

REQUEST FOR PROPOSAL

Cooling Tower

Ascension Health FIP

**Borgess-Lee Hospital
Dowagiac, MI**

**Baptist Hospital
Nashville, TN**

**Sacred Heart Hospital
Pensacola, FL**

July 21, 2011

TME Project No. 01-10-0265



*12140 Woodcrest Executive Drive, Suite 110
St. Louis, Missouri 63141
Telephone (314) 434-6700 Fax (314) 434-6706
E-Mail: tme@tme corp.com*

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00100 - SOLICITATION FOR PROPOSALS

1. Ascension Health Facilities Resource Group (the "Owner") is soliciting proposals from equipment suppliers ("Suppliers") to furnish three (3) cooling towers. One (1) for Borgess-Lee Memorial Hospital in Dowagiac, MI, one (1) for Baptist Hospital in Nashville, TN, and one (1) for Sacred Heart Hospital in Pensacola, FL. Each hospital will purchase the cooling tower independently. Pricing should be per unit. Each hospital has the right to select the supplier independent of each other.
2. Sealed Proposals will be received at the office of TME, Inc, 12140 Woodcrest Executive Drive Suite 110, St. Louis, MO 63141 until 2:00 P.M. CDT on Thursday August 4, 2011. Provide three (3) copies of the submitted proposals. Proposals should be addressed as per individual proposal forms. Proposals shall be hand delivered to TME, Inc or emailed to Kent Poyser at kpoyser@tmecorp.com.
3. Proposals will be received and evaluated privately. Suppliers submitting Proposals will be notified of selection within thirty (30) calendar days after designated closing time for the receipt of Proposals.
4. Copies of the Request for Proposals may be obtained at the offices of TME, Inc. 12140 Woodcrest Executive Drive Suite 110, St. Louis, MO 63141. Questions regarding the RFP shall be emailed to Kent Poyser at kpoyser@tmecorp.com.
5. Proposals may not be withdrawn for a period of ninety (90) days after the designated closing time for the receipt of Proposals.
6. The Owner reserves the right to reject any or all Proposals and to waive any formality or irregularity in any Proposal.
7. The cooling towers will be purchased by the hospital.

00200 - GENERAL CONDITIONS

1. **Selection Criteria:** Proposals will be evaluated based upon physical size, equipment cost, estimated installation costs, estimated energy costs, estimated maintenance costs, local service capabilities, equipment references, compliance with the terms and conditions of the RFP, and other factors. Vendor proposals shall be based on the lowest horsepower design meeting the space limitations shown on the attached drawings.
2. **Exclusions, Clarifications, and Exceptions:** Proposals shall be in strict accordance with the terms and conditions of the RFP as modified by Addenda. Exclusions, clarifications, and exceptions shall be clearly indicated.
3. **Borgess-Lee Memorial Hospital, Dowagiac, MI:** The one (1) new cooling tower will replace the existing cooling tower. The hospital will be purchasing the equipment directly.
4. **Baptist Hospital, Nashville, TN:** The new cooling tower will be located on the Chiller Room roof. The hospital will be purchasing the equipment directly.
5. **Sacred Heart Hospital, Pensacola, FL:** The new cooling tower will be installed in on existing cooling tower basins. The hospital will be purchasing the equipment directly.
6. **Purchasing Instructions for Cooling Towers:** TME, Inc. and Ascension FRG will review the proposals and the individual hospitals will select the equipment for their campus. After purchase of the equipment, the hospital will transfer the equipment to the installation contractor of the cooling towers. The Contractor will be instructed by the Contract Documents for the project to install the cooling towers furnished by the selected Supplier in accordance with the terms and conditions of the Request for Proposals. The Contract Documents for the project will require the Contractor to accept full responsibility and coordinate equipment delivery, unload the equipment, and install the equipment for a complete and operable system. The selected contractor will provide all the required insurance to cover the equipment after receipt of equipment. (This will include but not limited to; builders risk, general liability and performance and payment bonds as required by Ascension Health).
7. **Laws and Regulations:** The selection and procurement of the equipment is subject to all applicable State laws, municipal ordinances, and rules and regulations of authorities having jurisdiction. Proposals shall be structured to comply with these requirements.
8. **Form:** Proposals shall be made on the form included in the Request for Proposals. Proposals shall be submitted in a sealed envelope. Each envelope shall be clearly marked to indicate the name of the Supplier.
9. **Content:** Each Proposal shall contain as a minimum the following information:
 - A. Physical description of the proposed equipment.
 - B. Performance data for the cooling tower.
 - C. Detailed listing and description of the factory recommendations concerning scheduled (preventative) maintenance services.

- D. Detailed information regarding the Service Organization.
 - E. A complete list of references where equipment of similar configuration and capacity has been installed.
 - F. A completed Proposal Form.
10. **Project Specific Conditions:** Before submitting a Proposal, Supplier shall thoroughly examine the RFP. Suppliers shall fully inform themselves of all conditions and requirements and shall include in their Proposals an amount that is sufficient to cover all such items.
 11. **Delivery of Proposals:** Proposals shall be delivered by the time and to the place stipulated in the Request for Proposals. It is the sole responsibility of the Supplier to ensure that the Proposal or Proposals are received in proper time. Any Proposal received after the scheduled closing time for receipt of Proposals shall be returned to the Supplier unopened. Supplier shall provide 3 copies of submitted proposals.
 12. **Withdrawal:** Any Supplier may withdraw their Proposal, either personally or by written request, at any time prior to the scheduled closing time for receipt of Proposals.
 13. **Interpretation of Documents:** If any person contemplating submitting a Proposal is in doubt as to the true meaning of any part of the Request for Proposal or finds discrepancies or omissions he may submit, to the Owner's representative, TME, Inc., a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the documents will be made only by Addendum duly issued, and a copy of the Addendum will be mailed or delivered to each person receiving a Request for Proposal. The Owner will not be responsible for any other explanations or interpretations of the Request for Proposal. Submit all questions in writing to Kent Poyser at kpoyser@tmecorp.com by July 28, 2011.
 14. **Addenda:** Any Addenda issued during the time of submission of Proposals, shall be covered in the Proposal and shall be made a part of the Purchase Order. The Supplier shall acknowledge receipt of each Addendum on the Proposal Forms in the designated location.
 15. **Purchase Order and Delivery:** It is anticipated that the successful Supplier (or Suppliers) will receive a Purchase Order for the selected equipment by not later than September 1, 2011. Expected delivery date of the cooling towers to the job site is by December 15, 2011. The submittal documents for the equipment shall be submitted by the Supplier to the Engineer by not later than twenty-one (21) calendar days after the Purchase Order has been received. The Supplier shall determine the earliest delivery date. The Supplier shall be prepared and capable of making delivery to the site not later than the date stipulated on the Bid Form. All shipping and transportations of products purchased from the supplier shall be FOB destination/site, not FOB shipping point. Supplier shall commit in writing the expected lead times and delivery dates. Supplier shall not be responsible for damages for failure to make delivery in the event of strikes, fires, accidents and any other cause beyond the reasonable control of Supplier.

