

**CITY OF CORPUS CHRISTI
AMENDMENT NO. 2
CONTRACT FOR PROFESSIONAL SERVICES**

The City of Corpus Christi, Texas, hereinafter called "CITY," and **McKinstry Essention, Inc.**, hereinafter called "Design/Builder," agree to the following amendment to the Contract for Professional Services for **Energy Conservation Retrofit – Major Facilities, Phase 2** as authorized and administratively amended by:

Original Contract	6,950,000.00	M2012-014	January 17, 2012
Change Order No. 1	49,999.00	Administrative Approval	April 18, 2013
Amendment No. 1	\$125,000.00	Ord. 029830	May 14, 2013

The **Original Contract** shall be modified as shown in Exhibit "A" to include the Scope of Work, Special Terms on Phase 2 and Additional Terms.

In the **Original Contract**, ARTICLE NINE. "CONTRACT PRICE" shall be modified as shown in the attached Exhibit "A" for an additional fee not to exceed **\$7,709,592.00**(in figures) **Seven Million Seven Hundred Nine Thousand Five Hundred Ninety Two Dollars and Zero Cents** (in words) for a total restated fee not to exceed **\$14,834,591.00** (in figures) **Fourteen Million Eight Hundred Thirty Four Thousand Five Hundred Ninety One Dollars and Zero Cents** (in words).

All other terms and conditions of the January 17, 2012 contract between the City and Design/Builder and of any amendments to that contract which are not specifically addressed herein shall remain in full force and effect.

CITY OF CORPUS CHRISTI

MCKINSTRY ESSENTION, INC.

Gus Gonzalez, P.E. Date
Assistant City Manager
For Public Works & Utilities

Joseph Hagar Date
Director of Finance
5005 3rd Avenue S
Seattle WA 98134
(206) 768-7732 Business
(206) 303-9065 Mobile
JosephH@McKinstry.com

RECOMMENDED

Daniel Biles, P.E., Date
Executive Director of Public Works

APPROVED

Office of Mgmt and Budget Date

Project No. E13143
Fund Source No. 550950-3163-00000-E13143
Fund Name: Energy Efficiency CIP 2014 PFCO
Encumbrance No. _____

ATTEST

Rebecca Huerta, City Secretary

**AMD. NO. 2
Page 1 of 1**

Scope of Work Amendment No. 2 Energy Efficiency Conservation Project - Major City Facilities (Phase 2)

1. PROJECT SCOPE SUMMARY

A. Controls

1. Furnish and install new wireless programmable network thermostats in forty-six (46) facilities. This scope applies to all 04.01 Facilities Improvement Measures (FIMs). This device will be compatible with the facility HVAC equipment and has the ability to control the HVAC equipment to reduce the operating hours. It will be remotely accessed and monitored via a web interface. This will provide scheduling and setpoints to be accessed and changed remotely with an internet connection. These units have override and setpoint adjust capabilities at the thermostat.
2. Also includes Direct Digital Controls (DDC) similar to Phase I, in Neyland Branch Library.

B. Retro-Commissioning

1. Retro-commissioning services for Frost Bank Building (FIM #04.03-FBO), Greenwood Library (FIM #04.03-LGAW), and Kaffie South Side Library (FIM #04.03LKS) to optimize equipment runtime schedules and temperature setpoints for unoccupied and occupied times to reduce HVAC equipment operation hours and reduce energy consumption.

C. Retro-Commissioning and Upgrades to American Bank Center

1. Repair mechanical and controls deficiencies for FIM #AME-05.02, as documented in the Phase I retro-commissioning investigation, for building controls to become more automated and reduce energy consumption.
2. Arena Mechanical
 - i. Replace control valves for cooling towers and chiller isolation in CHW Plant
 - ii. Replace control valve actuators for boiler isolation and bypass valve
 - iii. Convert all automatic pump isolation control valves to manual operation by installing spool or lever
 - iv. Replace OSA dampers and OSA damper actuators on Arena AHU 1-11
 - v. Repair or replace non-functioning CHW & HW control valves on Arena AHUs 1-11
 - vi. Install ductwork to connect OSA louvers to reactivation air inlet for DAHU 1 & 2
 - vii. Replace OSA, Return and bypass damper actuators on DAHU 1 & 2
 - viii. Install VFDs on supply fan for DAHU 1 & 2
 - ix. Replace desiccant wheels on DAHU 1 & 2
 - x. Repair damaged Supply/OSA ductwork on DAHU 1 & 2
 - xi. Replace VFDs on supply fan for AHUs 6,7,B
 - xii. Replace VFDs on SCHWP 1 & 2, CWP 2, HWP 1 & 2
 - xiii. Rebalance Arena CHW loop
 - xiv. Replace failed duct pressure sensor on AHU-6
3. Arena Controls
 - i. Install new manufacturer's controller and sequences for DAHU 1 & 2 and integrate to ALC controls system
 - ii. Move smoke system to ALC controls system

