

# STATEMENT OF QUALIFICATIONS



**Chinook**  
Systems Inc.

May 2010

## **Primary Point of Contact**

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## **Secondary Point of Contact**

Bibi Ukoli Hines, Project Coordinator  
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Arlington, VA 22202  
Ph. 571-527-0728  
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**[www.chinooksystems.com](http://www.chinooksystems.com)**



## Qualifications Package

### *Company Introduction*

#### **CHINOOK SYSTEMS INC.**

Chinook Systems Inc. is an established commissioning consulting firm committed to supporting the successful delivery of construction projects. We specialize in LEED commissioning, project management, quality assurance, and maintenance management, all of which are critical components to “Bridging the Gap” between building design, construction and operations. Chinook Systems acts as a liaison between the owner, contractors and consultants in an effort to facilitate winning projects.

Chinook specializes in large, complex, multi-phase projects and is currently performing services on more than 20 projects, 4 of which are over \$1 Billion in value. Our team has provided commissioning services, including LEED requirements, to such Owners as the National Institutes of Health, General Services Administration, Department of Defense-The Pentagon, Naval Facilities Engineering Command, Lockheed Martin, the Smithsonian Institution, UCLA, Sutter Health, and Princeton University.

The key to successful commissioning is to understand project ‘deliverables’ and then coordinate the commissioning requirements and activities accordingly. When a facility is ready for its intended use, there should be no mad scramble to execute functional testing, put together training and closeout information, and transition into operations and maintenance.

The Chinook team has dedicated many years to specializing in the implementation of commissioning services and also holds both design and operations experience in support of their commissioning knowledge. Our staff is committed to supporting and consulting with team members throughout every phase of our projects. Chinooks end goal is to position the Owner with the ability to develop a fully functional CMMS and a re-commissioning strategy that will allow for continuous monitoring and maintaining of an energy efficient facility.

As active and leading members in national commissioning organizations, including the AABC Commissioning Group (ACG) and Building Commissioning Association (BCA), Chinook not only understands, but also drives the industry towards more effective and properly executed commissioning projects. Along with our memberships in leading commissioning organizations, Chinook also has staff members that are LEED Accredited Professionals, members of the Design Build Institute of America, and certified under the Army Corps of Engineers Construction Quality Management (CQM) for Contractors program.

The process of proper record keeping, document management and pre-planning for future operations is the heart of the unique project delivery software offered by Chinook. The QuiCx Project Delivery System (short for Quality In Commissioning) manages the commissioning, construction management, and quality assurance processes and provides for efficient methods of handling the mountain of paper that accompanies almost any project today. Chinook also specializes in Building Information Modeling (BIM), and has connected our QuiCx application to 3D models and Computerized Maintenance Management Systems (CMMS).

Chinook Systems Inc. is a certified woman owned small business with locations in Arlington, Virginia and Cocoa Beach, Florida and also performing work internationally.



**Chinook**  
Systems Inc.

## Qualifications Package

### Company Introduction

#### Company Information

Name: Chinook Systems Inc.

Address: 2001 Jefferson Davis Hwy, Suite 905  
Arlington, VA 22202

Telephone Number: 571-527-0728  
Fax Number: 571-527-0729

Incorporated: April 25<sup>th</sup> 2002

Small Business Category: Woman Owned Small Business

Certification: Metropolitan Washington Airports Authority  
Local Disadvantaged Business Enterprise  
Certification No: LD2009-0524-2012  
Expiration Date: September 23<sup>rd</sup>, 2012

City Of Orlando – MWBE Certification  
Certificate No: 20101177  
Expiration Date: April 30<sup>th</sup>, 2011

NAICS Codes: 541330 - Engineering Services  
541340 - Drafting Services  
541380 - Testing Laboratories  
541513 - Computer Facilities Management Services  
541519 - Other Computer Related Services  
541611 -Administrative Management & General Management  
Consulting Services  
541990 - All Other Professional, Scientific, and Tech Services  
561210 - Facilities Support Services

Duns Number: 118946321  
Cage Code: 3D5P5

#### Insurance Coverage

Chinook Systems Inc. carries the following insurance coverage:

General Liability	1,000,000	Each Occurrence
	2,000,000	General Aggregate
Automobile	1,000,000	Combined Single Limit
Workers Compensation	500,000	Each Accident
Professional Liability	1,000,000	Per claim limit of liability
	1,000,000	Aggregate limit of liability per policy year

