



COMMISSIONING QUALIFICATIONS

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Mission Statement

We are committed to our CLIENTS *At Genesys Engineering, we work with our clients to understand and resolve their facilities challenges. Using our professional engineering expertise, innovative thinking and practical hands on experience, we focus on achieving cost effective, efficient, reliable and practical solutions ... that work.*

”

1. OUR FIRM PROFILE...

Genesys Engineering, P.C. (GENESYS) is a multi-discipline engineering firm that provides **planning, design, construction, and commissioning services** for new and existing utility infrastructure projects, assisting our clients in implementing their most challenging projects in a cost effective manner.

In 2004, GENESYS was formed to acquire the “Energy Services Group” of Joseph R. Loring and Associates, Inc., focusing on the energy and utility infrastructure of major facilities and large physical plant complexes, such as large commercial and institutional buildings, commercial and industrial parks, manufacturing facilities, hospitals, university campuses, and military facilities. In 2005, GENESYS acquired Park East Facility Solutions in order to broaden and expand our commissioning, start-up, and operator training capabilities.

SERVICE FOCUS

GENESYS’ main focus is on the **study, design, construction management, and commissioning** of energy and utility infrastructure projects for major facilities. These projects include:

- ✓ HVAC infrastructure for buildings;
- ✓ central boiler plants;
- ✓ central chiller plants;
- ✓ emergency power plants;
- ✓ cogeneration plants;
- ✓ primary electric distribution; and
- ✓ thermal distribution.

In addition to our extensive engineering and design experience, GENESYS’ Principals and employees have experience in project development and operations, giving us a perspective that is unique to our industry and critical to the success of any project.

Study and Design Services

At GENESYS, we bring to bear our unique combination of practical “hands on” experience, strong engineering expertise and a commitment to quality in order to successfully develop our clients’ projects.

GENESYS’ study and design services include:

- ✓ Condition Assessment Surveys;
- ✓ Feasibility Studies;
- ✓ Energy Conservation Studies;
- ✓ Investment Grade Audits;
- ✓ Energy and Utility Master Plans;
- ✓ Preparation of Preliminary Engineering Documents; and
- ✓ Preparation of Bid Documents.

At GENESYS, we possess strong project management skills, allowing us to serve as the Prime Consultant; this, in combination with our construction management and commissioning expertise, gives our client “one stop shopping” for those projects within our areas of expertise.

Construction Management

At the urging and request of numerous Owners, all seeking a single source for the implementation of energy projects, GENESYS started a construction management group. This group is staffed with individuals having construction experience in the energy and power field, and who possess the strong leadership skills necessary for the success of any construction project.

At GENESYS, we believe in “TEAM APPROACH CONTRACTING,” which creates an atmosphere of shared risk instead of allocated risk, enabling the project team to focus on true goals and objectives instead of self-preservation. With a firm understanding of the construction delivery process, we communicate openly and honestly with all project team members, revealing the true objectives, schedule and budget.

The three most important skills that our construction managers possess are:

- ✓ A clear vision of how to lead and manage the construction process;
- ✓ A sound understanding of each team member's responsibilities; and
- ✓ An ability and willingness to enforce accountability.

Commissioning

At GENESYS, we believe buildings should function properly and problems should be identified and corrected prior to building occupancy -- before they become chronic issues for operators and occupants.

As Commissioning Providers, our dedicated team serves as our client's advocate throughout the design and construction process and are committed to protecting their investment. These services result in significant savings by reducing change orders, energy consumption and equipment life-cycle costs.

GENESYS' commissioning services include:

- ✓ Design reviews;
- ✓ Development of the Commissioning Plan;
- ✓ Review and input to construction schedule;
- ✓ Review of Shop Drawings, O&M Manuals, and Operator Training Programs;
- ✓ Development of Pre-functional Inspection Forms;
- ✓ Performance of Pre-functional Inspections;
- ✓ Development of Functional Test Protocols;
- ✓ Managing and witnessing the functional testing process;
- ✓ Commissioning meetings;
- ✓ Maintenance of the Deficiency Database;
- ✓ Commissioning documentation; and
- ✓ Post occupancy evaluations.

Our personnel also have experience with green buildings and several members of our team are Leadership in Energy and Environmental Design (LEED) accredited professionals.

2. **OUR PRINCIPALS...**

With a technical staff that includes professional engineers, and sub-consultant resources in the architectural, structural, and civil engineering disciplines, GENESYS has sufficient depth of resources to perform large, complex projects but is small enough to provide personal service from the firm's Principals.

