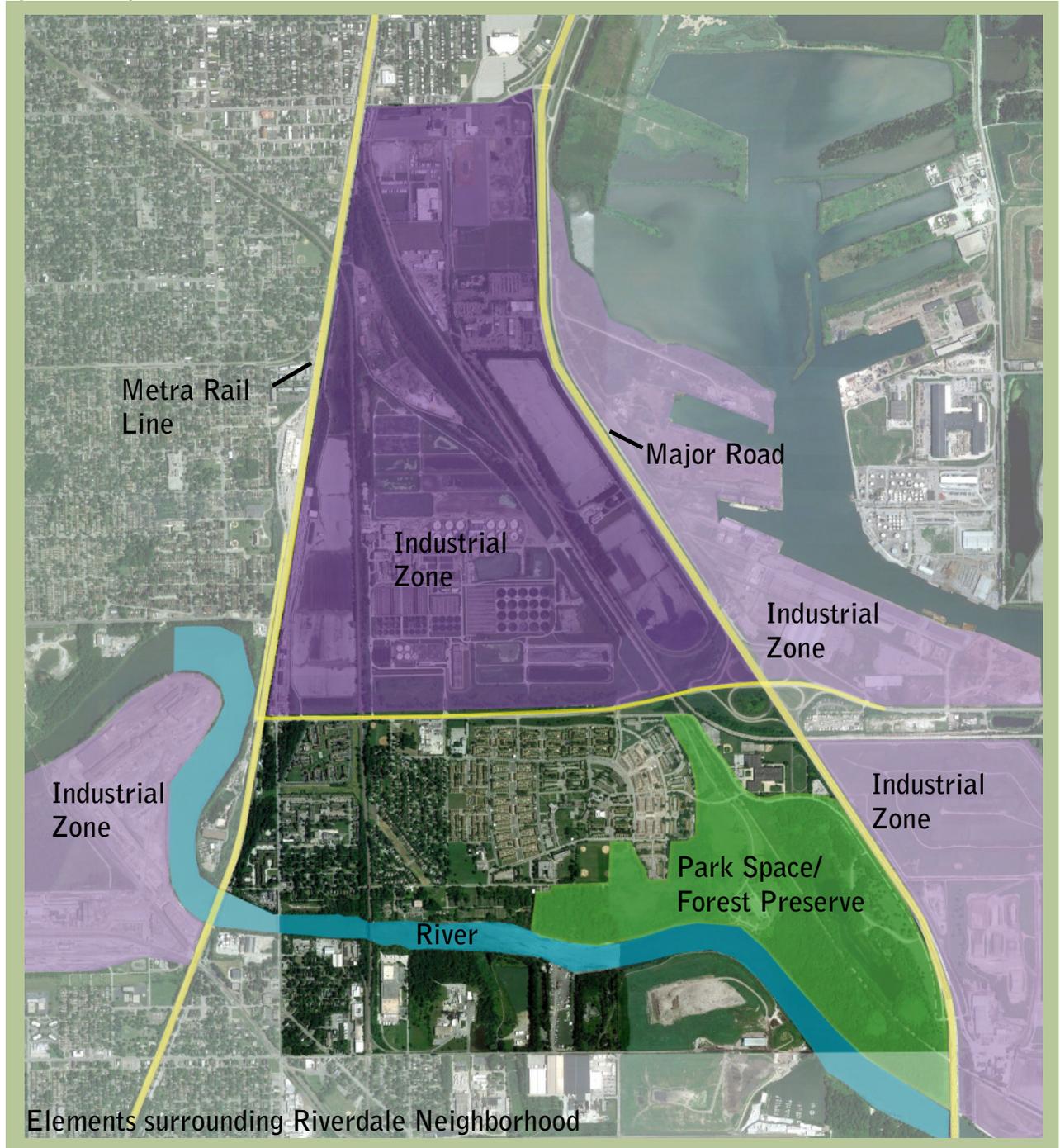
# Inventory/Analysis

Extent of Average Household Income Below Poverty Level  
Information provided by the U. S. Census Bureau and City-data.com



# Inventory/Analysis

This neighborhood is relatively isolated from its surrounding area. According to the City of Chicago website, this isolation has been a contributing factor to the danger. Most of the middle-income residents are separated from the low-income residents by the river, and are next to Dolton.



# Inventory/Analysis

After calculating and analyzing the number of trees and building units within each income level, I have found that there is a direct correlation of the amount of canopy cover in a given area to the average medium income level. The higher the income level, the more dense the canopy cover per household.



Map showing the different levels of canopy cover within Riverdale

# Inventory/Analysis

The stormwater and sewage system are all connected within the City of Chicago. Dealing with all the water that needs to be treated has created many problems for the city, in an attempt to minimize this issue, the city created a series of deep underground tunnel systems that hold excess stormwater runoff until it can be treated at the water treatment facility in the northern part of the neighborhood.

The Riverdale Neighborhood lies on top of a major sand and gravel aquifer and deep bedrock aquifers and a series of water wells for the city. Finding a way to recharge these aquifers with as much storm water runoff as possible is an important issue that should be addressed.



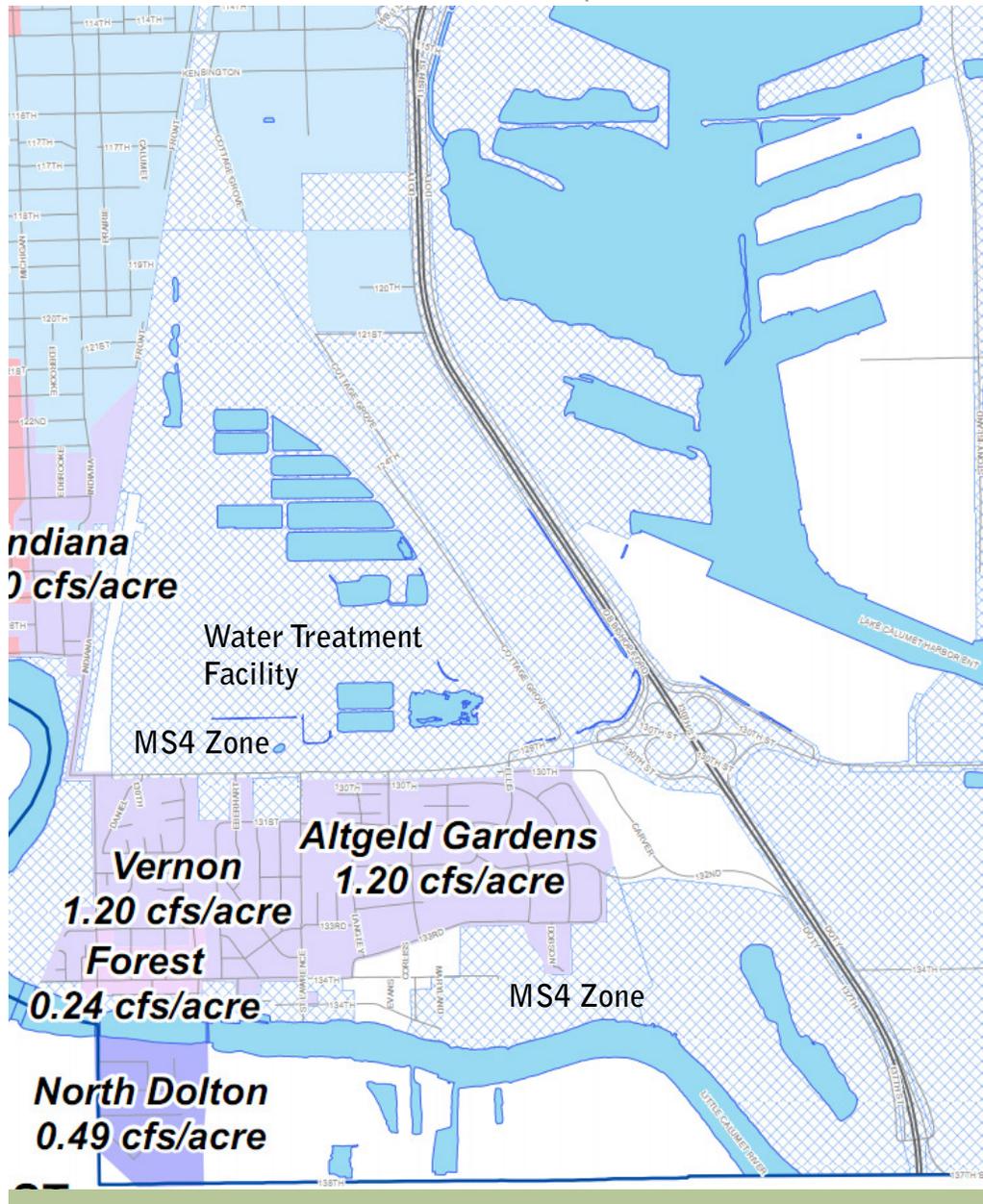
Water Wells

<http://www.isws.illinois.edu/iswsdocs/maps/ISWSMS2006-01.pdf>

- Communities
- Shallow Bedrock Wells
- ▨ Major Sand and Gravel Aquifers (<500ft)
- ▨ Major Deep Bedrock Aquifers (>500ft)

# Inventory/Analysis

The map shows the storm water release rates of each area. These areas flow into the sewers where they sit in the deep tunnel storage until they can be treated at the water treatment facility. The water treatment facility omits an unpleasant odor due to treatment of sewage and storm water. The areas that are not solid blue area areas declared MS4 Zones. Because these areas lie adjacent to a river, the stormwater runoff must flow directly into the river rather than be treated at the water treatment facility. (City of Chicago Stormwater Manual) This contributes to the pollution within the river.



