

# Contents

## Chantal Manning

2014 Fall Term (1) Special Topics in Architecture  
ARCH 4400 D668[82802] (NYC College of  
Technology): Final Submission of Semester Work

Resiliency Group - maps + diagrams

Steering Committee - agenda + meeting minutes

Partnership Development - instagram + facebook +  
emerging scholars + donations

Fundraising - organizing the sponsor event

80% Submission + ReSubmission

Register students for Design Review in Irvine, CA

SGA budget proposal for \$4200 airfare

Club Pride - organized event + 3D selfie event

Thursday Presentations - regular participant

## LAYERS OF RESILIENCY | PASSIVE SURVIVABILITY

A building's ability to maintain critical life support when services and resources are lost.

Outermost layers and icons largest in scale denote a layer of resiliency that is a DURAHOME's first layer of defense.

Layers decreasing in size represent steps towards sustainability and reliant strategies used as a last line of defense.



COMMUNICATION

COMMUNICATION

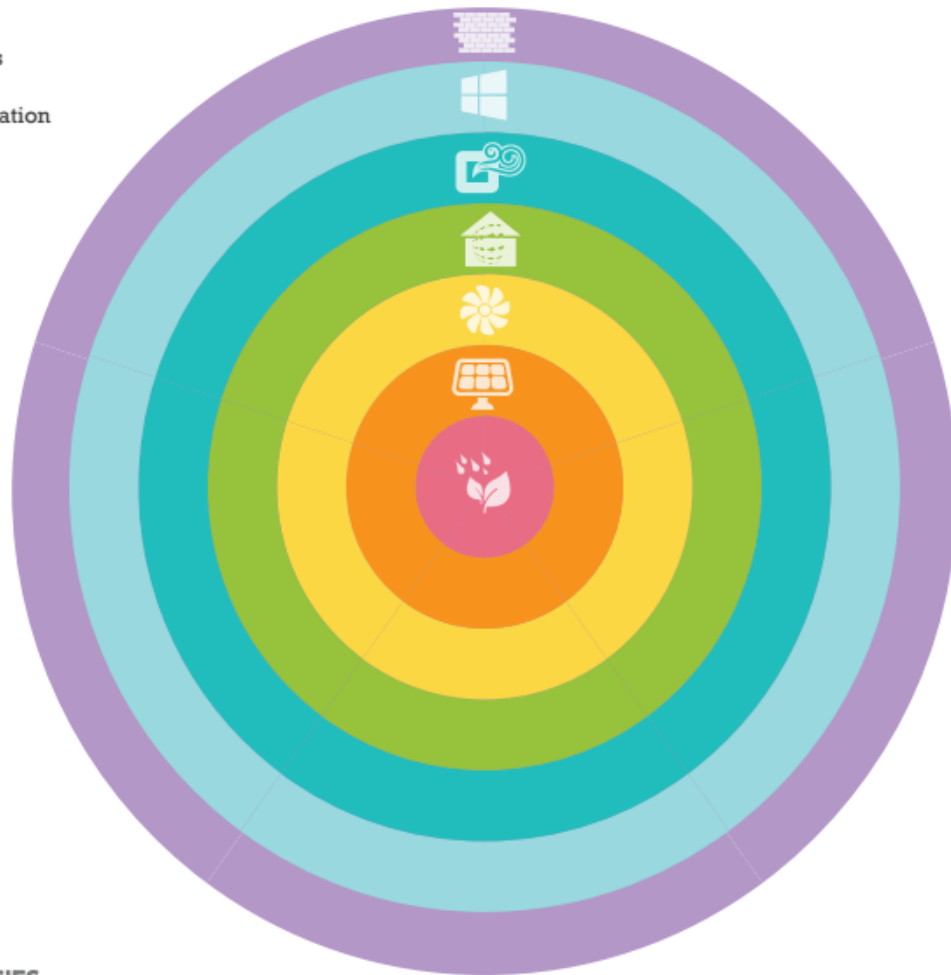
POWER







POWER

# RESILIENT BUILDING STRATEGIES

-  proper building materials
-  tight gaps/ minimal infiltration
-  active systems
-  passive system
-  good ventilation
-  solar module
-  rain garden



