THE CITY OF NEW YORK

DESIGN + CONSTRUCTION EXCELLENCE

How New York City is Improving its Capital Program

July 2008

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its Capital Program

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Brooklyn Children's Museum
Rafael Viñoly Architects
8.1 million yellow ceramic tiles were used to develop a sculptural form that converts the simple L-shaped building into a singular, dynamic mass. The ceramic tile pattern covers not only the sides but also the roof of the building, and the roof line dips down at the corners so that the roof tiles can be seen from street level. This project is seeking a LEED Silver rating.

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Staten Island Zoo Reptile Wing
Designed by Gruzen Samton Architects, this project houses new exhibits, animal support areas, classrooms, an auditorium, and staff spaces.

Dear Friends,

In a city as rich with architectural history as ours, design matters. It gives form and meaning to the growing communities of New York City through thoughtful, enduring, and beautiful structures that reflect the values we know to be important: education and culture, health and safety, diversity and opportunity.

Now in its fifth year, the Design and Construction Excellence program (D+CE) continues to reinvigorate our built environment. This program responds to the needs of our communities with dynamic design and construction strategies that inspire some of the best architects and engineers in the world to work with us.

Since our last report, all five boroughs have benefited from D+CE. In this year alone, we completed numerous significant projects, including the Queens Botanical Garden, a high-performance facility that is a national model for environmentally-sound design and a terrific example of PlaNYC's commitment to building greener, more efficient buildings. In addition, the program completed the stunning new facility for the Brooklyn Children's Museum. Next year, D+CE will continue its work on the design and construction of the 121st Police Precinct on Staten Island as well as the Kings County Supreme Courthouse in Brooklyn and the renovation of six firehouses throughout the boroughs. These are among the 90 projects moving toward construction through D+CE.

Our communities are filled with amazing buildings. These structures – and the values they represent– are what hold us together, and are the standard by which our city will be measured by future generations. All City agencies involved with D+CE have a common goal: to respect our shared history while moving forward in new, innovative directions. Our growing communities deserve nothing less, and we hope that, as you read the following pages, you will be inspired to participate in the design process as a peer review volunteer. Please visit www.nyc.gov for more information on how to become involved. With your help, the Design and Construction Excellence program will continue to deliver and improve upon the high-quality services our City has come to expect.

Sincerely,

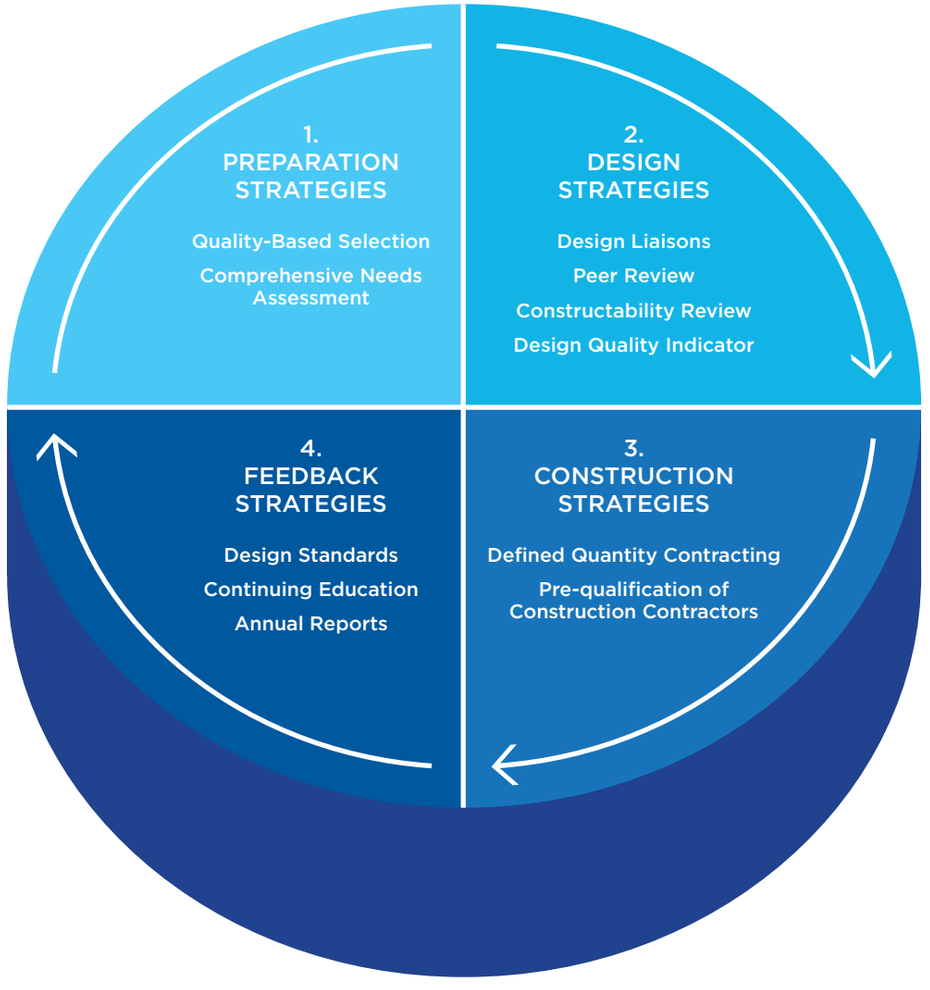
Michael R. Bloomberg
Mayor

PROLOGUE

THIS BOOK EXPLAINS HOW THE DESIGN + CONSTRUCTION EXCELLENCE PROGRAM IS IMPROVING NEW YORK CITY'S CAPITAL PROCESS.

It explains some of the challenges for which we sought solutions through the Design + Construction Excellence program (D+CE), and how we have initially begun to implement those solutions. As with any large-scale municipal works program, D+CE is still developing, changing, and improving daily as we discover new challenges, and apply new ways to use knowledge gained to benefit New York City's communities. Our previous D+CE publications have focused on giving annual updates on project progress. This year, we introduce the D+CE program in greater depth, highlight steps that are critical for success, and feature people and projects we feel exemplify the tenets of Design + Construction Excellence.

On the surface, constructing a civic facility looks like a straightforward, linear process: shovels break ground, construction takes place, and the ribbon is cut when the building officially opens.
In reality, construction projects are not developed in silos. It is a collaborative process where proper preparation leads to a productive design and construction process, and lessons learned while designing and building a structure serve as new knowledge that loops back into preparation for the next project. It is an ever-evolving process that also reflects the nature of our Design+Construction Excellence program. Each strategy leads to another, and all serve to inform the next.



DESIGN + CONSTRUCTION EXCELLENCE STRATEGIES

Quality-Based Selection

CHALLENGE: Engaging the best design consultants who have not traditionally sought City work due to the limitations of the procurement process and the perceived lack of interest in design quality.

SOLUTION: Modify the design procurement process by eliminating fee competition and emphasizing qualifications and expertise in selecting design consultants.

previous spread
Stapleton Branch Library, Staten Island
This project, designed by Andrew Berman Architect, will expand the library's size to 12,000 square feet. This will increase the library's circulation to more than 100,000 books.

THE PURPOSE OF QUALITY-BASED SELECTION IS TO ATTRACT A WIDE RANGE OF QUALIFIED CONSULTANTS TO CIVIC PROJECTS AND SELECT THE MOST APPROPRIATE DESIGN TEAM FOR EACH PROJECT.

In developing this new design procurement method, we not only wanted to simplify and modernize the application process, but we also wanted to move away from what was an outdated representation of how public entities procure design services. Equally important was fostering a new partnership with the private sector design community[1] that would result in all City buildings, regardless of size, being designed with the highest level of creativity and professionalism.

The traditional sealed proposal methodology, which selects the lowest bidder, made such partnerships difficult, with relations between the parties becoming strained, as so much of the evaluation process focus was on price competition. Such a selection process can deter firms from participating and can drive fee levels below the actual cost of providing the services, resulting in poor service delivery.

To begin improving our procurement process, we reached out to the architectural and engineering community, many of whose members had never considered working for the City of New York, and we listened to what they told us. In response, we began to make the prospect of working with the City more appealing for a new, larger pool of qualified applicants by completely removing price competition and implementing a quality-based selection process.

Quality-Based Selection[2] (QBS) differs significantly from previous procurement methods by allowing a consultant to be selected without costs (fees) becoming the overriding consideration. In the beginning of this process, we noted that the City Charter clearly permits an evaluation of proposers that is quality-based, as long as the end result is a contract at a fair and reasonable price. However, the Procurement Policy Board[3] (PPB) rules tended to encourage the use of pricing as a direct part of the competitive sealed proposals, or Request for Proposals (RFP) selection process. Upon further research, however, we discovered that the PPB rules also include an innovative, and previously unused, procurement vehicle[4] that allows the City to test and evaluate the feasibility and application of innovative procurement methods not currently used or provided for under the current rules.

Once we determined that quality-based selection was a viable option, we were able to develop and implement two new, primary methods for the

STEPS TO SUCCESS

(1)
Target the potential applicant pool through advertising in local and national design trade publications, providing instructional seminars, and creating a presence at design and construction events throughout the city.
(2)
Select firms with the appropriate skill set and experience for the design services required.

1. As a result of our ongoing efforts to expand our pool of qualified consultants, DDC has received approximately 450 applications for the D+CE program, resulting in over 70 awards to construction management firms, architectural firms, and landscape architects.
2. Quality-Based Selection (QBS) takes into account a firm's creative vision and execution as well as their relevant experience. This procurement method was designated as the standard for the procurement of design services by the Procurement Policy Board (PPB) in December 2006.
3. The PPB is authorized to promulgate rules governing the procurement of goods, services (including design services), and construction by the City of New York under Chapter 13 of the Charter of the City of New York.
4. Section 3–12 of the PPB Rules refers to the ability to use an "innovative procurement method" to test and evaluate the feasibility and application of procurement methods not currently used by the City. Use of this unique procurement method must be authorized by the City's Chief Procurement Officer at the request of an Agency Chief Contracting Officer. After the request is made, the public must be made aware of the potential new selection method and given ample time and the means to comment. We followed this process which enabled us to eliminate competitive pricing as the sole procurement method and replace it with the quality-based selection process for our D+CE projects.

5. Request for Proposals (RFPs) contain information about the submitting firm such as number of employees, years of experience for each partner or principal, and relevant experience.
6. Proposal evaluation criteria for procuring design services through DDC's quality-based selection process includes the experience of the applying firm and its subconsultants (50%), the educational and experiential background of the proposed team (30%), and the demonstrable creative capability of the firm (20%).
7. Pre-determined fee curve pricing is based on a combination of previous fees from contracts awarded by DDC for the same services, adjusted for inflation and information from a New York State analysis of contract fees derived using the Quality-Based Selection method.
8. Andrew Berman Architect; Atelier Pagnamente Torrian; Caples Jefferson Architects; Charles Rose Architects; Christoff:Finio Architecture; CR Studio Architects; Garrison Architects; LARC Studio; Locascio Architect; Lyn Rice Architects; Marble Fairbanks; Marpillero Pollak Architects; Michielli + Wyetzner Architects; Narchitects; OBRA Architects; Pasanella + Klein Stolzman + Berg; Sage & Coombe Architects; Slade Architecture; Steven Harris Architects; Steven Yablon Architects; Toshiko Mori Architects; W Architecture and Landscape Architecture; Weis + Yoes Architecture, and WORK Architecture Company
9. 1100: Architect; Deborah Berke & Partners Architects; Grimshaw; Polshek Partnership Architects; Smith-Miller & Hawkinson Architects; Snohetta; Steven Holl Architects, and Urbahn Architects with TEN Arquitectos

procurement of quality-based design services. The first method is for large-scale (more than $25 million), project-specific procurements. We streamlined the design procurement process into a new, two-stage Request for Proposals[5] (RFP). During the first stage of the application process, an evaluation committee—including at least one outside professional peer—reviews the portfolios and ranks[6] the submissions, establishing a short list. During the second stage, the evaluation committee invites the consultants on the short list to supplement their submissions with a thorough, and specific approach to the task, that includes a presentation to and interview with the evaluation committee. At the conclusion of the second stage, the City commences fee negotiations with the highest technically ranked[7] firm. If this negotiation fails to achieve a fee considered reasonable by both parties, negotiations begin with the next highest-rated proposer, until an agreement is reached. This final step in negotiation preserves the reasonable cost requirement in that the failure to agree on a fee with the top-ranked firm within a set time period results in rejection of that firm and the initiation of fee negotiations with the next highest-ranked firm. (These RFPs are for the largest and most complex projects in DDC's portfolio, such as the Brooklyn House of Detention, the new PSAC II facility, and the new Police Academy.) This two-stage RFP process makes it relatively easy for firms to enter the first stage of the process. Only firms selected for stage two are required to submit detailed project-specific submissions, the burden on participating firms is eased, which helps to attract a wider pool of applicants.

The second method is for procuring design services for smaller-scale projects (less than $25 million). For these projects, we select a panel of consultants who are then invited to submit proposals for individual projects within this fee category, as the projects come into the agency. The process for applying for panel inclusion involves an open one-step (similar to step one of the process) RFP containing a pre-determined fee curve as the pricing for all services provided under the contract. Variations from the curve are permitted to allow for complexity and special services that may be needed on a specific project. Selection of the firms on the panel is then made by an evaluation committee, which includes at least one outside professional peer. The committee evaluates each firm based upon quality of work and relevant experience, and awards are then made to the highest-ranked firms. Once the firms are selected, they are awarded on-call contracts with the City, and are invited to submit more thorough, project-specific proposals for projects. The proposals are then evaluated by the committee and ranked on their technical merits. With more than 50 individual procurements at DDC at this level each fiscal year, a project-specific RFP process would be too cumbersome. This new method allows agencies to quickly assign work to appropriate consultants, instead of embarking upon a new design procurement process for each project, allowing for the selection of a design team in just weeks, instead of several months.

Within this category (less than $25 million), we broke the contracts into two groups. To ensure that smaller firms would be given consideration for City projects, we categorized work under $10 million dollars. With approximately 100 projects during a 24-month period valued under $10 million, we decided to retain 24 small firms[8]—defined as firms with 10 or fewer employees—which would be limited to a maximum value of $10 million of construction work. The remainder of the work was then organized into the $10–$25 million category, for which eight firms[9] were retained.

The announcement of this new quality-based selection process for small-scale projects resulted in the greatest number of proposals we ever received. This not only was the result of the innovative procurement method, but also of marketing and promotion of the new process through seminars, advertising, and design press outreach. Similar requirement contracts have now been established by the Department of Parks & Recreation and other City agencies. Most significantly, the City's PPB Rules were amended to make QBS the primary procurement selection method for all solicitations of design and construction-related professional services.

THE 2008 PRE-DETERMINED FEE CURVE

The design fee curve below is based upon a percentage of the total cost of construction work. This curve is based upon previous fees of contracts awarded by the City for the same services, adjusted for inflation and information from a New York State analysis of contract fees.

CONSTRUCTION COST	%	DESIGN FEE	CONSTRUCTION COST	%	DESIGN FEE
$50,000,000	5.91%	$2,954,200	$3,000,000	8.61%	$258,180
$45,000,000	6.02%	$1,807,140	$2,750,000	8.75%	$240,742
$25,000,000	6.08%	$1,520,375	$2,500,000	8.90%	$222,563
$20,000,000	6.37%	$1,274,000	$2,250,000	9.05%	$203,642
$15,000,000	6.51%	$976,725	$2,000,000	9.20%	$183,980
$14,000,000	6.55%	$917,280	$1,750,000	9.35%	$163,577
$13,000,000	6.59%	$857,220	$1,500,000	9.50%	$142,433
$12,000,000	6.64%	$796,860	$1,250,000	9.64%	$120,547
$11,000,000	6.69%	$736,065	$1,000,000	9.79%	$97,920
$10,000,000	6.75%	$675,000	$875,000	10.53%	$92,166
$9,000,000	6.85%	$616,500	$750,000	11.27%	$84,559
$8,000,000	6.99%	$559,200	$600,000	12.16%	$72,984
$7,500,000	7.09%	$531,375	$500,000	12.76%	$63,785
$7,000,000	7.18%	$502,600	$400,000	13.35%	$53,400
$6,000,000	7.24%	$434,400	$300,000	13.94%	$41,829
$5,000,000	7.42%	$371,000	$250,000	14.24%	$35,599
$4,500,000	7.72%	$347,243	$200,000	14.54%	$29,072
$4,000,000	8.01%	$320,520	$150,000	14.83%	$22,249
$3,500,000	8.31%	$290,833	$100,000	15.13%	$15,129

DESIGN EXCELLENCE IN ACTION

Interview:
Andrew Berman
Principal,
Andrew Berman Architect

Engine Company 259
The renovation of this 108 year-old firehouse will include a new apparatus floor, as well as new HVAC and electrical system.

