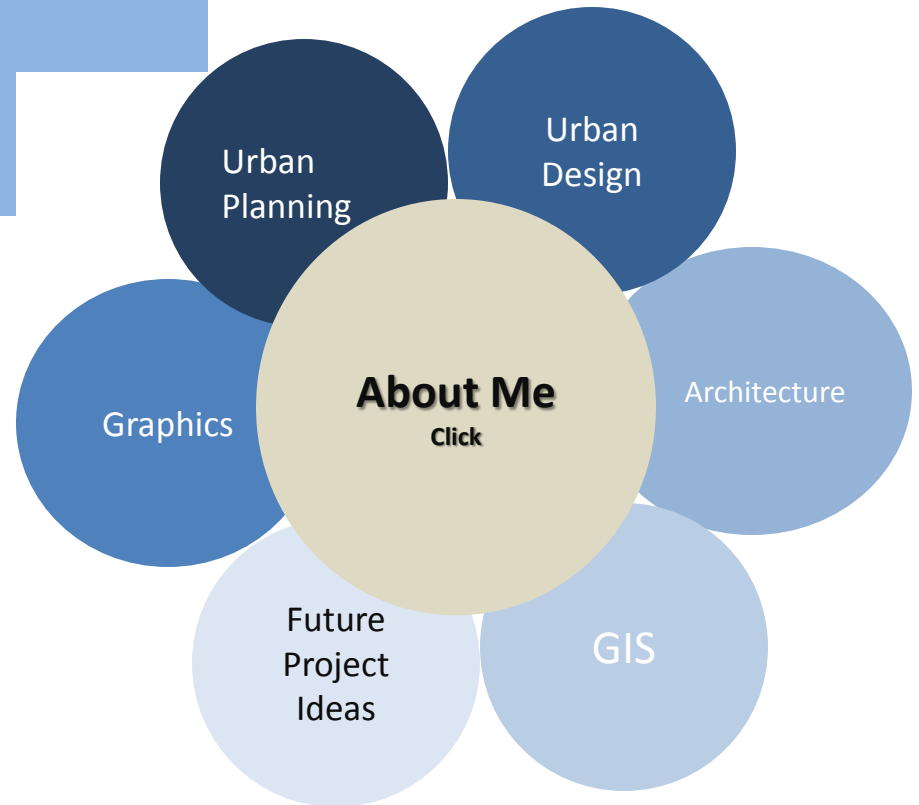


# Cesar Yoc

portfolio



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Earlier experiences paved my views on how human have contributed to environmental deterioration. Two of these experiences taught me lessons about how humans affect nature and life as a whole. In the early 90's I used to explore the areas surrounding the Bronx Kill, a South Bronx waterbody. I observe the lack of wildlife and the ever increasing dumping of garbage and oil. After a couple of years the waterbody contaminated from the dumping of garbage and car parts. Fishermen could not eat the fish because of this contamination. Also, as a Research Assistant at the Smithsonian Institution Conservation Research Center I took pictures of endangered wildlife and saw the efforts of scientist to preserve endangered habitat'. On a sunny day while taking a picture of the endangered Mongolian Horse, I thought deeply as to what I should learn and what my career path could be. These insight set me on a path to understand urban environments, learn about cultures, and explore solutions to environmental and social problems.

I pursue a Bachelor of Science degree in Environmental Studies to understand the root causes of urban water contamination and air pollution. At the SUNY College of Environmental Science and Forestry or SUNY ESF, I learned to examine complex problems using ecological systems principles and to look at places as systems, natural and social systems. Ever since graduating from SUNY ESF, I have been on a journey to find how I can contribute to the progress of humanity and how I can assist my peers in preserving natural resources. The following pages embody some of the skills I have developed at SUNY ESF, Hunter College, my internships, and jobs.

## Urban Planning

I believe in using planning techniques to conserve and preserve natural resources. Read and observe to find holistic perspective methods. Just knowing that urban areas are human-dominated ecosystems leads to understanding on how urban environments are affecting the use of natural resources.

## Geographic Information Systems or GIS

Ever since graduating from SUNY ESF, I have been involved in GIS related projects. It all started at the Smithsonian Institution National Zoological Park Conservation Research Center, where I was a Research Assistant. At the Research Center, I assisted staff in teaching environmental professionals about the use of GIS for conservation purposes. I also learned from observing endangered animals, such as the Presbyterian Oryx and the Mongolian Horse, that solutions start at the urban level and there is a need to do research to preserve habitats.

This is a list of projects, design ideas, and published maps and reports.