Storm Water Release Rate Map

[http://www.cityofchicago.org/content/dam/city/depts/water/general/Engineering/SewerConstStormReq/Release\\_Rate\\_Map\\_South.pdf](http://www.cityofchicago.org/content/dam/city/depts/water/general/Engineering/SewerConstStormReq/Release_Rate_Map_South.pdf)

# Current Project

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The City of Chicago is currently investing \$160 million dollars to remodel the Altgeld Community Gardens Housing Project within the Riverdale Neighborhood. This project includes:

- Re-paving the streets and parking lots
- Updating the residential buildings
- Adding trees and foundation plantings around the housing units

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Even though the city is investing the \$160 million in improving the Altgeld Gardens, it does not address the underlying social, economic, and environmental factors that has caused the deterioration of the Altgeld Gardens area in the first place. Without addressing these issues, the will fall into disrepair and neglect in the future.

# Project Goals

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The goal of this project is to explore ways to help the economically disadvantaged by increasing their living standards, and creating a healthier atmosphere which can help in creating more mobility between the economic classes.

All too often low income housing becomes neglected by both the residents and the cities as a result of low funding from the city and taxes as well as low income revenue from the households. This neglect tends to create an unhealthy living environment for the residents and lowers the quality of life.

The problems being addressed in the Riverdale Neighborhood are problems that occur in many low income areas throughout the world; poor water quality, lack of vegetation, safety, recreation, commercial areas, environment, and transportation (not necessarily in that order). By addressing some of these issues and understanding how they are all interconnected I hope to achieve the project goal by creating a healthier atmosphere and increasing the living standards of the residents to create social mobility for the residents.

After researching the sociological aspect of this neighborhood and other low income neighborhoods throughout the United States, I found that small changes that start with the individual tend to have a profound impact on the community at large. The second line of research dealt with water quality and the correlation between the health of the neighborhood and the quality of water. In order to achieve a healthier standard of living and increase the social mobility within the Riverdale neighborhood, I have focused on these two main lines of research.

# Proposal

I propose to address these issues by designing on three different levels within the Riverdale Neighborhood that focus on the residents and stormwater management simultaneously.

The Individual



The Neighbors



The Community



# Design

This design specifically focuses on the Altgeld Gardens Housing Projects within the Riverdale neighborhood. The master plan highlights the areas that would be directly affected by the changes made; which would, over time affect the rest of the community.

Riverdale Neighborhood Master Plan



Courtyard



Streetscape



Water Filtration and Recreation Park

Sections of the master plan have been designed in detail to illustrate solutions that would address the social, environmental, and economic needs of the community. These designs would not only increase the overall health of the community, but would retain the stormwater runoff from the Altgelds Housing Development.

# Courtyard Plan

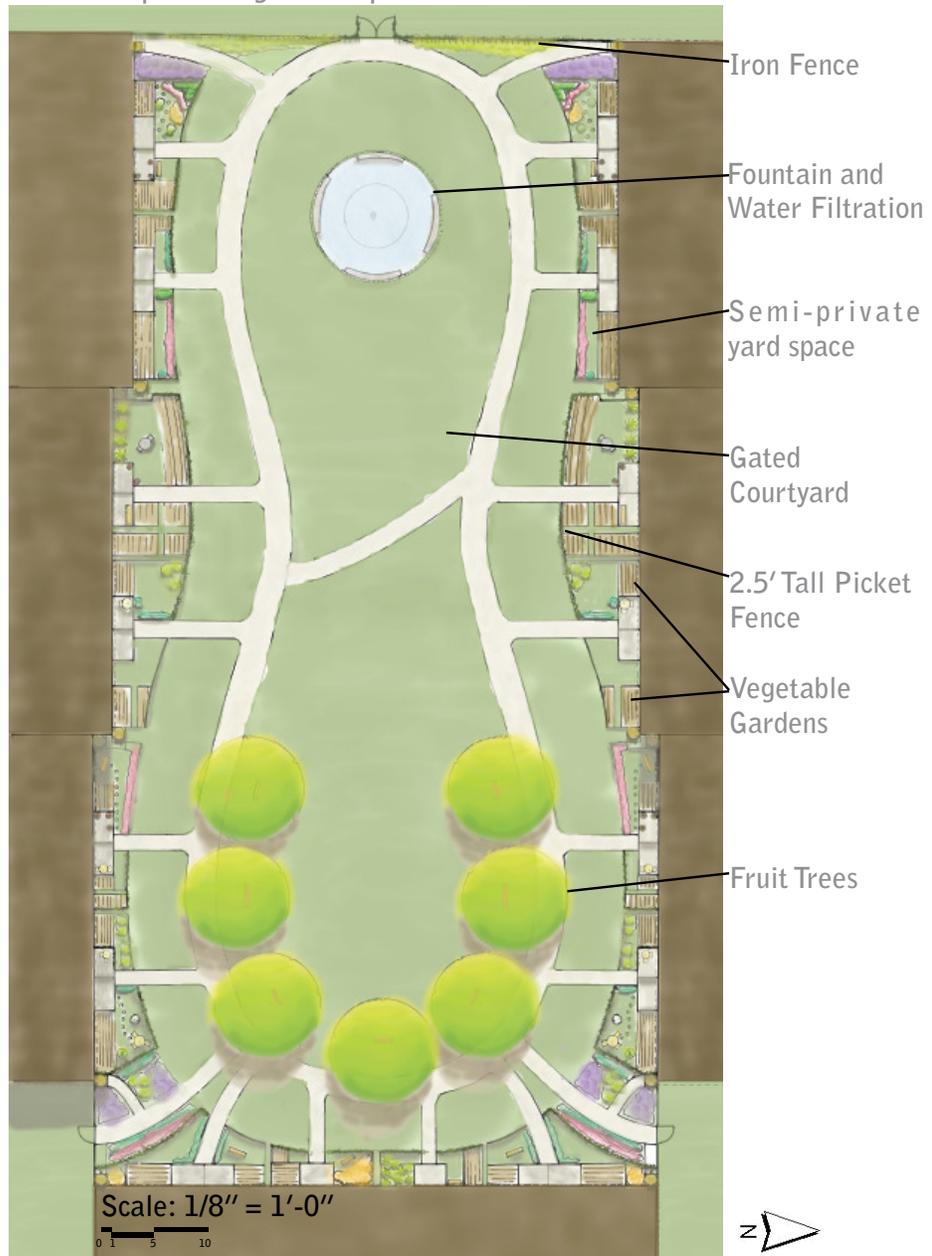


Courtyard

# Courtyard Plan

## Detail Plan

The first scale focuses on the individual resident and how a sense of ownership can slowly change the overall health of that individual, and subsequently, the overall health of the community. This scale also focus's on keeping the water onsite to reduce stormwater runoff and to help recharge the aquifers.



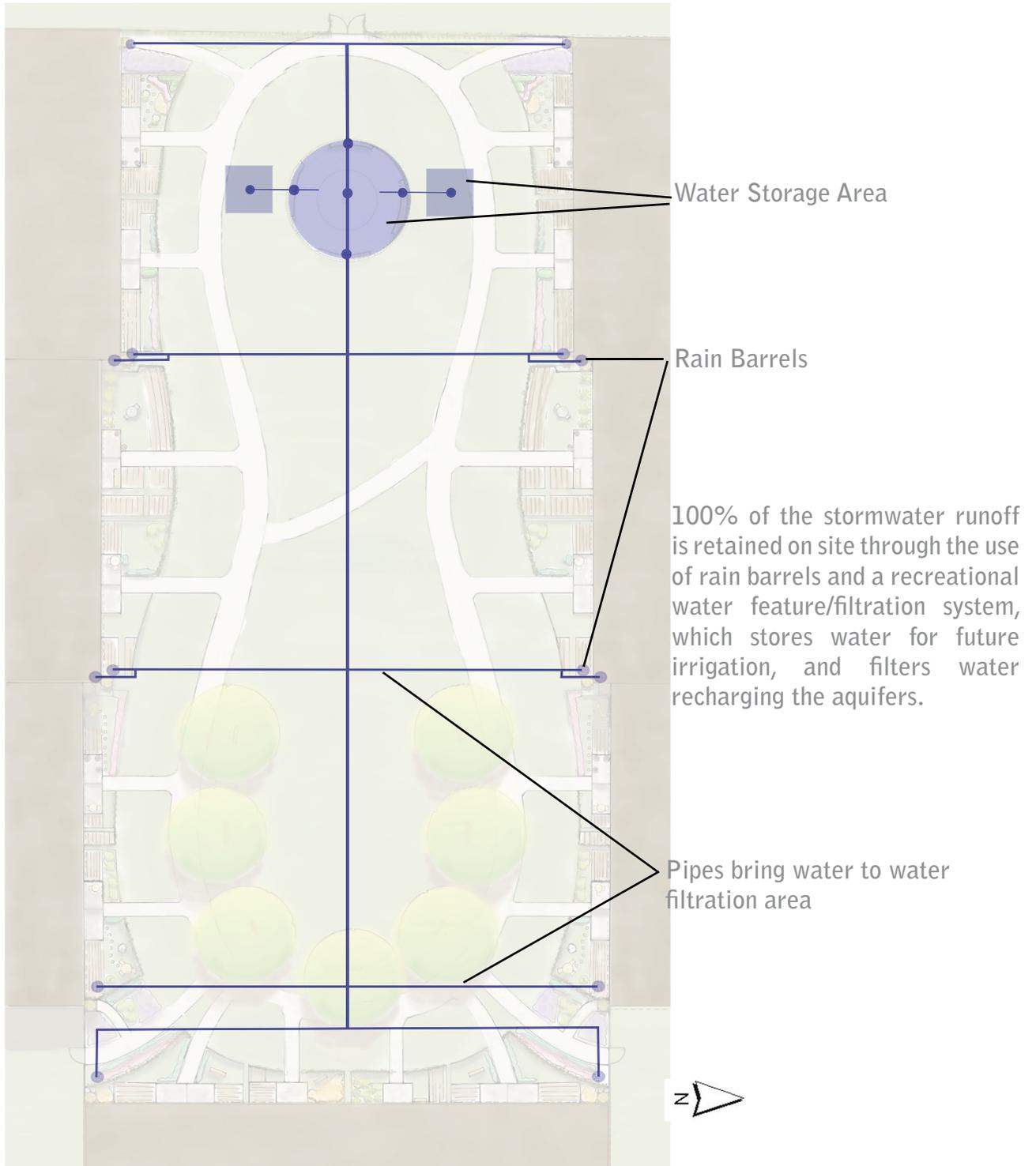
Each residential home would have a semi-private garden that they could customize as they like, enhancing the sense of ownership.

