



**THIS IS NOT
AN ORDER**

REQUEST FOR BIDS/PROPOSALS COVERSHEET
THE UNIVERSITY OF SOUTHERN MISSISSIPPI
Procurement and Contract Services
118 College Drive #5003, Hattiesburg, Mississippi 39406-0001

Date: June 10, 2020

Name: _____

Bid No. 20-42

Company: _____

Address: _____

City/State/Zip: _____

THE UNIVERSITY OF SOUTHERN MISSISSIPPI is considering the purchase of the following item(s). We ask that you submit your bid and retain one copy for your files. Right is reserved to accept or reject any part of your bid. Your quotation will be given consideration if received in Bond Hall, Room 214 on or before:

2:00 p.m. CT

TERMS - Bidder should state terms of sale. Our terms are 2% ten days, net 45 days.

These terms will apply per Mississippi law.

AWARDING CONTRACT - Cash terms will not be used as a basis for awarding contracts; however, the University will accept cash discounts when earned.

July 2, 2020

Buyer: Jessica Whitten

NOTE: If you cannot quote on the exact material shown, please indicate any exception giving brand name and complete specifications of any alternate. If additional space is required, use a separate sheet or letter of transmittal.

ITEM	QUANTITY		UNIT PRICE	TOTAL NET PRICE
		RFx # 3160003678		
		DESCRIPTION		
		Bid 20-42 Unmanned Surface Vessel		
		PROPOSAL MUST BE RETURNED TO THE UNIVERSITY IN ACCORDANCE WITH THE SPECIFICATIONS. BID NUMBER AND DATE OF BID OPENING MUST BE SHOWN ON THE OUTSIDE OF THE ENVELOPE IF USING THAT METHOD.		

We quote you as above-F.O.B. The University of Southern Mississippi. Shipment can be made in _____ days from receipt of order. DATE _____ TERMS _____
Return quotation to Procurement Services at above address.

**THE UNIVERSITY OF SOUTHERN MISSISSIPPI
PROCUREMENT SERVICES
118 COLLEGE DRIVE #5003
HATTIESBURG, MS 39406-0001**

GENERAL TERMS, CONDITIONS AND INSTRUCTIONS FOR BIDS/PROPOSALS

- 1.) Failure to examine any drawings, specifications, and instructions will be at bidder's risk.
- 2.) Samples of items when called for must be furnished free of expense and if not destroyed in testing, will, upon request, be returned at the bidder's expense. Request for the return of samples must be made within ten (10) days following opening bids. Each individual sample must be labeled with bidder's name and manufacturer's brand name and number.
- 3.) Bids must be signed and sealed with bidder's name and address on the outside of the envelope, and the time and date of the bid opening and the bid file number shown in the lower-left corner of the packages; envelopes, express mailing labels, boxes, etc.
- 4.) In order for your bid to be considered, it must be received and time stamped in our office by 2:00 P.M. of the bid opening date. It is the responsibility of the vendor to ensure their bid is received within the appointed time. If your bid package is not received in Bond Hall, Room 214, by 2:00 P.M. of the bid opening date, it will not be considered.

If you are delivering your bid, you need to hand carry the bid package to:

The University of Southern Mississippi
Procurement Services
Bond Hall, Room 214
Hattiesburg, Mississippi

If you are mailing your bid package via U.S. Postal Service, mail to:

The University of Southern Mississippi
Procurement Services
118 College Drive #5003
Hattiesburg, MS 39406-0001

If you are express mailing your bid package via Federal Express or UPS, or any other delivery service which requires the use of a physical address, deliver to:

The University of Southern Mississippi
Receiving Department
2609 West 4th Street
Hattiesburg, MS 39401