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	•Energy, culture, and Economic Development (ECEC)	
	•Bronx Sustainability Institute	

EoH a

EoH b

PLG a

PLG b

FPC a

FPC b

East of The Hub: A vision for Community Development and Green Design

#### East of The Hub Study Site



- Located in Bronx Community Board 1
- The Hub-Third Avenue Business Improvement District
- South Bronx High School
- Meryl Lynch Stadium
- Three vacant lots own by Economic Development Corporation and Housing Preservation and Development

## East of the Hub- A vision for Community Development and Sustainable Design

East of the Hub project uses a multi-disciplinary approach to plan neighborhoods. I use this approach to design three vacant lots according to zoning and adjacent uses.

The project boundary is situated adjacent to the HUB-Third Avenue Business Improvement District. The Hub is a transportation and commercial hub for South Bronx residents. So, all the components are there to propose a vision with multimodal transportation options and green building design.



This is a panoramic view looking from Westchester Avenue. There are a couple parking lots surrounding the area. Also, there is an adjacent site for which an RFP for development has been submitted by EDC.

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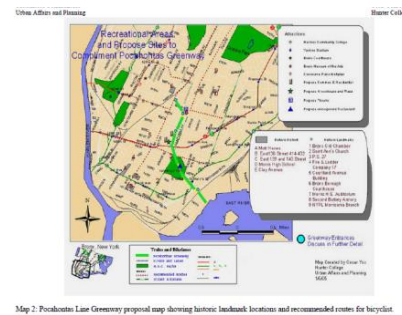
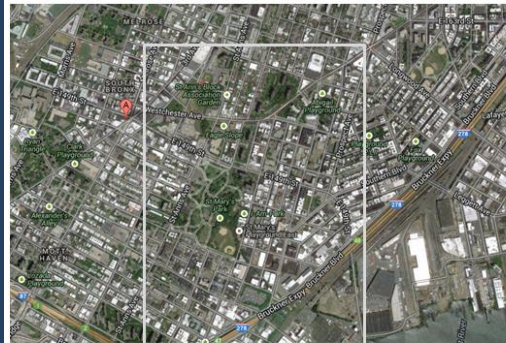
PLG b

FPC a

FPC b

## Pocahontas Line Greenway

December 19, 2004  
Course in Sustainable Communities  
Department of Urban Affairs, Hunter College



In 2004, I took a Sustainable Development course at Hunter College. The course requirement was to do a study of a neighborhood and to propose solutions to any problems.

Growing up in Millbrook Houses I have observed the bike paths that were painted throughout the neighborhood. The bike paths were unsafe for bicyclist because parked cars took most of the bike lane space. For my course assignment I proposed to do a study of bike lane use. After walking the bike lanes my study partner and I noticed an abandoned freight train line and changed the proposal to the conversion of this freight train line into a greenway. I named the Greenway the Pocahontas Line Greenway. I did research on the freight train line and found that the owner (Gouverneur Morris) was a direct descendant of Pocahontas and he nicknamed the Line Old Pokey after Pocahontas.

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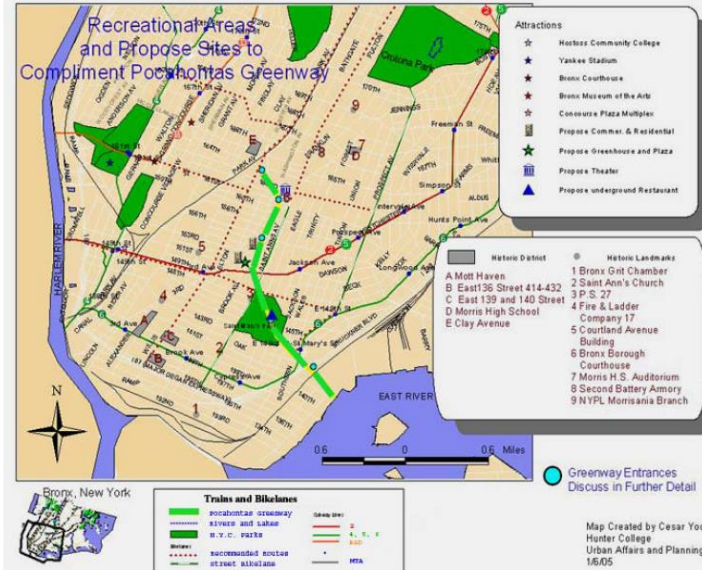
PLG a

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# Pocahontas Line Greenway



The course professor asked the students to identify any educational institutions and surrounding structures. I designed a map to identify any surrounding structures and thought of the possible uses of the space. The right image is a sketch of a railroad museum. The rail carts run using a solar powered generator. The carts have sits and windows were people can look at the exhibits outside the cart.