This enclosed area would give the residents a reason to be outside, and as a consequence would increase the safety within the area because of the eyes on the street theory.

Vegetation will only be low-lying or canopy trees to minimize the danger within the area and reduce concealment of unsolicited people.

# Courtyard Plan

## Water Storage and Piping System



# Courtyard Plan

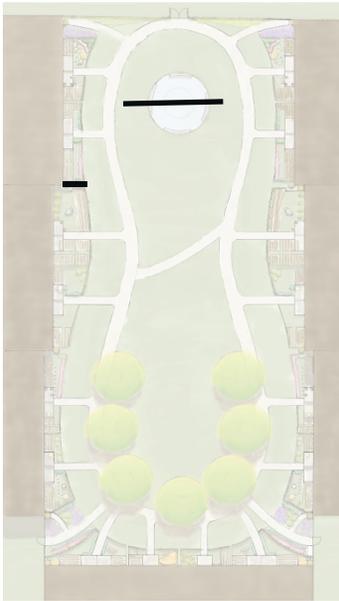
## Perspective of Courtyard Facing West

This perspective shows the open space within the courtyard where there are no tall shrubs within the design in order to increase the safety. The semi-private yard spaces are next to the buildings where the resident can utilize the area to their preference.

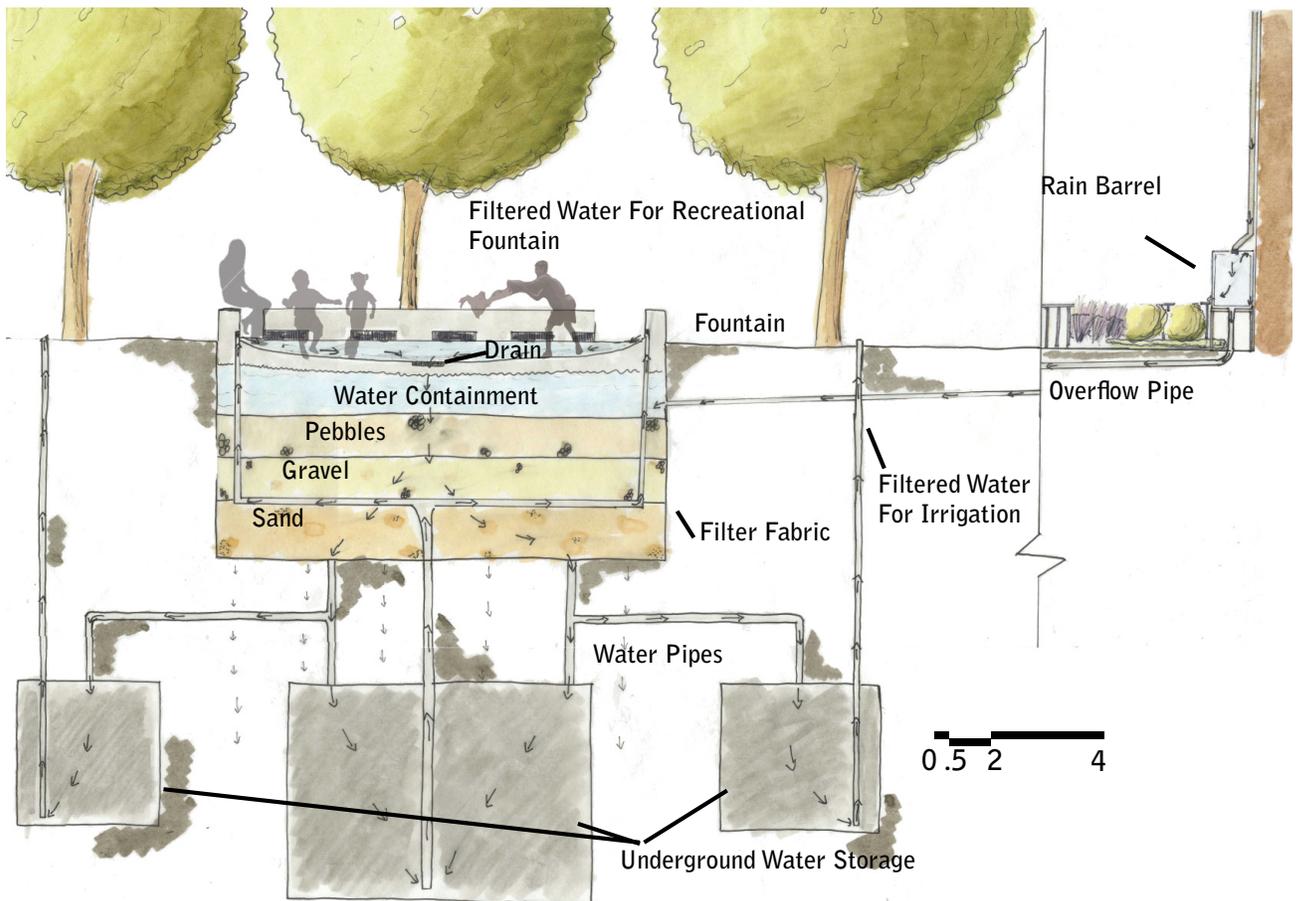


# Courtyard Plan

## Section Detail Facing East

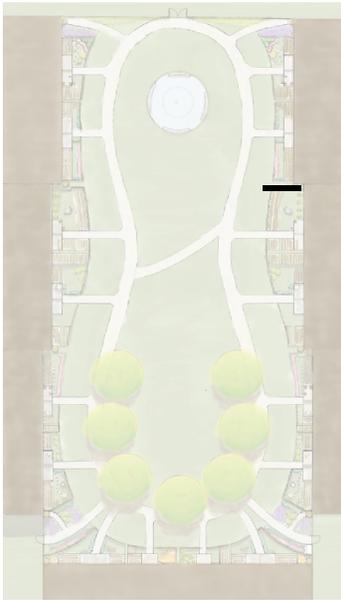


This section shows the water treatment and storage containers below the recreational water feature. The excess rainwater will flow through the rain barrel into an overflow pipe that gets filtered and stored underground.

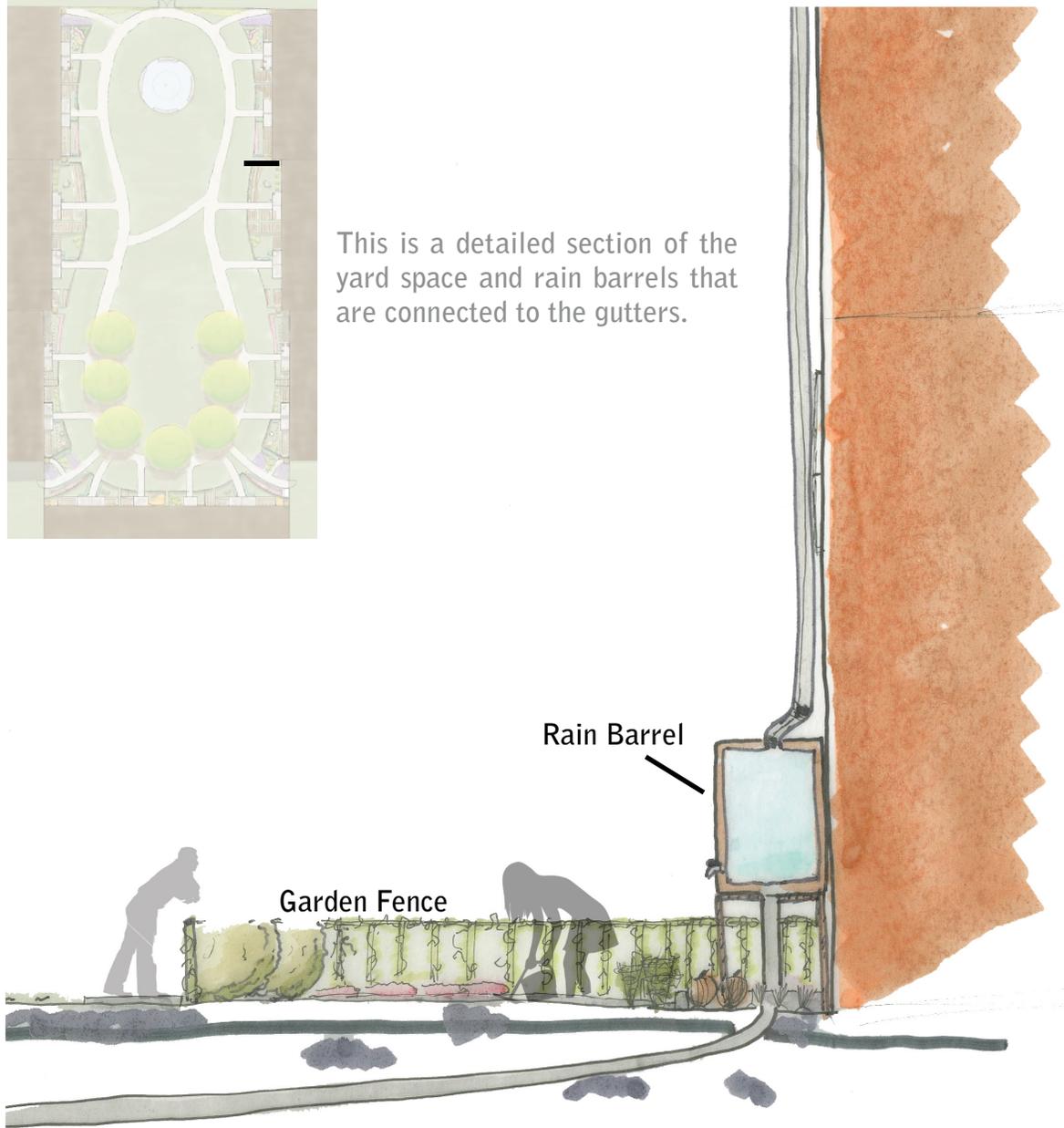


# Courtyard Plan

## Section Detail of Semi-Private Yard Space



This is a detailed section of the yard space and rain barrels that are connected to the gutters.

