COMMONWEALTH OF VIRGINIA

STANDARD CONTRACT

Contract Number: VTS-1848-2023

This contract entered into this 30th day of August 2022 by Facility Dynamics Engineering Inc. hereinafter called the "Contractor" and Commonwealth of Virginia, Virginia Polytechnic Institute and State University called "Virginia Tech."

WITNESSETH that the Contractor and Virginia Tech, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

SCOPE OF CONTRACT: The Contractor shall provide Commissioning and Audit Services to Virginia Tech as set forth in the Contract Documents.

PERIOD OF CONTRACT: From September 1, 2022 through August 31, 2024 with the option for three (3) two-year renewals.

COMPENSATION AND METHOD OF PAYMENT: The Contractor shall be paid by Virginia Tech in accordance with the Contract Documents.

CONTRACT DOCUMENTS: The Contract Documents shall consist of this signed contract, Request for Proposal (RFP) number 952642206 dated May 24, 2022, together with Addendum Number 1 To RFP dated June 10, 2022, the proposal submitted by the Contractor dated June 24, 2022 and the negotiation summary, all of which Contract Documents are incorporated herein.

ELECTRONIC TRANSACTIONS: If this paragraph is initialed by both parties, to the fullest extent permitted by Code of Virginia, Title 59.1, Chapter 42.1, the parties do hereby expressly authorize and consent to the use of electronic signatures as an additional method of signing and/or initialing this contract and agree electronic signatures (for example, the delivery of a PDF copy of the signature of either party via facsimile or electronic mail or signing electronically by utilizing an electronic signature service) are the same as manual executed handwritten signatures for the purposes of validity, enforceability and admissibility.

DS JJS / DS RN

(Initials)

In WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

Contractor
By: DocuSigned by: Jay Santos 107386EAF02F4B0...
(Signature)

Jay Santos
Name and Title
Principal

Virginia Tech
By: DocuSigned by: Reed Nagel 5EF51DA320D049B...

Reed Nagel
Associate Director for Goods and Services

VIRGINIA TECH™

Request for Proposal # 952642206

For

Commissioning and Audit Services

5/24/2022

Note: This public body does not discriminate against faith-based organizations in accordance with the *Code of Virginia*, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

RFP # 952642206, Commissioning and Audit Services

INCLUDE THIS PAGE WITH YOUR PROPOSAL, SIGNATURE AT SUBMISSION IS REQUIRED

DUE DATE: Proposals will be received until **June 24, 2022 at 3:00 PM**. Failure to submit proposals to the correct location by the designated date and hour will result in disqualification.

INQUIRIES: All inquiries for information regarding this solicitation should be directed to Levi Henry, CUPO, Buyer Senior. Phone: (540) 231-7852 e-mail: lhenry29@vt.edu. All inquiries will be answered in the form of an addendum. Inquiries must be submitted by **3:00 PM on June 10, 2022**. Inquiries must be submitted to the procurement officer identified in this solicitation.

PROPOSAL SUBMISSION:
Proposals may NOT be hand delivered to the Procurement Office.

Virginia Tech has partnered with Bonfire Interactive to create a new procurement portal that will allow you to access business opportunities and submit bids and proposals to Virginia Tech digitally.

Proposals must be submitted electronically at:
https://procurement-vt.bonfirehub.com/.

Vendors are requested to visit the new Procurement Portal then follow the link to the Bonfire vendor registration page to register your company. Registration is easy and free. If you have any challenges with the registration process, please contact Bonfire Interactive Support at support@gobonfire.com .

It is encouraged for all vendors to register prior to the proposal submission deadline to avoid late submissions. Log into your Bonfire Vendor account in order to access the opportunity and begin preparing your submission. Upon completion you will be directed to your Submission Receipt. Virginia Tech will not confirm receipt of proposals. It is the responsibility of the offeror to make sure their proposal is delivered on time.

For a quick tutorial on how to upload a submittal, visit: https://support.gobonfire.com/hc/en-us/articles/360011034814-Creating-and-Uploading-a-Submission-for-Vendors-?_ga=2.42375717.1472165071.1588110542-997330893.1585332052

Hard copy or email proposals will not be accepted. Late proposals will not be accepted, nor will additional time be granted to any individual Vendor.

Attachments must be smaller than 1000MB in order to be received by the University.

In compliance with this Request For Proposal and to all the conditions imposed therein and hereby incorporated by reference, the undersigned offers and agrees to furnish the goods or services in accordance with the attached signed proposal and as mutually agreed upon by subsequent negotiation.

AUTHORIZED SIGNATURE: _____ Date: _____

03/28/2022

[INCLUDE THIS PAGE]

I. PURPOSE:

This Request for Proposal (RFP) seeks to solicit proposals to establish a contract for Commissioning and Audit Services through competitive negotiations by Virginia Polytechnic Institute and State University (Virginia Tech), an agency of the Commonwealth of Virginia.

Virginia Tech has a need to procure Mechanical/Electrical System, Building Envelope, Plumbing and Building Automation Control Commissioning Services and Energy and Water Audit Services on a continuous and regular basis for a wide variety of projects associated with campus renovations and new construction.

II. SMALL, WOMAN-OWNED AND MINORITY (SWAM) BUSINESS PARTICIPATION:

The mission of the Virginia Tech supplier opportunity program is to foster inclusion in the university supply chain and accelerate economic growth in our local communities through the engagement and empowerment of high quality and cost competitive small, minority-owned, women-owned, and local suppliers. Virginia Tech encourages prime suppliers, contractors, and service providers to facilitate the participation of small businesses, and businesses owned by women and minorities through partnerships, joint ventures, subcontracts, and other inclusive and innovative relationships.

For more information, please visit: https://www.sbsd.virginia.gov/

III. CONTRACT PERIOD:

The term of this contract is for Two (2) year(s), or as negotiated. There will be an option for three (3) two-year renewals, or as negotiated.

IV. EVA BUSINESS-TO-GOVERNMENT ELECTRONIC PROCUREMENT SYSTEM:

The eVA Internet electronic procurement solution streamlines and automates government purchasing activities within the Commonwealth of Virginia. Virginia Tech, and other state agencies and institutions, have been directed by the Governor to maximize the use of this system in the procurement of goods and services. *We are, therefore, requesting that your firm register as a vendor within the eVA system.*

There are transaction fees involved with the use of eVA. These fees must be considered in the provision of quotes, bids and price proposals offered to Virginia Tech. Failure to register within the eVA system may result in the quote, bid or proposal from your firm being rejected and the award made to another vendor who is registered in the eVA system.

Registration in the eVA system is accomplished on-line. Your firm must provide the necessary information. Please visit the eVA website portal at http://www.eva.virginia.gov/pages/eva-registration-buyer-vendor.htm and **register both with eVA and Ariba**. *This process needs to be completed before Virginia Tech can issue your firm a Purchase Order or contract.* If your firm conducts business from multiple geographic locations, please register these locations in your initial registration.

For registration and technical assistance, reference the eVA website at: https://eva.virginia.gov/, or call 866-289-7367 or 804-371-2525.

V. CONTRACT PARTICIPATION:

It is the intent of this solicitation and resulting contract to allow for cooperative procurement. Accordingly, any public body, public or private health or educational institutions, or Virginia Tech's affiliated corporations and/or partnerships may access any resulting contract if authorized by the contractor.

Participation in this cooperative procurement is strictly voluntary. If authorized by the Contractor, the resultant contract may be extended to the entities indicated above to purchase at contract prices in accordance with contract terms. The Contractor shall notify Virginia Tech in writing of any such entities accessing the contract, if requested. No modification of this contract or execution of a separate contract is required to participate. The Contractor will provide semi-annual usage reports for all entities accessing the Contract, as requested. Participating entities shall place their own orders directly with the Contractor and shall fully and independently administer their use of the contract to include contractual disputes, invoicing and payments without direct administration from Virginia Tech. Virginia Tech shall not be held liable for any costs or damages incurred by any other participating entity as a result of any authorization by the Contractor to extend the contract. It is understood and agreed that Virginia Tech is not responsible for the acts or omissions of any entity, and will not be considered in default of the contract no matter the circumstances.

Use of this contract does not preclude any participating entity from using other contracts or competitive processes as the need may be.

VI. STATEMENT OF NEEDS/SCOPE OF WORK: Potential services for new buildings and renovations may include, but not necessarily be limited to the following

A. Pre-Design Phase:

1. Assemble a Commissioning Team, hold a scoping meeting and identify responsibilities
2. Develop a draft design-phase Commissioning Plan
3. Attend Commissioning meetings as needed with project manager and design team
4. Review the Owner Objectives documentation (design intent) for clarity and completeness
5. Develop the "Owner Project Requirements" (OPR) in correlation to the A/E's "Basis of Design" (BOD) information from the University and Design Team

B. Design Phase:

1. Coordinate and supervise the Commissioning work during design.
2. Attend initial meetings with the University and Design Team to discuss role of Commissioning Services Contractor (CxA) and coordination of design
3. Prepare and distribute the design phase Commissioning Plan
4. Continual review and update of the OPR throughout the design phase

5. Check the specifications to ensure there are no conflicts in testing, balancing, or other procedures that will not allow for a full and complete test of each system.
6. Provide Design Team members with Commissioning items to be considered during design
7. Perform focused design reviews, including schematic, preliminary, and working documents
8. Provide a final back-check review of the final documents to confirm comments were incorporated. The design review shall include the following:
   a. Input regarding making the building more commissionable
   b. How building O&M can be made easier (accessibility and system control, etc.)
   c. How utility usage and Indoor Environmental Quality con be improved
   d. Review contract documents to facilitate project certification goals (i.e. does design meet Energy Star, etc.)
   e. Verify the design complies with University's design guidelines and standards
9. Verify that contract documents are in keeping with and will meet the OPR
10. Prepare Commissioning specifications for the construction bid documents for systems and equipment that are to be commissioned
11. Have the Commissioning specifications approved by the A/E team and include in the A/E construction specifications
12. Prepare sample draft functional tests for equipment and systems to include in specifications
13. Verify that contract documents provide adequate building O&M documentation and operator training
14. Attend two, on-day Design Team review meetings to discuss comments on plans and coordinate specifications. Meetings will be held on VT campus
15. Coordinate a controls integration meeting between the mechanical and electrical engineers and the controls vendor
16. Prepare and maintain issues log
17. Participate in Value Engineering (VE) session as required to ensure the intent of the OPR is not compromised

