

CONTRACT FOR  
COMMISSIONING SERVICES  
**DENTISTRY CLINICAL EDUCATION FACILITY**  
TEXAS A&M HEALTH SCIENCE CENTER  
DALLAS, TEXAS

THIS CONTRACT made the 1st day of August, 2017, by and between the BOARD OF REGENTS OF THE TEXAS A&M UNIVERSITY SYSTEM, hereinafter called the "OWNER," and Burns & McDonnell Engineering Co., hereinafter called the "PROVIDER";

WITNESSETH, that whereas the OWNER intends to prepare a Commissioning Services for the **Dentistry Clinical Education Facility** Texas A&M Health Science Center, Dallas, Texas, (the "Project");

NOW, THEREFORE, the OWNER and the PROVIDER, for the considerations hereinafter named, agree as follows:

I

CONTRACT AMOUNT AND PAYMENTS

- 1.1 The OWNER agrees to pay the PROVIDER, when this Contract is fully completed, an all inclusive negotiated fee of three hundred seventy seven thousand (\$377,000.00) to cover all costs and profits for performing the Scope of Work set forth in Attachment No. 1 to this Contract.
- 1.2 PROVIDER can invoice TAMUS monthly for the Scope of Work identified in Attachment 1. For reimbursement of travel expenses, PROVIDER'S invoice(s) must include supporting documents. Payment will be made to PROVIDER upon approval of such invoice by TAMUS. It is the policy of the state of Texas to make payment on a properly prepared and submitted invoice within thirty (30) days of the latter of any final acceptance of performance or the receipt of a properly submitted invoice, in conformance with the Texas Prompt Payment law. Generally, payment will be made on the 30th day unless a discount has been arranged for more immediate payment.
- 1.3 If the PROVIDER incurs delay(s) in the completion of the work of a milestone (described in Paragraph 1.2 above) due to causes beyond the control of the PROVIDER, the OWNER, at its sole discretion, may make partial payment(s) to the PROVIDER for work performed to the time of the delay. The amount of the payment shall be in proportion to the percentage completion of the milestone work at the time of the delay as subjectively determined by the OWNER.
- 1.4 Under no circumstances shall the OWNER be obligated to make any payment (whether a progress payment or final payment) to the PROVIDER if any one or more of the following conditions precedent exist:
  - 1.4.1 The PROVIDER is in breach or default under this Contract.

- 1.4.2 Any portion of a payment is for services that were not performed in accordance with this Contract provided; however, payment shall be made for those services which were performed in accordance with this Contract.
- 1.4.3 The PROVIDER has failed to make payments that are properly due and owing to consultants or other third parties used in connection with services for which the OWNER has made payment to the PROVIDER.
- 1.4.4 If the OWNER, in its good faith judgment, determines that the balance of the unpaid fees are not sufficient to complete the services in accordance with this Contract.
- 1.4.5 The PROVIDER has failed to perform those services required to maintain the project schedule; provided that, barring any other claim by the OWNER, any withheld payments will be paid to the PROVIDER at such time as the services are performed.

Notwithstanding any other provision of this Contract, the OWNER shall have the right to withhold from payments due the PROVIDER such sums as the OWNER deems reasonably necessary to protect the OWNER against any loss or damage which may result from negligence by the PROVIDER or failure of the PROVIDER to perform the PROVIDER's obligations under this Contract pending final resolution of such claims.

## II

### OBLIGATIONS, SERVICES AND DUTIES OF THE OWNER

- 2.1 The OWNER will furnish the PROVIDER available information and documents in the OWNER'S possession and pertinent to the Project.
- 2.2 Owner Points of Contact:

The Texas A&M University System  
Glen Storey  
Construction PM III  
301 Tarrow St., Suite 248  
College Station, Texas 77840  
Phone: (979) 458-7062  
Email: [gstorey@tamus.edu](mailto:gstorey@tamus.edu)

## III

### OBLIGATIONS, SERVICES AND DUTIES OF THE PROVIDER

The PROVIDER agrees to perform professional services for the above named Project as follows:

- 3.1 The PROVIDER agrees and acknowledges that the OWNER is entering into this Contract in reliance on the PROVIDER's represented professional abilities with respect to performing the PROVIDER's services, duties, and obligations under this Contract. The PROVIDER agrees to use the PROVIDER's best professional efforts, skill, judgment, and abilities in performing the PROVIDER's services.