Leadership of GENESYS is provided by Ronald W. Mineo, P.E. and Robert J. Braun, P.E., the two Principals of the firm. Both Ron and Bob are active participants in projects, managing some of the larger, more complex projects and acting as the Principal-in-Charge for others, with overall responsibility for Quality Assurance/Quality Control. Both Ron Mineo and Bob Braun bring extensive experience in the study, design, construction, operation and maintenance of boiler plants, chiller plants, and power plants.

Ron Mineo, formerly President of Joseph R. Loring and Associates, is a licensed professional with more than 25 years of engineering and management experience in the research and development, study, design, construction, and commissioning of central utilities plants. With experience in the construction, start-up, operations, and maintenance of Boiler and Power Plants, Ron brings a unique perspective to any project.

Bob Braun, formerly an Owner of Braun Engineering and then a Senior Vice President of Keyspan, is a licensed professional engineer with more than 25 years of experience in the design, construction, operation and maintenance of utilities' infrastructure projects. Bob continues to maintain his Stationary Engineer's License for High Pressure Steam and Refrigeration in New York City.

In addition, while at Keyspan, Bob gained significant experience in the development and financing of energy projects, bringing an added dimension to our ability to assist Owners and Developers in all aspects of an Energy Project.

3. OUR COMMISSIONING SERVICES GROUP...

GENESYS commissioning services group is comprised of dedicated commissioning personnel with background experience in project management, construction, systems and equipment operations and maintenance, operator training, and systems design. Our commissioning personnel have extensive experience in the commissioning and retro-commissioning of commercial and institutional projects. This experience dates back to the mid 1990s, when commissioning was in its infancy and the true benefits were not yet obvious to the industry.

We have gone to great lengths to hire and actively train individuals that bring a broad range of experience and background to the commissioning role, and have created a dedicated group of personnel specifically responsible for providing commissioning services. We feel that it is extremely important that our commissioning personnel are multi-dimensional and understand all the roles of the parties involved in the commissioning process and also understand, through first hand experience, the challenges that each of these parties face in performing their portion of the project.

We place a great deal of emphasis on the importance of commissioning and are continually seeking to improve our capabilities and our offering to our clients. Towards that end, GENESYS acquired Park East Facility Solutions (PEFS) in 2005, which served to increase our depth of resources and broaden our commissioning, start-up, and operator training capabilities.

PEFS has now been fully integrated into GENESYS' operation and Steve Joern, the former Owner and Principal of PEFS, is now the Director of Commissioning Services for GENESYS.

Steve Joern is a Certified Commissioning Professional (CCP) by the Building Commissioning Association and a LEED Accredited Professional. Mr. Joern developed his operations and commissioning skills as a Chief Engineer in the U.S. Navy. His experience spans a wide variety of equipment and systems including HVAC, building controls, central boilers and chilled water plants, hydronic systems, and electrical systems.

He has more than 16 years of progressive commissioning, engineering and management experience in projects involving the study, design, construction, operations, and commissioning of energy projects. He has extensive experience in providing commissioning services ranging from developing commissioning plans, writing commissioning specifications, managing and implementing commissioning projects, training operators as well as retro-commissioning existing buildings.

4. OUR COMMISSIONING CAPABILITY...

GENESYS' experience and tenure in the commissioning field has helped us develop a consistent, replicable and scalable approach to the commissioning process, which is customized to the needs of each project and client. We believe that there are four key areas, which differentiate GENESYS from other commissioning firms, and are the primary contributors to the success we have achieved with other projects. These include:

- ✓ Technical expertise and Quality Control
- ✓ Our ability to integrate the commissioning process into the project;
- ✓ Our inspection and testing process; and
- ✓ The manner in which we manage data and disseminate information.

Technical Expertise

Our commissioning personnel not only have the requisite experience in the commissioning of facilities, but have experience in “hands on” testing of equipment and systems, construction, operations, design of mechanical and electrical systems, and the peer review of facility designs.

This expertise is not only critical in the development of our inspection and testing procedures, witnessing or performing functional testing, but provides the credibility to effectively manage the commissioning process and integrate with the project team. Our commissioning team members have extensive experience in the operations and maintenance of buildings, which provides our clients with that key advocate to assist them in the critical transition from construction to occupancy and ownership.

GENESYS has a quality assurance/quality control program that stresses that quality is achieved through the strict adherence to established procedures. Quality is not “checked” into a project. QA/QC is the process by which our project managers and principals assure that our personnel are adhering to the procedures, which provide direction and the tools for our personnel to succeed.

Integration into the Project Team

With a keen understanding of the design and construction process, we are able to create a positive and productive relationship with the project team by working closely to seamlessly integrate the commissioning services into the normal construction process and by being flexible, communicating effectively and quickly turning around reports without unnecessarily burdening the other team members.