C. Construction Phase:

1. Conduct a partnering meeting with the University and Contractor Team to discuss Commissioning scope, plan and schedule
2. Coordinate the Commissioning work with the General contractor (GC) to ensure that Commissioning activities are being scheduled into the master schedule. Continue to update schedule and coordination throughout construction with GC and subcontractors
3. Submit final Commissioning Plan for construction with coordination and activities for University PM and GC review
4. Review normal contractor submittals applicable to systems being commissioned for compliance with Commissioning needs, concurrent with the A/E reviews
5. Ensure that O&M material and contractor start-up procedures are submitted to the CxA team as the contractor receives it. This material will be needed to assist in finalizing start-up testing procedures.
6. Prepare final pre-functional and final functional test procedures for the equipment and systems
7. Submit test procedures to contractor for comments on appropriate startup, operations, and systems safety
8. Perform site inspection as necessary during rough-in of systems and equipment
9. Review request for information and change orders for impact on commissioning and OPR

10. Maintain a master issues log of any items found to be a problem, poorly installed or discrepancies. The log must be sufficiently detailed so as to provide clarity and point of future reference for the comment
11. Attend up to 12 on-site meetings for review of progress, coordination, and issues resolution. More than 12 on-site meetings will be considered work outside the normal scope of work
12. Witness a pipe test and flushing procedure, sufficient to be confident that proper procedures were followed
13. Coordinate with the contractor to witness startup of major equipment
14. Review and approve TAB execution plan
15. Witness a sample of any ductwork testing and cleaning procedures, sufficient to be confident that proper procedures were followed
16. Witness a sample of checkout, TAB, end-to-end testing and calibration of controls
17. Observe first pre-functional test of each type of system, including mechanical, controls, electrical, and specialty systems

D. Acceptance Phase:

1. Continue to update schedule and coordination throughout construction with GC and subcontractors
2. Obtain pre-functional reports from Constructor with sign-offs that the systems have been checked out
3. Obtain TAB report from TAB contractor. Verify accuracy of the TAB effort. Direct the TAB contractor to take simple readings and compare to TAB report:
   a. 20% sample of V A V terminals, other small terminal unit equipment serving general public areas
   b. 100% of lab terminals and lab hood controls
   c. 100% of the TAB report readings for main AHU's, central plant equipment, main pumps, and main exhaust fans
   d. Document findings
4. Verify building controls:
   a. 20% point-to-point verification of terminal units servicing general public areas, including analog calibration, mapping to workstation graphics, proper control, and alarm management functions
   b. 100% point-to-point verification of controls in lap spaces, including analog calibration, mapping to workstation graphics, proper controls and alarm management functions
   c. 100% point-to-point verification of main AHU's, central plant equipment, main pumps, and main exhaust fans; including analog calibration, mapping workstation graphics, and alarms management functions
5. Witnessing functional testing of smoke controls systems, emergency power, transfer switch, and fire alarm/protection sequence of operation per NFPA and University requirements
6. Conduct acoustic/sound level testing and prepare report
7. Witness functional testing of each major piece of equipment to demonstrate that each item of equipment and system is operating according to the OPR and contract documents. Functional testing shall include operating the system and components through each of the written sequences of operations
8. Provide troubleshooting to assist in resolving control problems, as they are uncovered
9. Maintain a master issues log and separate record of test results of any items found to be a problem, poorly installed, or discrepancies. The log must be sufficiently detailed so as to provide clarity and point of future reference for the comment. Provide the log and test results to the University PM, A/E, and GC, with recommended actions

10. Coordinate retesting as necessary. One retest will be provided as part of normal checkout. More than one retest will be considered work outside the normal scope of work
11. Notify the University PM and GC of the unacceptable finding if 10% of identical pieces of equipment fail to perform to the requirements of the contract documents because of manufacturing defects which do not allow it to meet the submitted performance spec, request an explanation of the problem and proposed solution from the GC; and then review the proposed solutions
12. Attend weekly meetings while on-site for functional testing
13. Attend up to one additional on-site meeting for review of progress, coordination, and issues resolution. More than on on-site meeting will be considered work outside the normal scope of work
14. Review O&M documentation for completeness. This review shall be in parallel with the A/E's team review of the O&M documentation for conformance to the project specification
15. Provide the user staff with an on-day systems training on "how the building is supposed to operate"
16. Review, pre-approve, and coordinate training of the University operating personnel by the contractor
17. Perform deferred (season) testing checkout of equipment – in August for cooling systems and in January for heating systems
18. Provide three hard bound copies of the comprehensive System Concept and Operations Manual containing:
    a. Owner objectives
    b. Design narrative and basis of design
    c. System descriptions
    d. Sing-line diagrams
    e. Sequence of operations and setpoint tables
    f. Instruction for normal operation, and seasonal adjustments
    g. Start-up and shutdown
    h. Energy saving strategies and monitoring recommendations
19. Provide three hard bound copies and three CD-ROM electronic copies of the Commissioning management report (Commissioning Final Report). The report shall include an executive summary, list of participants and roles, brief building description, and the following sections:
    a. Design intent
    b. Basis of design
    c. Pre-functional checklists complete
    d. Functional checklists complete
    e. TAB Reports
    f. System schematics
    g. Control strategies and set points
    h. Deficiency log
20. Verify the completeness and accuracy of BIM equipment inventory provided by the Contractor.

E. <u>Warranty Phase:</u>

1. During seasonal testing and at 10 months into warranty, review with facility staff the current building operation and the condition of outstanding issues related to the original and seasonal Commissioning
2. Interview facility staff and identify problems or concerns they have with operating the building as originally intended

3. Identify deficiencies that may come under warranty or under the original construction contract
4. Identify if facility staff needs additional vendor system training. Provide recommendations on additional training to the University
5. Prepare a detailed evaluation on the status of warranty issues for the University PM

F. Re-commissioning, Retro-commissioning and Audit Services:

1. Provide re-commissioning, retro-commissioning, and/or Audit services on existing facilities/systems as requested.

G. Systems to Commission: The specific systems that may be commissioned include but are not necessarily limited to:

1. HVAC and Mechanical

a. Building automation systems, including laboratory controls and linkages to remote monitoring and control sites
b. Chiller, chilled water pumps, piping, and associated equipment
c. Boiler, heat exchangers, hot water pumps, piping, and associated equipment
d. Air handling units
e. Laboratory, clean room, fume hood and pressurization systems
f. Exhaust and other specialty fans
g. Terminal units
h. Ductwork and piping
i. Heat exchangers
j. Fire and smoke dampers
k. HVAC system noise control and sound level testing
l. Smoke control systems – interfaces, egress pressurization

2. Electrical Systems

a. Emergency power system – includes generator, transfer switches, controls, and interlocks
b. Inspection of sectionalizing switch installation and testing

3. Lighting Systems
   a. Light Levels
   b. Lighting control system components – including but not limited to occupancy sensors, timers, photocells, and daylight sensors

4. Plumbing Systems

5. Building envelope

H. Supplemental Instructions & Clarifications: The following are offered to generally clarify the Owner's expectations regarding services that the CxA may be required to perform depending on the individual Project Order scope of work. They are explanations offered for the benefit, information and assistance of the CxA

1. The Owner will usually provide to the CxA copies of pertinent drawings on file indicating new/existing buildings, utilities and conditions

2. The Owner will usually provide the CxA copies of any pertinent drawing available on an existing building, which may be the subject of a Project Order. The CxA must not rely totally on information contained in the "as-built" documents
3. The CxA's project related costs of all miscellaneous blueprinting, reproduction of reports, photocopying, long distance telephone calls, facsimile transmissions, telegrams, travel and postage are included in the lump sum fee and marked up hourly rates negotiated
4. Each Project Order shall describe the scope of work required of the CxA and show the agreed-upon fee for the work. If applicable, the Project Order or its attachment shall identify any special requirements for the project, and show any schedule milestones for performance of the work
5. If extra services are requested or approved by the Owner during the course of any Project Order Work, the CxA will be compensated on the basis of a fixed sum fee to be negotiated at the time the extra work is ordered or at the hourly rates agreed upon in the contract. Any hourly rate method as specified above may be used instead of a fixed fee at the Owner's discretion. The fees for any such extra work shall be included in any calculation of the total value of the Project Order and in the aggregate total of all Project Orders issued during the contract term
6. Any Project Order for a feasibility or other study or a schematic or preliminary design issued pursuant to this term contract shall not include the right to extend the CxA's scope of services to include full design and construction period services. The CxA shall not, however, be prohibited from participating in a competitive negotiation procurement for such services.

VII. PROPOSAL PREPARATION AND SUBMISSION:

A. Specific Requirements

Proposals should be as thorough and detailed as possible so that Virginia Tech may properly evaluate your capabilities to provide the required goods or services. Offerors are required to submit the following information/items as a complete proposal:

1. Qualifications and Experience:

   Provide Organization data, including size and structure of the company, locations of branch offices and/or subcontractor arrangements, if any. Describe the company's qualifications and experience in providing the services described herein. Provide a list of the management and staff personnel (include energy engineers and water efficiency engineers), designated by discipline, and described their qualifications; resumes will suffice. Include proof of required certifications and/or licenses. Provide evidence of financial stability and your ability to obtain bonding.

2. References:

   Provide four (4) recent references, either educational or governmental, for whom you have provided the type of services described herein. Include the date(s) the services were furnished, the client name, address and the name and phone number of the individual Virginia Tech has your permission to contact.

3. Price:

   Provide a price schedule for all services offered. Discuss price firmness and include a plan for conveying price changes during renewal period of any resulting contract.

4. Plan for Providing Services:

   Describe your plan for providing the services described in the RFP.

5. Participation of Small, Women-owned and Minority-owned Business (SWAM) Business:

   If your business cannot be classified as SWaM, describe your plan for utilizing SWaM subcontractors if awarded a contract. Describe your ability to provide reporting on SWaM subcontracting spend when requested. If your firm or any business that you plan to subcontract with can be classified as SWaM, but has not been certified by the Virginia Department of Small Business and Supplier Diversity (SBSD), it is expected that the certification process will be initiated no later than the time of the award. If your firm is currently certified, you agree to maintain your certification for the life of the contract. For assistance with SWaM certification, visit the SBSD website at http://www.sbsd.virginia.gov/

6. The return of the General Information Form and addenda, if any, signed and filled out as required.

D. General Requirements

1. RFP Response: In order to be considered for selection, Offerors shall submit a complete response to this RFP to include;

   a. **One (1) electronic document** in WORD format or searchable PDF of the entire proposal as one document, INCLUDING ALL ATTACHMENTS must be uploaded through the Bonfire online submission portal. Refer to page 2 for instructions.

      Any proprietary information should be clearly marked in accordance with 2.d. below.

   b. Should the proposal contain **proprietary information**, provide **one (1) redacted electronic copy** of the proposal and attachments **with proprietary portions removed or blacked out**. This redacted copy should follow the same upload procedures as described on Page 1 of this RFP. This redacted copy should be clearly marked *"Redacted Copy"* within the name of the document. The classification of an entire proposal document, line item prices and/or total proposal prices as proprietary or trade secrets is not acceptable. Virginia Tech shall not be responsible for the Contractor's failure to exclude proprietary information from this redacted copy.

