NVISION BARUCH

CRP / MLA - AAP NYC FALL 2014
URBAN DESIGN STUDIO- BARUCH PUBLIC HOUSING

WXY architecture + urban design
‘... the city will engage the residents and neighbors of NYCHA in a respectful conversation over the local needs and opportunities.’

Housing Plan NYC
DESIGNING AN ENGAGEMENT TOOL

Engage the Community
Bring Revenue to NYCHA & Baruch Houses
Introduce Stakeholders to the concept of Trade-offs
Increase Affordable Housing
Integrate the NYCHA campus in the Neighborhood

OUR MISSION
GOVERNMENT FUNDING DOMINANCE

POLICIES

1937

PRIVATE SECTOR DOMINANCE:
TAX BREAKS AND INCENTIVES

1974

FINANCING GAP

1992

INITIAL HOUSING ACT
SLUM CLEARANCE

2014

GOVERNMENT FUNDING DOMINANCE

FULL FED. FUND
INFILL PLAN
PUBLIC HOUSING REVIVED
STATE SUBSIDY ELIMINATED
CITY SUBSIDY ELIMINATED
FLEXIBILITY REMOVED
FUND FREEZE

GOVERNMENT FUNDING DOMINANCE

1937

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SLUM CLEARANCE

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FUNDING FREEZE

PRIVATE SECTOR DOMINANCE:
TAX BREAKS AND INCENTIVES

1992

FULL FED. FUND
INFILL PLAN
HOUSING PLAN

FLEXIBILITY
STATE SUBSIDY ELEMINATED
CITY SUBSIDY ELEMINATED

PUBLIC HOUSING REVIVED

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PRIVATE SECTOR DOMINANCE:
TAX BREAKS AND INCENTIVES

FINANCING GAP EMERGES
GOVERNMENT FUNDING DOMINANCE

1974

FLEXIBILITY

STATE SUBSIDY ELIMINATED

CITY SUBSIDY ELIMINATED

FULL FED. FUND INFILL HOUSING PLAN

PUBLIC HOUSING REVIVED

FUNDING FREEZE

1992

NYCHA CAPITAL FUND DEFICIT

% NYCHA TENANTS REPORTING MAINTENANCE

$18 BILLION

% 33

POLICY

2003

2014
NYCHA CUMULATIVE CAPITAL FUND DEFICIT

FUNDING SHORTFALL LEFT NYCHA WITH AROUND $18 BILLION DEFICIT
Funding shortfall left NYCHA with around $18 billion deficit in 2011. 34% of NYCHA residents reported 3 or more deficiencies.

In 2011, 34% of NYCHA tenants reported maintenance deficiencies. 32% reported cracked walls, 33% reported water leaks, and 27% reported heating breakdowns.

NYCHA cumulative capital fund deficit.

Policy
BARUCH IS A PLACE OF HIGH PROPERTY VALUE, WITH A LOT OF OPEN SPACE AND UNBUILT AREA
THE NEIGHBORHOOD IS WELL CONNECTED TO THE REST OF NEW YORK CITY THROUGH PUBLIC TRANSIT
PUBLIC TRANSPORTATION

NEIGHBORHOOD
THE NEIGHBORHOOD NEEDS MORE RETAIL OPTIONS
THE NEIGHBORHOOD NEEDS MORE JOBS
15% JOBS INCREASE IN MANHATTAN OVERALL

0.2% JOBS INCREASE IN LES NEIGHBORHOOD

9,000 JOBS IN THE LES IN 2001

DENSITY OF JOBS
- 0 - 150
- 151 - 462
- 463 - 1207

EDUCATIONAL
COMMERCIAL & OFFICE
HEALTH CARE

95% OF LES RESIDENTS TRAVEL OUTSIDE THE NEIGHBORHOOD FOR WORK
THE REAL ESTATE MARKET PUSHES FOR SMALLER HOMES
RESIDENTIAL RENTAL MARKET