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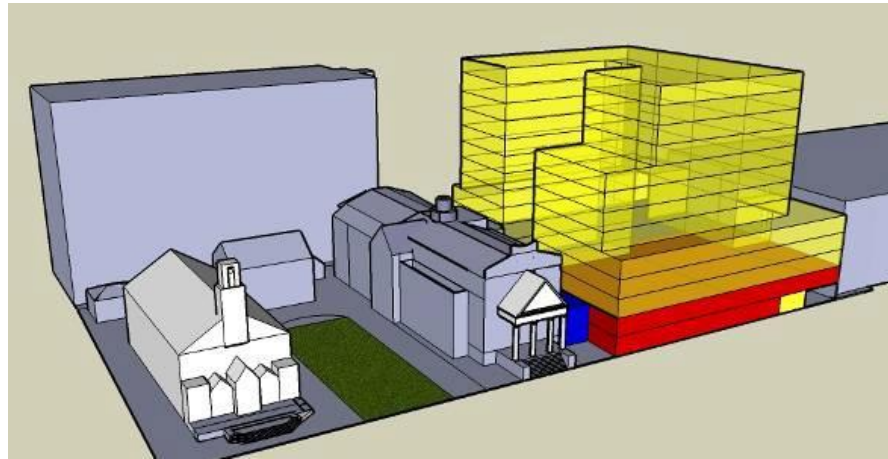
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## First Presbyterian Church of Jamaica, Queens Project



I did not write a thesis for the graduate program. Instead I completed a Capstone Seminar. The participating students had to find a client and do a community developments project for them. We found a client, The First Presbyterian Church in Jamaica, Queens. The church leaders asked us to do a feasibility study for a vacant lot they have purchase adjacent to the church. My task was to work with the architecture group to design a thirteen floor building according to the allowable zoning. Above is the proposed building mass.

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## First Presbyterian Church of Jamaica, Queens Project



I sketched the church properties current use. I sketched a building using Google SketchUp of the proposed building according to the zoning allowed. In our zoning analysis we merge zoning from adjacent lots to increase floor area for the new building and have more air rights.

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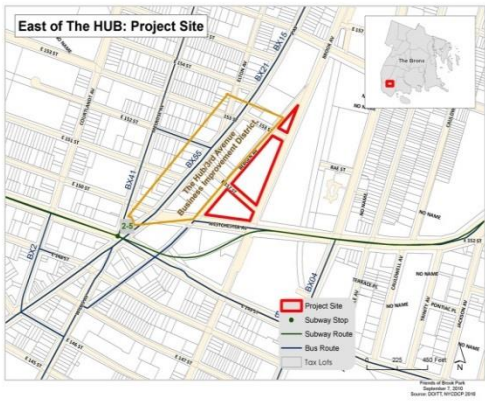
RCS a

RCS b

## East of the Hub- A vision for Community Development and Sustainable Design



I designed the area according to the zoning limitations and neighborhood needs. The neighborhood lacks open space and communal spaces.



The lots have trees to improve the air of the area and to promote environmental health.

The pavers and green spaces promote recreational uses and diversity of uses. This helps in reducing safety concerns.

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## East of the Hub- A vision for Community Development and Sustainable Design



One of the goals of the design is to reduce traffic by having single car lanes. With the width reduction of the car lane the floor area of the lot increases. The lane uses pervious pavers to reduce storm-water flow.



Plazas and roads promote environmental health and alternative transportation options. The required parking spaces are below ground to reduce traffic .



EoH a

EoH b

PLG a

PLG b

RCS a

RCS b

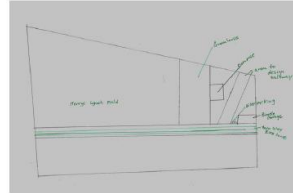
# Pocahontas Line Greenway

Cesar Yee  
Sustainable Communities  
Urban Affairs and Planning

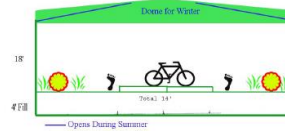
December 19, 2004  
Prof. Tom Augusti  
Hunter College

Cesar Yee  
Sustainable Communities  
Urban Affairs and Planning

December 19, 2004  
Prof. Tom Augusti  
Hunter College



The sketch identifies where the greenhouse is going to be located and entrances. The entrances allow easy passage for pedestrians and bicyclists.



The greenway should be fill in a couple of feet to allow easier access. Therefore, it looks less like a ditch and avoiding trash dumping from residents of residential housing surrounding the greenway. The total width is a minimum of 14' feet for multi-users. According to Charles A Flank guideline to accommodate all no motorized user groups in an urban area the width should be at least fourteen feet.

