Robertson County Tennessee
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MAIL DATE: **9/25/2014**

Cardiac Monitor/ Defibrillator/ Pacemaker

Sealed bids must be received by: **10/15/2014 at 10:30 AM**

Robertson County Finance Office
523 South Brown Street
Springfield, TN 37172

THE OUTSIDE OF THE ENVELOPE MUST BE MARKED WITH THE BIDDER'S COMPANY NAME, ITEM BID, TIME OF BID OPENING, DATE OF BID OPENING, BID NO. 1284 AND MUST BE MARKED "SEALED BID, DO NOT OPEN."

Bids are opened and read aloud to the public at the Robertson County Finance Office, 523 S. Brown Street, Springfield, TN 37172 immediately after the bid receipt deadline. Each vendor may submit more than one bid provided each bid meets the stated specifications. Each bid must be submitted in a separate sealed envelope with the appropriate notation on the outside. All bids must be signed by an authorized agent and submitted on the prescribed forms. Submission of bids by telegraph, telephone, or other electronic means is strictly prohibited. Please enclose a stamped, self addressed envelope to receive a completed bid tabulation form. Any brand name called for the bid specifications is provided as a reference only. Alternate brand name items offered for bid must be equivalent as to function, basic design, type and quality of material, method of construction, and any required dimensions. Bidder must attach a letter of exception to specifications.

For assistance with technical / product information contact Russell Gupton, Assistant Director, EMS at (615)384-1414. For assistance with bid procedures contact Cheryl Moon, Robertson County Finance Office at (615) 384-0202 or by email: cherylrcf@comcast.net.

Note: Robertson County reserves the right to reject any or all bids, to waive any technicalities or informalities, and to accept any bid deemed in the best interest of the County. All bids will be considered in accordance with Title VI and without regard to age, sex, color, race, creed, national origin, religious persuasion, marital status, political belief, or disability that does not prohibit the performance of duty.

BID SCHEDULE: #1284

Robertson County is accepting sealed bid proposals for the following:

(1) 12 Lead Cardiac Monitor /Defibrillator /Pacemaker

Please provide a price based on the attached specifications.

Must indicate: ___ New ___ Refurbished ___ Demo

LUMP SUM PRICE FOR (1) $_____ F.O.B. Delivered

Days Until Delivery From Order: _____

Price Good for: _____ Months

Non-Collusion Affidavit

The agent of the bidding firm hereby certifies to the best of his/her knowledge and belief that this bid proposal to Robertson County, Tennessee has not been prepared in collusion with any other seller of similar products. The agent also certifies that the prices, terms and conditions of said bid proposal have not been communicated by the undersigned, nor by any employee or agent of the bidding firm, to any other seller of similar products and will not be communicated to any such seller prior to the official opening of said bid. The agent further states that no official or employee of Robertson County Government has promised any personal financial or other beneficial interest, either directly or indirectly in order to influence award of this bid.

_____

Authorized Signature, Title (Owner/ Corporate Officer) Date

Printed Name:_____

_____

Company Name Mailing Address

_____

Telephone No. Fax No.

Monitor/Defibrillator Bid Specifications

Weight:

1. Device shall not exceed 10.6 lbs. (4.82 kg) without battery and paper.
2. Device shall not exceed 11.7 lbs. (5.32 kg) with battery and paper.

Dimensions:

1. Device must not exceed 10.4 in high x 8.9 in wide x 7.9 in deep (25.4 cm high x 22.6 cm wide x 20.6 cm deep) with handle.
2. Device must not exceed 8.75 in high x 8.9 in wide x 7.9 in deep (22.2 cm high x 22.6 cm wide x 20.6 cm deep) without handle.
3. Device must not exceed 615 cubic inches (by volume) without handle.

Operating:

1. Device must be capable of operating in temperatures between 0 to 50˚C.
2. Device must be capable of operating in humidity between 15 to 95% RH (non-condensing).
3. Device must be vibration tested to meet MIL-STD 810G, Method 514.6.
4. Device must be vibration tested to meet EN 1789 for ambulance.
5. Device must be shock tested to meet MIL-STD 810G, Method 516.6 and tested at 75G.
6. Device must be drop tested to meet MIL-STD 810G, Method 516.6 and tested at 1 meter with 26 drops.
7. Device must be drop tested to meet IEC 60601-1 and tested at 2 meters
8. Device must be capable of working at altitudes between -170 meters to 4572 meters (-557 feet to 15,000 feet).