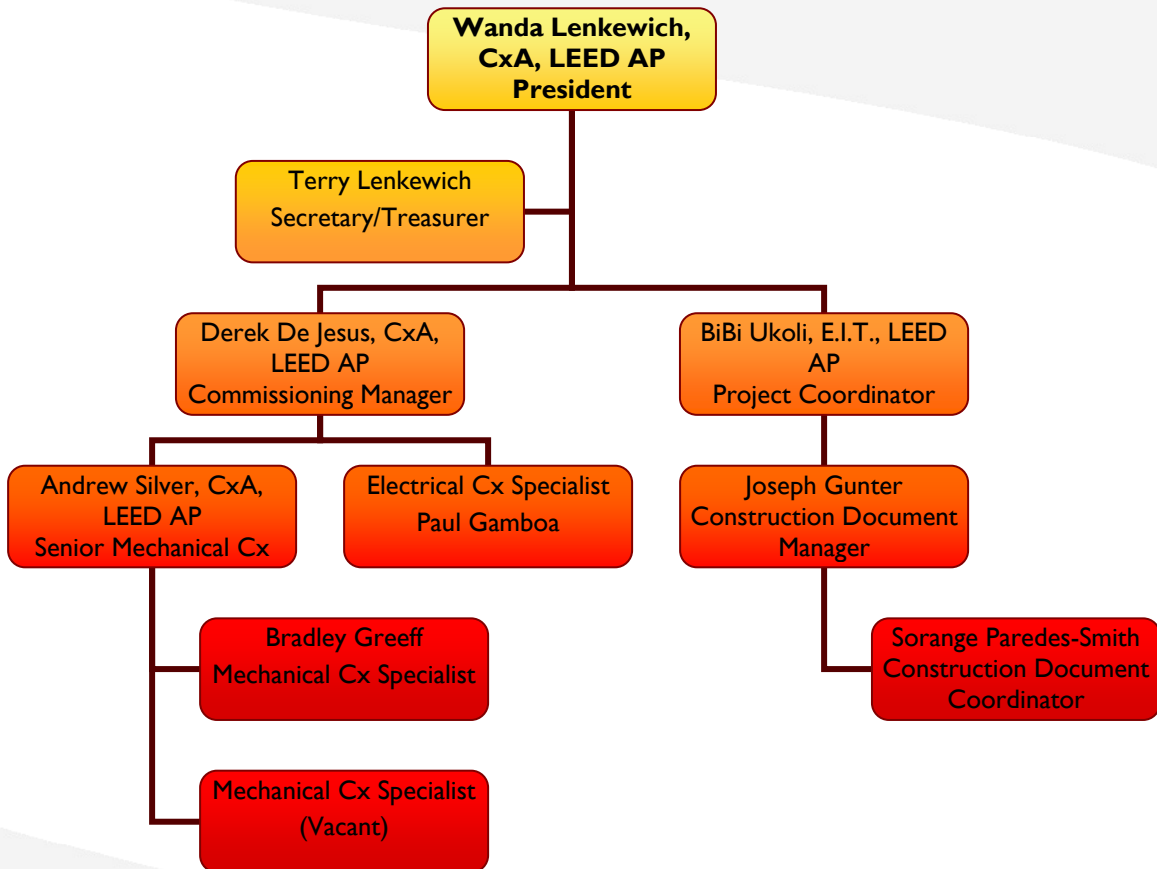


## Qualifications Package

### Organizational Structure

#### OUR TEAM

To capitalize on its strategic advantages, Chinook Systems has assembled a team of experienced and highly dedicated professionals. These individuals possess the skills and spirit necessary for long term success of the company and our clients.



**Wanda Lenkewich, CxA, LEED<sup>AP</sup>** is the President of Chinook Systems Inc. and a LEED accredited professional with 20 years experience in mechanical design, construction, commissioning, and operations of laboratory, hospital, educational, commercial, industrial, and government facilities. She has been involved in many projects of varying degree in size and complexity, and is especially committed to successful delivery of large, complex, multi-phased projects. Wanda has acted as a Commissioning Authority for Owners, Construction Management firms, Engineering firms, General Contractors, and Design-Builders through all project phases. She also specializes in the implementation of commissioning information management systems, construction management systems, and computerized maintenance management programs. Wanda developed the QuiCx Project Delivery System, a comprehensive web based database application that is being offered commercially by Chinook Systems Inc. as a tool to manage Commissioning and Construction Management processes, records, and documents. Wanda has also conducted various commissioning and project management seminars for corporations and at national conferences.