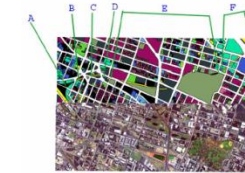


Before

After

These images depict some greenway construction ideas. The multi-use bicycle and wheelchair lane contains an asphalt surface. A natural surface will separate pedestrians from bicyclist's and wheelchair users. The final design will depend on the engineers. This rendering just provides the framework to a flexible design.

The sketch below provides information about the width, in feet, for pedestrian (natural surface), bicycle lanes (asphalt), and gardens (natural surfaces). Benches are located at appropriate locations. In some tunnels the width of the greenway is 30 feet, so no gardens can be constructed only for pedestrian and bicycle lanes.



Port Morris Line Current Owners

## Owners

This is a list of the owners for each tax lot that make up the "Pocahontas Line Greenway."

A: Tax block & Lot 2391-5 (East 163 St.)  
Owner: N.Y. and Harlem Railroad  
Property Type: Vacant  
Market Value: \$218,000  
Total Tax Due: \$8,415.48

B: Tax block & Lot 2384-23  
Owner: Ramo-Spec, Inc. (East 163 St.)  
Property Type: Vacant  
Market Value: N.A.

C: Tax block & Lot 2365-15  
Owner: Ramo-Spec, Inc. (East 161 St.)  
Property Type: Vacant  
Market Value: N.A.  
Period balance: \$50.44

D: Tax block & Lot 2364-58 (3rd Avenue)  
Owner: City of New York  
Period Balance: \$49.75  
Market Value: N.A.

E: Tax block & Lot 2359-1 (East 156 St.)  
Owner: Ramo-Spec, Inc.  
Market Value: N.A.

Tax block & Lot 2359-1 (Westchester Avenue)  
Owner: Ramo-Spec, Inc.  
Market Value: N.A.

Tax block & Lot 2276-31 (Brook Avenue)  
Owner: Ramo-Spec, Inc.  
Market Value: N.A.

Tax block & Lot 2276-52 (Saint Ann's Avenue)  
Owner: Ramo-Spec, Inc.

The greenway is designed according to bike lane design guidelines. This greenway promotes environmental health by planting flowers, trees, and other recreational amenities.

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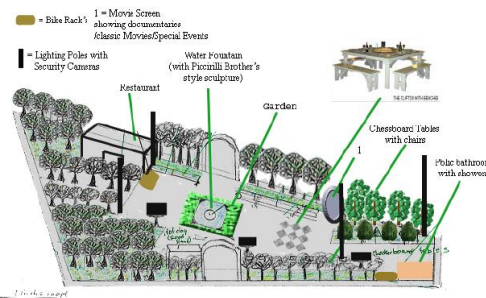
RCS a

RCS b

# Pocahontas Line Greenway

Cesar Yoo  
Sustainable Communities  
Urban Affairs and Planning

December 19, 2004  
Prof. Tom Angotti  
Hunter College



My mother remembers the days of "Teatro Puerto Rico," located in the corner of Brown Place and East 138 Street, where Bob Abbott and Lou Costello once perform their acts and popular Hispanic musicians came to perform. This is one of the first theaters I attended about thirteen years ago, when it was mainly used to show old movies. The theater was reminiscent of theaters constructed before television became popular.

This is the reason for movie screen in the sketch. People could see documentaries, foreign movies, or other television events.

The area should have surveillance camera and proper security, so people could feel safe to enjoy themselves.

Cesar Yoo  
Sustainable Communities  
Urban Affairs and Planning

December 19, 2004  
Prof. Tom Angotti  
Hunter College

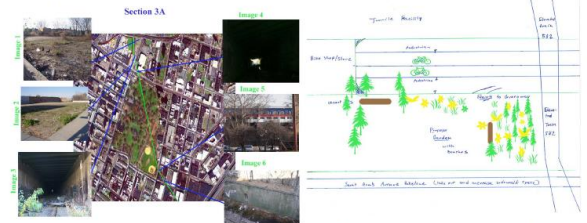


Image 1, Section 3A, is the site for a proposed garden with benches and tables for recreational use. Some stairs should be constructed to allow people to walk the greenway and go to the restaurants. Too many ramps are costly and should be used in places where people with wheelchairs and mothers with strollers could enjoy the greenway.

This sketch is an idea for the lots shown in Image 1 and 2. These lots are owned by the department of Housing Preservation and Development. Developers want to use this land for Housing, but the train that passes right next to it decreases its land value. The cracking of the concrete floor and noise will only bring cheap houses to this land. If they build it they might crack and if more money is used to maintain the house than it is not a cheap house anymore.

These lots should be used for the construction of stairs that helps pedestrian to enjoy the greenway and a bike store. There is a junior high school across the street from these lots, so the creation of the gardens could be a school project. They could create their own recreational oasis.

