QUANTITIES AND COMPARISONS
Total retail area

as factor of Manhattan land surface area (Manhattan = 60.88 km² / 23.7 miles²)

Total retail area, World = 33 x Manhattan land area
FIGURE 4.2: Female-Male Ratios in Total Population in Selected Communities

Source: Calculated from UN Population Statistics.
Major Air Cargo
Kate Asher, The Works

Major Air Cargo
Imports and Exports, 2004
(1000 metric tons)

EXPORTS

Machinery 83.98 tons
Leather/Bags 19.75 tons
Vegetables 26.69 tons
Plastic 26.93 tons
Fish/Seafood 28.52 tons
Footwear 29.20 tons
Optic/Medical Instruments 37.62 tons
Electrical Machinery 76.62 tons
Woven Apparel 128.77 tons

IMPORTS

Machinery 96.18 tons
Misc. Chemical Products 13.45 tons
Pharmaceutical products 11.47 tons
Perfume/Cosmetics 15.37 tons
Books/Newspapers 15.74 tons
Paper/Paperboard 20.41 tons
Plastic 30.63 tons
Optic/Medical Instruments 38.29 tons
Fish/Seafood 15.79 tons

A pie chart showing the major air cargo imports and exports for 2004.
Aftermath of Haiti Earthquake
Emily Schwartzman, GOOD Magazine

AFTERMATH OF THE HAITI EARTHQUAKE

Thousands of Lives Devastated

<table>
<thead>
<tr>
<th>ESTIMATED DEATHS</th>
<th>INJURIES</th>
<th>HOMELESS</th>
<th>NEED FOOD</th>
<th>HARDEST HIT POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>200,000</td>
<td>196,595</td>
<td>1,100,000</td>
<td>2,000,000</td>
<td>3,725,615</td>
</tr>
</tbody>
</table>

■ = 100,000 PEOPLE

Total Population in Haiti 10,000,000

Estimated Age of the Hardest Hit Population

<table>
<thead>
<tr>
<th>AGES 0-9</th>
<th>AGES 10-19</th>
<th>AGES 20-39</th>
<th>AGES 40-59</th>
<th>AGES 60+</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.7%</td>
<td>23.8%</td>
<td>30.4%</td>
<td>15%</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

Hardest Hit Population 3,725,615

50% < 20 years old

Already the Poorest Country in the Western Hemisphere

PEOPLE LIVING IN POVERTY: 80%

HAITI GDP ($USD): $6.95 Billion

UNITED STATES GDP ($USD): $14.2 Trillion

Relief Efforts

TOTAL HUMANITARIAN FUNDING ($USD): $1.55 Billion

TOTAL HUMANITARIAN ASSISTANCE: $2.35 Billion

$100 Million Uncommitted Pledges

NOTE:
FUNDING = CONTRIBUTIONS + COMMITMENTS

Commitment: creation of a single, contractual obligation between the donor and recipient entity, specifying the amount to be contributed.

Contribution: the actual payment of funds or transfer of in-kind goods from the donor to the recipient entity.

Pledge: a non-binding announcement of an intended contribution or allocation by the donor.

*Estimates from UNHCR for full coordination of humanitarian efforts.
## Construction Cost Matrix

