Joliet Junior College

C/o Facilities Services

1215 Houbolt Road · Joliet, IL 60431

December 23, 2014

Proposal – Commissioning Agent (CA) Services

I. INTRODUCTION

Joliet Junior College (JJC), hereby invites you to submit proposals for Commissioning Agent (CA) Services related to the following projects:

- **Multipurpose Building**
- **Romeoville Expansion Building**

The purpose of this Proposal ("PROPOSAL") is to solicit proposals from qualified commissioning agents to be part of the design team and provide critical input during the development of design and construction documents; to be a part of the construction team and ensure complete system functionality of the various systems; to commission all systems and document the commissioning activities; to provide any additional documentation, if required, for obtaining LEED certification. Details regarding the type of services are set forth in the solicitation and the fee proposal page attached hereto as Attachment A and made a part hereof.

II. RFP SCHEDULE

Date **(2014/2015)**	**Event**
December 23, 2014	Vendors contacted via email / advertised
January 7, 2015 at 12:00 noon	Last date/time for submission of written questions via email to purchasing@jjc.edu
January 9, 2015	Responses to questions emailed
January 16, 2015 at 2:00 pm	Proposals must be submitted to the attention of: Janice Reedus, Director of Business & Auxiliary Service, Campus Center Building A, Room 3100, 1215 Houbolt Road, Joliet, IL 60431
Week of January 19, 2015	JJC Evaluation Team reviews proposal
February 4, 2015	Notification of Award

III. PROJECTS OVERVIEW

Demonica Kemper Architects is the architect for the Joliet Campus Multipurpose Building and the Romeoville Expansion Building. KJWW is providing mechanical, electrical and plumbing engineering services for both projects. Joliet Junior College considers commissioning to be an integral part of the entire project process to help assure that building systems operate correctly with College standards and the design intent when the College takes occupancy of the project. The services to be provided by the CA include pre-construction, construction and warranty phase services. The CA must develop a comprehensive understanding of the project relative to the current program, assumptions, constraints, and budget. During all phases, the selected CA will be expected to actively participate with JJC, JJC's Architects of Record, and other consultants. The selected firm must provide a dedicated commissioning leader and team as required to meet the demands of the project.

IV. PROJECTS DESCRIPTION

Multipurpose Building:

The Multipurpose Building will be approximately 74,000 sf and will contain athletic and office space. The building is basically two stories, with rooftop HVAC equipment.

Romeoville Expansion Building:

The Romeoville Expansion Building will provide approximately 49,000 sf of classroom and office space (2 stories) on a site adjacent to the current main building. This project will also include rooftop HVAC equipment. B

Provide commissioning for all energy-related systems required to be commissioned under *EA Credit 3*: *Enhanced* Commissioning of Building Energy Systems in accordance with the LEED® Reference Guide for Green Building Design and Construction, 2009 Edition and additionally all systems required by this Proposal, including but not limited to the following:

- Equipment system
  - Fume hoods
  - Autoclaves
  - Glassware washers
- Mechanical systems providing service to the projects:
  - Air conditioning and ventilation systems
    - Rooftop unit with DX Cooling
    - Air handling units: including coils, filters, humidifiers, desiccant and all controls
    - Computer room air conditioning units
    - Variable air volume boxes
    - Fan coil units
    - Cabinet heaters
    - Unit heaters
    - Toilet exhaust
    - Mechanical room ventilation system
    - Make up air system
    - Grease exhaust fan

- Heating Systems
  - Gas fired rooftop units
  - Boilers
  - Radiant floor heating system
  - PRV stations
  - Condensate return
- DDC building control system. Controls include, but are not limited to, the HVAC system, security systems and emergency power hookups
- Plumbing systems
  - Rain water harvesting systems
  - Deionized water systems
  - Compressed air systems, laboratories, nursing labs, and other spaces
  - Vacuum systems
  - Sump systems
  - Water supply including circulation systems and auto valves
- Electrical systems including
  - Lighting control including time settings and sensitivity on sensors
  - Power monitoring and control
  - Variable frequency drives
  - Electrical distribution, greater than 400A
  - Automatic transfer switches
  - Photovoltaic system
- Fire protection systems including
  - Fire alarm system and tie in to existing systems
  - Fire pump
- Elevators

This project will use existing emergency generators. Commissioning Plan should include the verification of all commissioned equipment on both normal and emergency power. Campus chilled water and campus steam system are not included in the commissioning scope of work.

