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ADDENDUM NO. 01

TO: **ALL PROSPECTIVE BIDDERS AND OTHER RECIPIENTS OF CONTRACT DRAWINGS & SPECIFICATIONS**

DATE: **December 18, 2017**

RE: **ADDENDUM NO. 01**
ENERGY EFFICIENCY UPGRADES TO THE DONEGAL PRIMARY SCHOOL
CRA PROJECT NO. 3021

Receipt of this Addendum must also be acknowledged on the Proposal Form. Failure to do so may subject the bidder to disqualification.

ADDENDUM No. 01

December 18, 2017

ENERGY EFFIENCY UPGRADES TO THE DONEGAL PRIMARY SCHOOL
CRA PROJECT NO. 3021

TO: ALL PROSPECTIVE BIDDERS AND OTHER RECEPIENTS OF CONTRACT DRAWINGS & SPECIFICATIONS

NOTE: This Addendum is hereby made a part of the Contract Document, which will be the basis of the Contract. The Addendum is issued to modify and/or correct the original Contract Documents dated December 1, 2017. Attach this Addendum to your Contract Documents. Receipt of this Addendum must be acknowledged on the Proposal Form. Failure to do so may subject the bidder to disqualification.

GENERAL:

1. Each Bid must be submitted on the form provided by the Architect/Engineer, and must be accompanied by a bid bond, certified check, or cashier's check equal to ten percent of the total price submitted inclusive of add alternates. The Owner also reserves the right to reject any or all Bids for any reason whatsoever.

2. The last day which Contractors can ask questions in writing will be five days prior to receipt of bids. Questions will be answered by Addendum only.

3. All bidders are hereby notified that they are responsible to review all parts of this addendum for conditions and requirements that may apply to their individual contracts. All Plan Holders shall review their Bidding Documents against the Table of Contents and List of Drawings to ensure that all Specifications Sections and Drawings are in your possession.

ARCHITECTURAL SPECIFICATIONS

SECTION 000301 COMBINED BID FORM - GENERAL CONSTRUCTION - CONTRACT 3021-1/3060-1

REPLACE Page 3 of the Bid form with the attached page.

SECTION 012300 ALTERNATES

REVISE the bid alternates to state the following:

A. GENERAL CONSTRUCTION - ALTERNATES

GC-1 Acoustical Tile Ceiling in DAO: State the amount to be added to the Contract to provide all General Construction labor and materials to construct an acoustical tile ceiling in the "Clerk Area 100" of the District Administrative Office as shown on Drawing A1.10. GC to provide Acoustical Tile Ceiling in type and color "Armstrong 1761 2nd Look II Cream." Include two (2) boxes of additional ceiling tile in the cost for this alternate bid. Demolition of the existing acoustical tile ceiling in Clerk Area 100 shall be included in this alternate bid.

B. ELECTRICAL CONSTRUCTION – ALTERNATES

EC-1 LED Lighting in DAO: State the amount to be added to the Contract to provide all Electrical Construction labor, plant and materials to construct the lighting in the "Clerk Area 100" of the District Administrative Office as shown on Drawing E2.1. This alternate is for the bid form only found in the Renovations to the DIG.

HVAC SPECIFICATIONS

SECTION 230923 DIRECT DIGITAL CONTROL SYSTEM FOR HVAC

Add the following Paragraphs to the end of the section.

4.12 CHILLED WATER SYSTEM AND PACKAGED AIR-COOLED CHILLERS

A. The chilled water system consists of one packaged air-cooled chillers with VFD-controlled chilled water pumps operating as duty/standby.

B. The chillers shall be furnished with BACnet compatible controls provided by the chiller manufacturer. It shall be the responsibility of the BAS contractor to provide all control and interlock wiring necessary for the operation of the chillers.

C. The chilled water system shall be started and stopped through the DDC system. At 55°F (adj.) outside air temperature, a signal shall be sent to the chiller control panel to allow the chillers to operate under their own controls and start their respective chilled water primary pumps. The DDC system shall accept a 4-20ma or 0-10vdc signal that represents chiller load percentage.

D. When any chiller is enabled by the DDC system, the primary chilled water pump shall start first. Once water flow through the chiller is verified, as sensed by a differential pressure sensor piped across the supply and return chilled water lines, the chiller shall then be enabled.

E. The BAS system shall provide start/stop control, and lead/lag sequencing control of the chillers as recommended by the chiller manufacturer. Should any chiller be selected to operate as the lead chiller and fail to run, the lag chiller shall start and the DDC system shall be alarmed. Lead/lag control of chillers shall be monitored and selected through the BAS system software and shall alternate every 15 days (adj.) or based on the manufacturer suggested hours of operation. Once the lead chiller is operating, the lag chiller shall only start when the lead chiller is operating near full load and the chilled water supply temperature has exceeded set-point by 2°F (adj.) for 15 minutes (adj.). The chilled water pump vfd shall be modulated as required to assure that the rate of chilled water flow through each operating chiller never falls below the minimum limit required by the chiller manufacture. As the system load/temperatures and flow decreases, the lag chiller shall be shutdown. It shall be the responsibility of the BAS contractor to provide the proper flow meters and sensors and chilled water temperature sensors to provide the appropriate chiller sequencing and chilled water supply temperature as required by the chiller manufacturer.

