



# University of Missouri (UM) Procurement

**BID REQUEST NO.: 21052**

**TITLE: A Normal and High Capacity Freeze-and-Thaw Chamber**

**ISSUE DATE: December 3, 2020**

**STRATEGIC SOURCING SPECIALIST: Amanda Lorentzen**

**PHONE NO.:(573) 884-8695**

**E-MAIL: AMWYT7@umsystem.edu**

**RETURN BID NO LATER THAN: December 18, 2020**

**MAILING INSTRUCTIONS:** Print or type **Bid Request No.** and **Return Due Date** on the lower left hand corner of the envelope or package. **Bids are to be contained in a sealed envelope and delivered to the following address by the return date and time noted above. You may also return bids via email: AMWYT7@umsystem.edu**

**RETURN BID TO: UM Procurement  
Attention: Amanda Lorentzen  
2910 LeMone Boulevard  
Columbia, MO 65201**

You are invited to submit bids on the items or services specified. All bids must be made on this form and shall be subject to the terms and conditions on the reverse side hereof for furnishing items or services of the description listed below. All deliveries shall be made **FOB DESTINATION** with freight charges fully included and prepaid. The seller pays and bears the freight charges.

In compliance with this bid request and subject to all of the terms and conditions thereon, bidder offers and agrees to furnish or deliver the items or perform the services upon which prices are quoted herein, such items or services to be provided within the number of days indicated after receipt by bidder of University Purchase Order. Only cash discounts having a period of thirty (30) days or more will be taken into account in determining the lowest bid. Discount time is compiled from day of delivery and acceptance of items or services or receipt of correct invoice, whichever is later.

The bidder further agrees that the language of this bid document shall govern in the event of a conflict with his/her bid. The bidder further agrees that upon receipt of an authorized purchase order from the University of Missouri or when a Notice of Award is signed and issued by an authorized official of the University of Missouri, a binding contract shall exist between the bidder and The Curators of the University of Missouri.

## SIGNATURE REQUIRED

DOING BUSINESS AS (DBA) NAME	LEGAL NAME OF ENTITY/INDIVIDUAL FILED WITH IRS FOR THIS TAX ID NO.
MAILING ADDRESS	IRS FORM 1099 MAILING ADDRESS
CITY, STATE, ZIP CODE	CITY, STATE, ZIP CODE

CONTACT PERSON		EMAIL ADDRESS	
PHONE NUMBER		FAX NUMBER	
TAXPAYER ID NUMBER (TIN)	TAXPAYER ID (TIN) TYPE (CHECK ONE) ___ FEIN    ___ SSN		VENDOR NUMBER (IF KNOWN)
VENDOR TAX FILING TYPE WITH IRS (CHECK ONE) ___ Corporation    ___ Individual    ___ State/Local Government    ___ Partnership    ___ Sole Proprietor    ___ Other _____			(NOTE: LLC IS NOT A VALID TAX FILING TYPE.)
AUTHORIZED SIGNATURE		DATE	
PRINTED NAME		TITLE	

## BID REQUEST AND BID CONDITIONS

This Bid Request and Bid is made upon and subject to the following conditions, all of which are accepted by bidder. Upon acceptance by University, this Bid Request and Bid and the University Purchase Order issued thereon shall constitute the contract for furnishing the items described in the bid in strict conformity with the contract instruments.