      No other distribution of the proposals shall be made by the Offeror.

2. Proposal Preparation:

   a. Proposals shall be signed by an authorized representative of the Offeror. All information requested should be submitted. Failure to submit all information requested may result in Virginia Tech requiring prompt submission of missing information and/or giving a lowered evaluation of the proposal. Proposals which are substantially incomplete or lack key information may be rejected by Virginia Tech at its discretion. Mandatory requirements are those required by law or regulation or are such that they cannot be waived and are not subject to negotiation.

b. Proposals should be prepared simply and economically providing a straightforward, concise description of capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of content.

c. Proposals should be organized in the order in which the requirements are presented in the RFP. All pages of the proposal should be numbered. Each paragraph in the proposal should reference the paragraph number of the corresponding section of the RFP. It is also helpful to cite the paragraph number, subletter, and repeat the text of the requirement as it appears in the RFP. If a response covers more than one page, the paragraph number and subletter should be repeated at the top of the next page. The proposal should contain a table of contents which cross references the RFP requirements. Information which the offeror desires to present that does not fall within any of the requirements of the RFP should be inserted at an appropriate place or be attached at the end of the proposal and designated as additional material. Proposals that are not organized in this manner risk elimination from consideration if the evaluators are unable to find where the RFP requirements are specifically addressed.

d. Ownership of all data, material and documentation originated and prepared for Virginia Tech pursuant to the RFP shall belong exclusively to Virginia Tech and be subject to public inspection in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by an Offeror shall not be subject to public disclosure under the Virginia Freedom of Information Act. However, to prevent disclosure the Offeror must invoke the protections of Section 2.2-4342F of the Code of Virginia, in writing, either before or at the time the data or other materials is submitted. The written request must specifically identify the data or other materials to be protected and state the reasons why protection is necessary. –The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. The classification of an entire proposal document, line item prices and/or total proposal prices as proprietary or trade secrets is not acceptable and may result in rejection of the proposal.

3. Oral Presentation: Offerors who submit a proposal in response to this RFP may be required to give an oral presentation of their proposal to Virginia Tech.—This will provide an opportunity for the Offeror to clarify or elaborate on the proposal but will in no way change the original proposal. Virginia Tech will schedule the time and location of these presentations. Oral presentations are an option of Virginia Tech and may not be conducted. Therefore, proposals should be complete.

VIII. SELECTION CRITERIA AND AWARD:

A. Selection Criteria

Proposals will be evaluated by Virginia Tech using the following:

Criteria	Maximum Point Value
1. Quality of products/services offered and suitability for the intended purposes	20
2. Qualifications and experiences of Offeror in providing the goods/services	25
3. Specific plans or methodology to be used to provide the Services	20
4. Cost (or Price)	25
5. Participation of Small, Women-Owned and Minority (SWAM) Business	10
Total	100

B. Award

Selection shall be made of two or more offerors deemed to be fully qualified and best suited among those submitting proposals on the basis of the evaluation factors included in the Request for Proposal, including price, if so stated in the Request for Proposal. Negotiations shall then be conducted with the offerors so selected. Price shall be considered, but need not be the sole determining factor. After negotiations have been conducted with each offeror so selected, Virginia Tech shall select the offeror which, in its opinion, has made the best proposal, and shall award the contract to that offeror. Virginia Tech may cancel this Request for Proposal or reject proposals at any time prior to an award. Should Virginia Tech determine in writing and in its sole discretion that only one offeror has made the best proposal, a contract may be negotiated and awarded to that offeror. The award document will be a contract incorporating by reference all the requirements, terms and conditions of this solicitation and the Contractor's proposal as negotiated.

Virginia Tech reserves the right to award multiple contracts as a result of this solicitation.

IX. INVOICES:

Invoices for goods or services provided under any contract resulting from this solicitation shall be submitted by email to vtinvoices@vt.edu or by mail to:

Virginia Polytechnic Institute and State University (Virginia Tech)
Accounts Payable
North End Center, Suite 3300
300 Turner Street NW
Blacksburg, Virginia 24061

X. METHOD OF PAYMENT:

Virginia Tech will authorize payment to the contractor as negotiated in any resulting contract from the aforementioned Request for Proposal.

Payment can be expedited through the use of the Wells One AP Control Payment System. Virginia Tech strongly encourages participation in this program. For more information on this program please refer to Virginia Tech's Procurement website: http://www.procurement.vt.edu/vendor/wellsone.html or contact the procurement officer identified in the RFP.

XI. ADDENDUM:

Any **ADDENDUM** issued for this solicitation may be accessed at http://www.apps.vpfin.vt.edu/html.docs/bids.php. Since a paper copy of the addendum will not be mailed to you, we encourage you to check the web site regularly.

XII. COMMUNICATIONS:

Communications regarding this solicitation shall be formal from the date of issue, until either a Contractor has been selected or the Procurement Department rejects all proposals. Formal communications will be directed to the procurement officer listed on this solicitation. Informal communications, including but not limited to request for information, comments or speculations regarding this solicitation to any University employee other than a Procurement Department representative may result in the offending Offeror's proposal being rejected.

XIII. CONTROLLING VERSION OF SOLICITATION:

The posted version of the solicitation and any addenda issued by Virginia Tech Procurement Services is the mandatory controlling version of the document. Any modification of/or additions to the solicitation by the Offeror shall not modify the official version of the solicitation issued by Virginia Tech Procurement Services. Such modifications or additions to the solicitation by the Offeror may be cause for rejection of the proposal; however, Virginia Tech reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a proposal.

XIV. TERMS AND CONDITIONS:

This solicitation and any resulting contract/purchase order shall be governed by the attached terms and conditions, see Attachment A.

XV. CONTRACT ADMINISTRATION:

A. The contract administrator will be determined at a later time. The Contract Administrator shall use all powers under the contract to enforce its faithful performance.

B. The Contract Administrator, or their designee, shall determine the amount, quantity, acceptability, fitness of all aspects of the services and shall decide all other questions in connection with the services. The Contract Administrator, or their designee, shall not have authority to approve changes in the services which alter the concept or which call for an extension of time for this contract. Any modifications made must be authorized by the Virginia Tech Procurement Department through a written amendment to the contract.

XVI. ATTACHMENTS:

Attachment A - Terms and Conditions

ATTACHMENT A

TERMS AND CONDITIONS

RFP GENERAL TERMS AND CONDITIONS

See:
https://www.procurement.vt.edu/content/dam/procurement_vt_edu/docs/terms/GTC_RFP_02182022.pdf

ADDITIONAL TERMS AND CONDITIONS

1. **ADDITIONAL GOODS AND SERVICES**: The University may acquire other goods or services that the supplier provides other than those specifically solicited. The University reserves the right, subject to mutual agreement, for the Contractor to provide additional goods and/or services under the same pricing, terms and conditions and to make modifications or enhancements to the existing goods and services. Such additional goods and services may include other products, components, accessories, subsystems, or related services newly introduced during the term of the Agreement.

2. **AUDIT**: The Contractor hereby agrees to retain all books, records, and other documents relative to this contract for five (5) years after final payment, or until audited by the Commonwealth of Virginia, whichever is sooner. Virginia Tech, its authorized agents, and/or the State auditors shall have full access and the right to examine any of said materials during said period.

3. **AVAILABILITY OF FUNDS**: It is understood and agreed between the parties herein that Virginia Tech shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.

4. **CANCELLATION OF CONTRACT**: Virginia Tech reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 60 days written notice to the Contractor. In the event the initial contract period is for more than 12 months, the resulting contract may be terminated by either party, without penalty, after the initial 12 months of the contract period upon 60 days written notice to the other party. Any contract cancellation notice shall not relieve the Contractor of the obligation to deliver and/or perform on all outstanding orders issued prior to the effective date of cancellation.

5. **CONTRACT DOCUMENTS**: The contract entered into by the parties shall consist of the Request for Proposal including all modifications thereof, the proposal submitted by the Contractor, the written results of negotiations, the Commonwealth Standard Contract Form, all of which shall be referred to collectively as the Contract Documents.

6. **IDENTIFICATION OF PROPOSAL EMAIL**: Virginia Tech will only be accepting electronic submission of proposals. All submissions must be submitted to https://procurement-vt.bonfirehub.com/. Upon completion you will be directed to your Submission Receipt. Virginia Tech will not confirm receipt of proposals. It is the responsibility of the offeror to make sure their proposal is delivered on time. **Attachments must be smaller than 1000MB in order to be received by the University.** Proposals may **NOT** be hand delivered to the Procurement Office.

7. **NOTICES**: Any notices to be given by either party to the other pursuant to any contract resulting from this solicitation shall be in writing via email.

8. **SEVERAL LIABILITY:** Virginia Tech will be severally liable to the extent of its purchases made against any contract resulting from this solicitation. Applicable entities described herein will be severally liable to the extent of their purchases made against any contract resulting from this solicitation.

9. **CLOUD OR WEB HOSTED SOFTWARE SOLUTIONS**: For agreements involving Cloud-based Web-hosted software/applications refer to link for additional terms and conditions: http://www.ita.vt.edu/purchasing/VT_Cloud_Data_Protection_Addendum_final03102017.pdf

SPECIAL TERMS AND CONDITIONS

ADVERTISING: In the event a contract is awarded for supplies, equipment, or services resulting from this solicitation, no indication of such sales or services to Virginia Tech will be used in product literature or advertising. The contractor shall not state in any of the advertising or product literature that the Commonwealth of Virginia or any agency or institution of the Commonwealth has purchased or uses its products or services.

INSURANCE:

By signing and submitting a Proposal/Bid under this solicitation, the offeror/bidder certifies that if awarded the contract, it will have the following insurance coverages at the time the work commences. Additionally, it will maintain these during the entire term of the contract and that all insurance coverages will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission.
During the period of the contract, Virginia Tech reserves the right to require the contractor to furnish certificates of insurance for the coverage required.
INSURANCE COVERAGES AND LIMITS REQUIRED:

A. Worker's Compensation - Statutory requirements and benefits.
B. Employers Liability - $100,000.00
C. General Liability - $1,000,000.00 combined single limit. Virginia Tech and the Commonwealth of Virginia shall be named as an additional insured with respect to goods/services being procured. This coverage is to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor's Liability, Owner's and Contractor's Protective Liability and Personal Injury Liability.
D. Automobile Liability - $500,000.00
E. Builders Risk – For all renovation and new construction projects under $100,000 Virginia Tech will provide All Risk – Builders Risk Insurance. For all renovation contracts, and new construction from $100,000 up to $500,000 the contractor will be required to provide All Risk – Builders Risk Insurance in the amount of the contract and name Virginia Tech as additional insured. All insurance verifications of insurance will be through a valid insurance certificate.