- 3.2 Employ experienced architects, engineers, and a full team of necessary consultants, acceptable to the OWNER, and perform all professional services work set forth in Attachment No. 1, Scope of Work.
- 3.3 Assure that the makeup of the Commissioning Services team, as composed in the qualifications submittal remains intact, except as requested by or approved by the OWNER; or if a member ceases employment, his replacement must be approved by the OWNER.
- 3.4 Perform the professional services for the above named Commissioning Services work in accordance with Attachment No. 1, Scope of Work. These services include obtaining all required OWNER and regulatory agency input, obtaining and compiling all pertinent data, attending all meetings and conferences including recording notes and preparing and distributing minutes, developing a complete Commissioning Services in accordance with all applicable State and Federal regulations, codes, and requirements, providing deliverables and preparing material as may be required for the PROVIDER's presentation of the Commissioning Services to the OWNER and other groups as set forth in Attachment No. 1.
- 3.5 Grant the OWNER the right to use reproducible film positives, digital versions, and hard copies of all Commissioning Services documents prepared for this Project as the OWNER sees fit for purposes of the planning of future additions, alterations, and/or modifications to the **Texas A&M Health Science Center** facilities and such uses shall not be considered to be infringing upon any legal right the PROVIDER may have in such works as established by the Copyright Act of 1976 (17 U.S.C., Section 101 et seq.) and shall only be used in accordance with current State Rules and Regulations of the Practice of Architecture and Engineering.
- 3.6 The OWNER may retain copies of documents, including digital copies, for information and reference in connection with the Commissioning Services. Because of the possibility that information and data delivered in machine readable form may be altered, whether inadvertently or otherwise, the PROVIDER reserves the right to retain the original tapes/disks.
- 3.7 Provide reports of fee payments to Historically Underutilized Business (HUB) firms if applicable as directed in Section 9.5.
- 3.8 PROVIDER Point of Contact:
- Burns & McDonnell Engineering Co.  
David Meyers  
Manager of Commissioning  
Phone: (314) 210-2735  
Email: [dcmeyers@burnsmcd.com](mailto:dcmeyers@burnsmcd.com)

#### IV

#### CHANGES IN THE COMMISSIONING SERVICES

- 4.1 After approval of the Commissioning Services, if the PROVIDER is caused extra drafting or other expenses due to significant scope changes ordered in writing by the OWNER and not the fault of the PROVIDER, the PROVIDER will be paid an equitable fee for such extra services and

expenses. Additional payment to the PROVIDER for accomplishing the changes will be in accordance with an agreed fee, approved in writing by the OWNER prior to performance of the service. Compensation will be based on hourly rates in accordance with the attached Labor Rate Schedule (Attachment No. 2), limited by the maximum specified in the contract change. The fee shall be consistent with the applicable payment terms in Paragraph 1.2 adjusted, as mutually agreed upon, for the services required.

- 4.2 If the PROVIDER is caused extra drafting or other expenses due to his own errors and/or omissions, he will make such corrections without additional fee.

## V

### TERMINATION OF CONTRACT

- 5.1 This Contract may be terminated by either party upon seven (7) days' written notice should the other party fail substantially to perform in accordance with its terms through no fault of the party initiating the termination and such failure is not fully cured prior to the expiration of such seven (7) day period.
- 5.2 This Contract may be terminated at any time by the OWNER for its convenience upon at least fifteen (15) days' written notice to the PROVIDER.
- 5.3 In the event of termination not the fault of the PROVIDER, the PROVIDER shall be compensated for all services satisfactorily performed to the termination date, together with approved Reimbursable Services/Expenses then due, provided PROVIDER delivers to OWNER (i) statements, accounts, reports and other materials required for payment under this Contract and (ii) all reports, documents and other materials prepared by PROVIDER prior to termination.

## VI

### SUCCESSORS AND ASSIGNMENT

The OWNER and the PROVIDER each binds himself, his partners, successors, executors, administrators, and assigns to the other party of this Contract and to the partners, successors, executors, administrators, and assigns of such other party in respect to all covenants of this Contract. Neither the OWNER nor the PROVIDER shall assign, sublet or transfer their interest in this Contract without written consent of the other.

