8-2013

Revitalizing a 19th Century Industrial Complex into a 21st Century Research and Learning Technology Center

James Lawrence Wines
jwines@utk.edu

To the Graduate Council:

I am submitting herewith a thesis written by James Lawrence Wines entitled "Revitalizing a 19th Century Industrial Complex into a 21st Century Research and Learning Technology Center." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Architecture, with a major in Architecture.

Gregory Spaw, Major Professor

We have read this thesis and recommend its acceptance:

George Dodds, Matthew Hall

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

Revitalizing a 19th Century Industrial Complex into a 21st Century Research and Learning Technology Center

A Thesis Presented for the

Master of Architecture Degree

The University of Tennessee, Knoxville

James Lawrence Wines

August 2013

DEDICATION

I dedicate this thesis to my wife Anne. Without her love, support, and encouragement this would never have been possible. To my son Web who's enthusiasm and curiosity inspired me to grow in new ways and embrace challenge.

ABSTRACT

The revitalization and repurposing of the Domino's Sugar Plant will foster a vibrant and engaged community for the neighborhood in a distinct way differing from the recent history of growth. Williamsburg is located in a north Brooklyn, New York, community that has been struggling for its identity since the 1970's. The reprogramming of this abandoned industrial site will include the addition of a new technological research center that will contribute to economic growth and stability for the neighborhood. The new jobs will help bring more people into the neighborhood who will be committed to both live and work there. At present, most of the new residents live there due to the neighborhood's proximity to Manhattan. This project would activate 1,500 feet of waterfront property on the East River and create a greenway that would be a gateway for this community. The greenway will move residents through the new research center, creating an awareness of the developments taking place there. The research center will support a progressive school that will utilize distinctive architectural design coupled with an innovative educational curriculum. The school will be designed with a digital focus that is on the cutting edge of education reform as competitive schools make a neighborhood attractive to families. By bringing in new jobs, creating greenways, new opportunities in education and encouraging occupancy by residents who have a longer-term commitment to the area, the project will help foster a cohesive community that is invested in the Williamsburg neighborhood.

TABLE OF CONTENTS

LIST OF FIGURES

Quest to Learn- Public School 6 - 12

> Architecture can be a powerful instrument to affect social change. On a small scale, a well-designed school can positively influence individual learning and help children to identify themselves as part of a larger community. On a larger scale, urban planning that offers not only the basic requirements of housing, transportation, and commerce but also parks, public squares, and cultural facilities can increase the quality of life for all inhabitants, bolster civic pride, and have a positive impact on the city's economy.
>
> (Small Scale Big Change, Andres Lepik)

Figure 1:
Q2L student experiments with light and form

Photo courtesy www.Q2l.org

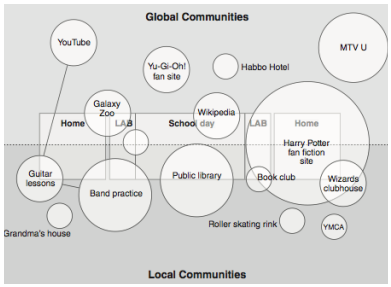

Figure 2:
Student activity diagram

Graphic courtesy www.Q2l.org

The project includes the implementing a school in the site. The closest high school to the site currently is Harry Van Arsdale, which has been in decline since 2004 because of its status as a failing school. The school was named after the first president of the AFLCIO, who dropped out of school at age 16. What's left of Harry Van Arsdale High School coexists with the Williamsburg School of Architecture and Design in the same prison like building with an enrollment currently of 450 students. Also

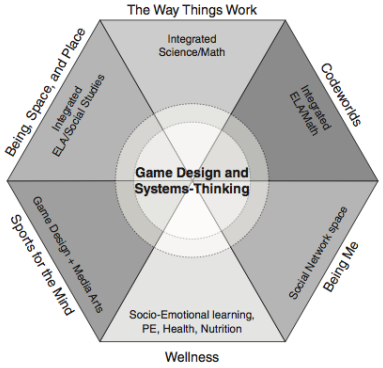

Figure 3:
Curriculum development diagram

Graphic courtesy www.Q2l.org

sharing the building is the Williamsburg Preparatory High School with an enrollment of about 432. The student to teacher ratio, according to the individual websites is 15 to 1, with a high rate of college going graduates.

