



**MISSISSIPPI STATE**  
UNIVERSITY™

## **INVITATION FOR BIDS**

### **OFFICE OF PROCUREMENT & CONTRACTS**

#### **1. INSTRUCTIONS FOR BIDDERS**

- a. Sealed bids will be received in the Office of Procurement & Contracts, Mississippi State University, for the purchase of the items listed herein.
- b. All bids must be received in the Office of Procurement & Contracts on or before the bid opening time and date listed herein. Delivery of bids must be during normal working hours, 8:00 a.m. to 5:00 p.m. CST, except on weekends and holidays when no delivery is possible.
- c. Bidders shall submit their bids either electronically or in a sealed envelope.
  - i. Sealed bids should include the bid number on the face of the envelope as well as the bidders' name and address. Bids should be mailed to: 245 Barr Avenue, 610 McArthur Hall, Mississippi State, MS 39762.
  - ii. At this time we only accept non-ITS bids electronically. For electronic submission of bids, go to: [https://www.ms.gov/dfa/contract\\_bid\\_search](https://www.ms.gov/dfa/contract_bid_search) and use the RFX number on the next page as your reference number.
- d. All questions regarding this bid should be directed to the Office of Procurement & Contracts at 662-325-2550.

#### **2. TERMS AND CONDITIONS**

- a. All bids should be bid "FOB Destination"
- b. Bidders must comply with all rules, regulations, and statutes relating to purchasing in the State of Mississippi, in addition to the requirements on this form. General Bid Terms and Conditions can be found here:  
[https://www.procurement.msstate.edu/procurement/bids/Bid\\_General\\_Terms\\_May\\_2019\\_V2.pdf](https://www.procurement.msstate.edu/procurement/bids/Bid_General_Terms_May_2019_V2.pdf)
- c. Any contract resulting from this Invitation for Bid shall be in substantial compliance with Mississippi State University's Standard Contract Addendum:  
<https://www.procurement.msstate.edu/contracts/standardaddendum.pdf>

**Bid Number/RFX Number: 20-21/RFX#3160003447**

**Opening Date: February 28, 2020 @2:00 p.m.**

**Description: Main switchboard section & motor control center breakers for central cooling plant (material only)**

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

Vendor Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Days the Offer is Firm: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

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

Title: \_\_\_\_\_

Item	Quantity	Description	Unit Price	Total Price
1		Lot of 4 MCC motor control centers with breakers		
2		Switchboard section		

Please place bids on attached Materialman's Proposal form P-1 through P-3.

**Specifications & Materialman's Proposal  
For  
Main Switchboard Section &  
Motor Control Center Breakers  
for Central Cooling Plant  
(Material Only)**



**February 5, 2020**

**Prepared for:**

Mississippi State University  
P.O. Box 5307  
Mississippi State, Mississippi 39762

**Prepared by:**

Atwell & Gent

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FOR CENTRAL COOLING PLANT  
(MATERIAL ONLY)  
MISSISSIPPI STATE UNIVERSITY  
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## INSTRUCTIONS TO BIDDERS

MAIN SWITCHBOARD SECTION &  
MOTOR CONTROL CENTER BREAKERS  
FOR CENTRAL COOLING PLANT  
(MATERIAL ONLY)  
MISSISSIPPI STATE UNIVERSITY  
MISSISSIPPI STATE, MISSISSIPPI

Bids that are sent by mail shall be clearly marked "Bid Enclosed" or "Bid Envelope Enclosed" as appropriate. The sealed envelope containing the bid shall have the following information shown on the envelope:

BID ENCLOSED

ITEM: MAIN SWITCHBOARD SECTION & MOTOR CONTROL CENTER BREAKERS  
FOR CENTRAL COOLING PLANT (MATERIAL ONLY)

OWNER: MISSISSIPPI STATE UNIVERSITY

BIDDER: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

BID DUE: REFER TO NOTICE TO BIDDERS

Bids that are sent by parcel delivery service should be addressed to:

Mr. Don Buffum, Director  
Office of Procurements & Contracts  
Mississippi State University  
Barr Avenue, 610 McArthur Hall  
Mississippi State, Mississippi 39762

Bids that are sent by mail should be addressed to:

Mr. Don Buffum, Director  
Office of Procurements & Contracts  
Mississippi State University  
P.O. Box 5307  
Mississippi State, Mississippi 39762

The Engineer for this project is:

Atwell & Gent

The Engineer will represent the Owner in all matters pertaining to this project, including but not limited to, answering technical questions of prospective bidders and recommendations of lowest and best bid, acceptance of shop drawings and similar documents, and approval of invoices prior to payment by the Owner.