1. No oral explanation in regard to the meaning of the specifications will be made, and no oral interpretation will be given before the award of the contract. If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of any part of the specifications or any other proposed contract documents, he may submit to the University a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made by addendum duly issued or delivered to each person receiving a set of such documents. The University will not be responsible for any other explanation or interpretations of the proposed documents.
2. The University reserves the right to reject any and all bids and to waive any informality in bids.
3. Whenever the name of a manufacturer or vendor is mentioned on the face hereon and words "or equal" do not follow, it shall be deemed that the words "or equal" shall follow such designation unless the context specifies "no substitution". University assumes that items bid as equal are equal. University reserves the right to return at the bidder's expense all items that are furnished which are not acceptable as equals to items specified by the Bid Request and Specifications, and vendor agrees to replace such items with satisfactory items at the original bid price.
4. All items bid shall be new unless otherwise specified by the University.
5. Bidder agrees to unconditionally guarantee all items bid upon against defects in material and workmanship for a period of one year from the date of acceptance by the University unless otherwise specified.
6. Unless it is so noted on the bid it will be deemed that the article furnished is that designated. If the vendor proposes to furnish an item of a different manufacturer or vendor other than the one specified on the face hereof, the manufacturer or vendor of the substituted items shall be noted and complete descriptive literature describing the items to be substituted must accompany the bid.
7. Materials and services furnished the University are not subject to either Federal Excise Taxes or the Missouri Sales Tax. Exemption certificates will be furnished on request.
8. Prices quoted are to be firm and final and prices shall be stated in units of quantity specified with packing and drayage charges included.
9. Shipments shall be marked as directed on the Purchase Order.
10. C.O.D. shipments will not be accepted. All shipping charges must be PREPAID. No packing or drayage charges will be allowed.
11. The University will not be responsible for articles or services furnished without a Purchase Order.
12. Risk of loss or damage to the goods prior to the time of their receipt and acceptance by the University is upon the vendor.
13. All invoices and correspondence shall show the Purchase Order Number. All invoices must be rendered in duplicate and contain full descriptive information on items or service furnished. Separate invoices shall be rendered for each order and forwarded to the University.
14. Vendor agrees to defend, protect and save the University harmless from all claims and actions arising out of patent infringement.
15. University reserves the right to cancel all or any part of orders if shipment is not made as promised. Vendor shall notify the University if shipment cannot be made as promised. Time of proposed delivery must be stated in definite terms in the space provided.
16. The bidder hereby guarantees that no article listed herein is adulterated or misbranded within the meaning of the Federal Food, Drug and Cosmetic Act or an article which may not, under the provisions of Federal Law, be introduced into interstate commerce.
17. Samples, when required, are to be furnished prior to the date specified for receipt of bids.
18. In case of any doubt or difference of opinion as to the items to be furnished hereunder or the quality thereof, the decision of the UM Chief Procurement Officer shall be final and binding upon both parties.
19. The University reserves the right to award an order to the lowest aggregate bidder for all items or on an item basis, or a group of like items, whichever is found to be in the best interest of the University. If a split award is not acceptable to a bidder, it must be stated in the bid response.
20. In awarding the contract, the University may take into consideration the skill, facilities, capacity, experience, ability, responsibility, previous work, the financial standing of the bidder or bidders; the amount of other work being carried on by the bidder; the quality, efficiency, and construction of the equipment proposed to be furnished; the period of time within which the equipment is to be furnished and delivered; and the necessity of prompt delivery of the items herein described. The inability of any bidder to meet the requirement mentioned above may be cause for rejection of his bid.
21. In the event that time and materials are a portion of this bid, the University reserves the right to audit vendor's records concerning this bid.
22. All items or services to be furnished hereunder shall meet all applicable State and Federal requirements of the Occupational Safety and Health Standard. All alleged violations and deviations from said State and Federal regulations or standards of the items of services to be furnished hereunder, must be set forth on the Bid Form at the time of submission of the bid. Or if at any later date the items or services contained herein shall not meet all applicable state and federal requirements after the bidder is awarded the contract hereunder the bidder must notify UM Procurement, immediately by certified mail, return receipt requested.
23. The University serves from time to time as contractor for the United States Government. Accordingly, the provider of goods and/or services shall comply with federal laws, rules, and regulations applicable to subcontractors of government contracts including those relating to equal employment opportunity and affirmative action in the employment of minorities (Executive Order 11246), women (Executive Order 11375), persons with disabilities (29 USC 706 and Executive Order 11758), and certain veterans (38 USC 4212 formerly [2012]) contracting with business concerns with small disadvantaged business concerns (Publication L. 95-507). Contract clauses required by the Government in such circumstances are incorporated herein by reference.
24. The Curators of the University of Missouri have adopted a policy which is binding upon all employees and departments of the University, and which by contract shall be binding upon independent contractors and subcontractors with the University, whereby all other things being equal, and when the same can be secured without additional cost over foreign products, or products of other states, a preference shall be granted in all construction, repair and purchase contracts, to all products, commodities, materials, supplies and articles mined, grown, produced and manufactured in marketable quantity in the State of Missouri and to all firms, corporations or individuals doing business as Missouri, firms, corporations, or individuals. By virtue of the foregoing policy, preferences will be given to materials, products, supplies, or provisions, and all other articles produced, manufactured, mined or grown within the State of Missouri, and to all firms, corporations or individuals doing business as Missouri firms, corporations or individuals. Each bidder submitting a proposal agrees to comply with and be bound by the foregoing policy.