GENESYS professionals have worked closely with dozens of construction teams during all of our commissioning engagements and truly believe the success of the commissioning process rests on the Commissioning Team's ability to work well and effectively with construction and design personnel. We firmly believe that established protocols for lines of communication and the direct involvement of the Commissioning

Provider as a member of the project team improves the understanding of the commissioning process by all team members and accelerates the acceptance process, reduces the potential for delays, and improves the overall operation, efficiency and comfort of the building.

Inspection and Testing Process

We have developed definitive protocols and software to customize the inspection criteria, perform the inspections and produce deficiency lists. All of our protocols and systems have been designed with three primary objectives:

- ✓ Maintain the **highest degree of quality control** throughout the commissioning process.
- ✓ Verify the applicability of the inspection and testing items and that all team members **clearly understand the processes and acceptance criteria**.
- ✓ Distribute information **quickly, verify the information is accurate and complete**, and that the contractors can easily manage the process involved to report corrective actions.

We strongly believe that as commissioning providers we should take an active role in not only developing the testing requirements but having personnel on-site to perform and witness the testing in conjunction with the contractors. This provides us with a first-hand account of system performance and identifying any problems that exist within the building.

We have a systematic and methodical approach to the development of the commissioning plan and execution of the commissioning process, allowing us to achieve a very critical commissioning objective -- to spend more time working with the construction team and performing the inspections and testing, rather than having to re-develop procedures and the required documentation.

During the development of the commissioning plan, we begin by gaining a thorough understanding of the equipment and systems to be installed through reviewing drawings and specifications and having candid discussions with the design and construction team. During this process, we use our inspection criteria form to generate the actual pre-functional inspection forms for each piece of equipment. This process and methodology raises our level and value of services and underscores our commitment to:

- ✓ Approaching each project with a new perspective and proper understanding of any unique circumstances;
- ✓ Customizing the inspection tools to enable inspectors to focus only on the items relevant to that particular equipment or system; and
- ✓ Providing the highest level of detail and documentation throughout the entire inspection process.

Deficiency Data Management and Information Dissemination

A critical component to successful building commissioning is the management and dissemination of the data used to communicate the deficiencies noted during the

inspection and testing process. We are committed to presenting this information to the owner, design team, construction managers and contractors in a timely and accurate manner.

We have been utilizing a sophisticated data management system to allow for maximum flexibility in the presentation and distribution of information. We can format and customize the database to show only certain information desired such as separating deficiencies by trade, equipment type, and length of time the deficiency has been active.

GENESYS takes a unique approach to prioritizing the deficiencies in the database. Each deficiency is assigned a deficiency code or several codes, which indicate the type of deficiency. The deficiency lists can then be sorted by these codes in order to more effectively manage correction of deficiencies and highlight deficiencies, which are significantly impacting the progress of the commissioning process. Our experience has proven this approach is more productive than ranking priorities because prioritization is often very subjective and doesn't necessarily relate to the operability and efficiency of the systems.

A separate report is also prepared for the contractors, which has a space for them to easily write in the date the corrective action was taken and any other pertinent information. This allows for re-inspection of the deficiencies to proceed quickly and efficiently as well as placing the appropriate amount of responsibility and accountability on the contractor to correct the deficiencies identified.

Web-Based Commissioning Management System

GENESYS web-based *Commissioning Management System* provides our clients with unparalleled access to critical real-time information anytime they have access to the World Wide Web. This tool provides direct and immediate access to information pertinent to project commissioning activities including:

- Recent Commissioning Activities
- Design review comments, status and updates
- Deficiency items, status and updates
- Commissioning RFIs

In addition, there is a section specifically dedicated to storing and managing commissioning related documents including the commissioning specifications and plan, all the deficiency reports and design review reports, status reports and pertinent correspondences.

5. OUR COMMISSIONING PROJECTS...

Bronx Criminal Courthouse

Dormitory Authority State of New York (DASNY)

Bronx , NY

GENESYS provided commissioning services for the new, 800 million ft² Bronx Criminal Court House Complex, a \$500 million complex, which is one of DASNY's largest projects in the New York Metropolitan area. The new court complex is located on a three-block site on East 161st Street near Grand Concourse Boulevard and represents an unprecedented program for court construction. This project includes the installation of new heating and cooling systems, including three new chillers, 36 air handling units and over 600 variable air volume (VAV) boxes. A new Building Management Systems is also being installed.

