Fashioning the Unfashionable: An Architecture of Waste

Alyson Canal
Syracuse University

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FASHIONING THE UNFASHIONABLE
AN ARCHITECTURE OF WASTE

Alyson Canal
Syracuse University
School of Architecture
Fall 2012/ Spring 2013

Advisors Larry Bowne & Sinead Mac Namara
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Infrastructure, although typically mundane and overlooked, arranges the fabric of a city, “articulating the aspirations and dignity of contemporary society.” Although infrastructure provides essential services that manage and facilitate society, the public resists their “disruptive” physical presence and limited, strictly utilitarian agenda (minimum public access and maximum effect on the public). Infrastructure cannot be ignored. Infrastructure belongs in the designed environment, and requires a clear and complex identity.

As Stan Allen notes, instead creating barriers and divides within a city, “infrastructural urbanism” can develop and organize a city. Infrastructure should be given a clear identity and celebrated within the realm of the city, responding to its context. Infrastructural facilities are the new public realm, and their design must embrace the public it so directly affects by providing public space and desirable programs. Architecture can mend a break in an urban fabric, and an architectural design applied through the lens of fashion can facilitate collectivity by bringing an unfashionable infrastructure into the designed environment.

Waste management is one of the least pleasant infrastructural systems and embodies the typical “out-of-sight, out-of-mind” notion of infrastructure. The average American produces almost 4.5 pounds of garbage per day, and waste removal, displacement and disposal is a growing issue. New York city has been accommodating waste for decades, currently displacing their waste to six different states, hundreds of miles away from the point of production. One of the most unfashionable regions of pollutants and waste is the Newtown Creek, dividing Brooklyn and Queens. Newtown Creek was once the most travelled maritime industrial waterway in the U.S. - a center for commerce and industry. Its industrial identity, however, has created tension between the residential and industrial landscapes, creating a break in the urban fabric. At the convergence of residential, commercial and industrial landscapes, the project site will not only mend the break, but engage the opposing landscapes.

A material recovery facility (MRF) would address the issues regarding infrastructure, maintain the industrial identity of the Newtown Creek and provide opportunities for public engagement. By fashioning a material recovery facility through the lens of fashion, the collectivity and public engagement demanded by the site is to engage the surrounding public/city/landscape through an architecture that facilitates collectivity and awareness.

Collectivity and temporality are issues pertinent not only to the fashion industry, but also to the infrastructural issues of waste. The logic of fashion, and the constant notions of re-invention, assimilate themselves to the processes of determining and collecting waste. Designers, regardless of their discipline, are constantly influenced by the past, reinterpreting it in search for “the new”, in search for innovation and invention that will impact society. Studies of fashion in terms of collective selection and temporality reflect the ways in which one determines whether or not something is “use-ful” or “use-less.” When is something considered to be waste? When is a purpose fulfilled? When is something no longer relevant and no longer “in fashion?”

It is evident that there exists a connection between architecture and fashion, and more significantly fashion and waste. Fashioning a material recovery facility through the lens of fashion facilitates the collectivity and public engagement the site demands.

Fashion frames what we consider architecture. Fashion frames what we consider waste. The social mechanism and temporality of fashion provides a framework within which an architecture of waste can be designed that not only addresses the issues of mundane infrastructure, but also issues of collectivity and public engagement.

Fashion is “the mode of dress, etiquette, furniture, style of speech, etc. adopted in a society for the time being.” Fashion, while widely publicized, is an art generally dismissed in the minds of scholars and theorists, considered to be something frivolous, superficial and ephemeral. Fashion is an integral part of society, a social mechanism that is relevant to almost every aspect of the modern world. Greater than clothes and trends, fashion exists as a “series of cultural currents,” an ideology through which architecture can be examined, based on cultural, formal and theoretical systems. Architecture and fashion are two design disciplines that not only share techniques, materials, processes and vocabulary, but also each discipline, in its most basic element, designs for the human body and serves as means to express identity.

To fashion the unfashionable is to reconsider infrastructure as a mediator, connector and collector of its urban surrounding. To fashion (v. “to modify, to transform”) the unfashionable (n. “not in/of prevailing use”) is to give infrastructure a celebrated identity. Infrastructural facilities were once symbols of civic pride, representing technological modernization, cultural values and a “utility + beauty” ideal. During the mid-twentieth century, infrastructure was disregarded as opportunity for experimental design, becoming strictly utilitarian, removed from and ignored by the public which it impacts. To “fashion” is to engage the surrounding public/city/landscape through an architecture that facilitates collectivity and awareness.

Studies of fashion in terms of collective selection and temporality reflect the ways in which one determines whether or not something is “use-ful” or “use-less.” When is something considered to be waste? When is a purpose fulfilled? When is something no longer relevant and no longer “in fashion?” It is evident that there exists a connection between architecture and fashion, and more significantly fashion and waste. Fashioning a material recovery facility through the lens of fashion facilitates the collectivity and public engagement the site demands.

Waste management is one of the least pleasant infrastructural systems and embodies the typical “out-of-sight, out-of-mind” notion of infrastructure. The average American produces almost 4.5 pounds of garbage per day, and waste removal, displacement and disposal is a growing issue. New York city has been accommodating waste for decades, currently displacing their waste to six different states, hundreds of miles away from the point of production.

One of the most unfashionable regions of pollutants and waste is the Newtown Creek, dividing Brooklyn and Queens. Newtown Creek was once the most travelled maritime industrial waterway in the U.S. - a center for commerce and industry. Its industrial identity, however, has created tension between the residential and industrial landscapes, creating a break in the urban fabric. At the convergence of residential, commercial and industrial landscapes, the project site will not only mend the break, but engage the opposing landscapes.

A material recovery facility (MRF) would address the issues regarding infrastructure, maintain the industrial identity of the Newtown Creek and provide opportunities for public engagement. By integrating artist studios and exhibition space with the operations of a waste management facility, the project addresses its surrounding context and engages the public. The art of waste is representative of the values (or lack thereof) of a culture at a time, operating similar to fashion and architecture. The MRF/Exhibition would continue to sustain modern society without proving detrimental to the lifestyles of those in its vicinity.
INFRASTRUCTURE IS IGNORED
EXISTING INFRASTRUCTURAL CONDITIONS
Infrastructure is “the basic physical and organizational structures and facilities needed for the operation of a society or enterprise.” Over the past centuries, infrastructure has altered the built environment with its commanding, yet ignored presence. Infrastructural systems manage complex systems “of flow,” whether transportation, communication, water, waste or energy, maintaining the basic functions that sustain society.

The mere physical presence of infrastructure reduces the quality of its environmental context. Although infrastructure sustains modern living, it degrades the lives of those who live, work, study and play in their vicinity. Infrastructure divides neighborhoods and harms ecosystems. The public is resistant to infrastructure’s disruptive presence and inevitable threat to pleasant living.

Infrastructural facilities serve a single, utilitarian purpose; one that has a maximum affect on the public, but minimum public access and engagement.

Typically “out-of-sight, out-of-mind,” infrastructure is ignored regardless of its significant impact on our society and culture.

Infrastructure is “designed” ("to create, fashion, execute, or construct according to plan") for the strictly utilitarian purpose of sustaining modern living. Infrastructure is “designed” to function, but nothing more. Infrastructure lacks “design” ("the arrangement of elements or details in a product or work of art"). “Design” is a marriage of functionality and beauty. “Design” incorporates the engaging context. “Design” activates the surrounding environment. “Design” responds the changing times and values of culture. Existing infrastructure is “designed” but lacks “design.”

Infrastructure relates to architecture, industrial design, and fashion through its relationship to the human body. Fashion is a second skin to the body. Architecture is a vessel for the body. Infrastructure is invisible to the body, yet sustains its daily operations. Each of these disciplines is “designed” but range on the scale of “design.”
Infrastructure is ignored because of its proximity (or lack thereof) to the human body. Designed as something almost entirely utilitarian, its high functionality results in minimal chances of becoming obsolete. It is needed to function as a society, but it is something so separate from the bodies it connects/affects.

Vitruvius, in his treatise, *Ten Books on Architecture*, addresses the “ethos of architecture, declaring that quality depends on the social relevance of the artist’s work...” arguing that an ideal architecture maintains *firmitas, utilitas* and *venustas*, ideals that are still relevant today. It is evident that the commodity, firmness, and delight or a design aligns with the proximity of the body to the work.

As Vitruvius states, architecture strives to maintain a balance between firmness, commodity and delight, relating directly to its purpose as a vessel for the body. Architecture is a balance between art and function, serving as shelter and protection, containing (un)prescribed program and facilitating the body.

Industrial and furniture design, similar to architecture, must maintain a balance between utility and beauty. Serving as support for the body and directly contacting the body makes these designs both potentially beautiful and functional. If utility is sacrificed for beauty, the object become useless, no longer serving its intended purpose.

Fashion, while needing to maintain integrity in structure, can be less practical and more dramatic/beautiful. Acting as a second skin to the body, fashion is the most aesthetically pleasing, responding to its immediate proximity to the body.

Proximity and relationship to the body directly affects the design and relevance of utility versus beauty (or a marriage of both).

---

**UTILITY VS. BEAUTY**

**DESIGN & RELATIONSHIPS TO THE BODY**

**COMMODITY** *utilitas*

Utility, functionality, practicality, pragmatic design allowing for ease of use

**FIRMNESS** *firmitas*

(Structural) integrity, soundness, materials chosen with care for function

**DELIGHT** *venustas*

Beauty, aesthetic quality, engaging when the encounter with a work is pleasing

Infrastructural planning has a single agenda. Due to its emphasis on utility and function, infrastructure typically lacks “delight” because there is no/minimal bodily contact between the user and the structure.
INFRASTRUCTURAL “VISIBILITY”
INFRASTRUCTURE & RELATIONSHIPS TO THE BODY

Historically, infrastructural facilities were objects of civic pride and icons of societal progress. These icons of infrastructure were of monumental beauty, demonstrating a city’s/region’s/nation’s development. Up until the mid-twentieth century, infrastructure was not hidden from the public - it was celebrated and embraced.

Icons such as the Brooklyn Bridge (Figure 1.5) were designed with their high-visibility profile in mind, representative of technological developments in the late nineteenth century - a fusion of beauty and utility. The public directly engaged in the activities pertaining to the bridge, influencing its beauty and design.

There is no longer such an emphasis regarding the “design” of infrastructure. Celebrated infrastructure no longer exists. “Design” and re-invention are no longer supported or funded by the public.

The relationship of the human body to the different infrastructural systems reflects the prominence of design. Transportation systems (trains, roads, bridges, etc.) are of high visibility, in which the body is only separated from infrastructure by means of a vehicle or train car. Communication systems, however, are less visible, but still within proximity of the body through a secondary device (cell phone, computer, etc.).

“Invisible” infrastructure, however, is completely separate from the human body. Instances such as industrial production (where the user only interacts with the end product) or waste management (in which the user only interacts with the project before he sends it away) are “invisible” systems of infrastructure. Historically, these systems of production and management have not always been hidden; the Municipal Asphalt Plant in New York City (Figure 1.6, and was designed by prestigious architects Kahn and Jacobs in the beginning of the twentieth century. Although no one but the workers/operators of the plant accessed the area, it was still carefully designed as a monument on the East River, for all passer-byers to understand the significant developments of the nation. Even though there was no human interaction there was still an acknowledgment to the structure and its impact on society.