## NOTICE TO BIDDERS

UM Procurement requests bids to **FURNISH and DELIVER A Normal Capacity and High Capacity Freeze-and-Thaw Chamber**, which will be received by the undersigned at University of Missouri Procurement, 2910 LeMone Boulevard, Columbia, Missouri, 65201 until 2:00 pm, Central Time December 18, 2020.

Specifications and the conditions of bid together with the printed form on which bids must be made may be obtained from UM Procurement at 2910 LeMone Industrial Blvd., Columbia, MO 65201, by phoning (573) 884-8695, or online at;

<https://www.umsystem.edu/ums/fa/procurement/bids>

The University reserves the right to waive any informalities in bids and to reject any or all bids.

THE CURATORS OF THE  
UNIVERSITY OF MISSOURI

By: ***Amanda Lorentzen, Strategic Sourcing Specialist***  
UM Procurement

Dated: November 10, 2020

## UNIVERSITY OF MISSOURI SPECIAL CONDITIONS

University of Missouri Procurement is requesting bids for **A Normal Capacity and High Capacity Freeze-and-Thaw Chamber** for University of Missouri – ROLLA Center for Infrastructure Engineering Studies.

### **AWARD:**

The award will be based on lowest price. The University reserves the right to award an order to the lowest aggregate bidder for all items or on an item basis, or a group of like items, whichever is found to be in the best interest of the University. **If a split award is not acceptable to a bidder, it must be stated in the bid response.**

**Note:** The University of Missouri reserves the right to negotiate best and final terms with the respondent selected.

### **PAYMENT:**

Preferred settlement method is through the use of Electronic Accounts Payable solutions. Payment terms associated with these forms of payment will be issued as net 30 after the date of invoice. Payment terms associated with settlement by check will be considered to be net 30 days. Cash discounts for prompt payment may be offered but they will not be considered in determination of award unless specifically stated in the Detailed Specifications and Special Conditions. The University may withhold payment or make such deductions as may be necessary to protect the University from loss or damage on account of defective work, claims, damages, or to pay for repair or correction of equipment or supplies furnished hereunder. Payment may not be made until satisfactory delivery and acceptance by the University and receipt of correct invoice have occurred.

The University encourages suppliers to opt into its Single-Use Account (SUA) credit card program for payment of invoices. The SUA is an electronic, credit card-based payment solution that acts like a check. It provides a single 16-digit virtual account number for each payment. Similar to a check, the credit limit on each SUA is set to the specific payment amount. Payment terms for Suppliers who participate in the SUA program are Net 0 as opposed to the standard Net 30 terms.

### **QUESTIONS:**

The final date for a request to be accepted for a clarification on any Specification or Requirement of the RFB is December 14, 2020 at 2:00 PM CT. Any request received after this date and time will **NOT** be acknowledged with a response. **Please do not contact the department directly to ask questions. Please send ALL questions to Amanda Lorentzen at [AMWYT7@umsystem.edu](mailto:AMWYT7@umsystem.edu)**

## DETAILED SPECIFICATIONS

The University of Missouri System Procurement request bids for A Normal and High Capacity Freeze-and-Thaw Chamber. Award may be made individually or collectively, whichever is in the best interest of the University.