The school planned for the Domino's site will be an existing secondary school in New York and Chicago, Quest to Learn. Q2L, as it is known, is a 6-12 experimental public school developed in 2007 by The Institute of Play in collaboration with New Visions for Public Schools. Q2L shares its location at 351 W. 18th Street, Manhattan, in the Humanities Educational Complex, with six other schools. Quest's former home was on 23rd street between 2nd and 3rd Avenues, in the School for the Deaf. Q2L has additional private funding sources, which include Bill Gates, and grants from the John D. and Catherine T. MacArthur Foundation. The funding is provided because of interest in the needed changes in the educational system in order to keep up with individual students needs in the information age.

Figure4:
The Cornell Campus on Rosevelt Island.

Stanford University/Ennead Architects, via Image by Redsquare

Figure 5:
Q2L class room in the School for The Deaf.

Photo by Dan Winters for The New York Times

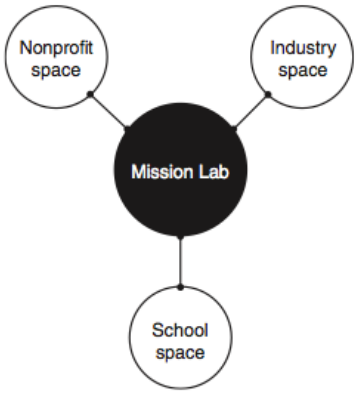

Figure 6:
Diagram of the creation/function of the Mission Lab

Graphic courtesy www.Q2l.org

> The school's learning model is carefully designed to enable all students, with a diverse range of learning styles to contribute to the design and innovation necessary to meet the needs and demands of a global society. At Quest, a curiosity for learning paired with a commitment to social responsibility and respect for others defines the school culture. "Learn how, learn now," is our motto.
>
> *WWW.Q2L.ORG/NODE/8*

Figure 7:
Existing conditions in the B.R.E.C. Hallways.

Photo courtesy www.Q2l.org

Quest to Learn is known, as "the school for digital kids" and it would be an ideal addition to the site's new purpose to research and develop digital technologies as well as help rejuvenate the Brooklyn neighborhood. Many of the Williamsburg schools are failing because of overcrowding and outdated curricula. This would also be an opportunity to move Q2L into a facility with classrooms designed specifically for the needs of a new digitally oriented curriculum. The current location in the B.R.E.C. building where it is located, built in 1930, cannot fully provide the necessary total environment that this kind of 21st century education demands.

Figure 8:
Existing conditions in the B.R.E.C. classrooms

Photo courtesy www.Q2l.org

CHAPTER II
The Site

Domino Sugar Refinery

Located on the East River in Williamsburg, Brooklyn, the Domino's sugar plant is an abandoned industrial site, which I am proposing to repurpose into a center for research and development for computer technologies. This project will counteract the impact the gradual loss of industry has made on the immediate community, while contributing to the economy in general through investment in new technology for innovative power sources. This plan is in line with current local government goals for the city. Computer industries are being targeted by the City Hall and Mayor Michael Bloomberg's intention is for New York City to become the silicon valley of the east coast.

Revitalization

The Domino's factory has had an important role in the development of the Williamsburg neighborhood. After two decades of change, the neighborhood is adapting to its new constituents and its time for the Domino's site to be responsive to the demand in the area as well.

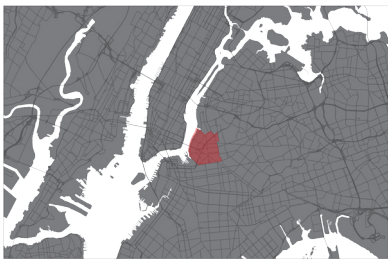

Figure 9:
Map showing the Williamsburg neighborhood

Map created with Archmap 10

Figure 10:
Domino Sugar Refinery

Photo by James L. Wines

Williamsburg had been deteriorating as an industrial neighborhood since the Brooklyn riots of the 1970's. At that time, many of the residents left for New Jersey or Long Island, which precipitated the rapid change that occured in the neighborhood over the last eighteen years. Young artists, and musicians began moving into the massive loft spaces created in the former commercial buildings in the late 1980's and throughout the 90's. This gave the young artists and or entrepreneurs a foothold in New York's art scene. Eventually, restaurants, and coffee shops that catered to the new residents began cropping up. The bohemian scene exploded in the neighborhood, sending the precariously balanced demographic of the neighborhood reeling. This influx created a demand for housing and developers began building high-rise condominiums that displaced the studios and loft living artists, as well as many of the remaining industries that employed the previous generations of neighbors. Currently, just up the street from Domino's plant is a high-rise luxury condominium project named The Edge.

