

AGREEMENT FOR THE PURCHASE OF ELECTRIC MOTOR REPAIR AND REPLACEMENT SERVICES

THIS AGREEMENT ("Agreement") is made and entered into as of the date of execution by both parties, by and between Lee County, a political subdivision of the State of Florida, hereinafter referred to as the "County" and John Mader Enterprises, Inc., a Florida corporation, whose address is 18161 N. Tamiami Trail, Ft. Myers, FL 33903, and whose federal tax identification number is 65-0048538, hereinafter referred to as "Vendor."

WITNESSETH

WHEREAS, the County intends to purchase electric motor repair and replacement services from the Vendor in connection with "Electric Motor Repair and Replacement Services" (the "Purchase"); and,

WHEREAS, the County issued Solicitation No. B180244GWT on May 18, 2018; and,

WHEREAS, the County evaluated the responses received and found the Vendor qualified to provide the necessary products and services; and,

WHEREAS, the County posted a Notice of Intended Decision on July 10, 2018; and,

WHEREAS, the Vendor has reviewed the products and services to be supplied pursuant to this Agreement and is qualified, willing and able to provide all such products and services in accordance with its terms.

NOW, THEREFORE, the County and the Vendor, in consideration of the mutual covenants contained herein, do agree as follows:

I. PRODUCTS AND SERVICES

The Vendor agrees to diligently provide all products and services for the Purchase in accordance with the project Scope of Services made part of this Agreement as Exhibit A, attached hereto and incorporated herein. Vendor shall comply strictly with all of the terms and conditions of Solicitation B180244GWT, a copy of which is on file with the County's Department of Procurement Management and is deemed incorporated into this Agreement.

II. TERM AND DELIVERY

- A. This Agreement shall commence immediately upon execution by both the County and the Vendor, and shall continue on an "as needed basis" for a one (1) year period. There may be an option to renew this Agreement for up to three (3) additional one (1) year periods upon the mutual written agreement of both parties.

- B. A purchase order must be issued by the County before commencement of any work or purchase of any goods related to this Agreement.

III. COMPENSATION AND PAYMENT

- A. The County shall pay the Vendor in accordance with the terms and conditions of this Agreement for providing all products and services as set forth in Exhibit A, and further described in Exhibit B, Fee Schedule, attached hereto and incorporated herein. Said total amount to be all inclusive of costs necessary to provide all products and services as outlined in this Agreement, and as supported by the Vendor's submittal in response to Solicitation No. B180244GWT, a copy of which is on file with the County's Department of Procurement Management and is deemed incorporated into this Agreement.
- B. Notwithstanding the preceding, Vendor shall not make any deliveries or perform any work under this Agreement until receipt of a purchase order from the County. Vendor acknowledges and agrees that no minimum order or amount of product or work is guaranteed under this Agreement and County may elect to issue no purchase orders. If a purchase order is issued, the County reserves the right to amend, reduce, or cancel the purchase order in its sole discretion.
- C. All funds for payment by the County under this Agreement are subject to the availability of an annual appropriation for this purpose by the County. In the event of non-appropriation of funds by the County for the services provided under this Agreement, the County will terminate the contract, without termination charge or other liability, on the last day of the then current fiscal year or when the appropriation made for the then-current year for the services covered by this Agreement is spent, whichever event occurs first. If at any time funds are not appropriated for the continuance of this Agreement, cancellation shall be accepted by the Vendor on thirty (30) days' prior written notice, but failure to give such notice shall be of no effect and the County shall not be obligated under this Agreement beyond the date of termination.

IV. METHOD OF PAYMENT

- A. The County shall pay the Vendor in accordance with the Local Government Prompt Payment Act, Section 218.70, Florida Statutes, upon receipt of the Vendor's invoice and written approval of same by the County indicating that the products and services have been provided in conformity with this Agreement.

- B. The Vendor shall submit an invoice for payment to the address indicated on the purchase order on a monthly basis for those specific products and services as described in Exhibit A (and the corresponding fees as described in Exhibit B) that were provided during that invoicing period.
- C. For partial shipments or deliveries, progress payments shall be paid monthly in proportion to the percentage of products and services delivered on those specific line items as approved in writing by the County.

V. ADDITIONAL PURCHASES

- A. No changes to this Agreement or the performance contemplated hereunder shall be made unless the same are in writing and signed by both the Vendor and the County.
- B. If the County requires the Vendor to perform additional services or provide additional product(s) related to this Agreement, then the Vendor shall be entitled to additional compensation based on the Fee Schedule as amended to the extent necessary to accommodate such additional work or product(s). The additional compensation shall be agreed upon before commencement of any additional services or provision of additional product(s) and shall be incorporated into this Agreement by written amendment. The County shall not pay for any additional service, work performed or product provided before a written amendment to this Agreement.

Notwithstanding the preceding, in the event additional services are required as a result of error, omission or negligence of the Vendor, the Vendor shall not be entitled to additional compensation.

VI. LIABILITY OF VENDOR

- A. The Vendor shall save, defend, indemnify and hold harmless the County from and against any and all claims, actions, damages, fees, fines, penalties, defense costs, suits or liabilities which may arise out of any act, neglect, error, omission or default of the Vendor arising out of or in any way connected with the Vendor or subcontractor's performance or failure to perform under the terms of this Agreement.
- B. This section shall survive the termination or expiration of this Agreement.

VII. VENDOR'S INSURANCE

- A. Vendor shall procure and maintain insurance as specified in Exhibit C, Insurance Requirements, attached hereto and made a part of this Agreement.
- B. Vendor shall, on a primary basis and at its sole expense, maintain in full force and effect, at all times during the life of this Agreement, insurance

coverage (including endorsements) and limits as described in Exhibit C. These requirements, as well as the County's review or acceptance of insurance maintained by Vendor, are not intended to and shall not in any manner limit or qualify the liabilities or obligations assumed by Vendor under this Agreement. Insurance carriers providing coverage required herein must be licensed to conduct business in the State of Florida and must possess a current A.M. Best's Financial Strength Rating of B+ Class VII or better. No changes are to be made to these specifications without prior written specific approval by County Risk Management. To the extent multiple insurance coverages and/or County's self-insured retention may apply, any and all insurance coverage purchased by Vendor and its subcontractors identifying the County as an additional named insured shall be primary.

VIII. RESPONSIBILITIES OF THE VENDOR

- A. The Vendor shall be responsible for the quality and functionality of all products supplied and services performed by or at the behest of the Vendor under this Agreement. The Vendor shall, without additional compensation, correct any errors or deficiencies in its products, or if directed by County, supply a comparable replacement product or service.
- B. The Vendor warrants that it has not employed or retained any company or person (other than a bona fide employee working solely for the Vendor), to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual, or firm other than a bona fide employee working solely for the Vendor, any fee, commission, percentage, gift, or any other consideration, contingent upon or resulting from the award of this Agreement.
- C. The Vendor shall comply with all federal, state, and local laws, regulations and ordinances applicable to the work or payment for work thereof, and shall not discriminate on the grounds of race, color, religion, sex, or national origin in the performance of work under this Agreement.
- D. Vendor specifically acknowledges its obligations to comply with Section 119.0701, Florida Statutes, with regard to public records, and shall:
 - 1) keep and maintain public records that ordinarily and necessarily would be required by the County in order to perform the services required under this Agreement;
 - 2) upon request from the County, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law;

- 3) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed, except as authorized by law; and
- 4) meet all requirements for retaining public records and transfer, at no cost to the County, all public records in possession of Vendor upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the County in a format that is compatible with the information technology system of the County.

IF THE VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 239-533-2221, 2115 SECOND STREET, FORT MYERS, FL 33901, publicrecords@leegov.com; <http://www.leegov.com/publicrecords>.

- E. The Vendor is, and shall be, in the performance of all work, services and activities under this Agreement, an independent contractor. Vendor is not an employee, agent or servant of the County and shall not represent itself as such. All persons engaged in any work or services performed pursuant to this Agreement shall at all times, and in all places, be subject to the Vendor's sole direction, supervision and control. The Vendor shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the Vendor's relationship and the relationship of its employees to the County shall be that of an independent contractor and not as employees of the County. The Vendor shall be solely responsible for providing benefits and insurance to its employees.