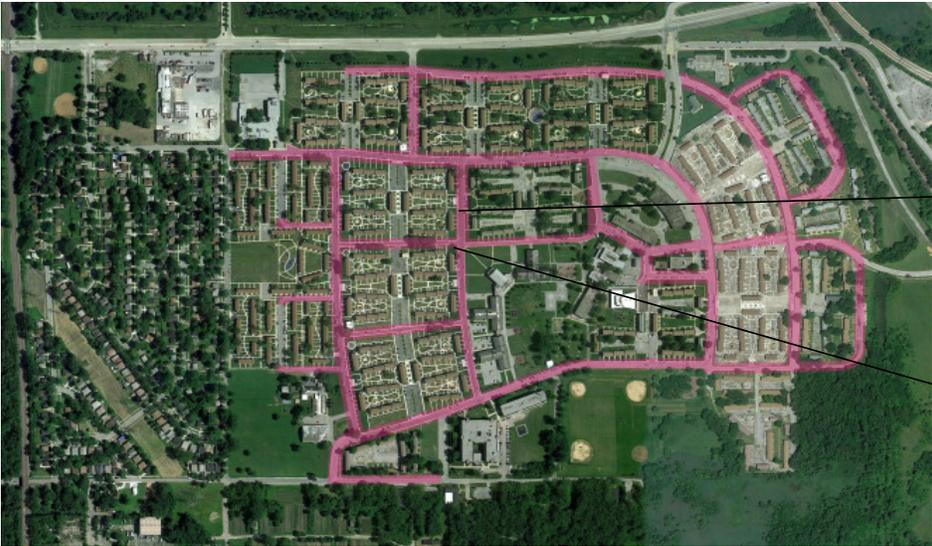


Rain Barrel

Garden Fence

0.5 2 4

# Street Plan

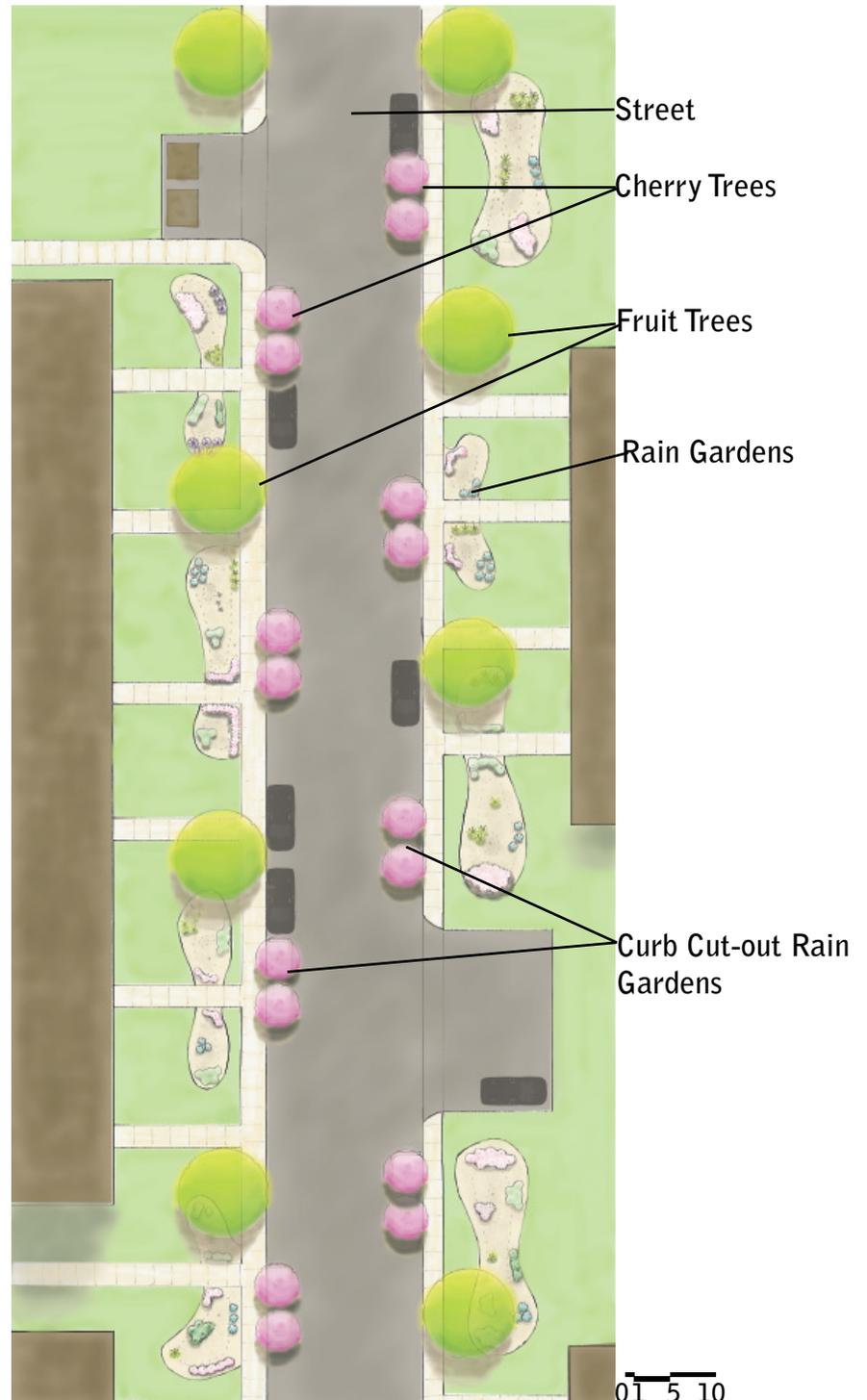


Streetscape

# Street Plan

## Detail Plan

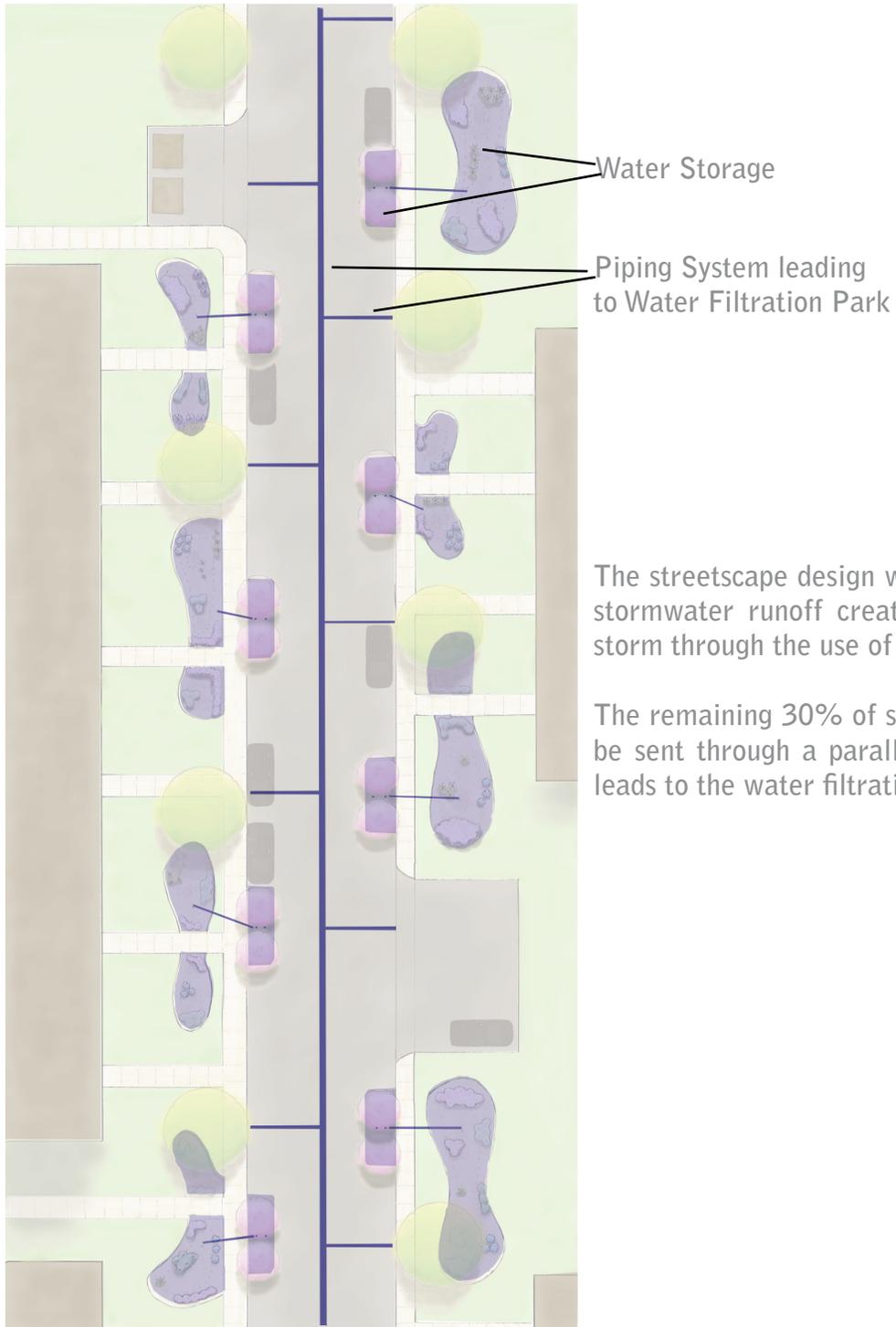
The second scale focuses on the immediate neighbors and a small group of people in each section of housing units. Once people start to feel comfortable within the courtyard and more people are spending time outside, the streetscape will be implemented.