- 5.) Bids or proposals shall not be modified, corrected, altered, or amended after the specified closing time and the opening of such bids, unless otherwise noted in the request for bids or proposals.
- 6.) The University of Southern Mississippi reserves the right to reject any and all bids, to waive any informality in bids, and unless otherwise specified by the bidders, to accept any items on the bid. If the bidder fails to state the time within which bids must be accepted, it is understood and agreed that The University of Southern Mississippi shall have 60 days to accept. The University of Southern Mississippi reserves the right to make an award to this bid on an all or none basis, or on a line by line basis, whichever serves the best interest of The University of Southern Mississippi.
- 7.) Contracts and purchases will be made or entered into with the lowest, responsible bidder meeting specifications.
- 8.) A written purchase order or contract award mailed or otherwise furnished to the successful bidder within the time of acceptance specified in the Invitation for Bid results in a binding contract without further action by either party. The contract shall not be assignable by the vendor in whole or in part without the written consent of The University of Southern Mississippi.
- 9.) Bid files may be examined during normal working hours by bid participants. Non-participants will be prohibited from obtaining any information relative to the bid until the official award has been made.
- 10.) If purchase orders or contracts are canceled because of the awarded vendor's failure to perform or request for price increase, that vendor shall be removed from our bidders' list for a period of 24 months.
- 11.) No addendum will be issued within a period of two (2) working days prior to the time and date set for the bid opening. Should it become necessary to issue an addendum within the two-day period prior to the bid opening, the bid date will be reset giving bidders ample time to answer the addendum.
- 12.) Alternate bids, unless specifically requested or allowed, will not be considered.
- 13.) Bid openings will be conducted open to the public. However, they will serve only to open the bids. No discussion will be entered into with any vendor as to the quality or provisions of the specifications, and no award will be made either stated or implied at the bid opening. After the close of the bid opening meeting, the bids will be considered to be in the evaluation process and will not be available for review by bidders. Proposal openings are not required to be open to the public; however, the resulting award is open for public inspection.
- 14.) Prices quoted shall be firm for the term of the contract or for the stated time of

acceptance.

- 15.) The bidder understands that The University of Southern Mississippi is an equal opportunity employer and, therefore, maintains a policy which prohibits unlawful discrimination based on race, color, creed, sex, age, national origin, physical handicap, disability, or any other such discrimination; and the bidder, by signing this bid, agrees during the term of agreement that the bidder will strictly adhere to this policy in its employment practices and provision of products or services.
- 16.) Bidders must upon request of The University of Southern Mississippi furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. The University of Southern Mississippi reserves the right to make the final determination as to the bidder's ability.
- 17.) Questions or problems arising from bid procedures should be directed to the Buyer listed on the solicitation at:

The University of Southern Mississippi
118 College Drive #5003
Hattiesburg, MS 39406-0001
Phone: (601) 266-4131

- 18.) All items must equal or exceed the specifications listed. The absence of detail specifications or the omission of detail description shall be recognized as meaning that only the best commercial practices are to prevail and that only first quality materials and workmanship are to be used.
- 19.) It is the intent of the specifications to obtain a product that will adequately meet the needs of the user while promoting the greatest extent of competition that is practicable. It is the responsibility of the prospective bidder to review the entire Invitation to Bid packet and to notify The University of Southern Mississippi if the Specifications, Instructions, General, or Special Conditions are formulated in a manner which would unnecessarily restrict competition.
- 20.) It shall be incumbent upon the bidders to understand the specifications. Any requests for clarifications shall be in writing and shall be submitted to our Procurement Services office at least five (5) days prior to the time and date set for the bid opening, unless otherwise noted in the bid or proposal specifications.
- 21.) The minimum specifications are used to set a standard and in no case are used with the intention to discriminate against any manufacturer. Bidders should note the name and the manufacturer and model number of the product they propose to furnish and submit descriptive literature.
- 22.) Trade names, brand names, and/or manufacturer's information used in these specifications are for the purpose of establishing quality, unless otherwise noted. Bids on

products of other qualified manufacturers are acceptable, provided they are demonstrated as equal to those specified in construction, design and suitability. Each bidder shall submit with his bid a complete brochure with pictures on each item and shall point out specifically any deviations from the specified items. Failure to do so may disqualify any bid. Please bid as specified or an approved equal.

