Message from the Director!!!

Greetings CIUS Board Members and Friends,

Issues of “Smart Growth” and “Sustainability” are tied to efforts to direct new development to existing areas of urban density and already-existing infrastructure. However, no such efforts will be successful without an appreciation of the role played by urban systems in the urban environment. These systems must be reconfigured and in some cases reinvented if they are going to contribute to the creation of “green” cities. Key components of that reconfiguration are more ecologically sound methods of creating these new systems and the use of “green” materials in their creation.

This is the second edition in a special three-part series devoted to the nexus of sustainability, infrastructure, and new technologies that will pave the way to the “green” but still every bit as dense cities of tomorrow. This second edition will focus on existing urban systems and current efforts and proposals to make them more sustainable. The first edition in this three-part series focused on education and research efforts and is available on our website. The next and final edition in this series will investigate how urban development can be accomplished in a sustainable manner.

As always we value your ideas and appreciate your comments!!!

Robert E. Paaswell PhD. Director, CIUS          May 5th, 2003

CUNY Institute for Urban Systems Newsletter          The City College of New York                Volume X

ON PAGE 2
Greening Queens Plaza

ON PAGE 3
The High Line & The Sludge Tank

ON PAGE 4
Components of NewTown Creek Wastewater Treatment Plant

ON PAGE 5
Harbor Loop Ferry System

ON PAGE 6
Solar and Wind Power for New York Region

ON PAGE 7
Contact Us!!! We want to hear from you!!!
Greening Queens Plaza
A Van Alen Institute Design Ideas Competition

Queens Plaza, in Long Island City, is on the verge of a major change. An essential part of New York City's infrastructure, with its intersection of roadway, subway, and elevated trains, it is now becoming a critical part of its urban experience, with a mix of commercial, civic, and cultural programs. How it finally achieves this, and what identity this renewed place will ultimately have, is still an open question, one that Van Alen Institute was very pleased to be asked to contribute to by the Office of Queens Borough President, which co-sponsored this competition. There is one fundamental purpose for design ideas competitions: to help envision a new place, a new urban character, a new design-often against great challenges- and to offer new possibilities for implemented change. With almost two hundred entries and a range of ideas as varied as the Borough of Queens, the competition started a valuable dialogue on the future of one of New York's most important new centers.

Although not the primary focus of the competition brief, "Greening" Queens Plaza became the thrust of many entries. Some intriguing and innovative (and some provocative) solutions to this complex problem included an array of ideas expressed quite diversely either horizontally, vertically, virtually, or even artificially (see images). Lynn Hsu and Bradley Shanks proposed hanging "green" panels using the existing vertical surfaces of the subway structure. These panels reflect different aspects of the landscape: grass, vines, wood, etc. Amoeba Architects proposed an engaging artificial environment; through the use of genetically engineered plants, surrealist lighting, synthetic materials and digital scrims, they have transformed the plaza into an artificial forest. The Ken Smith Workshop "opportunistic" approach uses a variety of different sizes of existing dumpsters that could be planted and transported to create urban gardens around the plaza, and on top of the existing infrastructure.

Working with the Office of Queens Borough President and the Department of City Planning, the Van Alen Institute Design Ideas Competition for Queens Plaza generated a remarkable response. Following the competition and an exhibition of all entries at the Van Alen Institute gallery (July 17- September 30, 2002), the New York City Economic Development Corporation and the New York City Department of City Planning issued an RFP for urban design services for Queens Plaza. In November 2002 they announced that a consultant team had been selected to assist in the development of a streetscape and landscape design plan for Queens Plaza. The design team, headed by Margie Ruddick Environmental Planning and Design, and including Michael Sorkin Studio (Prof. Sorkin is also the director of the CCNY Urban Design Graduate Program) and environmental artist Michael Singer will provide recommendations regarding the area's public spaces and parkland, including public art, lighting, street furniture, and crosswalk designs.