Infrastructure can no longer remain “un-fashionable” and separate from the designed environment.
1 INFRASTRUCTURE BELongs IN THE DESIGNED ENVIRONMENT
APPLICATIONS OF ARCHITECTURE AND FASHION
Infrastructure is the new public sphere – we are running out of space and money to continuously create more public (green) space. Infrastructure serves as an opportunity to provide this necessary space for its surrounding environment. Infrastructure has the potential to “give back” to its society by containing multi-agenda programs, housing more than just facilities necessary for the infrastructure to function.

Infrastructure must be embraced and celebrated as a public space. Infrastructure must provide information and connect people back to the operations that sustain activities of modern living. Infrastructure can no longer break the urban or natural fabric, it must mediate the landscape and connect its surrounding environment. As Stan Allen states, “infrastructural urbanism offers a new model for practice and a renewed sense of architecture’s potential to structure the future of the city.”

Infrastructure must be celebrated, given a clear and complex identity.

To “fashion” (v. “to modify, to transform; to make, as in fabricate”) the “unfashionable” (n. “not in/of prevailing use”) is to transform the utilitarian program of infrastructure must be re-considered to serve the public in more ways than one.

To design is to create a style (“a manner of doing something; design or make in a particular form”), and a style can be fashionable or unfashionable (“of prevailing use”), depending on the context and treatment of the object. The “unfashionable” infrastructural typology must be re-considered as something greater than strictly utilitarian. Infrastructure belongs in the designed environment.
INFRASTRUCTURE
n. “[typically utilitarian] structures for the operation of society or needed for the economy to function; essential facilities including transportation, energy, water, waste, communications, etc.”

ARCHITECTURAL DESIGN
n. “focuses on the components or elements of a structure or system and unifies them into a coherent and functional whole, according to a particular approach in achieving the objective(s) under the given constraints; the art or practice of designing and constructing buildings; the style of a building with regard to a specific period, place, or culture”

FASHION
n. “the [desirable] mode of dress, etiquette, furniture, style of speech, etc. adopted in society for the time being”
v. “to modify, to transform; to make, as in fabricate”
1 ANALYTICAL & COMPARATIVE DIAGRAMS
FOUR DISCIPLINES

Infrastructure
Architecture
Industrial Design
Fashion
DURATION  extent or length of time, how long does it last

TIMELINESS  changes in our ways, how long do we choose to make it last

[Graphs showing timelines for Infrastructure, Architecture, Industrial Design, and Fashion, with durations ranging from years to half centuries.]
### TEMPORALITY
Transitory state of being, a typology, change

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Temporality of “operations” through/within: waste, traffic, water, telephone, internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td>Building typologies with the potential to be altered to suit the needs of that environment/society at the time</td>
</tr>
<tr>
<td>Industrial Design</td>
<td>Furniture or industrial design typologies with standard functions are then altered and (re)designed based on user, context, etc.</td>
</tr>
<tr>
<td>Fashion</td>
<td>Temporality in styles and the cyclical nature of fashion(able): fads, fashion, classics</td>
</tr>
</tbody>
</table>

### SCALE
Space of occupation

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Belongs to the: country, state, region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td>Belongs to the: community, neighborhood, city</td>
</tr>
<tr>
<td>Industrial Design</td>
<td>Belongs to the: room, body</td>
</tr>
<tr>
<td>Fashion</td>
<td>Belongs to the body</td>
</tr>
<tr>
<td>UTILITY</td>
<td>transitory state of being, a typology, change</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>INFRASTRUCTURE</td>
<td>Mid 20th - 21st century, infrastructure as provision of needs and services to run society. Strictly utilitarian and single-purpose</td>
</tr>
<tr>
<td>ARCHITECTURE</td>
<td>Functions for basic programmatic requirements</td>
</tr>
<tr>
<td>INDUSTRIAL DESIGN</td>
<td>Exists and functions to provide “defined” services, i.e. chair to sit</td>
</tr>
<tr>
<td>FASHION</td>
<td>Functions as protection of the body from the elements and surrounding environment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BEAUTY</th>
<th>space of occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFRASTRUCTURE</td>
<td>19th - mid 20th century, infrastructure as monument, as an icon of technological advances and of civic value. Maintains functionality</td>
</tr>
<tr>
<td>ARCHITECTURE</td>
<td>Marriage of art and function - a balance in the designed environment</td>
</tr>
<tr>
<td>INDUSTRIAL DESIGN</td>
<td>Marriage of design and function - functionality must remain in tact in order to still serve its purpose and not be solely decoration</td>
</tr>
<tr>
<td>FASHION</td>
<td>Beauty as means of expression and identity, functionality is (sometimes) compromised</td>
</tr>
<tr>
<td><strong>TACTILITY</strong> implications of space</td>
<td><strong>COLLECTIVITY</strong> a social mechanism</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td><strong>INFRASTRUCTURE</strong></td>
<td>Essential for society to function, but its physical presence is ignored as a part of the designed environment. Connects society (services) &amp; Breaks society (presence)</td>
</tr>
<tr>
<td><strong>ARCHITECTURE</strong></td>
<td>Relationships forming between buildings, creating an urban fabric. Architecture facilitates collectivity and public gathering - based on program, location, event, etc.</td>
</tr>
<tr>
<td><strong>INDUSTRIAL DESIGN</strong></td>
<td>Individual styles, collective taste. Collectivity stimulating the cyclical nature of fashion, a social mechanism</td>
</tr>
<tr>
<td><strong>FASHION</strong></td>
<td>Individual styles, collective taste. Collectivity stimulating the constant re-invention of design, a social mechanism</td>
</tr>
</tbody>
</table>

No direct bodily contact
- Mediated bodily contact (typically no public access or occupation), typically minimal public interest, uninviting

Vessel for bodily contact
- Body occupies the space

Immediate bodily contact
- Support for the body

Direct bodily contact
- Fashion surface as a second skin
1 INFRASTRUCTURE RE-CONSIDERED
RE-INVENTING INFRASTRUCTURE TO ENGAGE THE PUBLIC

Herzog & de Meuron, Signal Stations
UN Studio, Electrical Substations
Office dA, Helios House
Steven Holl Architects, Water Purification
Herzog & de Meuron, 1111 Lincoln Rd
ICON LEGEND
PRECEDEANT STUDIES

PHASE OF COMPLETION
BUILT, UNDER CONSTRUCTION, NOT BUILT

LOCATION
URBAN, SUBURBAN, RURAL

PROJECT TYPE
NEW CONSTRUCTION, RE-DESIGN EXISTING, RE-USE EXISTING

SUSTAINABLE

EDUCATION PROGRAM

PUBLIC ACCESS

INFRASTRUCTURAL AGENDA

GREEN SPACE
HERZOG & DE MEURON

SIGNAL BOX AUF DEM WOLF 1992-95
MAIN SIGNAL TOWER 1994-1997
BASEL, SWITZERLAND

Each of these signal towers is part of the master plan for the Basel Main Train Station. The towers stand as markers, creating a network of signal stations while simultaneously relating to the surrounding urban landscape of solitary tower structures, linking the rail to the immediately surrounding urban environment. The surface-skin is composed of 10cm wide copper bands, which not only establish a presence for the signal box, but more importantly it is performative skin. Acting as a “Faraday cage,” it protects against electromagnetic fields.

Relating to both the city and the rail yards, these signal towers become part of the designed environment, gaining a presence in the urban fabric and an identity as a typically ignored program/design opportunity.
UN STUDIO

ELECTRICAL SUBSTATION(S)
AMERSFOORT, NETHERLANDS 1989-94
INNSBRUCK, AUSTRIA 1997-2002

(1) The substation is an almost entirely sealed “wrapper” containing three electrical transformers. The cladding responds to the surrounding environment - the basalt lava volume faces the industrial landscape of the rail yards and warehouses in the distance while the aluminum volume responds to the adjacent park and city hall.32

(2) Clad in the same basalt lava, the three-story high electrical substation responds to the scale of the residential neighborhood of the historic city center while defining itself as an infrastructural object.33

Regardless of an infrastructural and mundane program type, both substations were designed with an identity that responded to the surrounding landscape.

NEW DESIGN | MATERIAL
A redesign of an existing gas station, the Helios House “embraces the paradox of creating a green gas station.” Through recycled materials and new sustainable products, the site was transformed to a “learning lab.” Helios House acts as a laboratory, looking towards a sustainable future and serving as a community outreach and education facility while maintaining all of the elements necessary to a gas station under part of one canopy.

Acting as a promotion for a sustainable future and an education and outreach facility, the Helios House was designed as more than just a mundane gas station. Through the addition of educational programs, the site acts as a statement on gas stations and the automobile culture.
SEPARATE ELEMENTS

ONE “UNIT”

LEARNING LAB

EXISTING BILLBOARDS

PV PANELS

RECYCLED STEEL PANELS
A mixed-use project, the most evident (visible) program is a car park. Something considered mundane and typically hidden from view (whether underground or wrapped with a scrim), the car park is a featured part of this complex, offering views of the surrounding Miami neighborhood. The open concrete structure of the parking garage not only houses cars, but the upper levels include entertainment space. Introduction of retail shops, restaurants and luxury apartments to the complex have transformed a banal parking garage into a desirable location.

An unfashionable and generally hidden building type is celebrated and establishes the site as a place of luxury residences, retail, entertainment and views.
The majority of the water treatment facility is located “underground,” covered with the largest green roof in the state of Connecticut. The green roof/park is conceived as a “macro to micro” reinterpretation of the six processes of water treatment and purification. There are various literal and conceptual connections between the water treatment facility below and the green space above. The administration building is the primary evidence of the facility below, housing an exhibition lobby, lecture hall, conference space and labs, all promoting education.

Steven Holl integrates architecture, landscape, infrastructure and education in a manner that gives the typically rejected program type a clear and celebrated presence in the community.
The following matrix determines the fashionable strategies and architectural design solutions. What does it mean to fashion the unfashionable? To transform infrastructure?

**TO FASHION:**
- v. to modify, transform, make (fabricate)
- n. not in accord with prevailing use

Fashion relates to a social mechanism, temporality, style, and the re-invention of the old - re-inventing the ways of creating space and public interaction in infrastructure.

In studying infrastructure, waste management facilities are not only one of the most unfashionable pieces of infrastructure but also one of the most fashionable problems. Waste management/transfer facilities are one of the least considered and least recognized (until something goes wrong).