# AIR / VENTILATION

-  air tight plenum
-  mechanical systems
-  fans
-  cross ventilation



# WATER




-  public supply system
-  storage tank
-  groundwater
-  greywater
-  rainwater

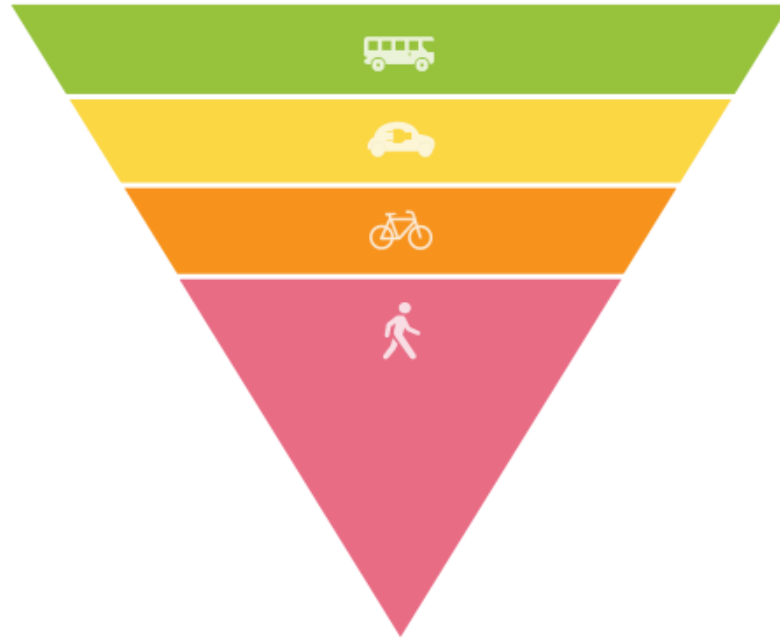
# LIGHT



sun  
solar module  
electrical +\_grid  
battery  
candle/ lamps  
sun

# TRANSPORTATION

-  public transportation
-  electric car
-  bicycle
-  walking



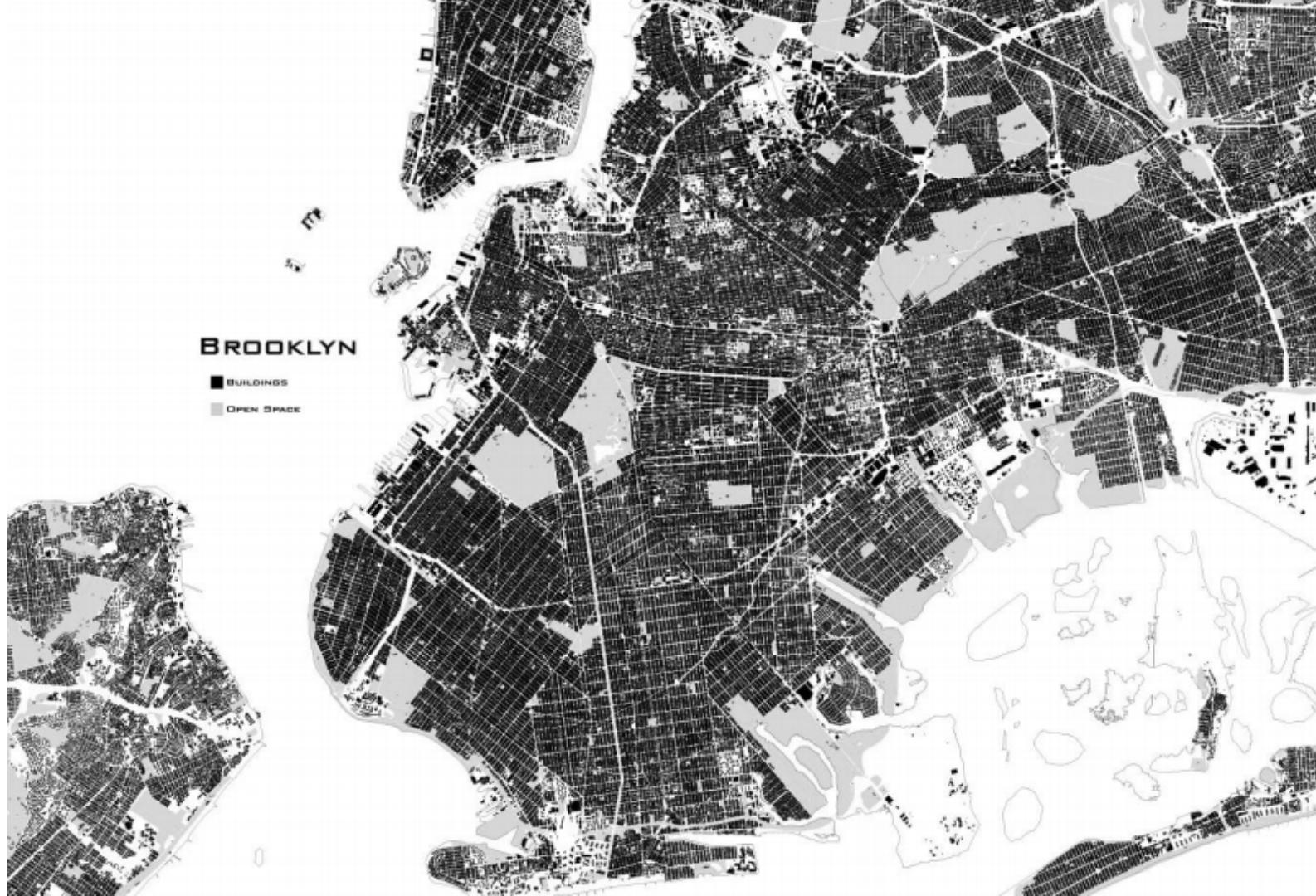




NYC TeamDURA from around the world

# BROOKLYN

- BUILDINGS
- OPEN SPACE



Race + Ethnicity of freshman students 2013-2014		
Hispanic	896	33.80%
Black	737	31.50%
Asian/Pacific Islander	457	20.00%
White	223	11.13%
Other	29	2.80%
American Indian/ Native Al	13	0.60%
TOTAL	2355	100.00%

<http://www.citytech.cuny.edu/life/aboutus/facts.pdf>

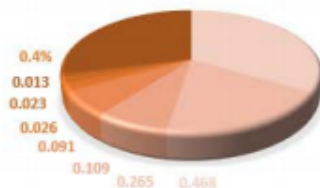
RACE + ETHNICITY OF FRESHMAN STUDENTS 2013-2014



#### Student Residence

Brooklyn	46.80%
Queens	26.50%
Bronx	10.90%
Manhattan	9.10%
Other NYS	2.60%
Staten Island	2.30%
International	1.30%
Other USA	0.4
	100.00%

NYCCT STUDENT ORIGINATE



#### Background

62.3% report a language other than English spoken at home

42% born outside the US [138 countries represented]

<http://www.citytech.cuny.edu/life/aboutus/facts.pdf>

LANGUAGES OTHER THAN ENGLISH SPOKEN AT HOME



