Building Systems Technologies, PLLC

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Company Profile

January 2021

Contents

Attachments:

NEBB Certifications

Principal

David Kirkham, EIT
President and Founder
Idaho State University, B.S. Mechanical Engineering, EIT
NEBB Certified Professional-TAB
NEBB Certified Professional-Cx

Staff

Stefanie Thomas
Office Manager

Matt Michels
Project Supervisor
NEBB Certified Professional
Daikin Certified Service Technician

Henry Goetsch
College of Idaho, B.S. Chemistry and Physics
Project Coordinator

Danny Lemus
Project Manager
TAB Technician

Phillip Michels
TAB Technician

Principal Resume

David Kirkham, EIT

President
Building Systems Technologies, PLLC.

Education:

Idaho State University, B.S. Degree in Engineering, 2005

Experience:

Building Systems Technologies – President and Founder
In charge of all daily operations including bidding, coordination, planning, and quality assurance.

Environmental Engineers, Inc. - EIT and TAB technician
Project manager and TAB Technician. Authored Procedure submittals and commissioning plans.

Professional Organizations:

- National Environmental Balancing Bureau (NEBB)
- Bonneville Environmental Balancing Bureau (BEBB) – Past President, Tech Committee
- ASHRAE Idaho Board of Governors

Industry Qualifications:

- NEBB Certified Professional
    - TAB - Air and Hydronic Environmental Systems
    - Building Systems Commissioning - HVAC
    - Building Systems Commissioning - Plumbing
    - Building Systems Commissioning - Fire Protection
- Proficient in operation of all building control systems
- Computer operation, programming, CADD, load estimating, equipment sizing
- Co-Author, Energy Systems and Resources, with Dr. Jay Kunze, former Dean - College of Engineering at ISU

BST has four key personnel:

David Kirkham, President and Founder
Stefanie Thomas, Office Manager
Matt Michels, Project Supervisor
Henry Goetsch, Project Coordinator

David and Stefanie oversee daily operations at the administrative level. While David spends a lot of his time in the commissioning realm, he makes site visits and conducts training in the office and field. Stefanie coordinates scheduling, contracts, bidding, etc. Matt and Henry oversee all projects in the field and work with the project managers to ensure that deadlines are met, quality work is maintained, and any issues are quickly resolved.

Examples:

Idaho National Laboratory – Cybercore and Collaborative Computing Center (C3)
General Contractor: JE Dunn - ESI
Mechanical Engineer: Affiliated Engineers, Inc.

This project was comprised of two buildings on the INL campus in Idaho Falls, Idaho. One building was a traditional VAV reheat system while the other building was comprised of multiple underfloor terminal units. Both buildings included chilled water, heating water, and multiple server racks.

Simplot World Headquarters
General Contractor: Hoffman Construction
Mechanical Engineer: Stantec

This nine-story building has four 125-Ton and one 26-Ton air handler which serve approximately 450 VAV terminal units with re-heat coils. Heat is generated through a geothermal heat exchanger. Water cooled chillers provide cooling at the air handlers. Additionally, chilled water is run through the primary side of a heat exchanger in which the secondary side runs through radiant ceiling panels to provide supplemental cooling. All staff was on board for this project. Work was divided up into three teams: Hydronic systems, VAV systems, and secondary systems (exhaust, fan coils, laboratories).

St. Al's Medical Center - Nampa
General Contractor: Layton Construction Company
Mechanical Engineer: AEI

This five-story hospital has six air handlers serving 420 VAV reheat terminal units. This project was approached differently that it would were it not a hospital. The top two floors are patient rooms, essentially isolated from the rest of the hospital. The third floor contains critical environments such as the OR suites, laboratories, and central sterile. For this floor we used our most experienced technicians. First and second floors also had some critical environments as well as kitchen equipment and common areas. Teams with the greatest experience in each area were assigned tasks accordingly.

Micron Technology Building 51
General Contractor: Stock Construction
Mechanical Engineer: M+W Group

This project for Micron was a 50,000 square foot cleanroom. The cleanroom itself contains over 700 fan powered HEPA filter units. Each unit had to be dialed in to a certain velocity. Make-up air is supplied to the cleanroom through multiple Make-up air units and through dry coils that totaled 20 X 120 feet on either side of the clean room. This project required great attention to detail.

Bio-Life Plasma Services
General Contractor: Build to Suit/Trane USA
Mechanical Engineer: KJWW Engineering Consultants

These projects are included to illustrate the ability to complete projects through coordination, a proven approach, and a limited time frame. Each of these projects consist of a 50-Ton VAV air handler serving 6 FPBs and 18 VAVs, a 7.5-Ton CAV, and a hydronic heating loop with redundant equipment. Our project manager and his technician travel on a Monday, balance for three days, and return on a Friday. Prior to them leaving, the system is balanced, reported, and verified and accepted by the general contractor. Because of the limited time frame, deficiencies must be identified immediately. We have completed over 605 of these projects spanning from Florida to Washington State, and multiple states in between.