## VII

### INSURANCE COVERAGE

The PROVIDER shall obtain and maintain, for the duration of this Contract or longer as stated in subparagraph D below, the insurance coverages set forth below. With the exception of Professional Liability (E&O), all coverage shall be written on an occurrence basis. All coverage shall be underwritten by companies authorized to do business in the State of Texas or eligible surplus lines insurers operating in accordance with the Texas Insurance Code and have a financial strength rating of A- and a financial strength rating of VII or better as measured by A.M. Best Company or otherwise acceptable to Owner. By requiring such insurance, the Owner shall not be deemed or construed to have assessed the risk that may be applicable to the Architect/Engineer under this Contract. The PROVIDER shall assess its own

risks and if it deems appropriate and/or prudent, maintain higher limits and/or broader coverages. No policy will be canceled without unconditional written notice to Owner at least ten days before the effective date of the cancellation.

Coverages	Limit
A. Worker's Compensation	
Statutory Benefits (Coverage A)	Statutory
Employers Liability (Coverage B)	\$1,000,000 Each Accident
	\$1,000,000 Disease/Employee
	\$1,000,000 Disease/Policy Limit

Workers' Compensation policy must include under Item 3.A. on the information page of the workers' compensation policy the state in which work is to be performed for [Member]. Workers' compensation insurance is required, and no "alternative" forms of insurance will be permitted.

**B. Automobile Liability**

Business auto liability insurance covering all owned, non-owned or hired automobiles, with limits of \$1,000,000 single limit of liability per accident for bodily injury and property damage.

**Option:** If a separate business auto liability policy is not available, coverage for hired and non-owned auto liability may be endorsed on the commercial general liability policy

**C. Commercial General Liability**

Aggregate Limit	\$2,000,000
Each Occurrence Limit	\$1,000,000
Personal/Advertising Injury	\$1,000,000
Products/Completed	\$1,000,000
Damage to rented Premises	\$ 300,000
Medical Payments	\$ 5,000

**D. Professional Liability (E&O)**

The PROVIDER shall maintain Professional Liability covering negligent acts, errors and/or omissions, including design errors of the PROVIDER for damages sustained in the course of performance of this Contract for three (3) years after the Project is complete. The Professional Liability insurance shall be in an amount of \$1,000,000 each claim/\$1,000,000 aggregate.

E. The PROVIDER shall include The Texas A&M University System Board of Regents, The Texas A&M University System and The Texas A&M Health Science Center as additional insured on the Commercial General Liability and Automobile Liability policies, and the Workers' Compensation policy shall include a waiver of subrogation in favor of the Owner where allowed by law.

## VIII

### DISPUTE RESOLUTION

8.1 The dispute resolution process provided for in Chapter 2260 of the Government Code shall be used, as further described herein, by The Texas A&M University System and the PROVIDER to attempt to resolve any claim for breach of Contract made by the PROVIDER:

- 8.1.1 An PROVIDER's claim for breach of this Contract that the parties cannot resolve in the ordinary course of business shall be submitted to the negotiation process provided in Chapter 2260, Subchapter B, of the Government Code. To initiate the process, the PROVIDER shall submit written notice, as required by Subchapter B, to the Executive Vice Chancellor and Chief Financial Officer. Said notice shall specifically state that the provisions of Chapter 2260, Subchapter B, are being invoked. A copy of the notice shall also be given to all other representatives of The Texas A&M University System and the PROVIDER otherwise entitled to notice under the parties' Contract. Compliance by the PROVIDER with Subchapter B is a condition precedent to the filing of a contested case proceeding under Chapter 2260, Subchapter C, of the Government Code.
- 8.1.2 The contested case process provided in Chapter 2260, Subchapter C, of the Government Code is the PROVIDER's sole and exclusive process for seeking a remedy for any and all alleged breaches of contract by The Texas A&M University System if the parties are unable to resolve their disputes under subparagraph 8.1.1 of this paragraph.
- 8.1.3 Compliance with the contested case process provided in Subchapter C is a condition precedent to seeking consent to sue from the Legislature under Chapter 107 of the Civil Practices and Remedies Code. Neither the execution of this Contract by The Texas A&M University System nor any other conduct of any representative of The Texas A&M University System relating to this Contract shall be considered a waiver of sovereign immunity to suit.
- 8.2 The submission, processing and resolution of the PROVIDER's claim is governed by the published rules adopted by the Office of Attorney General of Texas pursuant to Chapter 2260, as currently effective, hereafter enacted or subsequently amended. These rules are found at 1 T.A.C. Chapter 68.
- 8.3 Neither the occurrence of an event nor the pendency of a claim constitutes grounds for the suspension of performance by the PROVIDER, in whole or in part.
- 8.4 The designated individual responsible on behalf of The Texas A&M University System for examining any claim or counterclaim and conducting any negotiations related thereto as required under §2260.052 of the Government Code shall be the Chairman of the Committee on Buildings and Physical Plant, Board of Regents, The Texas A&M University System.
- 8.5 The OWNER shall have the right to pursue any and all remedies available to it at law or in equity if PROVIDER fails to perform the services with reasonable care and competence or fails to apply the technical knowledge and skill which is ordinarily applied by reasonably prudent architects or engineers practicing under similar circumstances and conditions. The PROVIDER shall hold harmless and indemnify the OWNER from any liability arising out of negligent acts, errors, or omissions of the PROVIDER in the performance of its professional services under this Contract.