NEIGHBORHOOD

STUDIO

1-BEDROOM

2-BEDROOM

3-BEDROOM

3+ BEDROOM

PERCENTAGE OF LISTINGS FOR LEASE

STUDIO

$3.9K $4.8K $7.5K

2-BEDROOM

$3.6K $3.8K

3-BEDROOM

AVG RENT PER SF

$4.44 /MONTH

AVERAGE RENT PER MONTH PER APARTMENT TYPE

OWNER-OCUPIED UNITS

RENTER-OCUPIED UNITS

$50% TO 65%

66% TO 85%

86% TO 100%

$50% TO 65%

66% TO 85%

86% TO 100%

AVG RENT PER SF

$4.44 /MONTH

NEIGHBORHOOD
1. Playground (2.17 Acres)  
   Operated by NYC Parks  
2. Bath House (19,000 SF)  
   Owned by NYC Parks  
3. DeWitt Reformed Church  
4. Lavanburg Homes  
   Owned by NYCHA  
5. Bard High School
EAST VILLAGE

LEGEND
- NYCHA Buildings
- Park and Playground
- Green Space
- Parking

14 Buildings
94,000 SF

7 Playgrounds
106,000 SF

12 Parking Lots
155 Parking Spots

Unbuilt FAR
1.2 Million SF

Building Coverage
15% of Site
DIFFERENT BUILDING TYPOLOGIES AND PROGRAMS OFFER DIFFERENT BENEFITS TO THE COMMUNITY
Revenue for repairs
Local Jobs
Neighborhood amenities

Human Scale
Family Housing
Active Streetfront
Baruch residents along with other stakeholders use ‘Envision Baruch’ to voice their interests and suggestions for the site.

Using Tygron as a simulation tool to explore the potential for transferring underbuilt development rights from Baruch campus to the Lower East Side.

A plan to unlock Baruch development potential and enhance permeability through mixed-use corridors.

Developers analyze the feasibility and potential economic impact of their proposal.

NYCHA integrates the residents in the revenue spending decision-making by adopting a Participatory Budgeting process.

Students are immersed in key topics such as urban planning, finance, trade-offs, and negotiation through a one-week workshop and new game adapted from Envision Baruch.
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PARTICIPATE TO ENVISION BARUCH

SIMULATION
EACH PLAYER REPRESENTS A STAKEHOLDER
NEW YORK CITY

MAIN GOAL:
PREQUIRE AND INCREASE THE NUMBER OF AFFORDABLE HOMES

MAIN ACTION:
APPROVE DEVELOPMENTS
ENFORCE PARKING REPLACEMENT
ENFORCE DESIGN STANDARDS
ADVOCATE FOR INCREASED AFFORDABILITY

STAKEHOLDERS
NYCHA

MAIN GOAL:
GENERATE MONEY TO
REDUCE CURRENT DEFICIT

MAIN ACTION:
LEASE LAND
ADAPTIVELY REUSE
PERFORM MAINTENANCE
BUILD OPEN SPACE AND INFRASTRUCTURE
PRIVATE DEVELOPER

MAIN GOAL:
MAKE PROFITABLE INVESTMENTS

MAIN ACTION:
BUILD
OBTAIN LEASING AGREEMENT
SECURE PERMITS
SECURE RESIDENTS CONSENT
RESIDENTS

MAIN GOAL: INCREASE QUALITY OF LIFE
MAIN ACTION: REPAIR EXISTING BUILDINGS
BUILD OPEN SPACE AND INFRASTRUCTURE
CHOOSE FROM A
MENU OF BUILDING, OPEN SPACE OR INFRASTRUCTURE
TYPOLOGIES
BUILDINGS