**TRANSFORMING INFRASTRUCTURE**
- fashioning the unfashionable

**FASHIONABLE**
- Material palette: copper skin
- Creating a network through the sculptural forms of the signal stations

**DESIGN**
- Architectural design strategies

**SOCIAL/CULTURAL**
- Impact on the public

**HERZOG DE MEURON, SIGNAL STATIONS**
- Remained as infrastructural objects in a greater network
- Material palette: copper skin

**SOCIAL/CULTURAL**
- Impact on the public

**UNSTUDIO, ELECTRICAL SUBSTATIONS**
- Remained as infrastructural objects in a land/city-scape
- Material palette: basalt lava and aluminum
- Materials and form respond to the surrounding environment
<table>
<thead>
<tr>
<th>OFFICE DA, HELIOS HOUSE</th>
<th>HERZOG DE MEURON, 1111 LINCOLN ROAD</th>
<th>STEVEN HOLL, WHITNEY PURIFICATION PLANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>- All of the required elements of a gas station (pump, kiosk, canopy, etc.) are designed as one single element - a faceted canopy</td>
<td>- Formal design strategy of residential tower adjacent to the “parking” tower, which include retail and entertainment spaces</td>
<td>- Using a green roof as not only a sustainable solution but also means of engaging the surrounding (green) environment</td>
</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>- Contrast of an environmental learning lab at the site of a gas station promoting a sustainable lifestyle while providing for the automobile world</td>
<td>- Re-thinking the potential of a parking garage/tower as an opportunity for entertainment spaces and city-wide views</td>
<td>- Relating the 6 park spaces above to the 6 water purification processes below</td>
</tr>
<tr>
<td><img src="image4.png" alt="Image" /> + <img src="image5.png" alt="Image" /> + <img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /> + <img src="image8.png" alt="Image" /> + <img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /> + <img src="image11.png" alt="Image" /> + <img src="image12.png" alt="Image" /></td>
</tr>
<tr>
<td>- Providing opportunities to engage the public through environmental education and promoting sustainable ways of living</td>
<td>- Including a public promenade through the retail, into the parking garage, and to the public overlooks of the city</td>
<td>- Transforming the facility into a park and education center for the surrounding community</td>
</tr>
<tr>
<td><img src="image13.png" alt="Image" /> + <img src="image14.png" alt="Image" /> + <img src="image15.png" alt="Image" /></td>
<td><img src="image16.png" alt="Image" /> + <img src="image17.png" alt="Image" /> + <img src="image18.png" alt="Image" /> + <img src="image19.png" alt="Image" /> + <img src="image20.png" alt="Image" /></td>
<td><img src="image21.png" alt="Image" /> + <img src="image22.png" alt="Image" /> + <img src="image23.png" alt="Image" /> + <img src="image24.png" alt="Image" /> + <img src="image25.png" alt="Image" /></td>
</tr>
</tbody>
</table>
FASHION FRAMES WHAT WE CONSIDER ARCHITECTURE
OPERATIONAL TERMINOLOGY
OPERATIONAL TERMINOLOGY
AS APPLIED TO ARCHITECTURE & FASHION

Fashion, while widely publicized, is an art generally dismissed in the minds of scholars and theorists. Some consider fashion to be mere ornamentation and decoration - something frivolous, superficial and ephemeral. Fashion, however, is an integral part of modern society, relevant to almost every aspect of the modern world.41

Fashion is a type of design, which is inherently a type of style. Style ("(n)a manner of doing something" or "(v) design or make in a particular form"42) however, is not strictly limited to fashion.

The ideas of styles changing over time is representative of the constant search for the “new,” a constant re-invention of the past.43 The notion of re-inventing a “style” is one that is applicable to all design fields. Technological developments do not look to the past. In design disciplines, such as fashion or architecture, a “new” style can either be a development on the current or a re-interpretation of a past “style.” There is a strong notion of history and the past in many of the designs of today.

Architecture and fashion are two design disciplines that share techniques, materials, process and design strategies, vocabulary and terminology. Each discipline, in its most basic element, designs for the human body - whether as a second skin or as a vessel for the body. Regardless they both serve as shelter, protection, and means of expressing identity.44

The following images serve as representations of the ways in which the terminology of fashion and architecture relate to each other and influence each discipline. Although the majority are surface-related, some terminology can be interpreted beyond the surface, as tectonic or conceptual ideas.

Design for the body.
“What I relate to is the creation of a form from structure and material. Although I don’t use direct architectural references in my work, I approach designing a garment in much the same way an architect approached designing a building with seaming for structure to create interesting fit lines and shape”

- Narciso Rodriguez

TENSION

Le Corbusier | Philips Pavilion, Expo '58, Netherlands

Elena Manferdini | Skin Jacket, Bones Collection, Autumn/Winter 2006

SEAM

Carlo Scarpa | Querini Stampalia Foundation, Venice, Italy, 1961-63

Narciso Rodriguez | Garment, Collection Autumn/Winter 2005/06
“The body shape is a perfect small scale exercise in spatial design, a testing ground for ideas and techniques to apply to buildings. Openings, folds, panelizing, pattern-making, the concepts and problems are much the same, whether it is a sleeve or a curtain wall.”

- Elena Manferdini

2.7 Massimiliano Fuksas | New Milan Trade Fair, Milan, Italy, 2002-05

2.8 Yoshiki Hishinuma | Bellows Dress Collection, Spring/Summer 2000

2.9 Jean Nouvel | Arab World Institute, Paris, France, 1987-88

2.10 Comme Des Garçons | Fusion Collection, Autumn/Winter 1998-99
HERZOG & DE MEURON | Prada Store, Tokyo, Japan, 2003

MAISON MARTIN MARGIELA | Jacket, Collection Autumn/Winter 2000–01

YOSHIKI HISHINUMA | Inside-Out 2 Way Dress, Spring/Summer 2004

TOD'S | Omotesando Building, Tokyo, Japan, 2004
ARCHITECTURE IS A FASHION
SOCIAL MECHANISMS OF THE MODERN WORLD
FASHION AS A SOCIAL MECHANISM
THE THEORY OF FASHION

Fashion is more than styles of dress; fashion is an integral part of society, relevant to almost every aspect of the modern world. Fashion is a highly relatable phenomenon due to its high visibility and high levels of engagement with the public (whether intended or not). Greater than clothes and trends, fashion exists as a “series of cultural currents.”

One of the earliest theories on fashion was Georg Simmel’s (1904), entitled the “trickle-down” theory. Simmel claimed that fashion changes occur based on the tastes of the elite, resulting in class differentiation. The elite set themselves apart by creating new insignia, which is soon adopted by the middle class, and later adopted by the lower class. As the laggards adopt the style, the elite re-invent the insignia, re-distinguishing themselves. Although Simmel claims fashion to be class distinction, he affirms that the fundamental character of fashion is its constant re-invention and the process of change.

Almost sixty years later, Herbert Blumer claimed that the changes and cyclical nature of fashion do not occur based on the elite and class differentiation, but instead as a collective selection process. Fashion is not simply clothing, but more importantly it is a mechanism that is evident in every aspect of modern life.

Blumer first analyzes fashion as it pertains to the clothing industry, noting the way in which “fashion” is selected, through an intense process of collective selection (in the fashion and clothing industry). A similarity in taste between the “choosers” was based on the world around them. These fashions “express new tastes which are emerging in a changing world,” and Blumer argues that fashion “allows people to adjust in an orderly and unified way to a moving and changing world.”

According to Blumer, the fashion mechanism is one of historical continuity, of modernity, of collective taste and a need for the “new” - this “generic character” of fashion is evident almost every aspect of modern life (especially design), especially applicable to the field of architecture.

Fashion, as well as architecture, serves as means of understanding culture and values of a certain time, especially relating to the role of collective taste in society.

Both architecture and fashion facilitate collectivity, personal expression and identity, all of which can be utilized to fashion the unfashionable.
“fashion is a specific form of social change, independent of any particular object; it is first and foremost a social mechanism characterized by a particularly brief time span and by more or less fanciful shifts that enable us to affect quite diverse spheres of collective life” - Gilles Lipovetsky
3 THEORY OF WASTE MANAGEMENT

PROCESSSES OF THE WASTE MANAGEMENT SYSTEM
Waste management is the collection, transportation, processing, disposal and management of unwanted, undesirable or discarded materials. Waste is categorized as municipal solid waste, hazardous waste, electronic waste, industrial waste, construction and demolition waste, etc. The waste management system (WMS) should be understood as a system composed of:

Physical Objects
Waste related materials and processing devices (manufacturing, agricultural and household equipment).

Human Activities
Any activities that are affected by, and which have an effect on, these physical things.

The functionality of WMS exists due to the links between physical objects and human activities. Theories of waste management allow for a generic methodology of waste management, assisting with means of classifying waste, allowing legislation to “prescribe” waste-related activity. The actions and decisions of society classify waste vs. non-waste. “Waste” must be re-interpreted to understand its potential for re-use.

Waste can be described in the PSSP Language, allowing one to describe the attributes of any real object in terms of:
- Purpose
- Structure
- State
- Performance

If an object lacks an element of the PSSP language, it is considered waste. The language and definitions of waste must be questioned to clarify the potential of re-use.

The ideal waste management system is a cycle, in which all of the waste produced is introduced back into society through recycled consumer goods or collected energy.
CLASSES OF WASTE

CLASS 1: NOT INTENDED OR WANTED

Includes things that are not necessarily intended to be created. This is waste created as something unwanted from the get-go, produced with no purpose. Waste is determined by process, and a waste management system has the potential to re-design the operations/processes of production to minimize wasted materials and energy. Examples include outputs with “negative market values,” useless by-products, emissions, fumes, smoke, cleaning emissions, etc.

CLASS 2: A “FINITE” PURPOSE

Includes objects that were given a finite purpose, designed to become obsolete and useless once its primary use was fulfilled. Class 2 waste can be avoided if the object is designed with its “lifetime” in mind. Designing a product with alternate uses will eliminate the waste of “finite” objects. Examples include the majority of disposal products, packaging, envelopes, disposable diapers, disposable cameras, plastic bags, plastic bottles, etc.
CLASS 3: OBSOLETE PURPOSE/ (PLANNED) OBSOLESCENCE

Includes objects whose purpose is “well-defined,” but is no longer “acceptable” in society. Some class 3 waste embody the idea of “planned obsolescence” - it will soon become obsolete due to new developments. In many instances it is unavoidable due to emerging technologies, but there is a design potential in which their parts are useful.60

Examples include technological products (t.v.’s, vhs tapes, telephones, computers, etc), old furniture, discarded household appliances, non-rechargeable batteries, etc.

CLASS 4: (PERCEIVED) OBSOLESCENCE/ OWNER NO LONGER WANTS IT

Class 4 waste includes objects whose purpose is “well-defined,” whose performance is “acceptable,” but whose owner no longer uses them for their intended purpose. These products still function, but it is the decision of their owner that determines if they are waste. There is a potential of a new owner, in which someone else finds use in the original waste.61

Examples include objects used in excess, like food, or products that the owner no longer wishes to own any longer, such as books, cars, clothing, etc.
3 FASHION FRAMES WHAT WE CONSIDER WASTE
TEMPORALITY AND CYCLICAL NATURE
TEMPORALITY & COLLECTIVITY
AS APPLIED TO FASHION & WASTE

Temporality and collectivity are issues pertinent not only to the fashion industry, but also to the infrastructural processes relating to waste and waste management. Although at first fashion and waste appear to be complete opposites, they each possess inherent qualities that relate the ideals and processes of fashion to the ideals and processes of waste.