## Qualifications Package

### *Organizational Structure*

**Derek De Jesús, CxA, LEED<sup>AP</sup>** is Chinook Systems Inc. Commissioning Manager and an Electrical Commissioning Specialist. Derek is an expert in medium voltage power systems, lighting control, power distribution and emergency power systems with 12 years experience in commissioning as well as electrical building design. He has conducted design and submittal reviews, development of pre-functional checklists and functional performance test procedures, equipment verification testing, training facilitation, and operations and maintenance manual review. Derek sits on the Board of Directors for the National Capital Chapter of the Building Commissioning Association (BCA) and the AABC Commissioning Group (ACG). In addition to providing project management, technical and site services for Chinooks projects, he is also involved in business development and client relations. Derek has been security cleared to Secret.

**Andrew Silver, CxA, LEED<sup>AP</sup>** is a Senior Mechanical Engineer. He has over 13 years of expertise in Building Commissioning, HVAC design and computerized maintenance and management systems. Andrew has performed mechanical design, load calculations and CADD document production of projects encompassing central plant design, commercial office buildings, retail spaces, pharmaceutical, research and education projects and has also acted as a commissioning agent for clients during programming, design, construction, and warranty phases of projects. He has also performed conditions surveys of new and existing HVAC equipment and has been responsible for verification of existing conditions and documents and performing systems lifecycle assessments. Andrew maintains secret security clearance.

**Elizabeth (Bibi) Ukoli, EIT, LEED<sup>AP</sup>** is a Civil Engineer and Chinook Systems Inc. Project Coordinator. With six years of experience in general construction – preconstruction and construction phases, Bibi provides a unique insight to the commissioning plan implementation. Bibi has an in-depth knowledge of information flow and document management and works with our Commissioning Specialists and Document Control Specialists to coordinate the setup, implementation, and ongoing monitoring of our projects. Bibi is an active member of the National Chapter of the US Green Building Council. She also plays a lead role in business development and client relations.

Our team members provide technical and administrative support that is crucial to Chinook Systems Inc. commitment to leading edge technology and services, and the highest quality of process management and efficiency in our industry.

### COMMISSIONING OF BUILDING SYSTEMS

Chinook Systems Inc. provides for the complete management of the commissioning process from conceptual planning and design development through to construction, turnover and operations. We have developed proven business processes and protocol to ensure the highest quality of execution. Commissioning services are offered for:

- New construction
- Additions, renovations, and historic preservation
- Retro commissioning of existing facilities

Chinook Systems Inc. specializes in providing both fundamental and additional commissioning requirements for LEED certification of facilities.

Project Phases	Commissioning Tasks	Primary Responsibilities	
		Fundamental EAp1	Enhanced EA3
<b>Pre-design, Design Phase</b>			
Request for proposal Architect and engineer selection	Designate Commissioning Authority (CxA)	Owner or Project Team	Owner or Project Team
Owners project requirements, basis of design	Document Owner's Project Requirements (OPR)	Owner / CxA	Owner / CxA
	Develop Basis of Design (BOD)	Design Team	Design Team
Schematic Design	Review OPR and BOD	CxA	CxA
Design Development	Develop and implement a commissioning plan	CxA	CxA
Construction Documents	Incorporate commissioning requirements into construction documents	CxA	CxA
	Conduct commissioning design review prior to mid-construction documents	N/A	CxA
<b>Construction Phase</b>			
Equipment procurement Equipment Installation	Review contractor submittals applicable to systems being commissioned	N/A	CxA
Functional testing Test and balance Performance testing acceptance	Verify the installation and performance of commissioned systems	CxA	CxA
Operations and Maintenance (O&M) manuals	Develop systems manual for the commissioned systems	N/A	CxA
O&M Training	Verify that the requirements for training are completed	N/A	CxA
Substantial Completion	Complete a summary commissioning report	CxA	CxA
<b>Occupancy</b>			
Systems Monitoring	Review building operation within 10 months after substantial completion	N/A	CxA



## **CONSTRUCTION DOCUMENT MANAGEMENT**

Document management is a vital part of project execution and key to proper planning and reducing risk. The successful closeout of a project and transition to operations hinges on timely delivery of accurate and complete document deliverables. Document management services offered include:

- Workflow analysis
- Implementation of automated project control systems for contract administration including Drawings, Specifications, RFIs, Submittals, Change Orders
- Management of commissioning and closeout documentation
- Development and/or review of operations and maintenance manuals
- Preparation and/or review of record contract documents including CAD drawings

Chinook Systems implements measures to effectively manage changes to design, construction, and O&M documents and keeps all parties informed throughout each phase of the project.

