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11 MetroTech

by Thomas E. Reed, PE, Principal, Senior Director of Government and Technology Projects



At 11 MetroTech Center's topping-out ceremony in 1994, then-Brooklyn borough President Howard Golden remarked that "the mission of those who will work here will be a vital link in the life of every New Yorker." Little did he know of the gravity of his words in the years to follow when New York City would survive 9/11 and the Northeast Blackout of 2003. Located in downtown Brooklyn, the five-story 358,000 SF facility houses the data processing and dispatch for all five New York boroughs emergency response agencies including the New York City Police Department (NYPD),

the New York City Fire Department (FDNY), the Emergency Management System (EMS), and the Department of Information Technology and Telecommunication (DoITT). For Philadelphia-based KlingStubbins, the Interior Architecture (representing DoITT) and base building and fitout engineering team responsible for designing the failsafe 24/7 infrastructure, the project challenges were not confined to the aggressive criteria of the City, but the intense focus on cost-consciousness of the design as well.

Through the years, 11 MetroTech, one element of the entire MetroTech Center developed by Forest City Ratner companies, has not only helped transform the urban center of Brooklyn, but it has undergone its own internal transformation. The facility was initially designed for the City of New York's Department of Information Technology & Telecommunications (DoITT) and the NYPD's Public Safety Answering Center. In 1996, the FDNY computer and dispatching functions were folded into the building, followed by EMS' move some eight years later. The consistent internal shuffling of departments required a surgical reconfiguration of equipment needed to ensure that not a single 911 call or piece of data was dropped or lost due to the renovations. Because KlingStubbins was successful at making this happen when the facility was first opened, the firm was retained for subsequent enhancements and new agency tenant improvements.

Systems are designed to withstand long-term outage of most all municipal services such as electric power, natural gas, and domestic water utility services. The emergency generators and paralleling switchgear provide utility paralleling and supply power to the facility. Critical reinforcement of the uninterruptible power supply (UPS) system maintains continuous service to the computer facility even with a loss of two of the four modules in the either UPS. The chilled water plant, consisting of four electric driven 400-ton centrifugal chillers, afford diversity in cooling sources and distribution. The design circulates water through the computer center, with no interruption of cooling to the computer room equipment during emergency modes of operation.

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The approximate \$65 million internal expansion of 11 MetroTech required a sizeable team effort, which included developer Forest City Ratner; interior architect Swanke Hayden Connell; technology consultant IMI; members of the DoITT, NYPD, EMS and FDNY planning groups; and First New York Management, the organization that would manage and operate the building. The complexity of reconfiguring power distribution systems as each new emergency response agency was added to the building ultimately played out during the coordinating efforts between the agencies themselves. As KlingStubbins Engineering Design Principal Gerry Murray, PE recalls, "There was an urgent need to provide highly reliable back-up systems, while maintaining separation of systems dedicated to each agency, NYPD, FDNY and DoITT. During our very first Design Session, the criteria was set that the reliability and redundancy strategy must include a "separation of systems" on a day-to-day basis, while allowing overlapping back-up resiliency in the design." This kick-off meeting would set the tone for the rest of the planning process.

Even though the emergency response agencies shared the mutual mission of serving the public good in a timely fashion, KlingStubbins would need to convince them that diverse distribution and multiple system redundancy were a vital strategy to providing availability of the infrastructure. The KlingStubbins design team faced the challenge of allowing the agencies to operate exclusive of one another and yet still act as a source of power for the other in the case of catastrophe.

Central to the design was the need for sophistication, while providing for simplicity in operation. Working with First New York management, a team that has successfully maintained and operated the facility since its original commissioning, Kling developed methods of procedure for operations as well as the trade contractors that would perform the upgrades.

Throughout the design process, the team met weekly with members of the City agencies as well as the City's Design and Construction agency DCAS. This assured that new requirements could be quickly integrated into the design and construction process. The constant demands placed on the City agencies such as police, fire, and information technology required the design and construction process to be unlike any other private or public project. DCAS and the City team worked non-stop with both the development, design, and construction teams



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as well as Police, Fire, EMS and IT agencies to establish a Change Control Procedure that had “military precision”, and assure cost control, while accomplishing the ever-changing needs to the First Response agencies.

Projects that house such critical public safety functions are most difficult on management, design, construction, and financing. This project not only succeeded but excelled in each of these fields, mainly due to the quality, dedication, and talent of the individuals involved from each aspect of the project.

PROJECT TEAM:

Developer/Owner: Forest City Ratner Cos.

Project Management/Leadership: DCAS (Department of Citywide Administrative Services)

Tenants: DoITT, NYPD, FDNY, EMS services

Design team: KlingStubbins Engineer; Swanke Hadden Connell Interior Architect

Construction: JLS, New York

Property Management: First New York Management

Technology: IMI Inc; Gartner Group, Winbourne & Costas, Inc.

Thomas E. Reed, PE, Principal and Senior Director of KlingStubbins’ Technology and Government practice possesses more than 25 years of experience on a variety of technically complex mission-critical facilities. His background has been instrumental in the successful development and implementation of some of the United States’ most hardened and reliable technology-driven projects. Mr. Reed has lectured at the university level on the topics of technology applications in facilities and has been published on the commissioning and reliable operation of mission-critical facilities.

KlingStubbins provides professional services in all major disciplines within the realm of architecture, engineering, interiors, planning, and landscape architecture. The firm consists of more than 550 professionals in its Cambridge, MA; Las Vegas, NV; Philadelphia, PA; Raleigh, NC; San Francisco, CA; and Washington, DC offices. Its areas of market focus and specialization include Corporate/Commercial, Government, Health Care, Higher Education, Hospitality/Entertainment, Institutional/Civic, Mission Critical, and Research and Development.

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