- 23.) A copy of the manufacturer's standard guarantee/warranty shall accompany and become a part of this bid.
- 24.) There are no federal or state laws that prohibit bidders from submitting a bid lower than a price or bid given to the U.S. Government. Bidders may bid lower than U.S. Government contract price without any liability as The University of Southern Mississippi is exempt from the provisions of the Robinson-Patman Act and other related laws. In addition, the U.S. Government has no provisions in any of its purchasing arrangements with bidders whereby a lower price to The University of Southern Mississippi must automatically be given to the U.S. Government.
- 25.) All invoices, unless noted otherwise, are to be billed to:
- The University of Southern Mississippi
Accounts Payable
118 College Drive #5104
Hattiesburg, MS 39406-0001
- 26.) All equipment bid shall be of current production and of the latest design and construction.
- 27.) Where all, or part(s), of the bid is requested on a unit price basis, both the unit prices and the extension of the unit prices constitute a basis of determining the lowest responsible and responsive bidder. In cases of error in the extension of price, the unit price will govern.
- 28.) Should the University of Southern Mississippi close due to inclement weather conditions, or any other unforeseen events on the bid opening date, sealed bids will open the following business day at the same time and location.
- 29.) As an alternative to traditional sealed bids in envelopes, the University of Southern Mississippi is capable of receiving electronic bid responses. While this option is available, it is not required and we ask that all potential respondents keep in mind that with any electronic system there could be delays or glitches with the submission process; therefore the University highly encourages traditional sealed bids which are either mailed or submitted in person. Should a vendor choose to submit their response electronically, please follow the instructions below using the following website:
https://www.ms.gov/dfa/contract_bid_search/Home/Sell. On this site you will find helpful links to procurement opportunities, as well as a link to supplier registration. If not already registered in this system, potential bidders will first need to click on 'Supplier

Registration' and follow the steps outlined (a one-time process). Once registered, they can return to the original website and click on 'Procurement Opportunities' where they can either search by keyword for the bid they desire to respond to or leave the search box blank and click 'Search' for a listing of all current bids and proposals for the various State of Mississippi offices.

With regard to construction bids, there is one additional step required during the bid submission process. Along with the bid response and other attachments, contractors will also need to attach their Certificate of Responsibility (COR), or a statement that the bid enclosed does not exceed Fifty Thousand Dollars (\$ 50,000.00). If their COR or such statement is not attached, the bid will be invalid and not considered.

AA/EOE/ADAI

The University of Southern Mississippi
Request for Bid #20-42
SPECIFICATION FOR UNMANNED SURFACE VESSEL

I. Background

The University of Southern Mississippi (USM) has received funding to purchase and operate an Unmanned Surface Vessel (USV) in coastal waters of Mississippi.

II. Purpose

The purpose of the USV is to survey the study area autonomously mapping the optical and physical properties of the water.

III. General Performance Specification

The USV must be able to operate in water as shallow as 2m water depth for coastal waters, however for future projects the USV must be able to handle open ocean conditions. The USV must have a capability of integration of optical sensors, such as but not limited to WET Labs ACS and Sequoia LISST-VSF. The USV must be able to operate for at least one (1) month, for continuous monitoring, using renewable energy sources.

IV. Required Specification

The following specifications are to ensure that the USV will perform the tasks necessary to satisfy the project's objectives. Any deviation from the following specifications must be explained and justified. Table 1 provides a summary of basic USV characteristics and required specifications. The following sections provide more detailed requirements.

Vehicle Characteristics	Specification
Vehicle power	The UAV must have Solar powered with 5kWh battery capacity
Propulsion	The USV must have brushless motors capable of at least 5kts
Endurance	The USV at least one month at a speed of 3kts
Communications	The USV must use Cellular 3G and/or 4G and RF, with capability of expansion to Iridium RUDICS satellite communications.
Data Telemetry	The USV must provide a live feed of data for users through a data server, either local or cloud based database.
Environmental operations	The USV must operate in 2m coastal to open ocean conditions, in up to 2kts surface currents
Vehicle Stability	The USV should have a capability to Self-right in rough sea conditions.
Autonomy	The USV must have the capability of navigating autonomously and have the following capabilities: <ul style="list-style-type: none"> • Manual control • Remote piloting • Station keeping • Programmable course navigation • Real-time mission changes
Collision Avoidance	The USV have AIS and ability for ship avoidance
Navigation	The USV must be able to do 10m station keeping and +/- 5m max cross track error using Marine grade GPS
Payload	The USV must have a minimum payload capability of 60kg
Addition/custom payloads	The USV should have capability for upgrades to the payload and addition of custom payloads.
Payload capabilities	The USV must have at least 500W payload
Standard integrated sensors	The USV must be equipped with: <ul style="list-style-type: none"> • Wind sensors for apparent wind speed and direction measurements of 10-78knots, +/- 5% and direction, +/- 2 degree RMS • Air Temperature, +/- 1.5 degree C • Atmospheric Pressure, +/- 1 mbar • Oceanographic Conductive and Temperature (CT) sensor • 3m Accuracy GPS, 95% of the time • Boat heading and speed through water
Transportation	The USV must be able to be towed from a small vehicle