The fruit trees would provide the upper canopy cover and the smaller grasses and perennials within the rain garden would provide the groundcover; creating multiple areas of interest. The interest and the fruit trees give people reasons to venture out of the courtyard area. This design intentionally leaves out the shrubs and tall perennials in order to minimize danger and crime within the area, and maximize the comfort and safety of the residents. With more people traveling around, the crime rate would decrease.

# Street Plan

## Water Storage and Piping System



The streetscape design will retain 70% of the stormwater runoff created during a 10 year storm through the use of rain gardens.

The remaining 30% of stormwater runoff will be sent through a parallel piping system that leads to the water filtration park.

# Street Plan

## Perspective of Streetscape



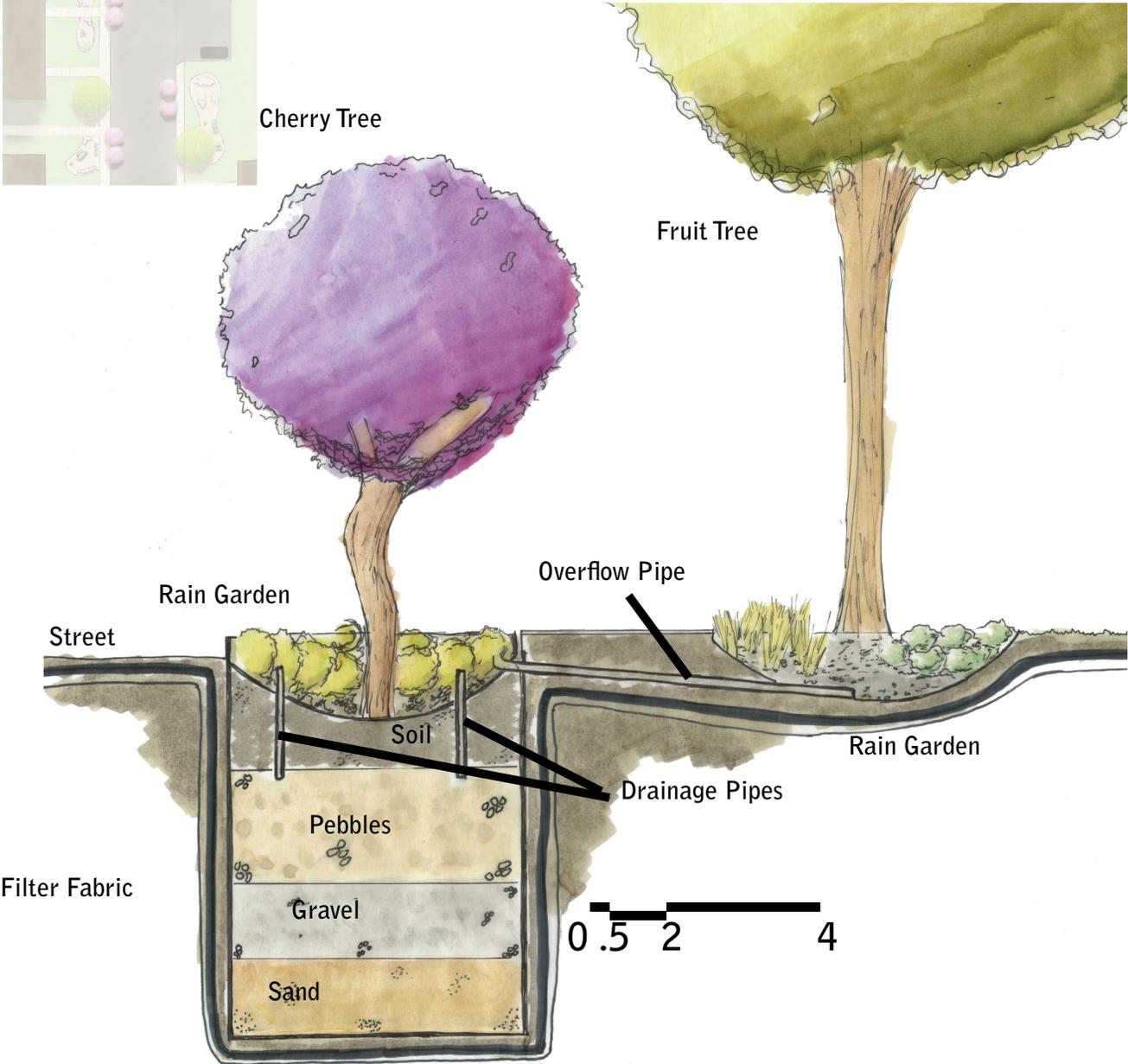
This perspective shows the streetscape and the rain gardens alongside the street.

# Street Plan

## Section Detail of Rain Gardens



This detailed section shows the water filtration system within the rain gardens along the street. The excess water from the rain gardens gets drained by a pipe into the rain gardens located within the yard space.



# Water Filtration Park



Water Filtration and  
Recreation Park

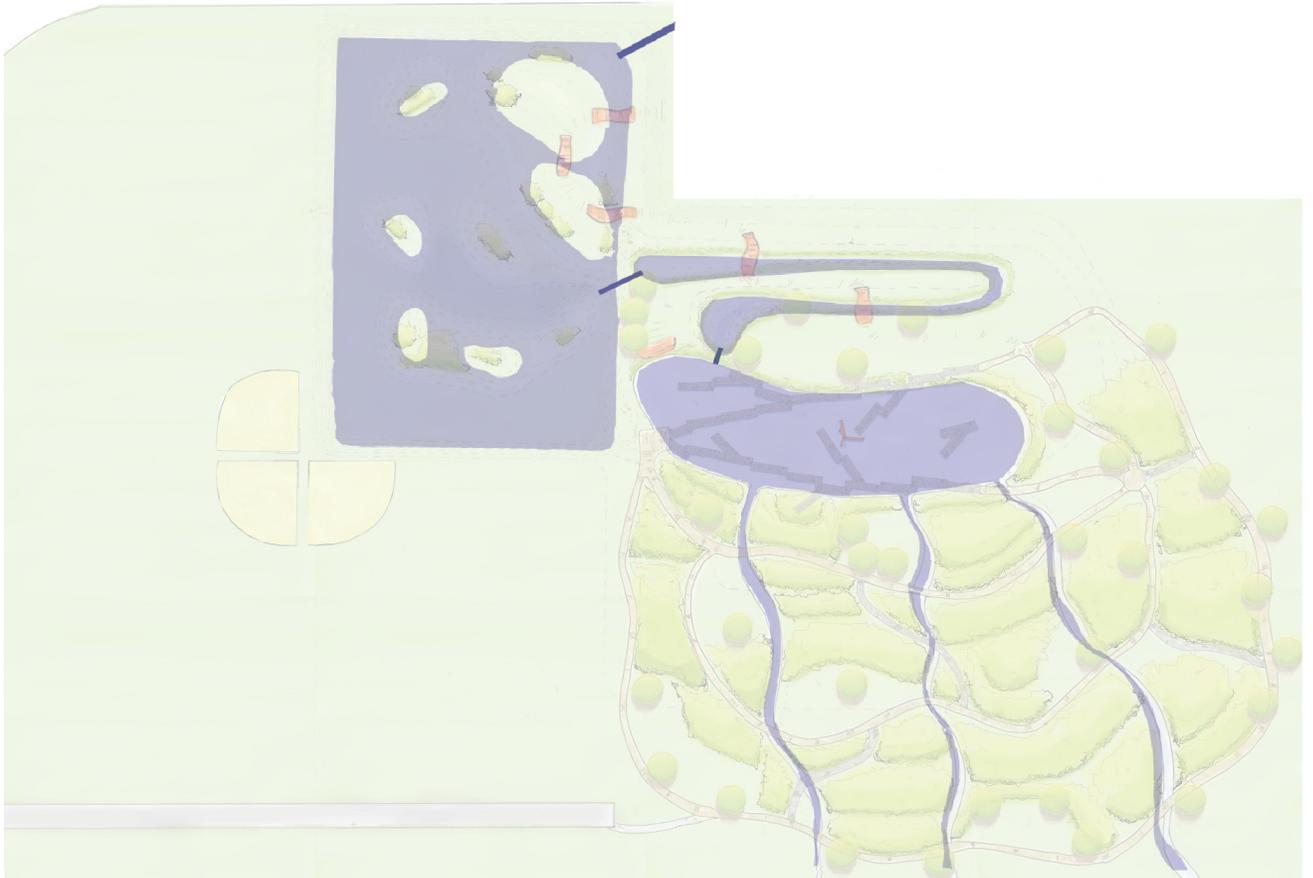
# Water Filtration Park

## Detail Plan



# Water Filtration Park

## Water Storage and Piping System



The water filtration system is meant to filter the 30% of stormwater runoff from the streets and allow it to enter the forest preserve directly south of the park.

The stormwater would arrive at the retention basin through underground pipes that run parallel to the sewer drains. This system is meant to be visible to the community, to allow them to see and understand the importance of good water quality.