16. **Sales Tax:** Proposals shall exclude sales tax. Sales Tax shall be listed as a separate line item.
17. **Project Acceptance for the Project:** The date of Project Acceptance for the project shall be date on which the Engineer and the Owner accept the project and approve the payment of final retainage to the General Contractor. The project schedule provides for Project Acceptance on or about June 30, 2012 for all projects.
18. **Failure to Receive a Purchase Order:** In the event that the selected Supplier fails to receive a Purchase Order for the equipment prior to the date indicated above, the selected Supplier and the Owner shall be unconditionally released of all obligations. The Supplier and the Owner, however, may decide to proceed with the purchase based upon revised terms and conditions that are agreeable to both parties.
19. **Prices:** Suppliers shall submit the following prices for each Proposal: Base Proposal, Extended Warranty, and Scheduled Maintenance (price and maximum annual escalation rate). The Base Proposal prices shall include verification of performance services, scheduled maintenance from the date of start-up to Project Acceptance, and first year warranty. The Owner reserves the right to accept the price for the Base Proposal and reject any or all of the other prices.
20. **Price Escalation and Carrying Charges:** The prices indicated on the Proposal Form should be inclusive of all required price escalation and carrying charges associated with the stipulated timing of the equipment purchase order, equipment delivery, Project Acceptance, and the specified partial payments. Provided that the actual dates of the equipment purchase order, equipment delivery, and Project Acceptance are not significantly different (within 30 days) from the stipulated dates, payments will be made at the stipulated amount and no adjustments for price escalation and/or carrying charges will be made. In the event that the actual dates are substantially different (more than 30 days) from the stipulated dates at no fault of the Supplier, the Supplier and the Owner will negotiate mutually acceptable adjustments to the payment amounts based upon an appropriate carrying charge (up to a maximum of 4.5% per annum).
21. **Proposal Acceptance:** Base Proposal prices shall be valid until the date indicated for the receipt of a Purchase Order (90 days). Extended Warranty and Scheduled Maintenance Proposal prices shall be valid until the date of equipment delivery. It is understood that the prices for Extended Warranty and Scheduled Maintenance are conditional upon the Owner's acceptance of the Supplier's Base Proposal.
22. **Termination of the Equipment Purchase by the Owner for Convenience:** The Owner may elect to terminate the purchase of the equipment for convenience and without cause at any time. Upon receipt of written notice from the Owner of such termination, the Supplier shall immediately terminate all Purchase Orders and enter into no further Purchase Orders. If such termination for convenience occurs after the receipt of a Purchase Order by the Supplier, the Supplier shall be entitled to recover payment for proven loss associated with respect to submittal preparation, materials, labor, tools, and equipment including reasonable overhead, profit, and damages. If such termination for convenience occurs prior to the receipt of a Purchase Order, the Supplier shall not be entitled to recover payment for any type of loss or damage.

23. **Termination of the Equipment Purchase by the Owner for Cause:** The Owner may elect to terminate the purchase of the equipment for cause if the Supplier either (1) disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction or (2) is otherwise guilty of a substantial breach of a provision of the RFP. If the purchase is terminated by the Owner for cause, the Owner shall be entitled to recover payment from the Supplier for loss.
24. **Termination of the Scheduled Maintenance Agreement:** The Owner may elect to terminate the Scheduled Maintenance Agreement by providing ninety (90) days written notice to the Supplier. In the event of Termination, the Supplier will receive payment for services rendered prior to the Termination. The cost of the services rendered prior to Termination will be determined by pro rata allocation of the annual cost.
25. **Shop Drawings, Submittal Documents, and Maintenance Manuals:** The selected Supplier shall furnish to the Contractor eight (8) copies of shop drawings, submittal documents and maintenance manuals. Submittal documents shall include the following;
 - A. Physical Description: Physical description of the proposed equipment.
 - B. Performance Data.
 - C. Installation Instructions: Detailed installation instructions regarding rigging, setting, foundations, structural supports, maintenance clearances, piping, power wiring, insulation requirements, and control wiring.
26. **Ownership and Responsibility:** The Supplier shall be responsible for all arrangements and costs associated with equipment including freight and insurance until the equipment is delivered to the project site and acceptance is signed by the Contractor's representative. Place of delivery shall be as per the address listed on the bid form. Equipment title shall pass to the Contractor at the place of delivery upon signed acceptance by the Contractor's representative (equipment is shipped "FOB Site"). Shipment "FOB Factory" with full freight allowed will not be acceptable. Supplier shall notify the Contractor and the designated representative of the Owner a minimum of forty-eight (48) hours prior to delivery. Contractor shall be responsible for coordinating the receipt and offloading of the equipment.

**00300 – PROPOSAL FORM – COOLING TOWER –
BORGESS-LEE MEMORIAL HOSPITAL**

Proposal of _____
(Hereinafter called "Supplier") corporation, organized and existing under the laws of the
state of _____ partnership, or an individual doing
business as _____.

To: Mr. Ken Holst
Chief Financial Officer
Borgess-Lee Memorial Hospital
420 W. High St.
Dowagiac, MI 49047-1943

Gentlemen:

The Supplier, in compliance with your Request for Proposal to purchase equipment for Borgess-Lee Memorial Hospital, having examined the Request for Proposals and being familiar with all conditions of these documents, hereby proposes to furnish equipment and services in accordance with the Request for Proposal, within the time set forth therein, and at the prices stated below.

Supplier acknowledges receipt of the following Addenda:

Base Equipment Price:

Supplier agrees to furnish one (1) cooling tower (including installation and start-up assistance, and the first year warranty) as described in the Request for Proposal for the total sum of:

_____ Dollars (\$ _____)

Sales Tax:

_____ Dollars (\$ _____)

Scheduled Maintenance Price:

Supplier agrees to furnish Scheduled Maintenance for the cooling tower as described in the Request for Proposals during the first year of equipment operation after start-up for the total annual sum of:

_____ Dollars (\$_____)

The sum will be increased each year thereafter by not more than the annual percentage amount of:

_____ Percent (_____%)

Extended Warranty Price:

Supplier agrees to furnish the Extended Warranty for the cooling tower as described in the Request for Proposals for the total sum of:

_____ Dollars (\$_____)

Pre-payment Discount Price:

Supplier agrees to provide a percentage (%) discount for the product and services if the Owner elects to prepay for the products. The discount will be determined by as a percentage of the amount to be prepaid. The prepayment percentage discount offered is:___

_____ Percentage (%) (_____)

Delivery Date:

Supplier agrees to deliver the equipment to the site at the earliest date of:

Supplier understands that the Owner reserves the right to reject any or all Proposals and to waive any formalities in the Proposals.

(Seal if by corporation)

Respectfully submitted,

Business Address

Supplier

Date: _____, 2011

By: _____

Title: _____

**00310 – PROPOSAL FORM – COOLING TOWER –
BAPTIST HOSPITAL**

Proposal of _____
(Hereinafter called "Supplier") corporation, organized and existing under the laws of the
state of _____ partnership, or an individual doing
business as _____.

To: Mr. Damian Skelton
Director of Facilities and Support Services
Baptist Hospital
2000 Church St.
Nashville, TN 37236

Gentlemen:

The Supplier, in compliance with your Request for Proposal to purchase equipment for Baptist Hospital, having examined the Request for Proposals and being familiar with all conditions of these documents, hereby proposes to furnish equipment and services in accordance with the Request for Proposal, within the time set forth therein, and at the prices stated below.