Transport and Storage:

1. Device must be capable of being stored at temperatures between -30 and 70˚C.
2. Device must be capable of being stored between 15 to 95% RH (non-condensing).

Environmental Protection:

1. Device must have a minimum IP55 rating for water and solid foreign objects.

Monitor/Display:

1. Device must have Tri-Mode display.
2. Device must be able to change display from ‘color’ to ‘black on white’ or ‘white on black’ via the push of a quick access key.
3. Device must have night vision goggle (NVG) display.
4. Device must be able to display dynamic 12-lead ECG on screen.
5. Device must be able to display static ECG analysis results and dynamic ECG on screen concurrently.
6. Device must be able to display four (4) waveforms.
7. Device must be able to display large numeric values independent of ECG or waveforms.

8. Device must have a high resolution color liquid crystal display (LCD) as a standard feature.

9. Device must have a screen size that is a minimum of 6.5 inches (16.5cm) diagonally.

10. Device must have a screen with a sweep speed of 25 mm/sec or 50 mm/sec.

11. Device must have a screen that provides a minimum viewing time of 4.87 seconds.

CPR Quality Improvement

1. The device must provide real-time audio and visual CPR rate, depth, release feedback with a perfusion performance index.

2. The device must provide CPR artifact filtering to allow rescuer to see underlying rhythms to minimize pauses in compressions.

2. The device must be current AHA Guidelines compliant and upgradeable to updated AHA Guidelines as necessary.

3. The device must provide the option for CPR data to be recorded to internal memory.

4. The device must provide the ability to review CPR on a software program to provide a complete review of the compressions delivered.

5. The device must provide a filter that will allow continuous chest compressions to be done for the full duration of the users CPR protocol.

6. The CPR option on the device must be able to be used in a moving environment, such as an ambulance.

7. The CPR option must allow the option for anterior-posterior and anterior-anterior pad placement.

8. When the CPR option is in use, the SpO_2 monitoring functionality must also be available.

9. The CPR feedback must be available with the standard pads or paddles cable connected to the device.

Monitoring

1. Device must be capable of patient monitoring through 3-lead, 4-lead, 5-lead and 12-lead ECG cables, multi-function electrodes and paddles.

2. Device must have impedance pneumography for monitoring respiratory rate via ECG Leads I or II.

3. Device must have ability to measure respiratory rate via capnography or impedance pneumography.

4. Device must be indicated for use on adult, pediatric, and neonatal patients.

5. Device must have a lead selector button located on front panel that allows user to change leads by pushing lead button.

6. Device must display lead selected on display at all times.

7. Leads must be fully defibrillator protected.

8. Device must have dedicated circuitry that detects most implanted pacer spikes.

9. Device must display standard marker of pacer spike on ECG trace.

10. Device must have the following bandwidths: 0.67 – 20 Hz Limited mode, 0.67 – 40 Hz Monitor mode, .25 – 40 Hz Filtered Diagnostic mode and 0.05 – 150 Hz Diagnostic mode.

11. Device must have the following ECG sizes: 0.125, 0.25, 0.5, 1, 2, 4 cm/mV and auto-ranging.

12. Device must show heart rate on display.

13. Device must display a Heart Rate range between 30 – 300 bpm.

14. Device must contain heart rate alarms that are user selectable.

15. Heart rate alarms must have an on/off indicator displayed on monitor.

16. Heart rate alarms must be capable of providing the user with an auto-generated strip chart recording, visual message and audible tone when activated.

17. In AED Mode, the device must be able to use any of the following monitoring parameters: $EtCO_2$, SpO_2, SpCO, SpMet, 12-lead ECG and/or NIBP.

Electrodes

1. Device must utilize Multi-Function Electrodes that allow pacing, defibrillation, cardioversion and ECG monitoring via one set of disposable pads.