Figure 11:
Mccarren Park Pool- In 1937
Five years after it's construction. The pool was shut down 1974 due to racial tensions in the neighborhood.

Photo from, http://www.nycgov-parks.org/about/history/pools

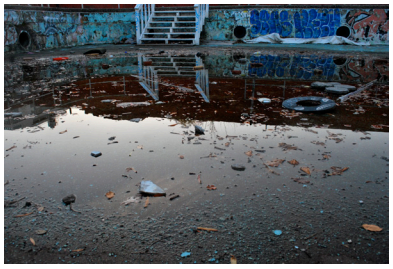

Figure 12:
Mccarren Park Pool- In 1994
The pool was home to vandals, drug addicts, and adventurers.

Photo by, Gina Pollack

Figure 13:
Mccarren Park Pool- reopened in the summer of 2012. From June-August The lines to get in stretch for blocks.

Photo from, http://greenline.stnicksalliance.org/?p=641

The developers of the edge, Douglaston Developers, were given permission to develop the Williamsburg waterfront on the condition that a portion of the units follows affordable housing guidelines. The affordable units all share a single egress, which is on the side street between the garage and the dumpsters and has no security. In contrast to the affordable units entrance, the condo owners, paying market rate for their units, have an egress that opens to Kent Avenue on one side, and to the waterfront greenway on the other side. Doormen are positioned at each entrance to the condos. The amenities associated with the condos include but are not limited to private patios, a pool, spa, gym, billiards room, as well as

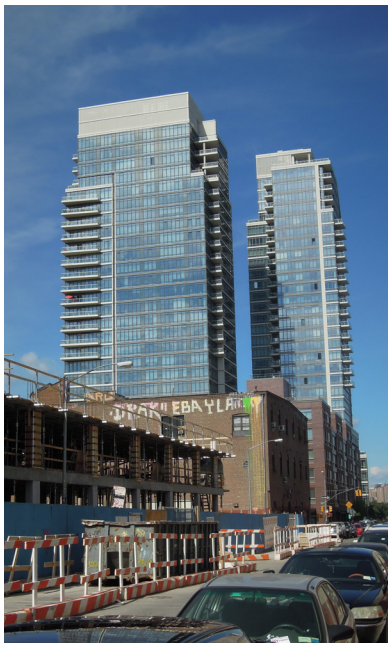

Figure 14:
The Edge Luxury high rise apartment buildings near the refinery

Photo by James L. Wines

Figure 15:
The Domino Sugar refinery

Photo by Pabo76 on Flickr

a movie and video game room. The residents of the affordable housing pay between four and seven hundred dollars a month, which is less than renting a monthly garage space in much of New York City. The apartments were rented out through a lottery system. Each affordable unit is rented out and has a waiting list of future residents. The cheapest condo at the Edge is currently priced at two million four hundred thousand dollars, with a monthly maintenance fee higher than the rent of the affordable units.

The Domino's Sugar Plant with its building and sign visible from Manhattan and the Williamsburg Bridge has been a Brooklyn icon since its construction in 1810. The plant was closed in 2007 and was slated to be demolished in order to make way for more high-rise luxury condos like the Edge. The developer backed out before demolition and construction could begin, because the existing newly built condos saturating the Williamsburg neighborhood are remaining mostly vacant. So now the Domino's plant stands empty and quiet literally at the foot of the Williamsburg Bridge.

Many industrial buildings and sites are left abandoned and in ruins after their intended original function is no longer needed. Spaces and structures that were built during the Industrial Revolution, whose forms were dictated by their function, are typically the ones that are prone to this abandonment. These industrial constructions were created for the perceived greater good of civilization between 1810 and 1950. Instead of remaining empty and falling into ruin, such sites should continue to be utilized in a way that currently best serves the community and or city in which they exist.