The logic of fashion, its temporality, and the on-going demands for re-invention and re-innovation likens to the notion of waste versus non-waste. Collective selection, as described by Herbert Blumer, strongly influences the fashions of the time, as society is heavily influenced by its surrounding environment and the changing world around them. Collective selection, in the sense that one’s environment influences what is “in” and what is “out,” is just as applicable to waste as it is to fashion. Collective selection is impacted by the changing world, and the duration of these “selections” last as long as each of the changes in the world lasts. Collective selections reflects the ways in which we determine whether or not something is “use-ful” or “use-less”

Determining what is waste and what is non-waste is dependent on user/owner and context. Similar to the logic of fashion, what is of use and no longer of use is dependent on context. According to Fred Davis, “[t]he socially stratified character of modern society serving as the backdrop against which movement are enacted... clothing does not mean the same thing to all member of society and because of this what is worn lends itself to symbolic upholding of class and status boundaries in society.” The owner/user is a significant factor in determining what works and what doesn’t work.

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WASTE

“the owner does not want it... waste exists only where it is not wanted; an output with no economic value from an industrial system or any substance or object that has been used for its intended purpose; if a product is designed with one single purpose and then it is fulfilled it then turns to waste”

NON-WASTE

“non-waste is an object that has been assigned a purpose by its (potential) owner, and this owner will either use it for that purpose, or by adjustment of state or structure ensures that the object will be able to perform in respect to the assigned purpose”
WASTE VS. NON-WASTE

ASSIGN A NEW OWNER

DOES IT HAVE A PURPOSE?

NON-WASTE STORAGE

OWNER INTEND TO USE IT FOR ITS PURPOSE?

OWNER SATISFIED WITH PERFORMANCE?

IS THERE A NEW OWNER?

DOES THE OWNER WANT TO DISCARD IT?

WASTE

ASSIGN A PURPOSE

IS IT POSSIBLE TO ASSIGN A PURPOSE?

DOES THE OWNER INTEND TO FIX IT?

IS IT DUE TO STATE?

IS IT DUE TO STRUCTURE?

ASSIGN A NEW OWNER

ADJUST STATE OR STRUCTURE

OWNER WANT TO Cede OWNERSHIP?

OWNER SATISFIED WITH PERFORMANCE?
CYCLICAL NATURE
OF FASHION, OF WASTE, OF PRODUCTION, OF CONSUMPTION

Cycles are evident in every part of modern life, especially pertaining to fashion/styles and waste/non-waste. Constantly searching for the new and constantly reflecting on/learning from the past results in invention, innovation and new design. It is our nature to constantly re-think and re-design, analyzing the world around us and attempting to progress and advance our society.

This curve to the right is derived from “The Fashion Cycle,” and it is evident that its applications extend beyond the world of mere clothing design, production and consumption. In any design or invention there is a search for the better, for society’s approval and adoption – inherently the style-object-fashion-etc will be replaced and the old is thrown away.

If something is replaced, it becomes obsolete. Does obsolescence mean it is waste? Is there a potential for re-use?

Philip Vannini, responding to Blumer’s theories regarding fashion, uses fashion as means of demonstrating his theories on “semiotic transformation,” the process by which meanings are produced, exchanged and interpreted, and used in different and changing ways throughout time. Studying fashion as a “generic social process,” Vannini understands collective selection and the means by which the surrounding environment influences, determines and transforms the fashions of the modern world. Constant re-invention, however, leads to constant waste. As Le Corbusier describes it in Towards a New Architecture, challenging the past (which is what we must inherently do to progress as a society), creates new styles, a revolution, in which new tools (styles, fashions, etc) are created and the old must be thrown away. The old must be replaced with the new.

Presently, architects and artists have addressed the issues of waste as re-use – aiming to transform the old and the undesirable into something innovative and fashionable. The following precedents embody the lessons of the temporality of fashion and waste and the potential of re-use.

Our fashion-obsessed society generates excessive waste.

INTRODUCTION | RISE | PEAK | DECLINE | OBsolescence

INNOVATORS | LEADERS | THE MASSES | ATE ADOPTERS | LAGGARDS

NUMBER OF ADOPTERS

TIME
“If we challenge the past, we shall learn that ‘styles’ no longer exist for us, that a style belonging to our own period has come about; and there has been a revolution...

A question of morality; lack of truth is intolerable, we perish in untruth. – Architecture is one of the most urgent needs of man, for the house has always been the indispensable and first tool that he has forged for himself. Man’s stock of tools marks out the stages of civilization, the stone age, the bronze age, the iron age. Tools are the result of successive improvement; the effort of all generations is embodied in them. The tool is the direct and immediate expression of progress; it gives man essential assistance and essential freedom also. We throw the out-of-date tool on the scrap heap: the carbine, the culverin, the growler and the old locomotive. This action is a manifestation of health, of moral health, of morale also; it is not right that we should produce bad things because of a bad tool; nor is it right that we should waste our energy, our health and our courage because of a bad tool. it must be thrown away and replaced.” - Le Corbusier

(RE)INVENTION DESIGN

ISSUE OBsolescence

APPLICATION USE

PRODUCTION CONSUMPTION

PROGRESS

TIME

CURRENT DESIGN

OBSOLETE DESIGN

WASTE
3 RE-USE & RE-PURPOSE WASTE
PRECEDENT STUDIES ON FASHIONING WASTE

Kobberling & Kaltwasser, Jellyfish Theater
Archi Union Architects, Can Cube
REX, Vakko Fashion House
David Adjaye, Dirty House
Lehigh Valley Associates, Steel Stacks
Field Operations, Fresh Kills Park
KOBBERLING & KALTWASSER

JELLYFISH THEATRE
LONDON, UK
2010

Made entirely of donated and recycled materials (all of which were at no cost), this performance venue was designed, acquired and constructed in promotion of sustainable design and sustainable lifestyles. This 120-seat auditorium was located in a playground, close to the Globe Theatre on the south bank of the Thames River. Materials included shipping pallets, recycled nails, old school furniture, plywood, water bottles and scaffolding, all of which were utilized in both a structural and aesthetic manner. The temporality of waste/recycled materials influenced the temporality of the theater structure.

Re-purposing and re-contextualizing (classes 2-4) “waste” and “useless” materials has allowed for the construction of a theater.
PLYWOOD
Interior + Flooring

H2O BOTTLES

SCAFFOLDING

LARGE WATER BOTTLES

STAGE

LOUNGE

800+ PALLETs
Facades

RECYCLED
NAILS + SCREWS

SCHOOL CHAIRS

Theater Seating
The Can Cube is a sustainable, mixed-use residential and office building designed in response to its surrounding environment. The building incorporates land (in front) and water (in back) through processional routes and views to/from the building. The facade of the Can Cube is composed of aluminum carbonated drink cans (enclosed in an aluminum frame). Using the cans in their pure/original form on the facade saved energy wasted during the recycling process. Parts of this facade are operable, providing the user with control over his/her environment.70

Aluminum cans as means of cladding has created an operable, sustainable facade system for this mixed-use project that re-contextualizes the cans and assigns them a new “identity” and purpose.
This project was designed for two Turkish “sister companies,” the fashion house of Vakko and a prominent television and radio company, Power Media. This adaptive re-use project utilized an abandoned hotel’s concrete framework as the basis of the design. REX conceived the project as two separate buildings – (1) the existing “ring,” containing offices and (2) the Showcase (structure placed in the center) housing an auditorium, showrooms, meeting rooms and executive offices. Clad in a thin, structural glass, REX not only celebrates the original concrete structure, but also allows views in to recognize the mirror-clad Showcase.71

Re-purposing an existing structure has given an unoccupied and wasted site a new identity.
The Dirty House was designed for artists Tim Noble and Sue Webster (see page 135), consisting of two studio spaces and a penthouse apartment. The structure is a converted timber factory, re-purposed and re-used to house two artists that are recognized for assembling garbage into pieces of art. The existing building was stripped down to a hollow shell, leaving just the brick walls, allowing for the two double-height studio spaces and the apartment above. The original exterior brick walls were painted black, and the light white roof “floats” above. The re-using of an old timber factory/warehouse aligns with the artists’ intentions of re-purposing waste and creating something desirable.
3.15

3.16

3.17

ORIGINAL WAREHOUSE

ORIGINAL BRICK WALLS + PROGRAM INSERT

ARTIST RESIDENTE

APARTMENTS

TWO STUDIOS
Located on the former Bethlehem Steel plant, Steel Stacks is a re-use project, utilizing an unoccupied industrial brownfield as the site of a revitalized urban community. Steel Stacks is an arts and cultural center, integrating the history of Bethlehem steel production into the new urban community center, including concert pavilions/plazas, a community/education center, cafe, restaurant, performance space, and gallery space - all of which are located within or adjacent to the steel mill.73

Taking advantage of Bethlehem’s rich history as a significant part of the “rust-belt,” Steel Stacks successfully transformed a previously abandoned steel mill/brownfield into an active and historically rich urban community and public space.
FRESHKILLS PARK
STATEN ISLAND, NY, USA
2001-2031

Freshkills Park is the largest recreational development project in NYC in the past century, transforming the world’s largest landfill into a “cultural destination,” embodying the ideals of (urban) renewal and re-use. Construction plans will take place over the next 30 years, developing the site and its natural/engineered beauty. Working from the periphery in (to assist in revitalizing the surrounding neighborhoods), the landfill mounds have been capped with a series of layered membranes that will allow the methane to be captured-sold-reused.

Design issues include programming (social, cultural, physical activity), wildlife (supporting nature), and circulation (ways in which the body/driver move through the site).

2,200 ACRES
RE-USE | SITE
NORTH PARK
233 ACRES
Meadowlands, creek
WALK, RUN, BIKE

THE POINT
Artwork, education
Event space, market

WEST PARK
544 ACRES
Memorial, park

EAST PARK
482 ACRES
Scenic drive, park
GOLF

CONFLUENCE
Waterfront activity
Visitor center, boat launch

SOUTH PARK
425 ACRES
Recreation fields
3 WASTE GENERATION & WASTE DISPLACEMENT
NYC WASTE REMOVAL/ DISPOSAL
U.S. WASTE
CONSUMPTION & WASTE PRODUCTION

In 2010, Americans produced approximately 250 millions tons of waste, equating to about 4.5 pounds of waste per person daily. Municipal Solid Waste (MSW) includes the items we commonly use then throw away - it is estimated that a little over half of the waste generated is from residential sources, and the rest is from commercial and institutional sources. Even though 34.1% of the waste of 2010 was recycled, 54.2% of it was still discarded and left for the landfills. The majority of our trash is still discarded in landfills, and although the number of physical landfills have decreased over the years, the size of each of the landfills has increased.
## 2010 MSW

<table>
<thead>
<tr>
<th>Discarded</th>
<th>Recovery</th>
<th>Combustion with Energy Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.2%</td>
<td>34.1%</td>
<td>11.7%</td>
</tr>
</tbody>
</table>

## 250,000,000 TONS OF MUNICIPAL SOLID WASTE

### BY MATERIAL

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>28.5%</td>
</tr>
<tr>
<td>Food</td>
<td>13.9%</td>
</tr>
<tr>
<td>Yard trimmings</td>
<td>13.4%</td>
</tr>
<tr>
<td>Plastics</td>
<td>12.4%</td>
</tr>
<tr>
<td>Metals</td>
<td>9.0%</td>
</tr>
<tr>
<td>Rubber, leather &amp; textiles</td>
<td>8.4%</td>
</tr>
<tr>
<td>Wood</td>
<td>6.4%</td>
</tr>
<tr>
<td>Other</td>
<td>3.4%</td>
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</tbody>
</table>