62.30%

37.00%

42%

58.00%

IN A CITY THRIVING AT AN EXPONENTIAL RATE, DURA REPRESENTS AN URBAN SOLUTION WITH STACKABILITY OPTIONS. HEIGHTENED LIVING DENSITIES AND CONSUMPTION RATES PROVIDES A DURAHOME THE CHALLENGE TO MEET THE EVOLVING PATH OF URBAN LIVING SUSTAINABLE INTO THE FUTURE.



## DIVERSE

AS DIVERSE AS THE CITY OF NEW YORK, THE CHARACTER OF A DURAHOME IS DEVELOPED THROUGH ELEMENTS OF INTERNATIONAL LIVING, BUILDING PRINCIPLES WITH A STRONG CONNECTION TO THE NATURAL ENVIRONMENT, INTERIOR AND EXTERIOR AREAS WHICH REVEAL OPEN SPACE, ACCOMMODATE GREENERY AND ALLOW FOR FLEXIBILITY AND COMFORT.

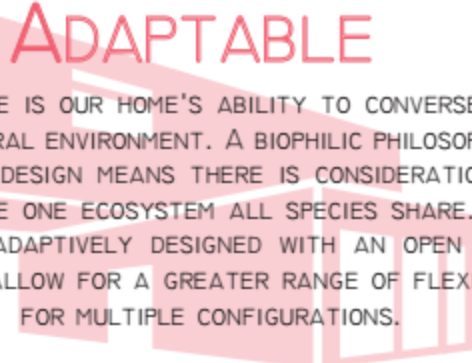


## RESILIENT

OUR HOME'S PROXIMITY TO THE FLOOD PLAIN AND RISING SEA LEVELS INCREASES THE NEED FOR A PROACTIVE DESIGN RESILIENT TO FLOOD WATER, GAIL FORCE WINDS AND SEISMIC ACTIVITIES. DURA IS BUILT FOR OPTIMAL PERFORMANCE AND WORKS FOR THE CHANGING CLIMATE IN FAST GROWING, POPULATED CITIES.

## ADAPTABLE

ADAPTABLE IS OUR HOME'S ABILITY TO CONVERSE WITH THE NATURAL ENVIRONMENT. A BIOPHILIC PHILOSOPHY TO DWELLING DESIGN MEANS THERE IS CONSIDERATION TOWARDS THE ONE ECOSYSTEM ALL SPECIES SHARE. THE HOME IS ADAPTIVELY DESIGNED WITH AN OPEN FLOOR PLAN TO ALLOW FOR A GREATER RANGE OF FLEXIBILITY FOR MULTIPLE CONFIGURATIONS.