Andrew Berman's firm was one of the first architectural and design firm to receive civic work through the Quality-Based Selection strategy. Currently, his firm is designing the new Stapleton Branch Library in Staten Island, and the new entry kiosk for P.S.1, in Queens. His firm also designed Engine Company 259, which has moved into construction.

Do you feel architects have a civic responsibility? If so, what aspects of municipal design interest you most? Architects have an implicit responsibility to design for the civic realm, as well as the larger landscape and environment. This is above and beyond our responsibilities to our client, be they private or public. Designing for the varied programs and typologies of civic work is particularly interesting for us, as it is an opportunity to engage a larger community through the work. I am also very interested in the experience of our work over time, as it engages with the city, and becomes a part of the evolving fabric of New York. **How is designing for a civic client different from designing for a client in the private sector?** Designing for a civic client is not actually different from designing for a private client in terms of our interests, concerns, and the design process within the studio. The process of developing and managing a project with a civic client is more encumbered than working for the private sector. This is the expected consequence of having a larger client group or groups, and the need to present and respond to various agencies and constituents. Our challenge is to maintain momentum and consensus so that the ideas that fuel the project can remain alive, fresh and intact through the entire process. We must also create for ourselves the space within the process to spend the time needed to develop the project fully. The Design Excellence program recognizes this need and has helped to create the conditions that can support quality design. **What was the thought process when designing for the Stapleton Branch Library, as well as Engine Company 259, which is now in construction?** Designing for a firehouse required learning the workings of the firefighters' community, and understanding the equipment and systems that support their work. I felt that by understanding the dynamics of their organization, we might be able to create an order with the architecture that would allow for the firefighters to work in a dignified and efficient environment. Another goal was to create spaces with character, appropriate for their use, but special and pleasurable to inhabit. Similar thoughts were at play while designing the Stapleton Branch Library. In both projects we considered how to design buildings that succeed in engendering the respect amongst the public and the building's occupants that such civic buildings deserve. **Has being a member of the City of New York's Design + Construction Excellence program shaped your practice in any way?** Our expertise and abilities have expanded as a result of working on these varied projects. One of the interesting aspects of our work and profession is the opportunity to research and learn specific things for each project, and being able to take that knowledge into our other work. **What do you consider tenets of good design?** A well designed building is of its time and place. It is also something that will transcend the time of its inception, and maintain a relevance and resonance into the future. A well-designed building is also informed by appropriate and progressive ideas about the site, the program, and the culture in which it is situated.

Bronx Museum of the Arts
Designed by Arquitectonica, this project received an Art Commission of the City of New York Design Award in 2003.

Comprehensive Needs Assessment

CHALLENGE: Ensuring the complexities of a project's scope are accurately reflected in preliminary budget estimates and schedules.

SOLUTION: Implement a comprehensive needs assessment early in the project to facilitate the highest level of shared understanding among project stakeholders.

QUALITY DESIGN IS, TO SOME EXTENT, DEPENDENT ON ACCURATE ASSESSMENT AND DEFINITION OF THE SCOPE OF THE PROJECT.

Even under optimal conditions, budgeting can be a complex and cumbersome process. This difficulty is magnified when budgets established by client agencies are made without benefit of design input.

D+CE has changed the paradigm by creating a comprehensive needs assessment program. Through these agency assessments, mechanical systems, architectural issues, and design needs are analyzed before budget adoption. The results can be quickly integrated into a capital plan that aids in early-stage alignment of project scope and budget.

In 2007–2008, a comprehensive needs assessment for 200 buildings within the City's three library systems: the Queens Library, the Brooklyn Public Library, and the New York Public Library was completed. These assessments assigned ratings on a scale of 1 to 5 for a variety of mechanical[1], electrical[2], and architectural[3] conditions at each facility, 1 denoting a very good rating and 5 denoting a very poor condition rating. Ratings were also assigned to the urgency of recommended actions, with 1 being an action that should be addressed immediately, and 5 signifying an action that could safely take place within the next 10 years.

The buildings were assessed on-site by DDC staff, including structural engineers, electrical engineers and architects. The results were downloaded onto software that provides a Needs Assessment Condition Report[4], which prioritizes the urgency of recommended actions. The report lists the reasons why such actions need to be taken and gives recommendations on when the corrective actions should take place.

For example, the New York Public Library's 103-year-old Aguilar Branch on East 110th Street in Manhattan, was assessed in April 2008. Upon assessing the facility, it was determined that cracking and spalling were occurring on a chimney on the north façade. The report recommended a restitching of the chimney within a year for restorative purposes. Knowing this information, the library has an accurate way to gauge what needs to be done, as well as up-to-date information allowing for precise scope and budget development as it plans for the facility's needs in the future.

In an important step forward for new capital projects, the Design + Construction Excellence program hopes to implement a pre-budget adoption scoping pilot in 2009 to improve new project estimates before a budget is finalized. Early team-driven, design-based project scoping increases understanding of a project's funding needs, increasing the chances that it will remain within its initial budget throughout the construction process. In this initiative, the City has created an initial $20 million revolving fund[5] to permit agencies to engage design professionals in preliminary scoping activities.

To the extent these projects move forward, the City can reimburse the revolving fund for the earlier expenditures with the proceeds of bonds issued at a later date. The City expects projects for inclusion in the fiscal year 2010 budget will benefit from the initiative.

1. Mechanical components assessed include evaluations of the air conditioning cooling tower, the heat pump system, and the temperature control system, among many others.
2. Many electrical components are evaluated at the time of assessment, including the emergency generator system, the elevator intercom system, and the fire alarm system.
3. A variety of architectural components are assessed, including exterior entrance and exit accessibility, the interior lobby doors and hardware, as well as the condition of chimneys, cornices, and door frames.
4. To organize the purposes of each recommended action, the Needs Assessment Condition Report gives numerical assignments to each purpose category. Safety purposes were given a numerical assignment of 1; Structural purposes were given a rating of 2; Code Regulations were given a 3; Security purposes were assigned a value of 4; Restorative purposes were assigned a 5; and Operations and Maintenance purposes were assigned a 6.
5. This fund was included in the 2009 Executive Budget.

STEPS TO SUCCESS

(1)
Use pilot inspections as training exercises for staff.
(2)
Understanding the history of the building's operational needs is vital. Consult with a knowledgeable maintenance representative throughout the assessment process.

Staten Island Zoo Reptile Wing
This 16,000 square-foot project was designed by Gruzen Samton Architects. As part of the City's Percent for Art Program, a 32 foot-long bronze snake adorns the exterior wall.

The Design Liaison

CHALLENGE: Ensuring design quality remains on equal footing with schedule and budget throughout the life of the project.

SOLUTION: Incorporate Design Liaisons into the project team to manage design quality as a project priority.

previous spread
Queens Botanical Garden
Visitor and Administration Building
Designed by BKSK Architects, this project was awarded a LEED Platinum rating in 2008.

DESIGN LIAISONS ARE THE CITY'S ADVOCATES FOR DESIGN + CONSTRUCTION EXCELLENCE.

Their primary responsibility is to ensure the maintenance of design throughout the life of a project. Traditionally, scheduling and budget have been given priority in project management, with design quality often neglected as a result. To avoid this, Design Liaisons are charged with monitoring the design process of all D+CE projects and are important players every step of the way—from RFP development and consultant procurement through construction completion. As D+CE advocates, they must be skilled in the art of design and flexible enough to navigate, negotiate and compromise.

The success of the Design Liaisons hinges on their ability to protect design quality across organizational divisions, and outside governing agencies[1]. Although Design Liaisons do not have direct project management responsibilities, they must be able to ensure that design is in synch with all priorities within project management. In order for this to be accomplished, it is vital that their position within the organization be flexible enough to work on equal footing with all levels of the project staff. To do this, Design Liaisons must be guaranteed top-down support. This allows corporate cultural issues or internal barriers to be handled in a timely and effective manner.

Design Liaisons must be able to understand and facilitate the expectations of the clients, and to develop strategies to meet various civic design approval requirements from other city agencies. They must be able communicators who can achieve consensus among the various stakeholders of a project, while communicating how quality design can help solve problems that arise when dealing with departmental approval, budget constraints, and scheduling requirements such as construction phasing.

Design Liaisons also play a key role in developing long-lasting relationships with our consultants. For a consultant working with the City for the first time, the process can be daunting. Design Liaisons serve as their guide and sounding board, resolving administrative and public relations issues and explaining processes that may be unfamiliar to our consultants. Design Liaisons provide complete continuity between the design and the construction phase[2] and is heavily involved in any changes directly affecting design during construction.

DDC has six Design Liaisons, four in the Structures Division, and two in the Infrastructure Division. The four Structures Design Liaisons cover four client groups: libraries and cultural institutions, health and human services, police and fire, and corrections and courthouses. The Infrastructure Design Liaisons handle the Department of Environmental Protection and the Department of Transportation projects.

1. Outside governing agencies include elected officials such as Borough Presidents, State Assembly and City Council members, the Public Advocate, public officials such as Community Board members, and civic organizations, which may include advocacy or environmental groups.
2. The DHS Family Center, at right, designed by Polshek Partnership Architects, LLP, is the first project to benefit from Design Liaison stewardship from conception to completion. This project received a 2006 Design Award from the Art Commission of the City of New York.

STEPS TO SUCCESS

(1)
Design Liaisons should understand and communicate the needs of all project stakeholders.
(2)
They should possess superior design skills—able to discover and solve complex design problems.
(3)
Design Liaisons should be involved with the design process from conceptual design through construction completion.

Queens Hospital EMS Station
This new 12,000 square-foot building on the Queens General Hospital campus, designed by Dean/Wolf Architects, will serve as the EMS district office. This project was the recipient of a 2006 Design Award from the Art Commission of the City of New York.

Peer Review

CHALLENGE: Integrating a more formal process during a project's design phase to provide feedback to the design team by outside professionals.

SOLUTION: Provide specific milestone review sessions for qualified professional peers to examine and critique the design of a project.

EVALUATION BY PROFESSIONAL PEERS HELPS UNCOVER MANY DESIGN SOLUTIONS.

It assures that the program is being met in creative and efficient ways, and provides professional support and ideas to the design team throughout the design process. The D+CE Professional Peer Review strategy also keeps the design process for civic projects[1] from becoming insular. By re-examining the project's needs and posing other possible solutions, the strategy helps avoid the problem of getting locked in to a design idea too early. Ideally, peer reviews are performed at the point in design where the architect has developed a conceptual range of acceptable solutions, yet while there is still enough room for modifications and improvements. Peers—usually two, an architect and an engineer—are chosen based on their experience and ability to enhance the value of the current design. Reviewers attend a presentation by the design team and provide an independent critique of the design proposal. They may also return in the later stages of design to provide further input. The Mayor's Office of Contract Services maintains a register[2] of volunteer professional peers with expertise in architecture, engineering, construction and public art. The peer review process has been used in the past, although it is now integrated more extensively.

The design for the Elmhurst Library in Queens was substantially shaped by the D+CE Peer Review strategy. The new library expansion will more than double the size of the existing building to 30,500 square feet, and triple the amount of usable program space. All reading, stack, and multi-use areas receive natural light, ventilation and views. State-of-the-art technology will be available throughout the building.

Initially, the project was scheduled to be a renovation and an addition to the existing Carnegie building. Carnegie libraries often valuable architectural traits that should be kept intact. As the Elmhurst project moved forward, however, it was discovered that only the main reading room was the original Carnegie design, and that pieces had been added over time that created a confusing, less-historically significant building. This discovery happened simultaneously with the realization that the library needed a much larger space than was originally planned in the initial reconstruction design. Once that need was apparent, a conflict arose as to whether the historical Carnegie portion of the library should be left intact, or whether it should be replaced to better meet the library's new needs.

After reviewing the current condition of the library, the peer reviewers concluded that the library was Carnegie in name only. Over the years the original design had been much maligned and the original construction showed evidence of poor craftsmanship. The reviewers expressed the belief that Carnegie libraries were meant to be about heroic inspiration as well as intimacy of detail, and the existing Elmhurst facility had been unable to preserve and restore those important qualities.

The dialogue, ideas, and historical information presented during the peer review enabled the design team to responsibly move forward with a new plan—discontinuing the designs that kept the existing building in place and instead implementing stronger ideas which responded to the contemporary needs of the community.

1. One project recently reviewed is the Mariners Harbor Branch Library. The new, 10,000 square-foot structure will contain reading spaces, circulation areas, and support spaces for the library's staff. The peer review process, performed by Denzil Gallagher, Joan Krevlin, FAIA, and Robert M. Rogers, FAIA, re-affirmed the building's design strategy of maximizing daylight deep into the building and articulating the volumes to fit the neighborhood scale.
2. Please visit www.nyc.gov/mocs for more information.

STEPS TO SUCCESS

(1)
Use experienced reviewers who are knowledgeable in the building type being reviewed.
(2)
Proper timing of the peer review sessions is critical—the project must be far enough along to offer substantial, feasible design solutions but also have flexibility so that new solutions offered by the reviewers can be discussed and implemented when appropriate.

Elmhurst Library, Queens
The Elmhurst Library, designed by Marpillero Pollack Architects, is the second largest circulating branch in the Queens Public Library system. The new 30,500 square-foot expansion will seek LEED Certification and will feature public art commissioned by the Department of Cultural Affairs' Percent for Art program.

Constructability Review

CHALLENGE: Decreasing the likelihood of flawed bids and significant change orders due to incomplete or uncoordinated construction documents.

SOLUTION: Implement the Constructability Review process, which provides a comprehensive review of construction documents before they are put out to bid.

CONSTRUCTABILITY REVIEW ENSURES DDC'S PROJECTS ARE BUILDABLE.

This strategy underscores the importance of producing accurate and thorough information through the detailed coordination and review of construction documents and specification materials. It reviews the bid document for clarity, addresses inconsistencies, checks the correctness of construction details and verifies the appropriateness of materials and construction methods.

The process assures coordination of drawings and specifications among all trades, cross-referencing architectural, electrical, mechanical, structural and plumbing. This unifies all aspects of the project, such as piping sizes and locations, beam layout and sizing, and other fundamental building components. Cross-referencing the trades also contributes to the avoidance of possible conflicts and overlapping jurisdictions among the various trade contracts. The review also identifies code compliance issues and their impact on design details and cost. Other issues highlighted during the constructability review include phasing issues, coordination with facilities operations, and the sequencing of construction operations. Additionally, the review assures compliance with regulatory criteria, such as proper submission format and procedure, adherence to Wick's Law, and Procurement Policy Board issues. Common inconsistencies recognized by the review team include missing or incomplete building code analysis and improper use of standardized information by the consultant.

The most successful contract is one with clearly defined specifications and little or no conflicting information, leaving limited room for interpretation. In order to achieve this, the Constructability Review strategy must be carried out by knowledgeable and experienced reviewers who are experts in their disciplines. Appropriate team members include representatives of each trade, project managers, internal independent constructability review staff, and a reviewer from the construction management consultant.

The timing of the project review is also critical to its success. The optimal time for constructability review is at approximately 75% design completion, and before the approval process needed by any other state or local governing or civic authorities. If the reviewer is given the documents too early in the design phase, they will be unable to make specific comments and the review will lose its effectiveness. If the review team is given the project too late, the changes may need to be issued through an addendum. This may impact the bid duration, quantity of bidders, and reduce the bidder's confidence in the completeness of the bid documents which may result in higher bids.

Once the appropriate time and team have been chosen, a standard format should be developed that guarantees the correct information can be easily understood and implemented by all parties. A successful format clearly informs the team members and client agency which aspects of the design were reviewed; what recommendations were made based upon the review; how those recommendations were decided upon, and how to implement the review team's recommendations effectively. It is at this point—in communicating and implementing the recommendations of the review team—that inconsistencies are clarified, prioritized, and corrected.

STEPS TO SUCCESS

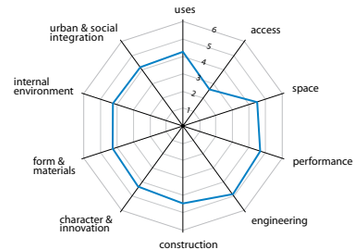
(1)
Highly-skilled staff across all disciplines
will ensure a rigorous review process.
(2)
Ensure all comments from assessment experts
can be compiled into a standardized format.
(3)
Educating the design consultant about
the importance of the assessment process
will result in fewer inconsistencies
and errors in the submission documents.