# Water Filtration Park

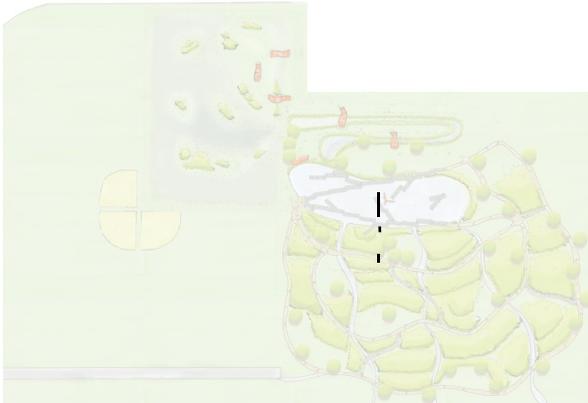
## Perspective of Sedimentation Pond and Water Feature



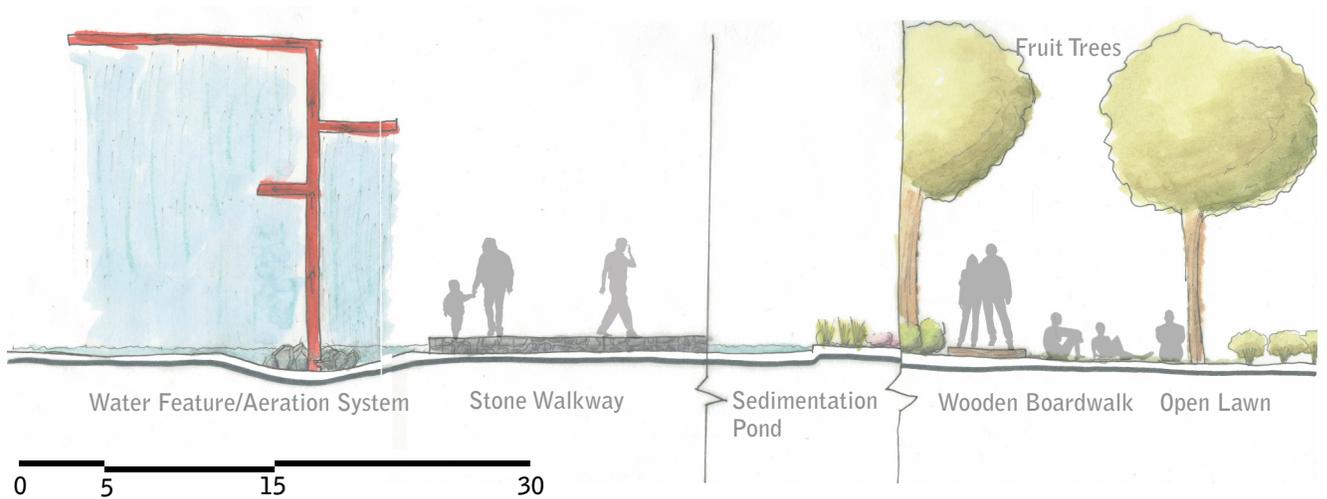
This perspective shows the sedimentation pond and the water feature that is meant to aerate the water to prevent water from becoming stagnant. The stone walkways within the pond are meant for recreation and observation of the water treatment process.

# Water Filtration Park

## Detailed Section Facing East



This section shows the different areas within the water filtration park and the different levels of interaction within the park.

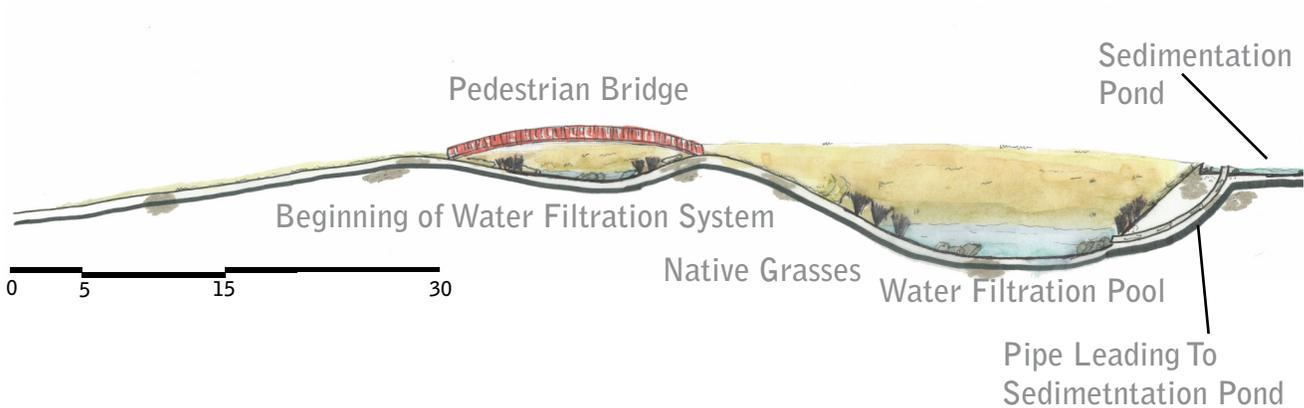


# Water Filtration Park

## Section Detail Facing East Showing Topography



This section shows the changes in the water channels in the first stage of water filtration.

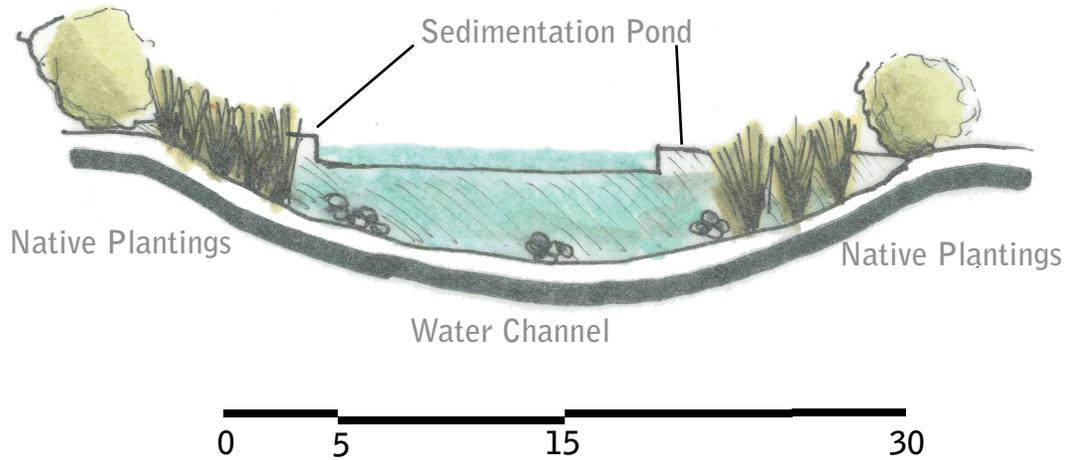


# Water Filtration Park

## Section Detail Facing North Showing Sedimentation Pond and Water Channels



This section shows how the sedimentation pond meets the natural water channels to allow for a steady flow into the channels.



# Phasing Plan

## 0-2 Years - Courtyard Development

The phasing plan for the courtyard development starts are the areas that are in the poorest conditions. The courtyard development is the highest priority and will increase the health of the community at the individual level.