THE ENGINEERING STRATEGY FOR DURA WILL BE BASED ON THE OVERALL EFFICIENCY AND USER-FRIENDLINESS OF THE TECHNOLOGY INCORPORATED INTO THE HOUSE. EMPHASIS WILL BE MADE ON HOW WELCOMED THE USER FEELS THROUGH THE USE OF ADVANCED AND INTEGRATED TECHNOLOGY. USING THESE INTEGRATED TECHNOLOGIES, THE USER WILL FEEL AS IF THEY ARE TRULY IN CONTROL OF THEIR HOME ENVIRONMENT.

## ENGINEERING NARRATIVE

ONE OF THE MAIN POINTS OF OUR DESIGN IS A MECHANICAL SYSTEM THAT ALLOWS OUR PHOTOVOLTAIC (PV) PANELS TO TRACK THE SUN BOTH SEASONALLY AND DAILY TO ALLOW OPTIMAL PLACEMENT AND IN TURN OPTIMAL POWER OUTPUT. OUR ENGINEERING STRATEGY WILL CREATE A PLEASURABLE EXPERIENCE FOR BOTH THE RESIDENTS AND THE VISITORS TO LEARN HOW TO USE THE VARIOUS FUNCTIONS OF THE HOUSE.

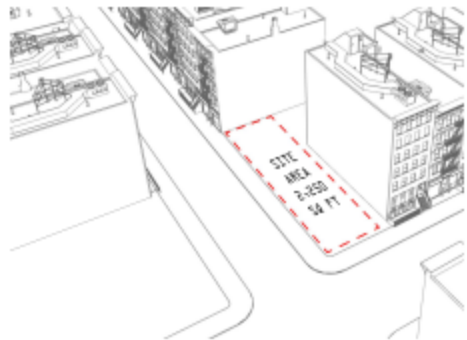
A DURAHOME OFFERS SOLUTIONS TO A NUMBER OF PROBLEMS FACING THE URBAN DENSE CITIES OF THE 21ST CENTURY. A POSITIVE-ENERGY HOUSE THAT IS DIVERSE, URBAN, RESILIENT, AND ADAPTABLE [DURA] IS THE EVIDENCE OF THE TEAMDURA RESEARCH INITIATIVE. CENTERED IN ONE OF THE MOST DIVERSE NEIGHBORHOODS IN NEW YORK CITY, A DURAHOME WILL SERVE A DIVERSE POPULACE WHILE IMPLEMENTING BUILDING PRINCIPLES EVIDENT IN REPRESENTED CULTURES SINCE ANTIQUITY. OUR HYPER DENSE AND URBAN ENVIRONMENT PROVIDES AN OPPORTUNITY FOR A SOLUTION THAT IS DISTINCT TO OUR LOCATION. RESILIENCY ALLOWS A RESPONSE TO THE CHANGING CLIMATE AND NEEDS OF THE NEW YORK CITY WATERFRONT. ADAPTABILITY IS A PARAMOUNT FEATURE TO BE AS VERSATILE AS POSSIBLE AS IT TRAVELS THE COUNTRY, THE LANDSCAPE OF THE GROWING SUSTAINABLE INDUSTRY AND INTO YOUR HEARTS TO ONE DAY BECOME YOUR FUTURE HOME.

## MISSION

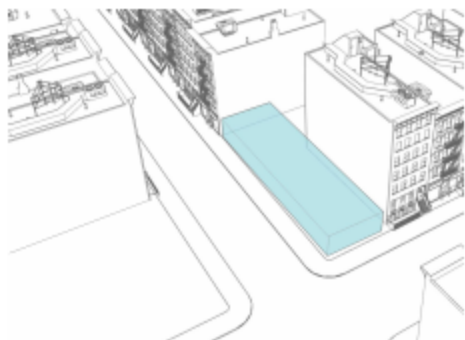
## TARGET CLIENT

THE IDEAL INHABITANTS FOR A DURAHOME ARE A YOUNG CREATIVE COUPLE MAKING A LIFE IN A COASTAL URBAN METROPOLIS. THEY LIVE A FULL LIFE, OFTEN ENTERTAIN FRIENDS, AND AT TIMES WORK FROM HOME. THE FAMILY HAS GOALS TO ONE DAY EXPAND AND CHOOSES TO INVEST IN A DURAHOME BECAUSE OF THE ADAPTIVE FUNCTIONALITY THAT PROVIDES FOR A GROWING ATMOSPHERE OF HEALTHY LIVING.