Supplier acknowledges receipt of the following Addenda:

Base Equipment Price:

Supplier agrees to furnish one (1) cooling tower (including installation and start-up assistance, and the first year warranty) as described in the Request for Proposal for the total sum of:

_____ Dollars (\$ _____)

Sales Tax:

_____ Dollars (\$ _____)

Additive Alternate #1 Price:

Supplier agrees to furnish two (2) additional cells for the total sum of:

_____ Dollars (\$ _____)

Scheduled Maintenance Price:

Supplier agrees to furnish Scheduled Maintenance for the cooling tower as described in the Request for Proposals during the first year of equipment operation after start-up for the total annual sum of:

_____ Dollars (\$ _____)

The sum will be increased each year thereafter by not more than the annual percentage amount of:

_____ Percent (_____ %)

Extended Warranty Price:

Supplier agrees to furnish the Extended Warranty for the cooling tower as described in the Request for Proposals for the total sum of:

_____ Dollars (\$ _____)

Pre-payment Discount Price:

Supplier agrees to provide a percentage (%) discount for the product and services if the Owner elects to prepay for the products. The discount will be determined by as a percentage of the amount to be prepaid. The prepayment percentage discount offered is:___

_____ Percentage (%) (_____)

Delivery Date:

Supplier agrees to deliver the equipment to the site at the earliest date of:

Supplier understands that the Owner reserves the right to reject any or all Proposals and to waive any formalities in the Proposals.

(Seal if by corporation)

Respectfully submitted,

Business Address

Supplier

Date: _____, 2011

By: _____

Title: _____

**00320 – PROPOSAL FORM – COOLING TOWER –
SACRED HEART HOSPITAL**

Proposal of _____
(Hereinafter called "Supplier") corporation, organized and existing under the laws of the
state of _____ partnership, or an individual doing
business as _____.

To: Mr. Jimmy Briggs
5151 N. Ninth Avenue
Sacred Heart Hospital
5151 N. Ninth Ave.
Pensacola, FL 32504

Gentlemen:

The Supplier, in compliance with your Request for Proposal to purchase equipment for Scared Heart, having examined the Request for Proposals and being familiar with all conditions of these documents, hereby proposes to furnish equipment and services in accordance with the Request for Proposal, within the time set forth therein, and at the prices stated below.

Supplier acknowledges receipt of the following Addenda:

Base Equipment Price:

Supplier agrees to furnish one (1) cooling tower (including installation and start-up assistance, and the first year warranty) as described in the Request for Proposal for the total sum of:

_____ Dollars (\$ _____)

Sales Tax:

_____ Dollars (\$ _____)

Scheduled Maintenance Price:

Supplier agrees to furnish Scheduled Maintenance for the cooling tower as described in the Request for Proposals during the first year of equipment operation after start-up for the total annual sum of:

_____ Dollars (\$_____)

The sum will be increased each year thereafter by not more than the annual percentage amount of:

_____ Percent (_____%)

Extended Warranty Price:

Supplier agrees to furnish the Extended Warranty for the cooling tower as described in the Request for Proposals for the total sum of:

_____ Dollars (\$_____)

Pre-payment Discount Price:

Supplier agrees to provide a percentage (%) discount for the product and services if the Owner elects to prepay for the products. The discount will be determined by as a percentage of the amount to be prepaid. The prepayment percentage discount offered is:___

_____ Percentage (%) (_____)

Delivery Date:

Supplier agrees to deliver the equipment to the site at the earliest date of:

Supplier understands that the Owner reserves the right to reject any or all Proposals and to waive any formalities in the Proposals.

(Seal if by corporation)

Respectfully submitted,

Business Address

Supplier

Date: _____, 2011

By: _____

Title: _____

00400 – EQUIPMENT PERFORMANCE DATA – BORGESS-LEE MEMORIAL HOSPITAL

Design Conditions:

The cooling tower shall be selected to operate at the conditions listed in the information below:

Actual Capacity (tons)	374
Number of Cells	2
Capacity (tons) per Cell	187
Heat of Rejection (MBH)	4,476
Heat of Rejection (MBH) per Cell	2,238
Entering Water Temperature (deg. F)	92
Leaving Water Temperature (deg. F)	82
Ambient Wet Bulb Temperature (deg. F.)	77
Flow (GPM)	898
Flow per Cell (GPM)	449
Minimum Flow per Cell (GPM)	Supplier to Provide
Static Head (ft. of water)	Supplier to Provide
Electrical Service	460V / 3 Phase
Sound Pressure Requirements	Supplier to Provide
Fan Horespower (HP)	Supplier to Provide
Basin Heaters (kW)	Supplier to Provide at 0.0 F
Operating Weight (lbs)	Supplier to Provide

00410 – EQUIPMENT PERFORMANCE DATA – BAPTIST HOSPITAL

Design Conditions:

The cooling tower shall be selected to operate at the conditions listed in the information below:

Actual Capacity (tons)	6,000
Number of Cells	6
Capacity (tons) per Cell	1,000
Heat of Rejection (MBH)	89,685
Heat of Rejection (MBH) per Cell	14,948
Entering Water Temperature (deg. F)	95
Leaving Water Temperature (deg. F)	85
Ambient Wet Bulb Temperature (deg. F.)	80
Flow (GPM)	18,000
Flow per Cell (GPM)	3,000
Minimum Flow per Cell (GPM)	Supplier to Provide
Static Head (ft. of water)	Supplier to Provide
Electrical Service	460V / 3 Phase
Sound Pressure Requirements	Supplier to Provide
Fan Horespower (HP)	Supplier to Provide
Basin Heaters (kW)	Supplier to Provide at 0.0 F
Operating Weight (lbs)	Supplier to Provide

Alternate #1:

Provide an additional two (2) cooling towers cells, identical to cells listed above.

00420 – EQUIPMENT PERFORMANCE DATA – SACRED HEART HOSPITAL

Design Conditions:

The cooling tower shall be selected to operate at the conditions listed in the information below:

Actual Capacity (tons)	1500
Number of Cells	2
Capacity (tons) per Cell	750
Heat of Rejection (MBH)	11,211
Heat of Rejection (MBH) per Cell	5,606
Entering Water Temperature (deg. F)	95
Leaving Water Temperature (deg. F)	85
Ambient Wet Bulb Temperature (deg. F.)	80
Flow (GPM)	4,500
Flow per Cell (GPM)	2,250
Static Head (ft. of water)	Supplier to Provide
Electrical Service (Voltage/Phase/Hertz)	230/460/3/60
Fan Horespower (HP)	Supplier to Provide
Basin Heaters (kW)	Supplier to Provide at 0.0 F
Operating Weight (lbs)	Supplier to Provide

00500 – EQUIPMENT SPECIFICATIONS – BORGESS-LEE MEMORIAL HOSPITAL

PART 1 GENERAL

1.01 SCOPE OF WORK:

- A. Cooling Towers.
- B. The cooling tower manufacturer shall be responsible for the design, fabrication, and delivery of materials to the project site. The Contractors shall install the cooling tower.
- C. The cooling tower manufacturer shall be responsible for furnishing structure sizes, weight loading information and support features required for proper installation.
- D. The steel structure will be designed by the Engineer and installed by the Contractor based upon certified loading and dimensional data provided by the Cooling Tower Manufacturer.