Renovated Residence Hall

Fashion Institute of Technology (FIT)

New York, New York

GENESYS provided commissioning services for a new, 320,000 ft² mid-rise residence hall at 401 West 31st Street, NY, NY. This project includes the installation of new heating and cooling systems, including: two new chillers, three new boilers, 11 air handling units and a new Building Management System. GENESYS has witnessed, performed and documented pre-functional inspections and functional testing of all major HVAC equipment, and managed and documented all deficiencies. In addition, at the end of the project, GENESYS was requested by FIT to provide operation and training support to building operators during the first 30 days of the transition to occupancy.

Battery Park City Authority

Site 3A – Battery Park City Parks Conservancy Maintenance Facility

New York, New York

GENESYS is providing commissioning services for this 40,000 ft² facility which is seeking LEED Platinum Certification. The installation includes all major HVAC systems, geothermal systems, Building Management System, as well as other energy conservation systems.

Battery Park City Authority

Site 23/24 – Community Center and Ballfield Maintenance Facility

New York, New York

GENESYS is providing commissioning services for this 60,000 ft² facility which is seeking LEED Platinum Certification. The installation includes new chillers, boilers, air handling units, Building Management System, and other energy conservation systems.

Clinton Green Tower 2 Interior Fit Out
The 52nd Street Project and Jonathan Rose Companies
New York, New York

Genesys is the Commissioning Authority for this new 15,000 ft² space to be occupied by The 52nd Street Project. The project is seeking LEED certification and will be built ahead of current design and construction standards.

Distance Learning Center
Empire State College
Saratoga Springs, New York

Genesys is the Commissioning Authority for the new construction of a 46,000 ft² facility, which is seeking LEED Certification at a minimum, with potential for LEED Silver. The systems include installation of a geothermal water source heat pump system for the HVAC system.

Athletic and Wellness Center
State University of New York at New Paltz
New Paltz, NY

GENESYS was the Commissioning Provider for the new Athletic and Wellness Center at SUNY New Paltz. This project includes the construction of a 57,000 ft² athletic/wellness center and the installation of air-cooled chillers and associated equipment, air handling units, hot water pumps, heat exchangers, unit heaters and an Energy Management System. GENESYS performed pre-functional inspections and functional testing of equipment and systems, managed the deficiency database and reporting, and provided the final commissioning documentation for the project.

Old Main Building
SUNY New Paltz
New Paltz, New York

Genesys is the Commissioning Authority for the full-scale renovation of this 65,000 ft² facility, including all mechanical, electrical and plumbing systems, as well as the building exterior/shell, interior, accessibility and other items. This building is the oldest building on the campus and has tremendous historical significance for the University.

Fine Arts Center
SUNY Oneonta
Oneonta, New York

Genesys is the Commissioning Authority for this project that includes the renovation of spaces within the Theatre, Visual Arts, Communication Arts and Music Departments, as well as the addition of a new Music Wing, foundry and pottery work area. In addition, the project includes upgrades to the chiller system and ADA compliance items.

Hudson HQ & Lab Consolidation

New York State DEP

Kingston, New York

This project includes commissioning services for the renovation of the NYS DEP Hudson HQ and Laboratory. Systems to be commissioned include a new chiller plant, boiler plant, HVAC systems, and VAV lab exhaust systems. The scope of work for this project is consistent with the requirements of Executive Order 111.

New York Public Library – Battery Park Branch

1100: Architect

New York, New York

Genesys is the Commissioning Authority for the new branch of the New York Public Library to be constructed on Site 16/17 in Battery Park City. The project is seeking LEED certification.

Marshak Science Tower Rehabilitation

City College of New York

New York, New York

GENESYS is providing commissioning services for this project which includes the retrofit of more than 180 fume hoods with low flow high performance retrofit kits, installation of 8 high velocity entrainment exhaust fans, and modifications to the fume hood exhaust systems. In addition to our commissioning responsibilities, GENESYS was responsible for the study, design, and construction of the project. The total project cost \$5.8 million, and the building is 650,000 ft².

New Science Tower

SUNY Oneonta

Oneonta, NY

GENESYS is providing commissioning services for this new laboratory, which is approximately 100,000 ft². The scope of work for this project is consistent with the requirements of Executive Order 111.

Campus-wide Controls and HVAC Modernization

SUNY at Stony Brook

Stony Brook, NY

GENESYS provided commissioning services for this project which included the commissioning of a campus-wide energy management system, including complete replacement of approximately 5,000 system points, the front end and communications network. The system covers 30 buildings comprising over 4.6 million square feet.

In addition to commissioning, GENESYS was also responsible for the design of the project. The work was done for Honeywell SES (formerly Sempra Energy Services) as an energy performance contract.