Promote community unity and multi-use by designing a plaza. The idea is to have a recreational space with a TV screen to show movies at night. The image to the right is an idea to renovate the tunnel..

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## Roberto Clemente Square

As an intern at the office of Congressman Jose E. Serrano I was meeting staff from the South Bronx Overall Community Development Corporation or SOBRO. The staff told me their ideas about a triangular space in the Third Avenue Business Improvement District.

I took pictures of the area to identify its potential use. This is an image of the triangle before its new design.

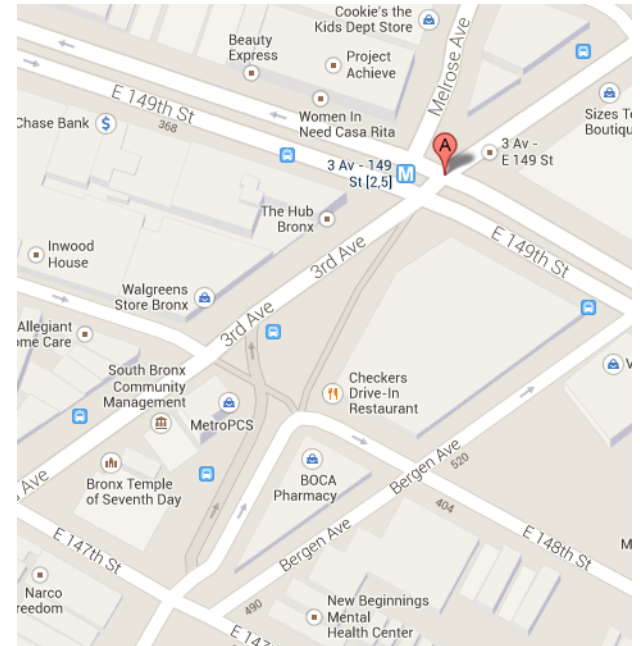


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## Roberto Clemente Square



Monument pointing  
North to mean progress

After observing the roads and pedestrians, I sketch my ideas of potential uses. The above design uses a tower to help with bus dispatching and has a seating area for passengers before their board the bus. Since this is the Hub I design a monument signifying hope and progress.

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To the left is a green building that has underground parking. The parking spaces below ground are for residential use. The above floors are for commercial, community, and residential use, and the bottom floor is for restaurants, a bookstore, fresh produce vendors, and various stores. The second floor is for community space, which are useful to educational institutions and not-for-profit organizations. The floor can have seating in an open area for meetings, a computer cafe, and space for reading. The other floors are for mixed-income housing.

There is a lack of open space in the neighborhood. The design ideas is to create an inviting open space and to use the space for recreational use or a place to relax after buying food or a book from stores in the first floor.

## East of the Hub



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As a College Aid at the NYC Department of Environmental Protection I learned the dire need to reduce stormwater flow. To reduce stormwater flow, the roads and sidewalks are not paved with asphalt or just pure concrete, it has pervious pavers to reduce stormwater flow and increase porosity to filter water.

The South Bronx does not have many open spaces that have an entertainment component. The open space has water and other natural components to promote community health.

## East of the Hub



### East of The Hub: A vision for Community Development and Green Design

#### Open Space

3



- Plaza with retractable movie screen
- Plaza for public events with stage
- Public seating places
- Water fountains creating tranquil places



- Places for the public to seat
- Water fountains for quite and tranquil space
- Public Bathroom



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## First Presbyterian Church of Jamaica, Queens Project

This a sketch I did for my Community Development Studio. I worked with other students to write a feasibility study for the First Presbyterian Church in Jamaica, Queens. This a Green Building that has elements that promote diversity of uses.



We designed the building according to the zoning limitations. I designed a space where residents could feel comfortable and that promotes multi0use.



## First Presbyterian Church of Jamaica, Queens Project



This is the entrance of the building. It has underground parking and commercial spaces in the first floor. The second floor is for programming use and the rest are for affordable apartments.

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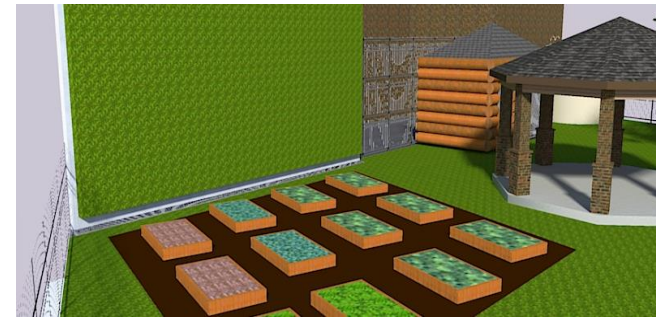
Design Ideas

## 176<sup>th</sup> Street Garden

I was helping to design a community garden for a group of residents in the North Section of the South Bronx, the 176<sup>th</sup> Street Garden. We worked together to sketch ideas on what components it should have.