## **QUALITY ASSURANCE**

The purpose of a Quality Assurance Program is to provide supervision of inspections and testing, and to support proper installation of building systems. Chinook Systems Inc. can help to ensure compliance with contract documents and applicable codes and standards related to materials, equipment, and workmanship. Our quality assurance services include development of QA specifications and plans, implementation and monitoring of QA Programs, and management of inspection and testing documentation.

Chinook Systems Inc. employees are certified under the U.S Army Corps of Engineers, Construction Quality Management (CQM) for Contractors program

## **TRAINING FACILITATION**

Properly trained operation and maintenance personnel are critical to safe and efficient operations of any facility. Chinook Systems Inc. facilitates operator training through:

- development and/or review of training plans, training materials and manuals,
- training schedule coordination
- videotaping of training sessions

### OPERATION AND MAINTENANCE

Chinook Systems specializes in the analysis, setup, implementation, and auditing of operations and maintenance programs. Using risk management methodologies, we strive to develop practical programs that are cost effective, provide a high level of service, and realize short-term payback. Our services that support this effort include:

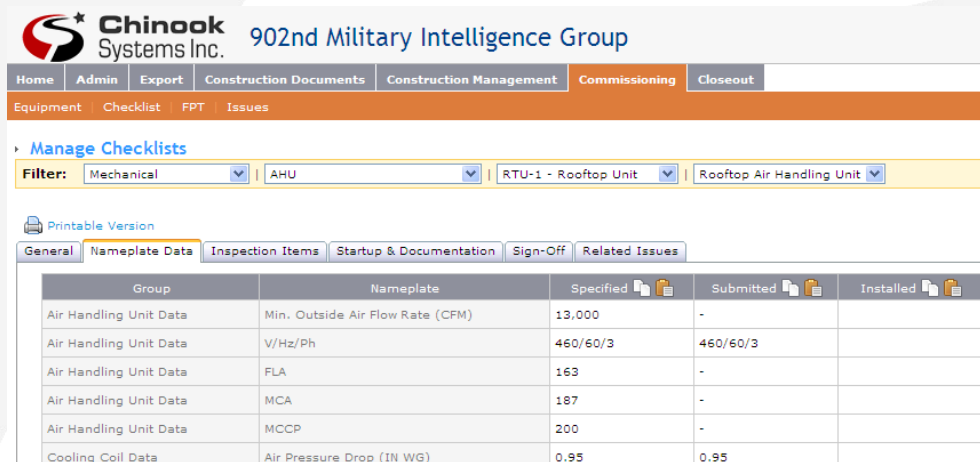
- Data collection and development of equipment inventories
- Development of building specific operating procedures, maintenance tasks, and schedules
- Development of property management agreements and maintenance service contracts
- Assessments of facility maintenance programs
- Implementation of computerized maintenance management systems (CMMS)

### THE QUICX PROJECT DELIVERY SYSTEM

Our team has been using web based database management tools as a standard practice of delivering commissioning services, for more than 15 years. Chinook Systems has developed a commercially available project delivery system that manages commissioning activities and documentation through all project phases.

The QuiCx Project Delivery System, QuiCx short for “Quality in Commissioning”, is a web based database application that is made available through an encrypted, secure website and accessible by strong password authentication to project team members.

Implementation of QuiCx facilitates the smooth transfer of knowledge and data during design and construction through to operations and maintenance. A complete record of all activities is effortlessly provided in database format and the as-built master equipment list is easily exported to industry leading computerized maintenance management systems such as Maximo, MP2, Facility Center, MicroMain, and Archibus.



**Chinook Systems Inc. 902nd Military Intelligence Group**

Home Admin Export Construction Documents Construction Management Commissioning Closeout

Equipment Checklist FPT Issues

Manage Checklists

Filter: Mechanical AHU RTU-1 - Rooftop Unit Rooftop Air Handling Unit

Printable Version

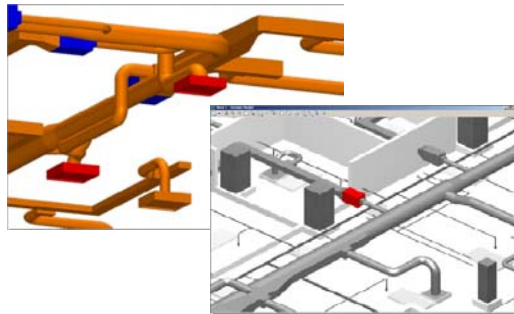
General Nameplate Data Inspection Items Startup & Documentation Sign-Off Related Issues