V. Overview of Project Development/Estimated Schedule

The following are the current project schedules, subject to changes and refinements, as the project progresses.

Multipurpose Building

April 14, 2015	Design Development Drawings Issued
July 14, 2015	Construction Documents Issued
August 17, 2015	Receive Bids
October 14, 2015	Construction Commences
April 14, 2017	Substantial Completion
July 14, 2017	Full Occupancy

Romeoville Expansion Building

April 14, 2015	Design Development Drawings Issued
August 14, 2015	Construction Documents Issued
September 15, 2015	Receive Bids
April 1, 2016	Construction Commences
April 14, 2107	Substantial Completion
July 14, 2017	Full Occupancy

A. **Additional or Alternate Proposals.** The Proposal may be used by the Respondent to submit alternate proposals showing alternative service or equipment rates, provided that the Fee Page as included in this Proposal is also completed. Failure to complete the Proposal Form in Attachment A may result in the disqualification of the Respondent's proposal.

B. **Federal Regulations –** JJC's procurement program is subject to the U.S. Office of Management & Budget regulations as set forth in Circular A-110.Respondents must note and maintain compliance with requirements of the EEO, Contract Work Hours and Safety Standards Act, Clean Air and Water Act, Davis-Bacon Act, Copeland Anti-Kickback Act and related laws and Department of Labor regulations respecting construction labor as delineated in Attachment C, Sections 19, 20, 21, and 22.

VI. PROJECT TEAM, OBJECTIVES AND SCOPE OF COMMISSIONING SERVICES

A. Project Team

The Commissioning Agent will report directly to the JJC Project Manager for each project. The selected Commissioning Agent will work with the design team and contractors to accomplish his scope of work. The Commissioning Agent will interact (as necessary) with a project team comprised of the following individuals:

JJC Director of Facilities	Patrick Van Duyne
JJC Manager of Construction and Facility Planning	Rick Lyman
JJC Project Manager	Phil Thiele
Architect	Demonica Kemper Architects
Civil Engineer	TBD
Structural, Mechanical & Electrical Engineer	KJWW

B. Objectives for Commissioning Services

The objectives for these commissioning services are –

a) Incorporate into the project design, provisions to allow the pursuit of LEED certification prerequisite "Energy & Atmosphere (EA) Credit#1 Fundamental Commissioning of Building Energy Systems.

b) Incorporate into the project design, provisions to allow the pursuit of LEED certification credit "Energy & Atmosphere (EA) Credit #3, "Enhanced Commissioning" (See alternate proposal section Attachment A)
c) to provide documented confirmation that THIS facility and its associated operation meets the Design Intent and fulfills the functional and performance requirements of the project
d) to ensure that adequate documentation has been provided for operation, preventive maintenance, repair, replacement, (OMR&R) manuals and training
e) to ensure that training on system operation and OMR&R, has been provided to the building operators to ensure the systems can operate as intended
f) to document the results of all of the above services in a commissioning report and provide any documentation required for obtaining the LEED certification

C. LEED Requirements pertaining to Commissioning provided here to show rigor required

(Excerpted from USGBC Guidance)

EA Prerequisite 1: Fundamental Commissioning of the Building

Intent: Verify that the building's energy related systems are installed, calibrated and perform according to the owner's project requirements, basis of design, and construction documents.

Requirements

The following commissioning process activities shall be completed by the commissioning team, in accordance with the LEED Reference Guide for Green Building Design and Construction, 2009 Edition:

1) Designate an individual as the Commissioning Authority (CxA) to lead, review and oversee the completion of the commissioning process activities.

a) The CxA shall have documented commissioning authority experience in at least two building projects.

b) The individual serving as the CxA shall be independent of the project's design and construction management.

c) The CxA shall report results, findings and recommendations directly to JJC, with copies to JJC and to the Architect.

2) The Owner shall document the Owner's Project Requirements (OPR). The design team shall develop the Basis of Design (BOD). The CxA shall review these documents for clarity and completeness. The Owner and design team shall be responsible for updates to their respective documents.