Rael San Fratello Architects, WPA 2.0 Design Competition

<table>
<thead>
<tr>
<th>Fence Typologies</th>
<th>BURJ DUBAI</th>
<th>GOLDEN GATE BRIDGE</th>
<th>L.A. AQUEDUCT</th>
<th>SOLAR FARM</th>
<th>THE HIGHLINE</th>
<th>CA STATE RT. 4 BYPASS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COST COMPARISON PER SQ. FT</strong></td>
<td>$170/sq.ft</td>
<td>$256/sq.ft</td>
<td>$483/sq.ft</td>
<td>$568/sq.ft</td>
<td>$1563/sq.ft</td>
<td><strong>1.00</strong></td>
</tr>
<tr>
<td><strong>BURJ DUBAI</strong></td>
<td>× 0.76</td>
<td>× 1.2</td>
<td>× 2.2</td>
<td>× 2.6</td>
<td>× 7.1</td>
<td><strong>1.00</strong></td>
</tr>
<tr>
<td><strong>GOLDEN GATE BRIDGE</strong></td>
<td>× 0.16</td>
<td>× 0.24</td>
<td>× 0.45</td>
<td>× 0.53</td>
<td>× 1.5</td>
<td><strong>1.00</strong></td>
</tr>
<tr>
<td><strong>L.A. AQUEDUCT</strong></td>
<td>× 1.2</td>
<td>× 1.9</td>
<td>× 3.5</td>
<td>× 4.2</td>
<td>× 11</td>
<td><strong>1.00</strong></td>
</tr>
<tr>
<td><strong>SOLAR FARM</strong></td>
<td>× 42</td>
<td>× 64</td>
<td>× 121</td>
<td>× 142</td>
<td>× 391</td>
<td><strong>1.00</strong></td>
</tr>
<tr>
<td><strong>THE HIGHLINE</strong></td>
<td>× 0.43</td>
<td>× 0.64</td>
<td>× 1.2</td>
<td>× 1.4</td>
<td>× 3.9</td>
<td><strong>1.00</strong></td>
</tr>
<tr>
<td><strong>CA STATE RT. 4 BYPASS</strong></td>
<td>× 4.4</td>
<td>× 6.6</td>
<td>× 13</td>
<td>× 15</td>
<td>× 41</td>
<td><strong>1.00</strong></td>
</tr>
</tbody>
</table>
Katrina’s Diaspora

One of the best snapshots of how New Orleans area residents were scattered by Hurricane Katrina may come from the post office. Since the storm struck last year, more than 270,000 households have filed change of address forms, including about 200,000 that still listed an address outside New Orleans and its surrounding parishes as of July 1.

Current population estimates vary, but most put the city’s population between 260,000 and 250,000, down from 480,000 before the hurricane. Estimates suggest that tens of thousands have also left nearby parishes.

Many evacuees stayed relatively close to home, moving to less hard-hit areas in Louisiana, but Southern cities like Houston, Dallas and Atlanta also saw a large influx of people.

The number of households having mail forwarded outside the New Orleans area peaked at the start of the year, and has come down slightly as some displaced residents have begun to return.

Number of New Orleans area households that had mail forwarded outside the area

<table>
<thead>
<tr>
<th>Month</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 2005</td>
<td>250,000</td>
</tr>
<tr>
<td>Jan. 2006</td>
<td>220,000</td>
</tr>
<tr>
<td>Apr. 2006</td>
<td>200,000</td>
</tr>
<tr>
<td>July 2006</td>
<td>150,000</td>
</tr>
</tbody>
</table>

Notes: The New Orleans area includes ZIP codes that begin with 700 and 791. Destination ZIP codes with fewer than 25 households are not shown. The post office asked people to use their pre-hurricane address on change of address forms if they made multiple moves during the year, those that did not may not have their final destination included.

Where New Orleans area residents moved, based on change of address forms filed with the post office:

- Circles are sized according to number of former New Orleans area households in each ZIP code region, as of July 1.
## Rebuilding Progress in New Orleans

**The New York Times**

### Households
- Actively receiving mail in Orleans Parish
- **Before Hurricane Katrina:** 158,232
- **2 Years Later:** 152,904

### Non-farm Jobs
- in New Orleans metropolitan area
- **6 Years Later:**
  - **13,461**
  - **12,400**
  - **11,100**
  - **10,200**

### Labor Force
- in New Orleans metropolitan area
- **6 Years Later:**
  - **517,539**
  - **539,723**
  - **534,451**

### Unemployment
- Rate in New Orleans metropolitan area
- **6 Years Later:**
  - **5.6%**
  - **4.2%**
  - **4.6%**
  - **7.2%**

### Child Care Centers
- Open in Orleans Parish
- **6 Years Later:**
  - **68**
  - **112**
  - **142**

### Public Schools
- Open in Orleans Parish
- **6 Years Later:**
  - **275**
  - **381**

### Single Family Home Sales
- in New Orleans metropolitan area
- **6 Years Later:**
  - **1,376**
  - **1,664**
  - **889**
  - **792**

### Average Daily Transit Riders
- For the New Orleans regional transit authority
- **6 Years Later:**
  - **71,543**
  - **19,744**
  - **12,945**
  - **11,007**