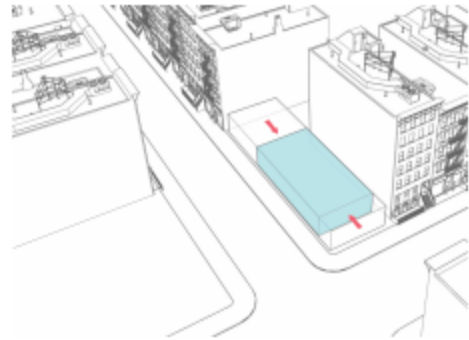




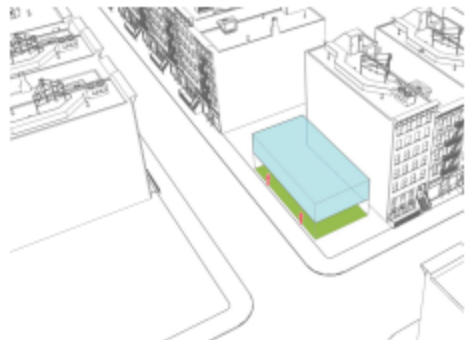
01\_Site



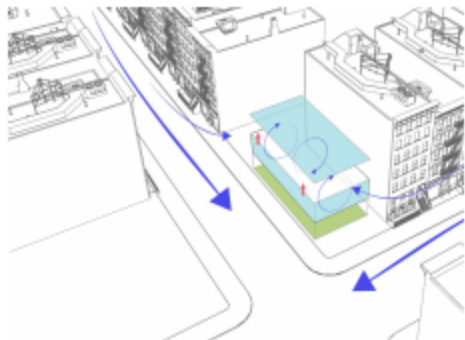
02\_Allowable Build



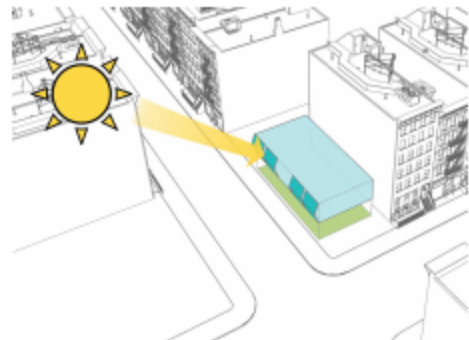
03\_Setbacks



04\_Proximity



05\_Air Vent Lift



06\_Energy Source

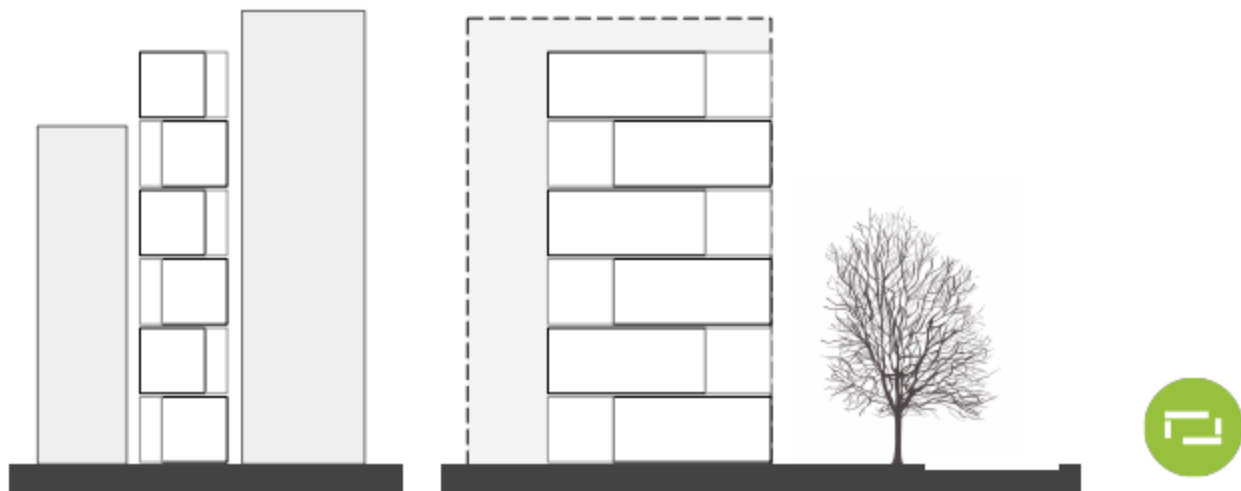




duplex

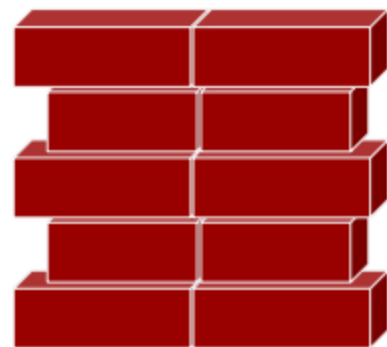


6 -plex tower





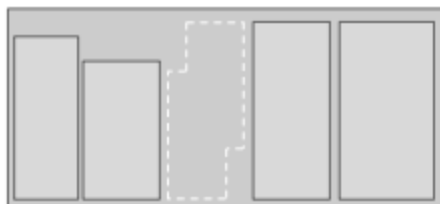
3/4 story walk up



public housing configuration







mid block