F. The contractor agrees to be responsible for, indemnify, defend and hold harmless Virginia Tech, its officers, agents and employees from the payment of all sums of money by reason of any claim against them arising out of any and all occurrences resulting in bodily or mental injury or property damage that may happen to occur in connection with and during the performance of the contract, including but not limited to claims under the Worker's Compensation Act. The contractor agrees that it will, at all times, after the completion of the work, be responsible for, indemnify, defend and hold harmless Virginia Tech, its officers, agents and employees from all liabilities resulting from bodily or mental injury or property damage directly or indirectly arising out of the performance or nonperformance of the contract.

SIDEWALK POLICY: Driving on sidewalks is allowed when there is no other way to get a needed vehicle to a designated place or building on campus. The vehicle operator shall be made aware that extreme caution shall be used to operate the vehicle in a way that will not be a hazard or hindrance to pedestrians using the walk. The contractor shall be responsible for any damage to turf and anything that is located adjacent to the walk. Parking an unattended vehicle on a sidewalk is strictly prohibited by State Law. The contractor is allowed to park a vehicle on a sidewalk if there is no other way to perform necessary work. The procedure to obtain a permit to operate a vehicle on sidewalks is the

same as for the turf as outlined in Turf Policy. Any vehicle parked illegally on sidewalks shall be subject to ticketing, fines and towing if necessary.

SUBCONTRACTS: No portion of the work shall be subcontracted without prior written consent of Virginia Tech. In the event that the contractor desires to subcontract some part of the work specified herein, the contractor shall furnish Virginia Tech the names, qualifications and experience of their proposed subcontractors. The contractor shall, however, remain fully liable and responsible for the work to be done by his subcontractor(s) and shall assure compliance with all requirements of the contract.

TURF POLICY: Parking or driving on campus turf or sidewalk is strictly prohibited, except as specifically directed or otherwise allowed by the Physical Plant Grounds Department. In this case, a turf permit must be obtained from Virginia Tech Parking Services and displayed by the vehicle. Turf parking is not allowed under the canopy of any tree on campus. Any vehicle parked illegally on turf or sidewalks shall be subject to ticketing and fines.

WARRANTY (COMMERCIAL): The contractor agrees that the supplies or services furnished under any award resulting from this solicitation shall be covered by the most favorable commercial warranties the contractor gives any customer for such supplies or services and that the rights and remedies provided therein are in addition to and do not limit those available to Virginia Tech by any other clause of this solicitation. A copy of this warranty must be furnished with the Proposal/Bid.

WORK SITE DAMAGES: Any damage to existing utilities, equipment or finished surfaces resulting from the performance of this contract shall be repaired to the Owner's satisfaction at the contractor's expense.

ADDENDUM # 1 TO RFP # 952642206

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY (Virginia Tech)
Procurement Department (MC 0333)
North End Center, Suite 2100
300 Turner Street NW
Blacksburg, Virginia 24061

DATE	ORIGINAL DUE DATE AND HOUR
June 10, 2022	**June 24, 2022 @ 3:00 PM**

ADDRESS ALL INQUIRIES AND CORRESPONDENCE TO: Levi Henry, Buyer Senior
E-MAIL ADDRESS: lhenry29@vt.edu TELEPHONE NUMBER (540) 231-7852
FAX NUMBER (540) 231-9628 AFTER HOUR MESSAGES (540) 231-6221

Commissioning and Audit Services

A. The following questions have arisen as a result of this solicitation. Please see answers below in red:

1. The RFP doesn't mention LEED. Does VT typically pursue LEED, and if so, for new construction, would Option 1 Path 2 Monitoring Based Commissioning be pursued? VT does typically pursue LEED Silver on new capital projects. The Option 1 Path 2 Monitoring Based Commissioning may be an option to be pursued.

2. Is there a set number of contracts that will be awarded for this RFP? No, there is no set number of contracts that will be awarded.

3. Will all of VT's commissioning needs, be fulfilled through this contract? Or do you anticipate procuring commissioning services under separate contract as well (say major new construction)? Virginia Tech cannot guarantee any minimum amount of business for any contract(s) awarded from this RFP.

4. Is this for all or VT's campuses? If so, would VT accept applications from commissioning providers that would prefer to focus on one campus location, rather than all, in order to limit the impact of travel costs to projects? The intent for this RFP is to service all of Virginia Tech's needs, wherever that may be.

5. Can a firm submit as prime and be a sub-consultant on other teams as well? Yes.

6. If the prime is SWaM/MBE, does that qualify to achieve 100% of the credit for SWaM participation, or does the SWaM commissioning provider need to bring another SWAM/MBE onboard? If the primary contractor is SWaM certified by the Virginia SBSD then that qualifies for 100% of the credit.

7. Under section VII, A. 3- Price: Are you looking for a rates sheet of team members, or should we price a hypothetical project to show the level of effort on different tasks? We are looking for an hourly rate sheet for team members.

8. Does Virginia Tech utilize any monitoring-based commissioning data analytics software such as Skyspark or Clockworks? Currently we have a system available called Navigator by Siemens. However, it is not fully utilized at this time.

9. Can you please tell me where I can find the required General Information Form to include with our submission to RFP #952642206 (Commissioning and Audit Services)? Page 2 of the RFP is considered the general information form. Please sign the bottom of this page and include as part of your proposal.

10. May our firm be part of multiple teams submitting on this RFP solely for the Building Enclosure Commissioning Services component of the RFP? Yes, your firm can be part of multiple teams submitting on this RFP solely for the Building Enclosure Commissioning Services component.

11. For the Insurance section, the RFP says: *Builders Risk – For all renovation and new construction projects under $100,000 Virginia Tech will provide All Risk – Builders Risk Insurance. For all renovation contracts, and new construction from $100,000 up to $500,000 the contractor will be required to provide All Risk – Builders Risk Insurance in the amount of the contract and name Virginia Tech as additional insured. All insurance verifications of insurance will be through a valid insurance certificate.* We have never seen this requirement before for a commissioning RFP. We are not contractors or builders. Can you confirm that this is being required for Cx Providers to add to their insurance policies? Yes, this term and condition will be included in any resulting contract(s) awarded from this solicitation.

12. Do you anticipate using this contract for work on the new Arlington campus construction? The contract(s) will be intended to service any of Virginia Tech's related needs. It is possible that this will be used for the work on the new Arlington campus however Virginia Tech cannot guarantee any minimum amount of business for any contract(s) awarded from this RFP.

13. Bonding is not typically a requirement for commissioning contracts. Please confirm bonding will not be required. Bonding is not required as this is being solicited as an RFP for goods/services.

14. Please clarify the appropriate time for an offeror to propose alternate terms for General and Special Terms and Conditions - as part of the submitted proposal or during contract negotiations? Please include any alternate terms your firm proposes as part of your submission.

15. The commercial warranty requirement appears to be inappropriate for the professional services sought by the RFP. Please confirm providing the warranty will not be a requirement. This term and condition will be included in any resulting contract(s) awarded from this solicitation.

B. All other terms, conditions and descriptions remain the same.

C. The due date and hour remains at 3:00 PM on June 24, 2022.

I acknowledge that I have read and understand this addendum in its entirety.

_____ _____

Signature Date

Virginia Tech

Request for Proposal for
Commissioning and Audit Services

RFP# 952642206 | June 24, 2022

Facility Dynamics
ENGINEERING

Facility Dynamics
ENGINEERING

February 3, 2021

Travis Jessee, Supervisory Project Manager
Virginia Tech
Sterrett Facilities Complex, 230 Strerrett Drive
Blacksburg, VA 24061
email: trjessee@vt.edu

RE: Request for Proposal for Building Systems Commissioning Services
Virginia Tech Innovation Campus Academic Building (ICAB-1)

Dear Mr. Jessee,

Our team is pleased to provide the attached proposal in support of our commitment to working with Virginia Tech and various task orders through the IDIQ Term Contract. Since, our inception, we have been integral team members for colleges and universities nationwide and since 2004, we have worked with Virginia Tech on multiple and notable projects.

Facility Dynamics is a commissioning firm that is committed to building health of all types by bridging the gap between how a building is designed and how it actually operates. For over 33 years, our team of engineers and technicians has been carefully built with unique people who were once owners, superintendents, and operators of various facilities- as previous owners in different capacities, we bring a breath of experience and understanding that sets us apart from other commissioning firms.

As a note, Facility Dynamics Engineering does not carry Builder's Risk Coverage

Best Regards,

Jay Santos, PE
Principal, Co-Founder

RFP # 952642206, Commissioning and Audit Services

INCLUDE THIS PAGE WITH YOUR PROPOSAL, SIGNATURE AT SUBMISSION IS REQUIRED

DUE DATE: Proposals will be received until **June 24, 2022 at 3:00 PM**. Failure to submit proposals to the correct location by the designated date and hour will result in disqualification.

INQUIRIES: All inquiries for information regarding this solicitation should be directed to Levi Henry, CUPO, Buyer Senior. Phone: (540) 231-7852 e-mail: lhenry29@vt.edu. All inquiries will be answered in the form of an addendum. Inquiries must be submitted by **3:00 PM on June 10, 2022**. Inquiries must be submitted to the procurement officer identified in this solicitation.

PROPOSAL SUBMISSION:
Proposals may NOT be hand delivered to the Procurement Office.

Virginia Tech has partnered with Bonfire Interactive to create a new procurement portal that will allow you to access business opportunities and submit bids and proposals to Virginia Tech digitally.

Proposals must be submitted electronically at:
https://procurement-vt.bonfirehub.com/.

Vendors are requested to visit the new Procurement Portal then follow the link to the Bonfire vendor registration page to register your company. Registration is easy and free. If you have any challenges with the registration process, please contact Bonfire Interactive Support at support@gobonfire.com .

It is encouraged for all vendors to register prior to the proposal submission deadline to avoid late submissions. Log into your Bonfire Vendor account in order to access the opportunity and begin preparing your submission. Upon completion you will be directed to your Submission Receipt. Virginia Tech will not confirm receipt of proposals. It is the responsibility of the offeror to make sure their proposal is delivered on time.

For a quick tutorial on how to upload a submittal, visit: https://support.gobonfire.com/hc/en-us/articles/360011034814-Creating-and-Uploading-a-Submission-for-Vendors-?_ga=2.42375717.1472165071.1588110542-997330893.1585332052

Hard copy or email proposals will not be accepted. Late proposals will not be accepted, nor will additional time be granted to any individual Vendor.

Attachments must be smaller than 1000MB in order to be received by the University.