F. Chilled Water Pumps: The BAS system shall provide start/stop control, VFD control and lead/lag sequencing control of the chilled water pumps. Lead chilled water system pumps, once enabled, shall run continuously. A differential pressure sensor piped across the supply and return chilled water lines about one-third and two-thirds the way down in each branch shall provide input based on the greatest deviation from set-point to modulate the VFD's to maintain proper pressure differential in the system. Pump status shall be monitored via current-sensing relays. If the lead pumps should fail to run, the standby pump shall start and the DDC system shall be alarmed. Lead/lag control of chilled water system pumps shall be selected in software and shall alternate every 15 days (adj.).

G. Existing Pump CP-1 will be dedicated to serve existing Chiller CHL-1. There will be a changeover in system function between the heating and cooling season to be initiated manually that will impact the service of the pumps for this building. While the system function is in cooling, pumps CP-1/CP-3 will serve as distribution pumps for the chilled water supplied through CHL-1.

H. The system chilled water supply temperature shall maintain the following reset schedule by modulation of the mixing valve controlled by the BAS contractor (refer to flow diagrams for quantity)

OA Temperature	Occupied System Water Temperature	Un-Occupied System Water
75°F	45°F	45°F
70°F	45°F	45°F
65°F	50°F	45°F
60°	50°F	45°F

I. When outside air temperature drops below 55°F (adj.) the DDC system shall disable the chiller and pumps.

J. Point List:
1. DO – Chiller #1 Start/Stop
2. DI – Chiller #1 Proof Of Water Flow

3. AI – Chiller #1 Flow Meter
4. AI – Chiller #1 Supply Water Temperature
5. AI – Chiller #1 Return Water Temperature
6. DI – Chiller #1 Alarm
7. AI – Chiller Capacity Control
8. AI – Common Chilled Water Supply Temperature
9. AO – Bypass Valve Control
10. DO – Pump CP-1 Start/Stop
11. DO – Pump CP-3 Start/Stop
12. DI – Pump CP-1 Status
13. DI – Pump CP-3 Status
14. AO – VFD CP-1 Control
15. AO – VFD CP-3 Control
16. AI – CP-1 VFD Alarm
17. AI – CP-3 VFD Alarm
18. AI – Chilled Water Distribution Pump Differential Pressure Sensor (as req.)

4.13 LIGHTING CONTROL

A. General

Lighting control panels shall be furnished and installed by the Electrical contractor complete with a BACnet or Modbus interface for connection to the Building Automation System.

The following zones shall be incorporated into the graphic:

Exterior Building Wall Packs Lighting
Parking Lot Lighting Zone 1
Parking Lot Lighting Zone 2
Exterior Building Doors/Canopies

Run Conditions - Scheduled

The BAS system shall control all lighting zones based on a user definable schedule.

	Hardware Points				Software Points					
Point Name	AI	AO	BI	BO	AV	BV	Sched	Trend	Alarm	Show On Graphic
Parking Lot Lighting Zone 1							x	x		x
Parking Lot Lighting Zone 2							x	x		x
Exterior Building Doors/Canopies							x	x		x
Lighting Control Interface (Modbus or BACnet)								x		×

END OF ADDENDUM NO.01

ATTACHMENTS

SECTION 000301 COMBINED BID FORM - GENERAL CONSTRUCTION - CONTRACT 3021-1/3060-1- Page 3

ALTERNATES: The Instructions to Bidders and the Contract Documents comprising the plans and specifications, and all documents bound therewith, together with all Addenda thereto, shall apply to all Alternate Bids as listed in Division 1 Section “Alternates”, and as listed below:

GC-1 Acoustical Tile Ceiling in DAO ADD $ _____

UNIT PRICES: The Instructions to Bidders and the Contract Documents comprising the plans and specifications, and all documents bound therewith, together with all Addenda thereto, shall apply to all Unit Prices as listed in Division 1 Section "Unit Prices", and as listed below:

The Owner reserves the right to accept or reject any and all Unit Prices stipulated on the Bid Form.

UNIT PRICES

GC-1 5/8” Plywood Roof Sheathing $_____SF

ADDENDA

The undersigned hereby acknowledge receipt of following Addenda and has prepared this bid accordingly:

ADDENDUM #_____Dated_____ ADDENDUM #_____Dated_____
ADDENDUM #_____Dated_____ ADDENDUM #_____Dated_____

Bids shall be officially signed in accordance with the Instructions to Bidders, using the applicable portion of the "Signature Pages".