### Option 1 - Normal Capacity

Automated System for testing according to ASTM C 666, Procedure A & B

Details of cycle applied in the chamber: As per ASTM C 666 standard, Procedure A, the equipment should enable the following:

- The nominal freezing-and-thawing cycle shall consist of alternately lowering the temperature of the specimens from 40 to 0°F and raising it from 0 to 40°F in not less than 2 nor more than 5 h. Not less than 25 % of the time shall be used for thawing. At the end of the cooling period, the temperature at the centers of the specimens shall be  $0 \pm 3^{\circ}\text{F}$  [ $-18 \pm 2^{\circ}\text{C}$ ], and at the end of the heating period, the temperature shall be  $40 \pm 3^{\circ}\text{F}$  [ $4 \pm 2^{\circ}\text{C}$ ], with no specimen at any time reaching a temperature lower than  $-3^{\circ}\text{F}$  [ $-19^{\circ}\text{C}$ ] nor higher than  $43^{\circ}\text{F}$  [ $6^{\circ}\text{C}$ ].

Details of cycle applied in chamber: As per ASTM C 666 standard, Procedure B, the equipment should enable the following:

- The nominal freezing-and-thawing cycle for Procedure B is similar to Procedure A in this testing method. However, not less than 20% of the freezing-and-thawing cycle time shall be used for thawing for Procedure B. In this procedure, specimens should be surrounded by air during the freezing phase of cycle and by water during the thawing phase. It is not contemplated that the specimens will be kept in containers. The supports on which the specimens rest shall be such that they are not in contact with the full area of supported side or end of the specimen, thereby subjecting this area to conditions substantially different from those imposed on the remainder of the specimen.

#### The following are mandatory criteria for Option 1:

- Large scale quality testing with a minimum of **18 concrete specimens**. The size of specimens shall comply with ASTM C 666 (3" by 4" by 16").
- Uniform air temperature for all specimens.
- Fully automatic operation.

#### The following are the optional/preferred specifications for Option 1:

- Up to eight freeze-thaw cycles within 24 hours, as per ASTM C 666.
- Possible user-created test control for changing freeze time, minimum temperature, maximum temperature, and the number of cycles.
- Warranty on the chamber and internal components.
- Availability of non-proprietary internal components for ease of repair and upgradability.

- Virtual Private Network for factory-based technical support, system monitoring, troubleshooting, and program downloading of applications.

### **Option 2 - High Capacity**

Automated System for testing according to ASTM C 666, Procedure A & B

Details of cycle applied in the chamber: As per ASTM C 666 standard, Procedure A, the equipment should enable the following:

- The nominal freezing-and-thawing cycle shall consist of alternately lowering the temperature of the specimens from 40 to 0°F and raising it from 0 to 40°F in not less than 2 nor more than 5 h. Not less than 25 % of the time shall be used for thawing. At the end of the cooling period, the temperature at the centers of the specimens shall be  $0 \pm 3^{\circ}\text{F}$  [ $-18 \pm 2^{\circ}\text{C}$ ], and at the end of the heating period, the temperature shall be  $40 \pm 3^{\circ}\text{F}$  [ $4 \pm 2^{\circ}\text{C}$ ], with no specimen at any time reaching a temperature lower than  $-3^{\circ}\text{F}$  [ $-19^{\circ}\text{C}$ ] nor higher than  $43^{\circ}\text{F}$  [ $6^{\circ}\text{C}$ ].

Details of cycle applied in chamber: As per ASTM C 666 standard, Procedure B, the equipment should enable the following:

- The nominal freezing-and-thawing cycle for Procedure B is similar to Procedure A in this testing method. However, not less than 20% of the freezing-and-thawing cycle time shall be used for thawing for Procedure B. In this procedure, specimens should be surrounded by air during the freezing phase of cycle and by water during the thawing phase. It is not contemplated that the specimens will be kept in containers. The supports on which the specimens rest shall be such that they are not in contact with the full area of supported side or end of the specimen, thereby subjecting this area to conditions substantially different from those imposed on the remainder of the specimen.

#### **The following are mandatory criteria for Option 2:**

- Large Scale quality testing with a minimum of **30 concrete specimens**. The size of specimens shall comply with ASTM C 666 (3" by 4" by 16").
- Uniform air temperature for all specimens.
- Fully automatic operation.