4. Convention Center Mechanical

- i. RTAHU 1-11 (excluding RTAHU 5) replace CHW control valves
- ii. RTAHU 1 & 2 replace HW control valves
- iii. RTAHU 1-11 (excluding RTAHU 5) replace OSA dampers and OSA damper actuators
- iv. Reconnect CHW actuator on AHU 3,5,6,8,9,11,19,20,21,22,23
- v. Repair or replace non-functioning OSA damper on AHU 1,2,3,4b,5,6,9,20,21,22,23
- vi. Replace failed duct pressure sensors on RTAHUs 3,7,10,11
- vii. Replace VFDs on AHU supply fan for RTAHU 3 & 1B

D. Energy Control Upgrades at American Bank Center

1. Implement a DDC energy management control system/strategy for FIM #AME-05.03 to make use of the existing thermal energy storage infrastructure to reduce peak demand energy consumption.

2. Mechanical

- i. Convention Center Chiller Plant
 1. Install new 1½" solenoid valve in make-up water line; control make-up water valve by using new pressure sensor in tank as a proxy for water level.
 2. Install new BTU meter across primary CHW loop.
- ii. Thermal Energy Storage ("TES") Tank
 1. Install new pressure sensor at bottom of tank (to measure water level).
 2. Install new BTU meter for TES tank. Install turbine flowmeter in pipe routed to the top of the tank.
- iii. Convention Center
 1. Install new CHWR temp sensor and calibrate.

3. Controls

- i. Convention Center Chiller Plant
 1. Correct BAS graphic to properly illustrate piping configuration in plant. Graphic currently shows Convention Center secondary pumps in series with primary chiller pumps.
 2. Replace (e) CHWR temp sensors at each chiller and calibrate.
 3. Furnish new 1½" solenoid valve in make-up water line. Calibrate. Integrate into BAS. Control make-up water valve by using new pressure sensor in tank as a proxy for water level.
 4. Furnish new BTU meter for installation across primary CHW loop.
 5. Integrate (3) new chiller VFDs into BAS.
- ii. Thermal Energy Storage ("TES") Tank
 1. Furnish & install (9) new temperature sensors along vertical profile of tank, replacing the (e) sensors. Calibrate new sensors.
 2. Furnish new BTU meter for TES tank. Calibrate and integrate into BAS; display temps and flow (with direction) on BAS graphic.
 3. Furnish & install new remote wireless internet connection for temp sensors, pressure sensor, and flow meters. Establish continuous communication with BAS and map points to BAS.
- iii. Convention Center
 1. Furnish & install new CHWS temp sensor and calibrate, replacing (e) sensor.
 2. Furnish new CHWR temp sensor for installation and calibrate.
 3. Calibrate (e) BTU meter.
 4. Reset CHWS temperature setpoint based on terminal equipment valve positions.