### BY PRODUCT

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
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<td>30.3%</td>
</tr>
<tr>
<td>Nondurable goods</td>
<td>21.3%</td>
</tr>
<tr>
<td>Durable goods</td>
<td>19.6%</td>
</tr>
<tr>
<td>Food</td>
<td>13.9%</td>
</tr>
<tr>
<td>Yard trimmings</td>
<td>13.4%</td>
</tr>
<tr>
<td>Other</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

## Energy Reduction

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>54.2%</td>
</tr>
<tr>
<td>Food</td>
<td>34.1%</td>
</tr>
<tr>
<td>Yard trimmings</td>
<td>11.7%</td>
</tr>
</tbody>
</table>

## Other Waste

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5%</td>
</tr>
</tbody>
</table>

250,000,000 TONS OF MUNICIPAL SOLID WASTE
New York City generates about 50,000 tons of garbage... a day.77

As the most populous city in the United States (a population density of over 27,000 people per square mile) it is inevitable that waste management is a pressing issue.78

The management and displacement of trash is an issue that New York City has been trying to accommodate since the eighteenth century. At that time, New Yorkers threw their (primarily organic) waste onto the streets which was picked up by roaming dogs and pigs. Waste (MSW and human waste) was being dumped into the rivers surrounding the five boroughs of NYC. Poorer areas of the city would pile up with trash, which pressured the city to develop a waste management system. At the end of the nineteenth century, New York City established a Department for Street Cleaning in which brooms and carts would pick up the waste and displace it elsewhere.79

In the 1940’s incinerators were developed to burn away the garbage, leading to air pollution, and soon after landfills were developed. Fresh Kills, on Staten Island, was created in 1948 as a temporary solution for garbage disposal... but lasted more than half of a century and became the largest landfill in the world.80
NYC WASTE DISPLACEMENT
ACCOMMODATING WASTE

The process of disposing waste in New York City is extensive. Once the New Yorker (resident/commuter/visitor) throws away his/her garbage, it is generally the last time they will think about it.

Once the trash is “away” and off of the curb, it is out-of-sight and out-of-mind, no longer of concern to a majority of New York City.

The process of collecting the trash from the curbside and placing it in a packer/garbage truck is only the first step of waste management in New York City. This garbage from the five boroughs is delivered to transfer stations throughout the Brooklyn, Queens, the Bronx and New Jersey. Waste is only temporarily located at the transfer stations, until it is placed on trucks that displace the garbage as far as a few hundred miles in six different states.81

8.1 MILLION RESIDENTS OF NYC

1.3 MILLION COMMUTERS + VISITORS (DAILY)

CURBSIDE

NO LONGER VISIBLE TO THE NEW YORKER

2,022 REAR-LOADING COLLECTION TRUCKS

50,000 TONS OF WASTE PER DAY
New York City is continuously assessing their waste management system in attempts to resolve the waste displacement issues.82

Prevention
Preventing waste from being created at the start

Recycling, Resource Recovery, WTE
Re-using materials or converting waste into useful energy such as heat or electricity

Treatement
If waste cannot be removed or minimized, there are strategies to reduce volume and toxicity of the waste, occurs at the transfer station

Disposal
The last resort to waste management is the landfill or the incinerator to eliminate the waste produced.

Architecture will not solve problem of waste, but it has the potential to raise awareness of the issues surrounding waste through public engagement and education, in hopes of influencing citizens to become more conscientious of their waste production.
SITE CRITERIA & SITE POTENTIAL
NEW YORK CITY

Hudson River Waterfront, Manhattan
Willets Point, Queens
Greenpoint, Brooklyn
East Williamsburg, Brooklyn
New York City presents many opportunities to fashion abandoned industrial/infrastructural (brownfield) sites into a vibrant public project that facilitates collectivity and engagement. Site criteria includes:

**Isolation**
A presently infrastructural site, abandoned, excluded from the public realm and public activity

**Separation**
An existing divide between residential/commercial (public) and the industrial (private)

**Infrastructural/Industrial Identity**
Fashioning the unfashionable while maintaining the historic infrastructural/industrial identity of the site

**Proximity to Activity**
Adjacent to residential area/community spaces, currently dividing a site/neighborhood, but providing an opportunity for interaction, integration and community engagement.

Transforming a previously “broken” site with fashionable infrastructure will provide the necessary infrastructural services to sustain society while also providing additional program to engage the public.
NYC, MANHATTAN
REVITALIZATION OF THE HUDSON RIVER WATERFRONT

Remaining Industry
Hudson Riverfront Park
Public Space
Cultural Objects
Throughout the 19th and early 20th centuries, the New York City waterfront was the center of commerce and trade, lined with shipping/cargo docks, wharves, piers and ferry terminals. This large number of goods that passed through Manhattan “fueled the city’s economy.” Manhattan was the top American seaport by the 1860’s and one of the primary international ports by 1900. In the next few decades, however, highways, bridges, esplanades and “urban strategies” began to divide and fragment the industrial waterfront.

When the Hudson River ceased to function as a port in 1960, commercial concern for the waterfront began to arise (primarily due to economic motivations). The area alongside the Hudson River became a place of crime, disease and prostitution - “the post-shipping era waterfront is experiencing an identity crisis.” There was no general consensus regarding how the waterfront should be used (all urban development vs. all natural development, etc.). By the 21st century, plans fell through for re-development and re-vitalization. Only recently have the abandoned piers been fashioned, transforming their use, purpose, and significance to serve as the public space of Manhattan.
"It is very easy and natural to enthuse with the proponents of speed highways, esplanades and bridges, but in this there is grave danger of losing sight of the fact that the North River and East River waterfronts below 34th Street have given New York the world preeminence it enjoys today."

- John McKenzie, Commissioner of Docks, 1931
REMAINING INDUSTRY
HUDSON RIVER WATERFRONT

DEPARTMENT OF SANITATION GARAGE

Garage to store and shelter garbage/ sanitation trucks on the west side of Manhattan.

PIER 57

Constructed in 1952, this pier is built on floating concrete caissons. At one point it housed the Hudson Pier Depot for the NYC Transit Authority and in 2004 served as a temporary detention center. Plans to repurpose the pier as an addition to Chelsea Piers have been discussed.

LINCOLN & HOLLAND TUNNELS

Both serve as automobile tunnels connecting New Jersey to Manhattan under the Hudson River. First route of the Holland Tunnel opened in 1927, and that of the Lincoln Tunnel in 1937.

HUDSON YARDS

Hudson yards served as rail storage yards, surrounded by brownfields, warehouses and industry. A proposed mixed-use real estate development project is taking shape, as part of the Hudson Yards Redevelopment Project, to re-develop this valuable real estate on Manhattan.
U.S. LINES TERMINAL/ NYPD

U.S. Lines was a transatlantic shipping company - serving cargo from 1921-1989 and ocean liners from 1921-1969. It is now used by the NYPD, serving as the “tow pound,” housing towed cars.

NY PASSENGER SHIP TERMINALS (PIERS 88, 90, 92, 94)

A ship terminal originally constructed in 1935 to replace Chelsea Piers as the primary location for ocean-going passenger ships/ luxury cruises.

PIER 98, CON EDISON ELECTRIC

Pier 98 serves as a hub for Con Edison Electric - including employee parking, a training activity, barge deliveries and storage of fuel oil.

DSNY MARINE TRANSFER STATION

As a waste transfer station, it processes and sorts solid municipal waste - collecting it from local sanitation/garbage trucks and transferring to river barges which will deposit it to its final location.
At the southern-most park of the Hudson Riverfront Park, abandoned industrial piers have been repurposed and redeveloped to serve as outdoor recreational space for the public of Manhattan - from skateboarding, to sun bathing to golf.

PIER 40

The largest pier in the park, it serves both community and recreational functions.

PIER 54

Pier 54 was once a Cunard-White Star Pier, the departure point for the Lusitania’s first voyage. The historic steel arch remains, and the pier is now open to public access, serving as a gathering point for concerts, film screenings, etc.
CHELSEA PIERS

Once passenger ship terminals - today a sports/rec complex.

CHELSEA WATERSIDE PARK

Open green/public space for recreational activities- basketball courts, playgrounds and a dog run.

PIER 66

Pier 66 contains a boathouse (NY River Sports), for recreational use, specializing non-motorized boats (kayaks, sailboats, etc.), as well as restaurants.

PIERS 82 & 84

Offering a boathouse, restaurant and cruise docks for sitings and tours around Manhattan - companies include Circle Line.
GREEN SPACE, OPEN SPACE, PARK SPACE
HUDSON RIVER WATERFRONT

BATTERY PARK

At 25 Acres, the park created by landfill in the late 19th century, used to serve as protection to the town. Today the park includes Clinton Castle, a waterfront promenade, restaurant and a theater.

HUDSON RIVER GREENWAY

A total of 550 acres, running 5 miles on the West Side waterfront, the Hudson River Greenway occupies a strip of land between Route 9A and the waterfront.
HIGHLINE PARK

Linear park built on the abandoned elevated (freight) tracks of the former New York Central Railroad, running from Gansevoort St. to West 30th St. on the (formerly industrial) west side of Manhattan.

RIVERSIDE PARK SOUTH

A four mile strip of land, Riverside Park South is a waterfront park on the west side of Manhattan. Originally undeveloped land, the conceptual plan was done by Frederick Law Olmstead.
Battery Park City

93 acres of land fill, Battery Park City was created from land reclamation of sand from Staten Island and the land excavated during the construction of the World Trade Center. Named for the nearby Battery Park, Battery Park City is a mixed-use planned development project, with 36 acres of open park space - Robert F. Wagner Jr. Park, South Cove Park, Esplanade, Rector Park, West Thames Park, Rockefeller Park, Teardrop Park.
The USS Intrepid contains one of the 24 Essex-class aircraft carriers built during World War II for the US Navy. In 1982, it became the base of the Intrepid Air, Sea and Space Museum.

The Lincoln Square (1906) Renewal Project was approved in 1955 - Robert Moses led the initiative to transform the square to a cultural center and arts organization.
NYC, BOROUGH OF QUEENS
VALLEY OF ASHES AT WILLETS POINT
The “Iron Triangle” is a region in Corona, Queens that lacks modern accommodations, including sidewalks and sewers. Willets Point is a world entirely removed from the neighboring cultural points such as Citi Fields and Flushing-Corona Meadows Park. The area of Willets Point is surrounded by highways infrastructure, and contains scrap yards, auto repair shops, and waste processing plants. Regardless of the numerous attempts to integrate Willets Point into the rest of its immediate (cultural) environment, plans have been turned down since the 1960’s.