1.02 QUALITY ASSURANCE:

- A. Experience: At the time of submission of the proposal, the cooling tower model must have been in standard production for a minimum of one year.
- B. CTI (Cooling Tower Institute) Standards: Provide cooling towers which meet the performance standards of CTI Standards STD-201.
- C. NEMA (National Electric Manufacturers Association) and IEEE Compliance: Provide electric motors which meet the scheduled full load efficiency, per NEMA Standard MGI-12.53a, based on dynamometers testing per IEE 12 Method B.
- D. NFPA Compliance: Comply with applicable provisions of ANSI/NFPA 70 "National Electric Code", pertaining to construction and installation of electrically operated components.
- E. NEMA and UL (Underwriters Laboratories) Compliance: Provide electric motors and products which have been listed and labeled by UL and comply with NEMA standards.

1.03 DELIVERY, STORAGE AND HANDLING: Coordinate delivery, storage, and handling with the Contractor.

1.04 PERFORMANCE DATA: Performance data for the design operating conditions (refer to Section 00400 shall be provided with each proposal. Performance data shall include flow rate, entering water temperature, leaving water temperature, pressure drop, sound pressure level (dBA), motor voltage and motor current (RLA).

- 1.05 **PHYSICAL DESCRIPTION:** A physical description of the cooling tower shall be provided. The physical description shall include the following information:
- A. Detailed drawings of the proposed equipment including a top view, right side view, and end view. The drawings shall indicate the dimension of the cells, locations of all connections (tower water, electrical controls, drain, overflow, make-up water, etc.), and service clearances. The drawings shall also indicate the type and size of each piping connection.
 - B. Detailed electrical wiring diagram that indicates all required field wiring and components including power and controls.
 - C. Detailed shipping instructions including shipping weights, operating weights, and rigging instructions.
 - D. Detailed installation instructions that address all installation requirements including rigging piping, anchors, mounting of sensors, etc.
 - E. Product data indicating motor speed (RPM), type of motor, type of bearings, fan description, fill material, and tower shell material.
 - F. Other information required to verify compliance with the Proposal Documents.
- 1.06 **REFERENCES:** A complete list of references for each type of cooling tower shall be provided with each proposal. The list shall include a minimum of 5 references. The list shall indicate the name of the facility where the equipment has been installed, location (city and state) of the equipment, installation date, equipment capacity (tons), contact name, and contact telephone number for each reference.
- 1.07 **FIRST YEAR WARRANTY:** Provide a complete equipment warranty on all parts, material, and labor for 1 year after the applicable date of Project Acceptance. The cost of the first year warranty shall be included in the amount indicated for the line item designated "Equipment Proposal" on the Proposal Form.
- 1.08 **INSTALLATION AND START-UP ASSISTANCE:** Supplier shall provide installation and start-up assistance to the Contractor. Such assistance shall be provided by a factory trained and certified technician. The date of the installation and start-up assistance provided by the Supplier shall be coordinated with the Contractor and the Owner. Service representative shall inspect the equipment installation and verify that the installation is in accordance with factory recommendations. Service representative shall verify that the power wiring, control wiring, piping connections, flow rates, and temperatures are correct prior to starting the equipment. The service representative shall thoroughly document the conditions at start-up in a detailed report. The service representative shall submit 8 copies of the report to the Contractor for processing and review by the Architect, Engineer, and Owner. The cost of the installation and start-up assistance shall be included in the amount indicated for the line item designated "Equipment Proposal" on the Proposal Form.
- 1.09 **EXTENDED WARRANTY PROPOSAL:** Supplier shall provide a proposal to provide a 4 year extension of the first year equipment warranty (refer to Section 00600 for additional information). The cost of the 4 year warranty extension shall be indicated on the Proposal Form on the line item designated "Extended Warranty Proposal".

- 1.10 SUBMITTALS: After receipt of a Letter of Intent or Purchase Order, the Supplier shall submit 8 copies of submittal documents to the Contractor. Each set of submittal documents shall be bound together in 3-ring binder. The binder shall be clearly marked to indicate the name of the project, Owner, Contractor, Architect, Engineer, and Supplier. The information shall be organized into sections. Each section shall be tabbed and labeled. Each set of submittal documents shall include the information listed below:
- A. Physical Description: Refer to Paragraph 1.05 above for required information.
 - B. Performance Data: Refer to Paragraph 1.04 for required information.
 - C. Operation and Maintenance Manuals: Manuals shall include operating instructions, maintenance instructions, troubleshooting information, parts lists, and other related information.

PART 2 PRODUCTS

2.01 APPROVED MANUFACTURERS:

- A. Marley
- B. Baltimore Air Coil (BAC)
- C. Evapco

2.02 INDUCED DRAFT CROSS FLOW TOWER:

- A. Provide an induced draft, factory packaged crossflow cooling tower as scheduled on drawings. Construction shall be G-235 galvanized steel general structure with Series 300 stainless steel welded seam cold water basin, lower wetted structure and all trim below the waterline, and stainless steel upper gravity type hot water distribution basins fitted with non-clog plastic target nozzle type metering orifices. Removable hot water basin covers of stainless steel shall be provided. Flanged connections shall be provided for hot water inlet piping. Single bottom inlet connection for each tower cell shall be provided with internal PVC riser piping and lateral header piping to each water distribution basin. Factory installed hot water basin weir dams or variable flow design distribution nozzles shall be provided.
- B. Each fan shall have cast aluminum airfoil blades with anti-recirculation hub assembly, and galvanized fan guard. Each blade shall be of the adjustable pitch design with raised pitching boss and shall be factory preset to design conditions. A complete mechanical equipment support shall be provided on which shall be rigidly mounted a right angle helical gear reduction unit and drive motor. Gear-reducer shall be of the latest five year maintenance free type, charged with synthetic lubricant at factory and not requiring lubricant change for a full 5 years. Motors shall be TEFC, High Efficiency, variable torque, 1.15 service factor, suitable for cooling tower duty and additional windings for inverter duty. Motor shall be as scheduled and shall not exceed nameplate amperage rating at design loads.

- C. For each tower cell the cold water basin shall be of stainless steel, self-cleaning with depressed center section. Basin shall be complete with stainless steel right angle sump outlet with Class 125 ANSI B16.1 connections and gaskets, stainless steel anti-vortex plate assemblies and debris screens. Provide factory float-operated, mechanical make-up valve in each fan cell. For equalization of water levels in each cell towers will be provided with hole and bolt circle located in basin floor. Contractor to provide field piping and isolation valve between each collection basin. A standpipe combination overflow and drain shall be provided in each basin for field piping to a sanitary drain per ADEQ code requirements.
- D. Fill shall be PVC film type high performance suitable for operating under winter icing conditions. Air inlet louvers and drift eliminators shall be integral with PVC fill sheets. Three pass drift eliminator shall be rated for drift loss not to exceed 0.005% of design flow rate. Hinged access doors shall be provided in the outer end walls for service access into eliminator and plenum area. Visual inspection of mechanical equipment, cold water basins and adjustment of make-up valve shall be capable from access door without shutdown of tower or recirculating water.
- E. Options and trim required for each tower fan cell are to include not less than: safety vibration cutoff switch, manual reset UL Listed explosion proof switch; extended oil line outside fan cylinder to level dipstick for external verification of lubricant level; Oil level sensing switch provided for field wiring to fan motor control to shut down tower on low oil level condition; factory installed and removable covers over hot water distribution basins; OSHA handrail system with 2 access ladders, ladder extensions to roof, and safety cage if top of tower is 20' above roof per OSHA regulations; an access platform assembly at each endwall with handrail for installation at base of tower to allow egress into tower interior; and stainless steel internal maintenance walkway factory installed full width of tower between doorways to access sump screen, mechanical equipment and basin accessories.
- F. An electric basin heat component system for each cell including weatherproof control panel, solid state controller with thermostat and B/W safety level switch provided. Basin heat shall be sized to maintain 40 F cold water basin temperature at 0 F ambient. Basin heat element and probe assembly shall be furnished for field mounting and wiring. All basin heat components submerged in cooling tower water shall be of stainless steel materials.
- G. Special cooling tower warranty requirement: All rotating parts and components of the air movement system, excluding the drive motor, shall be warranted by the cooling tower manufacturer for a period of 5 years from date of shipment when maintained in accordance with instructions provided in owner's manuals. All non-rotating parts shall be similarly warranted for a period of 18 months from date of shipment or 12 months from date of start-up, whichever occurs first. Warranty on drive motor shall be that of the motor manufacturer. Cooling tower submittal shall contain a factory certificate of rotating equipment and thermal performance warranties for Owner's Protection to be acceptable under this specification.