## IX

### GENERAL CONDITIONS

- 9.1 **Texas Law to Apply:** This Contract shall be construed under and in accordance with the laws of the State of Texas, and all obligations of the parties created hereunder are performable in Brazos County, Texas. Venue shall be in Brazos County, Texas.
- 9.2 **Parties Bound:** This Contract shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives, successors and assigns where permitted by this Contract.
- 9.3 **Severability:** In case any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Contract shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.
- 9.4 **Prior Agreements Superseded:** This Contract constitutes the sole and only agreement of the parties hereto with respect to the subject matter of this Contract and supersedes any prior understandings or written or oral agreements between the parties respecting the within subject matter.
- 9.5 If a subcontractor will be used to provide any commodity or service as part of the scope on a specific assignment, the PROVIDER will be required to make a good faith effort and complete the state of Texas HSP found at <https://www.tamus.edu/business/hub-procurement/hub-programs-3/system-offices-hub-program/>. If there are pre-existing agreements in place with companies who will be hired as subcontractors, the PROVIDER will show those companies as subcontractors on the HSP and provide an explanation as to why solicitations were not done, e.g. contractual requirements. If no pre-existing agreements with companies who will be hired as subcontractors exist, then the PROVIDER will be expected to make a good faith effort according to the HSP instructions.

In the event that you determine you will be using a subcontractor, please contact Mr. Jeff Zimmermann from the A&M System's HUB Program at (979) 458-6410 or [jzimmermann@tamus.edu](mailto:jzimmermann@tamus.edu) for assistance in determining available HUB subcontractors and proper completion of the HSP.

- 9.6 **Public Information.** Architect/Engineer acknowledges that Owner is obligated to strictly comply with the Public Information Act, Chapter 552, *Texas Government Code*, in responding to any request for public information pertaining to this Agreement, as well as any other disclosure of information required by applicable Texas law.

Upon Owner's written request, Architect/Engineer will provide specified public information exchanged or created under this Agreement that is not otherwise excepted from disclosure under chapter 552, *Texas Government Code*, to Owner in a non-proprietary format acceptable to Owner. As used in this provision, "public information" has the meaning assigned Section 552.002, *Texas Government Code*, but only includes information to which Owner has a right of access.

Architect/Engineer acknowledges that Owner may be required to post a copy of the fully executed Agreement on its Internet website in compliance with Section 2261.253(a)(1), *Texas Government Code*.

9.7 The OWNER and the PROVIDER hereby agree to the full performance of the covenants contained herein.

9.8 **CERTIFICATIONS:**

By agreeing to and signing this Contract, the PROVIDER hereby makes the following certifications and warranties:

9.8.1 Delinquent Child Support Obligations. A child support obligor who is more than 30 days delinquent in paying child support and a business entity in which obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25 percent is not eligible to receive payments from state funds under a contract to provide property, materials, or services until all arrearages have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency. The Family Code requires the following statement: “Under Section 231.006, *Family Code*, the vendor or applicant certifies that the individual or business entity named in this Contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this Contract may be terminated and payment may be withheld if this certification is inaccurate.

9.8.2 Prohibited Bids and Contracts. A state agency may not accept a bid or award a contract that includes proposed financial participation by a person who received compensation from the agency to participate in preparing the specifications or request for proposals on which the bid or contract is based. The Government Code requires the following statement: “Under Section 2155.004, *Government Code*, the vendor certifies that the individual or business entity named in this bid or Contract is not ineligible to receive the specified contract and acknowledges that this Contract may be terminated and payment withheld if this certification is inaccurate.”