# Phasing Plan

2-4 Years - Courtyard Development



# Phasing Plan

4-5 Years - Courtyard Development



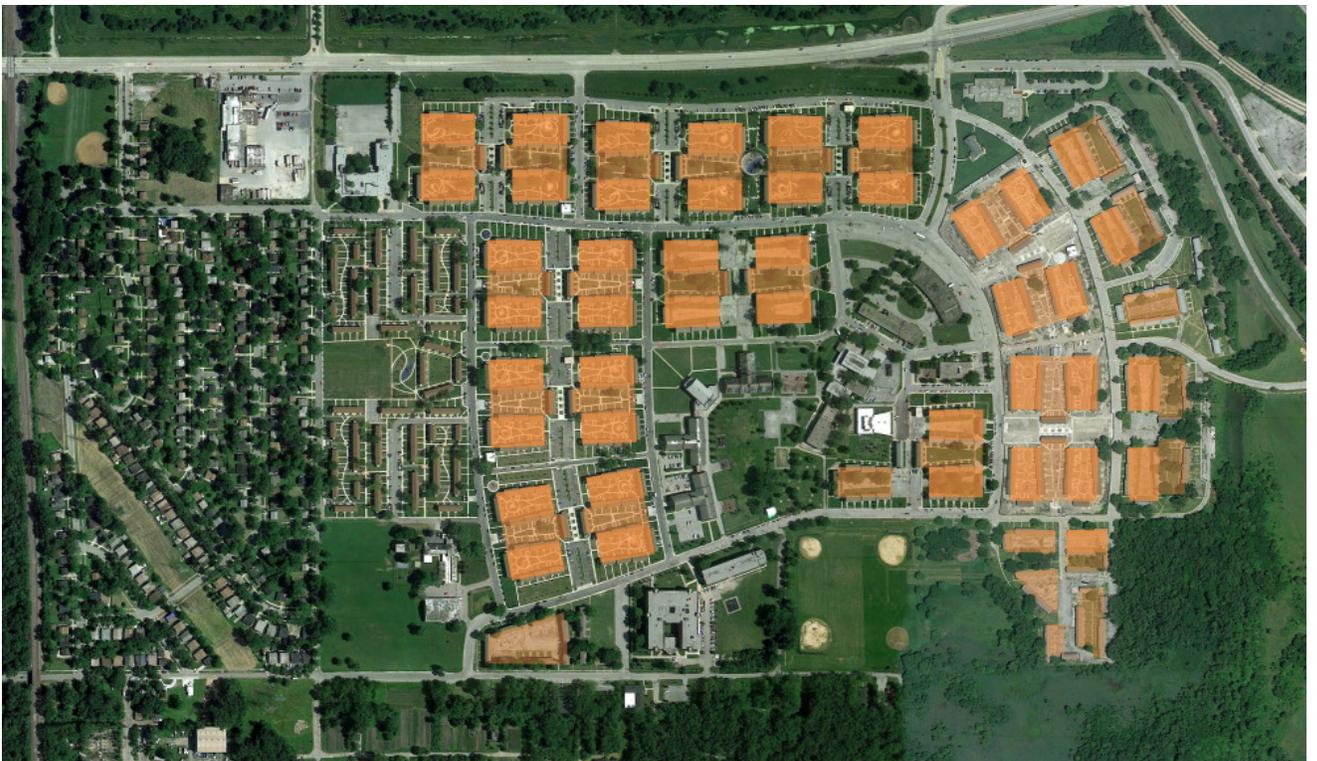
# Phasing Plan

5-6 Years - Courtyard Development



# Phasing Plan

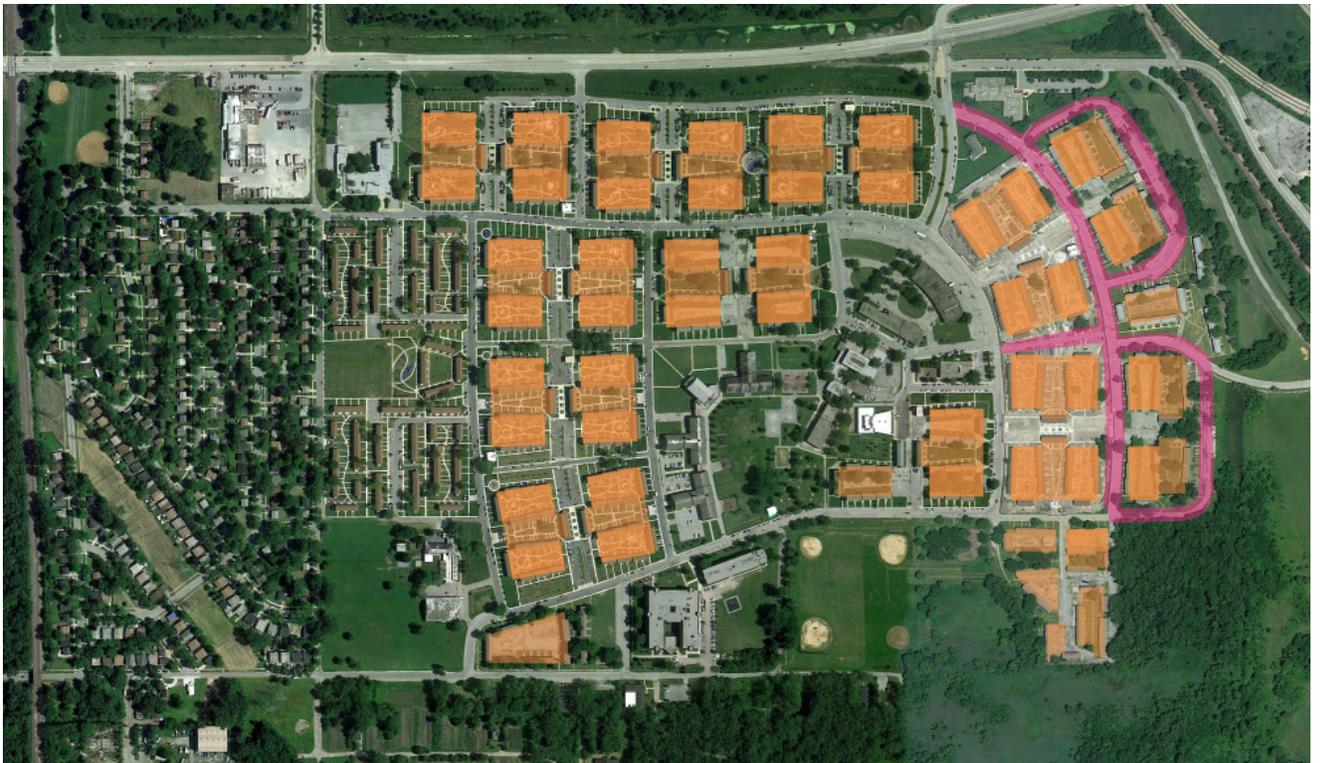
6-8 Years - Courtyard Development



# Phasing Plan

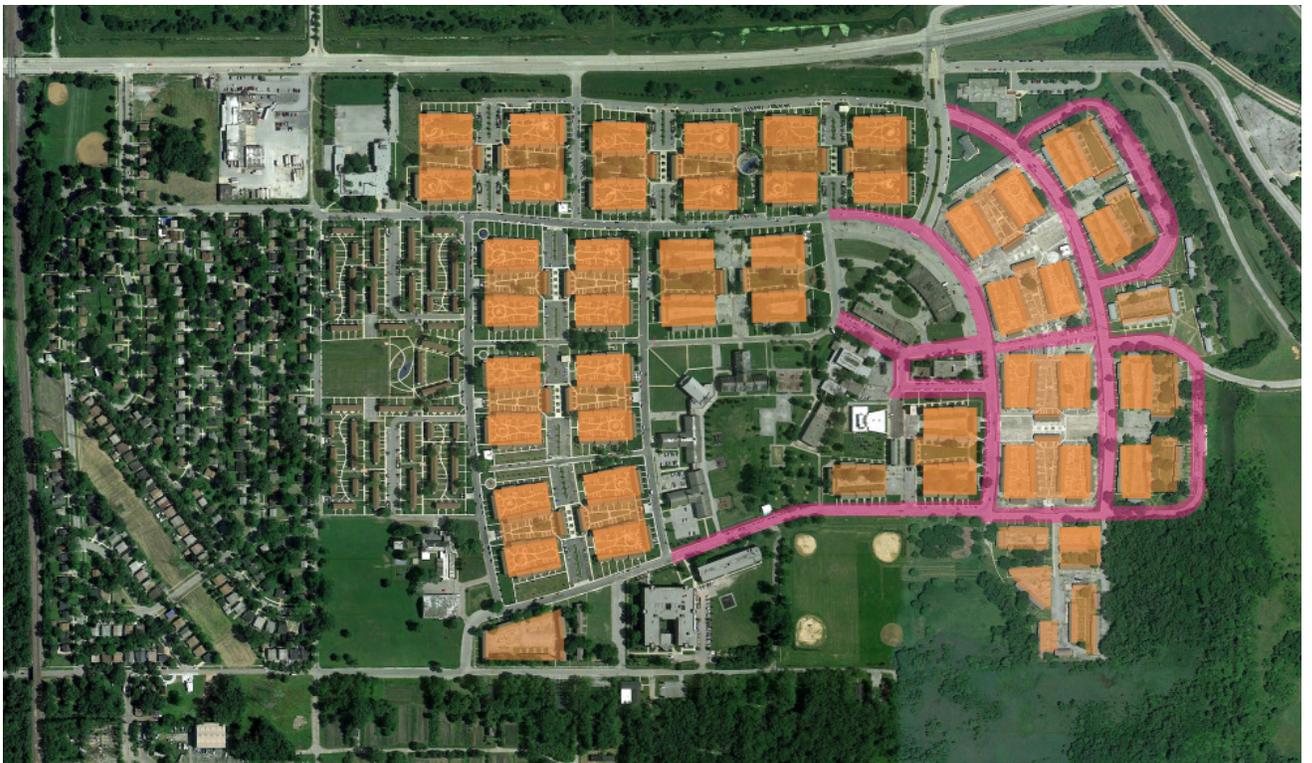
## 9-11 Years - Street Development

The second part of the phasing plan is the implementation of the street scape. This phase again starts with the areas that are in the poorest condition.