3) Develop and incorporate commissioning requirements into the construction documents.

4) Develop and implement a commissioning plan.

5) Verify the installation and performance of the systems to be commissioned.

6) Complete a summary commissioning report.

Rigor: The LEED Reference Guide for Green Building Design and Construction, 2009 Edition provides guidance for this prerequisite for the following:

- Owner's project requirements

- Basis of design
- Commissioning plan
- Commissioning specification
- Performance verification documentation
- Commissioning report

EA Credit 3: Enhanced Commissioning

Intent: Begin the commissioning process early during the design process and execute additional activities after systems performance verification is completed.

Requirements: Implement the following additional commissioning process activities in addition to the requirements of EA Prerequisite 1 and in accordance with the LEED Reference Guide for Green Building Design and Construction, 2009 Edition:

1. The CxA shall have documented commissioning authority experience in at least two building projects.

2. The CxA shall report results, findings and recommendations directly to JJC, with copies to JJC and to the Architect.

3. Conduct, at a minimum, one commissioning design review of the Owner's Project Requirements (OPR), Basis of Design (BOD), and design documents prior to mid-construction documents phase and back-check the review comments in the subsequent design submission.

4. Review contractor submittals applicable to systems being commissioned for compliance with the OPR and BOD. This review shall be concurrent with A/E reviews and submitted to the design team and the Owner.

5. Develop a systems manual that provides future operating staff the information needed to understand and optimally operate the commissioned systems.

6. Verify that the requirements for training operating personnel and building occupants are completed.

7. Review building operation within 10 months after substantial completion with O&M staff and occupants. Include a plan for resolution of outstanding commissioning-related issues.

Rigor: The LEED Reference Guide for Green Building Design and Construction, 2009 Edition provides detailed guidance for following process activities:

- Commissioning design review
- Commissioning submittal review
- Systems manual

D. Detailed Scope of Work

The CxA shall be responsible for carrying out the following tasks for the described phases. The Respondent is free to suggest changes and improvements to the following task list. For this proposal, the detailed tasks

listed below will be completed by the CA unless changes are proposed to the following task list and are "clearly" highlighted and noted in the respondent's proposal with cost deducts for the proposed changes.

Design and Pre-Construction Phase - Phase 1

1. Incorporate into the project design, provisions to allow the pursuit of LEED certification prerequisite "Energy & Atmosphere (EA) Pre-requisite#1 Fundamental Commissioning of Building Energy Systems".
2. Incorporate into the project design, provisions to allow the pursuit of LEED certification credit "Energy & Atmosphere (EA) Credit #3, "Enhanced Commissioning".
3. Perform focused reviews of the design, drawings and specifications at various stages of development (during design development and contract document phases).
4. Assist in and review the development of the Design Record documentation by design team members (i.e. Owners Project Requirements, Design Intent, and Basis of Design).
5. Develop a draft construction phase commissioning plan using an Owner-approved outline.
6. Develop full commissioning specifications for all commissioned equipment. Coordinate this with the A/E and integrate the commissioning specifications into the overall project specification package. The rigor required for LEED certification is the minimum requirement; however, one or more of the following documents can be used as a guide for content, rigor and format: Model Commissioning Plan and Guide Specifications, USDOE/FEMP; Portland Energy Conservation, Inc. (PECI).
7. Coordinate with and integrate into the specifications of the architect and engineers. Commissioning specifications should include, at a minimum, a Division 1 – General Commissioning, Division 1 – Systems Operation and Maintenance Data, Division 1 – Demonstration and Training, Division 15 – Mechanical System Commissioning and Division 16 – Electrical System Commissioning. Commissioning specification shall not duplicate nor contradict information within the architect/engineer specification sections. Commissioning specifications will include a detailed description of the responsibilities of the contractors, details of the commissioning process, reporting and documentation requirements, static installation verification and start-up requirements, functional performance testing procedures and approaches (e.g. full commissioning, sampling strategies, etc.) and procedures for addressing discrepancies and dispute resolution.
8. Coordinate a controls integration meeting where the electrical and mechanical engineers, owner's representative, and the Commissioning Agent discuss integration issues between equipment, systems and disciplines to ensure that integration issues and responsibilities are clearly described in the specifications.
9. Attend team meetings as appropriate. For the purposes of this proposal assume a total of four (4) meetings per project.
10. Attend a two hour interview session to answer commissioning related questions during the bid phase, for each project.