With the incorporation of digital control systems combined with the concerns of energy consumption and economic constraints, TAB now plays an unprecedented, more critical role in a project.

General Approach:

BST approaches every project from a commissioning standpoint. This has been the approach David took as a balancer long before the company was ever formed. It is the basis of BST's operation. TAB and full system commissioning follow a parallel path to the same end goal. The exception is that the TAB portion provides a substantial amount of information used in the commissioning process.

Since not all jobs have a commissioning team, we often fill that need as a matter of obligation to the owner. Though it is not always initially realized, there is also a benefit to every other member of the construction team. This approach has proven successful time and time again.

Specific Approach:

There is a straightforward process that we employ once we are awarded a project.

A. Design/Plan Review: Our form of design review is done while we are pre-planning a report. At some point, we will need to prepare our paperwork prior to arriving to perform TAB procedures. We have found that this is the ideal time, as it accomplishes two goals: Being prepared, and identifying any design deficiencies. RFI's are usually generated at this stage.

B. Submittal Review: We feel it is essential to have submittals sooner than later. They help to assist in the pre-plan phase as well as troubleshooting in the field. They are also sometimes necessary to explain any deficiencies in the TAB report General Comments.

C. Field Verification: Normally, we will send out a technician to gather model data on equipment prior to start-up. This isn't too repetitive a process, but it helps to catch issues before they become costly or critical.

D. Coordination:

1. Pre-TAB: We have developed very good relationships with most of the general, mechanical, and controls contractors in the Treasure Valley. Periodic communication with all of them maintains an awareness of the project schedule.

2. During TAB: While on the job performing TAB procedures, we understand the need to coordinate with other trades. This is especially critical in VAV and hydronic systems, as there are typically more trades involved. Working closely with a controls contractor (particularly) has proven to help both the controls contractor and we be more productive in finding and fixing problems more efficiently.

3. Post-TAB: When BST becomes part of a project, the final payment never signifies the end. We like it this way. We always assume that we may have to return to verify numbers, comfort balance, or simply help solve a problem.

E. Technology: With the advances of DDC systems, technology has been developed that allows a tremendous amount of data relatively easy.

1. TAB Procedures: By using the latest devices and instruments available in the industry, data collection, regeneration, and analysis can be done much more quickly than it has been traditionally been done. BST recognizes this advantage and employs this technology.

2. System Analysis: BST is familiar with most, if not all, system controls programs. By working with the controls contractor and commissioning agents, a system can be fine-tuned to achieve the most energy efficient operation of the installed system.

F. Education: David and his and team constantly stay in touch with industry standards. Though continuing education is a requirement of NEBB to maintain certification, our efforts exceed the minimum requirements.

1. Through ASHRAE membership, NEBB, trade publications, vendor shows, etc., we continue to ensure we are providing the best services possible.

2. All employees of BST receive instruction/training at the BST offices as well as on site.

Completed Projects

The following projects have been completed in the past few years, except for those listed as commissioning projects. BST averages about 250 projects per calendar year. Subsequently, this is not an entire list of projects, but a list of the more significant ones.

Education

- Thunder Ridge High School – Idaho Falls, Idaho
- Amity Elementary – Boise, Idaho
- Hillsdale Elementary – Meridian, Idaho
- Nyssa Middle School – Nyssa, Oregon
- South Hills Middle School – Twin Falls, Idaho
- Boise School District Career Tech – Boise, Idaho
- ISU Meridian PT/OT – Nampa, Idaho
- Sage International School – Nampa, Idaho
- NNU Helstrom – Nampa, Idaho
- BSU Honors College – Boise, Idaho
- Central Elementary School – Nampa, Idaho
- Victory Middle School – Meridian, Idaho
- Heartland High School – McCall, Idaho
- Falcon Ridge Charter School – Kuna, Idaho

Industrial

- Micron Technology Building 51 – Boise, Idaho
- Micron Technology Central Utility Plant – Boise, Idaho
- Fresca Foods – Caldwell, Idaho
- Jerome WWTP – Jerome, Idaho
- Materne – Nampa, Idaho
- NxEdge Cleanroom – Boise, Idaho
- Moose WWTF – Moose, Wyoming
- Marvin Wood RIP Scan – Baker City, Oregon
- FedEx Ground Sorting Facility – Boise, Idaho
- Glanbia Cheese – Gooding, Idaho
- Jerome Cheese – Jerome, Idaho
- GE Battery Storage – Caldwell, Idaho
- Johnson Thermal Systems – Caldwell, Idaho
- ConAgra Foods – Pasco, Washington