Recently Mayor Bloomberg proposed an urban renewal plan that has been debated, fought, approved and debated again since 2007. “Willets Point will become New York’s next great neighborhood, with retail and entertainment amenities, a hotel and convention center, mixed-income housing, public open space, and community uses.” Ignoring the industrial and infrastructural identity of Willets Point is not the solution. Historical identity remains regardless, and it cannot be erased, ignored, and replaced.
“About halfway between West Egg and New York the motor road hastily joins the railroad and runs beside it for a quarter of a mile… this is a valley of ashes – a fantastic farm where ashes grow like wheat into ridges and hills and grotesque gardens; where ashes take the forms of houses and chimneys and rising smoke; and finally, with a transcendent effort, or ash-gray men who move dimly and already crumbling through the powdery air…” - The Great Gatsby®
4 NYC, BOROUGH OF BROOKLYN

NEWTOWN CREEK AS PROJECT SITE

Newtown Creek
Greenpoint
East Williamsburg
Superfund Site & Awareness
Residential vs. Industry
Mediation and Integration
Newtown Creek is about four miles long and divides Brooklyn from Queens, a tributary of the East River. Newtown Creek has five main tributaries (Dutch Creek, Whale Creek, Maspeth Creek, East Branch and English Kills).  

The land surrounding the banks of the Newtown Creek, was once the center of industrial activity in New York City. Starting as a farming development, by the 1800’s the banks of the creek were lined with oil refineries, glue factories, saw mills, lumber yards, coal yards, etc. and the creek served as the primary means of transportation to these industries. Just as evidenced at the waterfront of Manhattan, Newtown Creek was the industrial center of the city, and the residents moved inland. Greenpoint/East Williamsburg established itself as a center of shipbuilding and maritime commerce.

Because of the industry adjacent to Newtown Creek, the water has become dangerously polluted by activities of the past and the present. With no natural flow, the combined storm runoff, sewage, and industrial waste provides the only means of movement in this stagnant creek.
NEWTOWN CREEK INDUSTRIAL GROWTH & IDENTITY

1630
DUTCH & ENGLISH SETTLE THE CREEK
Farms & Industry on both banks

1800
NEWTOWN CREEK BEGINS TO DEVELOP AN INDUSTRIAL IDENTITY

1850
NEZIAH BLISS BUILDS BLISSVILLE DRAWBRIDGE,
LEADING TO THE RAPID INDUSTRIALIZATION OF GREENPOINT

1860
RAILROAD CONSTRUCTED ALONG THE QUEENS WATERFRONT

1950
STANDARD OIL, UNDERGROUND OIL SPILL INTO THE NEWTOWN CREEK

1954
PUŁASKI BRIDGE, REPLACING VERNON AVE.
BRIDGE, CONNECTING LONG ISLAND CITY, QUEENS & GREENPOINT, BROOKLYN

1978
EPA IS FORMED IN 1970
17-30 MILLION GALLONS OF OIL RELEASED INTO THE NEWTOWN CREEK

1980
PARTS OF GREENPOINT SHIFT FROM INDUSTRIAL TO RESIDENTIAL - AWARENESS IS RAISED REGARDING CONTAMINATION IN THE CREEK
1870
PENNY BRIDGE CONSTRUCTED BETWEEN BROOKLYN & QUEENS, LATER DEMOLISHED

1900
BOTH SIDES OF THE CREEK ARE LINED WITH SHIPYARDS, FOUNDRIES, FABRIC/PAPER MILLS, FOOD PROCESSORS

1920/1930
BECOMES A MAJOR SHIPPING HUB, TRANSFORMING THE WATERWAY (WIDENING AND DEEPENING THE CREEK FOR SHIPS)

1939
KOSCIUSZKO BRIDGE, CONNECTING QUEENS AND EAST WILLIAMSBURG

1983
TREND OF CLOSING INDUSTRIES IN MANHATTAN, NEWTOWN CREEK INDUSTRIAL IDENTITY REMAINS REGARDLESS OF CLOSURES, RESIDENCES

1992
DESIGNATED AS A SIGNIFICANT MARITIME INDUSTRIAL AREA (SMIA), FACILITATING THE GROWTH OF WATER-DEPENDENT INDUSTRIES

2009
DECLARED A SUPERFUND SITE BY THE EPA (CONTINUED DISCOVERY OF HAZARDOUS MATERIALS AND SUBSTANCES IN THE CREEK)

2009
NEWTOWN CREEK NATURE WALK RAISING AWARENESS ABOUT ITS HISTORY
Newtown Creek is composed of storm water runoff, sewer overflows, and discharges from pollution sources (industries, etc.). The creek is essentially stagnant, leaving the pollutants to settle, creating a 15ft thick layer of “black mayonnaise” - a combination of raw sewage, petroleum and coal tar.94

Since 1980 the EPA has been collecting samples from Newtown Creek, and have continued to detect hazardous substances. In the 2009 EPA began Expanded Site Investigation (ESI) of the Newtown Creek, discovering found metals, volatile organic compounds, semi-volatile organic compounds at outstanding levels.95

The Newtown Creek is declared a Superfund Site by the EPA. Superfund relates to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980; a federal law to clean and revive contaminated sites/hazardous substances.96

The hazardous substances in the creek that are detrimental to the surrounding neighborhoods, the EPA has placed Newtown Creek on the National Priorities List, and in 2011 Remedial Investigation/Feasibilities Studies began in order to document the conditions at Newtown Creek, determine the cause of the pollution, assess the well-being of the surrounding neighborhoods and begin “cleaning” acts.97
NEWTOWN CREEK ARMADA
ART INSTALLATION

“The Newtown Creek Armada is an art installation that invites the public to explore the past, present and future of a contaminated New York City waterway.”

Newtown Creek is one of the most polluted bodies of water in the United States, and the Armada art installation allows the public to “pilot a fleet” of remote-controlled boats along the creek while viewing video that the boats are sending back to the shore. Launched in September 2012 in Greenpoint, the installation allowed the public to interact with the overlooked industrial waterway, understanding its rich industrial history and raising awareness of the pollutants and industrial identity through interaction.

Collaboration between artists Laura Chipley, Nathan Kensinger and Sarah Nelson Wright in partnership with North Brooklyn Art Coalition (nbART) and NYC Department of Environment Protection.
As evidenced by the New York City Hudson River Waterfront, the public is moving back to the waterfront for recreation. Newtown Creek and the surrounding industrial areas are declared Significant Maritime Industrial Areas (SIMA), meant to facilitate and continue the development of industry at these locations. Even though there is a movement to maintain industry along the banks of Newtown Creek, public access and engagement does not have to be sacrificed or compromised. This is an opportunity to not only design a functioning piece of infrastructure or industry, but more importantly engage the public and facilitate interaction. An industrial identity must be maintained to reflect this history and significance of Newtown Creek in the development of New York City’s industrial success, while also providing for the recreational/needs of the surrounding environment.

**INDUSTRIAL VS. RESIDENTIAL**

**OPPOSING AGENDAS**

1800’s

1900’s

PRESENT

PUBLIC HAS RECLAIMED SITES ON THE EAST RIVER, FACING FASHIONABLE MANHATTAN - THE NEWTOWN CREEK INDUSTRIAL WATERFRONT REMAINS OVERLOOKED

INDUSTRIAL/ INFRASTRUCTURAL IDENTITY REMAINS ADJACENT TO THE NEWTOWN CREEK.

INDUSTRY LOCATED ON THE WATERFRONT, RESIDENCES & GREEN SPACE MOVE INLAND, AWAY FROM THE WATER

AS POPULATION GROWS, PUBLIC ENCROACHES ON THE WATERFRONT, RE-PURPOSING ABANDONED LAND, BUILDINGS OR PIERS
GREENPOINT
LONG ISLAND CITY
EAST
WILLIAMSBURG
PULASKI BRIDGE
PULASKI BRIDGE
NORMAN AVE
RESIDENCES VS. INDUSTRY
BQE & INDUSTRY
NEWTOWN CREEK
MCGOLRICK PARK
MORGAN AVE
RESIDENCES VS. INDUSTRY
TYPOLOGICAL DISTRIBUTION
EAST RIVER & NEWTOWN CREEK
INDUSTRIAL

COMMERCIAL
Located at the intersection of Lombardy Street and Poter Avenue, the brownfield site is at the convergence of residential, commercial, and industrial landscapes. A former oil refinery, the site is an opportunity for a mediation of the three opposing programs of the neighborhoods adjacent to the Newtown Creek.

A tension exists between the severed landscapes of East Williamsburg - between the inland residential and parkscape, to the waterfront industrial landscape. Transforming infrastructure into a destination and public space will mediate the three opposing landscapes that converge at the project site. The public cannot be hindered by the industry, but rather embrace the industrial history and its potential to integrate additional program. The industrial/infrastructural landscape must be fashioned to facilitate collectivity, while still maintaining the identity of the site.
INDUSTRIAL IDENTITY
MANUFACTURED GAS PLANT

From 1928-1952 the site was owned by Brooklyn Union and Gas. A manufacture gas plant (MGP) was located at this site - manufactured gas was the primary source for heating, cooking and lighting in homes and businesses. In order to produce the manufactured gas, coal or oil was heated, but a coal tar was produced as a byproduct. Coal tar, a dense oil/liquid mixture of toxic contaminants, contaminated the Newtown creek.

Today, the site is owned by National Grid, and is adjacent to one of National Grid’s main locations in NYC. The primary service is a Peakshaving Plant/ Liquefied Natural Gas (LNG) Storage Facility. This includes the two enormous white holding tanks (1968, 1971) that store liquefied natural gas (LNG is produced by super cooling natural gas and placing it under high pressure). Typically the natural gas comes from Canada and Mexico, but to ensure that NYC has enough natural gas in the peak season, they have it stored in these tanks.
SITE TENSION
RESIDENTIAL VS. INDUSTRIAL
TYPOLOGICAL DISTRIBUTION
PROJECT SITE

INDUSTRIAL
COMMERCIAL
RESIDENTIAL
PARK SPACE
GREEN SPACE
HIGHWAY
RAILROAD
SUBWAY
STREET-SCAPE
SCALE COMPARISON
250,000 SQ FT PROJECT SITE

SYRACUSE UNIVERSITY
MAIN QUAD
EAST WILLIAMSBURG INDUSTRIAL PARK
PROJECT SITE
WASTE TRANSFER & MATERIAL RECOVERY
TRANSPORT AND RECOVERY OF WASTE AS OPPORTUNITY FOR DESIGN
Waste Transfer Stations (located throughout the five boroughs of New York City) serve as buildings/processing sites where local waste transportation vehicles deposit the trash before it is loaded onto regional/larger vehicles. From the transport center, the waste is then further transported to the “end point” of disposal, such as a landfill, incinerator, hazardous waste facility or recycling center. In some instances, waste transfer stations also contain Material Recovery Facilities (MRF), which serve to remove recyclable materials from the “waste stream.”

Material Recovery Facilities (MRF) are where drop-off and curbside pick-up recyclables are sent. A material recovery facility inevitably receives solid municipal waste that cannot be recycled, which is then transported and disposed of like any other waste transfer station. Utilizing a variety of methods, the materials that enter the facility are sorted by type of material, as diagrammed to the right. Sorting methods include conveyor belts, gravity, magnets, and human hands to minimize contamination of the recyclable material bales. These materials are then baled by material properties (glass, plastic, newspaper, paper, etc.), which are then shipped to manufacturers who buy the bales from MRFs. These manufacturers ultimately (or ideally) create new products out of the recycled material.