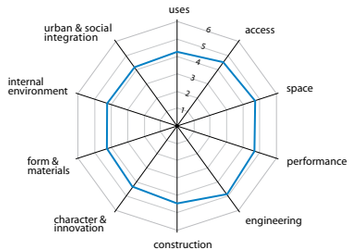
Greenpoint EMS Station, Brooklyn
In 2008 this project, designed by Michielli + Wyetzner Architects, received final approval from the Art Commission of the City of New York. The new 10,400 square-foot building will house a four-vehicle apparatus floor, a vehicle support zone and administrative offices. Construction will begin in 2008.

Design Quality Indicator

CHALLENGE: Establishing a standard metric by which to measure design quality.

SOLUTION: Use the Design Quality Indicator to define design priorities and continually measure how the design meets the project's stated goals.





1. These sample DQI spider diagrams are one way to illustrate the stakeholders' collective scores for the project's most important issues. The indentation in the circle above, left, indicates dissatisfaction with how the current design meets the project's stated goals for access.

A complete circle above, right, indicates that stakeholders are satisfied that all categories are on-track towards realizing defined goals—with no categories singled out for major improvements.

MEASURING DESIGN QUALITY HELPS ENSURE THAT COMPLETED PROJECTS MEET THE GOALS AND EXPECTATIONS OF CLIENTS AND USERS.

The Design Quality Indicator program (DQI) is a tool for assessing and measuring the design quality on a capital project. One of its most important objectives is to establish consensus on design priorities at the onset of a project—balancing the needs of all stakeholders involved in making the project a success. These stakeholders include the users of the building, the designers, architects, engineers, and the client agencies for which we work. This design goal process provides a framework and formal method to continually evaluate design priorities throughout a project's duration. It also makes the elements of good design visible through measurable and reportable statistics.

Phase one of the DQI process starts with a pre-design project briefing in which the stakeholders collectively identify what should be important in the design of the building. They do this using a data gathering tool called a FAVE, an acronym for Fundamental, Added Value, and Excellence. During the FAVE session, the stakeholders prioritize practical and value-based building criteria by placing brief statements into the three following categories:

FUNDAMENTAL: Is this factor fundamental to the building achieving its purpose?

ADDED VALUE: Will this factor add value, enhancing the building's usefulness and aesthetic impact?

EXCELLENCE: Will this factor help the design achieve excellence by creating a building of distinction?

Once the FAVE statements are organized into the three categories, they are weighted in value from 1 (strongly disagree) to 6 (strongly agree). These results highlight the stakeholders' most important design and construction values. For example, the FAVE statement of "The building's materials and finishes are well integrated," would be placed into one of the following categories by a respondent: Fundamental, Added Value, and Excellence. If the respondent chose to place the statement in the Fundamental section, that would signal the respondent's belief that the materials and finishes of the building are fundamental to the building achieving its purpose.

The next three phases in the process are assessment meetings. Assessment meetings occur at three points: mid-design, construction completion, and post-occupancy. During the assessment meetings, the stakeholders evaluate the project according to the values identified in the initial FAVE briefing and indicate how well those values are being achieved. The assessment data are then displayed in graph form[1], which can easily flag areas of success, or areas that need improvement.

STEPS TO SUCCESS

(1)
Using a qualified leader—preferably a project manager or design liaison—helps to ensure a thorough, accurate FAVE session.
(2)
At the end of the DQI process, carefully review the results to ensure the efficacy of the tool is continuously refined.

121st Police Precinct
One of the first projects to incorporate the Design Quality Indicator program is the new 49,000 square-foot facility for the 121st Police Precinct on Staten Island, designed by Rafael Viñoly Architects PC. This precinct will be the first NYPD facility designed under Local Law 86, and is seeking a LEED Silver rating from the United States Green Building Council. It was awarded a 2007 Design Award from the Art Commission of the City of New York.

1. The Pike Street Yard project, designed by Urbahn Architects for the Department of Environmental Protection, will include 27,000 square feet of offices, locker rooms, workshops, equipment storage, and vehicle fueling operations. The project is seeking a LEED Sliver rating, and used D+CE's Defined Quantity Contracting strategy.

Defined Quantity Contracting

CHALLENGE: Reducing the extensive process of change orders and cost escalations during the construction period that may result from using the traditional lowest-bid method for procurement of construction services.

SOLUTION: Modify the procurement process to equitably share financial risk between the City and its contractors by developing an accurate and detailed description of units and materials required under the contract.

previous page
Weeksville Heritage Center Education and Cultural Arts Building
Designed by Caples Jefferson Architects, this project was the recipient of an Art Commission of the City of New York Design Award for 2005. Sustainable aspects of the building's design include a geothermal heating and cooling system and controlled daylighting for interior illumination. This project is also participating in the Department of Cultural Affairs' Percent for Art program.

THE COMPLEXITY OF MODERN BUILDINGS DEMANDS A TEAM APPROACH.

Contemporary construction requires that the City, the design team and the construction team work together to bring a well-designed project in on time and on budget. Traditional bid methodology runs counter to building a creative and collaborative approach with our contractors. Although it ensures that the lowest price is obtained on any specific bid and protects the procurement process from corruption or collusion, the more we analyzed the lowest-bid procedures the more we realized that contracting with the low bidder by no means guarantees the most cost-effective solution.

For example, if the low bidder has under-bid the work and the bid amount cannot cover the actual costs of subcontracting or the purchase of materials, the contractor is inevitably led to reduce costs elsewhere, which could result in inferior construction quality. Under-bidding can also lead to an increase in the number of change orders and longer construction durations, potentially driving costs upward. Additionally, if the contract is not scoped and bid accurately, the contractor may try to recover the cost of unforeseen items. The resulting legal and administrative entanglements can cause the project to veer off course and construction quality to suffer.

Moreover, although construction documents generally follow certain industry standard formats, including protocols for the division of documents by trade and the separation of information into visual (drawings) and written (specs) descriptions, within those overall criteria there is very little specificity concerning the method by which construction activities are described and quantified. This can lead to confusion about the contract details, and, thus, to claims by the contractor for additional payment for work done not within the scope of the contract.

To begin resolving these long-standing issues, DDC has instituted the Defined Quantity Contracting strategy[1] as an alternative bid process. This process standardizes the format and detail of the final design stage estimate and bid documents by using an industry standard scope measurement tool, called the Agreed Rules of Quantification (ARQ). The ARQ's quantity surveying methodology guarantees that bids are scoped thoroughly, and that all necessary quantities and work are covered by the contract terms. It leaves little room for generalization and error—resulting in accurate, defined quantities as the foundation of the construction contract. This makes the bid process more exact, and more transparent—it is a fair and open process that guarantees equal footing for all bidders, eliminating the excessive risk factors that low bidders formerly incurred.

As a cost management tool, the ARQ serves as an accurate work reference so that contractors are paid with timeliness and precision. As work is completed, contractors submit payment requisitions based on the same Standard Method of Measurement used in the contract documents. If any aspect of the work has significantly increased or decreased and the contract price must be revised, the Method of Measurement provides a secure and fair basis for the adjustment. While this shifts project responsibility for accurate quantities more toward the City than previous

DESIGN EXCELLENCE IN ACTION

Remsen Yard
Canarsie, Brooklyn
Department of Environmental Protection
Kiss + Cathcart Architects

This project was one of the first DDC projects to use the Defined Quantity Contracting strategy.

D+CE Strategies: Quality-Based Selection, Peer Review, Defined Quantity Contracting

Targeting a LEED Silver rating, Remsen Yard exemplifies the D+CE program's commitment to sustainable design. The 95,000 square-foot project is a maintenance facility for New York City's Department of Environmental Protection (DEP). Supporting its water and sewer operations, the 2.4-acre property accommodates DEP vehicles, their equipment storage and material piles, and personnel support facilities, such as locker rooms, restrooms and administrative offices.

Water management is the primary mission of this operation, and on-site water management became a major goal in the Remsen Yard design. The Remsen Yard is a heavy water use operation, using an average of 6,600 gallons per day in yard activities such as washing trucks and misting piles for dust control in addition to building usage. Rainwater from the roof will be collected in a tank, treated according to New York City's health guidelines, and reused for site-related water needs, providing 51% of the water required for these site activities and saving 1.4 million gallons of potable water annually. A long-span roof has both active and passive environmental benefits. Over an acre of the open yard is shaded by the roof, sheltering the outside activities. In addition to collecting rainwater, the roof has thin-film photovoltaic (PV) panels integrated into skylights. The PV array produces up to 50 kilo-watts of electricity and contributes approximately 26% of the annual electrical load.

methods, it also increases work quality and improves project scoping. At bid submittal, the ARQ is summarized into a standard Form of Proposal. This allows the bids to be evaluated quickly and accurately, ridding the process of inconsistencies and gray areas where assumptions are made as to what the bidder may or may not have included in the final bid price.

The design and construction management team must provide a high level of accuracy when preparing the bid documents, and training for our potential bidding pool must be provided as well. Therefore, there are time and cost expenditures front-loaded in the scoping and bid process when adhering to the ARQ. Educating all parties to the contract is paramount in building trust and confidence within the new agreement process, and those explicitly responsible for scope definition must demonstrate expertise with the principles involved and possess the requisite professional design and construction skills. But these initial expenditures should be recouped by cost benefits due to more accurate bidding and cost management during construction. Experience shows that bids are consistently 5% to 10% lower using this process, due in part to the elimination of guesswork and the removal of bid padding based upon the assumption of unforeseen risk factors historically incurred by lowest bidders.

In implementing this approach, we discovered the absolute necessity for a high degree of participation by the industry so that all participants have a common understanding of the method. We stressed the positive effects of more equitable risk distribution, and we found that once we were able to actively educate our bidding audience on the methodology, we were more successful in attracting an increased number of bids from a better qualified pool. Education and cooperation internally and within the industry are key elements in the successful roll-out of this program.

Currently, DDC is following two DEP projects through this strategy: Remsen Yard (opposite page), which is in the early stages of construction, and Pike Street Yard, in Manhattan, which is in the bid/award stage. For Pike Street, HVAC and electrical bids were within 5% of the reconciled estimate, however the general contracting and plumbing contracts had to be rebid, which is attributed to the current, challenging market conditions. These conditions can adversely affect bid responses, particularly for general construction components (this holds true for conventionally bid projects as well).

Experience with Remsen and Pike reinforces that education of the bidding pool is important in streamlining this process, as there is a steep learning curve for contractors. As these two projects move through the construction process, the benefits of DQC will become more tangible for the contractors and will encourage buy-in for future projects[2]. This process has also resulted in a continual refinement of the bill of quantities to more closely reflect the model typically used by subcontractors to develop pricing, so that the proposal form and subcontractor price proposals are brought into closer alignment. On the design QA side, DQC has shown itself to be an effective complement to our constructability review process, and, as such, will aid in reducing the number of change orders due to document coordination and separation of trades issues.

2. DDC remains committed to DQC, and will implement a version of this strategy on the Police Academy in Queens, and the Bronx's PSAC II projects. Additional candidate projects will be identified through 2008.

STEPS TO SUCCESS

(1)
A thorough scoping process at the beginning of the project helps develop an accurate bid.
(2)
Provide seminars, classes and targeted educational mailings to ensure the bidding pool is aware of the new procurement method.
(3)
Continually refine the bill of quantities to reflect the model typically used by subcontractors to develop pricing.

Bronx River Greenway, River House
This project was designed for the Department of Parks & Recreation by Kiss + Cathcart Architects. A screen wall made of galvanized steel and mesh wraps the entire building, providing a secure perimeter and a surface for vines to grow. This project was awarded a 2007 Design Award from the Art Commission of the City of New York.

Pre-qualification of Construction Contractors

CHALLENGE: Increasing the number of contractors with the requisite experience for certain large-scale, specialized projects.

SOLUTION: Pre-qualify construction contractors with specialized skills to establish a viable pool of bidders.

1. For a museum project like the Queens Museum of Art, evaluation criteria includes the size of the firm, the scope of their relevant work, their financial ability to undertake a substantial project, as well as the ability to demonstrate the highest level of contemporary construction standards and methods to successfully complete the project.

2. The Weeksville Heritage Center's new Education and Cultural Arts building, above, was designed by D+CE architects Caples Jefferson. It is a new exhibition and research facility, supporting the Weeksville Society and their restored Hunterfly Road house complex.

PROJECTS CAN REQUIRE SPECIALIZED CONSTRUCTION EXPERTISE.

Historic preservation, as well as public safety work, are projects which are good candidates for contractor pre-qualification. The D+CE program addresses these types of projects by pre-qualifying contractors who have the necessary experience and expertise.

To become pre-qualified for specific project work, contractors must provide a number of project references similar in size and scope to the type of projects for which they are seeking pre-qualification. Each firm's submittal is then evaluated by an in-house team. This strategy is beneficial for the contractors since once they are pre-qualified for a project, they bid only against equally qualified competitors. This reduces the likelihood that they will be under-bid by less qualified bidders. Additionally, bidding only to qualified contractors eliminates delays and errors that can result from inexperienced contractors. This team will then review the qualification packages submitted and select firms that have met the criteria for pre-qualification[1].

Once final design and bid documents are available for specific projects, only those firms who have been pre-qualified will be invited to submit competitive bids. After the bid opening, the responsible firm with the lowest bid will be awarded the contract. As part of this strategy, the City has undertaken the pre-qualification of construction contractors for cultural institutions and libraries, including the Queens Museum of Art and the Weeksville Heritage Center[2].

STEPS TO SUCCESS

(1)
Extensive advertising ensures that a larger pool of experienced applicants will apply for the program.
(2)
The pre-qualification review team should include a broad range of technical and administrative expertise in the management of capital projects.

Design Standards

CHALLENGE: Establishing consistent design and construction standards appropriate for each client agency.

SOLUTION: Develop agency-specific design and construction standards publications that provide precisely developed specifications for use by architects and engineers in the preparation of the contract documents for their projects.

previous spread
Engine Company 277
The primary element of the design, by STV Incorporated, is the sculptural quality of the building. Above its square base, the structure is curved in three dimensions to create unique presence on the avenue. The project was completed in 2008, and was the recipient of an Art Commission of the City of New York Design Award in 2004.

PROVIDING STANDARDIZED MECHANICAL, ELECTRICAL, ARCHITECTURAL AND OTHER TRADE INFORMATION TO CONSULTANTS ALLOWS FOR MORE TIME TO BE SPENT ON DESIGN SOLUTIONS.

The D+CE Design Standards strategy provides design professionals working on civic projects with pre-approved design information. The standards provide fundamental design elements such as electrical loads, lighting performance requirements, fire and life safety information, HVAC requirements, and standards for concrete and sidewalk paving. This allows our design consultants to have uniform information readily available at the beginning of each project—reducing costs and shortening schedules by providing information that can be immediately shared by all parties working on the project. It also allows consultants to expedite programming and design work, since certain specifications have already been decided upon. The standards reduce errors and omissions in the construction documents and allow the design team to focus on specific project issues.

For example, the Fire Department of New York City (FDNY) recently developed their own Design Standards book. The book contains design and construction standards for FDNY facilities, including: existing conditions; concrete; masonry; openings; finishes; specialties such as signage and flagpoles; equipment; furnishings; fire protection; plumbing; HVAC; and electrical, among others.

STEPS TO SUCCESS

(1)
Identify and document all repetitive elements that occur in a specific building type.
(2)
Assign a project coordinator to this process to ensure that the information is accurate, up-to-date, and regularly distributed.

Continuing Education

CHALLENGE: Maintaining the highest levels of industry standards and keeping abreast of best practices that benefit City projects.

SOLUTION: Provide agency capital staff with a continuing education program that embodies design excellence.

DESIGN EXCELLENCE IS NOT STATIC.

It is a constantly improving process that is successful only if its tenets are embraced and understood by the design and construction industry, as well as the municipal agencies charged with its delivery. One way to accomplish this is through a well-developed continuing education program, which serves as a feedback loop of best practices and lessons learned. Continuing education provides an important step in the advancement of the employees of the City's capital agencies by providing classes[1] and site tours[2] based upon the ideas of Design + Construction Excellence. Over 1000 employees from various City agencies have taken advantage of the lectures and tours provided through this program.

Continuing education programs provide an ideal way for us to encourage paradigm change by educating appropriate staff about specific D+CE strategies, as well as on new ways the D+CE program can help expedite high-quality, fiscally responsible design. For example, it had been previously thought that expenditures associated with LEED[3] could make a capital project more expensive. The continuing education program provides classes that teach participants how using the LEED guidelines and principles can save money through the use of appropriate materials, for instance, while constructing facilities that are environmentally conscious. Additionally, classes in the management of architectural and engineering consultants provide examples and problem solving opportunities that improve how we manage and build relationships with our consultants, which can lead to better working relationships resulting in tighter schedules.