The Domino's site is located on the north side of the Williamsburg Bridge, on Kent Avenue. The site spans five blocks, from Grand Street to South Fifth Street. Facing the East River is a pier that is nearly one hundred feet wide and runs the full length of the site. The pier is an obvious addition to the greenway that ends two blocks north of Grand Street. Two massive cranes that once loaded and unloaded barges into the factory, sit side by side on the pear acting as symbolic roadblocks to the greenway. The Grand Street Park borders the north end of the Domino site. The park was once the landing point for the East River ferries. The ferries shuttled people between Grand Street Brooklyn and Houston Street in Manhattan, or Grand Street Brooklyn to Grand Street Manhattan. The ferries ran from 1800 to 1918, the completion of the Williamsburg Bridge in 1903 reduced the need for the ferry service. A new ferry route has opened in the neighborhood seven blocks North of the Domino's site. This ferry service is once again a vital source of transportation and became particularly needed in the aftermath of Hurricane Sandy in the fall of 2012.

South first and South Fourth streets end at Kent Avenue, across from the Domino's site. South Second and South Third Streets would, if not for the chain link fence, pass through the Domino's site to the East River. The industrial blocks are 425 feet deep from Kent Avenue to the East River, and together the three blocks are 1600 feet long.

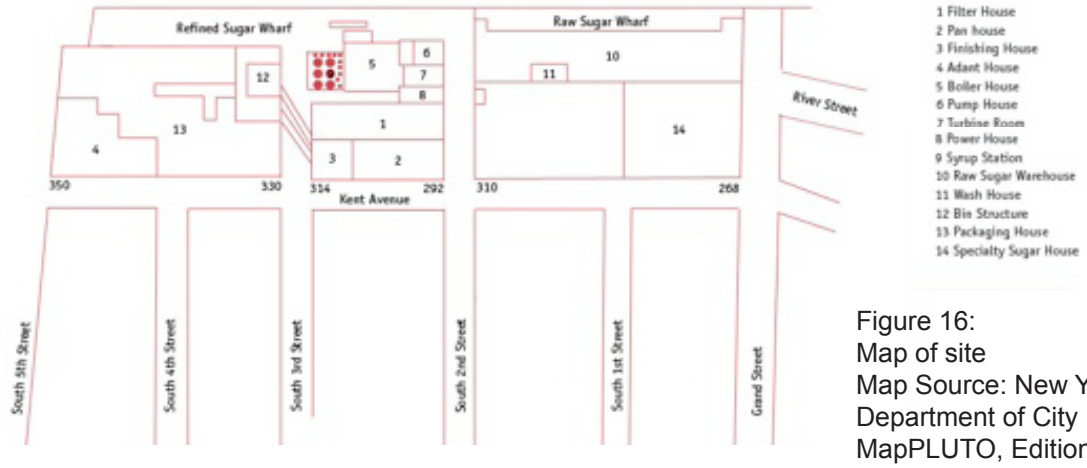

Figure 16:
Map of site
Map Source: New York City Department of City Planning, MapPLUTO, Edition 06C, December 2006. Author: New York City Landmarks Preservation Commission, JM.

Throughout the 1970's and 80's Williamsburg consisted of an Italian working class neighborhood on the "Northside." Many of the buildings built for these residents were row houses with tar shingle siding. The Western boundary of Williamsburg is the East River, the banks of which were riddled with warehouses. To the North, just the other side of McCarren Park, is the Polish neighborhood called Greenpoint. Between Grand Street and Broadway is the Latino portion of the neighborhood the "Southside" or "Los Sures". Between Broadway and the Brooklyn Navy Yard is the portion of Williamsburg populated predominantly by Hasidic Jews. Moving east from the Brooklyn Navy Yard the border line of the Williamsburg neighborhood follows Flushing Avenue through it's industrial park and ends at the Newtown Creek and English Kills.

Figure 17:
View of vacant condos on Kent Avenue, with Domino's plant in the background

Photo by James L. Wines

> Urban design codes and neighborhood planning policies were adopted in the 1960's that protected neighborhoods from mass demolition, mandated by city officials. The adopted renewal policies coupled urban planners with committees made up of local leaders. Instead of tearing down existing neighborhoods, they started working together to fill in gaps in the urban fabric. Federal policies changed, to follow New York City's example.
>
> *(CITY DESIGN, BY JONATHAN BARNETT)*

CHAPTER III
Precedents, Haus Blick

Figure 18:
View of Haus Blick

Photo courtesy Instant Architect web site

A project that revitalized a preexisting conventional house built in the 1930's, in Dusseldorf, Germany, Haus Blick, was designed and built in 2006 by the firm Instant Architecture. The modification came about through a dispute between a married man and woman over their new home. The man was pleased with the traditional pitched roof house, but the woman was displeased with the narrow corridors and limited view of the river Rhine of which the house was built on the banks. The basic idea was to insert a modern pavilion within the traditional pitched roof house.