### Permits for New Residential Housing Units
- In Orleans Parish, June
- **6 Years Later:**
  - **85**
  - **100**
  - **89**

### Fair-Market Rent
- Two-bedroom apartment in New Orleans metropolitan area
- **6 Years Later:**
  - **$676**
  - **$697**
  - **$709**
  - **$749**

### Unoccupied Addresses
- Orleans Parish
- **6 Years Later:**
  - **2008:**
    - Vacant or abandoned homes: 70,318
    - Total addresses: 212,647
  - **2009:**
    - Vacant or abandoned homes: 62,557
    - Total addresses: 233,016
A look at neighborhood segregation in Baltimore 50 years after the civil rights movement. Baltimore is often dubbed the ‘city of neighborhoods’, having over 300 identified districts within its borders. Despite efforts to promote integration, Charm City’s neighborhoods still remain very much segregated.

RACIAL DEMOGRAPHICS

**WHITE**
- High 88% St. Helena-Dundalk
- Low 1% Walbrook - Forest Park

**BLACK**
- High 97% Walbrook - Forest Park
- Low 5% Roland Park - Cross keys

Total 205,982
Total 418,951

**Baltimore**
- White
- Black
- Other

**Maryland**
- White
- Black
- Other

**United States**
- White
- Black
- Other

**POPULATION DENSITY**

People per square mile

**EDUCATION**

Bachelor’s degree or higher

**POVERTY**

Living below poverty level


Design: Jenny Wang, www.jenngstudio.com
Figure 35. Commercial Services Classification and Breakdown
Source: Field Survey, September 2007

Further research shows that 22% of the developable land in the district is strictly commercial while another 33% is defined as mixed use, which in most cases has a retail component. The pie chart shows the various retail and service categories that exist in the SSA and is weighted by the number of businesses that fall within each category. This chart shows the wide range of goods that are available locally to the residents of Wicker Park-Bucktown.
The team collected boarding and alighting data provided by the CTA at each bus stop location in the SSA. This data is shown on Figure 55 and illustrates that the Milwaukee/Division/Ashland and Milwaukee/North/Damen intersections are the busiest bus boarding locations in the study area. As can be seen from the graphic, there are numerous bus stop is in the SSA that have very low boarding numbers.
The Race for Raw Materials
Thanks to aggressive deal making in the sub-Saharan, China has dramatically boosted its economic footprint in Africa.

Increase in Exports From Africa, 1998–2006

402%  
2,126%
Dead Heat

China and the U.S. are now neck-and-neck in their skyrocketing appetite for Africa’s riches.
Solar Power Share of Global Energy
Feltron, Fast Company

The Graph
Projected Share by Source of Annual Global Energy Production, in Exajoules* per year.
Rachel Getting Married

The problem in "Rachel Getting Married" — not the problem with the film, mind you — is that even though Rachel is the one getting married, it’s all about Kym, her younger sister. Kym, played by a decidedly un-princessy Anne Hathaway, is furloughed from rehab for the happy event, arriving at her father’s rambling Connecticut clapboard house on a toxic cloud of snark, cigarette smoke and wounded narcissism. With her pale, slack features and dark-rimmed eyes framed by severe bangs, Ms. Hathaway resembles the silent film star Louise Brooks in "Pandora’s Box," except that Kym is less like the curious maiden of Greek mythology than like the box itself: a bottomless repository of guilt, destructiveness and general bad feeling.

Read Rest of NYT Review »
Building Heights Diagram
SCAPE, Bird-Safe Building Guidelines

WATERFOWL

SHORE BIRDS

SONGBIRDS & RAPTORS

DAYTIME COLLISION ZONE

INFO CREDIT: FXFOGLE ARCHITECTS
BRUCE FOWLE, E.J. McADAMS - 3/11/05
Deploying the Devoider
Interboro Partners, Urban Voids Design Competition
Religion
Tibor Kalman, Colors Magazine
What are you doing right now?
Tibor Kalman, Colors Magazine
CONCEPTS
The Three Magnets
Ebenezer Howard, Garden Cities of Tomorrow
City Form Diagrams
Kevin Lynch, *The Image of the City*
Duck and Decorated Shed
Robert Venturi and Denise Scott Brown, *Learning from Las Vegas*
The Blue Banana
Roger Brunet
Greenwich Street Idea Collages
Downtown Alliance, Greenwich Street South Framework Plan
Two Cycles: Two Futures