Group	Nameplate	Specified	Submitted	Installed
Air Handling Unit Data	Min. Outside Air Flow Rate (CFM)	13,000	-	
Air Handling Unit Data	V/Hz/Ph	460/60/3	460/60/3	
Air Handling Unit Data	FLA	163	-	
Air Handling Unit Data	MCA	187	-	
Air Handling Unit Data	MCCP	200	-	
Cooling Coil Data	Air Pressure Drop (IN WG)	0.95	0.95	

### BUILDING INFORMATION MODELING (BIM)

As outlined by the National Institute of Building Sciences – National Building Information Modeling Standard (NBIMS), a BIM is a digital representation of physical and functional characteristics of a facility. It serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its lifecycle.

Chinook Systems Inc. has been considered by the Pentagon to be a Subject Matter Expert (SME) on building information management systems including secure document management, CAD modeling, project controls, computerized maintenance management, and asset management systems. Chinook has successfully created interoperability of our Commissioning software with both Revit and Bentley Architecture and utilized such information as room locations, equipment tag numbers and descriptions, and equipment schedule data as exports from the 3D models into our Commissioning Software. Chinook has also written the BIM electronic data standards for Washington Headquarters Services (WHS), The Pentagon.



### Equipment Schedule Generated from the 3D Model

A properly planned and implemented 3D intelligent model can generate data in an electronic format to facilitate the commissioning process. Equipment schedules below were generated from the model and utilized in the development of the master equipment list of equipment to be commissioned and the commissioning pre-functional checklists.

BIM IEOC Pentagon Project

#### COMPUTER ROOM AIR CONDITIONING UNIT SCHEDULE

Tag No	Desc	Type	Mnl	Mod	CRAC Data							
					SN	Warranty ED	Status	Rm No	Nominal Capacity (Tons)	Volume CFM (l/s)	Motor HP	TSP (IN. WG)
AC A336-01	Type A	Comp Rm AC	Challenger	BF102C-AAHS	TBD	at least 3 yrs.	TBD		>6 tons	2500 (1180)	1-1/2 (1.12)	TBD
AC A336-02	Type A	Comp Rm AC	Challenger	BF102C-AAHS	TBD	at least 3 yrs.	TBD		>6 tons	2500 (1180)	1-1/2 (1.12)	TBD
AC B332-01	Type B	Comp Rm AC	Challenger	MMD40C2AHHDO / Opencomms Nic / AC4	TBD	at least 3 yrs.	TBD		<5 tons	1800 (850)	3/4 (0.56)	TBD
AC B33A-01	Type B	Comp Rm AC	Challenger	MMD40C2AHHDO / Opencomms Nic / AC4	TBD	at least 3 yrs.	TBD		<5 tons	1800 (850)	3/4 (0.56)	TBD



## Qualifications Package

### *Notable Projects*

#### **NIH Building 10 - 2nd Floor and Penthouse Renovations, Bethesda, Maryland**

Value: \$3 million

Owner: National Institute of Health

WFT Engineering, the AE for the project approached Chinook Systems Inc. to provide construction phase commissioning services for the Penthouse Renovation project. Service include design review, preparation of the commissioning plan, schedule coordination, development of pre-function checklists and functional performance tests, site observations and functional testing, and preparation of the final commissioning report. The project is estimated to cost approximately \$3M and be completed in 2010.

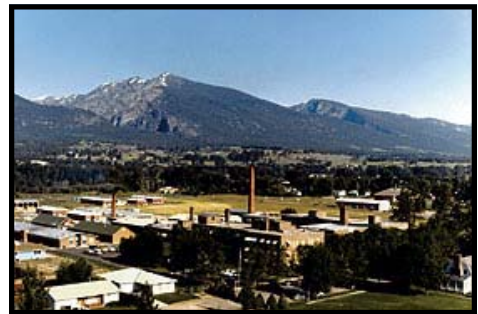


#### **Rocky Mountain Laboratory, Hamilton Montana**

Value: \$66.5 million

Owner: National Institute of Health

RML's new 105,000 sqft Integrated Research Facility, occupied in 2007, was the first NIH facility of its kind to house BSL-2, BSL-3, and BSL-4 laboratory space in one building along with administrative offices and conference rooms. The facility enables researchers to study priority pathogens in the area of biodefense – labeled as Category A, B, or C agents by the Centers for Disease Control and Prevention (CDC).