9.8.3 Previous Employment. The PROVIDER acknowledges and understands that Section 2252.901 of the Texas Government Code prohibits a state agency from using state appropriated funds to enter into any employment, professional services or consulting services agreement with any individual who has been previously employed, as an employee, by the agency within the past twelve (12) months. If the PROVIDER is an individual, by signing this Contract, the PROVIDER certifies that Section 2252.901 (as amended) of the Texas Government Code does not prohibit the use of state appropriated funds for satisfying the payment obligations herein.

9.8.4 Franchise or Margin Tax. If the PROVIDER is subject to the Texas franchise tax, the PROVIDER certifies that, upon the effective date of this Contract, it is either exempt from the obligation to pay franchise taxes or is not delinquent in the payment of franchise taxes. The PROVIDER agrees that any false statement with respect to franchise tax status shall be a material breach hereof, and OWNER shall be entitled to terminate this Contract upon written notice thereof to the PROVIDER.

9.8.5 Debt to State. Pursuant to Sections 2107.008 and 2252.903 of the Texas Government Code, the PROVIDER acknowledges and agrees that, to the extent the PROVIDER owes any debt or delinquent taxes to the State of Texas, any payments the PROVIDER are owed under this Contract may be applied by the Comptroller of Public Accounts toward



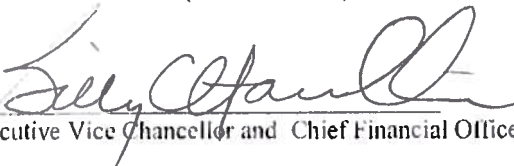
any debt or delinquent taxes the PROVIDER owes the State of Texas until the debt or delinquent taxes are paid in full.

- 9.8.6 To the extent permitted by Constitution and laws of the state of Texas, in no event will either party be liable for any special, indirect, or consequential damages including, without limitation, damages or losses in the nature of increased project costs, loss of revenue or profit, lost production, claims by customers of Texas A&M, and/or government fines or penalties.
- 9.8.7 To the extent permitted by Constitution and laws of the state of Texas, Provider's aggregate liability for all damages connected with its service for the project not excluded by the preceding subparagraph, whether or not covered by Provider's insurance, will not exceed the contract price including any change orders. These mutually negotiated obligations and remedies stated in this Agreement are the sole and exclusive obligations of the Provider and remedies of Texas A&M, whether liability of Provider is based on contract, warranty, strict liability, tort (including negligence), indemnity, or otherwise.

**[SIGNATURES PROVIDED ON FOLLOWING PAGE]**

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the day and year first written above.

BOARD OF REGENTS OF  
THE TEXAS A&M UNIVERSITY SYSTEM  
(THE OWNER)

By   
Executive Vice Chancellor and Chief Financial Officer

Date 8-1-17

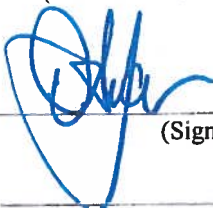
APPROVAL RECOMMENDED:

  
Executive Director  
Office of Facilities Planning & Construction

Date 08.01.17.

Burns & McDonnell Engineering Company, Inc.

(THE ARCHITECT/ENGINEER)

By   
(Signature)

David G. Yeaman - President

Date 8-1-2017

The Texas Board of Architectural Examiners, PO Box 12337, Austin, Texas 78711 or 333 Guadalupe, Suite 2-350, Austin, Texas 78711, telephone (512) 305-9000, has jurisdiction over complaints regarding individuals licensed under Chapter 1051, Texas Occupations Code.

Name(s) of individual(s), sole proprietors, partner(s), shareholder(s) or owner(s) with an ownership interest of at least 25% of the business entity executing this Contract.

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

**CONTRACT FOR ARCHITECT/ENGINEER SERVICES**  
**ATTACHMENT NO. 1**  
**SCOPE OF WORK**  
**DENTISTRY CLINICAL EDUCATION FACILITY**  
**COMMISSIONING SERVICES**

Prepare a Commissioning Services for the Dentistry Clinical Education Facility for The Texas A&M Health Science Center. The Basic Services to be provided in this Commissioning Services preparation include the following tasks.

**Services Required**

The following is a list of components, equipment, and systems to be commissioned, and commissioning services to be provided to support the achievement of minimum LEED Silver Certification: (The project will not be submitted for certification as a LEED project).