In compliance with this Request For Proposal and to all the conditions imposed therein and hereby incorporated by reference, the undersigned offers and agrees to furnish the goods or services in accordance with the attached signed proposal and as mutually agreed upon by subsequent negotiation.

AUTHORIZED SIGNATURE: _____ Date: June 24, 2022

03/28/2022

[INCLUDE THIS PAGE]

ADDENDUM # 1 TO RFP # 952642206

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY (Virginia Tech)
Procurement Department (MC 0333)
North End Center, Suite 2100
300 Turner Street NW
Blacksburg, Virginia 24061

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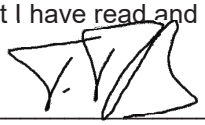
B. All other terms, conditions and descriptions remain the same.

C. The due date and hour remains at 3:00 PM on June 24, 2022.

I acknowledge that I have read and understand this addendum in its entirety.



Signature

June 23, 2022
Date

QUALIFICATIONS and EXPERIENCE

COLLABORATION. INNOVATION. PERSISTENCE.

FOUNDERS
Lon Brightbill, PE
Jay Santos, PE

WHEN WE OPENED
1989

WHERE WE ARE
Corporate
6760 Alexander Bell Drive
Suite 200
Columbia, MD 21046
410.290.0900

Local Presence in 17 states,
50 cities

WHAT WE DO
Building Commissioning
Controls Engineering
Remedial Engineering
Training
Fault Detection Diagnostics

CONTACT
Jay Santos, PE
Principal, Co-Founder
410.290.0900
jays@facilitydynamics.com

Tom Allin
Tim Scruby
Senior Project Managers
410.290.0900
tallin@facilitydynamics.com
tims@facilitydynamics.com

www.facilitydynamics.com

Facility Dynamics ENGINEERING

FDE was founded in 1989 to bridge the gap between construction and facility operation and to address the challenges of sustainable efficient facility operation. We have maintained that focus with our team of senior professionals who have extensive experience in systems design, construction, training, and operation of mechanical, electrical, and building controls/automation systems.

Our culture is to foster collaboration and inject our unique expertise to help the project team deliver successful facilities. As pioneers in the building commissioning industry, we have an unparalleled resume of successful highly complex facilities.

THE TEAM
We believe, and our actions and history show, that it is essential for the commissioning engineer to be a collaborative and constructive team member. Our comprehensive approach combines analysis with state-of-the-art software to create a thorough, efficient, and superior building commissioning process.

Our highly skilled staff have complementary expertise in mechanical and electrical systems design, HVAC controls, electrical testing, systems balancing, training, operations and maintenance, and remedial system analysis. We believe in a process that actively includes our engineers and technicians.

“WE ARE GLAD FDE IS HERE”
FDE embraces the attitude that the primary goal of commissioning is to deliver:

- High performance and properly operating facility to the Owner
- Well-trained Operations and Maintenance staff
- High quality and continually useful documentation of the facility and of the commissioning process.

Further, we approach our commissioning activities with the highest respect for the various parties in the design and construction processes and their roles. The words ‘we are glad FDE is here’ are heard often from contractors and owners alike, and we take great pride in compliments like this.

#6 by CONSULTING-SPECIFYING ENGINEER
Facility Dynamics Engineering was recently ranked the #6 MEP Commissioning firm in the United States. Compiled from revenue, performance, and percentage of work committed to the discipline, Facility Dynamics is a leader in the industry with its significant presence in the buildings and facilities landscape.

BUILDING ENVELOPE CONSULTANT

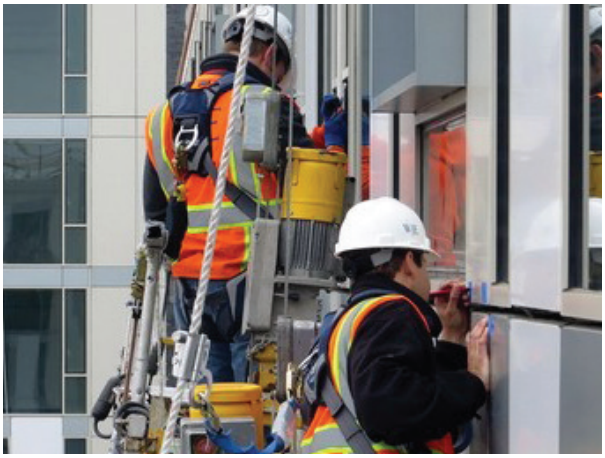
Facility Dynamics Engineering has teamed with Wiss, Janney, Elstner Associates, Inc. on nearly 60 different projects. After working together on many diverse facilities, our team is prepared to bring our solid expertise of MEP commissioning and building envelope commissioning to Virginia Tech.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

Wiss, Janney, Elstner Associates, Inc.

WJE has performed design reviews and observed the construction of many types of buildings across the country, including multiple higher education facilities, where the performance of the building enclosure is critical. WJE is familiar with the needs of the exterior enclosure in order to preserve and maintain the interior conditioned air quality and operational functions of these facilities. WJE's design and submittal reviews, construction observations, and testing of the exterior enclosure follows WJE's typical standard of care and core pursuit of excellence.

WJE's exterior enclosure consulting philosophy is a collaborative approach throughout the design and construction phases. During the design phase, WJE strives to understand the Architect's design intent, while reviewing the design documents and details to achieve the Owner's expectations. During the construction phase, WJE continues to work closely with the Architect, Contractor, and Ownership team. Their desire is to achieve effective and timely communications with all parties, allowing work to progress in a quality manner in accordance with the schedule. WJE has developed various approaches to the management of projects. Throughout recent projects, they have continuously evolved their approach and incorporated many "lessons learned" into their delivery of building enclosure services.



FIRM BACKGROUND

Facility Dynamics Engineering is a member in good standing of the ACG – AABC Commissioning Group.

acg
AABC Commissioning Group

Annual Membership Certificate

Awarded to

Facility Dynamics Engineering

as a member in good standing of the AABC Commissioning Group for the year

2022

This company has met all requirements for membership and is entitled to all rights and privileges thereof. This certificate is renewable on an annual basis and expires December 31, 2022.

Troy N. Byers, P.E., CxA, *President*

Ray Bert, *Executive Director*

QUALIFICATIONS and EXPERIENCE

FDE Staff- Experienced, Dedicated and Technically Proficient

Without the proper staff, even the best 'means and methods' would not be sufficient for a successful project. Above all else, FDE has strived over our 33 years to hire only the 'right people' – engineers and technicians with not only rich and diverse technical experience, but also highly motivated individuals with a dedication and passion to teaching, learning, and understanding and solving problems.

It is essential that the role of the Cx Provider be a collaborative and constructive one. FDE strongly feels that we cannot have an attitude that is primarily critical towards the design and construction parties, nor one that attempts to make the Cx process look like the "savior" of the project. The Cx Provider must take a constructive attitude and whenever possible collaborate directly with the related parties to advise them "behind the scenes", hopefully BEFORE a problem arises. When properly conducted, a successful Cx program makes all parties look good and perform better to the benefit of the Owner. Our experience also indicates that – when executed properly- the designers and contractors become full-on advocates of the commissioning process.

Please find below our proposed team for the task orders that will arise from this Term Services Contract.

LEADERSHIP

Tom Allin
Senior Project Manager

Jay Santos, PE
Principal

Tim Scruby, PE
Senior Project Manager

Brian Russell, PE
Senior Project Manager

Bill Majeski, PE
Senior Electrical Engineer

Dave Coleman, PE
Senior Project Manager

David Nichols, PE
Senior Electrical Engineer

Jamie Nickels
Senior Mechanical Engineer

Ryan Thomas
Senior Mechanical Field Engineer

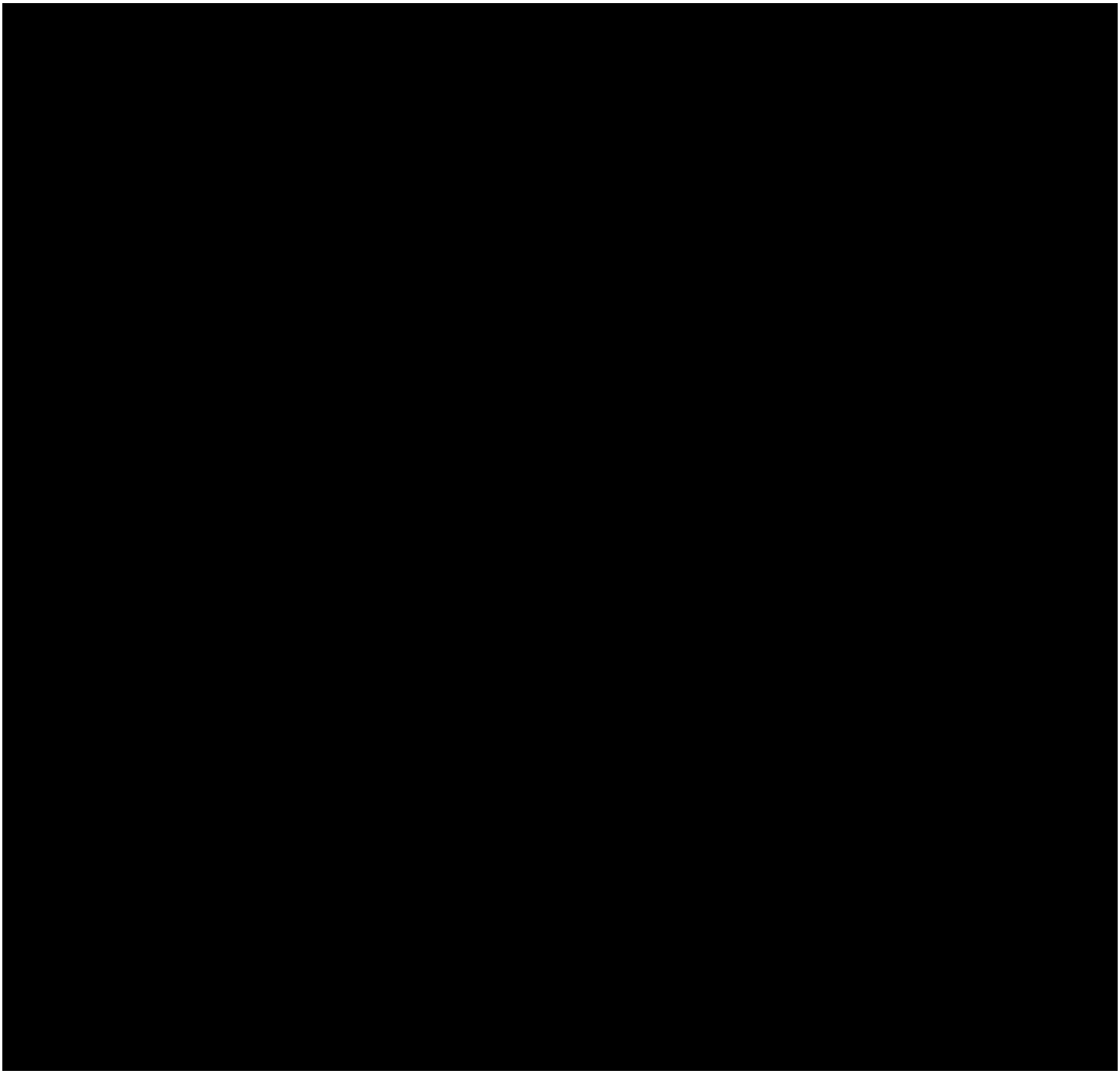
Keith Barlow
Senior Mechanical Field Engineer

Financial Stability

For each of the last 10 years, Facility Dynamics Engineering has had revenue over $20 million. Additional information can be made available upon request.