The interior under went a major transformation. Instant Architecture gutted the existing innards and the new interior was redeveloped into an open-plan defined by four spaces. The second floor was greatly expanded, pushing through the pitched roof, towards the river while forming a large dormer window. Upstairs Instant Architecture divided the space by a curtain that delineates between the couple and their kid's rooms. Both the kids and their parents share the one bathroom. The interior has a custom paint job, developed by Instant, consisting of a pattern that resembles wallpaper printed in the 1930's. The paint itself, unlike wallpaper, changes color depending in the amount of light it receives.

Viewing the house from the exterior, the dormer window

is the only significant change to the charming old house. Instant left the gutter at the bottom of the pitched roof to continue uninterrupted past the new dormer window. In photographs the gutter reads like a railing or a mullion where it passes the window that takes in a tremendous view of the river Rhine.

This project is considerate of the preexisting architecture and uses it to meet a contemporary need and function. When a structure is reused it saves vital, and diminishing resources and celebrates the original purpose and invests in our culture. It saves time and money where demolition is concerned. All of the rubbish created through demolition contributes to the rapidly expanding landfills. The new adaptation of the structure represents an evolution of architecture, and technology, as well as reflecting a mature and reflective culture.

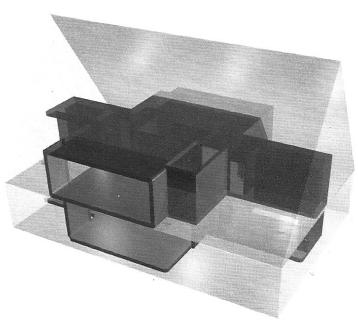

Figure 19:
Diagram showing Haus Blick's pavilion inside the origional pitched roof house.

Photo courtesy Instant Architect web site

PEGS Junior School

The PEGS building is important as a precedent because it shows a willingness to design and build more than just the bare minimum. The PEGS Junior School building is located on a primarily residential street. McBride Charls Ryan took the silhouette of a typical home in the surrounding neighborhood, and extruded it. From the street the profile of the building blends in with the rest of the neighborhood. The taller pointed portions of the silhouette, once extruded have operable windows inserted into them. The skylight/ clearstory serves not only to allow good natural light, but also creating a thermal chimney. The hot air is released through the openings, pulling cooler air through the school building. The extruded shape caries through the building, giving many of the class rooms undulating ceilings. The distinct character of the building gives the young students pride, and fosters a sense of belonging to a community.

Figure 20:
Exterior view of PEGS Junior School

Photo courtesy McBride Charls Ryan web site

Figure 21:
View of PEGS Junior School in its context

Photo courtesy McBride Charls Ryan web site

Figure 22:
Interior of Haus Blick

Photo courtesy McBride Charls Ryan web site

Chapter IV
Proposal

There are precedents for the successful revival of abandoned industrial constructions as well, however there is also a strong sentiment that often prevails in our society against the reuse of the ruins of the Industrial Revolution. This sentiment is in keeping with our contemporary consumer society. Proponents of this argument against repurposing industrial sites believe that the sites were created for the fulfillment of a specific function, and when that function is no longer necessary the site, structure, or building should be discarded like industrial waste.

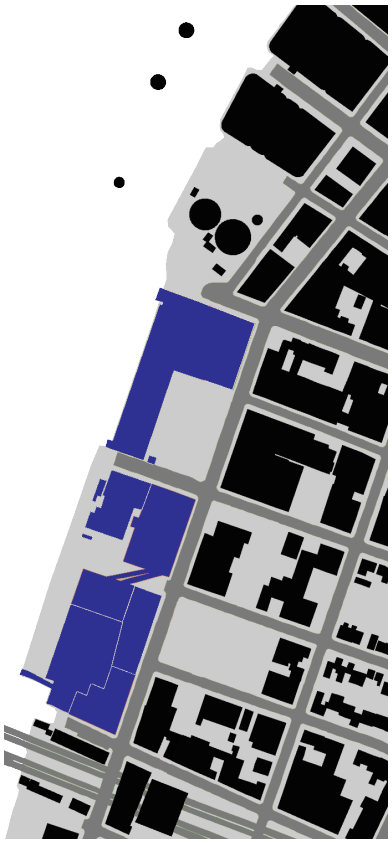

Figure 23:
Map of Domino site existing buildings in blue

Map made in archmap 10

In order to challenge this sentiment, I am proposing a new typology school building to meet the needs of education of both today and the future. The project also encompasses the utilization of the existing facility of the Domino's Sugar Refinery almost in its entirety integrated with contemporary design elements in order to revitalize the current structure into a center for research and development for computer technologies. The two institutions will have a symbiotic relationship, through curriculum development, as well as internship opportunities. The values and needs of the Industrial Revolution will not be lost while being integrated into the values and strategies needed to support the information age. Utilizing the existing structure, which was constructed during the industrial revolution