Chinook Systems Inc. acted as a consultant to the project commissioning agent. The commissioning agent implemented our QuiCx Project Delivery System for the project commissioning and validation processes. Chinook Systems provided implementation support and training for our application and also supported the commissioning agent in the development of the list of equipment and systems to be commissioned and the project commissioning pre-functional checklists. Chinook also interfaced with the General Contractor to export and import submittal and RFI data from the project management system into the commissioning program.



## Qualifications Package

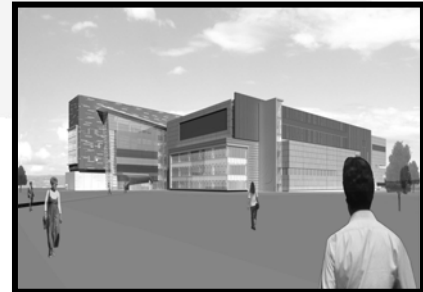
### *Notable Projects*

#### **U.S. Army Medical Institute of Infectious Disease Replacement Facility, Ft Detrick, MD**

Value: \$500 million

Owner: U.S. Army Corps of Engineers – Baltimore District

The U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), a subordinate command of the U.S. Army Medical Research and Materiel Command, located at Fort Detrick, MD is the Department of Defense's (DoD) lead biodefense. This new facility is approximately 950,000sf which includes HQ, Admin and Research offices, Laboratories, Veterinary Medicine offices, Medicine clinic, amenities, and building operations offices. Construction began in fall 2009 and will be completed in March 2013. The project designed to achieve LEED Silver certification.



Chinook Systems Inc. is a sub consultant responsible for providing commissioning services to support the Manhattan/Torcon construction team. Chinooks services include implementation and training of the Chinook Systems Inc. QuiCx Project Delivery System, design and submittal review, preparation of pre-functional checklists, preparation and witnessing of functional performance testing, site observations, training facilitation, review of operations and maintenance manuals, and preparation of systems manuals. The Commissioning scope for the project includes HVAC, plumbing, electrical, and fire protection.

#### **U.S. Army Medical Institute of Chemical Defense Replacement Facility, Aberdeen Proving Grounds, Harford County, MD**

Value: \$229 million

Owner: U.S. Army Corps of Engineers – Baltimore District

The USAMRICD Replacement Facility located in Aberdeen, MD will be the U.S. Department of Defense's (DoD) lead laboratory for medical chemical defense research. This 526,255sf facility will house about 300 employees. It will include chemistry labs, command HQ, offices and training facilities. Construction began in fall 2009 and will be completed in 2013. The project designed to achieve LEED Silver certification.



Chinook Systems Inc. is a sub consultant responsible for providing commissioning services to support the Clark construction team. Chinooks services include implementation and training of the Chinook Systems Inc. QuiCx Project Delivery System, project management, design and submittal review, preparation of pre-functional checklists, preparation and witnessing of functional performance testing, site observations, training facilitation, review of operations and maintenance manuals, and preparation of systems manuals. The Commissioning scope for the project includes HVAC, plumbing, electrical, and fire protection.



## Qualifications Package

### *Notable Projects*

#### **Stonegate II– Lockheed Martin, Chantilly, Virginia**

Value: \$25 million  
Owner: OPUS East. LLC

Stonegate II is a 140,635 square foot Class A office building located in the largest and most prestigious office park in Fairfax County, Virginia. The Property is 100 percent leased to Lockheed Martin, the nations largest defense and government contractors. With over 118,000 square feet of Sensitive Compartmented Information Facility (SCIF) space (85 percent of the Property), Stonegate II provides Lockheed Martin with a secure work environment.



Stonegate II was a design build project and Chinook Systems Inc. was the commissioning authority on the project in 2007 acting as Lockheed Martin's representative. Our services included design review, construction oversight, functional performance testing, scheduling of commissioning activities, and tracking status of installation, start-up and testing of equipment and systems. Chinook also reviewed the architectural installation in preparation for SCIF accreditation and performed thermographic scanning of electrical equipment. In addition to commissioning services, Chinook assisted the project team in development and management of the Lockheed Martin punchlist and preparation of the equipment data to facilitate implementation of the computerized maintenance management system (CMMS), Maximo.

#### **Evolved Expendable Launch Vehicle (EELV) Launch Complex 41, Cape Canaveral, Florida**

Value: \$300 million  
Owner: Lockheed Martin Astronautics

This design-build construction project completed in 2002 consisted of multiple industrial and commercial facilities, including the vehicle integration facility, launch complex, mobile launch platform and space flight operations center. The project was design to support Lockheed Martins heavy lift vehicle, the ATLAS V rocket.