Jay Santos, PE

PRINCIPAL



Tom Allin

SENIOR PROJECT MANAGER

EDUCATION

[redacted]

[redacted]

Tim Scruby, PE

SENIOR PROJECT MANAGER

EDUCATION

[redacted]

[redacted]

Brian Russell, PE

SENIOR PROJECT MANAGER

EDUCATION

[redacted]

[redacted]

David Coleman, PE

SENIOR PROJECT MANAGER

EDUCATION

[redacted]

[redacted]

David Nichols, PE

SENIOR ELECTRICAL ENGINEER

EDUCATION

[redacted]

[redacted]

Bill Majeski, PE

SENIOR ELECTRICAL ENGINEER

EDUCATION

[redacted]

[redacted]

Jamie Nickels

SENIOR MECHANICAL ENGINEER

EDUCATION

[redacted]

[redacted]

[redacted]

Keith Barlow

SENIOR FIELD ENGINEER

EDUCATION

[redacted]

[redacted]

Ryan Thomas

SENIOR MECHANICAL ENGINEER

EDUCATION

[redacted]

[redacted]

Experience with Virginia Tech

Facility Dynamics Engineering has worked with Virginia Tech since 2003 and a list of our projects is seen below.

- Academic & Student Affairs Building
- Academic Buildings Renovation-
- Academic Buildings Renovations
- Biocomplexity Institute Data Center – Fralin Life Sciences Institute
- Chiller Plant Phase II
- Cowgill Hall HVAC & Power
- Davidson Hall
- Fralin Hall BSL3 Lab Renovations
- Health Center Renovation & Addition – Schiffert Health Center
- ICTAS Facility- Hugh and Ethel Kelly Hall
- Indoor Athletic Training Facility – Beamer-Lawson Indoor Practice Facility
- Innovation Academic Building 1
- Materials Management Facility
- McComas Hall Addition
- Metabolic Research Lab – Metabolism Core
- New Residence Hall
- Sigma Phi Epsilon Fraternity Building
- Southern Piedmont Lab Addition
- VBI Data Center Electrical Metering- The Virginia Bioinformatics Institute
  Network Dynamics and Simulations Science Laboratory (NDSSL)

Virginia Commonwealth University, School of Allied Health Professions

Richmond, VA

PROJECT DETAILS

SIZE
154,000 SF

DATE
2015-2020

CONSTRUCTION COST
$87M

PROJECT REFERENCE
[redacted]

PROJECT SPECIFICS

- Facility Dynamics Engineering served as the Owner's Representative
- Lead Commissioning Authority
- LEED Silver

The building is a multistory high-rise building consisting of a taller 8 story wing along the west side, and a lower 4 story wing on the south side. The first floor includes a lobby and auditorium, with individual departments located on upper floors, and classrooms located throughout.

The new 54,000 SF facility is designed to unite Gerontology, Health Administration, Nurse Anesthesia, Occupational Therapy, Patient Counseling, Physical Therapy, Radiation Sciences, Rehab Counseling, and the Technology Center, as well as the Dean's Office and the Virginia Center on Aging. Departments and programs share teaching amenities and technologies, such as synchronous distance-learning classrooms; audiovisual capture of directed instruction; and observation of patient-care simulation.

The building houses a dedicated Nurse Anesthesia simulation suite, as well as one shared by all of the allied health disciplines working individually or in teams across specialties. Simulated hospital environments will be provided for operating rooms, acute care patient rooms, recovery rooms, and a range of imaging spaces including a high-tech virtual linear accelerator. The therapy departments will share a state-of-the-art Smart Home Apartment for training students. The program also includes a double-height biomechanics research lab and several maker labs, where students and faculty can research, create, and test their own adaptive aids for therapy.

Facility Dynamics Engineering was involved in all phases of this project beginning with the design phase, through construction and acceptance and finally through warranty with additional rechecks completed at the end of construction.

University of Virginia, Multiple Projects

Charlottesville, VA

PROJECT DETAILS

SIZE
Varies

DATE
Ongoing

COST
Varies

PROJECT REFERENCE

[redacted]

PROJECT SPECIFICS

- Over 168 projects
- Lead Commissioning Authority
- Often Serve as Staff Extension

Since 2003, Facility Dynamics Engineering has provided commissioning services for multiple projects for the University of Virginia (UVA), including several campus utility plant expansion/upgrade projects. Facility Dynamics has provided commissioning services to numerous University building projects including (but not limited to) the following.

Jordan Hall - HVAC Renovation of Old Jordan Hall; 7th Floor Renovation; Recommissioning of Jordan Hall Addition; and Gross Anatomy and Fresh Tissue Labs (renovation of the existing gross anatomy lab and addition of a fresh tissue lab at Old Jordan Hall)

MR-4 - Retrocommissioning; and remedial design including hydronic system upgrades and heat recovery system remedial engineering

MR-5 - Re-commissioning including Conversion of Constant Volume HVAC Systems to Variable Volume; Programming Assistance to Modify the Air Flow Sequence to Include Cross-Limited Tracking; and Design of Controls Upgrade

MR-6 (Carter-Harrison Medical Research Facility)- Commissioning and Re-commissioning including BSL-3 and ABSL-3 labs; and technical support to UVA Facilities for annual BSL-3 recertifications

South Chiller Plant - Commissioning of the last two additions to the South Chiller Plant including two large 2.5 MW generators and automated switchgear to serve the South Plant

Battle Building - 200k sf of pediatric outpatient facility, including surgery suite with 12 OR/Procedure rooms

Cyclotron - Conversion of shell space from underground vivarium addition into a cyclotron and biomarker core facility)

LiSA Electron Microscopy Suite- Converted shell space from underground vivarium addition into the Yeager Electron Microscope Suite

Snyder Research Building- Underground vivarium addition

Fontaine Research Park- Fit-out of the 3rd floor shell space of an existing MOB with an outpatient, multi-discipline clinic

Old Medical School - Renovation for a Clinical Research Unit and the Department of Neurosurgery

ITC Data Center- The new stand-alone Tier II and Tier III facility houses computing and telecommunications equipment including: high performance computing clusters with significant heat loads, standard computing equipment, UVA's storage and infrastructure and tape libraries.

University of Virginia, Multiple Projects (continued)

Charlottesville, VA

Special Collections Library - Design phase commissioning services including peer review and preparation of a commissioning plan and specifications for the 58,000 square foot project consisting of two stories above grade and two stories below grade with administrative, unloading and storage rooms. All areas have temperature and humidity control with desiccant dehumidification used for critical areas.

Observatory Hill Residence Hall - Commissioning services to the new Observatory Hill (O' Hill) residence hall, a five story 100,000 square foot new facility housing both students and community space including lounges, study areas, bathrooms, multi-purpose rooms and laundry facility.

Health System South Plant Expansion
FDE commissioned two separate CHW and electrical generator expansion projects at this plant that together added 7200 tons to the existing 3600 ton plant. This plant is connected to the Health System North Plant (9600 tons). Scope of commissioning at Health System South Plant projects included the following systems:

- 3-1200 ton (existing centrifugal chillers)
- 3-2400 ton chillers and cooling towers (expansion projects commissioned)
- Recommissioning 2,000,000 gallon chilled water energy storage system
- New secondary pumps, primary CHW and condenser water pumps, energy storage pumps, loop pressurization controls (expansion projects commissioned)
- Interaction of Sequences of Operation with other plants on the loop
- Electrical commissioning for 2- 2.5 mW generators and new switchgear (expansion) and rework of the existing 1 mW generator controls/switchgear.

North Grounds Utility Plant
This project was an upgrade/addition to the existing University of Virginia North Grounds Utility Plant. The project pursued and obtained LEED certification. The commissioning scope included all of the mechanical and electrical equipment and controls for the HVAC, chillers, boilers, pumps, cooling towers, generator, main-tie-main dual ended switchgear, ATS, UPS, lighting controls, BAS and building mechanical/plumbing modifications. The BAS was self-installed by UVA staff (Automated Logic).
Scope of commissioning at Health System South Plant projects included the following systems:

- 3-Fulton combination gas/oil boilers (condensing on gas, non-condensing on oil). Boilers equipped with Siemens LMV series/parallel positioning burner management and combustion controls;
- 2-1,000 ton Trane centrifugal chillers (included witnessing factory test on behalf of UVA);
- 5-module Multistack heat recovery chiller (included witnessing factory test);
- 3-1000 ton BAC cooling towers;
- Associated CHW and condenser water pumps;
- 400 kW generator and ATS;
- UPS for controls (10 kVA);
- Chemical Treatment Systems;
- GE Switchgear (with closed transition automated main-tie-main controls).

Virginia Tech, Academic Buildings Renovation

Blacksburg, VA

PROJECT DETAILS

SIZE
Varies

DATE
2019

PROJECT REFERENCE
Client:
[redacted]

Davidson Hall: FDE directed the commissioning process during the construction phase in 2017 and 2018, including reviewing submittals and verifying equipment startup. During the Summer and Fall of 2018, FDE conducted functional performance testing, reviewed BAS workstation graphics and trend logs, and documented owner training. FDE authored a Systems Manual to provide the facilities operating staff a document covering descriptions of specific systems and how they are intended to operate within the facility, guidance for efficient operation of mechanical, plumbing and lighting control systems and equipment, and detailed sequences of operation. FDE will follow up with an End-of-Warranty period site visit in late 2019 to review system operation with VT operations personnel to help resolve outstanding issues.

Liberal Arts Building Renovation: This renovation project renovated the entire building, including a complete replacement of mechanical, electrical and plumbing systems, and including an addition of a stack of toilets and a stairwell at the North end of the building. The four stories 17,900 square feet building houses instructional programs for the School of Performing Arts and Cinema.