3 TOWNHOME

4 MIXED-USE TOWNHOME
   (With ground-floor retail)

7 LOW-RISE RESIDENTIAL

12 TOWER

14 MIXED-USE TOWER
   (With ground-floor retail + two commercial floors)

16 MIXED-USE PODIUM TOWER
   (With ground-floor retail + school on three floors)
## Typologies

<table>
<thead>
<tr>
<th>Buildings</th>
<th>Open Space &amp; Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Townhome</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Mixed-Use Townhome</strong></td>
<td>Community Garden</td>
</tr>
<tr>
<td></td>
<td>Plaza</td>
</tr>
<tr>
<td><strong>Low-Rise Residential</strong></td>
<td>Open Lawn</td>
</tr>
<tr>
<td></td>
<td>Playground</td>
</tr>
<tr>
<td><strong>Tower</strong></td>
<td>Park</td>
</tr>
<tr>
<td><strong>Mixed-Use Tower</strong></td>
<td>Traditional Road</td>
</tr>
<tr>
<td></td>
<td>Traditional Parking</td>
</tr>
<tr>
<td></td>
<td>Permeable Road</td>
</tr>
<tr>
<td></td>
<td>Permeable Parking</td>
</tr>
<tr>
<td><strong>Mixed-Use Podium Tower</strong></td>
<td>Road Bioswale</td>
</tr>
</tbody>
</table>
CONSULT THE FLASHCARDS
ONE CARD PER BUILDING TYPE

- SIZE

FLASHCARDS
ONE CARD PER BUILDING TYPE

- SIZE
- # OF HOMES

FLASHCARDS
ONE CARD PER BUILDING TYPE

- SIZE
- # OF HOMES
- POTENTIAL JOBS ADDED

FLASHCARDS
### One Card Per Building Type

- **Size**
- **# of Homes**
- **Potential Jobs Added**
- **Added Population Estimate**

---

**High-Rise**

<table>
<thead>
<tr>
<th>Market</th>
<th>Market</th>
<th>80/20</th>
<th>80/30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>MU3</td>
<td>MU4</td>
<td>MU5</td>
</tr>
<tr>
<td>Profit</td>
<td>See back</td>
<td>See back</td>
<td>See back</td>
</tr>
<tr>
<td>IRR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Apts</td>
<td>Aff. Apts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>126</td>
<td>84</td>
<td>125</td>
</tr>
<tr>
<td>Bedroom Mix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S 1 2 3</td>
<td>S 1 2 3</td>
<td>S 1 2 3</td>
<td>S 1 2 3</td>
</tr>
<tr>
<td>Population Children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>236</td>
<td>214</td>
<td>234</td>
<td>234</td>
</tr>
</tbody>
</table>
**ONE CARD PER BUILDING TYPE**

- SIZE
- # OF HOMES
- POTENTIAL JOBS ADDED
- ADDED POPULATION ESTIMATE
- PROFIT FOR VARIOUS STAKEHOLDERS

### MARKET HIGH-RISE

- **Market rate/Affordable**
- **Market driven/Family oriented**

<table>
<thead>
<tr>
<th>No. of Floors</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floorplate</td>
<td>7,200 sqft</td>
</tr>
<tr>
<td>Jobs</td>
<td>89</td>
</tr>
</tbody>
</table>

### FLASHCARDS

<table>
<thead>
<tr>
<th>Name</th>
<th>MU3</th>
<th>MU4</th>
<th>MU5</th>
<th>MU6</th>
</tr>
</thead>
<tbody>
<tr>
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<td>See back</td>
<td>See back</td>
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<td>126</td>
<td>84</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>Aff. Apts</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>63</td>
</tr>
<tr>
<td>Bedroom Mix</td>
<td>S123</td>
<td>S123</td>
<td>S123</td>
<td>S123</td>
</tr>
<tr>
<td>Population Children</td>
<td>236 24</td>
<td>214 46</td>
<td>234 24</td>
<td>234 24</td>
</tr>
</tbody>
</table>
STEP 1. PICK A SHAPE
STEP 2. PICK A MIX