#### **The following are optional/preferred specifications for Option 2:**

- Customizable size of the cabinet and racks as well as the number and type of control sensors.
- Up to eight freeze-thaw cycles within 24 hours, as per ASTM C 666.
- Possible user-created test control for changing freeze time, minimum temperature, maximum temperature, and the number of cycles.
- Warranty on the chamber and internal components.
- Availability of non-proprietary internal components for ease of repair and upgradability.
- Virtual Private Network for factory-based technical support, system monitoring, troubleshooting, and program downloading of applications.

☐ BY CHECKING THIS BOX THE BIDDER ACKNOWLEDGES THAT ALL SPECIFICATIONS CAN BE MET AND THAT ALL REQUESTED INFORMATION PERTAINING TO QUALIFICATIONS IS ACCURATE.



## Pricing Proposal

### A Normal Capacity and High Capacity Freeze Thaw Chamber

**Option 1:** Normal Capacity Freeze-and-Thaw Unit Cost: \$ \_\_\_\_\_

Delivery Cost: \$ \_\_\_\_\_

Installation Cost: \$ \_\_\_\_\_

Training Cost: \$ \_\_\_\_\_

Extended Warranty Cost: \$ \_\_\_\_\_

**Option 2:** High Capacity Freeze-and-Thaw Unit Cost: \$ \_\_\_\_\_

Delivery Cost: \$ \_\_\_\_\_

Installation Cost: \$ \_\_\_\_\_

Training Cost: \$ \_\_\_\_\_

Extended Warranty Cost: \$ \_\_\_\_\_

**Option 3:** Both High and Normal Capacity Freeze-and-Thaw Units: \$ \_\_\_\_\_

Delivery Cost: \$ \_\_\_\_\_

Installation Cost: \$ \_\_\_\_\_

Training Cost: \$ \_\_\_\_\_

Extended Warranty Cost: \$ \_\_\_\_\_

**ATTACHMENT A**  
**SUPPLIER DIVERSITY PARTICIPATION FORM**

The University of Missouri System is committed to and supports supplier diversity as an essential part of the University's mission and core values. The University's Supplier Diversity efforts reflect this mission.

Tier 2 Supplier Diversity Information - The University strongly encourages Supplier Diversity participation in all of its contracts for goods and services. Tier 2 Spend is spend reported by primary (non-diverse) suppliers of the University of Missouri who subcontract work to, or make purchases from a diverse supplier. Depending upon the contract, primary (non-diverse) suppliers will be asked to submit Tier 2 information with Women and Diverse Owned companies. Suppliers have two options in reporting Tier 2 dollars depending on the terms of the contract: Direct and Indirect. Awarded suppliers may be asked to utilize CVM Solutions for reporting Tier 2 spend.

- Direct dollars - those dollars directly spent with Women and Diverse Owned suppliers in the fulfillment of the contract.
- Indirect dollars - based on a percentage of revenue the University represents to the supplier. An example is as follows:
  - Supplier's Total Revenues: \$10,000,000
  - Revenues from University \$: \$ 4,000,000
  - University % of Total Revenues: 40% (#2 divided by #1)
  - Total MBE Dollars \$: \$ 150,000
  - Total WBE Dollars \$: \$ 150,000
  - Total University Attributable MBE \$: \$ 60,000 (#3 multiplied by #4)
  - Total University Attributable WBE \$: \$ 60,000 (#3 multiplied by #5)
  - Total University Attributable MWBE \$: \$ 120,000 (Sum of #6 and #7)
  - University % Attributable Revenue: 3% (#8 divided by #2)

1. Does your company have a Supplier Diversity Program? If so, describe efforts your company has made to increase business with Women and Diverse Owned businesses (i.e. does your company have a policy statement, participate in outreach activities, promote diverse firm subcontracting, publicize contract opportunities, provide certification assistance, etc.?) Please provide examples (use additional pages if needed):

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2. If you are a non-diverse owned company, what percentage of your company's total contracting and procurement spend for the prior year was with Women and Diverse Owned businesses? Are you able to provide this information specific to University of Missouri business?

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3. If you are a non-diverse owned company, complete the following table indicating the percentage your company will subcontract with certified Women and Diverse Owned businesses should your company be the successful bidder. Note: If your company does not plan to use Women and Diverse Owned businesses to fulfill your contract obligations, please explain why not.