to memorialize this part of local and global history is a fitting tribute and a reminder of the impermanence of societal need and the constancy of change. The Domino's Sugar Refinery once embodied the strength that the industrial revolution represented and nurtured in the neighborhood, city, state, and country. Reviving the site with an educational facility, and a nest for new industry (a landing place where computer entrepreneurs and specialists are granted space and resources in order to foster a sustainable professional community in New York City). The Domino's factory has had an important role in the development of the Williamsburg neighborhood. After two decades of change, the neighborhood is adapting to its new constituents and its time for the Domino's site to be responsive to the demand in the area as well.

A determining factor in urban design which had been overlooked in the past is our steadily changing climate. After the destruction of New Orleans in 2005 by hurricane Katrina the instability of our climate should have been evident. According to Jonathan Barnett in his 2011 book City Design, major cities near sea level "began to take notice", because a hurricane striking at high tide would cover Miami, Boston, and of course much of New York City. Sadly, on October 29, 2012, Hurricane Sandy struck the northeastern United States, causing the deaths of 253 people from seven countries. According to the New York Times over 100 of the deaths were in New York and New

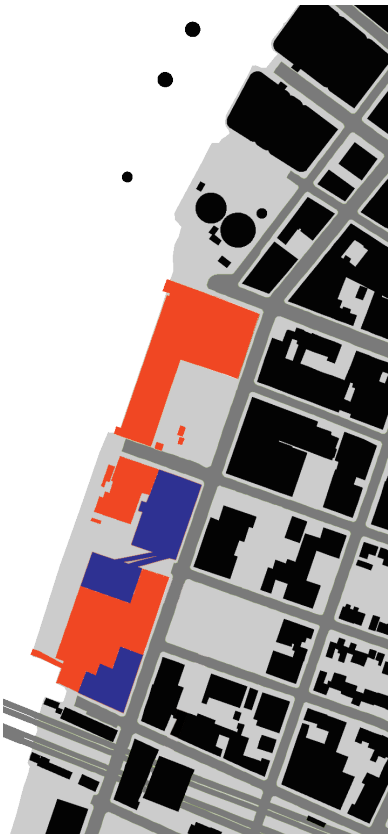

Figure 24:
Map of Domino site existing buildings to be kept in blue, buildings to be demolished on orange

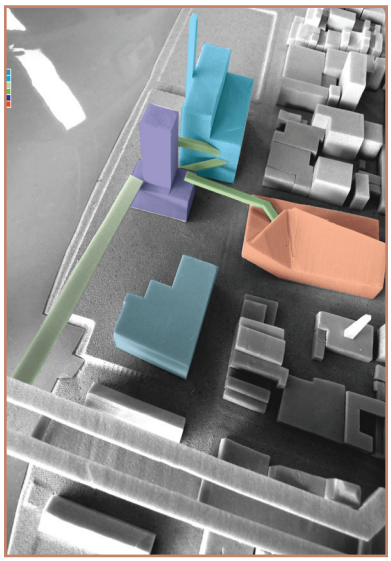

Figure 25:
view of proposed educational complex

Model and photo by James L. Wines

Jersey. In addition to the deaths, thousands of people where left homeless, tunnels connecting Manhattan to Brooklyn, Queens, and New Jersey were flooded along with any lower laying roadway. Mass transit was rendered useless, which created a gas shortage. Power outages affected millions, some which lasted for weeks. Two major New York City hospitals lost both primary and secondary power sources. One hospital had to evacuate patients during the height of the hurricane. Estimates made by city official's show that Hurricane Sandy did 65 billion dollars worth of damage. The Domino's Sugar site is located in evacuation zone A, the first areas to be evacuated in this type of natural disaster. The first floor of the Domino's plant was flooded, however no permanent damage occurred. The Domino's plant was built in 1810 during the Industrial Revolution, the only consideration given to natural forces was how to control them with engineering. "Taking notice" is obviously not enough, action must be taken in order to prevent the loss of human life, and minimize the damage to critical infrastructure during these devastating storms that are becoming more and more frequent.