dedicated vertical panels + [roof array] ? **75%**



corner lot

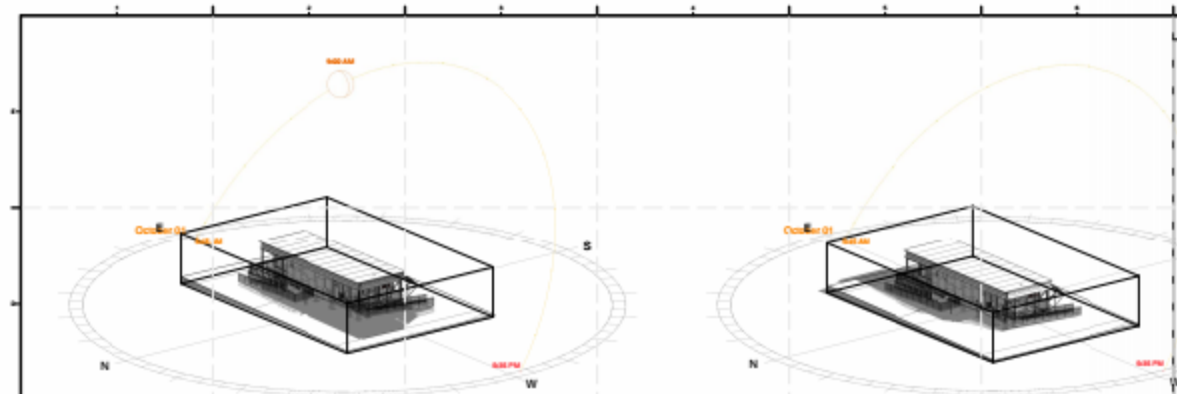
ideal lot. South PV array **100%**



public housing

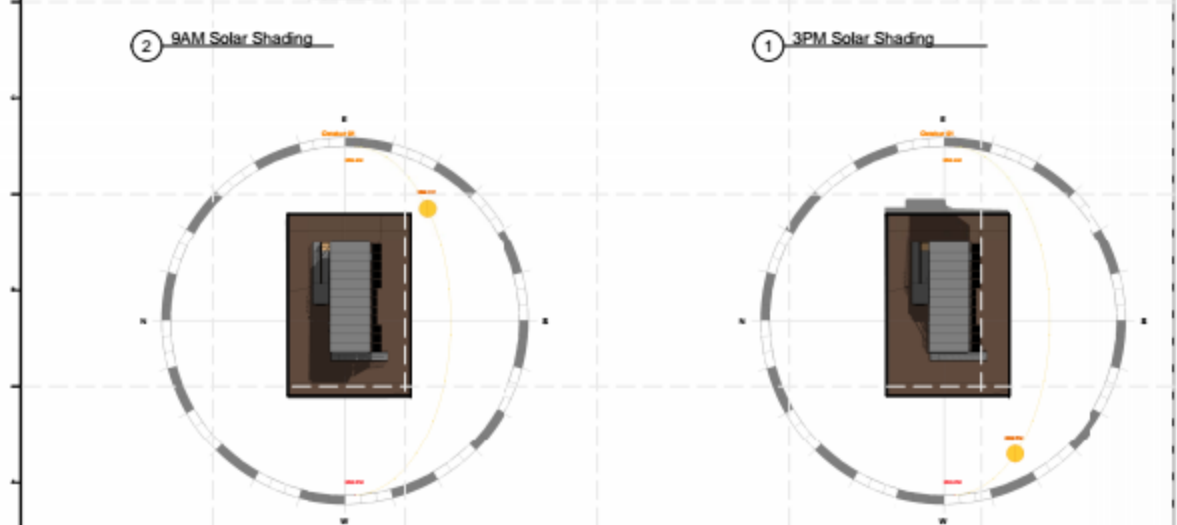
roof array + combined system **200%**





2 9AM Solar Shading

1 3PM Solar Shading



4 9AM Solar Shading

3 3PM Solar Shading

GENERAL SHEET NOTES



DURA HOME

Star name: Industrial

Address: 230th Street, NYC

Contact: [annmarie.miller@nccct.edu](mailto:annmarie.miller@nccct.edu)  
[www.nccct.edu/programs](http://www.nccct.edu/programs)