5. Modulate pump speed (existing VFD) to maintain pressure setpoint. Reset pressure setpoint using Trim & Respond logic. Pump speed reset takes priority (over CHWS temperature reset) when TES tank is discharging.
 - iv. Selena Auditorium
 1. Calibrate/repair/replace (e) BTU meter.
 2. Modulate pump speed (existing VFD) to maintain pressure setpoint. Reset pressure setpoint using Trim & Respond logic. Pump speed reset takes priority (over CHWS temperature reset) when TES tank is discharging.
 - v. Corpus Christi History/Science Museum
 1. Calibrate/repair/replace (e) BTU meter.
 2. Modulate pump speed (existing VFD) to maintain pressure setpoint. Reset pressure setpoint using Trim & Respond logic. Pump speed reset takes priority (over CHWS temperature reset) when TES tank is discharging.
 - vi. Art Museum
 1. Calibrate/repair/replace (e) BTU meter. Integrate into American Bank Center's BAS.
 2. Modulate pump speed (existing VFD) to maintain pressure setpoint. Reset pressure setpoint using Trim & Respond logic. Pump speed reset takes priority (over CHWS temperature reset) when TES tank is discharging.
 - vii. Harbor Playhouse
 1. Calibrate/repair/replace (e) BTU meter. Integrate into American Bank Center's BAS.
 2. Modulate pump speed (existing VFD) to maintain pressure setpoint. Reset pressure setpoint using Trim & Respond logic. Pump speed reset takes priority (over CHWS temperature reset) when TES tank is discharging.
4. Electrical
- i. Convention Center Chiller Plant
 1. Install one new VFD for each of three (3) McQuay chillers.
 - ii. Thermal Energy Storage ("TES") Tank
 1. Provide new 120V/20A circuit for tank temperature sensors.
 2. Provide new 120V/20A circuit for tank pressure sensor & BTU meter.
 3. Provide new 120V/20A circuit for new controls communication equipment.
 - iii. Convention Center
 1. Provide new 120V/20A circuit for BTU meter.

E. Lighting Technology Upgrades

1. The purpose of this measure is to replace or retrofit outdated and inefficient lighting fixtures and reduce utility consumption while maintaining or improving lighting quality at fifty-nine (59) buildings. All 9.01 and 9.02 FIMs are included in this scope.

F. Weatherization and Building Envelope Improvements

1. Furnish materials and labor required to perform building envelope improvements for FIM #13.01 (weather stripping, caulking, sealants, etc.) at thirty-eight (38) buildings to provide weather barriers to prevent infiltration and water encroachment.

G. Water Conservation Improvements

1. The purpose of this project is to reduce overall water consumption by utilizing low flow plumbing fixtures and sink aerators at fifty-six (56) buildings for FIM #18.01.

H. General Scope

During Phase 2 project implementation phase, Corpus Christi and McKinstry project representatives will review the project scope of work for each building and will address any scope items that were completed by Corpus Christi after the Energy Services Proposal submittal on December 23, 2013. If scope items were completed by the Corpus Christi, project representatives will review and mutually agree upon the redirection of project funds to scope

revisions. Scope revisions items will include, but not limited to, replacement of valves and variable frequency drives which were replaced by Corpus Christi at the American Bank Center.

2. SPECIAL TERMS ON PHASE 2

- A. The Scope of Work for Amendment No. 2 is detailed in the "City of Corpus Christi - Phase II Energy Services Proposal - REVISED" dated 20 November 2013.
- B. As described in the Energy Cost Savings Guarantee, Section 3, item 3.2B, page 33 of the McKinstry Energy Services Proposal, the energy cost savings are guaranteed by McKinstry and shall be computed on the basis of the actual utility bills the City of Corpus Christi paid for associated buildings/facilities before and after the implementation of the Scope of Work for Amendment 2 of the Energy Efficiency Conservation Retrofit - Major City Facilities (Project No. E11102).
- C. The materials furnished by McKinstry shall be approved by the City of Corpus Christi before procurement and construction. If the materials do not meet environmental requirements, McKinstry shall change the materials, without an increase to the Contract Price, until meeting the City's requirements. Otherwise, McKinstry shall provide a materials/fixtures list which meets the Owner's requirement before executing contract. The City will approve a formal environmental requirement (performance specification) prior to submittal delivery to the City for review.
- D. As described in the Energy Cost Savings Guarantee, Section 3 of the McKinstry Energy Services Proposal, annual savings of \$584,454 for energy and \$33,358 for maintenance and operations are guaranteed through the improvements included herein with any shortfall in these savings to be paid by McKinstry annually for the term of the contract, which is expected to be a 15-year period. These savings are based on City of Corpus Christi negotiated contractual utility rates reflected in Section 3, Energy Cost Savings Guarantee of the McKinstry Energy Cost Savings Proposal, table 3.3, page 63.
- E. For the buildings that do not meet the wireless network requirements for the programmable thermostats to be installed in FIM #04.01, the City of Corpus Christi will provide the network wiring for the thermostat connections. McKinstry will be required to coordinate the timing of these thermostat connections without any increase to the Contract Price.
- F. McKinstry agrees that the guaranteed energy savings shall not be achieved at the cost of sacrificing the comfort of each building/facility. Comfort is defined in Energy Cost Savings Guarantee, Section 3, item 3.4, page 38 and 39, of the McKinstry Energy Savings Proposal. During construction, McKinstry shall coordinate with the operating department and follow their requirements. This term takes precedence over the terms of ESP.
- G. McKinstry performed a site survey which was completed in August, 2013. Based on this survey McKinstry accepts the existing construction conditions without any increase to the Contract Price during construction. If changes to the sites occurred after August 2013, McKinstry will have the right to re-propose the scope of work and price as required to meet the guaranteed energy savings.
- H. For all drawings required for the construction by McKinstry for this scope of work, McKinstry shall submit all detailed engineering drawings for City of Corpus Christi's review and approval prior to commencing construction. All schedules prepared by McKinstry should include a review and approval period such that no project delays or increase in Contract Price can be claimed.