IX. OWNERSHIP OF PRODUCTS

It is understood and agreed that all products provided under this Agreement shall become the property of the County upon acceptance by the County.

X. TIMELY DELIVERY OF PRODUCTS AND PERFORMANCE OF SERVICES

- A. The Vendor shall ensure that all of its staff, contractors and suppliers involved in the production or delivery of the products are fully qualified and capable to perform their assigned tasks.
- B. The personnel assigned by the Vendor to perform the services pursuant to this Agreement shall comply with the terms set forth in this Agreement.

- C. The Vendor specifically agrees that all products shall be delivered within the time limits as set forth in this Agreement, subject only to delays caused by force majeure, or as otherwise defined herein. "Force majeure" shall be deemed to be any unforeseeable and unavoidable cause affecting the performance of this Agreement arising from or attributable to acts, events, omissions or accidents beyond the control of the parties.

XI. COMPLIANCE WITH APPLICABLE LAW

This Agreement shall be governed by the laws of the State of Florida. Vendor shall promptly comply with all applicable federal, state, county and municipal laws, ordinances, regulations, and rules relating to the services to be performed hereunder and in effect at the time of performance. Vendor shall conduct no activity or provide any service that is unlawful or offensive.

XII. TERMINATION

- A. The County shall have the right at any time upon fifteen (15) days' written notice to the Vendor to terminate this Agreement in whole or in part for any reason whatsoever. In the event of such termination, the County shall be responsible to Vendor only for fees and compensation earned by the Vendor, in accordance with Section III, prior to the effective date of said termination. In no event shall the County be responsible for lost profits of Vendor or any other elements of breach of contract.
- B. After receipt of a notice of termination, except as otherwise directed, the Vendor shall stop work on the date of receipt of the notice of termination or other date specified in the notice; place no further orders or subcontracts for materials, services, or facilities except as necessary for completion of such portion of the work not terminated; terminate all vendors and subcontracts; and settle all outstanding liabilities and claims.
- C. The County's rights under this Agreement shall survive the termination or expiration of this Agreement and are not waived by final payment or acceptance and are in addition to the Vendor's obligations under this Agreement.

XIII. DISPUTE RESOLUTION

- A. In the event of a dispute or claim arising out of this Agreement, the parties agree first to try in good faith to settle the dispute by direct discussion. If this is unsuccessful, the parties may enter into mediation in Lee County, Florida, with the parties sharing equally in the cost of such mediation.

- B. In the event mediation, if attempted, is unsuccessful in resolving a dispute, the parties may proceed to litigation as set forth below.
- C. Any dispute, action or proceeding arising out of or related to this Agreement will be exclusively commenced in the state courts of Lee County, Florida, or where proper subject matter jurisdiction exists, in the United States District Court for the Middle District of Florida. Each party irrevocably submits and waives any objections to the exclusive personal jurisdiction and venue of such courts, including any objection based on forum non conveniens.
- D. This Agreement and the rights and obligations of the parties shall be governed by the laws of the State of Florida without regard to its conflict of laws principles.
- E. Unless otherwise agreed in writing, the Vendor shall be required to continue all obligations under this Agreement during the pendency of a claim or dispute including, but not limited to, actual periods of mediation or judicial proceedings.

XIV. STOP WORK ORDER

The County may, at any time, by written order to the Vendor, require the Vendor to stop all or any part of the work called for by this Agreement. Any order shall be identified specifically as a stop work order issued pursuant to this clause. This order shall be effective as of the date the order is delivered to the Vendor. Upon receipt of such an order, the Vendor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. The Vendor shall not resume work unless specifically so directed in writing by the County. The County may take one of the following actions:

1. Cancel the stop work order; or
2. Terminate the work covered by the order; or
3. Terminate the Agreement in accordance with provisions contained in Section XI.

In the event the County does not direct the Vendor to resume work, the stop work order may be converted into a notice of termination for convenience pursuant to Section XII. The notice period for such termination shall be deemed to commence on the date of issuance of the stop work order. In the event the County does not direct the Vendor to resume work within ninety (90) days, the Vendor may terminate this Agreement.

XV. VENDOR WARRANTY

- A. All products provided under this Agreement shall be new (unless specifically identified otherwise in Exhibit B) and of the most suitable grade for the purpose intended.
- B. If any product delivered does not meet performance representations or other quality assurance representations as published by manufacturers, producers or distributors of the products or the specifications listed in this Agreement, the Vendor shall pick up the product from the County at no expense to the County. The County reserves the right to reject any or all materials if, in its judgment, the item reflects unsatisfactory workmanship or manufacturing or shipping damage. In such case, the Vendor shall refund to the County any money which has been paid for same.

XVI. MISCELLANEOUS

- A. This Agreement constitutes the sole and complete understanding between the parties and supersedes all other contracts between them, whether oral or written, with respect to the subject matter. No amendment, change or addendum to this Agreement is enforceable unless agreed to in writing by both parties and incorporated into this Agreement.
- B. The provisions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assignees of the parties hereto. A party to this Agreement shall not sell, transfer, assign, license, franchise, restructure, alter, or change its corporate structure or otherwise part with possession or mortgage, charge or encumber any right or obligation under this Agreement without the proposed assignee and/or party restructuring, altering or changing its corporate structure agreeing in writing with the non-assigning party to observe and perform the terms, conditions and restrictions on the part of the assigning party to this Agreement, whether express or implied, as if the proposed assignee and/or party restructuring, altering or changing its corporate structure was an original contracting party to this Agreement. Notwithstanding the foregoing provision, the Vendor may assign its rights if given written authorization by the County and claims for the money due or to become due to the Vendor from the County under this Agreement may be assigned to a financial institution or to a trustee in bankruptcy without such approval from the County. Notice of any such transfer or assignment due to bankruptcy shall be promptly given to the County.
- C. The exercise by either party of any rights or remedies provided herein shall not constitute a waiver of any other rights or remedies available under this Agreement or any applicable law.
- D. The failure of the County to enforce one or more of the provisions of the Agreement shall not be construed to be and shall not be a waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.

- E. The parties covenant and agree that each is duly authorized to enter into and perform this Agreement and those executing this Agreement have all requisite power and authority to bind the parties.
- F. Neither the County's review, approval or acceptance of, nor payment for, the products and services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.
- G. If the Vendor is comprised of more than one legal entity, each entity shall be jointly and severally liable hereunder.
- H. Any notices of default or termination shall be sufficient if sent by the parties via United States certified mail, postage paid, or via a nationally recognized delivery service, to the addresses listed below:

Vendor's Representative:

Name: Jeremy Mader

Title: President

Address: 18161 N. Tamiami Trail, Ft. Myers, FL 33903

Telephone: 239-731-5455

Facsimile: 239-731-8165

E-mail: maderelectricmotors@msn.com

County's Representatives:

Names:	<u>Roger Desjarlais</u>	<u>Mary Tucker</u>
Titles:	<u>County Manager</u>	<u>Director of Procurement Management</u>
Address:	<u>P.O. Box 398</u>	
	<u>Fort Myers, FL 33902</u>	
Telephone:	<u>239-533-2221</u>	<u>239-533-8881</u>
Facsimile:	<u>239-485-2262</u>	<u>239-485-8383</u>
E-Mail:	<u>rdesjarlais@leegov.com</u>	<u>mtucker@leegov.com</u>

- I. Any change in the County's or the Vendor's Representative will be promptly communicated by the party making the change.
- J. Paragraph headings are for the convenience of the parties and for reference purposes only and shall be given no legal effect.
- K. In the event of conflicts or inconsistencies, the documents shall be given precedence in the following order:
1. Agreement
 2. County's Purchase Order
 3. Solicitation No. B180244GWT

4. Vendor's Submittal in Response to Solicitation No. B180244GWT

[The remainder of this page intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date last below written.

WITNESS:

Signed By: Dan Luby

Print Name: Dan Luby

JOHN MADER ENTERPRISES, INC.