**Drop-off**
- TRASH
- CURBSIDE PICK-UP

**MRF**
- SEPARATE TRASH & RECYCLABLES
- SORT RECYCLABLES
- BALE & SHIP COMPRESSED MATERIALS

**Curb-side Pick-up**
- TRASH (NON-RECYCLABLES) DISPOSAL
- SELLING (RECYCLABLES) TO MANUFACTURERS

**Landfill**
- WTE
MEANS OF SORTING MATERIALS, MRF

1 MATERIALS UNLOADED

2 GRAVITY SORTS PAPER FROM OTHER MATERIALS

3 SORTING UNWANTED MATERIALS FROM PAPER PRODUCTS- REDUCING CONTAMINATION OF BALES

1. MATERIALS UNLOADED
2. GRAVITY SORTS PAPER FROM OTHER MATERIALS
3. SORTING UNWANTED MATERIALS FROM PAPER PRODUCTS- REDUCING CONTAMINATION OF BALES

PAPER
PLASTIC BAGS
CARDBOARD
TRASH

GRAVITY SORTS PAPER FROM OTHER MATERIALS

MAGNETIC ATTRACTION

MAGNETIC REPULSION

PUFF OF AIR

STEEL
ALUMINUM
PLASTIC

GLASS
Although the waste management system improves and sustains modern living, the mere physical presence of a material recovery facility degrades the quality of life in the surrounding neighborhoods.

Existing waste management facilities, especially waste transfer stations, are ignored within the designed environment. Fashioning the unfashionable requires the insertion of additional (not necessarily associated) program. Understanding the requirements of a material recovery facility while architecturally engaging the public through additional program and collective exhibition space would result in a raised awareness about the “trail of trash.”

Visitors of the transfer station would encounter their waste and recyclables in a fashionable way that encourages learning and interaction.

New York City produces more waste than it can accommodate. Situated in East Williamsburg Industrial Park, Brooklyn, the material recovery facility will not only sustain and strengthen the waste management system of New York City, but more importantly provide for the growing population of the neighborhood. The material recovery system will function properly as means of waste disposal while raising awareness about waste displacement and issues of consumption and production. East Williamsburg is an up-and-coming artistic community that would benefit from an exhibition space that promotes and encourages artists focusing on re-use and recycling. Spaces of art, industry and park will mediate the tension of “residential vs. infrastructure” while maintaining the industrial identity of area of Newtown Creek.
FASHIONING THE UNFASHIONABLE

ART  +  MRF  +  PARK

MRF

PARK
5 MATERIAL RECOVER FACILITY AS EXHIBITION
A REALM OF RE-USE
SIGNIFICANCE OF ART
ART AS OPPORTUNITY TO LEARN

Art is a significant and prevalent part of society. Art is understanding. Art is creating. Art is interacting.

Instead of merely learning about the process of waste management and material recovery through observation of the sorting, condensing and baling processes of the facility, the public has the opportunity to engage with the waste at a greater level. There is an interaction with the MRF, and an engagement between the public and the infrastructure. The public not only learns about waste by understanding the infrastructural processes of waste management, but more importantly through the art that is created and displayed at the MRF.

It is important to have an exhibition space – indoor and outdoor – providing artists with the opportunity to create whatever size/scale work of art they wish. A site for installations, exhibitions and lectures regarding the significance of waste management provide education opportunities regarding waste, especially as it pertains to NYC. The MRF will provide more than its infrastructural purposes – it will provide learning opportunities risen from engagement and collectivity.

The art of waste is representatitive of the values of the culture at the time.

As the art is created with the waste/recyclables, an identity is documented and created at that given time. Just like fashion and architecture, these works of art of waste are representative of the values of the culture at that time. Through the materiality of the work it is evident what was valued, because it is not present in the waste. Their waste, their non-fashions, will be exhibited through the art of waste. This entire notion of waste vs. non-waste and fashion vs. non-fashion assimilates itself back to the notions of fashion and architecture as means of collective selection and social mechanisms. Over time, the art of waste will be curated, and can be analyzed as trends, notions of change, etc. – just as fashion and architecture have.
WASTE MANAGEMENT PROCESS
INFRASTRUCTURAL

LEARN THROUGH PROCESS

EXHIBITION SPACE
PUBLIC SPACE OF ENGAGEMENT

INTERACTION BETWEEN ARTISTS & PUBLIC

ARTISTS

LEARN THROUGH ART

ARTIST STUDIO SPACE
CREATE, MAKE, INTERACT
The social mechanism and temporality of fashion provides a framework within which an architecture of waste is created. The Swan (Salvaged Waste At Newtown) Art Center and MRF transforms mundane infrastructure into a site of collectivity and public engagement. The site repurposes an existing, abandoned brownfield that abuts a normative housing block.

The project mediates the opposing conditions of residential and industrial uses by merging artist studios with a material recovery facility, creating a realm of re-use and the art of waste.

Swan Art Center adds another strand to the waste management system – one of re-use.
AGENTS OF TRANSFORMATION
ROLE OF ARTISTS AT SW@N ART CENTER

The artists themselves act as agents of transformation. The act of the artists on the waste stream creates a tertiary program of gallery and public spaces. This intervention and interruption of the waste stream creates a series of feedback loops - the public generates waste, the MRF sorts the waste, the artists transform and fashion the waste, and the transformed waste is put on display for the public.

Two paths are created for the waste - (1) the normative path of waste, where the recyclables are sorted, baled, and sold to manufacturers - (2) the new path, where the raw waste is transformed to become something valuable, a work of art.

Transforming the material recovery facility into a mixed-use exhibition and studio space utilizes recycled materials and raises awareness about waste removal, displacement and disposal in New York City.
ARTISTS

MRF

Waste + Recyclables.

Consumed by the public and turned into waste.

Processing + Sorting

Baling and selling

Explicitly interrupt the MRF process to re-use and give value to the raw material

GALLERY

The transformed / fashioned material is on display in the realm of reuse.
PATH OF RECYCLABLES:

ARTIST STUDIOS

the realm of reuse

ART OF WASTE GALLERY

MATERIAL RECOVERY FACILITY

typical path of waste

BALES OF RECYCLABLES SOLD TO THE MARKET

...the influence of the public/artist on the waste creates a realm of reuse, something that can be given back to the rest of the public...
RAW MATERIALS
ON DISPLAY THROUGH REVEALING THE WORK OF THE MRF
 tipping floor moving trash through the gallery

FASHIONED WASTE
ON DISPLAY IN THE REALM OF RE-USE
Artist Studios Gallery

INTERFACE BETWEEN ARTISTS AND WASTE
• Artists interrupt the processes of typical MRF to collect the sorted waste for their work
• GLEANERS, from collecting scraps of no value and transforming them into something of value
• Ball of Newspapers vs. Newspaper Dress

REALM OF RE-USE
UNWANTED
HARVESTED COLLECTED

PUBLIC
SORT
TRANSFORM
MRF AS EXHIBITION
RE-PROGRAMMING INFRASTRUCTURE

There is an integration between an interactive museum identity and a utilitarian waste transfer and material recovery facility. The process of waste removal and recycling, sorting, compressing and baling is not only put on exhibit itself, but more importantly facilitates the artwork created and exhibited on site. The sorting process is not only viewed, studied, and observed, but more importantly it is engaged by the artists and by the public. There is a direct interaction between the public and the art of waste, between the artists and the waste, and between the MRF and the public.

The public not only has the opportunity to learn about the MRF process, but more importantly can learn hands on, either through the facility or through the museum. There is a literal and conceptual transparency between the operations of the MRF and the operations of the artist studios. The public not only learns about the MRF processes, but also understands waste (and its meaning) through art.

Transforming, curating, collecting and understanding waste is essential to engage the community while maintaining an industrial identity of material recovery facility.

The multi-agenda program of the MRF is not meant to ignore the infrastructural functions and responsibilities. The art and park do not operate next to the material recovery facility, but rather an integral part of the MRF. The MRF cannot function as more than infrastructure without the art (cannot function as something to educate and engage the public) and the art cannot function without the MRF (no resources, no materials, no studio space).

1 SQUARE = 1,000 SQFT
PLAITING & BRAIDING
SWAN ART CENTER WEAVES SEPARATE STRANDS OF PROGRAM
The Swan Art Center re-considers the role of infrastructure for the public. Instead of remaining an introverted and contained material recovery facility, Swan produces something for the public - it becomes an “extroverted,” infrastructural project.

The surrounding site conditions inform the formal strategy, weaving these external forces (primarily programmatic) into this site of convergence.

Studies of the relationships between connections and intersections between these three (programmatic) strands resulted in three-dimensional form-making; clay programmatic strands were woven to create initial concept models, that soon developed into massing strategies on the site.
2. ARTISTS ➔ WASTE MANAGEMENT SYSTEM

ACTION: ARTISTS INTERACT WITH WMS & COLLECT WASTE TO TRANSFORM

RESULT: PROGRAM TO GIVE PUBLIC USE/SPACE

3.

GALLERY
- Encourage the use of waste
- Understanding the "transformation"

FLEA MARKET
- Public can bring unwanted/discard
- Or salvaged items to market to
- Donate or sell

EDUCATION + LECTURES
- MRF tours, artist lectures,
- Raise awareness about waste
- Environment for school groups

MRF TOURS + WMS
- Demonstrations/tours of the
- Facility, educating on

THE INTERSECTION OF PUBLIC ARTISTS & WASTE PRODUCERS TERTIARY PROGRAM
PATH OF WASTE
MATERIAL RECOVERY FACILITY
PATH OF ARTISTS & PUBLIC
ARTIST STUDIOS, GALLERY, CLASSROOMS
ARTISTS OF WASTE
TRANSFORMING THE USE-LESS

Maya Lin
Time Noble & Sue Webster
Chris Jordan
Vik Muniz
HA Schult
Robbie Rowlands
MAYA LIN

RECYCLED LANDSCAPES
STUDIO 94, NEW YORK CITY, NY
2009

Composed of discarded children's toys and found materials (cereal boxes, maps, cardboard, etc.), Maya Lin's small-scale sculptures explore ideas of waste and re-use. The "boisterous everyday objects" have (had) values that are (were) ritualistic and consumerist.106

Taking something that was once "loved, consumed, worn out, and thrown away," Maya Lin re-contextualizes the items and gives them new life and meaning as small scale sculptural installations.

5.1 5.2 5.3

RE-USE | MATERIAL

5.4
Tim Noble and Sue Webster are known and recognized for transforming found-objects, typically waste, into works of art. Their assemblages of trash are carefully composed so when light is projected on them, their shadows become identifiable (figures). This “transformative art” takes discarded objects, whether wood, scrap metal, taxidermy, etc. and re-contextualizes and re-assembles them into a recognizable image.

These shadow investigations, as demonstrated by Wild Mood Swings, demonstrate the ways in which something considered to be useless can become part of a work of art, taking something unwanted and making it necessary to a composition.
Making statements regarding the consumption of finite resources in America, Chris Jordan composes and photographs larger images/sculptures that are made out of representative “found objects.”

(Left) Car Keys, 2011: 260,000 car keys equal to the number of gallons of gasoline burned in motor vehicles in the US every MINUTE.