Finding qualified instructors to teach our classes involves seeking out individuals with a strong professional background coupled with relevant project experience. Since various agencies contribute to our continuing education classes, we are able to tap into a rich pool of experienced consultants. We have also found class attendance increases when we have the opportunity to facilitate classes in relevant environments. For example, LEED classes become much more than a classroom experience when the event is held at the Queens Botanical Garden, one of the City's most significant sustainable projects.

Continuing education programs can also serve as a springboard beyond more traditional classes and site visits. With the proper top-level reinforcement[4], they can encourage and incentivize capital staff to improve their certifications. Ideally, project staff benefit from completing educational programs that focus on conceptual design all the way through construction completion, so that each project could be served by its own learning platform throughout the building process.

STEPS TO SUCCESS

(1)
Top-level support will ensure appropriate staff are given time to attend classes.
(2)
Provide interesting courses and site visits to encourage questions and interactions.
(3)
Offer classes that deliver continuing education credits.

DESIGN+CONSTRUCTION EXCELLENCE FEEDBACK STRATEGIES

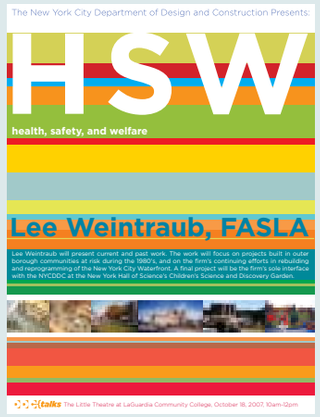
1. The classes in the continuing education program have included: An Introduction to Design + Construction Excellence; Universal Design and Applications; and Introduction to Sustainable Design and LEED.
2. Site tours add one more dimension of training outside the traditional classroom setting. Site tours have included the New York Hall of Science; the Corona Transit Facility; Hunter High School; and the Office of Emergency Management Headquarters, among many others.
3. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System, developed by the U.S. Green Building Council, provides a suite of standards for environmentally sustainable construction. Over 30 LEED projects have been involved with the D+CE program, totaling more than 1.5 million square feet.
4. Top-level support can filter down in many ways. DDC's executive staff has chosen to teach personnel and clients about specific Design + Construction Excellence strategies through an educational program within the agency strategic plan. It incorporates informal brown-bag lunch lectures about design, an internal signage program, and the development of surveys and questionnaires to gauge how well we are educating our clients, consultants, and staff about the value of D+CE.

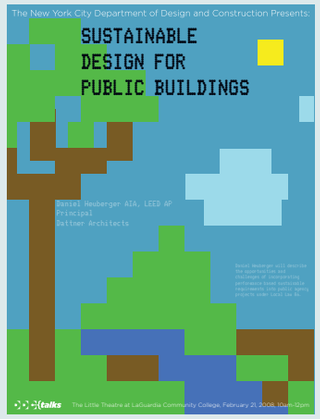
DESIGN EXCELLENCE IN ACTION

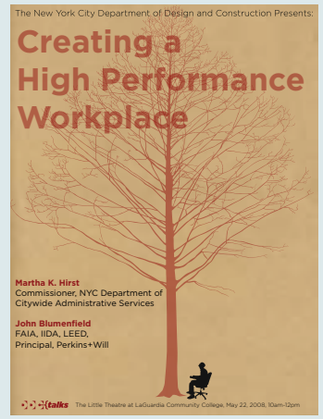
These are a sampling of posters DDC has prepared to promote each month's lecture.

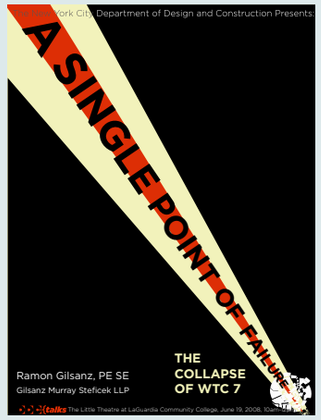
DDC Talks

In addition to the continuing education classes provided through our citywide cross-agency program, the Department of Design and Construction offers DDC Talks—a monthly professional lecture series to further advance contemporary thoughts and methods of design, engineering, and construction excellence. Those classes have included: *Urban & Suburban Design and Ecology; Preventing Progressive Collapse of Infrastructures; New Ways of Using Old Buildings; Dissolving Boundaries in Design Education; Security as Architectural Aesthetic; Public Buildings and Public Art; Materials and Performance in Buildings; Connections in Cultural Design; Transformability in Architecture; Design of Radiant Heating and Cooling; Architecture and Globalization.*









Annual Reports

CHALLENGE: Providing consistent, comprehensive and useful information to client agencies on their entire portfolio of work.

SOLUTION: Issue customized reports to client agencies that include detailed project, budget, and scheduling data.

PROACTIVE COMMUNICATION IS A PRIORITY OF DESIGN+CONSTRUCTION EXCELLENCE.

DDC's client agencies have numerous projects in various stages of development. The ability to accurately and effectively assess the progress of a client agency's complete portfolio is important in understanding their current and future budget and scheduling needs.

Annual Reports will be issued to each of DDC's client agencies, as well as to the Office of the Mayor. The reports provide clients with the capability to view relevant project information in one document—at a glance—that they can use to plan their budget and schedule. It also helps to better service clients, establishing a method that allows them more involvement in and awareness of their projects' progress.

Annual Reports provide a variety of beneficial information to City agencies. The report includes the number of projects in design, the number of projects in construction, and the number of completed projects. In addition, client agencies will be able to see cost breakdowns and trends highlighted in tables and graphs.

The reports will highlight new initiatives DDC is working on with the client agency, site safety subjects, and how their projects are addressing matters of sustainability. Additionally, clients will be informed if their projects are specifically addressing large, citywide initiatives, such as Mayor Bloomberg's PlaNYC.

STEPS TO SUCCESS

(1)
Consult often with client agencies to understand what kind of information is most valuable to them.
(2)
Work closely with the client agency to ensure the information included in the report is useful.


QUEENS MUSEUM OF ART

1. The Queens Library system is the second largest public library system in the United States in terms of collections. It contains more than 6.8 million items, and in 2007 had an in-person attendance of more than 14 million people.
2. Marble Fairbanks Architects' projects include the Our Children's Foundation, the Engineering Design Center at Cooper Union, and the Altschul Auditorium at Columbia University. Its principals, Scott Marble and Karen Fairbanks, each have more than 20 years of professional experience.

previous spread
Queens Museum of Art
Designed by Grimshaw Architects with Ammann & Whitney.

The Queens Library has expressed that the Glen Oaks branch be welcoming to the community and respectful of the neighborhood. The final design, above, by Marble Fairbanks Architects, rises two-stories above street level. The building employs substantial use of glass on three of the four elevations, allowing passersby to glimpse into the structure and enabling daylight to filter through the entire building.

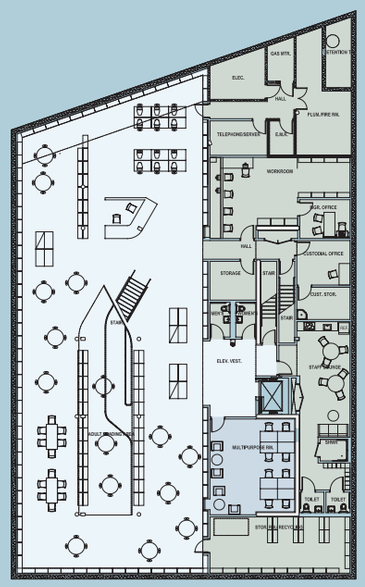
CASE STUDY 1
GLEN OAKS LIBRARY

CLIENT AGENCY: Queens Library
LOCATION: 256–04 Union Turnpike, Queens
BUDGET: $14 million
CONSTRUCTION COMPLETION: July 2010
D+CE CONSULTANT:
Marble Fairbanks Architects
D+CE STRATEGIES: Quality-Based Selection, Peer Review
LEED: Seeking Silver rating
AWARDS: Art Commission of the City of New York, Design Award 2006

Under the direction of the Department of Design and Construction, Queens Library is currently doubling the size of the Glen Oaks Library. This project has been an early marker of success for the program, combining contemporary design with the Queens Library's[1] mission to support and enrich the neighborhoods of New York City.

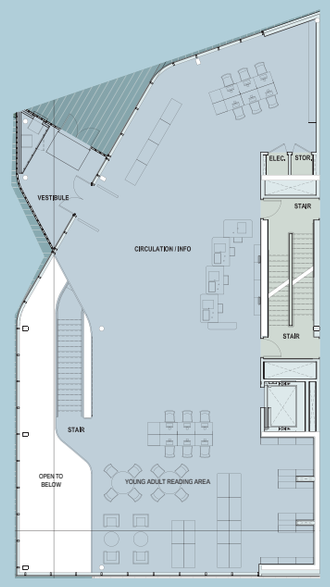
This project was one of the first libraries to benefit from D+CE's Quality-Based Selection strategy. Initially, the firm responsible for designing the project, Marble Fairbanks Architects[2], was one of 180 firms that applied to become a member of our on-call design services requirement contract panel of consultants. Once placed on the panel, these consultants are considered on-call, and are invited to submit a more thorough, project-specific proposal upon issuance of a task order by the agency. Marble Fairbanks Architects was selected for this panel. All firms applying for membership on the panel for projects within this financial category were then evaluated based

For this project, many reading and work areas, as well as book stacks, were designed sub-level due to neighborhood zoning restraints. Respondents to the RFP were specifically asked for design solutions that would creatively incorporate light below grade. In their response to the RFP, Marble Fairbanks Architects brought natural light into the basement level through three large skylights which illuminate the book stacks and reading areas, above . The double-height staircase which opens fully to the ground floor also allows substantial daylight to enter the space.



a

The below-grade level of the library (a) contains adult reading areas, study areas, staff offices, a workroom, and storage space. On the ground floor (b) there is a large circulation and



b

information area, as well as young adult reading areas. The second floor (c) contains a large multi-purpose room, a substantial children's reading area, storage and quiet reading areas.

c

Respondants to the RFP were asked to consider a contemporary approach to reading rooms, circulation, and library technology.

upon the experience of the firm and their sub-consultants (50%), education and experience of the proposed team (30%), and the creative and technical abilities of the firm (20%). An evaluation committee, including an outside professional peer, then ranked each firm based on these merits. The 24 highest-ranking firms, including Marble Fairbanks, were selected for panel inclusion and awarded an on-call requirement contract.

The agency then issued a task order to the new panel for the design and construction of the new Glen Oaks Library. Of the 24 consultants on our panel, 21 responded to the task order and submitted RFPs for architecture and design services for the new library. Within this project-specific RFP, each consultant was asked to give a more detailed explanation of the proposed project team's experience, including demonstrated capability to successfully complete a project of this type, size and complexity. This RFP also included a stricter focus on the clear definition of key roles, duties, and clear lines of communication—especially in regard to client input and community concerns. In addition, each firm was asked for a detailed expression of the overall goals of the project and methods for achieving them.

Within the RFP, the proposers were informed that the current Glen Oaks library had insufficient space for the community's needs. Queens Library was demolishing the out-dated structure and erecting a new building on the same site. The new library would contain approximately 18,000 square feet of space, and includes provisions for new equipment and electronic information networks. Respondents were also asked to consider contemporary thought about library organization, with designs for separate reading areas for adults, young adults and children. Increased book mobility and new technologies, such as radio frequency self-checking, were also given priority. In addition to these ideas and programmatic needs, respondents were expected to incorporate passive sustainable design in a number of ways, including controlled daylighting in reading and work rooms. Importantly, and due to zoning regulations, the respondents were informed of the need to include a good portion of the building below grade. Marble Fairbanks Architects was awarded the contract due to their innovative and efficient response. The selection committee included two members of DDC's Structures Division, two members of DDC's Architecture and Engineering Division, and the client agency.

This project was vetted through another D+CE strategy: the Peer Review. The project was reviewed at 75% schematic design phase by two professional peers: Alexander Gorlin[3], FAIA, of Alexander Gorlin Architects and by Jean Phifer[4], AIA. The Peer Review environment provided a creative, professional way for the design consultants to receive productive feedback from an outside professional peer. As a result of this review process, three major design elements were changed: the overall massing of the building, the construction materials used on the west façade and the size and scale of the skylights used to bring daylight into the library's basement level (see opposite page, top). Originally, the new structure was designed as a three-story building. The reviewers pointed out that the current massing might keep the project from properly fitting into the surrounding urban context, which is primarily low-level residential and commercial structures. Ideas resulting from this issue eventually led to

3. Alexander Gorlin Architects is a New York-based architecture and design firm. Alexander Gorlin was named the recipient of the 2008 John Q. Hejduk Award for Architecture. Conferred annually on a graduate of The Cooper Union School of Architecture, the highly prestigious prize recognizes extraordinary contributions to the theory, teaching and practice of architecture.

4. Jean Phifer served as President of the Art Commission of the City of New York from 1998-2003. She is an architect and planner who has designed or restored over fifty distinguished buildings, monuments, and public spaces, primarily in New York City.

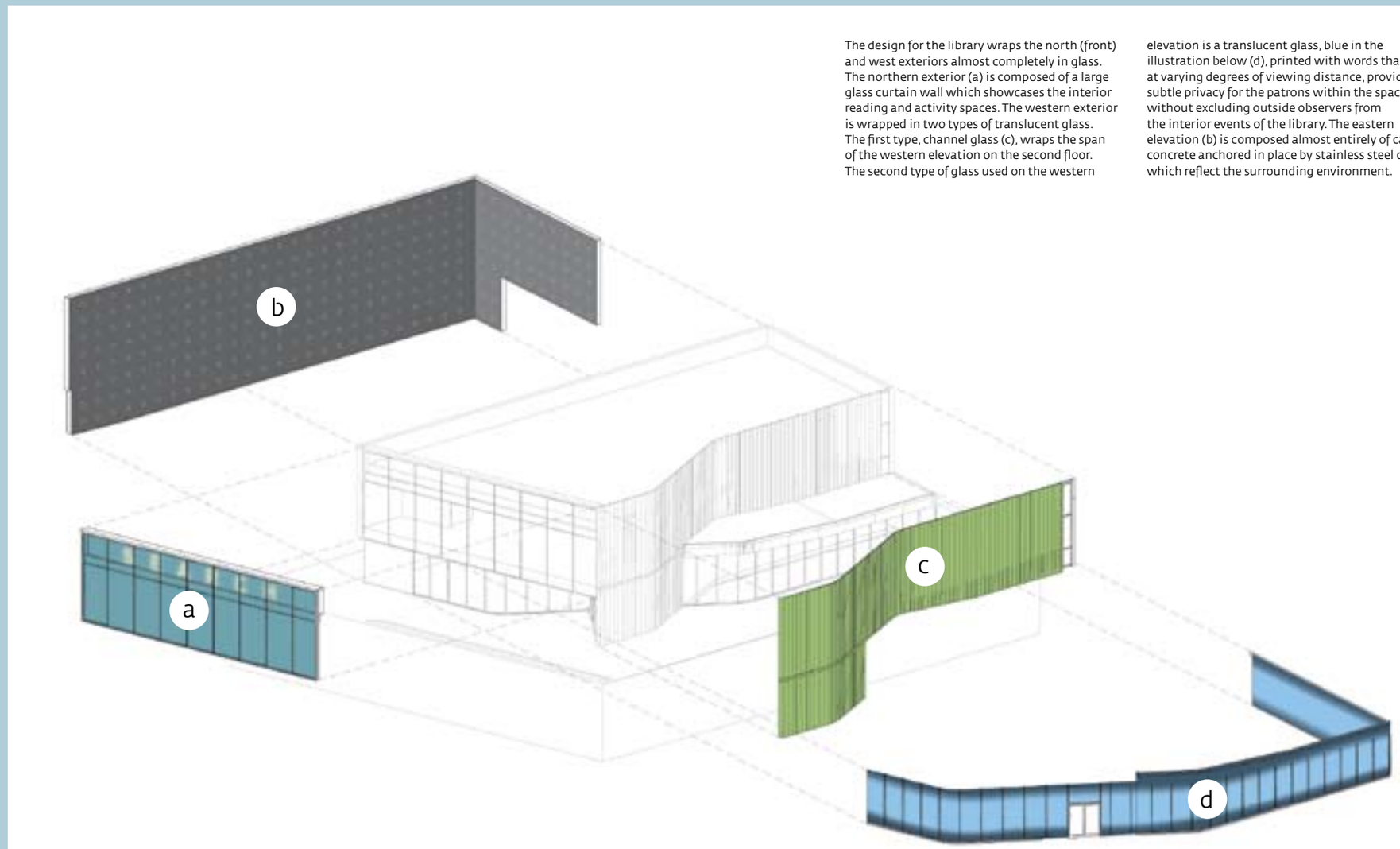
5. Channel glass is a translucent U-shaped cast glass produced in several widths. The basic ingredients of channel glass are sand, lime, soda, and carefully recycled glass. The mix is combined in a highly sophisticated oxygen-fired melting furnace to emerge as a ribbon of high quality molten glass. It is then drawn over a series of steel rollers to form a continuous glass channel of specific dimensions and surface finish. The endless ribbon of channel glass is carefully cooled and cut prior to custom processing and packaging for dispatch.

a rethinking of the structure's massing, and the consultant changed the facility to two above-ground levels instead of three.