Signed By: Jeremy Mader

Print Name: Jeremy Mader

Title: President

Date: 8-8-18

LEE COUNTY

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

BY: [Signature]
CHAIR

DATE: 8-10-18

Commissioner Cecil L. Pendergrass
Lee County Board of County Commissioners
District 2

ATTEST:
CLERK OF THE CIRCUIT COURT
Linda Doggett, Clerk

BY: [Signature]

APPROVED AS TO FORM FOR THE
RELIANCE OF LEE COUNTY ONLY:

BY: [Signature]
OFFICE OF THE COUNTY ATTORNEY

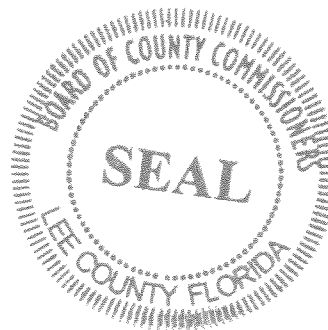


EXHIBIT A SCOPE OF SERVICES

SCOPE OF WORK AND SPECIFICATIONS

LEE COUNTY, FLORIDA DETAILED SPECIFICATIONS FOR

1. SCOPE

Lee County Board of County Commissioners is seeking the services of both a primary vendor and a secondary vendor to provide all necessary labor, materials, and equipment to service both in the field and in their shop, electric motor repair work. Such services will consist of, but not limited to, the repair and rewind of motors, field services in the removing and installing of equipment, predictive and preventive maintenance of rotating equipment, technical support, substantial inventory, panel shop capabilities and the ability to retrofit wells from existing turbine motors to submersible motors.

2. OVERVIEW

These detailed specifications consist of several sections, several of which include a series of requirements to which the vendor must answer either "Yes" or "No". Obviously, it is desired that vendors respond with a "Yes" to all requirements; and while answering "No" may not eliminate the vendor from consideration for an award, an explanation as to why that requirement could not be met should be included with your bid response. Lee County Utilities (LCU) will review this explanation and will make a determination as to whether or not it is satisfactory enough to permit the consideration of that vendor's pricing for an award. All decisions made by Lee County Utilities (LCU) will be final.

Only those vendors who, in the sole opinion of the county, best satisfy the needs of the Lee County Utilities will have their pricing considered for an award. All decisions will be final. A site visit to the vendor's facility may be made to substantiate qualifications. Misrepresentation of qualifications or equipment necessary to properly service the County's requirements will be cause for immediate revocation of recommendation.

3. REGULAR DEALER

Bids will be considered only from firms which qualify as a "regular dealer".

A "regular dealer" means a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular dealer, the firm must engage in, as its principal business and in its own name, the purchase and sale of the products in question.

4. MAJOR BREAKDOWNS/NATURAL DISASTERS

Lee County requires that the awarded vendor provide the name of a contact person and phone number which will afford Lee County access twenty-four hours per day, 365 days per year, of this product or service in the event of major breakdowns or natural disasters.

Lee County reserves the right to purchase the product or service listed in this quotation elsewhere in an emergency situation.

5. COMPENSATION RATE AND FEE SCHEDULE CHANGES

The bid price shall be firm and will not vary during the first year of the agreement. However, if the awarded vendor requests a price increase during the remaining years of the contract, it will be reviewed by both the Department of Public Works (Utilities Division) and the Purchasing Division. If accepted by Lee County, the increase will only take effect after the awarded vendor receives the approval in writing from the Purchasing Division.

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EXHIBIT A SCOPE OF SERVICES

6. WARRANTIES

As a minimum, the awarded vendor shall provide warranties on all work as follows:

- *On labor and materials - 12 Months,
- *On rebuilt or repaired equipment - 90 days,
- *On new equipment, manufacturer's warranty period.

7. DOCUMENTATION

The awarded vendor shall provide to LCU all installation, operation and maintenance manuals for all new equipment supplied and/or installed; as well as all warranties.

8. AUTHORIZATION TO PERFORM WORK

Upon award LCU will provide contractor a list of LCU employees empowered to authorize work.

9. INVOICING

Bidders should provide a sample invoice with their bid. At a minimum, this invoice should include the following items.

- County work order, purchase order or contract number.
- Name of facility where work was performed.
- Address or location of facility.
- Problem corrected and description of work performed.
- Identifiers for equipment worked on; e.g. lift station number, pump number, serial number, horsepower, manufacturer, etc.
- For labor; name, classification, work performed, total straight time hours worked, total premium time hours worked and extended amount.
- For repair components; item, quantity, unit price and extended amount.
- For replacement equipment supplied and/or installed; item description, manufacturer, model number, serial number, location where delivered or installed, price, mark-up and extended amount.
- For crew, premium time hours for crew, rate for crew, crane use hours, rate and extended amounts.
- For any subcontracted work; name of subcontractor, work performed, price, mark-up and extended amount.
- For Miscellaneous items, e.g. overnight freight, pick-up or delivery charges, consumables etc.; item, cost, mark-up if any and extended amount.
- For specialty services, if any; service provided, name of provider, hours, rate and extended amount.

SECTION I - QUALIFICATIONS

Introduction

As stated above, Lee County is seeking the services of both a primary vendor and a secondary vendor to provide all necessary labor, materials, and equipment to service both in the field and in their shop, electric motor repair work. Such services will consist of, but not limited to, the repair and rewind of motors, field services in the removing and installing of equipment, predictive and preventive maintenance of rotating equipment, technical support, substantial inventory, panel shop capabilities and the ability to retrofit wells from existing turbine motors to submersible motors.

EXHIBIT A SCOPE OF SERVICES

The awarded vendor shall comply with NFPA 70 E codes while doing work in any facilities. Any violations of NFPA 70 E codes the vendor will be dismissed from the job site. There will be no exceptions.

Response Format

Bidders should submit three (3) copies of their submittal. The response format shall contain a letter of transmittal and the following three tabs with the stated information behind each tab. Where specified, the maximum number of pages in each section of the response shall consist of single-sided, 8-1/2" x 11" paper, using 12-point characters. Responses exceeding these limits may be considered non-responsive.

1. Report on the Firm (maximum 25 pages)

- a. The history of the firm, its corporate structure, years in business, current facility, fleet, inventory resources, and areas of expertise.
- b. Capabilities and technical background of dedicated staff.
- c. List any current or past clients for whom the firm is providing or has provided a similar service program. Include a description of the services provided, the scale of the program, and a point of contact for each. Vendor must demonstrate a proficiency for servicing a utilities infrastructure like that of Lee County.

2. Project Approach (maximum 25 pages)

Describe, in detail, the proposed strategy for providing the services as listed. Include emergency and non-emergency response times, estimates of typical repair times for motors and pumps, a sample predictive maintenance proposal, and your warranty policy.

3. Additional Information (optional) (maximum 10 pages)

Provide any additional information that may assist in the evaluation of the quotation.

VENDOR REQUIREMENTS

Lee County shall require that the vendor provide the following services in conjunction with their motor repair capabilities. Vendors must indicate below for each numbered statement whether you can comply (yes) or cannot comply (no) and should submit this page with your quotation. If your answer is no, please briefly explain why you cannot comply.

1. **Field Service Capabilities** – provide trained personnel and service vehicles to Lee County in the removing and re-installing of all rotating equipment if required.

Yes ☒ No ☐

2. **Predictive Maintenance** – provide trained personnel and service vehicles to Lee County for vibration analyses, field balancing, and laser alignment of all equipment pulled out of service and reinstalled where applicable. Vendor must own and maintain an IRD Data Pac 1500 and a Fixture Laser or equivalent to perform these services. A hard copy of results will be furnished with each repair.

Yes ☒ No ☐

EXHIBIT A SCOPE OF SERVICES

3. **U.L. 508 Control Panel Builder** – Vendor will supply to Lee County the ability to design, engineer, fabricate and install a U.L. Listed Control Panel. It is not necessary for the vendor to fabricate or engineer these panels in-house; panels not built on the vendor's premises but are built to County specifications in a U.L. 508 panel facility will be acceptable

Yes ☒ No ☐

4. **Inventory** – Vendor will maintain a motor inventory of high efficiency motors from fractional up to and including 150HP, 460-volt, TEFC, 1800RPM at his repair facility. A copy of his current inventory will be required prior to ratifying contract.