AFFORDABILITY MIX
MIXED-INCOME 80/20
UNIT MIX
MARKET-DRIVEN

80/20
STEP 2. PICK A MIX

GROUND-FLOOR RETAIL

SECOND-FLOOR RETAIL

CHOOSE BETWEEN

COMMUNITY CENTER
OFFICE
CLINIC
DAYCARE

80/20
STEP 3. ADD FEATURES

+ FOR EXAMPLE
GREEN ROOF
STEP 2. PICK A MIX

80/20

GROUND-FLOOR RETAIL

COMMUNITY CENTER

OFFICE

CLINIC

DAYCARE

Choose between +

GROUND-FLOOR RETAIL

DAYCARE
STEP 4. GET APPROVALS

CITY PERMIT TO BUILD + NYCHA LEASING AGREEMENT + RESIDENT CONSENT TO BUILD
STEP 5. CHECK RESULTS
### NEW YORK CITY

**INCREASE AFFORDABLE UNITS, JOBS, LIVABILITY**

<table>
<thead>
<tr>
<th>SOCIAL IMPACT ON CITY</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation Open Space Increased</td>
<td>0 sq ft</td>
<td></td>
</tr>
<tr>
<td>Infrastructure Increased</td>
<td>0 sq ft</td>
<td></td>
</tr>
<tr>
<td>Jobs Increased</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Student Increased</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ECONOMIC IMPACT ON CITY</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax Revenue Generated</td>
<td>$ 8,024,910</td>
<td></td>
</tr>
<tr>
<td>Subsidy Spent</td>
<td>$(1,927,026)</td>
<td></td>
</tr>
<tr>
<td>Infrastructure Cost</td>
<td>$ 0</td>
<td></td>
</tr>
<tr>
<td>Community Facility Cost</td>
<td>$ 0</td>
<td></td>
</tr>
<tr>
<td>Recreation Open Space Cost</td>
<td>$ 0</td>
<td></td>
</tr>
<tr>
<td><strong>Net Profit</strong></td>
<td><strong>$ 4,397,884</strong></td>
<td></td>
</tr>
</tbody>
</table>

### PRIVATE DEVELOPER

**MAKE PROFIT, INCREASE MARKET RATE UNITS**

- **Total Sq Ft**: 100,800 sq ft
- **Residential**: 86,400 sq ft
- **Commercial**: 7,200 sq ft
- **Community Facility**: 7,200 sq ft
- **Recreation Open Space**: 0 sq ft
- **Total Units**: 125
  - Market rate: 100
  - Affordable: 25
  - Studio and 1 Bed: 106
  - 2 Bed +: 19

**SOCIAL IMPACT: Private Development**

- **Green Open Space Increased**: 0 sq ft

### RESIDENTS

**INCREASE LIVABILITY, INCREASE OR MAINTAIN INFRASTRUCTURE, REPAIRS**

<table>
<thead>
<tr>
<th>SOCIAL IMPACT</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation Open Space Increased</td>
<td>0 sq ft</td>
<td></td>
</tr>
<tr>
<td>Community Space Increased</td>
<td>0 sq ft</td>
<td></td>
</tr>
<tr>
<td>Jobs Increased</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Population Increased</td>
<td>234</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ECONOMIC IMPACT</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Profits Allocated (10% of NYCHA's)</td>
<td>$ 9,568,606</td>
<td></td>
</tr>
<tr>
<td>Spent on Maintenance</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Spent on New Infrastructure</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Net Profit</strong></td>
<td><strong>$ 9,568,606</strong></td>
<td></td>
</tr>
</tbody>
</table>

**NYCHA**

**INCREASE AFFORDABLE UNITS, JOBS, MEET RESIDENTS NEEDS**

**SOCIAL IMPACT**

- **Recreation Open Space Increased**: 7,200 sq ft
- **Infrastructure Increased**: 7,200 sq ft
- **Jobs Increased**: 19
- **Population Increased**: 234
- **Student Increased**: 24