Launching	The USV must be able to be launched from a boat ramp or a crane (either on a ship or on a pier)
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Table 1

A. Basic USV

1. The USV must be able to operate in depth ranges from 2m coastal water to open ocean sea conditions.
2. The USV must be solar powered with large enough battery capacity to operate the vehicle continuously for at least one month, in addition to a 500W payload capability.
3. The USV must be able to maintain 3kts of speed and handle up to a 2kt surface current.
4. The USV must have a customizable payload space capable of accommodating at least 60kg of payload

B. Navigation

The USV must navigate multiple control and autonomy states, such as Manual, semi-autonomous (man in the loop) and fully autonomous. The USV must be able to maintain a +/- 5m cross track error and a 10m station keep accuracy.

C. Communications

1. The USV must communicate with cellular 3G and 4G networks with line of sight RF communications. Furthermore, the USV must have the capability of Iridium satellite communications for open ocean operations.

D. Sensors

The following sensors must be included on the USV and must be time synchronized and spatially referenced with data from other sensors and the positioning/navigational data. The USV must allow for future sensors to be added.

1. The USV must be equipped with meteorological sensors for atmospheric conditions, as well as
2. The USV must be equipped with a Conductivity and Temperature sensor for surface water conditions.

E. Safety Features

1. The USV shall have a means of self-aborting the mission while it is in the water due to abnormal readings or set points from key systems monitored within the glider that will result in immediate surfacing of the glider. Abnormal readings, which lead to a self-abort of the mission, will include but are not limited to water intrusion, low battery, and other obviously erroneous sensor readings.
2. The USV shall have the ability to receive mission commands during the mission via installed communications protocols. Vehicle commands required, but not

limited to, are to end mission, navigational corrections, ability to turn sensors on or off, etc.

V. Software

1. The vendor shall provide a one (1) year support of mission planning and management software through a secure online cloud server with a web based GUI interface. The web interface should allow access by multiple logins from USM.
2. The vendor will provide a means of reviewing USV performance during the mission. Software must be provided for displaying and assessing glider performance or the glider logs must be accessible in a documented format such that in-house analysis may be performed.

VII. AUV Deployment and Recovery

1. The USV must be able to be towed by a small vehicle.
2. The USV must be able to be retrieved through a boat ramp or onto a ship.

VIII. Warranty Services

At a minimum, the vendor shall provide Software/Hardware Warranty support for one (1) year from acceptance. Longer warranty periods are preferred.

The Vendor shall agree to repair, adjust, and/or replace (as determined by the University to be in its best interest) any defective materials at the Vendor and/or manufacturers' sole cost. The University will incur no costs for service or replacement of materials during the warranty period.

The Vendor will be the sole point of contact for warranty issues.

IX. Documentation

The vendor shall provide Operations and Maintenance manuals to USM.

X. Training

The vendor shall provide training on the operation, software, maintenance (battery replacement) and troubleshooting of the USV for a minimum of 2-4 persons at the vendor's location or some other agreed upon site. This must include at least one (1) actual deployment & recovery of the system as well as mission planning and basic mission data analysis. Training pricing should be listed in bid as separate line item.

XI. Proof of Performance

The vendor shall provide a proven record of the USV's performance with documentation of a minimum of three (3) successful missions in offshore waters. The vendor must demonstrate that all integrated sensors operate in accordance of above requirements.

XII. Copies

At least one (1) signed original of the bid response **MUST** be provided. The University **requires** a portable electronic virus/malware free copy (thumb drive) of the bid response from the responding Vendor to be included in the bid response package. If an electronic copy is not included, the University reserves the right to request an electronic copy of the **exact** bid response prior to review of the bid.

XIII. Payment

The currency used for payment of costs will be in United States dollars.

State law requires that the University receive an **original invoice** from the Vendor and that payment of the invoice is processed **within 45 days of receipt** (Miss Code 31-7-305). The invoice should be on the Vendor's letterhead and/or include an original Vendor representative signature.

XIV. USM Terms and Conditions

Unless written exception is provided in the bid response, the winning Vendor agrees to be bound by the USM Terms and Conditions, which are incorporated herein, and may be found at <https://www.usm.edu/procurement-contract-services/usm-terms-and-conditions>.