Yes ☒ No ☐

INSURANCE REQUIREMENTS (MINIMUM):

The company submitting the RFQ must be able to provide a copy of their current Certificate of Insurance or a letter from their insurance company evidencing the fact that the Vendor is able to be insured pertaining to Electric Motor Repair & Replacement Services as per the insurance requirements detailed in these specifications. The certificate or letter should be included with your bid response.

Yes ☒ No ☐

1. Introduction

1.1 OVERVIEW

This Model Repair Specification lists the suggested minimum requirements for the repair and overhaul of low-voltage random-wound three-phase AC squirrel cage induction motors, which are sent for repair. It pertains to motors with anti-friction bearings (ball and roller) only

1.2 INTENT

The intent of this Model Repair Specification is to achieve a consistent, high quality diagnosis, repair and/or overhaul of a motor, and to return it to good operating condition with a minimum of delay and cost. Not all repair situations can be covered in this Model Repair Specification. In the absence of specific instructions, the requirement shall be to restore the motor to as-manufactured condition.

1.3 REFERENCE DOCUMENTS

The references to be used in conjunction with these Model Repair Specifications are the latest editions of the following:

UL UL674 Electric Motors and Generators For Use In Hazardous Locations

IEEE AR100-1998 Recommended Practice For The Repair of Rotating Electrical Apparatus

IEEE IEEE Std. 43, Recommended Practice for Testing Insulation Resistance of Rotating Machinery

IEEE Std. 112, IEEE Standard Test Procedure for Polyphase Induction Motors and Generators

ISO ISO Std 1940-1, Mechanical Vibration—Balance Quality Requirements of Rigid Rotors

EXHIBIT A

SCOPE OF SERVICES

NEMA NEMA Std. MG-1, Motors and Generators

ABMAANSI/ABMA Std. 7, Shaft and Housing Fits for Metric Radial Ball and Roller Bearings

Vendors should indicate for each numbered statement whether they can comply (yes) or cannot comply (no) and submit these pages with their quotation. If your answer is no, please briefly explain why you cannot comply.

1.4 HAZARDOUS LOCATIONS

Motors intended for use in hazardous locations will have a nameplate to that effect. The repair work shall be done in a facility that has been certified by the Underwriters Laboratories to meet the requirements of UL674 Qualification of Facilities Engaged in the Repair of Electric Motors and Generators for use in Hazardous Locations. Subcontracting these services will be acceptable. If the explosion-proof characteristics of the motor are not to be maintained, then the nameplate shall be altered to reflect this, and the motor will no longer be considered suitable for use in hazardous areas.

Yes ☒ No ☐

1.5 GENERAL

1.5.1 Unavoidable Degradation

During the course of repair, if any damage is found which cannot be fully repaired, the County's approval is required before proceeding. Likewise, if any repair is indicated which may result in a permanent degradation of efficiency or other performance parameters, the County's approval is required before proceeding.

Yes ☒ No ☐

1.5.2 Operating Environment

If this motor operates in severe environmental conditions, it will be indicated on the accompanying motor repair form. No repair methods or materials may be used which make the motor more vulnerable to these conditions than it was as originally built.

Yes ☒ No ☐

1.5.3 If Powered by an Inverter

If "Powered by ASD" is checked on the accompanying Motor Repair Form, this motor is powered by a pulse-width-modulated inverter. The windings shall be sufficiently insulated and supported to withstand this type of power supply. Magnet wire must be of a design intended for inverter duty. The wire manufacturer and specification shall be reported to the County. Quad wire rated for inverter duty will only be accepted.

Yes ☒ No ☐

1.5.4 Subcontracted Work

EXHIBIT A

SCOPE OF SERVICES

Motor repair vendor will be responsible for performing all work. Absolutely no subcontracting of any repair work will be allowed. All winding will be performed at vendor's facility. The purchasing of form wound coils will be allowed.

Yes X No _____

2. Repair Procedures

2.1 DOCUMENTATION

2.1.1 Repair Forms

The motor will be accompanied by a Motor Repair Form from the County which will list the perceived problems, the operating environment, the urgency of the repair, past problems where applicable, the required repair, cost constraints, missing parts and the person within the Utilities to be contacted about the repair. This form shall be used as a guide for the repair. A sample is included in Section 4 of these specifications.

During repair, actions and findings will be recorded on a Repairer's Tracking Form. It shall contain records of all the work done, problems noted, checks and measurements taken during the work, repairs carried out and the final tests conducted prior to shipping.

Requirements for the work, checks and tests are listed in the following sections.

Yes X No _____

2.1.2 Expanded Work Scope

If tests and inspection indicate problems beyond the initial scope of the listed repair, then the designated person shall be contacted and given a description of the problems, plus an estimate of their effect on delivery and costs.

Yes X No _____

2.1.3 File

The repairer will keep a copy of the Motor Repair Form in their file for the particular job for up to three years from the date of delivery.

Yes X No _____

2.2 INCOMING INSPECTION

On receipt of the motor and after reading the Motor Repair Form, the repairer shall do the initial tests set out below, plus any other tests indicated by the form.

2.2.1 Intent

The intent of the initial tests shall be to determine and record the probable cause of failure, if any, to document certain pre-repair parameters, and to determine what work is required.

Yes X No _____

EXHIBIT A

SCOPE OF SERVICES

The repairer will keep a copy of the Motor Repair Form in their file for the particular job for up to three years from the date of delivery.

Yes ☒ No ☐

2.2 INCOMING INSPECTION

On receipt of the motor and after reading the Motor Repair Form, the repairer shall do the initial tests set out below, plus any other tests indicated by the form.

2.2.1 Intent

The intent of the initial tests shall be to determine and record the probable cause of failure, if any, to document certain pre-repair parameters, and to determine what work is required.

Yes ☒ No ☐

2.2.2 Visual

A visual inspection shall be made to assess the general condition of the outside of the motor for cracks, broken welds and missing parts.

Yes ☒ No ☐

2.2.3 Insulation to Ground

An insulation resistance test to ground shall be performed, at a voltage suitable for the motor's voltage rating and the apparent condition of the motor. The testing shall be as follows:

- The initial test voltage shall be 500 volts DC.
- For motors where there is more than one winding, the insulation shall also be tested between windings, at the test voltage appropriate to the lower voltage winding, with other windings grounded.
- The duration of the insulation test shall be one minute. The temperature shall be recorded.

Yes ☒ No ☐

2.2.4 Bearings

The shaft shall be manually rotated to check for any obvious problems with the bearings or shaft.

Yes ☒ No ☐

2.2.5 No Load Run

If possible, the motor shall be run on no load, at nameplate voltage and checked for balanced currents and vibration. The readings shall be noted on the Repairer's Tracking Form.

Yes ☒ No ☐

2.3 DISMANTLING

2.3.1 Identify Problem

After the incoming inspection, the motor shall be dismantled to the extent needed to either fully identify or repair the problem, or to do the specified overhaul.

Yes ☒ No ☐

EXHIBIT A SCOPE OF SERVICES

2.3.2 Markings

End brackets and frames shall be clearly match-marked with numerals or letters.

Yes X No

2.3.3 Parts Storage

Bolts and small parts shall be stored in dedicated containers and parts from other jobs shall not be kept with them.

Yes X No

2.3.4 Insulated Bearings

If the motor has insulated bearings, note which, if any have the insulation deliberately bridged. The insulation resistance of each insulated bearing shall be at least 10-megohms with a 500-volt DC test.

Yes X No

2.3.5 Dowels

If dowels or fitted bolts are used to ensure accurate fits, the location of these pieces shall be identified.

Yes X No

2.3.6 Explosion Proof

Repairer or repairer's subcontractor must be certified by UL for repair of explosion-proof motors. For motors certified for hazardous locations, extra care shall be taken to ensure that joints and flame paths are not damaged during the work. If damage requiring other than normal repair is found, Utilities shall be notified before proceeding with repair.

Yes X No

2.3.7 Rotor Removal

For horizontal motors where the shaft rotor assembly is too heavy to be removed easily by hand, one or two cranes shall be used to move the shaft, with a close fitting pipe installed over one end of the shaft to act as a shaft extension. Attention shall be paid to the following:

- Care shall be taken that the slings do not damage the bearing surfaces or the rotor,
- Under no circumstances shall the stator windings be touched by any of the parts being moved.