Wanda Lenkewich, at the time providing independent consulting services, worked with Lockheed Martin Astronautics to develop Standard Operating Procedures for the incremental release of construction documents to the Design-Build contractor. She was also responsible for managing the RFI, Submittal, and Field Work Directive processes for the project, preparation of the Operations and Maintenance manuals and management of the preparation of Systems Manuals and As-Built record Drawings and Specifications. Wanda also setup an inventory control program and trained users for the management of Lockheed provided equipment for the project.





**Chinook**  
Systems Inc.

## Qualifications Package

### *Notable Projects*

#### **Walter Reed National Military Medical Center (WRNMMC)**

Value: \$1 Billion

Owner: Department of Defense

The new medical center comes as a result of the 2005 Base Realignment and Closure (BRAC) process to create an integrated state-of-the-art medical facility for military members. Project involves new construction and renovation of existing facilities, including approximately 667,000 square feet of new medical office, emergency room and patient care construction; more than 20,000 square feet of new utility and material handling tunnels and circulation corridors; more than 400,000 square feet of renovation in areas of existing buildings; and a patient parking garage. The project will attain a LEED Silver rating and is scheduled for completion in 2011.



Chinook Systems Inc. has been brought on by NAVFAC as the Owners representative to provide commissioning services and oversight of the commissioning program to support BRAC construction contracts at WRNMMC. Work covers support of the NAVFAC Washington / ROICC Bethesda BRAC construction office in new & renovation projects and associated utility & site improvement projects. Commissioning focuses are HVAC, plumbing, electrical, fire protection, and hospital medical gas systems. Chinook is also providing support to the NAVFAC construction office with the review and enforcement of the construction contractors' record drawings, training of Navy system operation and maintenance operators

#### **Cathedral Hill Hospital, San Francisco**

Value: \$1.7 Billion

Owner: California Pacific Medical Center

The California Pacific Medical Center's (CPMC) Cathedral Hill project is a new 555-bed hospital in San Francisco, Calif., budgeted at \$1.7 billion. The hospital is one million sf with a total of 15 floors above and two below grade stories, and includes 555 parking stalls. Design of the Cathedral Hill hospital began in 2005, and the project is expected to complete in 2013. The project will attain a LEED Silver rating.



Chinook Systems Inc. is responsible for providing commissioning services and oversight of the commissioning program to support the CPMC Integrated Project Delivery Team (IPDT). Chinook is provide LEED commissioning services including design and submittal review, preparation of pre-functional checklists, preparation and witnessing of functional performance testing, site observations, training facilitation, review of operations and maintenance manuals, and preparation of systems manuals. Commissioning scope includes HVAC, plumbing, electrical, fire protection, and hospital medical gas systems. Chinook has interfaced our commissioning software with the BIM Revit model for location data and equipment data.



**Chinook**  
Systems Inc.

## Qualifications Package

### *Notable Projects*

#### **Pentagon Renovation Project Wedges 2-5, Arlington VA**

Value: \$700 million

Owner: US Department of Defense

The Pentagon Renovation Wedges 2-5 is a phased design/build renovation of 4 million square feet of space in the Pentagon. Scope includes removal of all hazardous materials, replacement of all building systems, addition of new elevators and escalators and installation of new security and telecommunications systems. Project completion is scheduled for 2012. LEED Silver Project.



Chinook Systems is acting as a Commissioning Consultant to the Pentagon Renovation Liaison Branch (PRLB) responsible for implementation of the departments Commissioning, and Construction Document Management program. The PRLB is responsible for receipt, management, and retrieval of all of construction contract deliverables for construction projects on the Pentagon Reservation. Chinook currently manages design and construction documentation for more than 30 projects at the Pentagon. Chinook has also been instrumental in the development of the Building Information Modeling (BIM) standards for the Pentagon and has connected 3D models with commissioning and maintenance management applications.

Chinook also acted as a Commissioning Consultant for the Design-Build Contractor and was responsible for development and implementation of the project Decommissioning, Commissioning, Quality Management, and Record Documents management programs for the Wedges 2-5 Program. In addition, Chinook developed procedures for secure handling, distribution, and disposal of official documentation, conducted configuration management review of drawings and specifications and reviewed transition plans for phased project delivery.

#### **Old Patent Office Building – Historic Preservation, Washington, D.C.**

Value: \$200 million

Owner: Smithsonian Institution

The Smithsonian American Art Museum and the National Portrait Gallery project completed in 2007 was a historic preservation of the third oldest building in Washington D.C. It included new mechanical, electrical, telecom, plumbing, security, fire alarm, and fire protection systems. The 400,000 sqft of interior was modified to include galleries, office, retail, and support spaces for the museum as well as laboratories.