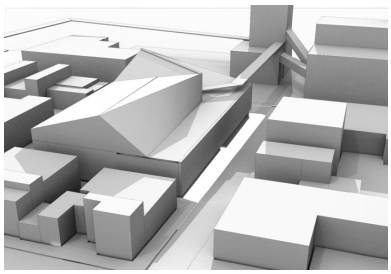

Figure 26:

Rendering of Quest 2 Learn

The building will serve the community in vital ways as a place to vote and through a gym available for public use at night or on weekends. To this end the gymnasium and cafeteria are situated in such a way so that the rest of the school can be secured while they remain open to the public. This eliminates the cost of having security

Program for the Domino's Project

This program is designed to revive the Domino's site with an educational facility, and a nest for new industry (a landing place where computer entrepreneurs and specialists are granted space and resources in order to foster a sustainable professional community in New York City)

Residency and workspace for computer technology scholars, engineers, scientists, and artists.

The residency portion of the rebuild is designed to invite young emerging stars in the field of cutting-edge computer technology and provide them with housing and work space in the proposed complex. In return the residents are expected to teach in the school, as well as collaborate with other interns. Open studios would be regularly held in order to share the work that is taking place, promote collaboration, and spark creativity. Lectures, from distinguished leaders in the computer industry, will be regularly held to foster a strong learning environment.

Computer aided design and fabrication lab

A computer design and manufacturing lab would enable the residents to bring their individual projects into fruition. The lab would facilitate both mass production as well as custom work. The encouragement of experimentation

Figure 27:
MIT Media Lab

Photo © Anton Grassl/Esto

Figure 28:
Robotic arm

image by martin kaftan

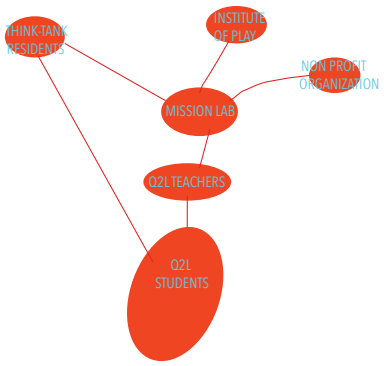

Figure 29:
Diagram of Proposed Mission Lab

Graphic by James L. Wines

would drive the design of this facility. Computer design classes would be offered at the Quest to Learn School, as well as create internship possibilities with local colleges. This portion of the program would be built in the final stages of the project.

The manufacturing lab would contain Laser, Plasma, and water knife cutting technology- for cutting almost anything including metal and stone, three axes CNC Milling Machine- computer-controlled subtractive milling or turning machine, Rapid-Prototyper typically a “3D printer” of plastic or plaster parts, Circuit board printing and milling- enables the fabrication of circuit boards, Microprocessor and digital electronics design, assembly, and test stations, and Six axis articulated robotic arms- to enable large-scale digital fabrication.

guards placed at multiple strategic positions throughout the school building. Having multiple security guards is customary in New York for public school buildings that are made available for public use. The cafeteria and the gymnasium can be made available to the public together or separately. It is common for satellite police stations to be placed around the city. These stations are essentially used as office space, and serves to distribute the police force. One such office has been included in the design of the new Q2L. This would give the new Q2L as well as the greenway a consistent police presence. The police office is just inside and to the right of the main entrance on Kent Avenue. Form the exterior on Kent Avenue the building gives the appearance that the entire southwest corner has been lifted up into the air to allow entry through the bottom. The main entry opens into a grand atrium. The atrium serves as an assembly hall, a performance space, and a theater. The administration is on the second floor. A direct route to the administration is to the left just inside the front doors. The Q2L building as a whole is like a double loaded corridor, which has been pulled almost entirely apart. The most pronounced difference between Q2L Brooklyn and a conventional school building is the space created for collaborative work, and play. The main atrium stretches back through the school building and a grand