Van Alen Institute is a New York based non profit organization with the mission of improving the design of the public realm. The Institute's Projects in Public Architecture are integrated programs including design competitions, workshops, websites, publications, exhibitions and forums. To learn more about the institute's distinguished history of connecting design students and professionals to the highest goals of public architecture, please visit www.vanalen.org

1st Prize: Surachai Akekapobytin, Juthathip
2nd Prize: Amoeb architecture: Gisela Baurmman, Birgit Schoenbrodt
3rd Prize: Lynn Hsu, Bradley Shanks, Cambridge, MA
Honorable Mention: Workshop: Ken Smith Landscape Architect: Ken Smith, Elizabeth Asawa, Alex Felson, Dan Willmer, Judith Wong, New York, NY
RE-USE AND DESIGN OF THE "HIGH LINE"

Built in the 1930s as an elevated passageway for freight trains, the High Line runs for 1.5 miles, from 34th Street, along the edge of the Hudson River, through far West Chelsea, into the heart of the Meat Packing District terminating at Gansevoort Street. In recent years, Friends of the High Line (www.thehighline.org), a community-based non-profit organization, has worked to create a 7-acre elevated walkway atop the structure's rail bed. Reuse of this kind is not without precedent. In the early 1990s the city of Paris successfully converted a similar elevated rail viaduct near the Bastille opera house into a pedestrian walkway called the Promenade Plantée (www.promenade-plantee.org).

RAILS-TO-TRAILS SOLUTION

Friends of the High Line (FHL) proposes to use the federally sanctioned railbanking program to preserve the High Line's easement and to allow it to be used as a walkway. To railbank, the Surface Transportation Board (STB) must issue a Certificate of Interim Trail Use (CITU), which permits a governmental body or non-profit organization to negotiate with a railroad for trail use on a corridor. Tracks may be removed, but the easement itself is preserved for future rail use, should the need arise.

PLANNING PROCESS

In 2001, FHL was awarded a fellowship from the Design Trust for Public Space, an independent, not-for-profit organization that provides opportunities for design professionals to work with the public sector on selected planning, design and development issues in New York City. Together, the Design Trust and Friends of the High Line produced "Reclaiming the High Line," the first-ever reuse study of the structure. This was followed in 2002 by an economic feasibility study, which FHL commissioned to demonstrate to the Bloomberg administration the long-term economic benefits the City could expect from the creation of a public open space on the High Line. This study helped inform the City's decision to file with STB in December 2002 for a CITU, stating its desire to transform the High Line to a public open space. In January 2003, FHL launched "Designing the High Line," an open, international ideas competition seeking visionary design proposals for High Line's reuse as 1.5-mile-long elevated public promenade. All competition information, including guidelines, background research, and on-line and off-line registration materials, are available on FHL's website: www.thehighline.org.

For more information, inquire via email at info@thehighline.org.

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GREENTANK : FEASIBILITY STUDY Phase 1
An Adaptive Re-Use of the Greenpoint Sludge Tank
11/24/01

The Municipal Art Society sponsor Metropolitan Waterfront Alliance,
The Metropolitan Waterfront Alliance, a network of over 1000 officials, environmentalists, designers, industry and community leaders is joining with Greenpoint residents, Brooklyn community board I, and the Newtown Creek Monitoring Committee (NCMC) to conduct a feasibility study to determine the environmental, structural and architectural feasibility of a proposed cleanup, renovation and re-use of a unique City-owned sludge tank as a community facility, on Dupont Street in Greenpoint, Brooklyn.
The study will also determine the cost/benefits of demolition versus the option of re-use.

Currently, the tank holds sludge from the Newtown Creek Water Pollution Control Plant, which is pumped periodically into a sludge boat that docks at the East River. The tank will be phased out of service by the NYC Department of Environmental Protection after the Newtown Creek Pollution Control Plant is upgraded.

Adapted for re-use, the tank's containment vessel, base and roof deck could offer as much as 13,800 square feet on three levels for a variety of uses for community residents and visitors, and would help to revitalize the Greenpoint neighborhood.
Department of Environmental Protection Upgrade Construction at Newtown Creek Wastewater Treatment Plant

The New York City Department of Environmental Protection is currently in the midst of a 10 year 2.5 Billion dollar construction project to upgrade the Newtown Creek Wastewater Treatment Plant in Greenpoint, Brooklyn to secondary treatment status. The project will bring the treatment plant into compliance with secondary treatment requirements mandated by the Clean Water Act pertaining to wastewater that flows to the plant from the surrounding drainage area. The Newtown Creek area is still one of New York City’s major industrial zones, its shores hosting myriad manufacturing, wholesale, distribution and municipal uses. New York’s Department of City Planning identifies the area as a Significant Maritime and Industrial Area and in 1991, named it one of six areas in the city critical to the existing needs of the maritime support industry. As a result of the industrial concentration in this area, however, water and air quality have suffered substantially and Newtown Creek is considered one of New York City’s most polluted waterways.