(Right) Caps Seurat, 2011: 400,000 plastic bottle caps, equal to the average number of plastic bottles consumed in the US every MINUTE.
The documentary film "Waste Land," follows Vik Muniz on his trip to Rio de Janeiro, where one of the world’s largest garbage dumps is located. Muniz discusses the process of waste management, photographs the dedicated workers on the dump and then arranges found objects from the dump to photograph them to create works of art.
HA SCHULT

TRASH PEOPLE
VARIOUS LOCATIONS
1996-PRESENT

HA Schult since 1996 has installed one thousand life sized “trash people” throughout the world, at famous monuments-public spaces-structures. These “trash people” are made from re-used electronic waste, crushed cans, and other waste as a critique on the nature of society’s consumption and production of waste.110

Famous locations for the installation include the Great Wall of China, Moscow’s Red Square, the Pyramids of Giza, Egypt, the Roman Colosseum, Piazza del Popolo, Rome,
ROBBIE ROWLANDS

BUS DEPOT INTERVENTION
DANDENONG, AUSTRALIA
2008

Robbie Rowlands studies the objects that surround us everyday, “questioning their nature.” Rowlands cuts and manipulates the recognizable character of depot, peeling back different layers to reveal what is beneath – making the observer aware of what lies beneath the comfortable environment that we inhabit.111

“In my work I transform material from the urban environment using simple processes of cutting, bending and stacking. Arranging and reconstructing the portions I search for discernible patterns to create new forms that intercept the preconceived order. Offering up the potential of a new process of thought or interaction.”112
ARTIST COMMUNITIES
WORKING ON SITE, ENGAGING WITH MATERIAL, INTERACTING WITH WASTE

Temple Bar Gallery & Studios
Eyebeam Creative Residences
Temple Bar Gallery and Studios (TBG+S) offers thirty individual artists’ studios. In one year more than forty artists will have stayed and worked at TBG+S. Offering studio space at a subsidized cost, TBG+S supports both local and international artists (exchange programs) through their artistic endeavors.

Rentals include studio space, limited use of digital equipment and tools, access to the reading room, scanning and printing facilities and more. Artists seeking professional development are the prime candidates selected for the studio rentals.

225 SQ FT – 590 SQ FT for each studio space
Eyebeam Art and Technology Center provides gallery and exhibition space, public programs and creative residencies to both national and international artists. Eyebeam residencies support “the creative research, production and presentation of initiative, queying art, technology and culture.” Residencies last for up to five months; a period in which artists immerse themselves in “artistic investigation” and research to further their artistic pursuits.
ARCHITECTURE OF WASTE
PRECEDENT STUDIES ON FASHIONING WASTE MANAGEMENT

Michael Singer Studio, Recycling Center
Maya Lin, Bronx Community Paper Company
Selldorf Architects, Recycling Facility
Dattner Architects, Wastewater Treatment
MICHAEL SINGER STUDIO

PHOENIX RECYCLING FACILITY
PHOENIX, AZ, USA
1990’S

Michael Singer re-conceptualized the purpose of this facility from an “out-of-site, out-of-mind” infrastructural object to a landmark that stands out in the city’s landscape. The facility engages the public of Phoenix by providing facilities for their use, including education spaces, lecture and auditorium spaces, public gardens in conjunction with programs associated with waste management and recycling centers. Considerations include site context, energy consumption, public access, water management, and the ways in which architectural design can create an unobtrusive response to a recycling center.115

Michael Singer re-imagines and reconsiders the ways in which a recycling center can provide for the public, aside from the necessary services.
The BCPC was designed not only as a solution to the amount of wasted paper in New York City, but more importantly as an opportunity to transform a brownfield site in one of the poorest areas of the Bronx into an engaging paper mill and green space. BCPC addressed issues of waste management/recycling ideals as well as the issue of declining manufacturing jobs. The goal of the project was to create a “humanistic center” that not only recycled paper and made newsprint, but also to create a positive environment for workers, the community, and the public that would tour the facility.

Maya Lin designed BCPC as a set of buildings and green spaces that work in harmony with each other, redefining man’s relationship to the environment.
5.32

5.33

5.34

BROWNFIELD

"WASTE" PAPER

SEPARATION FROM WATERFRONT

GREEN SPACE

RECYCLED PAPER

ENGAGE W/ WATER @ PROJECT
An abandoned 11-acre pier on the Gowanus Canal in Brooklyn is the new location of a facility for recycling and active education. Located right on the water, the facility is a tipping building, open to collections from a barge, eliminating 260,000 miles of annual vehicular truck travel. The public space includes a green space, admin. offices, classrooms, and a visitor center - which is linked to the recycling building through a pedestrian bridge/observation room.

Integrating education, infrastructure and sustainability, Selldorf Architects utilizes a waterfront site to engage the surrounding community to promote awareness regarding sustainable lifestyles and recycling.
Dattner Architects collaborated with Abel Bainnson Butz Landscape Architects and designed a 28 acre park built on top of a sewage treatment facility on the upper west side of Manhattan, on the Hudson River. The North River Wastewater Treatment Plant was constructed in two phases between 1986 and 1991, and the park was built a few years later.\textsuperscript{119}

Regardless of its location on the roof of a sewage treatment plant, the park is one of the most heavily used state parks in New York, and the only evidence of its actual identity below of a wastewater treatment plant is the "smoke stacks" hidden in the trees. One of the most unfashionable and hidden aspects of waste infrastructure was transformed as the structure of a riverside park.
At the Swan Art Center and MRF, the processes and inter-workings of the waste management system are constantly on display. The project is a translucent MRF, a polycarbonate box, with a solid gallery and public space weaving through, made of recycled stone. The waste is displayed in its raw state, activating the facade, registering the dissemination of the waste as it is being taken and transformed by the artists. The public is constantly connected to the waste management system, gaining an understanding of the means and methods of transformation.

The waste stream moves through the continuous MRF, and the public program weaves through it, creating two primary moments of public (visual) interaction with the waste:

**MRF**
The solid mass of the public classrooms, public walkway, administration, and salvation army moves through the translucent MRF. A visual connection between the public and the waste is established.

**Gallery**
At this end of the project the public sees the fashioned waste and understands the transformation process with a visual connection to artists working and transforming the waste in the collective work spaces on the ground level and the live/work studios above.

A path/ connection moves the public from the second level of the gallery, through the MRF and into the classrooms. This path moves through the “zone of collision,” the moment when all three user-groups meet at three different levels. In this zone of collision, there exists a visual connection between the MRF below, the public walkway, and the artists’ studios above. This is also the moment of interface where the artists interrupt the waste stream to bring the waste into their studios, establishing an alternative path of waste.

The systems of the project are revealed and the architecture itself utilizes everyday systems of assembly and construction. Industrial light monitors cover the roof-scape of the MRF as well as the roof-scape of the gallery space. Ideas of infrastructure as sculpture and systems as art are evident as the systems are taken out of the project and put on display adjacent to the transformed waste in the sculpture garden (located in a former concrete holder tank base).

**SWAN ART CENTER & MRF**
**FASHIONING INFRASTRUCTURE**
SALVAGED WASTE AT NEWTOWN
ART CENTER + MATERIAL RECOVERY FACILITY
PROGRAMMATIC PLATING

ZONE OF COLLISION

SOLID VS. VOID

PUBLIC PATH

LIGHT MONITORS

INFRASTRUCTURE AS SCULPTURE
FASHIONING THE UNFASHIONABLE
AN ARCHITECTURE OF WASTE

By merging artist studios with a material recovery facility, the swan art center mediates the opposing site conditions of residential and industrial uses while creating a realm of re-use, in which reconditioned and fashioned waste becomes a destination and space for the local community.
END NOTES


9. IBID


18. IBID


20. IBID


22. IBID

23. IBID


27. IBID

28. IBID

29. IBID


45. IBID

46. IBID


51. IBID

52. IBID


55. IBID

56. IBID


58. IBID

59. IBID

60. IBID

61. IBID


65. IBID


68. IBID


75. Municipal Solide Waste Generation, Recycling and Disposal in the United
88. IBID
89. IBID
90. GREAT GATSBY
94. IBID
95. IBID
96. IBID
97. IBID
99. IBID
100. IBID
103. IBID
105. IBID

112. IBID


FIGURE CREDITS

1 INFRASTRUCTURE


Figure 1.5: Photographs of Old America. “The Brooklyn Bridge Pedestrian Walkway, 1900.” http://www.photosofoldamerica.com/index.cfm/New_York_City_Bridges-The_Brooklyn_Bridge_Pedestrian_Walkway_208.htm


Figure 1.7: IBID

Figure 1.8: IBID


Figure 1.10: IBID

Figure 1.11: IBID

Figure 1.12: Berkel, Ben Van, and Caroline Bos. UN Studio: Design Models – Architecture, Urbanism, Infrastructure. New York: Rizzoli, 2006.

Figure 1.13: IBID

Figure 1.14: Betsky, Aaron. UN Studio: The Floating Space. Koln: Taschen, 2007.

Figure 1.15: IBID


Figure 1.17: IBID

Figure 1.18: IBID


Figure 1.20: IBID

Figure 1.21: IBID

Figure 1.22: IBID


Figure 1.24: IBID

Figure 1.25: IBID


Figure 1.27: IBID

2 FASHION

Figure 2.1: Jodidio, Philip. 100 Contemporary Architects. New York: Taschen, 2008.

Figure 2.2: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.


Figure 2.4: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.

Figure 2.5: Terrassen, Prosdocimo. Carlo Scarpa: La Fondazione Querini Stampalia a Venezia. Milano: Electa, 2006.

Figure 2.6: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.

Figure 2.7: Jodidio, Philip. 100 Contemporary Architects. New York: Taschen, 2008.
Figure 2.8: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.

Figure 2.9: Jodidio, Philip. 100 Contemporary Architects. New York: Taschen, 2008.

Figure 2.10: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.

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Figure 2.12: Jodidio, Philip. 100 Contemporary Architects. New York: Taschen, 2008.


Figure 2.15: Jodidio, Philip. 100 Contemporary Architects. New York: Taschen, 2008.

Figure 2.16: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.

Figure 2.17: ArcSpace. “Tod’s Omotesando.” Last modified October 31, 2005.


Figure 2.18: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.

Figure 2.19: Jodidio, Philip. 100 Contemporary Architects. New York: Taschen, 2008.

Figure 2.20: Hodge, Brooke, Patricia Mears, and Susan Sidlauskas. Skin and Bones, Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007.

Figure 2.21: Jodidio, Philip. 100 Contemporary Architects. New York: Taschen, 2008.


3 WASTE


Figure 3.3: IBID

Figure 3.4: IBID

Figure 3.5: IBID


Figure 3.7: IBID

Figure 3.8: IBID


Figure 3.11: IBID

Figure 3.12: IBID


Figure 3.14: IBID

Figure 3.15: IBID

Figure 3.16: IBID
Figure 4.7: IBID
Figure 4.8: Newtown Creek Alliance. “Newtown Creek Alliance.” Accessed November 16, 2012. http://www.newtowncreekalliance.org/
Figure 4.10: IBID
Figure 4.13: Google Maps. maps.google.com
Figure 4.14: IBID
Figure 4.15: IBID

Figure 5.2: IBID

4 SITE

Figure 4.2: Bone, Kevin. The New York Waterfront: Evolution and Building Culture of the Port and Harbor. New York: The Monacelli Press, Inc., 1997. PG 111 - View of South Street Manhattan, 1900

5 PROGRAM