2. Electrodes must be available in sizes for adults and pediatrics.

3. The Multi-Function Electrodes must allow the user to pre-connect the electrodes without compromising shelf life.

4. Electrodes must include an accelerometer to enable CPR feedback and artifact filtering functionality.

5. Adult paddles must incorporate pediatric paddles.

Defibrillator

1. Device must utilize a high current, low energy rectilinear, constant current biphasic waveform.

2. Device must have the following energy selections available to provider in manual mode operation: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 50, 70, 85, 100, 120, 150 and 200 joules.

3. Device must have clinical evidence of 95% or better conversion rate at 120J.

4. Device must have clinical evidence of >95% success on high impedance patients.

5. Device must meet current AHA specifications for biphasic defibrillation (<200J low energy, scientific data to support efficacy claims).

6. Device must allow provider the ability to adjust energy selection controls on device front panel or sternum paddle.

7. Device must be able to charge to 200 Joules in 7 seconds or less with a new fully charged battery.

8. Device must display energy selected and delivered on monitor display, strip chart recorder and code summary.

9. Device must have a defibrillator discharge button that illuminates when device is charged and ready to deliver shock.

10. Device must have synchronized cardioversion capability with “sync” message displayed on monitor.

11. Device must have charge controls on both the front panel of device, as well as, on apex paddle.

12. Device must have optional paddles that are external anterior/anterior adult and pediatric paddles.

13. Adult paddles must slide off paddle housing to expose pediatric paddles.

14. Device must contain a built in defibrillator tester that tests energy output and continuity of the multi-function cable and paddles documented on strip chart recorder and internal memory.

15. Device must have a “Multi-function” therapy cable that is field replaceable.

16. Device must have a single “Multi-function cable" that operates both multi-function electrodes and external paddles.

17. Device must be indicated for use on adult, pediatric and neonatal patients.

Printer/Recorder

1. Device must utilize a thermal strip chart recorder.

2. Strip chart recorder must use 80mm paper width thermal recording paper.

3. Strip chart recorder must utilize a 6 second delay.

4. Device must have user configurable print out modes offering manual or automatic recording options initiated by alarm activation or defibrillator discharge.

5. Strip chart recorder must be able to print four (4) leads simultaneously.

Pacemaker

1. Device must utilize a constant current 40 ms pace pulse width duration waveform.

2. Device must have a continuously variable current level.

3. Device must have a continuously variable pacing rate from 30 - 180 ppm.

4. Pacer parameters must be maintained when switching back to defibrillation or monitor mode.

5. The heart rate alarms must function in the pacing mode.

6. Device must be configurable for initial setting of pacing rate.

7. Device must display pacing rate and milliamps on display.

8. The pacer must continue to deliver life-saving therapy in the event an ECG lead falls off.

9. Device must be able to pace through multi-function or pacing electrodes.

12-Lead ECG

1. The 12-lead ECG must not require any special hardware or proprietary software to view.

2. The 12-lead ECG parameter must reside within a defibrillator weighing less than 11.7 lbs. (5.3 kg).

3. The 12-lead ECG parameter must utilize the Inovise ECG Analysis Program

4. The 12-lead ECG parameter must allow direct transmission of 12-lead ECG to RescueNet 12-Lead via PAN Bluetooth, WiFi or USB Cell modem.

5. The 12-lead ECG must be capable of being acquired without entering deep menus and without the use of a trim knob.

6. The device must offer an optional 0.05 to 40 Hz Diagnostic bandwidth

7. The 12-lead parameter must allow users to easily insert patient name, age and gender using soft keys on the defibrillator

8. The 12-lead parameter must allow users to print the 12-Lead Analysis Interpretation including measurements and patient name, age and gender on 80 mm paper.

9. The 12-lead patient cable must consist of 4 limb leads and a separate V-lead cable.

10. The 12-lead patient cable must be capable of providing limb lead signals directly to the defibrillator when only the limb leads are attached.

11. Device must provide the option for integrated Bluetooth for the wireless transmission of 12-lead ECG and vital sign data to RescueNet 12-Lead.