Questions and Clarifications:

Submit all questions about the specifications to the Engineer, in writing. Replies will be issued to all prospective Bidders of Record. Neither the Engineer nor the Owner will be responsible for oral clarifications.

Substitutions:

Only equipment from listed manufacturers will be accepted. No substitutions will be accepted.

Bid Preparation Instructions:

Bidders shall complete all blank spaces on the Materialman's Proposal Form for each item of equipment being bid in accordance with these specifications and terms and conditions. Bidder should insert the unit price in the blank under the Unit Price heading and multiply this unit price by the number shown in the Number Required heading and enter the product of this multiplication in the blank under the heading Total Price for each bid item on the Materialman's Proposal Form. The bidder shall sum the Total Bid Price for each Bid Item and enter this sum in the Total Bid Price.

Bidder shall insert the delivery time in weeks after receipt of an order for each item of equipment bid in the blank provided. Bidder shall also indicate equipment being bid by the manufacturer's name and catalog number in the blanks provided on the Materialman's Proposal Form. In the event MATERIALMAN proposes to Bid substituted equipment, MATERIALMAN shall provide substitution data as specified in the Specifications.

Bidder shall complete both copies of the Materialman's Proposal Forms bound in these Specifications and shall submit both copies to the OWNER at the time that the bids are due. Bidders taking exceptions to any part of the specifications, conditions, or payment terms specified herein shall show such exception on the Materialman's Proposal Form in the space provided. If exceptions are not shown on the Proposal Form, Bidder must supply equipment specified herein under the terms and conditions specified herein. Proposals that are modified, excepted, or in any way changed from the proposal that the OWNER is requesting in this request for proposals may be rejected by the OWNER.

Bid Award:

**Bid Item No. 1 will be awarded to the bidder with lowest and best responsive bid for Bid Item No. 1. Unusually long delivery promises or exceptions may cause bid to be disregarded.**

**Bid Item No. 2 will be awarded to the bidder with lowest and best responsive bid for Bid Item No. 2. Unusually long delivery promises or exceptions may cause bid to be disregarded.**

## MATERIALMAN'S PROPOSAL

MAIN SWITCHBOARD SECTION &  
MOTOR CONTROL CENTER BREAKERS  
FOR CENTRAL COOLING PLANT  
(MATERIAL ONLY)  
MISSISSIPPI STATE UNIVERSITY  
MISSISSIPPI STATE, MISSISSIPPI

To: Mr. Don Buffum, Director  
Office of Procurements & Contracts  
Mississippi State University  
Barr Avenue, 610 McArthur Hall  
Mississippi State, Mississippi 39762

The undersigned (hereinafter called the MATERIALMAN) acknowledges by his signature that he has received and examined the documents entitled "Specifications and Materialman's Proposal for "MAIN SWITCHBOARD SECTION & MOTOR CONTROL CENTER BREAKERS FOR CENTRAL COOLING PLANT (MATERIAL ONLY)" for Mississippi State University, dated February 5, 2020, and has included the provisions of the Specifications in his Proposal. The MATERIALMAN further acknowledges that he has received the following addenda:

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

The Materialman hereby proposes to sell and deliver to Mississippi State University, Mississippi State, Mississippi (hereinafter called OWNER), upon the terms and conditions herein stated, the equipment specified in the attached specification for the following sums:

<u>BID ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>NO. REQUIRED</u>	<u>UNIT</u>	<u>TOTAL PRICE</u>
1	SWITCHBOARD SECTION	_____	1	EA	_____
2	MOTOR CONTROL CENTER BREAKERS	_____	1	LS	_____

- A. The prices set forth above shall include delivery to the Mississippi State University Facilities Management; Oktibbeha County; Starkville, Mississippi; tested and ready for OWNER's use.
- B. The OWNER will unload electric distribution materials at MSU Facilities Management.
- C. The prices set forth herein do not include any sums which are or which may be payable by



the Materialman on account of taxes imposed by any taxing authority upon the sale, purchase, or use of the equipment. If any such tax is applicable to the sale, purchase, or use of the equipment, the amount thereof shall be added to the purchase price and paid by the OWNER.