3. ADDITIONAL TERMS

A. COORDINATION WITH CITY

1. McKinstry shall hold periodic conferences with City through the end of the Project. The Project shall have the full benefit of City's experience and knowledge of existing needs and facilities and be consistent with City's current policies and standards.
2. To assist McKinstry in this coordination, City shall make available, for McKinstry's use in planning and designing the Project, all existing plans, maps, statistics, computations and other data in City's possession, relative to existing facilities and to this particular Project, at no cost to McKinstry. However, any and all such information shall remain the property of City and shall be returned by McKinstry to City upon termination or the completion of the Project or if instructed to do so by the City's authorized representative.
3. McKinstry shall submit all shop drawings and submittals for City's review. City's review shall be limited in scope to a review for conformance with the information given and nothing more.
4. City promptly will give written notice to McKinstry whenever City observes, discovers or otherwise becomes aware of any defect in McKinstry's services, or any development that affects the scope or timing of McKinstry's services.

B. REVISIONS TO DOCUMENTS

McKinstry shall make, without expense to City, such revisions to the drawings, reports or other documents, as may be required to meet the needs of City and which are within its Scope of Services.

C. SUBMITTALS

Within 14 working days after the date of commencement as stated in the Notice to Proceed, the MCKINSTRY shall submit the following items to the CITY for review:

1. A preliminary schedule of Shop Drawings, sample, and proposed substitutes or "or-equal" submittals.
2. A list of all permits and licenses the MCKINSTRY shall obtain indicating the agency required to grant the permit and the expected date of submittal for the permit and required date for receipt of the permit.
3. A complete progress schedule for all phases of the Project.
4. Material Safety Data Sheets on products used on the Project.
5. A letter designating the MCKINSTRY's Superintendent, defining that person's responsibility and authority.
6. A letter designating the MCKINSTRY's safety representative and that person's responsibility and authority.

No payments shall be made to the MCKINSTRY until all of these items are submitted in their entirety, as determined by the CITY.

D. SHOP DRAWING SUBMITTAL

1. Wherever called for in the Contract Documents, or where required by the CITY, MCKINSTRY shall furnish to the CITY, for review, eight (8) copies of each Shop Drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, Shop Drawings, fabrication drawings, installation drawings, erection drawings, lists, graphs, operating instructions, catalog sheets, data sheets, and similar items.
2. All Shop Drawing submittals shall be accompanied by the MCKINSTRY's standard submittal transmittal form. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for re-submittal.

- E. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the City. City will respond to all submittal requests for approval within 5 working days from receipt.
- F. Any shop drawing sheet that contains structural design information that departs from contract plan design values must be sealed, signed and dated by an engineer registered in the state of Texas.
 - 1. Optional designs typically propose design values that vary from contract plan designs and therefore fail under this requirement.
 - 2. Similarly, and even though originally proposed and sanctioned by the City, all "modified" optional designs must also be sealed.
 - 3. Note that previously, only the cover sheet of the calculations that were required to accompany optional or alternate designs was required to be sealed. Now, the calculations cover sheet as well as the associated shop drawing detail sheets must be sealed.
- G. All calculations and detailed shop drawings must be dated, uniquely identified, and sealed by a Texas Professional Engineer.
- H. The City's review of any and all shop drawings and any other submittals is strictly limited in scope to City's review for "conformance with information given."



SUPPLIER NUMBER
TO BE ASSIGNED BY CITY
PURCHASING DIVISION

CITY OF CORPUS CHRISTI DISCLOSURE OF INTEREST

City of Corpus Christi Ordinance 17112, as amended, requires all persons or firms seeking to do business with the City to provide the following information. Every question must be answered. If the question is not applicable, answer with "NA". See reverse side for Filing Requirements, Certifications and definitions.