The components include a space for organic and a relaxing space to congregate (the Kiosk).





EoH a

EoH b

FPC a

FPC b

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Garden b

## Millbrook Gardens

This is my idea for improving New York City Housing Authority open spaces. Most of these are not open to the public. The top image is a current use of a Millbrook Houses open space. The bottom images are ideas of design.

The purpose of the design is to promote community unity. The garden also has sections for residents to grow food and to relax.



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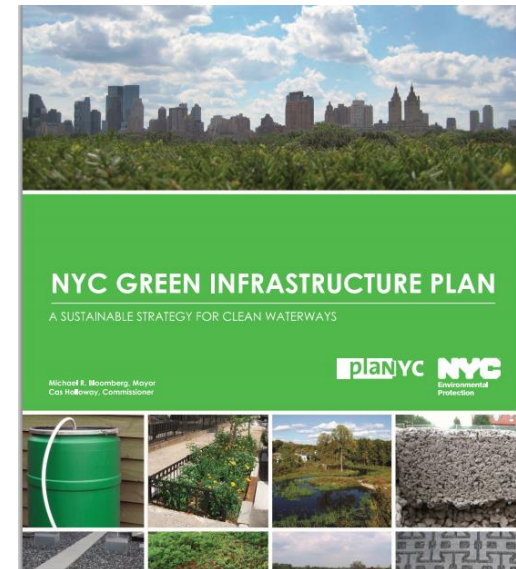
GIP b

JB a

Other

## NYC Green Infrastructure Plan

I have used GIS software for the last five years. I assisted in the analysis and designs of the maps for the NYC Green Infrastructure Plan report as an intern and College Aid at the NYC Department of Environmental Protection.



I design maps to identify areas where there is a need to reduce water contamination. These maps include potential and current green infrastructure construction sites.

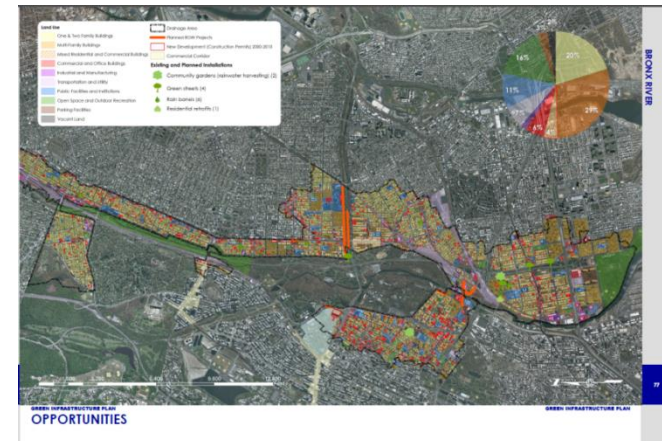


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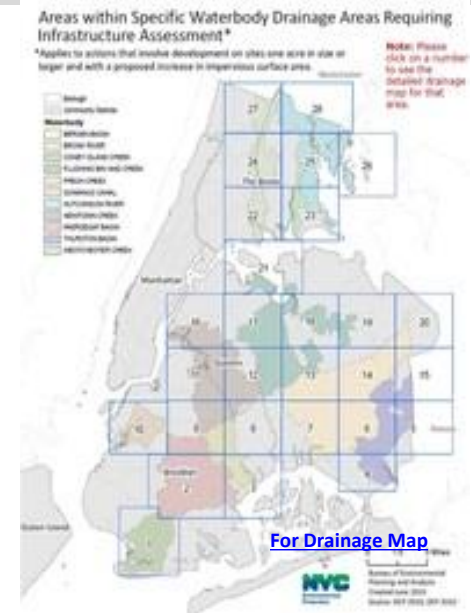
JB a

Other

# NYC Green Infrastructure Plan

I was helping an intern with their internship GIS project. We worked together to do a Grid map, where people can click a grid and a zoomed in map loads or it is displayed.

I used SQL software to do a Landuse Analysis of NYC drainage areas. DEP used the information to calculate the number of acres for each drainage area.



## BRONX RIVER

Total Watershed Drainage Area: 4,160 acres  
 Combined Sewer Contributory Area: 2,842 acres  
 Combined Sewer Contributory Impervious Area: 2,331 acres  
 Opportunity Area for Source Control: 1,609 acres

The goal is to manage stormwater from 10% of the impervious surfaces in the combined sewer contributory area. There are opportunities in 94% of the combined sewer contributory area.