Sandy Hall: This renovation project renovated the entire building, including a complete replacement of mechanical, electrical and plumbing systems. The four stories 15,762 square feet building houses instructional programs for the School of Neuroscience. Central air handling equipment consists of a single air handler with relief air fan, hydronic cooling coil, steam preheat coil that serves 4-pipe chilled beam terminal units. The source of heat is the campus steam distribution system. The source of cooling is the campus chilled water distribution system The central HVAC equipment is located in a ground floor mechanical room. A few ceiling mounted cabinet unit heaters provide heat for selected building entry locations. 4-pipe fan coil units serve the toilet rooms and other service areas. A blower-coil unit (large vertical 4-pipe fan coil unit) serves the Distance Learning Center room on the basement floor level.

FDE commissioned the HVAC Equipment with Siemens BAS: AHU's, Terminal Units, Fan Coil Units, Steam Systems, Chilled & Hot Water Systems, Air Cooled Chiller, Chilled Beam Chilled Water System, Ex-Fans, Unit Heaters, Baseboard Radiator Heaters, Cabinet Unit Heaters, Ductless Split Systems, Four pipe Chilled Beams. Plumbing: Elevator sump pumps (BAS Alarming integration, Electric Water Heaters and Recirc Pumps. Lighting: Occupancy Sensors, Dimming.

PRICE

Facility Dynamics Engineering

Professional Staff	2022-2024 Rates
Principal	$225
Project Manager	$205
Lead Cx Engineer	$195
Senior Mechanical Engineer	$185
Senior Electrical Engineer	$180
Project Mechanical Engineer	$170
Senior Field Engineer Mechanical Engineer	$165
Field Mechanical Engineer	$155
Field Technician	$145
Junior Field Engineer	$125
Administrative	$50

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

Wiss, Janney, Elstner Associates, Inc.

Professional Staff	2022
Senior Principal	$370
Principal	$300
Associate Principal	$250
Senior Associate	$225
Associate III	$195
Associate II	$175
Associate I	$140
Professional Support Staff	
Senior Specialist	$165
Specialist	$145
Senior Technician	$125
Technician II	$110
Technician I	$95

WORK PLAN

Facility Dynamics will assign a minimum of two Senior Project Manager / Project Director level staff to the contract. Depending on project schedule(s) and our current workload, one or both may play lead roles, at the management and technical level as needed. For each project depending on size and scope, we will designate a Project Manager and supporting staff as needed. For example, for a laboratory building with automated emergency / standby and uninterruptible power supply, and sophisticated power monitoring and control, we would designate a mechanical discipline project manager and a project electrical engineer to support the electrical scope for the project. All of our staff at this level will be well versed in current design, construction and maintenance practice for the systems for which they are responsible.

Facility Dynamics in-house staff are familiar with thermal and vapor transmission in buildings and its effect on HVAC heating and cooling, humidification and dehumidification loads, and condensation in and on structural elements as well as piping and ductwork. For LEED projects with Building Envelope Commissioning we will subcontract Wiss Janey Elsner (WJE) for the required design and peer reviews as we consider this element as better provided by a specialty firm. Alternately, we can and do incorporate Owner or other Owner preferred third party reviews in the process when requested.

Commissioning Project for New Construction and Renovation

Pre-Design and Design Phases

We prefer to be initially contracted in the early pre-design phase, at or before the time the project programming is nearing completion.

At this time after we have received the Project Description, Owner Objectives and available programming documents we will develop and present an early design phase commissioning plan to the interested Owner entities in a Design Phase Commissioning Kick-off Meeting. This will typically include the Owner's design and construction management team, Owner commissioning coordinator, Owner Facilities Management; plus the Architect, Engineer, and any contractors providing design support (such as a GC doing preconstruction services, or the Building Automation System contractor). Based on the outcome of this, we will finalize the design phase commissioning plan and update it as needed throughout the Design Phase of the project.

We will prepare a draft Owner's Project Requirements document using any standard templates that Virginia Tech maintains (or our own), and will submit to the team for review and approval. In concert with the Design Team, the OPR will be maintained through the design and construction phase to include changes that occur through the project design and construction.

Our approach to the design phase Commissioning Plan and Commissioning Specifications is to have the design phase commissioning plan include the boiler plate commissioning specifications to avoid unnecessary repetition with definitions, process descriptions and the like, and reduce both effort and the opportunity for error.

WORK PLAN

Specification Appendices to the Design Phase plan will include:

Division 1- General Commissioning Requirements

- Functional Performance Testing (This section is structured to provide generic functional tests, and sample commissioning breakout schedules in Gantt chart format with precedents shown for commissioning deliverables as well as typical systems)
- Integrated (Inter) System Testing (Provides generic Integrated System Test requirements)
- Building Envelope Commissioning

Each Technical Division

- (Plumbing, Mechanical, Electrical) Commissioning Requirements. (These sections reference the General Requirements and cover trade specific details.)
- Building Automation System Commissioning Requirements

These sections will be edited and submitted with the project specifications at each design submission incorporating specifications to allow the design team to review and offer comments to us and to coordinate and reference them from the technical and related front end sections.

We will provide focused design reviews at schematic, preliminary and working documents phases and track the resolution of comments via our web based commissioning management portal, or other agreed issues management system. Our reviews represent our experience and opinions and are always intended to be constructive and not critical. Our reviews will focus on efficiency, operability and maintainability, and functional capability to meet the Owner's requirements. Additionally we will coordinate commissioning requirements and conformance to the VT design guidelines as we review the contract documents.

We coordinate one or more meetings at each phase of the design to facilitate the team's understanding of our comments, our understanding of the responses, and the coordination of the specifications and OPR updates. This will include a final backcheck to document the status of comments at issuance of the documents for construction.

We will make detailed review of the controls design when it is sufficiently developed to ensure that the hardware and software specifications, as well as the sequences of operation for the systems are sufficiently developed for the controls contractor to understand and implement them in accordance with the design intent and VT requirements. We will conduct and document a controls integration meeting at the appropriate time to facilitate this.

We will participate in project value engineering sessions as requested. We will assign senior staff to this effort with experience commensurate with the need to represent Virginia Tech's best interest.

Our final commissioning specifications included in the contract documents constitute the Construction Phase Commissioning Plan. Our specifications include requirements for and the contractor preparation of plans during construction for items such as temporary conditioning of the building, temporary use and maintenance of permanent equipment (if allowed), post construction cleaning and the like. We will coordinate requirements for hydrostatic testing, flushing, cleaning and sterilization of piping systems as applicable and the specifications cover this.

WORK PLAN

Construction Phase

We normally conduct a Project Management / Executive level meeting with the Owner's Project Manager and the General Contractor or Construction Manager's project leadership to review the project requirements and understand any particular communication requirements before doing a more general Commissioning Kick-off meeting with the GC/CM and subcontractors. At the executive level meeting, we will establish the initial communication protocols and the submittal distribution and protocols.

As the GC / CM develops the project construction schedule, we will work with them to include commissioning tasks. As the project moves toward construction completion, we will work with the contractors to integrate more detailed system level tasks into the project schedule, or to develop system based breakout schedules to better track construction prerequisites for prefunctional and functional performance testing and to help them understand the system level processes required.

We will annotate the contractor's submittal schedule / log with items that we need to review and items that we need to receive for record and reference. Additionally we will identify items such as the building automation system submittal where additional review time and notice may be needed.

We will review the submittals for equipment, systems and important materials of construction, concurrent with the A&E. We will additionally review RFIs and change orders affections systems within the scope of the commissioning.

We develop a systems matrix and our specs will require the contractor's participation in tracking the required commissioning deliverables such as draft and completed pre-functional test and start-up documentation, submittals, testing and balancing and the like for each system, as well as the completion of the functional performance testing. This will typically be reviewed in commissioning meetings with the contractors.

Our project specifications will require contractor preparation of quality control and pre-functional checklists with draft approval by the CA and execution by contractors, and will include detailed requirements in collaboration with part 3 of the technical sections. Facility Dynamics will assist with example checklists for the contractors on request, and we offer a web portal or allow the contractor to submit electronic forms to complete. The contractors are still required to submit all required third party and vendor start-up forms.

We will visit the site to review installation progress and during, or immediately following the successful start-up of the major systems and the submittal of the start-up documentation to ascertain readiness for functional testing, and to confirm the schedule. We will typically attend start-ups of first of a kind systems and equipment and witness first of a kind piping and ductwork tests to ascertain that proper procedures are being followed and that the documentation will meet requirements.

At this time, we will conduct and document commissioning coordination meetings as necessary. We will prepare a site visit report for each site visit, and track issues using our web based commissioning tool action list component. This provides the ability to assign responsibility, due date. The initial items and subsequent responses are automatically emailed to selected portal project members and are visible to are parties. The action list is normally reviewed at each commissioning meeting.

After receiving the submittals and the draft O&M material, we will finalize the pre-functional, functional and integrated testing plans and will provide them to the contractors for their review.

Facility Dynamics maintains our own NIST traceable calibrated test equipment to use for retro-commissioning, troubleshooting, and TAB validation as needed. We also do TAB validation via reviewing the test and balancing contractor's TAB plan and witnessing portions of their work and procedures.

WORK PLAN

Acceptance Phase

Functional Performance Testing

Facility Dynamics will attend start-up and will direct functional performance testing of the new systems and associated controls.

Sampling methodologies will be as agreed during the commissioning proposal. Generally for non-critical terminal heating and cooling equipment and lighting controls a sampling methodology will be employed. For lab, life safety and critical systems 100 percent testing is done. No sampling is ever permitted on the contractors quality control and pre-functional testing.

Functional Test Prerequisites Include:

- Control System and Graphics
- Completed start-up forms for the systems to be tested. Systems to be tested shall be in full time automatic operation under their final and specified sequences of operation.
- Draft Installation Operation and Maintenance Manuals.
- At least hand written TAB data, with issues noted.

Integrated System Testing will include as a minimum checking system operation during simulated power failure and emergency power operation tests. Additionally, it will include fire alarm system interfaces with HVAC, lighting controls and access control systems. When applicable, it will include smoke control and stair pressurization systems.

It is anticipated that the Owner's maintenance staff may participate in functional performance testing as an aid in their learning of the new systems operation. During the functional testing and training period, following completion of installation and start-up, the Commissioning Agent will maintain an Action List / Deficiency Log related to commissioning issues resolution that will be included as part of each site visitation report. This list is not intended to replace the punch lists prepared by the A/E. FDE will maintain the action list on a project web portal that will be accessible to all members of the project team requesting access. The web portal allows review and response to the Action List, and review of the functional performance test progress.

Generally, punch list items noted by the CA will be forwarded to the A/E for inclusion in the punch list at their discretion, and will not be added to the action list unless considered a commissioning issue. This is negotiable with the project team.