Yes X No

2.4 VERTICAL MOTORS

Vertical motors shall be dismantled according to the manufacturer's instruction book. The assembly of vertical motors is critical. Particular attention shall be paid to, and records kept of:

- The amount of rotor lift (end play);
- The make and types of bearings, particularly the thrust bearings including orientation of thrust bearings;
- The arrangement of the thrust and guide bearings, including specially ground mating surfaces;
- The axial and radial clearances (fit) to the shaft and housing;
- The method of lubrication of both upper and lower bearings;
- The method of bearing insulation, if any; and

EXHIBIT A

SCOPE OF SERVICES

- Any other particular features of the motor configuration.

Yes ☒ No ☐

2.5 WINDING REMOVAL

2.5.1 General

For motors that are to be rewound, the core shall be stripped, cleaned, tested and repaired.

Yes ☒ No ☐

2.5.2 Take Data

Winding data shall be recorded so as to permit replicating original configuration.

Yes ☒ No ☐

2.5.3 Core Loss

A core loss test shall be done on all stators both before and after stripping and iron repair, to check for damaged interlaminar insulation. The tests shall be done at a flux density of 85,000 lines per square inch rms. Exciting current and watts loss shall be recorded each time, as well as a physical check carried out for hot spots. If data from previous tests are available, the results shall be compared. Testing at other flux densities may be done if previous data is available.

If hot spots exceed 15°C above the average temperature after 10 minutes, or losses are excessive overall either before or after stripping, the situation shall be discussed with Utilities before proceeding further. For a core without any hot spots, the losses after stripping shall not be more than 10% higher than the pre-strip losses. To avoid misleading results, the second core loss test should not be done until the core has been cleaned and dried.

Vendor will own and maintain a core loss tester equivalent to or better than a Phenix Core Loss Tester.

Yes ☒ No ☐

2.5.4 Burn Out

The winding shall be burned out in a controlled temperature burnout oven where the part temperature is limited by means of fuel control and supplementary (water spray) cooling to 3600C (6800F) for organic (C3) or 4000C (7500F) for inorganic (CS) interlaminar insulation. If a higher temperature is deemed necessary, repairer shall reference communication or documentation from the motor manufacturer indicating that the core iron can safely withstand the temperature.

Yes ☒ No ☐

2.5.5 Aluminum Frame

Frames may be chemically stripped if burnout facilities are not available. Other methods of stripping may only be used with Utilities' approval.

Yes ☒ No ☐

2.6 CORE PREPARATION

EXHIBIT A SCOPE OF SERVICES

2.6.1 Cleaning

The stripped core shall be cleaned of all foreign material, such as insulation debris, and dried.

Yes ☒ No ☐

2.6.2 Iron Damage

All obvious iron damage, plus any problems indicated by the core loss tests, and significant frame damage, shall be reported to Utilities before proceeding further.

Yes ☒ No ☐

2.6.3 Method of Repair

The method of repair to damaged cores shall be discussed with Utilities and shall be chosen from the following:

- Grinding. Selective grinding with a small sharp power tool.
- Spray between laminates. Separating laminations and re-insulating with spray-on inter-laminar insulation.
- Mica between laminations. Inserting split mica between the laminations.
- Restacking. Restacking, with deburred laminations and new interlaminar insulation.

Yes ☒ No ☐

2.6.4 Core Loss Test

A final core loss test shall be done as described in sub-section 2.5.3.

2.7 REWINDS

Yes ☒ No ☐

2.7.1 Winding Details

The total cross sectional area of a turn, the turns per coil, the span and connection of the coils shall not be changed without authorization from Utilities.

Yes ☒ No ☐

2.7.2 Thermal Class

Class H or higher system materials shall be used throughout. Windings which were originally Class F or lower shall be rewound with Class H magnet wire and materials.

Yes ☒ No ☐

2.7.3 Sensors

Temperature sensing devices shall be replaced with devices comparable to those previously used.

Yes ☒ No ☐

2.7.4 Explosion Proof

If the temperature class of the insulation of an explosion-proof motor has been increased, a temperature sensor shall be installed to monitor and limit the motor surface temperature to the original maximum external temperature. The motor shall be tagged with a warning to the operator that to maintain the hazardous area classification, the sensor must be connected to shut down the motor.

EXHIBIT A

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Yes ☒ No ☐

2.7.5 Insulation Materials

Insulation shall include, as a minimum, the following components:

- Turn insulation. Multiple build coating turn insulation of polyamide, polyimide or a combination of both over polyester, or equivalent;
- Slot Liner. Slot liner extending at least one-quarter inch past each end of the slot;
- Separator. Center strip or separator between the top and bottom coil sides in a slot;
- Wedge. A top piece to hold the coils in the slot (where needed, a bottom filling piece shall be used to make up any extra space in the slot); and,
- Phase Barriers. Phase barriers between end turns of different phases (these shall be trimmed to permit clear airflow).

Yes ☒ No ☐

2.7.6 End Turns

The end turns shall be fully compacted so that there are no loose wires. Both sets of end turns, plus leads and jumpers, shall be laced tightly together so that each coil is tied securely to the two adjacent coils.

Yes ☒ No ☐

2.7.7 Connections

All connections shall be brazed with materials that will not be subject to corrosion in the specified operating environment. They shall have no sharp edges and shall be insulated.

Yes ☒ No ☐

2.7.8 Winding Test

Before impregnation, the winding shall be tested to verify that there are no wrong connections or shorted turns. This will include a surge comparison test, a high potential test, and winding resistance test using a Baker D12000 Hi-Pot and a Baker DLRO Tester or equivalent. Voltage used shall be as indicated in EASA Recommended Practices for the Repair of Rotating Electrical Apparatus or other standards approved by Utilities. Any defects shall be corrected and retested before impregnating. Test results shall be recorded in the Repairer's Tracking Form.

Yes ☒ No ☐

2.7.9 Impregnation

The rewound stator shall be impregnated in one of the following ways:

Dip-and-Bake. Double dip-and-bake cycle using resin or varnish and a temperature controlled bake oven (baking times and temperatures shall be recorded in the Repairer's Tracking Form.)

Trickle. A trickle epoxy or polyester treatment where the resin is poured into the end turns and slots of a vertically inclined stator, which has been heated with controlled electric current to assist in curing the resin.

Yes ☒ No ☐

2.8 ROUTINE OVERHAULS

EXHIBIT A

SCOPE OF SERVICES

2.8.1 Testing

After dismantling, the following procedure shall be followed:

- Winding and cooling ducts shall be cleaned, dried and inspected.
- Winding insulation resistance shall be tested at 500 volts DC.
- The duration of the test shall be one minute. The minimum acceptable level after one minute, corrected to a 400C reference temperature per IEEE 43, is 20 megohms. Levels less than 20 megohms shall be discussed with Utilities.
- If satisfactory levels are not attained, the winding shall be re-cleaned and dried thoroughly at a temperature not exceeding 900C (1950F), and then retested.
- After successful insulation resistance to ground has been achieved, the winding shall be given a high potential or surge comparison test. Voltage level used shall be as indicated in EASA Recommended Practice for the Repair of Rotating Electrical Apparatus or other standards approved by Utilities.

Yes ☒ No ☐

2.8.2 Cleaning

The components, including the stator windings, shall be cleaned with hot water and a suitable detergent after heavy deposits of dirt and grease have been removed by scraping and wiping.

If necessary, brushes shall be used to clean small passages in components.

Solvents shall not be used to clean insulation, but may be used on mechanical components of the motor.

All components shall be thoroughly dried at a temperature less than 900C (1950F), for as long as it takes to remove all signs of moisture. For windings, this will be indicated by the insulation resistance stabilizing after some hours of drying.

Yes ☒ No ☐

2.8.3 Repairs

After satisfactory insulation resistance has been attained, all loose or damaged wedges, slot sticks, coil supports etc., shall be replaced or repaired.

The winding shall then be given a minimum of two dip-and-bakes using a Class II or higher- grade varnish. Immersion and baking times shall be sufficient to penetrate any cracks and give a sealed durable finish to the insulation. The repairer shall notify Utilities if a dip-and- bake is undesirable.