Central Boiler and Chiller Plant
City College of New York
New York, New York

GENESYS is providing commissioning services for this project which includes the installation of a 10,000 Ton hybrid chiller plant, the installation of cooling towers, condenser water pumps, chilled water pumps, the upgrade of the existing boiler plant and addition of two high pressure steam boilers with a total capacity of 70,000 pph.

Gross Anatomy Laboratory and Division of Laboratory Animal Resources (DLAR) Rehabilitation
Downstate Medical Center
Brooklyn, New York

GENESYS is the commissioning provider for this multi-phased modernization of Downstate Medical Center's Gross Anatomy Lab and DLAR spaces. In addition to commissioning the new laboratory air pressurization systems GENESYS was also tasked with assessing and preparing detailed scopes to rehabilitate four 30,000 CFM air handling units, their associated exhaust systems, heat recovery equipment and steam absorption chiller plant. This existing equipment had been "mothballed" for over eight years from a previous project that was never completely finished. GENESYS was instrumental in developing the scopes, managing the contractors and commissioning the system to support the Gross Anatomy Labs and the DLAR spaces.

280 Park Avenue, 33rd Floor Renovation
Viking Global Investors
New York, New York

GENESYS provided Commissioning Authority services for this extremely fast tracked LEED commercial interiors project in Manhattan. The project involved the complete renovation of an entire floor in this high rise office building including the installation of dedicated computer server room air handling units, interconnection with existing building heating, cooling and building management systems. Due to the fast track nature of the project, Genesys performed a significant portion of our functional performance testing after hours in order not to disrupt the multiple trades working in the space prior to move-in.

Existing Building Commissioning
William and Anita Newman Vertical Campus
Information and Technology Building
Baruch College
New York, New York

GENESYS is providing Existing Building Commissioning Services for the William and Anita Newman Vertical Campus (NVC) and the Information and Technology Building (ITB) at Baruch College. The NVC is an approximately 800,000 ft² facility, with 17 floors (14 above ground and 3 below ground). The building includes high tech classrooms, faculty and administrative offices, performing arts spaces and auditoriums, an athletic and recreation complex, conference facilities, food court and student activities areas. The ITB is an

approximately 330,000 ft² facility, with 9 floors. The building was built in 1894 and served as the power plant for the City's cable car system. The building was substantially renovated and was dedicated in 1994. The Library also houses the campus computing center, conference center and administrative offices. Genesys efforts are focused on identifying *Facility Improvement Measures* within both buildings to reduce energy waste, obtain energy and operational savings, identify corrective measures to address deferred maintenance and operational needs and improve indoor air quality and occupant comfort.

Rehabilitate Laboratories and Vivarium – Building 2

Upstate Medical Center

Syracuse, New York

GENESYS was the commissioning provider for this project which included the complete renovation of the 7th and 8th floors and provided the necessary upgrades required for code compliance as well as improved program spaces. This included the complete renovation of the two floors, laboratory suites on the 8th floors, new office spaces, surgical suites on the 7th floors and a Vivarium.

6. OUR CLIENTS...

Genesys has provided commissioning services to the following prestigious organizations:

Higher Education

Baruch College
Bronx Community College
City College of New York
College of Staten Island
Empire State College
Fashion Institute of Technology
Hunter College
John Jay College of Criminal Justice
Stony Brook University
SUNY Cobleskill
SUNY College at Old Westbury
SUNY College at Oneonta
SUNY Downstate Medical Center
SUNY Farmingdale
SUNY New Paltz
SUNY Upstate Medical Center
Union Graduate College
University at Albany
Wagner College
Yale University School of Medicine

Federal, State and Municipal Agencies

Battery Park City Authority
Battery Park City Parks Conservancy
Brooklyn Navy Yard Development Corporation
City University of New York
ConEdison Solutions
Dormitory Authority State of New York
NYC Department of Environmental Protection
NYSERDA
State University Construction Fund

Public Organizations

52nd Street Project
Albany Public Library
ART/New York
Nassau BOCES
New York Public Library

Private Organizations

1100: Architect
AS Realty
Cushman & Wakefield
David Smotrich & Partners
DMJM Harris/AECOM
Hackley School
Hartford Stage
Honeywell SES
Jonathan Rose Companies
Joyce Theater
LiRo Group
Mitchell Kurtz Architect PC
Perkins Eastman Architects
R.M.Kliment and Frances Halsband Architects
Rudin Management
Sightlines, LLC
Viking Global Investors
W.J. Northridge Construction

Healthcare & Laboratories

NYC Department of Environmental Protection
SUNY Downstate Medical Center
SUNY Upstate Medical Center
Wadsworth Laboratories
Yale University School of Medicine