- D. The base price shall be firm if accepted within forty-five (45) days of the bid due date and time.
- E. The MATERIALMAN shall include engineering data with his proposal as specified and as required to evaluate bid.
- F. The times of delivery shall be as follows:

BID ITEM NO. 1 \_\_\_\_\_

BID ITEM NO. 2 \_\_\_\_\_

- G. The items included in each of the above bid prices are as follows:

BID ITEM NO. 1

MANUFACTURER \_\_\_\_\_

CATALOG NO. \_\_\_\_\_

BID ITEM NO. 2

MANUFACTURER \_\_\_\_\_

CATALOG NO(S). \_\_\_\_\_

CATALOG NO(S). \_\_\_\_\_

CATALOG NO(S). \_\_\_\_\_

CATALOG NO(S). \_\_\_\_\_

- H. Title of the equipment shall pass to the Owner upon:

1. Delivery to location specified.
2. Satisfactory inspection for in-transit damage.
3. Acceptance by the Owner.

- I. Bidder hereby certifies that he is:

(     ) Manufacturer

(     ) Manufacturer's Authorized Mississippi Representative

(     ) Manufacturer's Authorized Mississippi Distributor

J. Exceptions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

K. It is understood by the undersigned that the OWNER retains the privilege of accepting or rejecting all or any part of this proposal and to waive any informalities or technicalities therein. Counter-proposals or qualified bids shall be subject to rejection at the discretion of the OWNER.

It is also understood by the undersigned that the OWNER reserves the right to conduct investigations to evaluate the proposals received and to award the bid for this equipment to the lowest Bidder, who in the OWNER's evaluation will provide the equipment which will be in the best interest of the OWNER.

#### **MATERIALMAN**

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

DATE SIGNED: \_\_\_\_\_

## SWITCHBOARD (EXISTING)

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section includes:
  - 1. Distribution switchboard section for existing switchboards.
  - 2. Distribution circuit breakers – 400 Ampere and Larger Frame Size.
  - 3. Nameplates.

#### 1.2 SCOPE OF WORK

- A. Furnish new switchboard section for connection to existing switchboard by owner.
- B. New switchboard section shall include one 2000 amp, 3-pole distribution circuit breaker.

#### 1.3 REFERENCES

- A. National Electrical Manufacturers Association:
  - 1. NEMA PB 2 - Deadfront Distribution Switchboards.
  - 2. NEMA PB 2.1 - General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less.
- B. International Electrical Testing Association:
  - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- C. Underwriters Laboratories Inc.:
  - 1. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures.
  - 2. UL 891 - Dead-Front Switchboards.

#### 1.4 SUBMITTALS

- A. Product Data: Submit electrical characteristics including voltage, frame size and trip ratings, fault current withstand ratings, and time-current curves of equipment and components.
- B. Test Reports: Indicate results of factory production and field tests.

#### 1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

#### 1.6 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver to owner wrapped for protection and mounted on shipping skids.

## PART 2 PRODUCTS

### 2.1 DISTRIBUTION SWITCHBOARD SECTION FOR EXISTING SWITCHBOARD

- A. Manufacturers: Only listed manufacturers will be accepted.
  - 1. Square D QED-2 Switchboard.
- B. Power System Data:
  - 1. Voltage: 480Y/277 volt, 3-phase wye, 4-wire, solidly grounded.
  - 2. System Short Circuit Current Rating: 42kA RMS.
  - 3. Configuration: Incoming section connected to existing switchboard through the right side of lineup.
- C. Bus System Data:
  - 1. 4000A silver plated copper main bus.
  - 2. (4) .25x2.00 IN/6x51 & (4) .25x1 .50 IN/6x83 Cu Bus Bar Per Phase/Neutral.
  - 3. (1) .25x1 .75 IN/6x44 mm Cu Ground Bus.
- D. Enclosure Data:
  - 1. Type 1 Free Standing.
  - 2. Exterior Paint Color: ANSI 49.
  - 3. Front Accessibility Only.
  - 4. Required Handling: Rollers.
  - 5. Section Barriers.
  - 6. Dimensions: 36" W x 48" D x 91.50" H.

### 2.2 DISTRIBUTION CIRCUIT BREAKERS - 400 AMPERE AND LARGER FRAME SIZE

- A. Manufacturers:
  - 1. Square D PowerPact Type RK 2000
- B. Rating: 2000 amp trip rating, LSIG, 600V, High Interrupting, Plug A.
- C. Voltage: 480Y/277 volt, 3-phase.
- D. Mounting: Provide installed and configured in switchboard section specified above.