Construction Phase – Phase 2

1. Coordinate the commissioning work with JJC, to ensure that commissioning activities are being incorporated into the master construction schedule.

2. Review Contractor submittals applicable to systems being commissioned for compliance with commissioning needs, concurrent with the A/E submittal reviews and provide input to A/E if applicable.
3. Plan and conduct commissioning meetings as needed and distribute minutes.
4. Review requests for information (RFI) and change orders for impact on commissioning and owner's objectives.
5. Review coordination drawings to ensure that trades are making a reasonable effort to coordinate.
6. Write and distribute construction checklists for commissioned equipment.
7. Develop an enhanced start-up and initial systems checkout plan with contractors for selected equipment. Request and review additional information required to perform commissioning tasks, including O&M materials, contractor start-up and checkout procedures. Before startup, gather and review the current control sequences and interlocks and work with contractors and design engineers until sufficient clarity has been obtained, in writing, to be able to write detailed testing procedures.
8. Perform site visits (identified in the proposal), as necessary, to observe component and system installations. Attend selected planning and job-site meetings to obtain information on construction progress. Review construction meeting minutes for revisions/substitutions relating to the commissioning process. Assist in resolving any discrepancies.
9. Perform the following pre-functional tasks such as but not limited to: (i) Witness piping pressure test and flushing, sufficient to be confident that proper procedures were followed and include testing documentation in the Commissioning Report; (ii) Witness any ductwork testing and cleaning sufficient to be confident that proper procedures were followed and include documentation in the Commissioning Report; (iii) Witness megger testing of electrical equipment; (iv) Document construction checklist completion by reviewing completed construction checklists and by selected site observation; (v) Document systems startup by reviewing start-up reports and by selected site observation.
10. Review Test and Balance requirements in construction specifications for adequacy. Approve air and water systems balancing by spot testing and by reviewing completed reports and by selected site observation.
11. With necessary assistance and review from installing contractors, write the functional performance test procedures for equipment and systems. This will include manual functional testing, energy management control system trending and may include stand-alone data logger monitoring.
12. Coordinate witness and document manual functional performance tests performed by installing contractors. Coordinate retesting as necessary until satisfactory performance is achieved. 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 impacted 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 Agent during functional testing. Analyze functional performance trend logs and monitoring data to verify performance.
13. Tests on the relevant equipment shall be executed during both the heating and cooling season. However, some over-riding of control values to simulate conditions shall be allowed. Functional

testing shall be done using conventional manual methods, control system trend logs, and read-outs or stand-alone data loggers, to provide a high level of confidence in proper system function, as deemed appropriate by the Commissioning Agent and the Owner.

14. Prepare test plans for, assist with execution of, and document tests of commissioned equipment overseen by regulatory authorities and ensure that such tests meet the testing rigor desired by the Owner.
15. Maintain a master issues log and a separate record of functional testing. Report all issues as they occur directly to the JJC Project Manager as well as written progress reports, trip / monthly reports and test results with recommended actions. Provide copies of all such reports and results to both JJC and the Architect
16. Review equipment warranties to ensure that the Owner's responsibilities are clearly defined.
17. Oversee and review the training of the Owner's operating personnel.
18. Oversee the videotaping of this training.
19. Review the creation of a classroom "owner's manual" that is to be kept in the building.
20. Review the adequacy of OMR&R manuals for commissioned equipment.
21. Compile a Commissioning Report, which shall include:

    A brief summary report 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 Agent regarding the adequacy of the equipment, documentation and training meeting the contract documents in the following areas:

    a. Equipment shop drawings meeting the equipment specifications,
    b. Pre-functional Tests for Equipment installation
    c. Functional Tests for performance and efficiency
    d. Operator training conducted
    e. 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 non-compliance issue shall be referenced to the specific functional test, inspection, trend log, etc. where the deficiency is documented.
    f. Also included in the Commissioning Report shall be the issues log, commissioning plan, progress reports, submittal and O&M manual reviews, training record, test schedules, construction checklists, start-up reports, functional tests, and trend log analysis.