In recent years, residential pressures in both Queens and Brooklyn have led to new interest in cleaning up the creek and reclaiming some part of its shoreline for public access.

When the Newtown Creek upgrade is completed, all of New York City's fourteen wastewater treatment facilities will be in compliance with federal mandates. It is a far reaching project that will contribute to the continuing improvement of the City's Harbor environments and water quality. In addition this facility has been honored by awards for its commitment to the community through its aesthetic design and will also be complemented by two public art projects that will enhance the plant environs."

The upgrade will include three new chlorine contact tanks and a chlorination building, which will permit year-round disinfections to meet standards for treated wastewater. The facility will also include seven sodium hypochlorite storage tanks, a truck unloading station, and a multi-story building, which will house personnel facilities, administrative offices, a central lab and a shop area. The master design and plans for the campus were created by Polshek Partnership, Architects, best known for their design of the Rose Planetarium at New York’s Museum of Natural History and the New York Times printing facility in Queens. Polshek Partnership, Architects have received Excellence in Design Awards from the New York City Art Commission for the aesthetic appropriateness of their architecture on City-owned property. In addition, two artists, Vito Acconci and George Trakas, were commissioned by the City of New York Department of Cultural Affair’s “Percent for Art Program,” to create public art projects at the site of the plant. Mr. Acconci has designed a special water-feature that involves interface between the public and the facility, which weaves through the public sidewalk and through the architectural facades of the perimeter buildings as well. Mr. Tracas has designed a Waterfront Nature Walkway along Newtown Creek and Whale Creek Canal. At night the facility will be bathed in a blue aquatic lighting scheme by Descot/ L’Observatoire Lighting Inc. who are also designing the new lighting scheme for PS.1 Museum which is within view, across the creek in Long Island City.

Also on the Queens side of Newtown Creek, the New York City Department of City Planning and local community groups have begun to identify sites along the canal as potential "street end parks" for passive seating and possible small boat access to the Creek. Potential sites in Long Island City include:

- **Second Street**
- **Vernon Boulevard** (this is directly across from the Manhattan Avenue street end on the Brooklyn side, which is to be redeveloped as a park area with DOT funds. The draft Greenpoint 197-a plan calls for a pedestrian bridge to link the two sides of Newtown Creek at these sites.)
- **49th Street**
- **58th Road**.

Back on the Greenpoint side, North of the Brooklyn-Queens Expressway, three additional sites could potentially provide access to Newtown Creek at Greenpoint Avenue, Apollo Street and Meeker Avenue. Community groups are currently seeking private funds to provide seating areas, plantings and safe access to the water here. Residents are also looking into the possibility of creating pocket parks at city-owned lots under the Pulaski, Greenpoint and Kosciuszko Bridges.

Bluebelt Project

The Staten Island Bluebelt provides ecologically sound and cost-effective storm water management for The South Richmond area of Staten Island. The project preserves streams, ponds and other wetland areas - called bluebelts- allowing them to perform their natural functions of conveying, storing, and filtering storm water. In addition, the Bluebelts also provide important community open spaces and diverse wildlife habitats. This area of Staten Island is the last large section of New York City that does not have sewers.

The New York City Department of Environmental Protection (DEP) has found that, compared to installing storm sewers, the Bluebelt saves millions of dollars in infrastructure costs. This program demonstrates how wetland preservation can be cost-effective and environmentally responsible.

Currently the Bluebelt is in the midst of a $40 million capital program to design and construct over 90 storm water Best Management Practices (BMPs). The Bluebelt BMPs are award-winning bio-engineered facilities that mitigate the impact of urban storm water discharges into the natural stream corridors.

Upper New York Bay is the geographic, economic and ecological heart of our region.

The bay where the Hudson River meets the ocean is home to international landmarks such as the Statue of Liberty and Ellis Island, and also a hub of the region's shipping and transportation network. Dozens of development projects are now underway: over 7 million square feet of office space, 3000 units of housing, 1000 hotel rooms, and the expansion of 13 different cultural attractions total nearly $2 billion in new construction. At the same time, redevelopment of many of the remaining sites, including the four largest tracts-Governors Island, Ellis Island, Homeport/Stapleton, the Military Ocean Terminal Bayonne—is thwarted by poor transportation access.