**Systems**

- The system list below was generated from the 50% CDs dated 03/23/2017. Specific system components and final quantities will be determined based on actual construction documents when issued.
- Mechanical Systems:
  - 11 Variable Air Volume Air Handling Units (VAV, AHUs, Single-Zone AHUs, Outside Air (OA) heat recovery AHU's).
  - 11 Fan Coil Units.
  - 3 Hydronic Unit Heaters.
  - 1 Radiant Heater.
  - 28 Airflow Measuring Stations.
  - 19 Exhaust Fans, Return Air Fans, Supply Air Fans, and Stairwell Pressurization Fans.
  - 121 Variable Volume Terminal Units with HW reheat (testing up to 25%).
  - 106 Fan Powered Terminal Units with HW reheat (testing up to 25%).
  - 3 Water Cooled Chillers, 3 Cooling towers, 3 Condenser Water Pumps, a Condenser Water Sump, a Cooling Tower Chemical Feed System, Chilled Water System including 3 Chilled Water Pumps, an Expansion Tank, 2 Flow Meters, and an Air and Dirt Separator.
  - Heating Water System including 2 Heating Water Pumps, 2 Fire Tube Boilers, 2 Plate and Frame Heat Exchangers, 2 Flow Meters, Packaged Feedwater System, a Condensate Return Unit, 4 Recirculation Pumps (for AHU preheat coils), and an Air and Dirt Separator.
  - Ductwork System – (Sampling of duct pressurization testing).
  - Fire and Smoke Dampers.
  - Review and verify testing, adjusting and balancing activities and reports (up to 10% TAB field verification).
- Electrical Systems:
  - Medium Voltage Switchgear (Note 1: Include documentation by others only).
  - Medium Voltage Transformers (Note 1: Include documentation by others only).
  - Medium Voltage Power Cable (Note 1: Include documentation by others only).
  - Power Meters: (Note 1: Include documentation by others only).
  - Low Voltage Conductors.
  - Low Voltage Switchgear.
  - Bus Ducts, include documentation by others.

- Electric Motors, include documentation by others.
- Power Factor correction systems, include documentation by others.
- Surge Protection devices, include documentation by others.
- 71 Power Panelboards (witness testing up to 25%, include documentation by others).
- 12 Power Switchboards (witness testing up to 25%, include documentation by others).
- Emergency Generator power supply system (witness testing, include documentation by others).
- 5 Automatic Transfer Switches (witness testing up to 25%, include documentation by others).
- Emergency Lighting, include documentation by others.
- 47 Daylighting Harvesting Sensors (witness up to a 25% sampling of basic function, confirm functionality and coordination as related to commissioned system interfaces).
- 275 Occupancy/Vacancy Sensors (witness up to a 25% sampling of basic function, confirm functionality and coordination as related to commissioned system interfaces).
- Instrumentation and control systems for Stand-by Generator emergency power system.
- Integrated Systems Test (to verify all relevant systems on the emergency power system).
- Life Safety Systems (Include documentation by others only):
  - Fire Alarm/Smoke System (witness up to a 25% sampling of basic function, confirm functionality and coordination as related to commissioned system interfaces), include documentation by others.
  - Fire-Protection/Suppression System (witness up to 25 % sampling and include documentation by others).
- Plumbing Systems:
  - 6 Elevator Sump pumps.
  - Domestic Hot Water System including 2 Steam Fired Water Heaters, a Domestic Water Booster Pump System, 2 Hot Water Circulating Pumps, a Water Softener, Expansion Tank, 626 fixtures, and Showers.
  - Tempered Water System including Emergency Showers and Eye Washes (quantity unknown for the purposes of the proposal we have included 50 stations).
- Special Building Systems:
  - Laboratory Air, Gas & Dental Vacuum Systems including 3 Dental Air Compressors, 1 Medical Air Compressor, 2 Dental Air Dryers, a Medical Vacuum Pump, and 5 Dental Vacuum Pumps.
  - Laboratory Water System including 2 RO Water Pumps (process cooling water, RO/DI water system).
  - Chemical Fume Hoods, Laminar Hoods, Snorkels (quantity unknown for the purposes of the proposal we have included 40 Fume Hoods, Laminar Hoods, and Snorkels).
  - Bio-safety Cabinets (quantity unknown for the purposes of the proposal we have included 20). Security systems (witness up to 25 % sampling and include documentation by others).
- Building Automation System (BAS) / Energy Management Systems including point- to-point confirmation of control cabling:
  - Review control documentation for clarification of system installation.
  - Review and monitor control systems documents throughout the project.
  - Facilitate coordination of design intent.
  - Review and monitor control system installation management.
  - Point-to-point verification.
  - Functional control sequence into function performance tests.
  - Implement of the owner's requirements for structure of control code.
  - Translation of project control sequences into English language sequences for inclusion into program code.