Yes ☒ No ☐

2.8.4 Other

The routine overhaul of other parts of the motor shall return the parts to good condition.

Yes ☒ No ☐

2.8.5 Reassembly

The assembly of the motor after overhaul is covered in sub-section 2.15.

Yes ☒ No ☐

2.9 ROTOR TEST AND REPAIR

2.9.1 Testing

EXHIBIT A

SCOPE OF SERVICES

All rotors shall be given a test for damaged bars, whether the motor is suspect in this area or not. This test shall apply a stable single-phase voltage to the stator of the assembled motor while the shaft is slowly turned through at least one revolution. Any fluctuations of stator current in excess of 3 percent shall be investigated further. Other methods may be used if the stator winding is faulty and it can be shown that they have a good record of detecting faults.

For motors where electrical or mechanical problems with the rotor are suspected, more sophisticated tests shall be used. These include one or more of the following:

- Growler tests;
- Current analysis or vibration analysis of a loaded motor;
- Physical examination;
- Ultrasonic examination of the bars and end rings; and,
- Core loss tests (axial current thorough shaft).

Yes ☒ No ☐

2.9.2 Fabricated Cage Repair

Since repair of squirrel cages can be expensive, no work shall be done in this area without Utilities' approval.

Yes ☒ No ☐

2.9.3 Cage Replacement

For cage replacement, the conductive, metallurgical and strength characteristics of both the bar and end ring materials shall be determined and duplicated. Since changing the rotor resistance or density has major effects on the motor performance, no change in these is permitted without Utilities' approval.

Any parts that are to be reused shall be cleaned and examined for defects.

Yes ☒ No ☐

2.9.4 Testing

After fabrication, the joints shall be examined and tested by ultrasonic or comparable means.

Yes ☒ No ☐

2.9.5 Balance

The rotor shall be dynamically balanced to the tolerances listed in sub-section 2.14 of these specifications.

Yes ☒ No ☐

2.9.6 Cast Rotor Repair

A defective cast cage shall not be repaired without prior authorization from Utilities.

The method of repair shall be to remove the old cage by chemical means, without damaging the laminations, followed by re-barring with extruded, aluminum bars and duplicate cast aluminum end rings to give the same cage resistance as before.

Yes ☒ No ☐

2.9.7 Iron Repairs

EXHIBIT A

SCOPE OF SERVICES

Because of the costs involved, this work shall not be done without prior approval from Utilities. If tests or observation indicate that the laminations have been damaged, they shall be repaired or replaced with new laminations. Care shall be taken to ensure a consistent air gap.

Yes ☒ No ☐

2.10 SHAFT REPAIR

2.10.1 General

If information on the Motor Repair Form or any tests indicates that there may be a shaft problem, it shall be tested and repaired or replaced. If there is any risk or uncertainty in the proposed repair method, this shall be discussed with Utilities prior to proceeding.

Yes ☒ No ☐

2.10.2 Requirements

When the work is completed, the shaft shall meet the following criteria:

- Total Indicated Runout. It shall be straight, with a Total Indicated Runout (TIR) when measured in V blocks, of no more than 0.051 mm (0.002 inch) for up to 41.3 mm (1.625 inch) shaft diameter and no more than 0.003 inch for larger diameters.
- No Cracks. The shaft shall have no cracks. If ultrasonic, magnetic particle, dye penetrant or other testing methods are needed to verify this; they shall be documented in repair records.
- Straightness. The shaft shall be straight, parallel and undamaged at the bearing areas. If any measurable but acceptable deviation from this is noted, it shall be documented in repair records.
- Journal Repairs. Make journal repairs by welding or plating, followed by machining and grinding, with fit as specified in section 2.11.4.
- Fit To Rotor. The shaft shall be a tight fit to the rotor iron. If there is looseness, the shaft shall be built up and turned for proper interference fit, or shall be replaced.
- Shaft Material. New shafts shall be machined from AISI Gr. C1045 hot rolled steel or better. For special applications, the service center shall consult with the manufacturer and report recommendations to Utilities.
- Tolerances. Shaft extension dimension tolerances shall be within the limits specified in NEMA MG-1, Motors and Generators sections.

Yes ☒ No ☐

2.11 ANTI-FRICTION BEARINGS

2.11.1 New Bearings

Anti-friction bearings shall always be replaced. New bearings shall be SKF brand, unless otherwise approved by Utilities. If the bearing type, size, sealing, shielding or configuration is changed, this shall be noted on a supplemental nameplate. If the original bearing race showed pitting from shaft current, the causes and remedy for this shall be discussed with Utilities.

Yes ☒ No ☐

2.11.2 Shielding, Sealing

If the method of shielding, sealing or lubricating is to be changed, it shall be approved by Utilities.

EXHIBIT A SCOPE OF SERVICES

Yes ☒ No ☐

2.11.3 Clearance

Unless otherwise specified by the manufacturer or Utilities, C3 clearance bearings shall be used for all bearings.

Yes ☒ No ☐

2.11.4 Tolerances

Fitting tolerances to the journals and housings shall be per manufacturer's specifications. Out of tolerance fits shall be restored. (Reference ANSI/ABMA Std. 7-1995 as a guide.)

Yes ☒ No ☐

2.11.5 Heating

The bearing shall be heated, without use of direct flame, to approximately 940C (2000F) to permit it to be slid easily onto the shaft up to the shoulder. Bearings with bores under 45mm may be press fit.

Yes ☒ No ☐

2.11.6 Grease

Greasable bearings shall be lubricated as specified in the EASA Recommended Practice for the Repair of Rotating Electrical Apparatus or other standards approved by Utilities.

Lubrication shall be in accordance with the motor manufacturer's recommendations if available. Otherwise fill the cavity to 1/3 capacity. The lubricant shall be compatible with both Utilities' lubricant and the lubricant packed by the bearing manufacturer.

Yes ☒ No ☐

2.11.7 Insulated Bearings

Insulated bearing resistance shall be at least 10 megohms. Voltage applied from the megohmmeter should not exceed 500 VDC. Alternately a 115VAC test lamp may be used. No light should be visible from the lamp filament. (Reference IEEE 112-1996, section 9.4.3, or EASA AR100-1998)

Yes ☒ No ☐

2.12 End Brackets

2.12.1 Requirements

End brackets shall fit snugly to the stator frame. Worn dowel holes and rabbet fits shall be repaired.

Yes ☒ No ☐

2.12.2 Tolerances

See section 2.11.4 for the fit of the outer diameter of anti-friction bearings to housings.

Yes ☒ No ☐

2.12.3 Repairs

EXHIBIT A

SCOPE OF SERVICES

Repairs to end bracket-bearing housings shall be by building up the metal and machining to size. Welding, plating and sleeving are the accepted methods.

Epoxies and other compounds shall not be used for locking bearings.

Yes X No _____

2.13 OTHER DEVICES

2.13.1 Fans

Fans shall be checked for cracks and fit to the shaft or rotor.

Fans shall be firmly fixed to the shaft or rotor by the original factory method, unless there has been corrosion between dissimilar metals, in which case a new method shall be proposed to Utilities. Welding to the shaft is not permitted.

Repairs to fans shall only be done after discussion with Utilities.

New fans shall be as supplied by the original manufacturer if available.

Fans used in motors for use in hazardous locations shall be made of material that will not cause sparking; either by impact or by build-up of static electricity.

Yes X No _____

2.13.2 Temperature Sensors

Temperature sensors shall be installed in the motor as originally found or as otherwise specified by Utilities.

- Bearing. Bearing sensors shall be of the same type as those removed and shall be located to sense, as nearly as possible, the highest bearing temperature. If the original bearing sensor was insulated, the replacement shall also be insulated.

- Winding. Sensor type shall be the same as the original and will usually be located in the end turns.

Yes X No _____

2.13.3 Leads

Leads shall be flexible and multi-stranded, and have at least the same cross sectional area as the original leads. Temperature class must be the same as original or better.

Main power and accessory leads shall be indelibly marked using the same marking systems as the incoming motor. If this is illegible, then the system described in NEMA MG-1, Motors and Generators, Section 2 shall be used and a notice describing the system attached to the terminal box. Every effort shall be made to keep the original direction of rotation.