Warranty – Phase 3

A. Coordinate and supervise required seasonal (or deferred) testing and deficiency corrections and provide the final testing documentation for the Addendum to Commissioning Report and OMR&R manuals.

B. Return to the site in accordance with the itemized list for deferred and seasonal testing and at about 10 months into the 12-month warranty period. Review with facility staff the current building/plant operation and the condition of outstanding issues related to the original and seasonal commissioning. Also interview facility staff and identify problems or concerns they have with operating the building as originally intended. Make suggestions for improvements and for recording these changes in the O&M manuals. Identify areas that may come under warranty or under the original construction contract. Assist facility staff in developing reports and documents and requests for services to remedy outstanding problems. Compile Warranty Phase Review in a Letter Report briefly summarizing all of the above elements.

C. Change in Personnel

If the commissioning firm's personnel or sub-consultants change for this project JJC must review and approve the replacement personnel, in advance. The replacement personnel shall have, at minimum, equivalent qualifications as the original personnel.

A. **Qualifications and Experience of the Respondent.** It is JJC's desire for the firm(s) designated as the site Commissioning Agents to satisfy as many of the following requirements as possible. Submit completed/checked list below with proposal.

- ❖ Acted as the principal Commissioning Agent (starting from the design phase) for at least three (3) similar projects and/or certification as a commissioning agent by a nationally recognized entity such as the BCA or AEE.
- ❖ Demonstrable field experience in the operation and troubleshooting of HVAC systems, energy management control systems, fire-protection systems, smoke evacuation systems
- ❖ Demonstrable field experience in building operation and maintenance and O&M training.
- ❖ Demonstrable field experience in the review of test and balance of both air and water systems.
- ❖ Demonstrable field experience in the review of energy-efficient equipment design and control strategy optimization.
- ❖ Demonstrable field experience in the review of monitoring and analyzing system operation using energy management control system trending and stand-alone data logging equipment.
- ❖ Excellent verbal and writing communication skills. Highly organized and able to work with both management and trade contractors.
- ❖ Experienced in writing and reviewing commissioning specifications.
- ❖ Strong familiarity with the LEED certification requirements
- ❖ A bachelor's degree in mechanical or electrical engineering is strongly preferred, and P.E. certification is required, however, other technical training, past commissioning, and field experience will be considered.

The required expertise for this project will be based on the skill and experience set of the full team making the proposal; A member of the prime firm will be the designated Commissioning Agent who is the member of the team that will coordinate the commissioning activities from the technical perspective. This party may not necessarily be the team's overall project or contract manager. The

Commissioning Agent must have significant in-building commissioning experience, including technical and management expertise on projects of similar scope. If the Commissioning Agent or prime firm does not have sufficient skills to commission a specific system, the prime firm shall subcontract with a qualified party to do so. Subcontractor qualifications shall be included and clearly designated in the response to this PROPOSAL. JJC reserves the right to approve the inclusion of subcontracted team members.

C. **Organization Structure.** Provide an organization chart for the team managing and executing the project.

D. **Credentials of Principals.** Provide resumes for key staff and sub-consultants. The resumes shall include specific information about expertise in commissioning tasks, (e.g. design reviews, specification writing, commissioning management, troubleshooting, test writing, test execution, energy management, sustainable design, etc.) These individuals should be the managing personnel who will be assigned to the Project described in this PROPOSAL. The individual(s) who will serve as the lead Commissioning Agent for the design phase and for the construction phase of the contract (they may be different people) must also be identified. Respondent(s) shall not substitute key personnel without the prior written approval of the University.

Briefly describe "relevant" experience of the Respondent's team in the following areas. List involvement of key team members:

a. projects similar to this one with LEED certification as an objective
b. field experience in commissioning and O&M experience;
c. energy-efficient equipment design and control strategy optimization;
d. project and construction management and system design (specify)
e. troubleshooting
f. commissioning experience

E. **Project Approach.** Discuss your specific Project Approach and methodology in working with the project team to achieve the project goals. Identify the critical issues and specific challenges that this project presents and how your approach will address these critical issues and challenges. Identify within a timeline when the critical issues must be addressed in order to meet the proposed completion dates.