Chinook Systems Inc. was the Commissioning Authority on the project and responsible for all aspects of construction phase commissioning and closeout deliverables. We developed the commissioning plan, the master equipment list, pre-functional checklists and functional performance tests, and participated in review of equipment submittals and O&M manuals.



### *Notable Projects*

Chinook directed all onsite commissioning activities, functional performance testing, and commissioning meetings and also provided supplemental testing services for vibration monitoring, thermography, and laser alignment. In addition, we participated in partnering sessions with the Owner, Designer, CM, and General Contractor.

Chinook facilitated the systems and equipment operator training programs including DVD video production of more than 40 training sessions and prepared CAD as-built documents for more than 1000 contract drawings. All activities were managed through our internal Software Application, the QuiCx Project Delivery System. Our system provided real-time project information and was accessible to over 150 project users.

#### **Additional Commissioning Projects – New Construction:**

- Tysons Park Place II, McLean, VA
- Princeton University – 701 Carnegie Center, Princeton, NJ
- Sutter Medical Center Sacramento, Sacramento, CA
- Alexandria Police Headquarters Building, Alexandria VA
- Orlando Performing Arts Center, Orlando, FL
- Aircraft Flight Test and Evaluation Facility, Patuxent River, MD.
- Westmoreland Park Visitor Center, Montross, VA
- VA Medical Center, Richmond, VA
- Potomac Yards North and South – Electrical Cx, Arlington, VA
- NY Department of Environmental Protection – 6 Administrative Facilities

#### **Additional Commissioning Projects – Existing Building**

- Deer Creek Facility, Lockheed Martin, Denver, CO
- Dulles International Airport, Dulles, VA
- Decatur House Museum, Washington, D.C.
- Swedish University, Finland
- Stonegate I, Lockheed Martin, Chantilly, VA

#### **Additional Commissioning Projects – Renovation/Addition**

- National Academy of Sciences, Washington, D.C.
- US National Guard Bureau Readiness Center Addition, Arlington Hall, VA
- Georgetown University Chiller Plant Upgrade, Washington, D.C.
- VA Medical Center, Richmond, VA
- Hilton, McLean, VA



#### **Additional Services Projects**

- Cx Program audit and oversight services
  - UCLA Medical Center – Reagan Hospital
- Development of the Computerized Maintenance Management (CMMS) program
  - B.F. Saul Company – for Tysons Park Place II
- CAD as-built record drawings for General Contractor for:
  - Social Security Administration Building
  - National Zoo – Aisa Trail II
  - The John F. Kennedy Center for the Performing Arts Site Improvement Project
- Live streaming web cameras and time lapse videos
  - DC Courts
  - Smithsonian American Art Museum and the National Portrait Gallery
- Lifecycle Building Information Modeling (BIM). Successfully automated the transfer of data from the 3D model to our commissioning program to the maintenance management system.
  - Washington Headquarters Services – The Pentagon
  - Cathedral Hill Hospital Project, San Francisco, CA
- BIM roadmap and BIM standards development
  - Washington Headquarters Services – The Pentagon
  - US Coast Guard
- Development of Systems Operations and Maintenance Manuals
  - 2.4 kV feeder upgrade – Pentagon
- MEP QC/Cx site coordination services:
  - Maryland State Police Forensic Science Laboratory, Pikesville, MD
  - National Oceanic and Atmospheric Administration Satellite Operations (NOAA) Facility Suitland, MD
  - House of Delegates, Annapolis, MD
  - BWI Airport, MD
  - Dulles Walkback Tunnel, Dulles Airport



### PROJECT REFERENCES

#### Owners

1. **Lockheed Martin Projects**  
George Weikel, Senior Project Manager  
Lockheed Martin Information Systems & Global Services  
Lockheed Martin Corporation  
230 Mall Boulevard, King of Prussia, PA 19406-2902  
Tel Number available upon request
2. **Pentagon Renovation Program**  
Doug Hall, Manager of the Pentagon Renovation Liaison Branch,  
DOD The Pentagon  
DFD – PRLB – 1F349  
Washington, D.C. 20301  
Tel Number available upon request
3. **Walter Reed National Military Medical Center**  
Masood Shoyooee, P.E., F. ASCE  
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## Qualifications Package

### References

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#### Contractors

8. **The Smithsonian American Art Museum and the National Portrait Gallery**  
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