The materials used on the western façade were also reconsidered due to the Peer Review process. Initially, that façade was designed as pre-cast concrete with vertical slats for windows. A secondary design included metal fins on the western façade. Both reviewers voiced concern that the pre-cast concrete might appear too harsh and heavy—keeping the library from relating to its surrounding environment. The reviewers also felt that the proposed materials were not in keeping with the library's wish to be perceived as open and welcoming. As a result, the material used on the western façade changed from pre-cast concrete to channel glass[5]. The clear channel glass is illustrated in green in the diagram to the right (c).

The final change implemented as a result of the Peer Review was the number and size of skylights used to bring daylight into the cellar level of the library. In the beginning, the consultant proposed a more historic use of glass: the tiny, circular glass perforations that are traditionally seen throughout New York City and that serve to bring light into the sub-levels of basements and residences. Citing maintenance as the main concern, the reviewers recommended moving toward a more modern plan using fewer, but larger and more sculptural, skylights to bring daylight below grade.

The Art Commission of the City of New York was also critical in approving the design of the new library. At the recommendation of the



The design for the library wraps the north (front) and west exteriors almost completely in glass. The northern exterior (a) is composed of a large glass curtain wall which showcases the interior reading and activity spaces. The western exterior is wrapped in two types of translucent glass. The first type, channel glass (c), wraps the span of the western elevation on the second floor. The second type of glass used on the western elevation is a translucent glass, blue in the illustration below (d), printed with words that, at varying degrees of viewing distance, provide subtle privacy for the patrons within the space without excluding outside observers from the interior events of the library. The eastern elevation (b) is composed almost entirely of cast concrete anchored in place by stainless steel disks which reflect the surrounding environment.

6. These skylights were originally conceived as smaller, circular perforations that would allow light to filter below grade. They play an important role in establishing a connection between the plaza level outside and the ceiling of the basement level, providing an interesting connection between the two.

7. A curtain wall is a building façade which does not carry any dead load from the building other than its own. These loads are transferred to the main building structure through connections at floors or columns of the building. A curtain wall is designed to resist air and water infiltration, wind forces acting on the building, seismic forces, and its own dead load forces. They are commonly made of glass and/or aluminum.

Art Commission, the designers rethought their use of certain exterior materials—specifically the western façade's first and second floor. In addition, the Art Commission proposed landscaping suggestions in regards to the depth of the tree planting beds and in the choice of the trees and other greenery.

As previously mentioned, in conceptualizing the design, it was important to comply with zoning regulations that restricted the elevation height of the library—keeping it respectfully in line with the existing low-rise elevations of the neighborhood's commercial and residential structures. To accomplish this while still having to meet the goal of doubling the library's size, the design focused a substantial part of the program underground, creating a large below-grade adult reading area, space for workrooms and storage, offices and a staff lounge. The challenge in working below grade was to find a way for natural light to filter down from the ground floor.

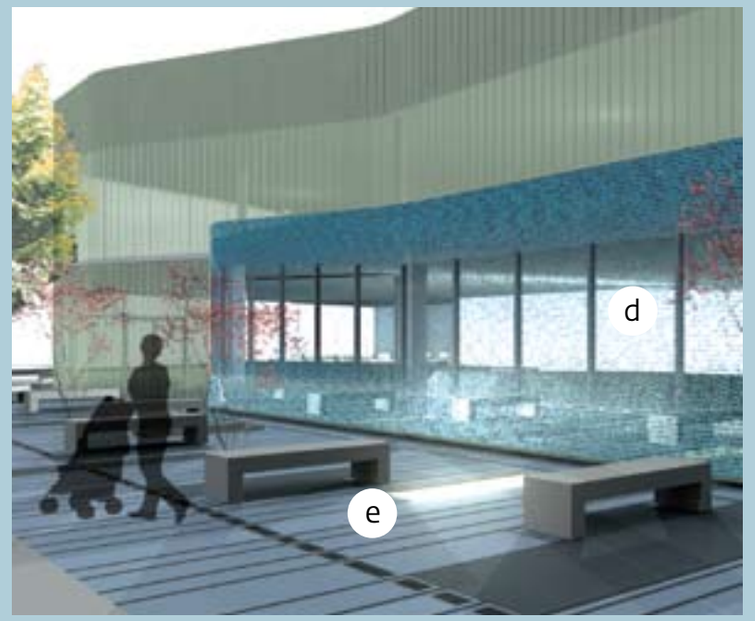
The challenge was met in two ways. First, by incorporating a double-height space adjacent to the main entrance on the ground floor. This space connects the ground floor to the basement level with a large, open, sculptural stairwell. It allows a substantial amount of natural light to filter down and play across the work areas in the cellar. Second, three rectangular skylights[6] were placed within the ceiling in the basement level, allowing sunlight from the outdoor plaza level above to define specific reading areas located below. This feature establishes a dynamic interplay between indoors and out, accentuating the ground surface's dual role as an outdoor public space and its inversion as the roof of the cellar below.

This desire to bring the outside in goes hand-in-hand with the library's goal of openness, inclusion, and transparency. The open plans of the first and second floors are wrapped in transparent and translucent glass—a simple glass curtain wall[7] (noted as (a) opposite page, top) on the northern, or front, exterior of the building spans the height of both stories, allowing the bustling activities on Union Turnpike to be in full view of the library's cyber center located on the ground floor. The cyber center provides space where patrons can study and view new media. This level also provides for a young adult reading area and a large, open circulation and information area. Since the northern elevation's glass curtain wall extends upward to the second story, it allows views into the second floor children's area.

Continuing on the theme of architectural openness and translucency, channel glass runs the length of the exterior western elevation of the second floor (see section (b) of rendering on opposite page, top) and drops down to encompass the ground floor western exterior toward the northern end of the building. The channel glass is a contemporary, beautiful way to keep the exterior of the building from feeling too heavy—or exclusive—while simultaneously allowing for both light and privacy.

The ground floor's northern and western exteriors are also translucent. In a unique intermingling of text, light, and privacy, most of the glass at this level is layered with a transparent film that contains words (see section (d) of renderings on opposite page, bottom left and right). As viewed from a distance, the words layered upon the glass provide a semi-opaque layer of privacy for the reading room. As the outside viewer moves closer to the glass, the words become distinct and offer

The western elevation of the Glen Oaks Library is composed almost entirely of glass. Channel glass (b) allows for a large amount of sunlight to filter into the space while simultaneously providing a filter from solar rays and privacy from the surrounding neighborhood. On the ground floor, the translucent glass layered with text (C) also provides a degree of privacy without feeling exclusionary.



Above, a close-up of the windows that wrap around the ground floor's northern (or front) and western elevations (d) reveals the small text lettering inlaid in the film that covers the glass. This lettering forms a semi-private screen that allows for patron privacy while still enabling daylight to filter through.

The rendering, left, of the outdoor plaza, ground floor and second floor of the western elevation highlights three different ways daylight enters the building: through the skylights (e) into the basement level, through glazed picture windows on the ground floor, and through the large swath of channel glass that wraps around the second story.

a clearer view of the interior of the building. These words tell the neighborhood's history as told by local sources. These small stories anchor the library to the neighborhood while simultaneously being a nod to the future of a facility that is filled with stories within its bound volumes.

As words are what defines a book, and are therefore an integral part of the library, the design of the Glen Oaks branch sought to literally reflect the idea that words are integral to the new facility: On the northern elevation, the word *Search* (opposite page, top) is projected by sunlight through letters on the film in the parapet onto the façade's glass curtain wall. The word varies in scale and legibility depending on time of day, degree of sunlight, and season.

In addition to the ideas of transparency and light, the exterior design elements of the building were conceived to be appreciative of the surrounding environment. The southern side of the library is clad with cement panels—cost efficient and novel in their application—fastened with polished stainless steel disks (opposite page, bottom) that reflect the surrounding houses and landscape. The stainless steel disks create a low-resolution, pixilated image of the neighborhood, in effect reflecting it back upon itself. The shape of the entire structure is designed to minimize intrusiveness as well. Through its use of glass and the gently weaving characteristic of the western façade, the design breaks down the building's mass to more closely relate to the small-scale residences in the area.

As a final design commentary on the openness of the library, the design team chose to focus the landscape on visual access to the structure, instead of blocking sightlines to the building with bulky planters or privacy fences. Bluestone planks of varying widths create an urban surface in keeping with the library's residential context and larger public space role. To allow for greenery, these planks can be removed to plant low perennials. Benches are also introduced, and match the grain of the bluestone pattern. In addition, Sumac trees were chosen for their light and airy quality. These affects create clear, open sightlines to the building while providing quiet seating areas for rest and reading.

Through the Department of Cultural Affairs' Percent for Art program, Brooklyn artist Janet Zweig created artwork for the second floor children's area of the library. The artwork is a sculpture on the ceiling in the form of very slender pipe-work that holds a single band of tiny white LED lights. The pipe travels up the wall and across the ceiling into a tangle and then moves out to a rectangular shape where questions scroll through.

When activated, a small white dot or line of light (symbolizing a thought) very slowly climbs the pipe on the wall and moves toward the tangle of piping. As it moves, it gradually picks up speed until it is racing around the tangle. It then rushes toward the text block, finally pouring light into the text block and scrolling a question across the screen. The rising of the dot and its acceleration clues viewers that a question is on its way. The piece moves and changes, presenting something new each time a child looks at it.

The D+CE program places the highest priority on sustainable architecture and environmental design, as shown through the Glen Oaks Branch Library project, which is seeking LEED certification. Sustainable design and construction features include the following: storm water retention system; Energy Star roofing; ultra-low sulfur fuel and clean technology to be used in construction vehicles and zero potable water use for landscape irrigation.

On the northern elevation of the library, the word *Search* is projected by sunlight through letter on the film of the parapet, illustration (a), above top, and onto the façade's glass curtain wall. The size and density of the letters changes at various points of the day due to the changing location of the sun's rays. The majority of the building's southern elevation, above, is clad in pre-cast concrete block anchored in place by small, stainless steel disks (b).

The Montessori Progressive Learning Center, designed by Slade Architecture, was the first project to be completed under the D+CE program.

1. The Montessori Progressive Learning Center serves 145 children ranging in age from two to twelve and is located on Linden Boulevard, in Queens.

CASE STUDY 2
MONTESSORI PROGRESSIVE LEARNING CENTER

CLIENT AGENCY: Administration for Children's Services
LOCATION: 195–05 Linden Boulevard, Queens
BUDGET: $275,000
CONSTRUCTION COMPLETION: February 2007
D+CE CONSULTANT: Slade Architecture
D+CE STRATEGIES: Quality-Based Selection

In 2007, the Department of Design and Construction completed its first D+CE project: an interior upgrade of several spaces of the Montessori Progressive Learning Center (MPLC)[1]. The project was designed by Slade Architects, one of the first design firms to qualify for City work through D+CE's Quality-Based Selection strategy. Slade Architecture was one of 180 firms that applied to become a member of our on-call design services requirement contract panel of D+CE consultants. Once placed on the panel, these consultants are considered on-call, and are invited to submit a more thorough, project-specific proposal upon issuance of a task order by the agency.

Slade Architecture applied for inclusion on this panel for the specific category of consultants considered for architectural, engineering and construction-related services valued under $10 million. All firms applying for membership on the panel for projects within this financial category were then evaluated based upon the experience of the firm and their subconsultants (50%), education and experience of the proposed team (30%), as well as the creative and technical abilities of the firm (20%). An evaluation committee, including an outside professional peer, then ranked each firm based upon these merits. The 24 highest-ranking firms, including Slade Architecture, were selected for panel inclusion and awarded an on-call requirement contract.

The agency then issued a task order to the new panel for the design and construction of the renovation of MPLC. Firms interested in providing design services responded by submitting RFPs for architecture and design services for the renovation work. Within this project-specific RFP, each consultant was asked to give a more detailed explanation of the proposed project team's experience, including demonstrated capability to successfully complete a project of this type, size and complexity. This RFP also included a clear definition of key roles, duties and lines of communication—especially in regard to client input and community concerns. In addition, each firm was asked for a detailed expression of the overall goals of the project and methods for achieving them.

Within the RFP, the proposers were informed that the 3,000 square-foot project included renovation of the staff kitchen, staff lounge, and restroom facilities. The centerpiece of the design would be the newly expanded library, which was originally housed in a storage closet and surrounded by corridors on all sides. After careful review of the RFPs by the review committee, Slade Architecture was selected to provide design services.

The design demolished the four walls of the closet, opening up the corridors and transforming the space into a vibrant learning center that serves as the hub of the entire building. On one side of the new, open space, volumes of children's books

The white, reflective ceiling and wallcovering that represents the sky contribute to the Montessori Progressive Learning Center's feeling of openness.

are displayed on shelving in a new alcove. Across from this alcove is a series of wooden bleachers rising upwards on two sides. These tiered platforms[2] provide an intimate area for children to curl up and read books.

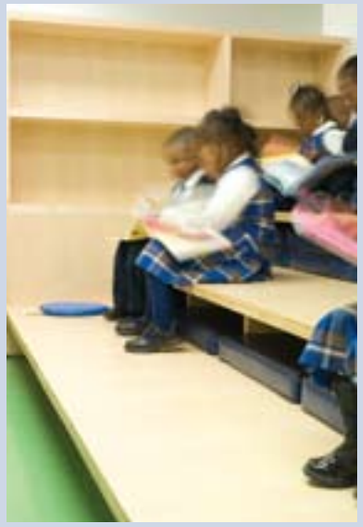
Since the entire space is now open to public circulation, the new library functions like a plaza or courtyard at the heart of the school. Children can circulate through the library during the regular course of their day, as well as for directed visits —making the idea of study and books central to their day in a concrete way. To further this idea of a public space, the design kept the center open and organized the seating and bookshelves along the perimeter. The bookshelves are on casters, however, and can serve to divide the space for multiple uses such as storytime or individualized study. The resulting space provides ample room for instructed activities but also affords the opportunity for independent exploration and lounging. This new, community driven space was so influential upon the students and faculty that the Center changed its educational programming to better serve the space and children.

Since the central location of the library does not provide the space with direct sunlight, the design enhanced the walls above the bookshelves with a large-scale photograph of the sky, creating a visual clerestory. The green flooring provides a colorful, grounding effect and is perfectly pitched against a white, reflective vinyl ceiling membrane[3] that is stretched above the book alcove and held taut, creating a pleasing, smooth reflective surface that feels light and airy. Mirrors throughout the space add to the perception of space, giving the area a much more expansive feel.

Since children use the space, environmental concerns were imperative. Paints, sealants, and grouts with low VOCs[4] were used throughout the design. Linoleum flooring, primarily made of renewable materials, was used instead of vinyl composite tile. Restroom compartments were manufactured using recycled content. Also, in keeping with current sustainable principles, a majority of the demolition waste was required to be recycled.

Overall, the project added flexibility, allowing teachers to use the newly expanded library as an extension of their classrooms, thus turning the library into the life of the facility. The design transformed the concept of the library from dull repository of books to an outward-reaching and vital learning center.

2. Comfortable seat cushions for students to sit on are conveniently stored under each step of these tiered platforms.
3. The idea of the reflective ceiling membrane is to lighten and enhance the space through affordable, contemporary materials.
4. VOCs, or Volatile Organic Compounds, are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors.



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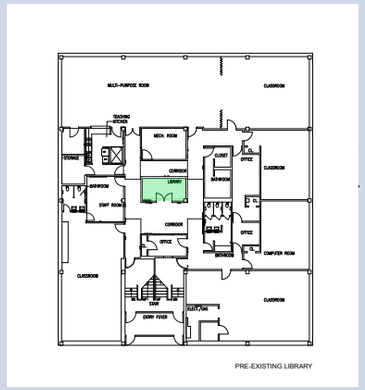
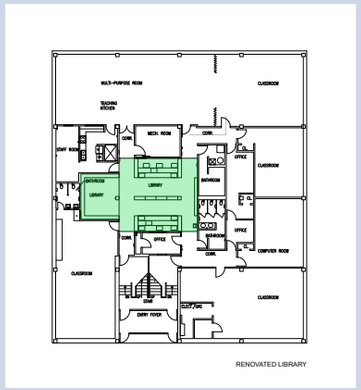




As shown at left, the Montessori Progressive Learning Center was small and enclosed by corridors. The new plan designed by Slade Architecture opened the library into the surrounding space, providing the school with a much needed new hub for learning activities.