Project Title:

Client Name:

Project No.:

Date:

Scale:

Author:

Checker:

Revision:

Notes:

Material:

Orientation:

Shading:

Other:

Remarks:

Project No.:

Revision:

Date:

Author:

Checker:

Scale:

Orientation:

Shading:

Other:

Remarks:

Project No.:

Revision:

Date:

Author:

Checker:

Scale:

Orientation:

Shading:

Other:

Remarks:

Project No.:

Revision:

Date:

Author:

Checker:

Scale:

Orientation:

Shading:

Other:

Remarks:

Exterior Shading  
Diagrams

G-125

10/20/2018 11:50 AM

## DESCRIPTION OF MEETING

### **In Attendance**

Margarita Salas  
Shelly Smith  
Alexander Aptekar  
Vijay Tulsee  
Mujun Chen  
Amanda Waal  
Barbara Mishara  
Evgenia Gorovaya  
Stephen December  
Hadiza Djibring  
Chantal Manning

### **Note Taker**

Chantal Manning [primary]  
MuJun Chen [secondary]



**STEERING COMMITTEE**

## DESCRIPTION OF MEETING

### **In Attendance**

Osmany Cabrera  
Jennifer Jiminez  
Barbara Mishara  
Amanda Waal  
Alexander Aptekar  
Margarita Salas  
Hadiza Djibring  
Mujun Chen  
Shelly Smith  
Vijay Tulsee  
Stephen December  
Chantal Manning

### **Note Taker**

Chantal Manning [primary]  
MuJun Chen [secondary]



**STEERING COMMITTEE**

## DESCRIPTION OF MEETING

### **In Attendance**

Agata Whyte  
Hadiza Djibring  
Shelly Smith  
Brian Mason  
Stephen December  
Alexander Aptekar  
Margarita Salas  
Osmany Cabrera  
Mujun Chen  
Kemoy Henry  
Jennifer Jimenez  
Vijay Tulsee  
Chantal Manning

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Chantal Manning [primary]  
MuJun Chen [secondary]



**STEERING COMMITTEE**

## DESCRIPTION OF MEETING

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Agata Whyte  
Hadiza Djibring  
Vijay Tulsee  
Alisa  
Alexander Aptekar  
Osmany Cabrera  
Amanda Waal  
Stephen December  
Chantal Manning

### **Note Taker**

Chantal Manning [primary]  
Hadiza Djibring [secondary]



**STEERING COMMITTEE**

## DESCRIPTION OF MEETING

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MuJun Chen  
Chantal Manning  
Amanda Wall  
Hadiza Djibring  
Alexander  
Aptekar  
Shelly Smith  
agata Whyte  
Vijay Tulsee  
Alisa Ka;egina  
Kemoy Henry  
Stephen December

### **Note Taker**

Chantal Manning [primary]  
NA [secondary]



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Vijay Tulsee  
Chantal Manning  
Alisa Kalegina  
Evgenia Gorovaya

### **Note Taker**

Chantal Manning [primary]  
NA [secondary]