- H. The cooling tower manufacturer shall certify that their proposed tower meets the performance standards set forth in CTI Standard STD-201. Performance certifications notwithstanding, the Owner shall have the right to conduct a CTI or ASME on-site performance test during the first year of operation in the presence of CTI or ASME observers as well as the manufacturer's representatives. In the event that the tower fails to perform within the limits of the test tolerance, the cooling tower manufacturer will pay for the cost of the test and will make such corrections as are appropriate and agreeable to the Owner to compensate for the performance deficiency.

2.03 START-UP SERVICES:

- A. Manufacturer of cooling tower shall provide the services of a factory trained Service Technician or Engineer to inspect the installation to insure that it is in accordance with the manufacturer's instructions and procedures, that rotating components provide smooth operation within manufacturer's vibration tolerances. He shall advise the installer in writing of any recommended corrective action that is required to meet manufacturer's recommended installation procedures.
- B. Cooling tower start-up by manufacturer's representative shall include verification of mechanical equipment clearances and alignment, adjustment of water flow and operating water levels in hot water and cold water basins, check rotation of fan, verify operating sequences of tower control system and temperature settings. Written start-up report shall be provided to the Engineer and Owner confirming these procedures and including motor operating amperage readings. Manufacturer shall provide for local stock of tower spare and repair parts, and dedicated cooling tower repair personnel for 24 hour emergency service.
- C. Instruction of tower operation and maintenance procedures shall be provided by manufacturer's representative to Owner's satisfaction.

PART 3 EXECUTION

NOT APPLICABLE.

Installation shall be executed by Contractor.

00510 – EQUIPMENT SPECIFICATIONS – BAPTIST HOSPITAL

PART 1 GENERAL

1.01 SCOPE OF WORK:

- A. Cooling Towers.
- B. The cooling tower manufacturer shall be responsible for the design, fabrication, and delivery of materials to the project site. The Contractors shall install the cooling tower.
- C. The cooling tower manufacturer shall be responsible for furnishing structure sizes, weight loading information and support features required for proper installation.
- D. The steel structure will be designed by the Engineer and installed by the Contractor based upon certified loading and dimensional data provided by the Cooling Tower Manufacturer.

1.02 QUALITY ASSURANCE:

- A. Experience: At the time of submission of the proposal, the cooling tower model must have been in standard production for a minimum of one year.
- B. CTI (Cooling Tower Institute) Standards: Provide cooling towers which meet the performance standards of CTI Standards STD-201.
- C. NEMA (National Electric Manufacturers Association) and IEEE Compliance: Provide electric motors which meet the scheduled full load efficiency, per NEMA Standard MGI-12.53a, based on dynamometers testing per IEE 12 Method B.
- D. NFPA Compliance: Comply with applicable provisions of ANSI/NFPA 70 “National Electric Code”, pertaining to construction and installation of electrically operated components.
- E. NEMA and UL (Underwriters Laboratories) Compliance: Provide electric motors and products which have been listed and labeled by UL and comply with NEMA standards.

1.03 DELIVERY, STORAGE AND HANDLING: Coordinate delivery, storage, and handling with the Contractor.

1.04 PERFORMANCE DATA: Performance data for the design operating conditions (refer to Section 00400 shall be provided with each proposal. Performance data shall include flow rate, entering water temperature, leaving water temperature, pressure drop, sound pressure level (dBA), motor voltage and motor current (RLA).

- 1.05 **PHYSICAL DESCRIPTION:** A physical description of the cooling tower shall be provided. The physical description shall include the following information:
- A. Detailed drawings of the proposed equipment including a top view, right side view, and end view. The drawings shall indicate the dimension of the cells, locations of all connections (tower water, electrical controls, drain, overflow, make-up water, etc.), and service clearances. The drawings shall also indicate the type and size of each piping connection.
 - B. Detailed electrical wiring diagram that indicates all required field wiring and components including power and controls.
 - C. Detailed shipping instructions including shipping weights, operating weights, and rigging instructions.
 - D. Detailed installation instructions that address all installation requirements including rigging piping, anchors, mounting of sensors, etc.
 - E. Product data indicating motor speed (RPM), type of motor, type of bearings, fan description, fill material, and tower shell material.
 - F. Other information required to verify compliance with the Proposal Documents.
- 1.06 **REFERENCES:** A complete list of references for each type of cooling tower shall be provided with each proposal. The list shall include a minimum of 5 references. The list shall indicate the name of the facility where the equipment has been installed, location (city and state) of the equipment, installation date, equipment capacity (tons), contact name, and contact telephone number for each reference.
- 1.07 **FIRST YEAR WARRANTY:** Provide a complete equipment warranty on all parts, material, and labor for 1 year after the applicable date of Project Acceptance. The cost of the first year warranty shall be included in the amount indicated for the line item designated "Equipment Proposal" on the Proposal Form.
- 1.08 **INSTALLATION AND START-UP ASSISTANCE:** Supplier shall provide installation and start-up assistance to the Contractor. Such assistance shall be provided by a factory trained and certified technician. The date of the installation and start-up assistance provided by the Supplier shall be coordinated with the Contractor and the Owner. Service representative shall inspect the equipment installation and verify that the installation is in accordance with factory recommendations. Service representative shall verify that the power wiring, control wiring, piping connections, flow rates, and temperatures are correct prior to starting the equipment. The service representative shall thoroughly document the conditions at start-up in a detailed report. The service representative shall submit 8 copies of the report to the Contractor for processing and review by the Architect, Engineer, and Owner. The cost of the installation and start-up assistance shall be included in the amount indicated for the line item designated "Equipment Proposal" on the Proposal Form.
- 1.09 **EXTENDED WARRANTY PROPOSAL:** Supplier shall provide a proposal to provide a 4 year extension of the first year equipment warranty (refer to Section 00600 for additional information). The cost of the 4 year warranty extension shall be indicated on the Proposal Form on the line item designated "Extended Warranty Proposal".