### 2.3 NAMEPLATES

- A. Product Description: Laminated three-layer plastic with engraved black letters on white contrasting background color.

B. Letter Size: 3/16 inch high letters for identifying grouped equipment and loads.

C. Minimum nameplate thickness: 1/8 inch.

D. Installation: Provide nameplate for each device.

#### 2.4 SOURCE QUALITY CONTROL

A. Furnish shop inspection and testing in accordance with NEMA PB 2.

### PART 3 EXECUTION

#### 3.1 INSTALLATION

A. Provide technical assistance to owner during installation.

END OF SWITCHBOARDS (EXISTING)

## **MOTOR CONTROL CENTER (EXISTING)**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

**A. Section Includes:**

1. Motor control center enclosures for existing motor control center.
2. Feeder circuit breakers.

#### **1.2 SCOPE OF WORK**

- A.** Furnish Four (4) new motor control center enclosures (buckets) for existing motor control center.
- B.** Each new bucket shall include a 150 amp, 3-pole feeder circuit breaker.

#### **1.3 REFERENCE STANDARDS**

**A. National Electrical Manufacturers Association:**

1. NEMA ICS 2.3 - Instructions for the Handling, Installation, Operation, and Maintenance of Motor Control Centers.
2. NEMA ICS 3 - Industrial Control and Systems: Factory Built Assemblies.
3. NEMA ICS 5 - Industrial Control and Systems: Control Circuit and Pilot Devices.

**B. International Electrical Testing Association:**

1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

**C. Underwriters Laboratories Inc.:**

1. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures.
2. UL 508 - Industrial Control Panels.
3. UL 845 - Motor Control Centers.

#### **1.4 SUBMITTALS**

- A. Product Data:** Submit electrical characteristics including voltage, frame size and trip ratings, fault current withstand ratings, and time-current curves of equipment and components.
- B. Shop Drawings:** Indicate front and side views of enclosures with overall dimensions shown; conduit entrance locations and requirements; nameplate legends; size and number of bus bars for each phase, neutral, and ground; electrical characteristics including voltage, frame size and trip ratings, withstand ratings, and time and current curves of equipment and components.

- C. Test and Evaluation Reports: Indicate field test and inspection procedures and test results.
- D. Source Quality Control Submittals: Indicate results of factory tests and inspections.
- E. Field Measurements: Verify field measurements prior to fabrication.

## 1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver to owner individually wrapped for protection and mounted on shipping skids.

## 1.7 EXISTING CONDITIONS:

- A. Verify field measurements prior to fabrication. Indicate field measurements on shop drawings.

## PART 2 - PRODUCTS

### 2.1 MOTOR CONTROL CENTER ENCLOSURES FOR EXISTING MOTOR CONTROL CENTER

- A. Manufacturers: Only listed manufacturers will be accepted.
  - 1. Square D Model 6 LVMCC installed in existing Model 5 LVMCC.
- B. Ratings:
  - 1. System Voltage: 480Y/277V, 3-phase, 4-wire, 60Hz.
  - 2. Maximum available fault current (RMS): 42kA.
  - 3. Enclosure: NEMA Type 1.
  - 4. Exterior Paint: ANSI 49.
- C. Miscellaneous:
  - 1. Cover plate for installed devices.

### 2.2 FEEDER CIRCUIT BREAKERS

- A. Manufacturers:
  - 1. Square D PowerPact, Electronic Trip Circuit Breaker, LSIG, installed in existing Model 5 LVMCC.
- B. Ratings:
  - 1. System Voltage: 480Y/277V, 3-phase, 4-wire, 60Hz.
  - 2. Maximum available fault current (RMS): 42kA.
  - 3. Device Height: 12 inches.

4. Exterior Paint: ANSI 49.
- C. Circuit Breaker Rating per Equipment:
1. PCHP-1: 150 amp.
  2. CWP-1: 150 amp.
  3. CWP-2: 150 amp.
  4. CWP-3: 150 amp.

## 2.3 NAMEPLATES

- A. Product Description: Laminated three-layer plastic with engraved black letters on white contrasting background color.
- B. Letter Size: 3/16 inch high letters for identifying grouped equipment and loads.
- C. Minimum nameplate thickness: 1/8 inch.
- D. Installation: Provide nameplate for each device.

## 2.4 SOURCE QUALITY CONTROL

- A. Shop inspect and perform standard productions tests for each circuit breaker in accordance with manufacturer's standards.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Provide technical assistance to owner during installation.

END OF SECTION