Lugs, if used, shall be suited for the application and have all cable strands in the lug. No cable strands may be cut off or bent back to facilitate insertion in the lug.

If crimp lugs are used, the correct make and style of die shall be used for the particular lug, and the correct compression applied.

Yes X No _____

2.13.4 Terminal Boxes

Terminal boxes shall be returned to original condition. In particular, the following items must be confirmed.

- Missing bolts and gaskets for both the cover and the motor-to-box joint shall be replaced.
- On motors certified for hazardous environments, the junction boxes shall be sealed off from the main body of the motor by a sealing compound approved by UL for this application.

EXHIBIT A

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- Damaged flanges shall be repaired. No paint or gaskets shall be left on the flanges of boxes for explosion-proof motors.

Yes ☒ No ☐

2.13.5 Space Heaters

Space heaters shall be tested for insulation resistance for one minute at 500 volts. A 10- megohm minimum resistance is acceptable.

They shall be tested for correct functioning.

Yes ☒ No ☐

2.13.6 Vibration Sensors

Vibration sensors shall be replaced in their original locations.

Yes ☒ No ☐

2.14 Balancing

The motor rotor shall be dynamically balanced in a balance stand before assembly of the motor. An IRD 5000 pound dynamic balancer or equal will be used for every motor repair and recorded on repairer's tracking card. Balance criteria include the following:

- Half key. It shall be balanced with a half key in the keyway.
- Tolerance G2.5 (ISO 1940-1). Generally, the permitted total imbalance is $15W/N/2 = \text{oz in/plane}$ where W is weight of rotor in pounds and N is operating speed in RPM. ($426 W/N/2 \text{ gin, in/plane}$)
- Tolerance G1.0 (ISO 1940-1). Two Pole rotors should be balanced to $6W/n/2 = \text{oz.in./plane}$. ($170.4 W/n/2 \text{ gin, in/plane}$)
- Material removal. If material is removed, structural integrity and fan capacity shall be maintained.
- Added material. Added material shall be able to withstand the centrifugal forces and be positioned either in the manufacturer's designated positions and locked in place, or positioned in a location where centrifugal force will tend to keep the material in place. Weights may be attached to metallic parts only.

Yes ☒ No ☐

2.15 REASSEMBLY

The assembly of the motor is the reverse of the disassembly process and the following points shall be observed:

- Match marks shall line up.
- On reinsertion of the rotor, take care not to damage the journals or the stator windings. Cranes, slings and extension pipes shall be used on heavy rotors. Check axial alignment of stator and rotor cores.
- Dowels and fitted bolts shall go back into the same holes that they came from.
- Where they can be measured, all air gaps shall be within 10 percent of the average.
- On motors with insulated bearings, the insulation shall be checked and noted. (See 2.11.7)
- On vertical motors, the lift on the shaft shall be the same as the original manufacturer's setting, unless Utilities and the repairer agree that a modified setting would give better performance.
- Motors for use in hazardous environments shall have all the explosion-proof features maintained and verified in accord with UL674.

Yes ☒ No ☐

EXHIBIT A

SCOPE OF SERVICES

2.16 FINAL TESTS

2.16.1 Insulation

Prior to running, the motor shall be given an insulation resistance test to ground in the following manner: For rewound motors, a DC high potential test shall be conducted at 1700 VDC for motors to be powered by less than 250VAC service voltage. Motors to be powered between 250VAC and 600VAC service voltage shall be tested at 1700VDC plus 3.4 times the machine's voltage rating, e.g. 3264VDC for a 460VAC machine. Readings corrected to 400C, which are less than 20 megohms, shall be discussed with Utilities. Vendor will own and maintain a Baker D12000 Hi-Pot Tester or equivalent to perform these tests and shall print out results and attach to each job tracker.

Yes ☒ No ☐

2.16.2 Running Test

After the insulation tests, the motor shall be run at no load at full terminal voltage, with either a half key or a half coupling, on the shaft. If the motor uses an external oil supply and removal system in normal use, a similar system shall be arranged for the test. The test shall determine that:

- No Load Amps. No load current unbalance at balanced rated voltage shall be less than 2 percent.
- Vibration. Horizontal, vertical and axial readings shall be taken at each bearing and results recorded for Utilities' review. Repairer shall record vibration of motor with motor bolted down to an isolated test stand installed in repairers shop for accurate readings.
- Temperature Rise. Temperature rise after levels stabilize shall be within normal limits on the frame and bearings.
- Shipment. At the completion of the test, the motor shall be painted as specified by the Utilities, and prepared for shipment. Any lubricant and coolant inlets and outlets shall be plugged and masked before painting and shipping. Any special precautions or preparations that should be noted before powering the motor shall be indicated on a tag.
- Testing of all motors shall be done with a Hubbell Hipotronics Motor Tester or equivalent and be capable of printing out no-load running amps, voltage, vibration, and bearing temperature for each motor repair. Tester shall be able to run AC motors up to 4160-volts and DC up to 600-volts.

Yes ☒ No ☐

3. Quality Control

3.1 MEASURING INSTRUMENTS

3.1.1 Calibration

All measuring instruments shall be calibrated regularly. The calibration records shall be available for Utilities' inspection. Minimum frequency of calibration shall be annually, except:

- Insulation Testers. Insulation resistance testers—every six months to a known resistance;
- Dimension Meters. Micrometers, vernier calipers and other dimension measuring devices—every six months against a minimum grade AA gauge block set; and,
- Bore Gauges. Bore gauges shall be calibrated to a certified standard before and after each use.

Yes ☒ No ☐

3.1.2 Storage

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All measuring equipment shall be stored in a clean dry environment.

Yes ☒ No ☐

3.2 MATERIALS

3.2.1 Anti-Friction Bearings

Anti-friction bearings shall be replaced with new SKF brand or equal, upon authorization from Utilities department. Bearings shall be stored in their factory packaging in a clean, dry, location. The location shall be isolated from any vibration strong enough to be felt by hand.

Yes ☒ No ☐

3.2.2 Solid Insulation

Insulating materials such as slot liners, tapes and phase insulation shall be used and shall meet or exceed the temperature class H rating and shall be compatible with the resins used.

Specifications for the materials shall be obtained from the material supplier and kept for checking their suitability for the application.

Yes ☒ No ☐

3.2.3 Resins and Varnishes

The manufacturer's material specifications for resins and varnishes shall be kept on file, to permit checking for correct storage, handling and usage.

A sample shall have been taken and analyzed to be satisfactory within three months of its being used on a motor.

Yes ☒ No ☐

3.2.4 Other Materials

Other materials shall be new and of good quality. In particular the following shall be confirmed:

- Lead Wires. Lead wires shall be multi-stranded and flexible with insulation meeting or exceeding the temperature and voltage class of the motor.
- Magnet Wire. Magnet wire for random-wound motors shall be compatible with the other insulation system components and shall be insulated with a polyamide, polyimide or a combination of both, over a polyester base coat, or equivalent. Any wire damaged in storage or working shall be replaced. The manufacturer's specifications for the insulation shall be kept on file for reference. Inverter grade wire rated 1600-volts shall be used on all motors regardless if the motor is run off of a variable frequency drive or not.

Yes ☒ No ☐

3.3 TESTS AND INSPECTION DURING WORK

3.3.1 Records

Records shall be kept of all tests and inspections carried out during the work. Signed copies of these records shall be shipped in original form, at the same time as the motor, to the designated contact person. Vendor shall keep all records for a period of not less than 3 years from date of repair.

Yes ☒ No ☐

EXHIBIT A SCOPE OF SERVICES

3.3.2 Access

Lee County Personnel shall have access to the repair facilities at all times that work is being done, for the purposes of checking progress and inspecting the work. Due to emergency response time and the need for shop inspections, vendor's repair facility shall be no more than 90 miles from Detar Warehouse at 5180 Tice Street, Fort Myers, FL. NO EXEMPTIONS.

Yes ☒ No ☐

3.4 FINAL INSPECTION AND TEST

For all motors over 100 HP, or when Utilities specifies, Utilities shall be informed when the final inspection and testing of the motor is to take place. Utilities shall have the right to be present for tests on any motors. In emergency cases, tests will not be held up waiting for Utilities representatives, but every effort shall be made to keep Utilities informed so that they can be present if possible.