Justice Reinvestment offers an alternative to the current cycle of incarceration and return in Orleans Parish. Two choices confront residents, community groups, and government officials as they continue to rebuild the city. They can deepen the current dependence on a criminal justice exostructure that siphons money and jobs away from their own neighborhoods and toward prison communities hundreds of miles away, or they can reinvest public resources in neighborhood institutions and infrastructure, networking existing assets and building new ones. All citizens have something at stake in the outcome of this decision.

This diagram describes two options for criminal justice infrastructure in the city: 1. as an exostructure, cycling people and money from their neighborhood to prison and back; or 2. as an infrastructure, which keeps people and money in their neighborhood by investing in alternatives to incarceration, education, arts, economic development, health, recreation and beyond.
ALTERNATIVE DATA MAPPING STRATEGIES

The Detroit Collaborative Design Center invited students at Harvard's Graduate School of Design (where I was cross-registered) to produce a set of maps for a forthcoming publication aimed at visualizing underecognized geographic patterns in the city's built form, history, culture, and politics. The publication is to be inexpensively produced and distributed freely to city residents in an effort to counter an overabundance of discouraging and incomplete data on population and income loss. My approach began with Harvard's 2000 Social Capital Community Benchmark Survey, a general conclusion of which was that measures of social capital decreased nationwide with reported income. Knowing anecdotally that, in the absence of traditional civic structure, many Detroiters are well-connected to other less official groups, I investigated the robustness of the trend for the Survey's Detroit sample. Using GIS, I mapped respondents' group memberships by reported income and further disaggregated responses to reveal uneven correlations between the two variables. I produced a series of illustrative diagrams to convey the differences between responses both quantitatively and qualitatively.

In general, the survey did find a downward trend in social capital corresponding to decreasing income in Detroit. The number of total group affiliations followed this trend in membership in hobby groups, parents associations, youth groups, and fraternal organizations all appeared to decrease with income. However, affiliations with other groups either showed no income-related trend or showed a rise in group memberships with decreasing income in the Detroit sample. Some of these patterns (in arts, religious, and self-help groups) were present whether income levels considered were those reported by respondents or the median income of the census tract in which he or she lived. While the survey data supports the theory that lower income correlates with lower total average number of group memberships, it also suggests the possibility of either increased opportunity or increased interest, perhaps particularly among women, for certain kinds group memberships among low income Detroit residents, residents of low-income Detroit communities, or both.

1 The survey had a total of 36,098 respondents nationwide, and 195 in the City of Detroit. The 195 included in this paper were those who reported income within one of the given classes, and for whom census tract was calculated.
Hybrid Constituency Diagrams,
Alice Shay, Harvard GSD Career Discovery, Summer 2006
A "Bio-mimetic" Solution on the Horizon
Scientists have concluded that birds perceive UV daylight as a separate, enhanced color. In fact, most birds have UV-colored plumage that is invisible to humans but important to birds in distinguishing among bird species and sexes. UV vision is also important for bird’s orientation during migration and it facilitates feeding practices. Given bird’s receptivity to UV light, it is possible to develop a "bio-mimetic" solution for bird-safe glass.33

Example: Emerging Technology
UV Reflective Coatings: Glaswerke Arnold's Ornilux Glass
"According to Christian Treischner, Director of Applied Technologies at Glaswerke Arnold, Ornilux glass uses a unique UV reflective coating that allows birds to easily identify glass surfaces and therefore avoid collisions with them. "Our new application is based on the anti-bird-strike patent and basic research conducted by Dr. Alfred Meyerhuber which examined the use of glass coatings and the UV vision of birds.""

(For more information, see source: http://www.glaswerke-arnold.de)
THE WORD ON

security deposit

Your landlord can’t charge more than one month’s security deposit. If you live in a building with six or more apartments, your building owner must also place your security deposit in an interest-bearing account, inform you of the bank name, and add the interest that it earns.
CHANGE
Welcome to the
New Climatic Territories of New England
to be established by 2070
Napoleon’s March to Moscow
Charles Joseph Minard
Diversification Diagrams
Field Operations, The High Line
A Trio of Aqueducts
To contend with various geological conditions, sections of the aqueducts serving New York City were built at different depths along the route toward the city.