COMPANY NAME: McKinstry Essention, Inc.

P. O. BOX: _____

STREET ADDRESS: 5005 3rd Avenue S CITY: Seattle, WA ZIP: 98134

FIRM IS: 1. Corporation 2. Partnership 3. Sole Owner
4. Association 5. Other

DISCLOSURE QUESTIONS

If additional space is necessary, please use the reverse side of this page or attach separate sheet.

1. State the names of each "employee" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Job Title and City Department (if known)
N/A	
_____	_____
_____	_____
_____	_____

2. State the names of each "official" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Title
N/A	
_____	_____
_____	_____
_____	_____

3. State the names of each "board member" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Board, Commission or Committee
N/A	
_____	_____
_____	_____
_____	_____

4. State the names of each employee or officer of a "consultant" for the City of Corpus Christi who worked on any matter related to the subject of this contract and has an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Consultant
N/A	
_____	_____
_____	_____
_____	_____

FILING REQUIREMENTS

If a person who requests official action on a matter knows that the requested action will confer an economic benefit on any City official or employee that is distinguishable from the effect that the action will have on members of the public in general or a substantial segment thereof, you shall disclose that fact in a signed writing to the City official, employee or body that has been requested to act in the matter, unless the interest of the City official or employee in the matter is apparent. The disclosure shall also be made in a signed writing filed with the City Secretary. [Ethics Ordinance Section 2-349 (d)]

CERTIFICATION

I certify that all information provided is true and correct as of the date of this statement, that I have not knowingly withheld disclosure of any information requested; and that supplemental statements will be promptly submitted to the City of Corpus Christi, Texas as changes occur.

Certifying Person: _____ **Title:** _____
(Type or Print)

Signature of Certifying Person: _____ **Date:** _____

DEFINITIONS

- a. "Board member." A member of any board, commission, or committee appointed by the City Council of the City of Corpus Christi, Texas.
- b. "Economic benefit". An action that is likely to affect an economic interest if it is likely to have an effect on that interest that is distinguishable from its effect on members of the public in general or a substantial segment thereof.
- c. "Employee." Any person employed by the City of Corpus Christi, Texas either on a full or part-time basis, but not as an independent contractor.
- d. "Firm." Any entity operated for economic gain, whether professional, industrial or commercial, and whether established to produce or deal with a product or service, including but not limited to, entities operated in the form of sole proprietorship, as self-employed person, partnership, corporation, joint stock company, joint venture, receivership or trust, and entities which for purposes of taxation are treated as non-profit organizations.
- e. "Official." The Mayor, members of the City Council, City Manager, Deputy City Manager, Assistant City Managers, Department and Division Heads, and Municipal Court Judges of the City of Corpus Christi, Texas.
- f. "Ownership Interest." Legal or equitable interest, whether actually or constructively held, in a firm, including when such interest is held through an agent, trust, estate, or holding entity. "Constructively held" refers to holdings or control established through voting trusts, proxies, or special terms of venture or partnership agreements."
- g. "Consultant." Any person or firm, such as engineers and architects, hired by the City of Corpus Christi for the purpose of professional consultation and recommendation.

Facilities Energy Conservation, Phase 2
Project No. E13143
Invoice No. 12345
Invoice Date:

	Contract	Amd No. 1	Amd No. 2	Contract	Amount Invoiced	Previous Invoice	Total Invoice	Percent Complete
Basic Services:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0%
Preliminary Phase	0	0	0	0	0	0	0	0%
Design Phase	0	0	0	0	0	0	0	0%
Bid Phase	0	0	0	0	0	0	0	0%
Report Phase	0	0	0	0	0	0	0	0%
Construction Phase	0	0	0	0	0	0	0	0%
Subtotal Basic Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0%
Additional Services:								
Permitting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0%
Warranty Phase	0	0	0	0	0	0	0	0%
Inspection	0	0	0	0	0	0	0	0%
Platting Survey	0	0	0	0	0	0	0	0%
Reporting	0	0	0	0	0	0	0	0%
O & M Manuals	TBD	TBD	TBD	TBD	TBD	TBD	0	0%
SCADA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	0%
Subtotal Additional Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0%
Summary of Fees								
Basic Services Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0%
Additional Services Fees	0	0	0	0	0	0	0	0%
Total of Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0%