- 1.11 SUBMITTALS: After receipt of a Letter of Intent or Purchase Order, the Supplier shall submit 8 copies of submittal documents to the Contractor. Each set of submittal documents shall be bound together in 3-ring binder. The binder shall be clearly marked to indicate the name of the project, Owner, Contractor, Architect, Engineer, and Supplier. The information shall be organized into sections. Each section shall be tabbed and labeled. Each set of submittal documents shall include the information listed below:
- A. Physical Description: Refer to Paragraph 1.05 above for required information.
 - B. Performance Data: Refer to Paragraph 1.04 for required information.
 - C. Operation and Maintenance Manuals: Manuals shall include operating instructions, maintenance instructions, troubleshooting information, parts lists, and other related information.

PART 2 PRODUCTS

2.04 APPROVED MANUFACTURERS:

- A. Marley
- B. Baltimore Air Coil (BAC)
- C. Evapco

2.05 INDUCED DRAFT CROSS FLOW TOWER:

- I. Provide an induced draft, factory packaged crossflow cooling tower as scheduled on drawings. Construction shall be G-235 galvanized steel general structure with Series 300 stainless steel welded seam cold water basin, lower wetted structure and all trim below the waterline, and stainless steel upper gravity type hot water distribution basins fitted with non-clog plastic target nozzle type metering orifices. Removable hot water basin covers of stainless steel shall be provided. Flanged connections shall be provided for hot water inlet piping. Single bottom inlet connection for each tower cell shall be provided with internal PVC riser piping and lateral header piping to each water distribution basin. Factory installed hot water basin weir dams or variable flow design distribution nozzles shall be provided.
- J. Each fan shall have cast aluminum airfoil blades with anti-recirculation hub assembly, and galvanized fan guard. Each blade shall be of the adjustable pitch design with raised pitching boss and shall be factory preset to design conditions. A complete mechanical equipment support shall be provided on which shall be rigidly mounted a right angle helical gear reduction unit and drive motor. Gear-reducer shall be of the latest five year maintenance free type, charged with synthetic lubricant at factory and not requiring lubricant change for a full 5 years. Motors shall be TEFC, High Efficiency, variable torque, 1.15 service factor, suitable for cooling tower duty and additional windings for inverter duty. Motor shall be as scheduled and shall not exceed nameplate amperage rating at design loads.

- K. For each tower cell the cold water basin shall be of stainless steel, self-cleaning with depressed center section. Basin shall be complete with stainless steel right angle sump outlet with Class 125 ANSI B16.1 connections and gaskets, stainless steel anti-vortex plate assemblies and debris screens. Provide factory float-operated, mechanical make-up valve in each fan cell. For equalization of water levels in each cell towers will be provided with hole and bolt circle located in basin floor. Contractor to provide field piping and isolation valve between each collection basin. A standpipe combination overflow and drain shall be provided in each basin for field piping to a sanitary drain per ADEQ code requirements.
- L. Fill shall be PVC film type high performance suitable for operating under winter icing conditions. Air inlet louvers and drift eliminators shall be integral with PVC fill sheets. Three pass drift eliminator shall be rated for drift loss not to exceed 0.005% of design flow rate. Hinged access doors shall be provided in the outer end walls for service access into eliminator and plenum area. Visual inspection of mechanical equipment, cold water basins and adjustment of make-up valve shall be capable from access door without shutdown of tower or recirculating water.
- M. Options and trim required for each tower fan cell are to include not less than: safety vibration cutoff switch, manual reset UL Listed explosion proof switch; extended oil line outside fan cylinder to level dipstick for external verification of lubricant level; Oil level sensing switch provided for field wiring to fan motor control to shut down tower on low oil level condition; factory installed and removable covers over hot water distribution basins; OSHA handrail system with 2 access ladders, ladder extensions to roof, and safety cage if top of tower is 20' above roof per OSHA regulations; an access platform assembly at each endwall with handrail for installation at base of tower to allow egress into tower interior; and stainless steel internal maintenance walkway factory installed full width of tower between doorways to access sump screen, mechanical equipment and basin accessories.
- N. An electric basin heat component system for each cell including weatherproof control panel, solid state controller with thermostat and B/W safety level switch provided. Basin heat shall be sized to maintain 40 F cold water basin temperature at 0 F ambient. Basin heat element and probe assembly shall be furnished for field mounting and wiring. All basin heat components submerged in cooling tower water shall be of stainless steel materials.
- O. Special cooling tower warranty requirement: All rotating parts and components of the air movement system, excluding the drive motor, shall be warranted by the cooling tower manufacturer for a period of 5 years from date of shipment when maintained in accordance with instructions provided in owner's manuals. All non-rotating parts shall be similarly warranted for a period of 18 months from date of shipment or 12 months from date of start-up, whichever occurs first. Warranty on drive motor shall be that of the motor manufacturer. Cooling tower submittal shall contain a factory certificate of rotating equipment and thermal performance warranties for Owner's Protection to be acceptable under this specification.

- P. The cooling tower manufacturer shall certify that their proposed tower meets the performance standards set forth in CTI Standard STD-201. Performance certifications notwithstanding, the Owner shall have the right to conduct a CTI or ASME on-site performance test during the first year of operation in the presence of CTI or ASME observers as well as the manufacturer's representatives. In the event that the tower fails to perform within the limits of the test tolerance, the cooling tower manufacturer will pay for the cost of the test and will make such corrections as are appropriate and agreeable to the Owner to compensate for the performance deficiency.

2.06 START-UP SERVICES:

- D. Manufacturer of cooling tower shall provide the services of a factory trained Service Technician or Engineer to inspect the installation to insure that it is in accordance with the manufacturer's instructions and procedures, that rotating components provide smooth operation within manufacturer's vibration tolerances. He shall advise the installer in writing of any recommended corrective action that is required to meet manufacturer's recommended installation procedures.
- E. Cooling tower start-up by manufacturer's representative shall include verification of mechanical equipment clearances and alignment, adjustment of water flow and operating water levels in hot water and cold water basins, check rotation of fan, verify operating sequences of tower control system and temperature settings. Written start-up report shall be provided to the Engineer and Owner confirming these procedures and including motor operating amperage readings. Manufacturer shall provide for local stock of tower spare and repair parts, and dedicated cooling tower repair personnel for 24 hour emergency service.
- F. Instruction of tower operation and maintenance procedures shall be provided by manufacturer's representative to Owner's satisfaction.

PART 3 EXECUTION

NOT APPLICABLE.

Installation shall be executed by Contractor.

005230 – EQUIPMENT SPECIFICATIONS – SACRED HEART HOSPITAL

1.00 GENERAL:

- A. The contractor shall provide two separate 750 ton cooling towers. Each tower shall meet the thermal performance listed below.
- B. Approved Manufactures:
 - 1. Marley
 - 2. Baltimore Air Coil (BAC)
 - 3. Evapco

1.01 BASE:

- A. Provide an induced draft, crossflow type, factory assembled, film fill, industrial duty, galvanized steel cooling tower situated as shown on the plans. The limiting overall dimensions of the tower shall be 22.42 ft wide, 11.9 ft long, and 23.42 ft high. Tower shall have one motor shall not exceed 50 Hp. Tower shall be similar and equal in all respects to Marley Model NC8411UAS1.

1.02. THERMAL PERFORMANCE:

- A. The tower shall be capable of cooling 2250 gpm of water from 95 °F to 85 °F at a design entering air wet-bulb temperature of 80 °F, and its thermal rating shall be Certified by the Cooling Technology Institute.