**ECONOMIC IMPACT**

<p>| | |</p>
<table>
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<td><strong>Net Profit</strong></td>
<td><strong>$ 9,568,606</strong></td>
</tr>
</tbody>
</table>

**Maintenance Priority List**

<table>
<thead>
<tr>
<th>Maintenance Priority List</th>
<th>$ NEED TO ACHIEVE</th>
<th>Current Status</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Heating System</td>
<td>$43,000,000</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>2 Windows</td>
<td>$39,000,000</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>3 Passenger Elevators</td>
<td>$11,300,000</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>4 Light Fixtures + Security</td>
<td>$8,600,000</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>5 Water Infrastructure</td>
<td>$30,600,000</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>6 Bathroom</td>
<td>$29,200,000</td>
<td>N/A</td>
<td>0</td>
</tr>
</tbody>
</table>
Financial impacts are calculated based on a pro-forma tailored to the objectives of the Envision Baruch Simulation.
### Initial Costs Assumptions

<table>
<thead>
<tr>
<th>Pre-Development Costs</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Cost (per lot sqft)</td>
<td>$3,000</td>
</tr>
<tr>
<td>Land Entitlement / Legal Fees (% land cost)</td>
<td>2%</td>
</tr>
<tr>
<td>Professional Fees (% construction cost)</td>
<td>5%</td>
</tr>
<tr>
<td>Land Carry (% land cost)</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development Costs</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Cost</td>
<td>$350</td>
</tr>
<tr>
<td>Insurance During Construction (% construction cost)</td>
<td>1%</td>
</tr>
<tr>
<td>Tax During Construction (% of land cost)</td>
<td>1%</td>
</tr>
<tr>
<td>Affordable Housing Subsidy (per affordable unit)</td>
<td>$65,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Costs</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer Fee (% development cost)</td>
<td>4%</td>
</tr>
<tr>
<td>Contingency (% construction cost)</td>
<td>10%</td>
</tr>
</tbody>
</table>
## OPERATING INCOME ASSUMPTIONS

<table>
<thead>
<tr>
<th>OPERATING INCOME</th>
<th>GROSS POTENTIAL INCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escalation</td>
<td>3%</td>
</tr>
<tr>
<td>Rents</td>
<td></td>
</tr>
<tr>
<td>Affordable</td>
<td></td>
</tr>
<tr>
<td>Low-Income</td>
<td></td>
</tr>
<tr>
<td>Moderate-Income</td>
<td></td>
</tr>
<tr>
<td>Market Rate</td>
<td></td>
</tr>
<tr>
<td>Unit Sizes (sqft)</td>
<td></td>
</tr>
<tr>
<td>3 BD+</td>
<td>$5.04</td>
</tr>
<tr>
<td>3 BD</td>
<td>$5.40</td>
</tr>
<tr>
<td>2 BD</td>
<td>$6.16</td>
</tr>
<tr>
<td>1 BD</td>
<td>$8.72</td>
</tr>
<tr>
<td>Studio</td>
<td>$12.33</td>
</tr>
<tr>
<td>Micro-Units</td>
<td>N/A</td>
</tr>
<tr>
<td>Additional Rent (% of gross potential rent)</td>
<td>10%</td>
</tr>
<tr>
<td>Less: Vacancies</td>
<td>5%</td>
</tr>
<tr>
<td>Less: Concessions</td>
<td>2%</td>
</tr>
</tbody>
</table>

### OPERATING COSTS

- Residential: 10%
- Retail/Office: 10%

### PROPERTY TAX RATE

- Residential Affordable: 0%
- Residential Market Rate: 12.90%
- Commercial: 12.90%
LAND LEASE ASSUMPTIONS

FOR THE PURPOSE OF THE SIMULATION:

The developer provides NYCHA with a lump sum payment for the ground lease at year 0.

Lump Sum Payment = $3000 psf Land Cost

NEW YORK CITY HOUSING AUTHORITY
STEP 5. CHECK RESULTS

RESIDENTS
GRADE
NYCHA