To ensure stability, the tunnel needed to be placed under at least 150 feet of granite.
Lollapalooza 1992 As I Remember It
Andrew Kuo

Duration of the day

1. It was all worth it! The months of saving money! The traveling! The crowds! The sunburn!
2. I know all the songs from every band and I got my glasses on! LET'S DO THIS!
3. This is pretty fun... Let's try to repeat this every weekend!
4. Wait, I can't see. What's going on? What are those tiny dots in the distance?
5. Walking around. Catching glimpses. It all sounds like mush... sort of like my brain.
6. Please take me home... I've had enough. My bed misses me.

Red Hot Chili Peppers  Ministry  Ice Cube  Soundgarden  Pearl Jam  Lush  Rage Against the Machine  Porno for Pyros  Cypress Hill  Seaweed  Stone Temple Pilots  Seam  Jim Rose Circus  (Driving)
Many elderly residents chose not to return, leaving scores of empty lots and vacant properties.

Interviews

Brian Eastwold
Unsure whether to renovate or rebuild, he lives in a trailer in his backyard.

Amanda Gaffney
Ms. Gaffney and her parents are legally blind. They used retirement and education funds for renovations.

Julie Maggio
"Being away was the hardest part," says Ms. Maggio, who moved back in June.
Two Centuries of Streetlights
Kate Asher, The Works

1807
Among the earliest lampposts were those made of wood, which burned oil.

1825
Gas streetlighting was first installed in New York City in 1825 and continued into the twentieth century.

1892
The first ornamental lamppost was placed on Fifth Ave. in 1892 and was limited to that street.

1900
The bishop's crook, which appeared at the turn of the last century, was the second ornamental electric streetlight. It was reproduced in 1980.

1908
The boulevard system was designed for streets with center malls. Mast arm lights reached over the roadway.

1980
The original cobra streetlight featured a pendant light with the recognizable octagonal pole.
NETWORKS AND FLOWS
Connecting the Distant Dots
Always with Honor
From the Ground Up
Michael Haggerty, Raj Kottamasu, Resilient City Design Ideas Competition

DISTRIBUTION
- Neighborhood Market
- Schoolyard Markets
- Brick Street Exchange

CONSUMPTION
- Households
- Restaurant Co-op
- Short Order Restaurants

PROCESSING
- Home Kitchens
- Commercial Kitchen
- Restaurant Co-op

WASTE
- Backyard Compost Piles
- Allotment Garden Piles
- Cogeneration Facilities

PRODUCTION
- Backyard Gardens
- Allotment Gardens
- Hydroponic Greenhouses
- Brick Street Trees
- Chicken Coops
- Mushroom Containers
Planning Process Diagram
SHoP, East River Waterfront Esplanade Plan
Visitor Circulation in Tate Modern
Space Syntax
Free Water District
Urban Lab, WPA 2.0 Design Competition

Free Water District
FWD Rules: Expanded

Usage
Industry
Manufacturing
Faucets
Toilets
Green Roofs

Intake & Use

FWD Landscape

Industrial Bio Machine & Energy Harvest
Microbial Fuel Cells Harvest Energy
Geothermal Mitigates Energy Use
UV Disinfects Water
Hydroponic Reactors Recover Nutrients

Filtration
UV Disinfection
Nano
Ultra
Micro
Coarse

Gray Water
Toilets
UV Disinfection
Osmosis
Micro Filtration
Green Roofs

The Great Lakes

Bioremediation Wetlands
Geothermal

Pervious Paved Roads
Geothermal

Construction Wetlands
Two Week Detention for Final Polishing Before Returning to Lake
Urban Strategy Diagram, Grand Rapids Made

Grand Rapids Made - Urban Strategy

the importance of being urban

existing

proposed

legends

- red: institutions
- black: anticipated furniture activities
- blue: existing furniture activities

urban - suburban

1994 - present (proposed)
1945 - present
1850 - 1945

Urban Strategy Diagram, Grand Rapids Made
Beth Campbell
Tracking a Few Common Personal Myths and Some Notable Public Restrooms