DESIGN EXCELLENCE IN ACTION

Interview:
Hayes Slade
Principal,
Slade Architecture

Slade Architecture was chosen through the D+CE Quality-Based Selection strategy to provide design services for the Montessori Progressive Learning Center (left). The firm is currently working on libraries in Eastern Flatbush, Red Hook, and Sunset Park, Brooklyn.

How has being a part of the Design + Construction Excellence program informed your practice? We are delighted to have an opportunity to be part of shaping the institutional fabric of the city. As residents of New York City, we are constantly aware of the importance of public spaces and institutions for the city community. This has been a great opportunity for a young firm like ours to actively participate in the improvement of these spaces. Furthermore, the recognition has been helpful as a marker of quality. As a smaller firm, it is very helpful to highlight our work with the City. The DDC has a rigorous review and qualifying process. Having been vetted by the city is appreciated by other clients who understand what is implied by this. The program itself has fostered ties between participating firms. This has increased the dialogue between firms and strengthened the New York City design community as a whole. **Are there certain challenges that working civically has presented? Did that affect the outcome of the design?** The DDC process is rigorous and structured. We have come to appreciate the objective and explicit nature of the phases for deliverables and services. That rigor has informed our delivery on other private projects. **In designing for the MPLC, what were the guiding ideas?** Our first priority was to maximize the space for the children. “Maximize” is used here to mean both maximizing the physical space available, particularly for the library program (which was previously squeezed into a basement closet) and also maximizing the impact of the space for the children. We wanted to create the largest space we could that would also serve as a worthy backdrop for imagination and aspiration in the way that a good children’s library should. The challenge was to do this without negatively impacting the functioning of the MPLC as a whole. **What do you consider trademarks of “good” design?** One that responds well to the objectives of the project and challenges of the context. A great design would be one that does all this and expands on the potential of the original brief while presenting an aesthetic that is appealing and even thought-provoking. In 2008, any project should consider the environment—the ecological broader environment, as well as the immediate environment created by the project.

1. PlaNYC contains 127 initiatives designed to address the challenges of a city whose population will grow by one million people by 2030: the need for new capacity, a deteriorating infrastructure, an embattled urban environment, and the global challenge of climate change.

The Ocean Breeze Track & Field House, designed by D+CE architect Sage & Coombe Architects, includes approximately 140,000 square feet to house the elite-level competition track and 3,000 spectator seats.

CASE STUDY 3
OCEAN BREEZE TRACK & FIELD HOUSE

CLIENT AGENCY: Department of Parks & Recreation

LOCATION: New York State Park Fields, Father Capodanno Blvd., Staten Island

BUDGET: $70 million

CONSTRUCTION COMPLETION: 2011

D+CE CONSULTANT: MKW + Associates, LLC, Landscape Architects, and Sage & Coombe Architects

D+CE STRATEGIES: Quality-Based Selection

LEED: Seeking Silver rating

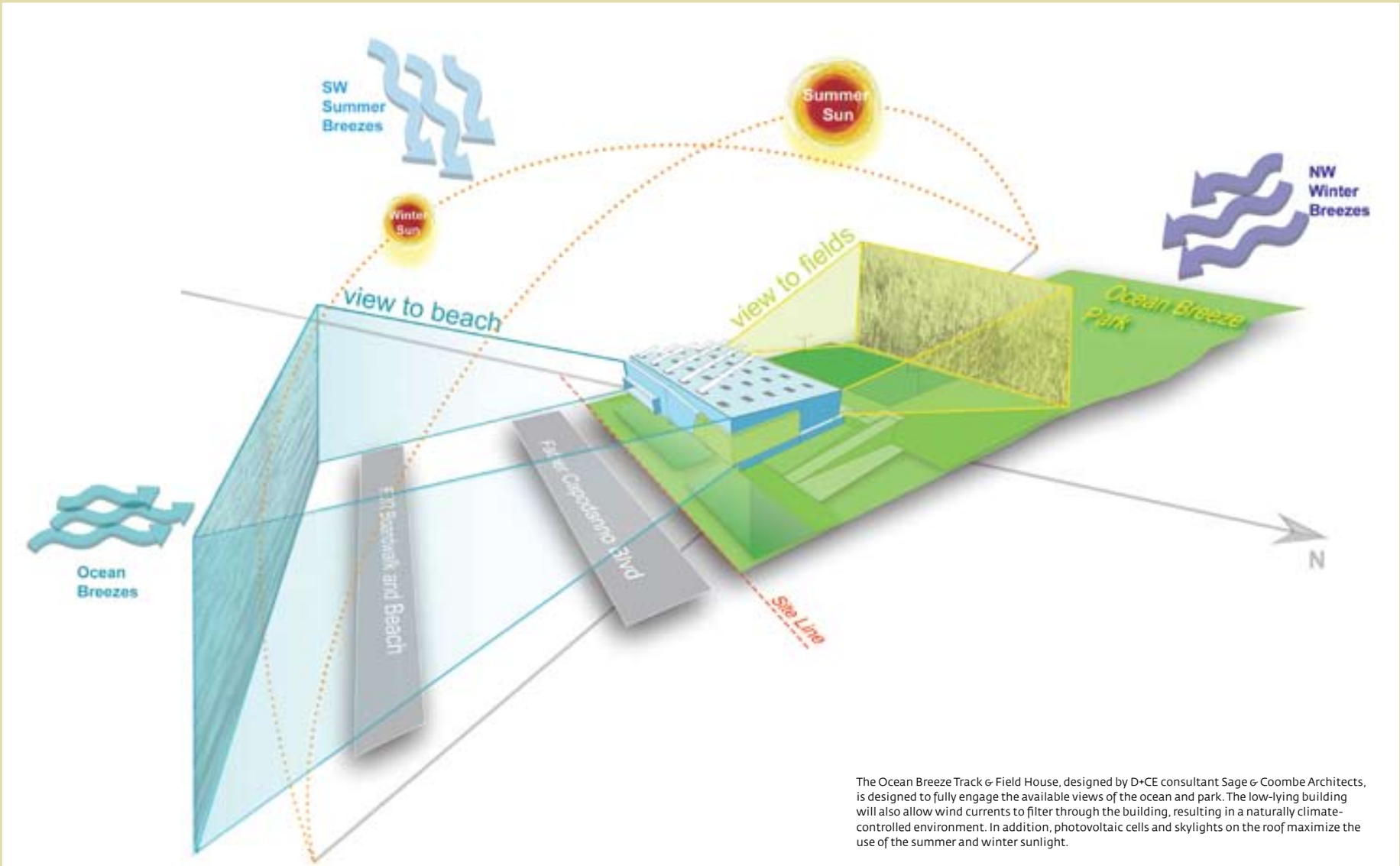
Through Mayor Michael R. Bloomberg's Design + Construction Excellence program and the PlaNYC 2030 Initiative[1], New York City's park system will have a new park and track and field facility in Staten Island. Ocean Breeze Park will provide new public open space, and represents the single best opportunity on Staten Island to create a much needed indoor athletic facility. The facility will be adjacent to new outdoor soccer, football and baseball fields, a cross-country course and a variety of nature trails. This D+CE project is a unique opportunity to revitalize the 110-acre landscape which encompasses an extensive area of native coastal wetlands. The success of the project is based upon its ability to improve public access and recreation while simultaneously enhancing the landscape and wildlife habitat.

To implement the design for this project, the Department of Parks & Recreation (DPR) used the D+CE on-call panel of consultants who had

previously qualified for City work through the D+CE Quality-Based Selection strategy. Selection for the on-call panel of consultants consists of an open one-stage RFP process in which firms submit information regarding their expertise and experience. Each submitting firm is then reviewed by an evaluation committee, which includes one outside peer. The highest-ranking firms are then chosen for the panel and awarded on-call contracts. They are then invited to submit project-specific proposals upon issuance of a task order by the agency. For the Ocean Breeze Track & Field House project, dual proposals were issued to the panel: one for architectural services and one for landscape architectural services.

Nine D+CE on-call firms responded to the RFP process. Once the firms were short-listed, they were asked to prepare a concept proposal, and interviews were scheduled. Each firm was provided an opportunity to present their initial design concepts for the new facility. Particular focus was placed on the integration of building and site components. This process not only allowed DPR to gauge which firms presented the best design concept for the project, it also provided a venue for the agency to discover which firms were best suited to the project as a whole, and which firms might be best suited to work together.

The submitting firms were informed that their responses should address several project goals for the park, including integrating active and passive recreation areas into the natural landscape; improving the landscape quality; restoring the ecology of the site; and consolidating the wetlands. Expressed design goals for the Field House included provisions for track and field venue for college and high school competitions;

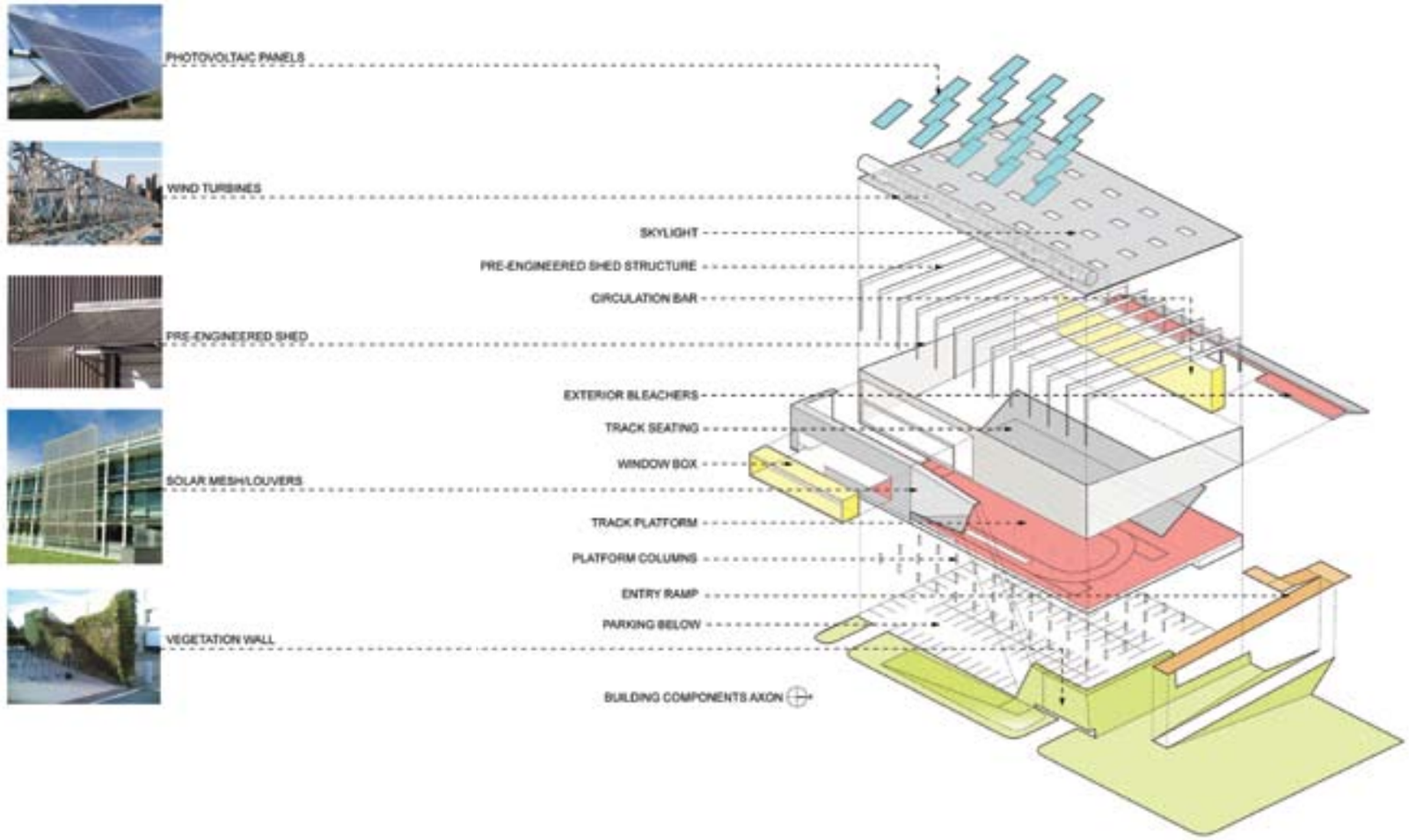


The Ocean Breeze Track & Field House, designed by D+CE consultant Sage & Coombe Architects, is designed to fully engage the available views of the ocean and park. The low-lying building will also allow wind currents to filter through the building, resulting in a naturally climate-controlled environment. In addition, photovoltaic cells and skylights on the roof maximize the use of the summer and winter sunlight.

community fitness facilities; facilities and concessions for playing fields; substantial sustainable elements and to minimize the impact of parking on the site. Upon completion of the interviews and presentations to the reviewers[2], MKW + Associates, LLC, Landscape Architects, and Sage & Coombe Architects were awarded the project based upon their design solutions to the stated project goals and their previously demonstrated success in working together[3] on civic projects. The initial task for the consultants was the development of a master plan for the overall project.

The first of two community listening sessions kicked off the beginning of the master plan development. During this session, all interested parties to the project were invited to express their needs, desires, and concerns for the new park and field house. This session was attended by approximately 150 people and was instrumental in developing a program and concept for the new park and field house.

After the initial listening session, the next step was a comprehensive analysis of the existing site to enable the teams to fully understand the opportunities and constraints facing the project. In addition to a full site investigation and analysis, an environmental assessment statement (EAS)[4] was being prepared for the new park and athletic facility. With the results of the listening session and environmental investigation and analysis in hand, the development of a full and detailed program for the project was undertaken. The team met with all agency stakeholders, and recorded all physical and operational requirements for the field house and park. These were reviewed and refined with the DPR team. Several concepts for the new field house and park were then developed



The stacking diagram, above, of the Ocean Breeze Track & Field House, demonstrates the consultant's design solutions to two of the design goals stated in the RFP: an emphasis on sustainable design aspects whenever appropriate, as well as an emphasis on maintaining a strong connection between the facility and its views of the park and beach. The use of skylights, photovoltaic cells and wind turbines on the roof address sustainability issues. The building's sublevel parking allows the facility to maintain a stronger connection to the surrounding environment.

2. For DPR, the reviewers included: the Borough Commissioner, Chief of Design, Director of Landscape Architecture, Director of Architecture, Chief of Recreation and the Capital Project Team Leader.
3. MKW + Associates, LLC, and Sage & Coombe Architects have successfully collaborated on other projects, including: the Robert Venable Park Comfort Station, the Owl Hollow Comfort Station, the Highland Park Native Plant Reserve, and the Urban Environmental Center and Conservancy Headquarters in Newark, NJ.
4. The City of New York's Environmental Assessment Statement requires consultants to provide project info for environmental quality review. Among various other requirements, consultants must submit analysis on the effects of shadows caused by the project, the project's effect on the site's natural resources, any displacements due to the project, and the impact of construction on the surrounding areas.

5. The new Field House will be equipped with a hydraulic, banked track. The turns of the track can be raised for competition and lowered for practices and other activities. Design of the track was influenced by many site visits to other, top-level facilities, as well as by extensive interviews with track and field experts throughout the United States.

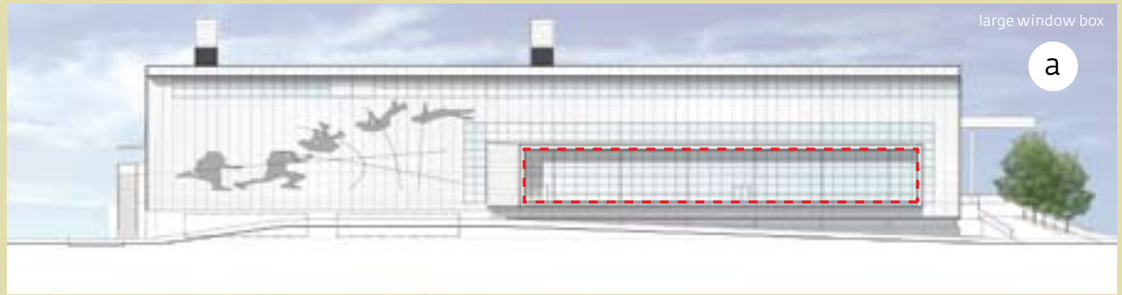
and tested against the program and site analysis. These early concepts were presented to the DPR team for review and discussion, and after several iterations, the concepts were narrowed down to three alternatives.