Describe your proposed approach to managing the project expertly and efficiently, including distribution of tasks, travel, and duration of which staff will be on site during what periods of time, etc. Describe what approach you will take to integrate the commissioning into the normal design and construction process in order to minimize potential time delays. Describe what you will do to foster teamwork and cooperation from contractors and design team and what you will do to minimize adversarial relationships. Describe how you intend to determine the appropriate level of commissioning effort for the various systems.

As an attachment, provide the following work products that members of the Respondent's team developed. List the team member who actually wrote the document and the projects on which they were used. Work from the designated Commissioning Agent is preferred.

1. Commissioning plan that was executed (the process part of the plan);

2. Sample commissioning specifications; and
3. An actual (sample) functional test procedure form that was executed.

F. **Price Reasonability and Competitiveness of Respondent's Proposal**. While not the sole criteria for determining contract award, price competitiveness and overall value will be heavily weighted as an evaluation factor. Respondent should use the form included as Attachment A for proposal submittal.

The Commissioning Services will be procured on a negotiated scope and fee basis. In addition to the Qualifications package, provide both an hourly rate for each team member, along with rates and fees for all other costs the Owner could incur from the Respondent in this contract (travel, mileage, per diem, communications, etc.). For each phase, provide the percentage level of effort for each of the primary team members.

Provide an estimated, lump sum total cost to accomplish the Scope of Commissioning Services described above. All task amounts include associated meetings, progress reports and direct costs (travel, mileage, per diem, communications, etc.). Use the budget table shown in **Exhibit 3** to provide a cost breakdown for the project listed in this solicitation. Also provide an hourly rate for each team member for work that may exceed the scope. For each phase, provide the percentage level of effort for each primary team member.

Provide a statement of Respondent's liability insurance coverage (type, and dollar amount of coverage). Proof of this insurance will be required prior to the award of this contract to the winning proposal.

G. **Other Required Documents.** The following other documents must be properly executed and notarized (if required), and shall be submitted with this Proposal.

i. Fee Form
ii. Vendor Information Form
iii. Commissioning Task Listing Form

List of Exhibits: (Included in Proposal Document)

Exhibit 1: Not Used
Exhibit 2: Commissioning Firm Experience
Exhibit 3: Budget Table

List of Attachments:

Attachment A – Fee Page and Proposal Acknowledgement (Included with Proposal)

Exhibit 2: Commissioning Firm Experience

FILL OUT A SEPARATE FORM FOR EACH FIRM ON THE TEAM

Company Name | Contact Person | Title

Address | City/ State | Zip/Postal Code

Telephone | Fax | E-Mail

Description of Business

Commissioning Activities

Percentage of overall business devoted to commissioning services _____%

How long has the firm offered commissioning services _____Years

Average number of commissioning projects performed each year: _____Projects

Systems or technologies for which firm has provided commissioning services

(check all that apply)

Pkg. and split HVAC systems	Door access
Chiller systems and Controls	Envelope
Steam Boiler systems and Controls	Fire/Life Safety
Energy Management Systems	Plumbing
Variable Frequency Drives	Commercial refrigeration
Lighting Controls	Elevators
Steam System Peripheral Equipment and Controls	Cooling Towers
Electrical Systems, Emergency Power	Steam Distribution Systems
Cafeteria Refrigeration	Chilled Water Distribution Systems

Number of registered engineers on staff who have directed commissioning projects: _____

The firm has provided commissioning services in the following: (check all that apply)

Building Sector	Construction Major Renovation	Existing Building Tune-up	Equipment Replacement
Office or retail	❑	❑	❑
Laboratories	❑	❑	❑
Schools or universities	❑	❑	❑
Special purpose–prisons, museums, libraries, etc.	❑	❑	❑

Exhibit 3a: Page 1 Project Budget Table: Multipurpose Building

(Create an overall budget for the project proposed)