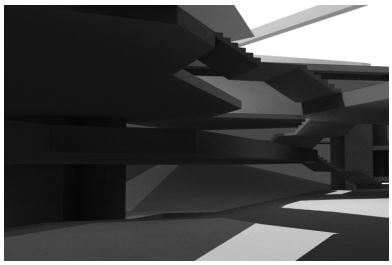

Figure 30:
Interior endering of Quest 2 Learn, view from inside cafeteria

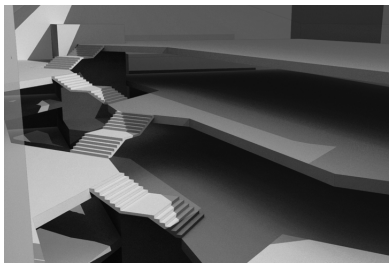

Figure 31:
Rendering of Quest 2 Learn, view from 3rd floor

stair zigzags back and forth as if stitching together two sides of the building. From the top of the stair at the end closest to Wythe Avenue, one can see the main entrance on Kent Avenue. Many other sight lines are created from the top floors to the bottom floors and back. The primary functions of the school take place on the second floor and upwards in response to the possibility of flooding. South third and fourth streets have a significant slope if you view them from Wythe Avenue towards Kent Avenue. The Gymnasium and cafeteria open at street level onto 3rd and 4th Streets. If serious flooding occurred again very little would need to be replaced. A good clean-up is all the main entrance would need. The school could utilize the side and rear egress until the main egress was cleared for use.

The library is located in the tip of the lifted portion of the building. It is intended to celebrate the use and function of the library by giving it an unobstructed view of the East River and Lower East Side skyline.

LIST OF REFERENCES

Roosevelt Island: New York's New Tech Hub
Dickey Christopher
News Week, July 30, 2012

For Tech Start-Ups, New York Has Increasing Allure
Brustein Joshua
Business Day, Technology, New York Times, May 27, 2012

Turning New York into the East Coast Silicon Valley
Sun Joo Kim
Smart Planet, www.smartplanet.com, November 6, 2011, 7:24 PM PST

The Romance of abandonment: Industrial Sites
Hugh Hardy
Places, College of Environmental Design, UC Berkeley 2005

The Becher Vision
Reyner Banham
Water Towers
Massachusetts Institute of Technology,1988
(English version)

Redeveloping Industrial Sites
Carol Berens
John Wiley & Sons, Inc., Hoboken, New Jersey

Small Scale Big Change
Andres Lepik
The Museum of Modern Art, New York, 2010

City Design
Jonathan Barnett
Routledge, 2011

Delirious New York
Second edition
Rem Koolhass
The Monacelli Press, 1994

The New Architectural Generation
Kieran Long
Laurence King Publishing Ltd. London.

http://www.ecologicstudio.com/v2/projects.php?idsubcat=4

http://www.drkh.net/
http://laurencerand.typepad.com/lux_lotus/art/page/65/

Massive Change
Bruce Mau, and the Institute Without Boundaries
Phaidon Press Limited, 2004

http://www.instant-arch.net/object.php

http://www.mcbridecharlesryan.com.au/#/projects/pegs-junior/

http://www.nycgovparks.org

http://greenline.stnicksalliance.org/

http://www.instant-arch.net

http://www.mcbridecharlesryan.com.au

VITA

James Lawrence Wines was born in 1970 in Flint Michigan to his parents Nancy Lee McCord and Richard Fowler Wines. James was the first of several offspring, but only one shares the same two parents, Michael. James attended Elms Elementary School in the Township of Flushing, Michigan until the age of thirteen when he moved to Winchester, Tennessee, the hometown of his stepfather Joseph William McCord. Five schools and a few years later James graduated from Brentwood High School, in Brentwood, Tennessee in 1990. James went on to study sculpture at The Memphis College of Art and Design. James spent a semester of independent study in New York City while pursuing his undergraduate degree, and then met the love of his life, L. Anne Gaines, on a school trip to artist Walter Anderson's Horn Island. Following their marriage James and Anne moved to New York City in 1994. Two years later James went to Parsons The New School for Design and earned an MFA in Fine Arts in 1998. Wilbur Austin Wines, James and Anne's son was born in November of 1997 during James' pursuit of his graduate studies. Upon finishing his degree James began working for Boxart Inc., where he designed cases for traveling museum exhibitions. Among other original designs, James created service carts used to safely move art, which were purchased by among others, the Museum of Modern Art, the Solomon R. Guggenheim, the Cooper Hewitt, and the Rauschenberg Foundation. James was entrusted with the safety and handling of Van Gogh's Starry Night, Monet's Water Lilies, and many other globally significant works of art before he decided to pursue further education to obtain a Master of Architecture degree at the University of Tennessee in Knoxville.