1.03. The tower shall be capable of a minimum 65.2 GPM/hp efficiency per ASHRAE Standard 90.1.

1.04. PERFORMANCE WARRANTY:

- A. CTI Certification notwithstanding, the cooling tower manufacturer shall guarantee that the tower supplied will meet the specified performance conditions when the tower is installed according to plan. If, because of a suspected thermal performance deficiency, the owner chooses to conduct an on-site thermal performance test under the supervision of a qualified, disinterested third party in accordance with CTI or ASME standards during the first year of operation; and if the tower fails to perform within the limits of test tolerance; then the cooling tower manufacturer will pay for the cost of the test and will make such corrections as are appropriate and agreeable to the owner to compensate for the performance deficiency.

1.05. DESIGN LOADING:

- A. The tower structure, anchorage and all its components shall be designed by licensed structural engineers per the International Building Code to withstand a wind load of 70 psf, as well as a .3g seismic load. The fan deck and hot water basin covers shall be designed for 50 psf live load or a 200 lb. concentrated load. Guardrails, where specified, shall be capable of withstanding a 200 lb. concentrated live load in any direction, and shall be

designed in accordance with OSHA guidelines.

1.06. CONSTRUCTION:

- A. Except where otherwise specified, all components of the cooling tower shall be fabricated of heavy-gauge steel, protected against corrosion by G-235 galvanizing. The tower shall be capable of withstanding water having a pH of 6.5 to 8.0; a chloride content (NaCl) up to 300 ppm; a sulfate content (SO₄) up to 250 ppm; a calcium content (CaCO₃) up to 500 ppm; silica (SiO₂) up to 150 ppm; and design hot water temperatures up to 125°F. The circulating water shall contain no oil, grease, fatty acids or organic solvents.
- B. The specifications, as written, are intended to indicate those materials that will be capable of withstanding the above water quality in continuing service, as well as the loads described in paragraph 4.1. They are to be regarded as minimum requirements. Where component materials peculiar to individual tower designs are not specified, the manufacturers shall take the above water quality and load carrying capabilities into account in the selection of their materials of manufacture.
- C. The tower shall include all design and material modifications necessary to meet the fire rating requirements of Factory Mutual. The product proposed shall be listed in the FM Approval Guide, latest edition.

1.07. MECHANICAL EQUIPMENT:

- A. Fan shall be propeller-type, incorporating wide-chord aluminum alloy blades and galvanized hubs. Blades shall be individually adjustable. Maximum fan tip speed shall be 13,000 ft/min. Fan(s) shall be driven through a right angle, industrial duty, oil lubricated, geared speed reducer that requires no oil changes for the first five (5) years of operation. The gearbox bearings shall be rated at an L10A service life of 100,000 hours or greater.
 - 1. An external oil level dipstick shall be located adjacent to the motor at the fan deck surface.
 - 2. The motor shall be mounted outside the casing of the tower, and shall be connected to the gear reducer by a dynamically-balanced, stainless steel tube and flange driveshaft.
- B. Motor shall be 50 Hp maximum, TEFC, 1.15 service factor, variable torque, and specially insulated for cooling tower duty. Speed and electrical characteristics shall be 1800 rpm, single-winding, 3 phase, 60 Hz, 460 volts. Motor shall operate in the shaft-horizontal position, and nameplate horsepower shall not be exceeded at design operation.
 - 1. Motor shall be premium efficiency and labeled for inverter duty.
- C. The complete mechanical equipment assembly for each cell shall be supported by a rigid steel structural support that resists misalignment between the motor and the gear reducer. The mechanical equipment assembly shall be warranted against any failure caused by defects in materials and workmanship for no less than five (5) years following the date of tower shipment. This warranty shall cover the fan, speed reducer, motor, drive shaft and couplings, and the mechanical equipment support.

- D. A vibration limit switch shall be installed on the mechanical equipment support assembly and wired into the control panel. The purpose of this switch will be to interrupt power to the motor in the event of excessive vibration. It shall be adjustable for sensitivity, and shall require manual reset.
- 1.08. FILL, LOUVERS AND DRIFT ELIMINATORS:
- A. Fill shall be film type, thermoformed of 15 mil thick PVC, with louvers formed as part of each fill sheet. Fill shall be suspended from hot dip galvanized structural tubing supported from the tower structure, and shall be elevated above the floor of the cold water basin to facilitate cleaning. Air inlet faces of the tower shall be free of water splash-out. Fill shall be capable of withstanding a hot water temperature of 125°F.
 - B. Drift eliminators shall be PVC, triple-pass, and shall limit drift losses to 0.005% or less of the design water flow rate.
- 1.09. HOT WATER DISTRIBUTION SYSTEM:
- A. Two open basins (one above each bank of fill) shall receive hot water piped to each cell of the tower. These basins shall be installed and sealed at the factory, and shall be equipped with removable, galvanized steel covers capable of withstanding the loads described in paragraph 4.1. The water distribution system shall be accessible and maintainable during tower fan and water operation.
 - B. Heavy-duty flow-regulator valves shall be provided at the hot water inlet connections. These valves shall be disc-type, with cast iron bodies and stainless steel operating stems. There shall be a locking handle to maintain the valve setting in any position. Valves shall be right-angle configuration, precluding the need for inlet elbows.
- 1.010. CASING, FAN DECK AND FAN GUARD:
- A. The casing and fan deck shall be heavy-gauge galvanized steel, and shall be capable of withstanding the loads described in paragraph 4.1. Fan deck shall be extended as shown on the drawings to allow easy access to all areas of fan deck. Fan cylinder shall be galvanized steel, velocity recovery type. Height shall be a minimum of 5 feet and not require a fan guard.
- 1.011. ACCESS:
- A. A large galvanized, rectangular access door shall be located on both end panels for entry into the cold water basin. Doors shall provide access to the fan plenum area to facilitate inspection and allow maintenance to the fan drive system.
 - B. The air inlet faces of the tower shall be covered by 1" mesh hot-dipped galvanized welded wire screens. Screens shall be secured to removable galvanized U-edge frames. Screens shall be designed so bottom half can be removed for easy access to the cold water basin.
 - C. The top of the tower shall be equipped with a sturdy guardrail, complete with kneerail and toeboard, designed according to OSHA guidelines and factory welded into subassemblies for ease of field installation. Posts, top rails and kneerails shall be 1.5 " square tubing. The guardrail assembly

shall be hot dipped galvanized after welding and capable of withstanding a 200 pound concentrated live load in any direction. Posts shall be spaced on centers of 8'-0" or less. A 1'-6" wide aluminum ladder with 3" I-beam side rails and 1.25" diameter rungs shall be permanently attached to the endwall casing of the tower, rising from the base of the tower to the top of the guardrail.

D. Ladder Safety:

1. A heavy gauge aluminum safety cage shall surround the ladder, extending from a point approximately 7'-0" above the foot of the ladder to the top of the guardrail.