Opportunities in Combined Sewer Contributory Area	Acres	% of Watershed
New development/redevelopment	103	2%
Vacant lots	93	2%
Right-of-way	812	27%
Planned ROW Projects	14	0.5%
Commercial corridors	9	0.3%
Other streets	547	18%
Other sidewalks	242	8%
Multi-family residential complexes	161	5%
Commercial development with parking lots	14	0.5%
Schools	45	2%
Parks	337	11%
Other public properties	44	2%
TOTAL	1,609	54%

Wastewater Treatment Plant(s):

NYSED Classification(s):

Ecological Classification(s):

Existing Water Uses:

Shoreline Uses:

Borough(s): Bronx

Community District(s): 4, 9 & 11

Hunts Point

Class I - Secondary Contact, Boating and Fishing

Special Natural Waterfront Area (DCP)

Pedestrian and Bicycle Trailways, Recreational Boating

Industrial, Residential, Recreational, Parkland and Open Space, Commercial

400,000

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## Jamaica Bay Access Map NYC Department of Environmental Protection

As intern at DEP, my task was to design a Jamaica Bay Access Map. This is the map designed and it is published in the Jamaica Bay Plan.



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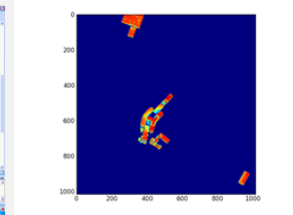
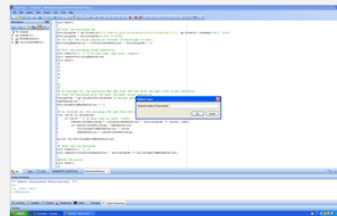
JB a

Other

## GIS maps

I have designed maps for GIS courses at Hunter College. Last year I took a programming course to learn python. I wrote a program to do an analysis of solar radiation of buildings in the North Area of the Bronx.

### Top 10 solar radiation or user input



Top 5 buildings

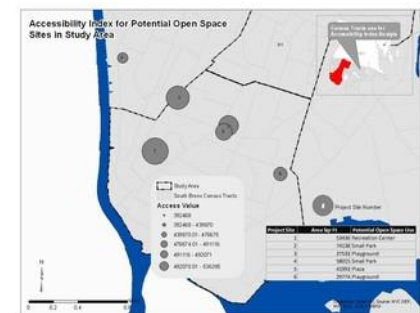
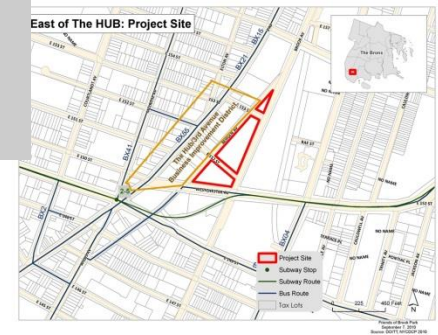
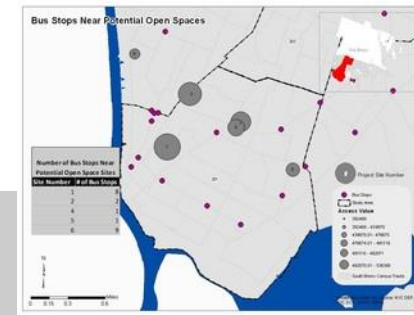


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OAV

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Media c

Directed, produced, and edited video about Osborne Association's Green Career Center and Justice Community



[http://www.youtube.com/watch?feature=player\\_embedded&v=WRhyESNpTdo](http://www.youtube.com/watch?feature=player_embedded&v=WRhyESNpTdo)

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# The Green Scene

## Osborne's Workforce in Action Newsletter

March 2012

Volume 1, Number 4

A letter from the AmeriCorps Vista Green Career Center Volunteer, Cesar Yoc

I was at first reluctant to volunteer at the Osborne Association's Green Career Center. Some of my friends said that it was a waste of time and that I should focus on my fields of Urban Planning and Geographic Information Systems. However, based on my experience and what my brother went through during his more than decade-long period of drug abuse in the early 90's (hasn't done drugs for more than a decade), I believe that people always deserve a second chance and that they can change, even though it might not seem possible. This belief and the mission of the Green Career Center helped me overcome my reluctance. The mission of the Green Career Center gives the formerly incarcerated a second chance, and what makes it even better, is that the Center focuses on the Green Economy.

I've seen participants who surmounted barriers and are improving their communities. Al Garcia is one of the first Alumni I interviewed for the first issue of the Green Scene. Al is a remarkable person that believes in community unity and family. I've talked to leaders like Lawrence Harris, who are working on projects that help their communities and the environment.