All final inspection and test results shall be sent, in their original form, to the designated contact person

Yes ☒ No ☐

4. Motor Repair Form

<i>Repairer:</i>			<i>Date:</i>	
<i>Motor</i>	<i>Facility</i>	<i>Dept.</i>	<i>Process</i>	<i>Description</i>
<i>Designation:</i>				
<i>Manufacturer:</i>	<i>Type</i>	<i>Speed:</i>	<i>Power:</i>	<i>Frame:</i>
<i>Volts:</i>	<i>Ampere:</i>	<i>Rep</i>	<i>ings:</i>	<i>Lubricant Grade:</i>
<i>Serial #:</i>	<i>by (</i>	<i>face w/bearing</i>	<i>mfg):</i>	
<i>Other:</i>				
<i>Service:</i>			<i>Powered by ASD</i>	<i>Contamination</i>
<i>Explain:</i>			<i>High Altitude</i>	<i>High Ambient Temp</i>
<i>Reason sent for repair:</i>				

<i>Required work:</i>	
<i>Past problems with machine:</i>	
<i>Missing parts:</i>	
<i>Urgency: (check one)</i> Rush, full O.T. Rush, limited O.T. ASAP, no O.T. Routine (specify time) Hold parts if required	<i>Cost limitations:</i> Contact with price before work Go ahead, advise price Other
<i>Special instructions</i>	
<i>Contact:</i>	<i>Phone:</i>
<i>Reference:</i>	

EXHIBIT A SCOPE OF SERVICES



Procurement Management Department
1500 Monroe Street 4th Floor
Fort Myers, FL 33901
Main Line: (239) 533-8881
Fax Line: (239) 485-8383
www.leegov.com/procurement

Posted Date: June 12, 2018

Solicitation No.: B180244GWT

Solicitation Name: Annual Electric Motor Repair and Replacement Services

Subject: Addendum Number 1

The following represents clarification, additions, deletions, and/or modifications to the above referenced bid. This addendum shall hereafter be regarded as part of the solicitation. Items not referenced herein remain unchanged, including the response date. Words, phrases or sentences with a strikethrough represent deletions to the original solicitation. Underlined words and bolded, phrases or sentences represent additions to the original solicitation.

1. Bid Opening Date Change From: June 18, 2018 at 2:30 P.M.
To: June 20, 2018 at 2:30 P.M.

2. Questions

1.	What is the estimated annual budget?
Answer	Please see section 13 Confidentiality, sub section 13.3 in the solicitation in regards to the County's policy in providing the estimated annual budget.
2.	Are you going to require the secondary vendor to always keep a stock of motors?
Answer	No.
3.	Will vendors have provide the same exact IRD data pack 15 or can they provide and equivalent?
Answer	The vendor can provide an equivalent as long as the equivalent meets the requirements and standards of an IRD data pack 15.
4.	May I see the previous bid tabulation?
Answer	Yes. The previous bid tabulation is on the Lee County website under the procurement department's annual bids. Under annual bids, there is a project labeled B-130513- Electric Motor Repair and Replacement Services and inside that project, you will see the previous bid tabulation.
5.	Are the previous year's invoices available?


EXHIBIT A SCOPE OF SERVICES

Answer	Visit the Lee County Website main page and select the Public Records Request Tab. The Public Records Request Tab will give you the information needed to request the previous year's invoices.
6.	What are the exact size fractional motors you are requesting?
Answer	¼ HP to 500 HP.
7.	Are these fractional motors all 460-volts? Some Fractional motors are not rated 460-volts, TEFC.
Answer	No.
8.	Are all the motors three phase? Small fractional motors are single phase only.
Answer	No.
9.	Are all the motors T-frame motors? Fractional motors are not rated as T-frame motors.
Answer	No.
10.	Are all motors horizontal motors?
Answer	No.
11.	You mention all the motors must be high efficiency motors. Can you provide what the minimum efficiency rating that each motor needs to be?
Answer	Motors are to be VFD rated inverter duty.
12.	Can the primary vendor utilize their manufacturer's warehouse in Tampa to stock all these motors and more? Why does a motor shop have to have these motors sitting in inventory when they are all stocked in Tampa with 24/7 access.
Answer	No, common usage motors must be stocked by the vendor; however, proprietary motors do not need to be stocked and can be stocked at the manufacturer's warehouse.
13.	How will Lee County be awarding the contract?
Answer	Lee County will be awarding to a Primary and Secondary vendor.

BIDDER/PROPOSER IS ADVISED, YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS ADDENDUM WHEN SUBMITTING A BID/PROPOSAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE BIDDER/PROPOSER BEING CONSIDERED NON-RESPONSIVE.

**EXHIBIT A
SCOPE OF SERVICES**

ALL OTHER TERMS AND CONDITIONS OF THE SOLICITATION DOCUMENTS ARE
AND SHALL REMAIN THE SAME.



Procurement Analyst
Lee County Procurement Management

**EXHIBIT B
FEE SCHEDULE**

Hourly Rates - Personnel Type - One (1) Hour Response Time	
Classification	Hourly Rate
Inhouse Shop Technicians	\$30.00/hr.
Machinists, Lathe Operators	\$28.00/hr.
Field Service Technicians	\$10.00/hr.
Welder	\$10.00/hr.
Hourly Rates - Equipment and Crew Type - One (1) Hour Response Time	
Item/Classification	Hourly Rate
Crane - 20 Ton with 75-Foot Reach	\$85.00/hr.
Two Man Crane Crew	\$40.00/hr.
Markups	
Repair Components	12% Markup
New Equipment	10% Markup
Miscellaneous Items: e.g. Overnight Freight on Special Parts, Consumables, etc.	Cost Plus a 0% Markup
Overtime Hourly Rates - Personnel Type	
Classification	Hourly Rate
Inhouse Shop Technicians	\$45.00/hr.
Machinists, Lathe Operators	\$40.00/hr.
Field Service Technicians	\$15.00/hr.
Welder	\$15.00/hr.
Overtime Hourly Rates - Equipment and Crew Type	
Item/Classification	Hourly Rate
Crane - 20 Ton with 75-Foot Reach	\$85.00/hr.
Two Man Crane Crew	\$60.00/hr.
Hourly Rate for Specialty Service Classification	
Classification	Hourly Rate
Laser Alignment, Vibration Analysis or Other Similar Specialty Services	\$150.00/hr.

EXHIBIT C INSURANCE REQUIREMENTS



Lee County Insurance Requirements

INSURANCE GUIDE

Minimum Insurance Requirements: *Risk Management in no way represents that the insurance required is sufficient or adequate to protect the vendors' interest or liabilities. The following are the required minimums the vendor must maintain throughout the duration of this contract. The County reserves the right to request additional documentation regarding insurance provided*

- a. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and completed operations, independent contractors, contractual liability exposures with minimum limits of:

\$1,000,000 per occurrence
\$2,000,000 general aggregate
\$1,000,000 products and completed operations
\$1,000,000 personal and advertising injury

- b. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$1,000,000 combined single limit (CSL)
\$500,000 bodily injury per person
\$1,000,000 bodily injury per accident
\$500,000 property damage per accident

- c. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Workers Compensation exemptions may be accepted with written proof of the State of Florida's approval of such exemption. Employers' liability will have minimum limits of:

\$500,000 per accident
\$500,000 disease limit
\$500,000 disease – policy limit

*The required minimum limit of liability shown in a. and b. may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."

EXHIBIT C INSURANCE REQUIREMENTS

Verification of Coverage:

1. Coverage shall be in place prior to the commencement of any work and throughout the duration of the contract. A certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

- a. The certificate holder shall read as follows:

Lee County Board of County Commissioners
P.O. Box 398
Fort Myers, Florida 33902

- b. *"Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials"* will be named as an "Additional Insured" on the General Liability policy, including Products and Completed Operations coverage.

Special Requirements:

1. An appropriate "Indemnification" clause shall be made a provision of the contract.
2. It is the responsibility of the general contractor to insure that all subcontractors comply with all insurance requirements.

End of Insurance Guide Section