Completed Projects

Multi-Use and Office Buildings

- Simplot World Headquarters – Boise, Idaho
- Clearwater Analytics – Boise, Idaho
- Paylocity – Meridian, Idaho
- US Bank Building – Boise, Idaho
- Norco – Meridian Idaho
- Wells Fargo Tower – Boise, Idaho
- Bio-Life Plasma – National (multiple locations)
- Meridian Family YMCA – Meridian, Idaho
- Primary Health – Multiple Locations

Critical Environment

- St. Al's Medical Center – Nampa, Idaho
- St. Luke's Hospital – Nampa, Idaho
- West Valley Medical Center Surgery Upgrades – Caldwell, Idaho
- North Canyon Medical Center Surgery Suites – Gooding, Idaho
- St. Luke's Jerome Surgery Suites – Jerome, Idaho
- St. Luke's Ambulatory Care – Twin Falls, Idaho
- Treasure Valley Hospital Addition – Boise, Idaho

Government and Institutional

- Orchard Readiness Training Center – Kuna, Idaho
- VAMC Animal Research – Boise, Idaho
- Ada County Juvenile – Meridian, Idaho
- NIFC NWS Upgrades – Boise, Idaho
- VAMC Cath Lab – Boise, Idaho

Commissioning Services

- Simplot World Headquarters – Boise, Idaho
- MHAFB Building 278 – Mountain Home, Idaho
- MHAFB Building 2610 – Mountain Home, Idaho
- MHAFB Logistics Readiness Center – Mountain Home, Idaho
- MHAFB Explosive Ordinance Disposal – Mountain Home, Idaho
- City of Pocatello Water Department – Pocatello, Idaho
- MHAFB Building 1310 – Mountain Home, Idaho

References

GENERAL CONTRACTORS	MECHANICAL ENGINEERS
Engineered Structures, Inc. (208) 362-3040 Mike Koci	**Musgrove Engineering (208) 384-0585** Bill Carter, Charles Paulin, Todd Nelson
Petra, Inc. (208) 323-4500 Brett Myron	**Tikker Engineering (208) 658-0218** Bob Tikker
Okland Construction Co - (208) 576-6077 Ben Petzinger	**PVE, Inc. (801) 359-3158** Tim Cantrell
Layton Construction (208) 429-6740 Jeremy Hobbs	**DC Engineering (208) 288-218** Jared Miller, James Schroeder

TRADE REFERENCES	
Paige Mechanical (208) 331-9000 Teresa Paige, Brian Donahue	**BSU Facilities** Roy Miller, Rocky Yoneda
YMC, Inc. (208) 888-1727 Carl Marcum, Brian Rainey	**Johnson Controls (208) 846-9011** Edward Rebman
RM Mechanical – (208) 362-0131 Greg Wright, Tony Magnuson	**Siemens (208) 658-9107** Mark Hinrichs

Projects contracted directly with DPW are listed below:

10-009 BSU Aquatics Center addition
12-041 IAB Geothermal Upgrade
12-047 BSU Morrison Chiller Upgrade
12-061 BSU Engineering Building Microfab
12-132 BSU Athletic Football Complex
12-133 BSU Geothermal Building Conversion
13-007 BSU Animal Holding
13-038 Teaching Research Renovation
13-088 IAB Geothermal 3rd & 4th
13-091 Research Renovation
13-095 Idaho Parks and Rec
14-018 Upgrade Science Building
17-192 Hood Upgrade, Science Building
17-320 Office Renovation ISLD
17-009 Chinden Campus Building 2
17-154 LCSC Career Tech

Firm Certification

BUILDING SYSTEMS TECHNOLOGIES, PLLC

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFIED STATUS IN THE FOLLOWING DISCIPLINE

Testing, Adjusting and Balancing of Environmental Systems

3387

NEBB Certification Number

March 31, 2023

Expiration Date

NEBB President

NEBB President-Elect

Certification

MATTHEW L. MICHELS

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFIED PROFESSIONAL STATUS IN THE FOLLOWING DISCIPLINE

Testing, Adjusting and Balancing of Environmental Systems

This Certificate, as well as individual affiliation with a NEBB Certified Firm and associated NEBB Certification Stamp are REQUIRED to provide a NEBB Certified Report. Participation in the NEBB Quality Assurance Program requires the Certificant be affiliated with a NEBB Certified Firm

CP-24152

NEBB Certification Number

March 31, 2023

Expiration Date

NEBB President

NEBB President-Elect

Certification

DAVID C. KIRKHAM

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFIED PROFESSIONAL STATUS IN THE FOLLOWING DISCIPLINE

Testing, Adjusting and Balancing of Environmental Systems

This Certificate, as well as individual affiliation with a NEBB Certified Firm and associated NEBB Certification Stamp are REQUIRED to provide a NEBB Certified Report. Participation in the NEBB Quality Assurance Program requires the Certificant be affiliated with a NEBB Certified Firm

CP-23545

NEBB Certification Number

March 31, 2023

Expiration Date

Jeffrey Schoels

NEBB President

NEBB President-Elect