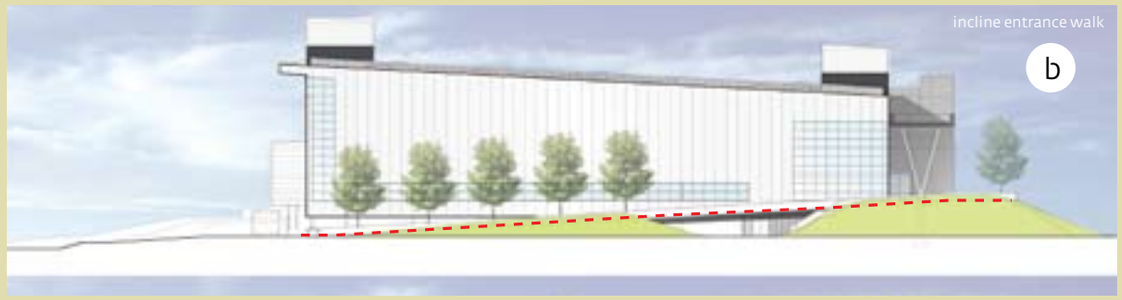
The second public listening session was held in late September 2007, and the three concepts were shared with the large group of stakeholders and the general public. One concept was clearly preferred by all and this concept is the basis for the master plan developed herein. The concept was then developed and refined further through discussions and presentations to DPR's in-house staff and the Staten Island Borough Commissioner. Conceptual cost estimates were prepared to determine concept feasibility and alternatives to building structure and systems were further investigated. The concept was finalized by the DPR and submitted to the Art Commission of the City of New York in December 2007. The completion of design documents is anticipated for the fall of 2008, with construction slated to begin after.

The design for the Field House includes approximately 140,000 square feet to house the elite-level competition track[5] and 3,000 spectator seats. The facility will also include an extensive warm-up area, locker rooms and two fitness areas with cardiovascular equipment. The fitness rooms, locker rooms and track areas will be available to the community. In addition to the spectator seating within the building, the Field House will open at its northwest façade to landscaped seating overlooking a sports field, the finish line for a range of cross-country courses and the park beyond. The main entrance to the facility starts at the foot of a generous inclined walk that brings the visitor to an open-air overlook, an entry plaza and the building's front doors. From this vantage point, approximately twenty-one feet above Father Capodanno Boulevard, the track and public spaces will have commanding views of Ocean Breeze Park and the lower New York Harbor. An open parking garage accommodating 175 cars will be set below the building.

Sustainable features for the Field House include geothermal heating and cooling, displacement ventilation, harvesting of storm water to recharge surrounding wetlands, "cool" roof and recycled materials. In addition, the building will take advantage of the cool ocean breezes to provide natural ventilation for the majority of the year. Natural daylight harvested through skylights, windows, light shelves and clerestories will either eliminate or supplement the necessity for artificial lighting much of the time.

The track plan, left, illustrates the new, elite-level track and the program spaces around it. Surrounding spaces include spectator seating (red), circulation and ancillary spaces (blue), an underground parking deck (not featured), and fitness center space at the north and south end of the buidling.





The eastern elevation of the facility (a), highlights the large window box (outlined in red) that allows views of the beach. The northern elevation (b), features the main entrance to the facility—a generous, inclined walk (also red) that brings visitors to an open-air overlook at the building's front doors. The northwestern elevation (c), opens up to outdoor spectator seating, noted in red, overlooking a new sports field.

The Queens Museum of Art
Redesigned by D+CE consultant Grimshaw Architects with Ammann & Whitney, this project will have a new, highly-visible façade that strengthens the museum's relationship to the surrounding park area.

CASE STUDY 4
QUEENS MUSEUM OF ART

CLIENT AGENCY: Department of Cultural Affairs
LOCATION: Flushing, Queens
BUDGET: $43 million
CONSTRUCTION COMPLETION: August 2010
D+CE CONSULTANT:
Grimshaw Architects with Ammann & Whitney
D+CE STRATEGIES: Quality-Based Selection
LEED: Seeking Silver rating

Design and construction services for the expansion of the Queens Museum of Art (QMA) were procured through an on-call requirements contract, one preparation strategy in the Design + Construction Excellence program. Once the Commissioner of the agency issued a task order, all eight firms holding on-call requirement contracts through the D+CE program responded. These firms, already on a pre-approved panel qualified to receive project RFPs, were chosen through D+CE's Quality-Based Selection process.

To begin with, respondents to the RFP were informed that substantial attention must be given to the exterior of the building. QMA's wish to establish a contemporary, physical identity for the museum, on both the highway and the park sides, was also clearly identified. Additionally, in order to create a more intimate connection to the park and to draw more visitors into the facility, QMA expressed their desire to establish the main entrance on the park side of the building. Also within the RFP, respondents were informed that the objective of the project was to expand the QMA to occupy the entire 105,000 square-foot

New York City building. In the submittals, firms were asked to consider the QMA's plans to contain the majority of the construction in the southern half of the building, which is currently occupied by an ice skating rink. It was noted that minimal changes to the north side of the building may be necessary to create a clear and logical circulation pattern through the entire building, and to meld the two sides together. Respondents were also asked to apply their design ideas to a visitor reception area in a well-defined and visually arresting entry space, which is to have direct access to a café, museum store and classrooms.

Importantly, firms were informed that the expansion should allow for new exhibit spaces, art storage and exhibit preparation spaces, and a new wood shop. The museum also needed the designers to consider its need to house and exhibit the museum's collection of art, which reflects the diverse artistic and historical heritage of Queens. These exhibit spaces also needed to be multi-use—creating space for the museum's fundraising events, educational programs, and special events. As the largest department of the museum, the education department currently uses the exhibit spaces, the theatre, and educational studios for its many programs. The submitted expansion designs should include new classrooms for this department, some of which will be equipped for special needs students.

All eight responding firms were evaluated on the experience of the project team and their capability to successfully execute a project of comparable size and complexity. Each firm's previous work—including projects similar in nature to QMA—were also considered. In addition, the educational background and experience of the individuals

Queens Museum of Art
The main lobby features a translucent, louvered glass sun filter that will provide diffused natural daylight throughout the space. This feature was designed in direct response to the RFP, which asked respondents to consider innovative design solutions for a visually arresting entry space.

Queens Museum of Art
The interior design of the lobby space also includes a double-height staircase and a multi-space area that provides a clear view of the park and of Grand Central Parkway. The space incorporates a grand staircase composed of glass that connects the upper and lower levels.

proposed for the project team were of key importance, as was their demonstrated ability to establish clear lines of communication, especially in regard to QMA's input and community concerns. Finally, each firm's technical approach and methodology were evaluated for a clear expression of the overall goals of the project. After this rigorous review process, Grimshaw Architects with Ammann & Whitney were chosen for their experience, technical expertise, and productive and forward-thinking design ideas. Overall, the new design will expand the museum to include a full range of new exhibit spaces, back-of-house facilities including art storage, exhibit preparation space, educational facilities, a workshop, and winter garden. The expansion will enable the museum to increase the volume and number of exhibitions it hosts, as well as add to its permanent collection space.

The design—a series of discrete interventions into the historically significant building—is focused on increasing the museum's visibility and physical connection to its surrounding environment. This is achieved through the enhancement of the west and east façades of the building and a site and landscaping strategy which creates new access routes from the Grand Central Parkway, the parking lots and the park to the numerous entry points of the museum. These new exterior design features create a building that integrates with Flushing Meadows Corona Park on the east, and is made more identifiable from the Grand Central Parkway on the west.

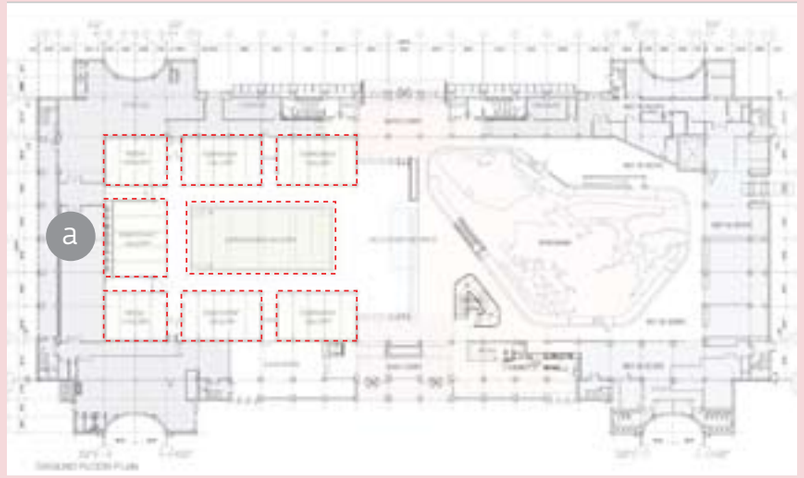
On the eastern side, the façade merges the park and the building through the use of a new, highly transparent curtain wall and entryway, which brings light into the heart of the building.

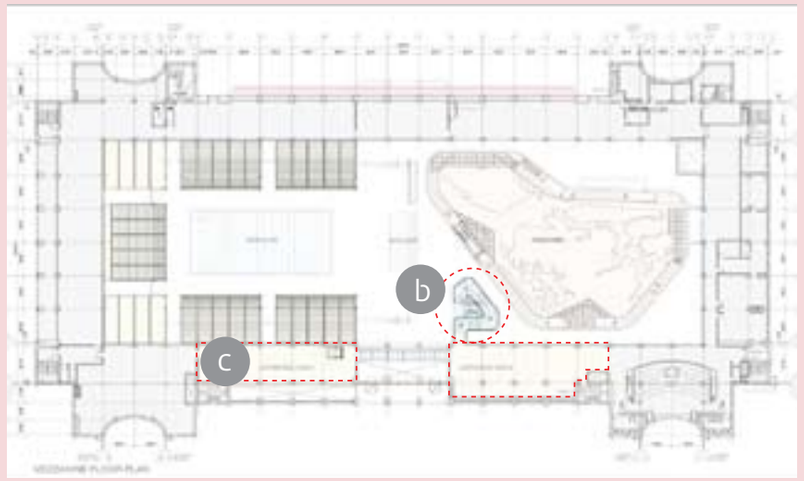
The transparency of this new façade is inviting, welcoming visitors from the park side while also serving as the contemporary face of the museum. The west façade (facing Grand Central Parkway) will serve as a distinctive gateway to the museum and the park. The image projected on the glass wall of this façade is designed to be read from different perspectives: the pedestrian approaching the building; the cars approaching the museum on the park access road; and the vehicles on the highway just beyond. There are graphics that adjust to each scale and speed, and, additionally, the vertical fins fitted perpendicular to the façade read like a "flip-book"—revealing the name of the institution as the observer passes by. To link these two façades, the interior design incorporates a large, double-height lobby and multi-purpose space which opens up the interior and provides an unobstructed view to both the park and the Grand Central Parkway. This space will serve as a venue for performances, lectures, and evening events. From this open space, visitors can proceed to the exhibition areas, museum shop, library, or café.

Once inside the museum, the double-height lobby provides the perfect viewing space for the fully sky-lit winter garden, which is a glass-enclosed pavilion featuring a large, louvered-glass sun filtering device suspended from the ceiling. The louvered glass modulates the light as it streams in from the skylights, acting as a diffuser for the galleries and providing luminous, indirect lighting perfect for viewing and protecting art. Natural light also extends into the interior of the seven ground-floor galleries—which encircle the winter garden—through each of the galleries' louvered ceiling. This allows consistent, gentle light to showcase the works. Integrated artificial lighting supplements natural light during the winter and evenings. These seven galleries—three on the west, three on the east, and one large gallery on the south side—are all designed with a circular logic that gives access to each gallery on a clearly defined path (outlined in red and noted as (a) on floor plan opposite page, top).

The new design for the museum also incorporates a grand staircase (outlined in red and noted as (b) on floor plan opposite page, bottom) and a glass bridge that connect the upper and lower levels. A signature aspect of the expansion, the grand staircase has been rigorously designed to integrate itself into the museum's Panorama exhibit. It also incorporates a new, glass elevator. The new glass bridge and gathering space (noted as (c) on the floor plan opposite page, bottom) is located directly over the entry lobby and designed for maximum transparency and visibility so as not to obstruct views and light from entering deep into the building's interior.

The interior design of the building also carefully considers the museum's need for expanded storage and support spaces by adding these programs along the south and west periphery of the building. Additionally, a continuous back-of-house corridor will open to a new loading dock with can be directly accessed by these support spaces. At the mezzanine level, office space will be significantly increased along the west side of the building. This level will also accommodate meeting rooms, storage rooms and the library, allowing all administrative functions to be centralized.





The ground level floor plan, above (top), focuses on the seven new galleries that ring the perimeter of the interior space. These galleries will provide space for many of the museum's temporary exhibitions. The ceiling of each gallery is louvered, which allows natural light to filter though and illuminate the space. The mezzanine level, above (bottom), is connected to the ground floor by an open, glass staircase, above (b), which leads to a large gathering space,

1. Polshek Partnership Architects has also provided design services for the DHS Family Center in the Bronx, the Flushing branch of Queens Public Library, the Brooklyn Museum of Art and the Museum of the City of New York.

Rescue Company 3
The oversized FDNY red apparatus doors, designed for Rescue Company 3 by Polshek Partnership Architects, are a primary design element and express the building's identity as a FDNY facility.

CASE STUDY 5
RESCUE COMPANY 3

CLIENT AGENCY: Fire Department of New York
LOCATION: 1655 Washington Avenue, the Bronx
BUDGET: $20 million
CONSTRUCTION COMPLETION: 2009
D+CE CONSULTANT:
Polshek Partnership Architects LLP
D+CE STRATEGIES: Quality-Based Selection, Peer Review, Design Standards
AWARDS: Art Commission of the City of New York, Design Award 2006

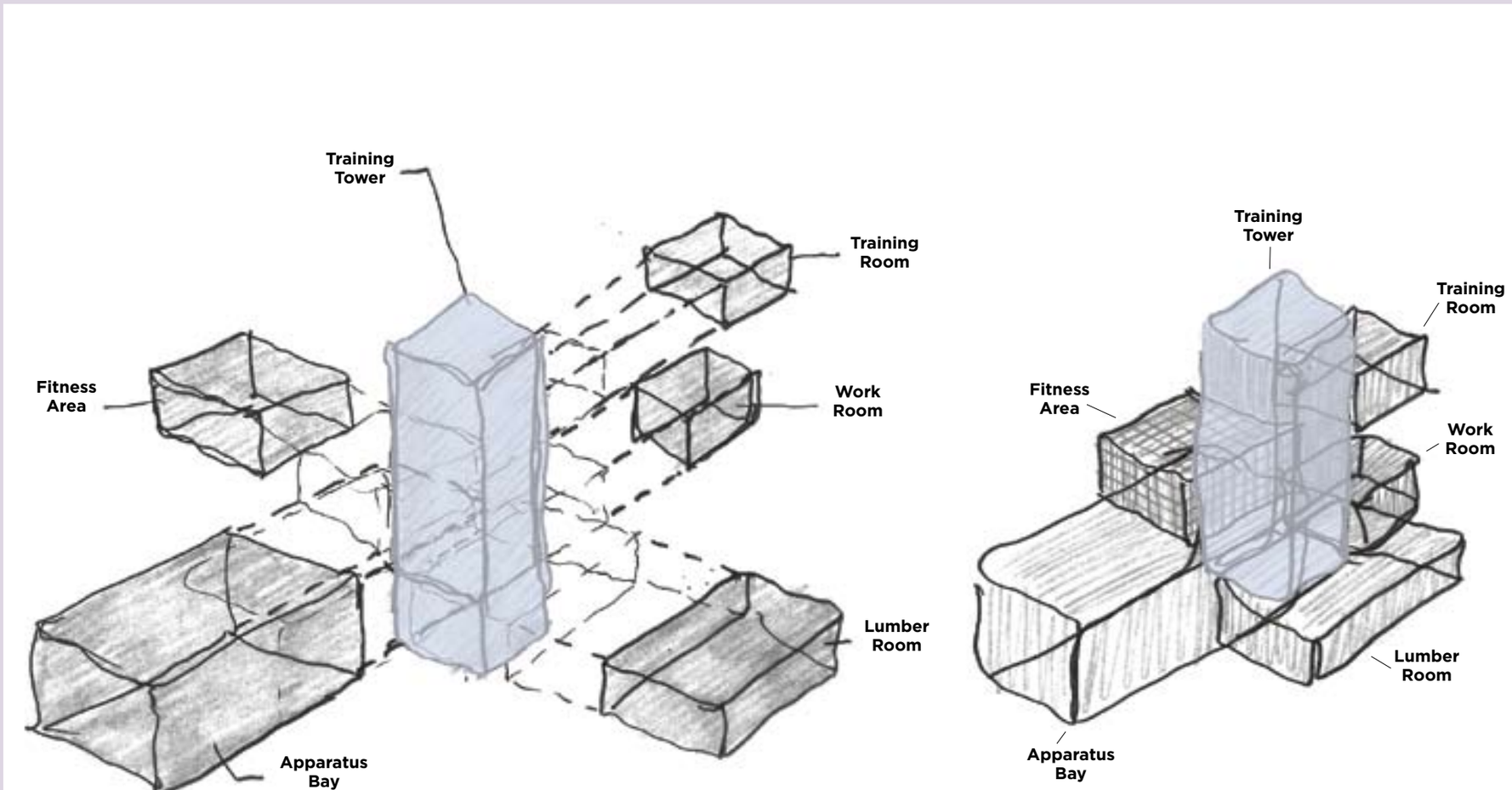
As part of the ongoing modernization of the Fire Department of the City of New York (FDNY), the Department of Design and Construction is overseeing the construction of a new 23,000 square-foot firehouse for Rescue Company 3, in the Bronx. Designed by Polshek Partnership Architects; this project is the first rescue company to move into construction through the City's Design + Construction Excellence (D+CE) program, and was also one of the first rescue companies to benefit from the D+CE Quality-Based Selection strategy. Polshek Partnership Architects was one of the initial 180 firms that applied to become members of D+CE's on-call design services requirement contract panel of consultants. Once placed on the panel, these consultants are considered on-call, and are asked to submit a more thorough, project-specific proposal upon issuance of a task order by the agency.