Acceptance Phase Meetings

Facility Dynamics will coordinate commissioning meetings as needed to coordinate the on-site testing activities. On all projects there would be a summary meeting at least weekly to cover open issues, completion status, and look ahead schedule. For larger projects, short start of day meetings may be needed to confirm daily coordination.

WORK PLAN

Failed Tests and Retesting

We expect to have a small number of functional performance testing failures. Our specifications will require remedy of excessive failures, either due to manufacturing defects or to failure of responsible subcontractors, at no cost to the Owner. We define and identify the failure limits in the commissioning specifications.

Our web based Action List / Issues Log is used to manage failed tests – the contractors respond when the issue has been corrected and designated parties are notified. Facility Dynamics then changes the issue category to retest, and schedules and performs retesting at the next planned site visit, or schedules a retesting site visit when sufficient items are ready for retest.

CA Involvement in Training

FDE is contracted to assist with training coordination. The specifications require contractor preparation and submittal of a complete training plan before beginning any training. Facility Dynamics will provide assistance including sample forms, review of logistics and assistance with scheduling, upon request. The contractors are required to maintain documentation of all training session, including the agenda, materials, and attendee log. Facility Dynamics will provide or arrange initial supplemental training on the design intent, system configuration and orientation, as needed by the nature of the project.

Observation Period

After Functional Performance Testing, the new systems shall be shown to operate properly for 2 weeks (or other agreed period, depending on the nature of the facility) without malfunction, without alarm caused by control action or device failure, and with smooth and stable control of systems and equipment in conformance with these specifications.

Opposite Season Testing, Follow-up Site Visits and Monitoring

CA may visit the site at any time during the warranty periods to assist in resolving issues or conditions that have arisen since the functional testing, and to assess overall system operation. CA may monitor the systems via remote access to the FMS system, or will visit the site for this purpose if necessary, or will review trend logs provided by the controls contractor. During the opposite season from the initial observation period, FDE will visit the site to complete seasonal and other deferred testing and optimization. Our specifications will require an opposite season observation period to demonstrate satisfactory operation.

Conduct Acoustic/Sound Level Testing and Prepare Report

Facility Dynamics maintains sound level testing equipment and will provide sound level surveys with octave band data plotted on NC (Noise Criteria) curves.

O&M Documentation

Facility Dynamics reviews the project O&M documentation submitted by the contractors and tracks it using the systems matrix that we develop. We will coordinate the specification requirements with the A/E team. We often find that a preliminary review for completeness and general content is needed to make the material available for the installation, start-up and testing, then a final review of the completely assembled, indexed manuals, assemble by Trade / Subcontractor.

Asset Management

Facility Dynamics will review and coordinate the BIM asset management information as requested by the Owner. When contracted to do so, we can assist with asset tagging.

WORK PLAN

Final Deliverables

Systems Manual

As described, FDE will track and assemble the needed contractor turnover documents and assemble System Concept and Operation Manuals including the final design documentation (Owner Requirements and Basis of Design), System Level Documents (Functional Description, Single Line Diagrams, Sequence of Operation, Operating Manual) and recommendations for preventative maintenance and energy saving.

Final Commissioning Report

Facility Dynamics prepares a draft commissioning report at the completion of the acceptance phase, containing the elements of the final report, including:

- Design Documentation (OPR and BOD)
- Completed Start-up / Prefunctional Testing Documentation
- Testing and Balancing Report
- Functional Performance and Integrated System Performance Test logs
- Action List / Issues Log

The draft report will contain the open items issues log and the completed log.

The final report will contain the completed documentation of the opposite season testing and observation period and the final end of warranty site visit, including the agreed disposition of remaining issues.

Warranty Phase

Facility Dynamics will respond to issues arising during the warranty phase and will coordinate and conduct the opposite season testing and observation period. We will also hold an end of warranty meeting to handle the final disposition of the remaining issues and concern. The draft and final commissioning reports are prepared during this phase. The Systems Manual is completed during this phase.

WORK PLAN

Retro-Commissioning

Facility Dynamics normal process for retro commissioning and energy auditing is done in 3 phases. The phases are:

- Assessment Phase – The initial assessment of issues and deficiencies. The assessment report identifies the issues, offers solutions where evident, indicates what further investigation might be needed related to the issues, and prioritizes the path forward to addressing the issues.
- Remediation Phase – this is where issues are addressed by the designated responsible parties and further investigation and action takes place.
- Final Verification Phase – The phase where the corrections are reviewed by observation and testing and confirmed to have resolved the original issue.

Assessment Scope

Following is a typical scope of services for the retro commissioning assessment or energy audit.

Familiarization

Obtain and review project design drawings and specifications.
Obtain and review project quality control and commissioning documents as applicable

Assessment

Interview operation and maintenance staff to identify common issues and focus areas.
Make visual inspection of system and equipment installation to assess condition, with focus on the issues identified in the interviews.
Where applicable, review the BAS system, including system graphics, trend and alarm set-up, and operator logs showing overrides. Review system and equipment operation via historical trend data.

Analysis and Report

Assemble a report documenting the Activities, Observations and Recommendations with the following general outline.

- Executive Summary
- Observations
- Analysis
- Recommendations (Prioritized repairs, energy conservation measures)

Review report with owner and staff
Update report to include Owner and staff commentary and issue final report

Remediation / Implementation and Verification

The scope of services for the Remediation and Final Verification Phase are determined by the outcome of the assessment phase. Depending on the magnitude of the project, the Remediation or Implementation Phase may include preparation of a design, followed by a construction project. The Final Verification is the confirmation that the Remediation / Implementation was successful and documentation of that.

SMALL BUSINESS

Facility Dynamics Engineering is a Small Business in the Commonwealth of Virginia. The certification number is [redacted]

Let's Talk About Your Project

Jay Santos, PE
Principal, Co-Founder
410.290.0900
jays@facilitydynamics.com
www.facilitydynamics.com

Facility Dynamics
ENGINEERING

Negotiations Summary

1. **Virginia Tech question:** As part of Virginia Tech standard procedures, all awarded contracts will be publicly posted on an online contracts portal. Is there any information included that would be used to identify or harm a person's identity, finances or personal information? If so, please provide a redacted copy of your proposal.

   Facility Dynamics response: No information needs to be redacted.

2. **Virginia Tech question:** Are there any additional forms or documents that you will require to be incorporated into the contract documents? If so, please submit.

   Facility Dynamics response: No additional forms or documents will be required.

3. **Virginia Tech question:** Does Facility Dynamics agree to provide monthly invoices with payment due thirty (30) days after receipt of invoice or goods/services, whichever is later?

   Facility Dynamics response: Yes, we agree.

4. **Virginia Tech question:** Do you agree that you will be performing services as an Independent Contractor, Company, Corporation or other business entity and are not an employee of Virginia Tech or any other Commonwealth Entity?

   Facility Dynamics response: Yes, we agree.

5. **Virginia Tech question:** Do you further agree that Virginia Tech will not withhold any income taxes from its payments to contractors nor will it provide any employment benefits to the contractor or contractor's employees?

   Facility Dynamics response: Yes, we agree.

6. **Virginia Tech question:** End of Contract Service Transition Expectations**:** If or when a transition of service to another provider is required (end of contract life or otherwise), the university would require the incumbent firm to cooperative fully in a successful transition of services. Explain any requirements your firm might have in preparing for such a transition of services. Additionally, please indicate your willingness to establish a transition plan alongside the new provider of service which may include but not be limited to sharing important data and/or existing service information via a cooperative knowledge transfer process.

   Facility Dynamics response: No additional requirements. FDE has no issue with providing any transition planning and sharing of information in a cooperative manner.

7. **Virginia Tech question:** Do you agree that the initial contract period shall be two years?

   Facility Dynamics response: Yes, we agree.

8. **Virginia Tech question:** Upon completion of the initial contract period, does Facility Dynamics agree that the contract may be renewed by Virginia Tech upon written agreement of both parties for three (3) two-year periods, under the terms of the current contact?

   Facility Dynamics response: Yes, we agree.

9. **Virginia Tech question:** If awarded a contract, do you agree to limit price increases to no more than the increase in the Consumer Price Index, CPI-W, All Items category for the latest twelve (12) months for which statistics are available at the time of renewal or 3 percent, whichever is less?

   Facility Dynamics response: Yes, we agree.

10. **Virginia Tech question:** If awarded a contract, are you willing to hold prices firm for the initial contract period and the first renewal year?

    Facility Dynamics response: Yes, we agree.

11. **Virginia Tech question:** Please identify the highest-level executive in your organization that is aware of this solicitation. Describe that person's commitment to assuring the highest quality service to Virginia Tech if your organization is awarded a contract.

    Facility Dynamics response: J.Jay Santos, PE, President and Co-Founder. Jay is actively involved in the day to day business operations and is committed to personally review the quality of work provided to Virginia Tech through this contract.

12. **Virginia Tech question:** Will you be able to handle increased volumes of business and/or provide service to additional departments during the course of the contract?

    Facility Dynamics response: Yes.

13. **Virginia Tech question:** Please provide your best schedule of prices for all services offered.

    Facility Dynamics response: Hourly rates provided:

Hourly Rates	
Project Manager	$205
Lead Commissioning Engineer	$195
Senior Mechanical Engineer	$185
Project Mechanical Engineer	$170
Senior Field Mechanical Engineer	$165
Field Mechanical Engineer	$155
Administrative	$50

14. **Virginia Tech question:** How soon after contract award can you begin providing services?

    Facility Dynamics response: Immediately.

15. **Virginia Tech question:** Are you registered with and willing to participate in the eVA internet procurement solution described in the terms and conditions of the RFP?

    Facility Dynamics response: Yes.

16. **Virginia Tech question:** Do you acknowledge, agree and understand that Virginia Tech cannot guarantee a minimum amount of business if a contract is awarded to your company?

    Facility Dynamics response: Yes, we agree.

17. **Virginia Tech question:** Are the prices for all goods/services listed in your proposal inclusive of all applicable eVA system transaction fees?

    Facility Dynamics response: Yes.

18. **Virginia Tech question:** Does the vendor acknowledge, agree, and understand that the terms and conditions of the RFP # 952642206 shall govern the contract if a contract is awarded to your company?

    Facility Dynamics response: Yes, we agree.

19. **Virginia Tech question:** For purposes of interacting with HokieMart, please identify the person (name, phone number, email address, etc.) in your company that will serve as liaison for a) e-commerce, b) accounts receivable, c) emergency orders.

    Facility Dynamics response: Dawn Kahalewai, [redacted], dkahalewai@facilitydynamics.com

20. **Virginia Tech question:** Are there any additional financial or value-added incentives you would like to offer at this time?

    Facility Dynamics response: No, not at this time.