**STEERING COMMITTEE**



## DESCRIPTION OF MEETING

### **In Attendance**

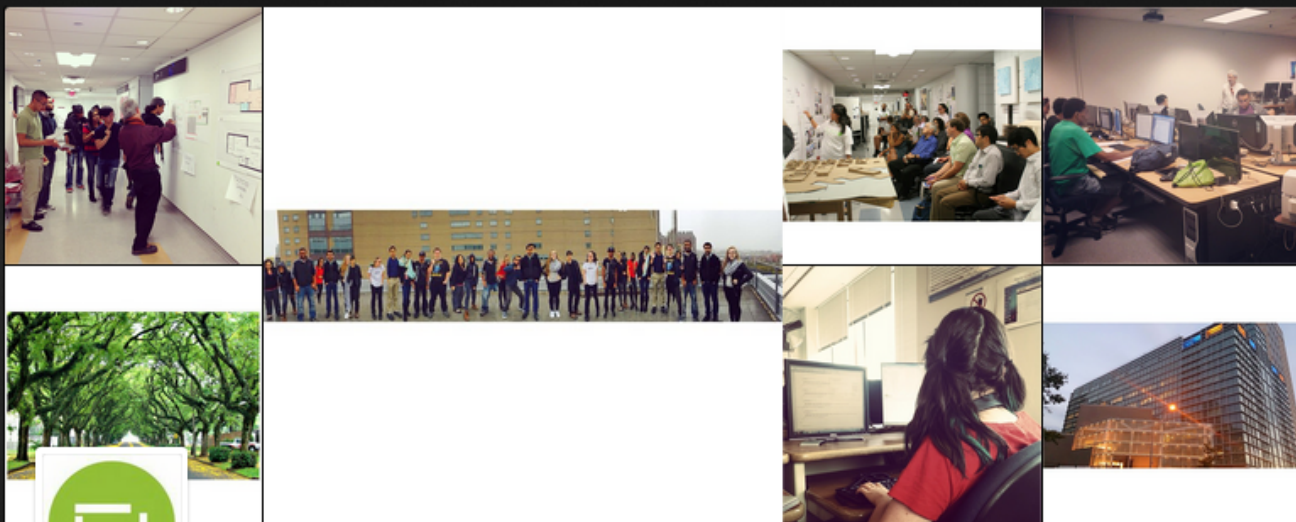
Chantal Manning  
Alexander Aptekar  
Agata Whyte  
Vijay Tulsee

### **Note Taker**

[primary] Chantal Manning  
[secondary] NA



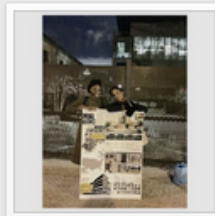
**STEERING COMMITTEE**



Following

**teamdura**Team DURA Team NYCCT - Solar Decathlon 2015 <http://www.durahome.org>43  
posts88  
followers107  
following

December 2014



November 2014

# Solar Decathlon, DURA Sponsorship Outreach



Student researcher(s): Chantal Manning, Alisa Kalegina,  
Hadiza Djibring, Mujun Chen  
Faculty Mentor: Professor Alexander Aptekar  
Department: Architectural Technology

## ABSTRACT

NYCCT's submission to the 2-year International Solar Decathlon Competition has been a great opportunity for all students to gain hands-on, practical knowledge pertaining to their field of choice. The sustainable housing market demands innovation. CityTech's entry of the DURAHOME strives to meet those requirements and go beyond. In order for the creative aspect to reach its full potential, the machine of support of internal and external sponsors should run simultaneously and supplement design efforts. For the team, involvement from equally aligned local vendors creates an atmosphere of community involvement while garnering support from the public at large.

<b>BROOKLYN BRIDGE</b> \$100,000+	Provides stable, long-term funding for the Solar Decathlon Competition and student involvement at the organization. Supports various projects, labor and event materials.
<b>MANHATTAN BRIDGE</b> \$75,000 - \$99,999	Provides strategic support. Provides various materials, labor and event materials.
<b>WILLIAMSBURG BRIDGE</b> \$50,000 - \$74,999	Donor organization is pleased to see how the Present Solar group of NYCCT uses the use of DURA for the solar decathlon event.
<b>VERRAZANO NARROWS BRIDGE</b> \$25,000 - \$49,999	Work through various parts of the organization. Support in our ongoing work through access to our working site at the CityTech Ferry Landing. Community and support from the organization.
<b>QUEENSBOROUGH BRIDGE</b> \$10,000 - \$24,999	Enthusiastic partner. Involved in our website party.
<b>ERONY WHITESTONE BRIDGE</b> \$5,000 - \$9,999	Provided financial assistance for DURA. Company sign on DURA logo with an acknowledgment.
<b>GEORGE WASHINGTON BRIDGE</b> \$1,000 - \$4,999	Company signs on DURA logo with an acknowledgment.
<b>THROGS NECK BRIDGE</b> \$500 - \$999	Company signs on DURA logo with an acknowledgment.
<b>KOSCIUSKO BRIDGE</b> \$5 - \$499	Company signs on DURA logo with an acknowledgment.

Tiers of sponsor packages when businesses decide to donate.



## RESPONSIVE WEB REDESIGN

In order to stay true to the ethos of Team DURA, namely the emphasis on Diversity and Adaptability, the latest iteration of the website has been rebuilt on a responsive Bootstrap framework. Responsive web design is a concept which emphasizes usability above all else, ensuring that a website is easy for the user to view and interact with. Overall, the main objective for the responsive redesign of DURAHOME.org is to increase usability and demonstrate access in order to stay true to the team's tenets: adapting to the needs of a diverse people.



stay tuned for supplementary data

**Chantal Manning**