00600 – SCHEDULED MAINTENANCE SPECIFICATIONS

PART 1 GENERAL

- 1.01 **PROPOSAL:** The Supplier shall indicate a price on the Proposal Form in the designated location for a price to provide Scheduled Maintenance Services. The Supplier shall also indicate a maximum annual price escalation rate on the Proposal Form in the designated location for the cost of the Scheduled Maintenance Services.
- 1.02 **WORK INCLUDED:** Provide scheduled (preventive) maintenance services for each cooling tower.
- 1.03 **SCOPE OF SERVICES:** Scheduled maintenance shall be performed in accordance with the manufacturer's recommendations and accepted industry standards. Adequate documentation of preventive maintenance programs shall be provided to satisfy all federal, state and local regulations.
- 1.04 **QUALIFICATIONS OF THE SERVICE ORGANIZATION:** The Service Organization shall have been active in this type of work in the area for a minimum of 5 years.
- 1.05 **SERVICE ORGANIZATION PERSONNEL REQUIREMENTS:**
- A. Personnel:
1. The Service Organization shall perform all services using qualified and trained personnel.
 2. The conduct of the Service Organization and all employees of the Service Organization shall be in accordance with the rules and regulations of the Owner.
 3. If requested by the Owner the Service Organization shall remove any employee that engages in improper conduct, appears unqualified to perform their assigned duties or has violated established procedures regarding security, conduct or safety.
 4. The Service Organization shall warrant that all employees are U.S. citizens or are otherwise legally entitled to accept employment with the Service Organization and perform services under this Agreement. The Service Organization shall pay all wages and all applicable federal, state and local taxes, including FICA, unemployment taxes, etc., arising out of such employment.
 5. All employees of the Service Organization shall wear uniforms which bear the name of the employee and the name of the Service Organization.

6. In the event that the Service Organization becomes a party to a collective bargaining agreement, no provision in that agreement shall be binding upon the Owner. Any attempt to so bind the Owner shall be deemed to be a material breach of this Agreement. No provision in a collective bargaining agreement shall relieve the Service Organization of its obligations under this Agreement.
7. The Service Organization shall have a sufficient number of experienced and qualified personnel to fulfill the requirements of this Agreement. The Service Organization shall respond on site to requests for service within 4 hours after the request for service.
8. Account Representative: The Service Organization shall designate an Account Representative, having supervisory status, who shall be accessible regarding any communication relevant to the Agreement.

1.06 INDEMNIFICATION; LIMITS OF LIABILITY: The Service Organization shall agree to indemnify and hold the Owner harmless from any and all costs, expense, damages, liens, charges, claims, judgments, demands or liabilities whatsoever (including attorney's fees) arising from the acts or omissions of the Service Organization or its agents or employees.

1.07 INSURANCE:

- A. The Service Organization shall obtain, pay for and maintain the following insurance covering the performance of Services as a minimum:
 1. Comprehensive General Liability Insurance covering each occurrence of bodily injury in an amount of not less than \$1,000,000 and covering each occurrence of property damage in an amount of not less than \$1,000,000. In lieu of providing separate coverage for bodily injury and property damage, as specified above, the Service Organization may provide umbrella coverage with the total limit of \$1,000,000 for each occurrence. The Comprehensive General Liability Insurance shall cover the Owner as an additional insured and shall contain endorsements providing coverage for the following:
 - a) Personal Injury Liability
 - b) Broad Form Property Damage
 - c) Blanket Contractual Liability
 - d) Products and Completed Liability
 - e) Premises-Operations Liability

- f) Independent Contractor's Protective Liability, if the Service Organization employs subcontractors to perform portions of the Services.
 - 2. Comprehensive Automobile Liability Insurance for owned, hired and non-owned motor vehicles, if any, used for the performance of the Services. This insurance shall have the same minimum coverage limits as specified above for Comprehensive General Liability Insurance.
 - 3. Workers' Compensation Insurance, Occupational Disease Insurance and Disability Benefits Insurance, in accordance with applicable statutory requirements.
 - 4. Employers' Liability Insurance in an amount not less than \$100,000.
- B. Prior to the commencement of the Services on the Owner's premises, the Service Organization shall furnish the Owner with certificates of insurance providing evidence of the coverage and limits of liability required under Paragraph 1.05. These certificates shall state that at least 30 days written notice shall be provided to the Owner prior to any cancellation, expiration, non-renewal or material change in the insurance coverage that occurs during the life of this Agreement.
- C. The Service Organization shall be responsible to the Owner for the amount of any deductible contained in any of the foregoing policies and certificate of insurance.
- D. These provisions set forth the minimum amounts and scopes of coverage and are not be construed in any way as a limitation on the Service Organization's liability under this Agreement.

PART 2 PRODUCTS

2.01 GENERAL:

- A. Parts, components and accessories furnished and installed by the Service Organization shall be new and as manufactured by or recommended by the Original Equipment Manufacturer (OEM).
- B. Fluids, oil, components, devices, etc., furnished and installed by the Service Organization shall be as recommended by the Original Equipment Manufacturer (OEM).

2.02 SPARE PARTS: The Service Organization shall maintain spare parts, materials and supplies that are typically required for normal and emergency repairs and maintenance.

PART 3 EXECUTION

3.01 REPORTING METHOD AND OWNER INSPECTION:

- A. Inspection: All work done and all materials furnished shall be subject to random and periodic inspection and approval by the Owner so as to ensure that the services rendered are in accordance with requirements and intentions of the specifications and special provisions.
 - B. Reporting Method: The Service Organization shall furnish the Owner 2 copies of a service check receipt for each unit serviced or repaired and a service checklist bearing the signature of the service personnel and the signature of the Owner's designated representative certifying receipt of services.
- 3.02 CLEAN-UP: The Service Organization shall keep the job site free of debris, litter, refuse, etc., and shall clean all fluids that spill or drip during the progress of the work. The Service Organization shall remove all equipment from the area upon completion of the work.

3.03 SCHEDULED MAINTENANCE REQUIREMENTS:

- A. The Service Organization shall provide scheduled maintenance services in accordance with Section 00700.
- B. The Service Organization shall provide additional scheduled maintenance services as recommended by the equipment manufacturer.
- C. The Owner shall provide access to building, parking and the use of utilities. The Owner shall maintain security of the equipment rooms.

00700 – SCHEDULED MAINTENANCE REQUIREMENTS

- 1.01. Annual Maintenance: Once each year, a thorough preventive maintenance program shall be completed. The program shall include the items of work listed below:
 - A. Inspect gear-reducer oil level (lubricate as required).
 - B. Inspect gear-reducer and extended oil lines for signs of leakage.
 - C. Inspect coupling drive.
 - D. Inspect motor operating temperature.
 - E. Inspect water levels.
 - F. Inspect structural integrity (any signs of corrosion).
 - G. Inspect hot water basins for scale accumulations.
 - H. Clean basins and interior (low pressure washer)
 - I. Grease drive motor bearings.
- 1.02. Manufacturer's Instructions: Perform all preventive maintenance services in strict accordance with the equipment manufacturer.
- 1.03. The Service Organization shall provide all equipment necessary to service and maintain the cooling tower.

00800 - EXTENDED WARRANTY SPECIFICATIONS

- 1.01. **PRICE:** Supplier shall indicate on the Proposal Form in the designated location a price to extend warranty by up to 4 additional years to result in a 5 year period of complete cooling tower warranty protection from initial Project Acceptance.
- 1.02. **SCOPE OF SERVICES:** Extended Warranty shall cover the entire tower including materials, replacement oil, equipment, parts, and labor. Warranty will not cover regular scheduled replacement gear oil.
- 1.03. **AGREEMENT:** Extended Warranty Agreement shall be between the Owner and the equipment manufacturer.
- 1.04. **RESPONSE TIME:** Supplier shall provide on-site warranty service within 4 hours of the initial call for warranty.