Supplier Name	% of Contract	Specify Direct or Indirect

If there are questions regarding supplier diversity at the University, contact Teresa Vest, [vestt@umsystem.edu](mailto:vestt@umsystem.edu).

-----THIS FORM MUST BE SUBMITTED WITH THE RESPONSE-----

**ATTACHMENT B**  
**SUPPLIER REGISTRATION INFORMATION**

Completion of this section is strongly encouraged. Please review and check ALL applicable boxes.

SMALL BUSINESS CONCERN: ☐ Yes ☐ No

The term “small business concern” shall mean a business as defined pursuant to Section 3 of the Small Business Act and relevant regulations issued pursuant thereto. Generally, this means a small business concern organized for profit, which is independently owned and operated, is not dominant in the field of operations in which it is bidding. We would consider any firm with 500 employees or less a “small business concern”.

WOMAN OWNED BUSINESS (WBE): ☐ Yes ☐ No

A woman owned business is defined as an organization that is 51% owned, controlled and/or managed, by a woman. The determination of WBE status depends solely on ownership and operation and is not related to employment. The firm should be certified by a recognized agency (e.g., state, local, federal, etc.). Please see Public Law 106-554 for more detail.

MINORITY BUSINESS ENTERPRISE (MBE): ☐ Yes ☐ No

A minority business is defined as an organization that is 51% owned, controlled and/or managed by minority group members. The determination of minority status depends solely on ownership and operation and is not related to employment. The firm should be certified by a recognized agency (e.g., state, local, federal, etc.). Please see Public Law 95-507 for more detail. Place an X by the appropriate space below.

1. Asian-Indian - A U.S. citizen whose origins are from India, Pakistan and Bangladesh ☐ (A)
2. Asian-Pacific - A U.S. citizen whose origins are from Japan, China, Indonesia, Malaysia, Taiwan, Korea, Vietnam, Laos, Cambodia, the Philippines, Thailand, Samoa, Guam, the U.S. Trust Territories of the Pacific or the Northern Marianas. ☐ (P)
3. Black - A U.S. citizen having origins in any of the Black racial groups of Africa. ☐ (B)
4. Hispanic - A U.S. citizen of true-born Hispanic heritage, from any of the Spanish-speaking areas Mexico, Central America, South America and the Caribbean Basin only. ☐ (H)
5. Native American - A person who is an American Indian, Eskimo, Aleut or Native Hawaiian, and regarded as such by the community of which the person claims to be a part. ☐ (N)

A Veteran or Service Disabled Veteran business is defined as an organization that is 51% owned, controlled and/or managed by Veterans. The firm should be certified by a recognized agency (e.g., state, local, federal, etc.). Please see Public Law 109-461 for more detail.

VETERAN BUSINESS ENTERPRISE    ☐ Yes    ☐ No

SERVICE DISABLED VETERAN BUSINESS ENTERPRISE                      ☐ Yes    ☐ No

MISSOURI FIRM:    ☐ Yes    ☐ No

A Missouri Firm is defined as an organization which has and maintains within the State of Missouri a regular place of business for the transaction of their business.

**BUSINESS TYPE:**

Manufacturer	<input type="checkbox"/> (M)
Distributor/Wholesaler	<input type="checkbox"/> (D)
Manufacturer's Representative	<input type="checkbox"/> (F)
Service	<input type="checkbox"/> (S)
Retail	<input type="checkbox"/> (R)
Contractor	<input type="checkbox"/> (C)
Other	<input type="checkbox"/> (O)

SOLE PROPRIETORSHIP:    ☐ Yes    ☐ No

**SUPPLIER'S CERTIFICATION:**

The undersigned hereby certifies that the foregoing information is a true and correct statement of the facts and agrees to abide by the laws of the State of Missouri and the rules and regulations of the University of Missouri System now in effect including any subsequent revisions thereof. Supplier acknowledges that it is his/her responsibility to keep the information current by notifying the University of Missouri of any changes.

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Signature of Person Authorized to Sign this Supplier Registration Information Form

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