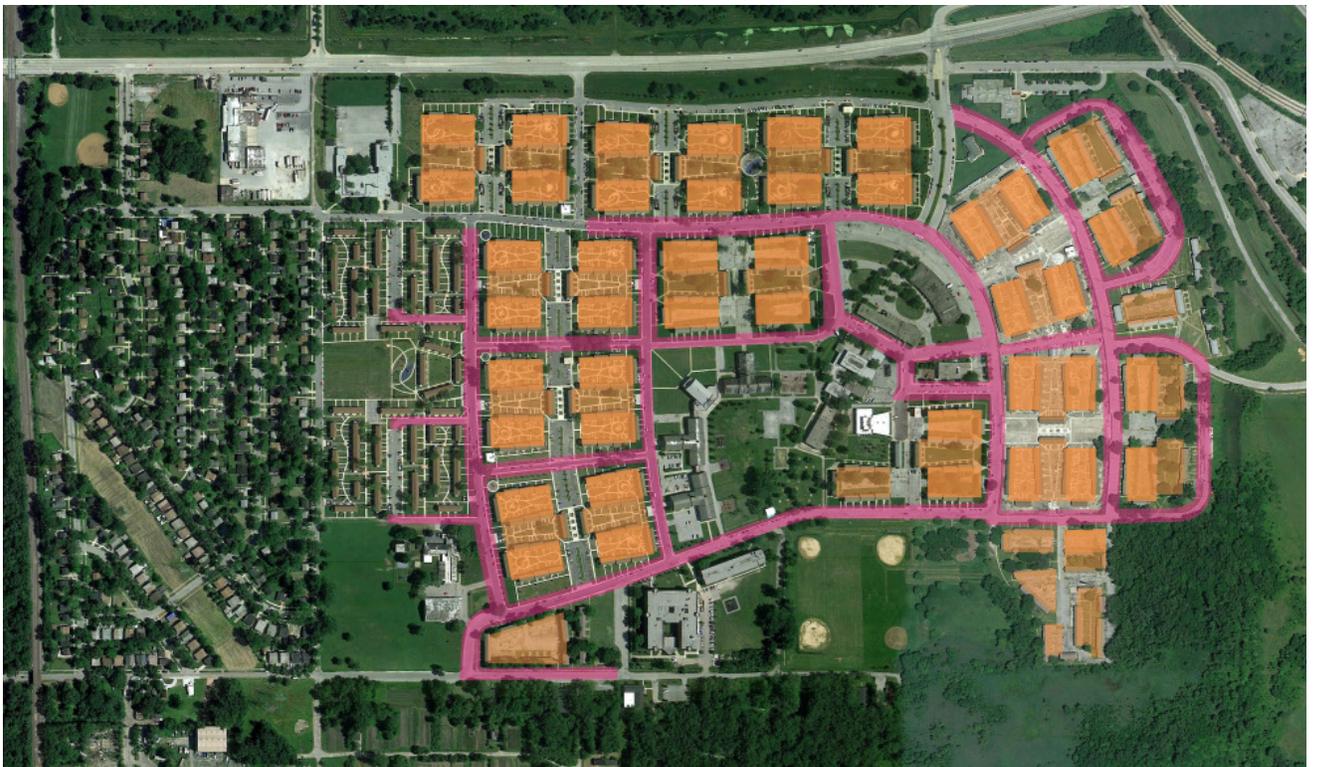
# Phasing Plan

11-13 Years - Street Development



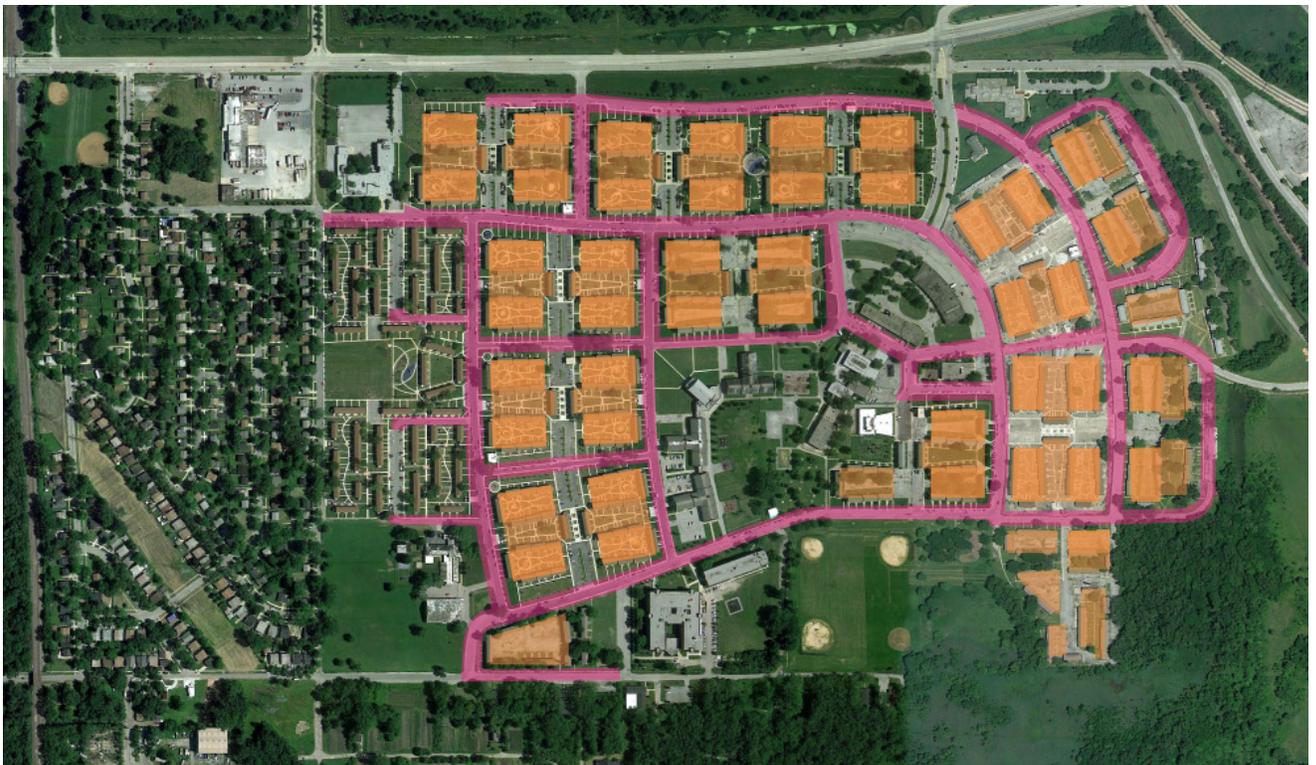
# Phasing Plan

13-15 Years - Street Development



# Phasing Plan

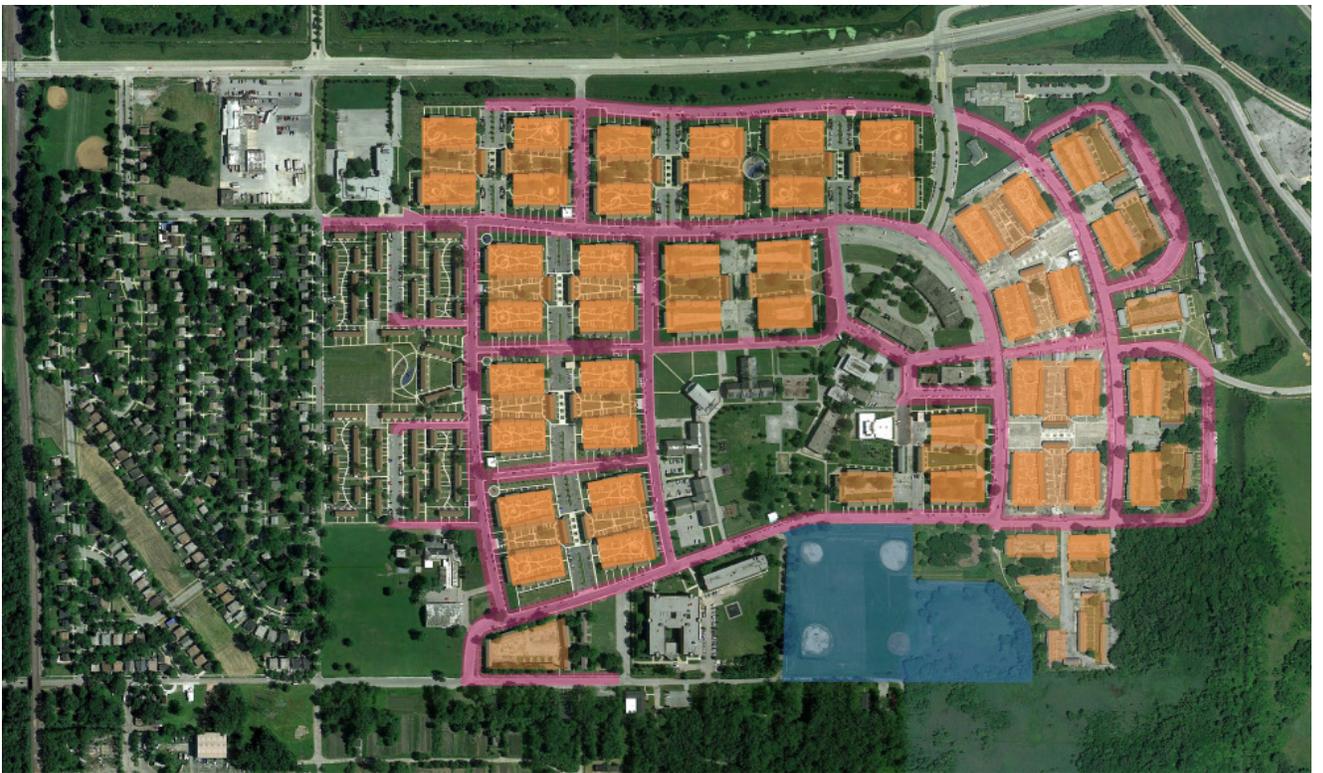
15-17 Years - Street Development



# Phasing Plan

## 17-20 Years - Water Filtration Park

The final phase of the plan is the implementation of the water filtration park. This park will be a place for the entire community and will retain all the stormwater runoff for the Altgeld Gardens Community Housing Project.



# Proposal

## Achievement of Goals

The goal of this project is to explore ways to help the economically disadvantaged by increasing their living standards, and creating a healthier atmosphere which can help in creating more mobility between the economic classes.

### The Individual



By creating an enclosed courtyard and allowing each resident a space of their own to utilize, this design will create a safe haven for the residents and provide incentive to take a sense of ownership for their yard. By retaining 100% of the stormwater runoff, the aquifers will be recharged and there will be less of a burden on the water treatment facility.

### The Neighbors



The street plan gives residents enjoyable avenues to walk around and socialize, while the fruit trees provide nourishment and incentive for people to venture out of the courtyards. The street plan not only makes the area more attractive and walkable, it also retains 70% of the stormwater runoff.

### The Community



The water filtration park provides a space for the community to congregate while informing the public of a natural water treatment facility. This park filters all of the remaining stormwater runoff from the Altgeld Gardens Housing Projects and recharges the aquifers, minimizing the impact on the water treatment facility directly north.



## Previous Studio Experience

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### Second year Fall – 2007 Kathleen Pepple

John Klai Building – Fargo, ND  
Walster Hall – Fargo, ND  
Kathleens Garden – Fargo, ND (Change)

### Second year Spring – 2008 Mark Lindquist

Pioneer Park – Valley City, ND  
Waterfront Park – Winnipeg, Canada

### Third year Fall 2008 Stevie Famulari and Matt Chambers

Dike West – Fargo, ND  
Symphonic Alley – Fargo, ND

### Third year Spring 2009 Kathleen Pepple

Sustainable Residential Design – Fargo, ND  
Lions Park – Battle Lake, MN

### Fourth year Fall 2009 – Mark Lindquist

Moody Avenue – Portland, OR  
Sandy Boulevard – Portland, OR

### Fourth year Spring 2010 – Mike Christenson, David Crutchfield

The Pink City – Jaipur, India

### Fifth year Fall 2010 – Catherine Wiley

Sheyenne National Grasslands - ND

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