- Review and and document the initial and final control programs, coding, and algorithms, including scheduled and unscheduled progress review of control code installation throughout the project.
- Review and document the the condtion of controllability of the system.
- Review and document the the condtion of functionality to support systems to/from controls system.
- Review and document the condtion of the complete fire alarm/smoke control functionality as related to BAS.
- Document control including progress report, development and implementation of key verification document and Final Controls Commissioning Report.
- Review and monitor control system installation both from the field device installation and head end equipment.
- Review and coordinate DCS programming graphical design and installation in accordance with TAMUS/TAMHSC standards.
- Point-to-point (front-end to field) review and document of all I/O=+/-1400, including review and documentation of device calibration.
- Verify new functional control sequences relating to all BAS systems, including the existing components and software.

## Services

- This proposal includes commissioning services during the following phases of the project. All phases of the project will require assistance from other members of the Design and Construction Team, including Owner's personnel. The cost, if any, for this assistance is not included in this Proposal.
- Construction Phase:
  1. Review and comment on (2) any revisions to the Design Intent Documents prepared by the PROVIDER.
  2. Review contractor submittals applicable to systems being commissioned for compliance with the Design Intent Documents and commissioning needs, concurrent with the Design Teams review. Communicate any comments to the PROVIDER for their review and incorporation into their response to the submittal and shop drawings.
  3. Back check Construction Documents Review comments for consistency with the Design Intent Documents.
  4. Update the Design Intent Commissioning Documents as necessary to reflect changes made during the construction phase.
  5. Conduct a commissioning Kickoff Meeting with TAMUS Project Manager, CM at Risk or contractor, appropriate sub-contractors, TAMHSC Engineering, TAB firm representatives and other campus operations personnel as deemed necessary by Owner. The intent of the meeting will be to present the commissioning process, specification requirements, test procedures, and scheduling.
  6. Develop the draft and final project-specific "System Readiness Checklists" and "Functional Performance Tests" forms, based on the current Design Intent Documents, system shop drawings, contractor submittals, requests for information (RFIs), construction changes and PROVIDER supplemental instructions. Provide the forms to the CM at Risk or contractor for review and coordination purposes.
  7. Coordinate commissioning work with the CM at Risk TAMHSC Chief Engineer and TAMUS Project Manager to ensure that commissioning activities are included in the master project schedule.
  8. Conduct (60) coordination meetings; half of which coincide with field observations.

9. Coordinate and direct the commissioning activities in a logical, sequential, and efficient manner using standardized protocols and forms, centralized documentation, clear and regular communications and consultations with all necessary parties frequently updated timelines and schedules, and technical expertise.
  10. Review and comment on the Contractor supplied start-up execution plan and piping flushing plans.
  11. Review and comment on the Test and Balance (TAB) execution plan.
  12. Witness the pipe flushing process and applicable ductwork pressurization testing.
  13. Document that all systems to be commissioned are installed and functionally perform to meet the construction document requirements as established in the Design Intent Documents by witnessing 25% randomly selected sampling of contractor start-up of equipment.
  14. Maintain the master Corrective Action Log (CAR) during construction.
  15. Schedule, plan and make final preparation for functional performance testing during the Construction Acceptance Phase.
- Construction Acceptance Phase:
    1. Plan, participate in, and direct up to (18) commissioning planning progress meetings conducted in conjunction with periodic construction progress meetings.
    2. Provide up to 10% (of commissioned systems) review of air and water systems balancing by spot testing, reviewing completed reports, and by random direct site observations.
    3. Review System Readiness Checklists (SRCs) for completion prior to execution of Functional Performance Testing.
    4. Review the Contractor provided O&M Training Plan and O&M documentation to provide project relevant information needed to understand and optimally operate the commissioned systems. Review the manuals and recommend for approval concurrently with the PROVIDER, TAMHSC Engineering O&M staff. Collect approved O&M documents as it pertains to commissioned systems to be included in a Systems Manual.
    5. Review, recommend and assist with coordinated training plans provided by contractors. Provide a 25% randomly selected sampling attendance at contractor implemented training sessions to verify that training has been completed and meets the overall intended outline and intended training value.
    6. Coordinate, facilitate and document the contractor training of the TAMHSC O&M staff in the design intent and proper operation of the equipment and installed systems.
    7. Document the commissioning process for future reference and use by the O&M staff.
    8. Direct, witness, document and approve all “Functional Performance Tests” implemented by the CM at Risk or contractor for a total testing duration of (81) days.
    9. Document all deficiencies identified during the Functional Performance Testing by developing, monitoring, and periodically submitting a Corrective Action Report Log. Deficiencies noted during Functional Performance Testing will be communicated to the CM at Risk or Contractor and the Owner on a daily basis, so that corrective actions may be implemented quickly.
    10. Once corrective actions are completed by contractors, coordinate and document all retesting as necessary until satisfactory performance is achieved. (we have included 10% retest time in our proposal) The functional testing shall include operating the system and components through each of the written sequences of operation, and other significant modes and sequences, including startup, shutdown, unoccupied mode, manual mode, staging, miscellaneous alarms, power failure, security alarm (when affected) and interlocks with other systems or equipment. Sensors and actuators shall be calibrated during construction, check listing by the installing contractors and spot-checked by the commissioning provider during functional testing.