Polshek Partnership Architects applied for inclusion on this panel for the specific category of consultants considered for architectural,

engineering, and construction-related services valued over $10 million. All firms applying for membership on the panel for projects within this financial category were then evaluated based upon the experience of the firm and their subconsultants (50%), education and experience of the proposed team (30%), as well as the creative and technical abilities of the firm (20%). An evaluation committee, including an outside professional peer, then ranked each firm based on these merits. The eight highest-ranking firms, including Polshek Partnership Architects, were selected for panel inclusion and awarded an on-call requirement contract.

The agency then issued a task order to the new panel for the design and construction of a new facility for Rescue Company 3. Six of the eight panel consultants responded to the task order and for the new facility. Within this project-specific RFP, each consultant was asked to give a more detailed explanation of the proposed project team's experience, including demonstrated capability to successfully complete a project of this type, size and complexity. This RFP also included a stricter focus on the clear definition of key roles, duties and clear lines of communication—notably in regard to client input and community concerns. In addition, each firm was asked for a detailed expression of the overall goals of the project and methods for achieving them.

Within the RFP, the proposers were informed the objective of the project was to create new quarters for Rescue Company 3, replacing the outdated existing building. Respondents to the RFP were informed that the new building would need to provide space for two rescue trucks, restrooms, locker areas, dormitory space, kitchen and



For Rescue Company 3, the architects studied space adjacencies to ensure the new facility provided quick transitions from living space to work space. The diagram above illustrates how the different programmatic areas are centered around the training tower, ensuring quick access to the tower and apparatus bay from all parts of the building.

Rescue Company 3
This project benefitted from three D+CE strategies: Quality-Based Selection, Peer Review and Design Standards.

dining rooms, offices, training room and training tower, a shop area, storage rooms for equipment, a decontamination area and mechanical and electrical rooms. The total building program area needed would be approximately 20,000 square feet. After careful review of the RFP materials by the selection committee, which included two members of DDC's Structures Division, two members of DDC's Architecture and Engineering Division, and the client agency, Polshek Partnership Architects was selected as the design team.

Rescue Company 3 is one of five rescue units in the special operations command, one assigned to each borough. A tradition of invention, experimentation and rigorous training characterized the units, which are often tasked with pilot-testing new tools, equipment, and fire fighting rescue techniques. They have also pioneered the fire service application of artificial resuscitation techniques and fire fighting foam. In addition to standard rescue procedures, these elite units are equipped to undertake specialized operations, including motor vehicle extractions, machinery and equipment entrapments, confined space incidents, high-angle incidents, SCUBA operations, water rescues and hazardous materials exposure.

Currently, Rescue Company 3 responds to an average of ten calls a day and to structural collapse events in all five boroughs. These demands require that the new building be operational 24 hours a day and be multi-functional. Key urban and building design considerations, as well as the culture and operational exigencies of Rescue Company 3, were explored while conceptualizing the design. They included the project's response[2] to the Bronx community; the impact of the project on the surrounding neighborhood of Bathgate; and the culture of the FDNY. Most importantly, understanding the functional needs of the building and its occupants necessitated a thorough understanding of all the aspects of the building—from its work, training, and storage spaces to its more private dining and living spaces.

Once the relationships between all these functionalities were discovered and explored, the building's organization began to take shape. The design team decided to stack the many different functions on top of each other: physical work area and storage occupy the ground and basement levels; rest, study, and dining areas are located on the second level; training and fitness spaces are located on the mezzanine level. A training tower[3] rises through all three levels and extends through the metal shell of the building at roof level. This vertical element physically and visually connects the space at all levels. Terraces on the roof are multi-level to provide for varied training activities and entry into the vertical training tower.

All spaces in the building are strategically located relative to the apparatus rigs, which are the most important program element in the house, and are housed in a double-height apparatus bay. These vehicles contain an extensive collection of equipment that is rigorously organized and stowed away in compartments arrayed around the vehicles, ready-at-hand when needed during an emergency. Similarly, the firehouse has been planned as a stationary toolbox with work areas, storage rooms and support spaces close to the vehicles. Within the building, visual continuity between the upper levels of the building and the apparatus bay is affected by expanses of glass and reinforces

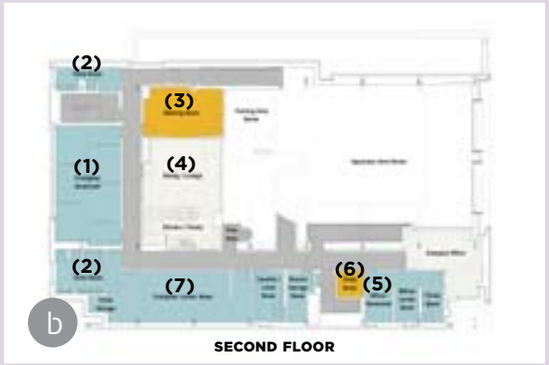
2. Successful design of a rescue company will decrease the station's response time to neighborhood emergencies. Factors that lead to decreased response time include the rescue vehicle's access to the roadway, efficient and convenient storage of equipment and materials, and appropriate adjacencies that allow members of the response team to move through their facility quickly—easily gaining access to their uniforms and equipment along the way.

3. This training tower is the most prominent visual design element and connects the space at all levels.

the central importance of the space. Natural light enters the apparatus bay from skylights above and a large glass wall at the front of the space. On the exterior, structural concrete and ironspot masonry anchor the building, and ground it to the site structurally and materially. In this solid base are spaces for vehicles, workshops and storage. The base supports a lighter steel framework and folded zinc roof above. The steel expresses the shape of the building shell on the interior of the building as it is left exposed wherever possible. The east façade along Washington Avenue creates a welcoming, yet secure street presence. The oversized FDNY red apparatus doors are a primary design element and express the building's identity as a FDNY facility. Alternating glass and "FDNY Red" metal panels fill the void between the apparatus doors and building shell, which is flanked by metal and masonry.
The northern façade—which abuts the adjacent residential building—has been animated by providing a brick pattern and vertical stainless steel strip to break down the scale of the wall. This feature was recommended by the Art Commission of the City of New York during their design review. The Art Commission also recommended the project incorporate more sustainable design elements and materials. The design team was able to reassess the materials to include recycled and/or rapidly renewable content, including structural steel; cement board sheathing; composite aluminum panels; ceramic wall and floor tiles; fiberglass ceiling tiles; and linoleum flooring. In addition, daylight was introduced to all occupied spaces in the building, with clerestory windows and skylights used in sensitive areas where normal windows would not afford the proper level of privacy and security. Limited façade openings on the south side of the facility reduce solar radiation inside the building.

Design recommendations were also contributed to the project through D+CE's Peer Review strategy. During the peer review of Rescue Company 3, the reviewers were complimentary of the design and recommended one design change—that the material lift in the building be relocated. The original location of the material lift, against the north wall of the building, shown at the time of the peer review was a response to the initial basement design. It was discussed at the peer review that given the option of having a full basement, the location of the lift could be relocated to better serve the operation of the apparatus bay. Once the full basement was the determined direction of the building design, the consultant was able to re-examine all of the vertical connections to the basement from the apparatus bay. The decision to use a full basement allowed repositioning of the material lift at the rear center of the apparatus area, greatly improving its operational functions.

Accommodating the needs of a specialized FDNY unit into a highly efficient building on a restricted site was a primary design challenge. Moreover, the adjacency of the EMS facility and its distinct operation was a consideration. Collaboration with end-users throughout the process ensured a design solution whose specificity responded to current functions while also incorporating flexibility for future needs.



For Rescue Company 3, an array of program spaces were developed to meet the needs of the company. The ground floor (a), consists of a housewatch (a3), shop (a1), and training (a2) spaces. It also includes large spaces for storage (a4) and a deacon area (a5). The second floor is comprised of a firefighter bunkroom (b1), restrooms (b2), a meeting room (b3), a large dining and lounge area (b4), officer bunkrooms and locker space (b5), a study room (b6), and a firefighter locker room (b7). The mezzanine level includes an area for health and fitness (c1), and training areas (c2). Cellar level consists of a space dedicated to confined training (d1), with the remainder of the space at this level dedicated to storage.

APPENDIX A

DESIGN + CONSTRUCTION EXCELLENCE CONSULTANTS 2004–2008

1100: Architect
Abel Bainnson Butz, LLP
AFG Construction Management
Agrest & Gandelsonas Architects
Andrew Berman Architect
Architecture Research Office, LLC
Arquitectonica
Atelier Pagnamenta Torriani Architects & Planners
Beyhan Karahan & Associates
BKSK Architects, LLP
Blumberg & Butter, P.C.
Caples Jefferson Architects
Carter & Burgess
Charles Rose Architects
Christoff:Finio Architecture
CR Studio Architects, PC
Dean/Wolf Architects
Deborah Berke & Partners
EDAW
Frederic Schwartz Architects
FXFOWLE
Garrison Architects
Gilbane Building Company
Gluckman Mayner
Grimshaw Architects with Ammann & Whitney
Hill International, Inc.
Karen Bausman + Associates
Keenan/Riley
Kiss + Cathcart Architects
LARC Studio
Locascio Architects
Lyn Rice Architects
Manuel Elken Co., P.C.
Marble Fairbanks Architects
Mark K. Morrison Associates, LTD
Marpillero Pollak Architects
Michielli + Wyetzner Architects
MKW + Associates, LLC
Nancy Owens Studio LLC
nArchitects
OBRA Architects
Olhausen DuBois
Pasanella + Klein Stolzman + Berg
Polshek Partnership Architects, LLP
Prendergast Laurel Architects
Quennell Rothschild & Partners, LLP
Rafael Viñoly Architects PC
Rietveld Architects
Rogers Marvel Architects, PLLC
Sage and Coombe Architects
Stantec
Skidmore, Owings, and Merrill LLP
Slade Architecture
Smith-Miller + Hawkinson
Snohetta
Stephen Yablon Architect, PLLC
Steven Harris Architects
Steven Holl Architects
Tectonic Engineering & Surveying Consultants, P.C.
TDX Construction Corporation
The Galante Architecture Studio
The McClour Group, LLC
Thomas Balsley Associates
Toshiko Mori Architects
Urbahn Architects and Ten Aquitectos
URS Corporation
Archipelago
Weisz + Yoes Architecture
WORK Architecture Company, PPLC

APPENDIX B

DESIGN + CONSTRUCTION EXCELLENCE PROJECTS 2004–2008

121st Precinct
Alpha Omega Dance Company
Betty Shabazz Health Center
Bronx Detention Center
Bronx Park
Bronx Park Solomine Ballfields
Bronx River Art Center
Bronx River Greenway River House
Brooklyn Historical Society
Brooklyn House of Detention
Central Harlem Health Center
Chelsea Health Center
Colonel Charles Young Playground
Coney Island Center
Conference House Park
Crotona Park & Pool
Cunningham Park
Devoe Park
DHS Family Center
Disaster Response Equipment and Apparatus Depot
East 38th Street Storage and Maintenance Facility
EC217
EC235
EC239
EC259
EC284
EC285
EC293
Elmhurst Library
Ferry Point Park Comfort Station
Flight 587 Memorial
Flushing Town Hall
Forest Hills Community House
Fort Washington Park
Fort Totten Park
Glen Oaks Library
Glendale Library
Greenpoint EMS Station
Harris Park Ballfields
Indian Lake Restoration, Crotona Park
Jerome Gunhill Municipal Parking Garage
Jerome Yard
John F. Murray Park Comfort Station
Kent Avenue Shaft Maintenance
Kew Gardens Hills Branch Library Addition
Kings County Criminal Courthouse
Kings County Supreme Courthouse
Ladder Company 8
Long Island City Wayfinding
Macon Branch Library
Mariner's Harbor Branch Library
McCarren Pool & Bathhouse
Metropolitan Avenue Building
Mind Builders Creative Arts Center
Montessori PLC
Mullaly Park Playground
Mullaly Skate Building
New Carriage Museum
New York Central Railroad Building
Non-traditional Employment for Women
New York Public Theater
New York Public Library Humanities and Social Services Library Mechanical Penthouse
Ocean Breeze Track & Field House
Pike Street Yard
Poe Park Visitors' Center
P.S.1 Contemporary Arts Center
P.S. 122
Queens Botanical Garden Entries
Queens Central Library
Queens Hospital EMS Station
Queens Museum of Art
Queensborough Hill Branch Library
Remsen Yard
Rescue Company 3
Richmond District Health Center
Ridgewood Branch Library
Riverside Health Center
Roberto Clemente Plaza
Robert Venable Park
Rochdale Village Branch Library
Rugby Branch Library
Schoolyards to Playgrounds Program
Saratoga Branch Library
Schmul Park Comfort Station
Snug Harbor Cultural Center Building E
Snug Harbor Cultural Center Building F
Soundview Park
St. James Park
Stapleton Branch Library
Staten Island Children's Museum
Staten Island Institute of Arts and Sciences
TD Chan Dance Company
Van Cortlandt Park
Zerega Avenue EMS Station

DDC'S PARTNERS IN DESIGN + CONSTRUCTION EXCELLENCE

Administration for Children's Services
John B. Mattingly, Commissioner

Art Commission of the City of New York
James Stuckey, President
Jackie Snyder, Executive Director

Brooklyn Public Library
Dionne Mack-Harvin, Executive Director

Department for the Aging
Edwin Méndez-Santiago, LCSW, Commissioner

Department of City Planning
Amanda M. Burden, Director

Department of Citywide Administrative Services
Martha K. Hirst, Commissioner

Department of Correction
Martin F. Horn, Commissioner

Department of Cultural Affairs
Kate D. Levin, Commissioner

Department of Environmental Protection
Emily Lloyd, Commissioner

Department of Health and Mental Hygiene
Thomas R. Frieden, M.D., M.P.H., Chair, Commissioner

Department of Homeless Services
Robert V. Hess, Commissioner

Department of Housing Preservation and Development
Shaun Donovan, Commissioner

Department of Parks & Recreation
Adrian Benepe, Commissioner

Department of Transportation
Janette Sadik-Khan, Commissioner

Fire Department of New York
Nicholas Scoppetta, Commissioner

Human Resources Administration
Department of Social Services
Robert Doar, Commissioner

Landmarks Preservation Commission
Robert B. Tierney, Chairman

Law Department
Michael A. Cardozo, Corporation Counsel

Mayor's Office of Contract Services
Marla G. Simpson, Director

New York City Police Department
Raymond W. Kelly, Commissioner

New York Public Library
Paul LeClerc, Ph.D., President, Chief Executive Officer

Office of the Criminal Justice Coordinator
John Feinblatt, Criminal Justice Coordinator

Office of Management and Budget
Mark Page, Director

Queens Library
Thomas W. Galante, CEO and Director

Special thanks to:
Patricia E. Harris, First Deputy Mayor

Queens Central Library
Designed by 1100: Architect PC, this project was part of D+CE's Comprehensive Budget Assessment strategy and is seeking LEED Certification. It was awarded a 2007 Design Award from the Art Commission of the City of New York.

Queens Botanical Garden
Visitor & Administration Building
Designed by BKSK Architects.