12. Device must provide the option for Wi-Fi for the wireless transmission of 12-lead ECG and vital sign data to RescueNet 12-Lead.

13. Device must provide the option for USB Cell modem for the wireless transmission of 12-lead ECG and vital sign data to RescueNet 12-Lead.

Pulse CO-Oximetry

1. The device must have integrated Oxygen Saturation (SpO_2), Carboxyhemoglobin Saturation (SpCO) and Heart Rate measurement.

2. The device must have the ability to automatically display HR, SpO, & SpCO values on the screen without user intervention.

3. Alarm settings for SpO2 & SpCO must be user configurable.

4. The device must utilize pulse oximetry technology that has FDA 510(k) clearance for use during patient motion and low perfusion.

5. The device must include Masimo SET/Rainbow® technology.

6. The device must utilize pulse oximetry sensors that work in bright sunlight.

7. The device must utilize alarms that are user adjustable in the field.

8. Device must be indicated for use on adult, pediatric and neonatal patients.

9. An optional ear sensor must be available in the event a finger probe cannot be used.

Capnography

1. The defibrillator must be capable of providing continuous $EtCO_2$ and respiratory rate readings as well as a capnogram for on-screen display or print-out.

2. The Microstream® sample pump must be rated for 24,000 hours of continuous use.

3. The device must be at full operating specification in 20 seconds or less.

4. Device must be indicated for use on adult, pediatric and neonatal patients.

Non-Invasive Blood Pressure

1. Device must be capable of acquiring a blood pressure measurement on inflation within 15 to 30 seconds.

2. Device must be capable of synchronizing the oscillation to the R-wave of the ECG.

3. Device must be capable of using dual lumen tube and/or cuffs

4. Device must incorporate non-invasive oscillometric technology.

5. Device must display systolic, diastolic and mean arterial (MAP) pressures.

6. Device must be capable of taking automatic, stat or manual measurements.

7. Automatic intervals should be user adjustable to 1, 2, 3, 5, 10, 15, 30 and 60 minutes.

8. Device must be indicated for use on adult, pediatric and neonatal patients.

9. Stat mode must allow for repeated rapid measurements within 5 minutes.

10. Device must include an artifact indicator which is displayed when excessive artifact is detected.

11. Device must display a numeric value for cuff inflation status.

12. Device is capable of displaying and/or printing up to 24 hours of patient vital trend data at one minute intervals.

Battery/Charging Systems

1. Device must be capable of using rechargeable lithium-ion batteries.

2. A new, fully charged lithium-ion batteries operating at room temperature must provide the following capacity: At least 6 hours of continuous monitoring of ECG, SpO_2, CO_2, three Invasive Pressure channels, and two channels of Temperature, with NIBP measurements every 15 minutes and 10 200J shocks.

3. A new, fully charged lithium-ion batteries operating at room temperature must provide the following capacity: At least 3.5 hours of pacing with ECG, SpO_2, CO_2, three Invasive Pressure channels, and two channels of temperature, with NIBP measurements every 15 minutes and pacing at 180 ppm and 140mA.

4. A new, fully charged lithium-ion battery operating at room temperature must be capable of delivering 420 shocks at 200J.

5. The battery must be easy to change.

6. The device must offer battery option with a recharge time of 4 hours or less with the integral charger.

7. The device must provide a LOW BATTERY indicator which displays on the monitor.

8. The device must provide a Battery Management charger system capable of charging both sealed lead acid and lithium ion batteries.

9. The device must come with a Battery Management Software program for maintenance and conditioning of the batteries.

10. The AC charger must use a standard grounded cable to operate charging system in AC mode.

11. When plugged in, the AC charger must be able to recharge a depleted lithium ion battery, operate the device without a battery or batteries in device and simultaneously recharge battery and operate device.

12. The AC or charger shall be able to operate at total functionality while drawing power off of recommended vehicle inverters.

13. The battery support system must be capable of the simultaneous charging of 4 batteries at one time.

14. The battery support system must be capable of the simultaneous testing of up to 4 batteries at one time.

15. The battery support system must have an auto test feature that automatically tests charges and recalibrates batteries whenever a battery is installed in system.