### Green Career Center (GCC)

The Green Career Center connects formerly incarcerated individuals to employment opportunities in the growing Green job sector, training people for sustainable career pathways and placing them in jobs that support their growth, their families, and the environment.

**Cool Roofs** decrease the Heat Island Effect by reducing the amount of solar energy that is absorbed by the roof. Learn more at <http://www.custombiltmetals.com/cool-roof.php>

I was an AmeriCorps Vista volunteer at The Osborne Association's Green Career Center. My task was to design a Newsletter for the Department. This is a section of one of the first issues of the Newsletter. I have sections for interviews and information about Green products or Environmental deterioration and its solutions.

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# Fatherhood Initiative pamphlet

After my AmeriCorps tenure I helped the Fatherhood Initiative staff to design a brochure and a Newsletter. I took pictures of participants and interviewed them to write their achievements in the Fatherhood Times Newsletter.

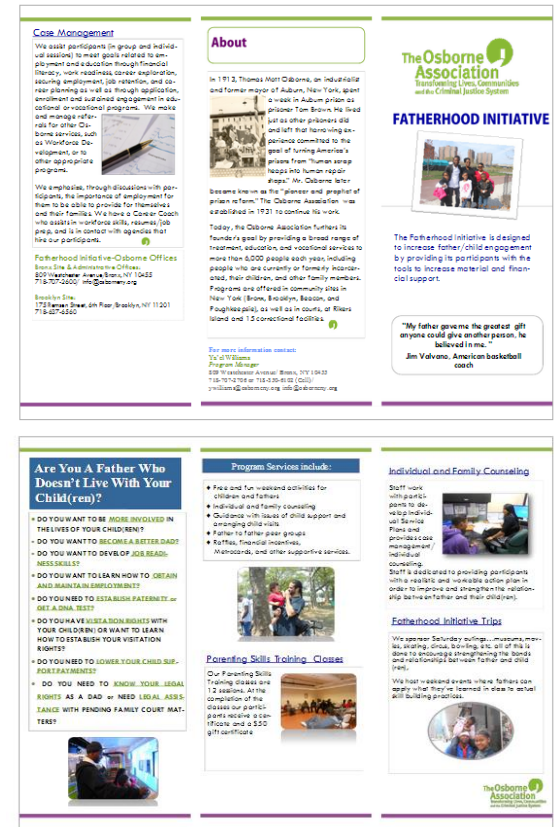


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### Energy Use and Water Retention in a home



The Green, Not  
Outside Association  
Green Career Center

## Energy use in a home

For the Green Career Center I sketched a hypothetical house. The flat roof is not typical of a house. The roof just showed what house owners can do to reduce their electrical bill by using alternative energy.

The main floor, second floor, and rooftop. This is done to show the areas that people can improve to reduce their electrical bill.

### Floors of the House

Front of House

This is an energy efficiency presentation. First, I am going to display areas in the house that consume energy in the form of gas or electricity. Second, calculated the cost of appliances. Finally, to show how energy consumption can be reduced by using energy efficiency techniques.



Note: This design has a flat rooftop. Houses don't usually have flat tops. This is just to show what design can be used for buildings.

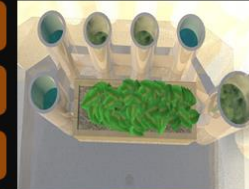
### Living Machine

Water and Electricity

Lighting

Kitchen Appliances

Furnace & Water Heater



Sample home design of a living machine

Onsite sewage treatments Uses ecology and biology to treat wastewater. The greywater can be recycle to flush toilets.

Green Roof

Rain Barrel

Solar Panels

Living Machine



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What is the thermal system for urban areas in the city?

BEA b

ECEC a

ECEC b

How can we model this area to quantify maximum power?

What is the energy potential from the sunlight to reduce the use of fossil fuels and to provide locally available energy?

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## Bronx Energy Analysis



What is the interior and exterior absorption and release of energy for different archetypes



Sunlight reflected and energy absorbed by materials

Tree  
Oxygen  
release and  
CO2  
absorption





## Energy, culture, and Economic Development

BEA a

BEA b

ECEC a

ECEC b

Use methods from urban planning to observe the transportation options in the neighborhood. Also, learn about the neighborhood by interviewing residents in the neighborhood. Learn environmental psychology theory to understand the neighborhood. Use this information to contribute to the redesign of the area.



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## Energy, culture, and Economic Development

### The creation of a Bronx Sustainability Institute

Use the Institute to do energy potential mapping for Bronx neighborhoods

Have student based projects for them to learn landscape architecture and urban design

Learn about thermodynamic theories and how it applies to architecture