The Harbor Loop Proposal recommends the creation of 15 new ferry stops to enhance regional mobility, improve the quality of life in communities underserved by transit, and create new work, living and recreational opportunities for current and future residents of the region. This proposal is a crucial first step in providing improved access and a new transportation alternative for Upper New York Bay, the crossroads of the metropolitan region.

For a complete copy of The Harbor Loop Ferry Proposal or a hard copy of the Harbor Loop Ferry Map please contact the MWA at info@waterwire.

Staten Island Bluebelt Drainage Basins

For a complete copy of The Harbor Loop Ferry Proposal or a hard copy of the Harbor Loop Ferry Map please contact the MWA at info@waterwire.
New York City’s Largest Commercial Solar Power System Unveiled

In the fall of 2002, the Greenpoint Manufacturing and Design Center (GMDC) in partnership with Clean Air Communities, New York State Energy Research & Development Authority (NYSERDA), Con Edison, PowerLight Corporation and U.S. Congresswoman Nydia Velazquez unveiled what is to date the largest commercial rooftop solar power system in New York City.

The $900,000 project was jointly funded through a public-private partnership by Clean Air Communities, NYSERDA and GMDC. The system was built and installed by PowerLight Corporation of Berkeley, California, using state-of-the-art solar technology and zinc bromide batteries. The photovoltaic panels and advanced battery will collectively work as a solar energy system to generate and store electricity in coordination with Con Edison's network system.

The 115-kilowatt solar power system covers 11,500 square feet of roof area and reduces the peak electricity demand on New York's power grid while simultaneously improving local air quality. When fully powered, the solar system will generate the equivalent energy to light 100 homes.

The solar panel array, which is located on the roof of two GMDC buildings in the Greenpoint neighborhood of Brooklyn, transforms sunlight directly into electricity, generating clean electrical power. The total solar system includes a 59 kW array at GMDC’s Humboldt Street location and a 56 kW array that will be operational at GMDC’s Manhattan Avenue building within the next several months.

Neighborhood residents and manufacturing retention activists are particularly pleased with what they deem as a project that demonstrates that preserving urban manufacturing can be compatible with community revitalization and environmental responsibility. GMDC is a non-profit organization that rehabilitates industrial buildings and focuses on creating and maintaining high-quality, blue-collar jobs for low-income New Yorkers.

For more information, please visit:

- www.gmdconline.org
- www.nyserda.org
- www.powerlight.com
- www.conedison.com
- www.cleanaircommunities.org

Long Island Power Authority (LIPA) Plans Offshore Windmill Farm

The Long Island Power Authority (LIPA) has announced plans to build 33 offshore wind generators of the region’s South Shore that would generate 100 megawatts of electricity, enough to power 100,000 homes. Following the lead of similar successful projects in Europe, the windmills will be anchored six miles offshore in 100 feet of water.

A meeting is scheduled June 25 with wind generation developers to discuss the project, and LIPA hopes to solicit bids by the end of 2003. The project is tentatively scheduled for completion in 2006 and the project's cost is estimated at $190 million to $220 million.

It is likely that the project will follow the course of similar projects, with opposition coming from those who object to seeing windmills along the horizon and those who fear birds will be harm. Supporter will be those who see the alternatives as worse, posing threats to the quality of the atmosphere and increasing the dependency on non renewable resources.

For more information about the LIPA initiative and wind power potential please go to:

1) http://www.lioffshorewindenergy.org/study.html
2) http://www.citizenscampaign.org/contact.html
THREE CORNERSTONES OF CIUS

TECHNOLOGY: The emerging wide scale applications of computers and communications technologies will create more centralized control and more real-time information to be used by infrastructure managers and users.

INSTITUTIONS: Institutions developed in the 20th century to build infrastructure now must transform to operate, control and finance the next generation of infrastructure.

FINANCE: Modernization and capital expansion demanded by new technologies and institutional change will call for new methods of financing, which itself will impact infrastructure institutions.

The CUNY Institute for Urban Systems (CIUS) has as its primary goal the shaping of these forces and their impacts, while simultaneously providing leadership through policy advisement and practice.

CUNY is a natural home for the Institute. The Institute's Board of Directors is composed of distinguished faculty from a number of CUNY campuses. With strong schools of engineering and architecture, and noted programs in urban planning, law and management, CIUS is linking academic and business to provide solutions to the problems of aging infrastructure.