11. Analyze functional performance trend logs and monitor data to verify performance.
  12. Verify that deferred testing (if required) is conducted as specified or required to address the overall system level and functional requirements. The commissioning firm will witness, document the process and verify that testing documentation is obtained and entered into the final Commissioning Report.
  13. Compile and maintain organized and complete commissioning records (CxA developed documentation to be included in the Commissioning Report).
  14. Prepare and submit a final commissioning report to TAMUS that includes but is not limited to the following:
    - An executive summary of the commissioning process and verification results.
    - A detailed section that includes a list of participants and roles, brief building description, overview of commissioning and testing scope, and a general description of testing and verification methods. For each piece of commissioned equipment, the report should contain the disposition of the commissioning provider regarding the adequacy of the equipment, documentation and training meeting the contract documents in the following areas:
      - Verify that copies of executed System Readiness Checklists, Functional Performance Tests, and Integrated System Tests are provided.
      - Copies of Corrective Action Reports, logs and final deposition.
      - Equipment installation / start-up plans.
      - Functional Performance Testing results for each system commissioned.
      - Documentation of the TAB related coordinated process and results.
      - Training materials utilized during the contractor lead training sessions.
      - All outstanding non-compliance items shall be specifically listed. Recommendations for improvement to equipment or operations, future actions, commissioning process changes, etc., shall also be listed. Each noncompliance issue shall be referenced to the specific functional test, inspection, trend log, etc., where the deficiency is documented.
      - A benchmark matrix of system performance for reference during the warranty phase.
      - Verify that copies of issued logs, commissioning plan, progress reports, submittal and O&M manual reviews, training records, test schedules, construction checklists, pre-installation, start-up reports and functional trend log analysis are included.
- Warranty / Operational Phase:
    1. Assist with the organization and attend a 10th month warranty period systems review meeting. Assist with determining current issues with commissioned systems and provide recommendations to the O&M staff for corrective actions.

**CONTRACT FOR ARCHITECT/ENGINEER SERVICES  
ATTACHMENT NO. 2  
PERSONNEL TITLES AND HOURLY RATES**

Firm/Position Classification

Hourly Billing Rate

**Commissioning –**

Administrative Staff	\$85.00
Cx Specialist 1*	110.00
Cx Specialist 2*	129.00
Cx Specialist 3*	131.00
Cx Agent 1	146.00
Cx Agent 2	156.00
Senior Cx Agent 1	162.00
Senior Cx Agent 2	176.00
Senior Cx Agent 3	186.00
Associate 1	218.00
Principle 1	236.00

**NOTES:**

1. For any nonexempt personnel in positions marked with an asterisk (\*), overtime will be billed at 1.5 times the hourly labor billing rates shown.
2. Project time spent by corporate officers will be billed at the Principle 1 rate plus 25 percent.
3. For outside expenses incurred by Burns & McDonnell, such as authorized travel and subsistence, and for services rendered by others such as subcontractors, the client shall pay the cost to Burns & McDonnell plus 0%.
4. The services of contract/agency personnel shall be billed to Owner according to the rate sheet as if such contract/agency personnel is a direct employee of Burns & McDonnell.
5. The rates shown above are effective for services through December 31, 2017, and are subject to revision thereafter.
6. Rates indicated above could be subject to discount if mutable projects are run together or if project is run as a fixed sum