	Task	Expenses ($) (a)	Man-hours (b)	Total Budget $ (c = a+b)
Construction Phase Tasks				
1	Review Owner's Project Requirements			
2	Review Construction documents - plans, specifications, design narratives, design intent			
3	Provide Commissioning Specifications to Engineer of Record for inclusion in construction documents			
4	Develop Commissioning Plan			
5	Review RFI's, Change Order Requests, Submittals etc.			
6	Develop Procedures and Review Pre-functional Testing			
7	Observe installation and startup			
8	Develop Procedures, Review Functional testing, Witness testing			
9	Management/Coordination/Scheduling			
10	Review OMR&R Manual and Training			
11	Compile Commissioning Report			
12	Coordinate Progress Meetings and issue Trip Report			
13	Site visits planned			
14	Provide Systems Level Training			
	Subtotal			
	TOTAL (this should match Page 2 Total)			
Warranty Period				
15	Unused			
16	Seasonal testing			
17	Near-warranty end review			
	Subtotal			

Exhibit 3a: Page 2 Project Budget Table: Multipurpose Building

(Itemize budget by systems for Construction Phase Only)

Systems	Expenses $ (a)	Man-Hours (b)	Budget ($) (c = a+b)
1. Mechanical Systems and Controls including Plumbing			
2. Electrical Systems and Electrical Controls			
3. Lighting & Controls Systems, Emergency Lighting			
4. Building Elevator			
5. Building Fire Alarm and Fire Protection Systems			
8. Emergency Generator / Standby Power transfer switching			
9. Chilled water Systems, controls and sequences			
10. Metering Systems (and connection to Campus systems)			
11. Steam System, Controls and Sequences			
12. Door Access and Security Systems			
TOTAL (this should match Page 1 Total)			

Exhibit 3b: Page 1 Project Budget Table: Romeoville Expansion Building

(Create an overall budget for the project proposed)

	Task	Expenses ($) (a)	Man-hours (b)	Total Budget $ (c = a+b)
Construction Phase Tasks				
1	Review Owner's Project Requirements			
2	Review Construction documents - plans, specifications, design narratives, design intent			
3	Provide Commissioning Specifications to Engineer of Record for inclusion in construction documents			
4	Develop Commissioning Plan			
5	Review RFI's, Change Order Requests, Submittals etc.			
6	Develop Procedures and Review Pre-functional Testing			
7	Observe installation and startup			
8	Develop Procedures, Review Functional testing, Witness testing			
9	Management/Coordination/Scheduling			
10	Review OMR&R Manual and Training			
11	Compile Commissioning Report			
12	Coordinate Progress Meetings and issue Trip Report			
13	Site visits planned			
14	Provide Systems Level Training			
	Subtotal			
	TOTAL (this should match Page 2 Total)			
Warranty Period				
15	Unused			
16	Seasonal testing			
17	Near-warranty end review			
	Subtotal			

Exhibit 3b: Page 2 Project Budget Table: Romeoville Expansion Building

(Itemize budget by systems for Construction Phase Only)

Systems	Expenses $ (a)	Man-Hours (b)	Budget ($) (c = a+b)
1. Mechanical Systems and Controls including Plumbing			
2. Electrical Systems and Electrical Controls			
3. Lighting & Controls Systems, Emergency Lighting			
4. Building Elevator			
5. Building Fire Alarm and Fire Protection Systems			
8. Emergency Generator / Standby Power transfer switching			
9. Chilled water Systems, controls and sequences			
10. Metering Systems (and connection to Campus systems)			
11. Door Access and Security Systems			
TOTAL (this should match Page 1 Total)			

ATTACHMENT - A

FEE PAGE AND PROPOSAL ACKNOWLEDGEMENT
(Support the fee with detail in Exhibit 3)

Multipurpose Building, EA Credit 3: Enhanced Commissioning $ _____

Romeoville Expansion Building, EA Credit 3: Enhanced Commissioning $ _____

TOTAL **$** _____

Fee Savings Based on Award of all projects to single commissioning agency:

TOTAL **$** _____

Alternate Proposal:

Multipurpose Building (Fundamental Commissioning only) $ _____

Romeoville Expansion Building, EA Credit 3: Enhanced Commissioning $ _____

TOTAL **$** _____

Fee Savings Based on Award of all projects to single commissioning agency:

TOTAL **$** _____