

ARLINGTON COUNTY, VIRGINIA  
OFFICE OF THE PURCHASING AGENT  
2100 CLARENDON BOULEVARD, SUITE 500  
ARLINGTON, VIRGINIA 22201

CONTRACT AWARD COVERPAGE

<b>TO:</b> ANLAC, LLC DBA ALEXANDRIA ARMATURE WORKS 3025 COLVIN STREET ALEXANDRIA, VIRGINIA 22314	<b>DATE ISSUED:</b> <b>CONTRACT NO:</b> <b>CONTRACT TITLE:</b>	<u>OCTOBER 15, 2020</u> <u>20-213-ITB-1</u> <u>NEW ELECTRIC MOTOR PARTS AND SERVICES (PRIMARY CONTRACTOR)</u>
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**THIS IS A NOTICE OF AWARD OF CONTRACT AND NOT AN ORDER. NO WORK IS AUTHORIZED UNTIL THE VENDOR RECEIVES A VALID COUNTY PURCHASE ORDER ENCUMBERING CONTRACT FUNDS.**

The contract documents consist of the terms and conditions of AGREEMENT No. 20-213-ITB-1, including any attachments or amendments thereto.

**EFFECTIVE DATE:** OCTOBER 15, 2020

**EXPIRES:** OCTOBER 14, 2022

**RENEWALS:** THREE (3) ONE (1) YEAR RENEWAL OPTIONS FROM OCTOBER 15, 2022 TO OCTOBER 14, 2025

**COMMODITY CODE(S):** 92961

**LIVING WAGE:** N

**ATTACHMENTS:**

AGREEMENT No. 20-213-ITB-1

**EMPLOYEES NOT TO BENEFIT:**

**NO COUNTY EMPLOYEE SHALL RECEIVE ANY SHARE OR BENEFIT OF THIS CONTRACT NOT AVAILABLE TO THE GENERAL PUBLIC.**

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**VENDOR CONTACT:** YVONNE BOYSEN

**VENDOR TEL. NO.:**

(703) 370-3500

**EMAIL ADDRESS:** [YVONNE@AAWVA.COM](mailto:YVONNE@AAWVA.COM)

**COUNTY CONTACT:** IVAN COLLAZO, DES, WPCB

**COUNTY TEL. NO.:**

(703) 228-6899

**COUNTY CONTACT EMAIL:** [ICOLLAZO@ARLINGTONVA.US](mailto:ICOLLAZO@ARLINGTONVA.US)

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**PURCHASING DIVISION AUTHORIZATION**

**Kaylin Schreiber** Title: Procurement Officer Date: 10/15/2020

**ARLINGTON COUNTY, VIRGINIA  
OFFICE OF THE PURCHASING AGENT  
SUITE 500, 2100 CLARENDON BOULEVARD  
ARLINGTON, VA 22201**

**AGREEMENT NO. 20-213-ITB-1**

THIS AGREEMENT is made, on October 15, 2020, between **Anlac, LLC dba Alexandria Armature Works (Primary Contractor)**, 3025 Colvin Street, Alexandria, Virginia 22314 ("Contractor"), a Virginia Limited Liability Company authorized to do business in the Commonwealth of Virginia, and the County Board of Arlington County, Virginia. The County and the Contractor, for the consideration hereinafter specified, agree as follows:

**1. CONTRACT DOCUMENTS**

The "Contract Documents" consist of:

- Agreement No. 20-213-ITB-1, and all modifications properly incorporated into the Agreement
- Exhibit A – Arlington County Invitation to Bid No. 20-213-ITB, including all solicitation exhibits, attachments, and addenda herein incorporated by reference
- Exhibit B – Scope of Work
- Exhibit C – Price Bid of Contractor

The Contract Documents set forth the entire agreement between the County and the Contractor. The County and the Contractor agree that no representative or agent of either party has made any representation or promise with respect to the parties' agreement that is not contained in the Contract Documents. The Contract Documents may be referred to below as the "Contract" or the "Agreement".

**2. SCOPE OF WORK**

The Contractor agrees to provide the goods and services described in the Contract Documents (the "Work"), more particularly described in the Specifications included with the Invitation to Bid. The primary purpose of the Work is to provide new electric motor parts and service. It will be the Contractor's responsibility, at its sole cost, to provide the specific goods set forth in the Contract Documents and sufficient goods to fulfill the purposes of the Work. Nothing in the Contract Documents limits the Contractor's responsibility to manage the details and execution of the Work.

**3. PROJECT OFFICER**

The performance of the Contractor is subject to the review and approval of the County Project Officer, who will be appointed by the Director of the Arlington County department or agency requesting the Work under this Contract.

**4. CONTRACT TERM**

Time is of the essence. The Work will commence on October 15, 2020 and must be completed no later than October 14, 2022 ("Initial Contract Term"), subject to any modifications provided in the Contract Documents. Upon satisfactory performance by the Contractor the County may, through issuance of a unilateral Notice of Award, authorize continuation of the Agreement under the same contract prices for not more than three (3) additional 12-month periods, from October 15, 2022 to October 14, 2025 (each a

"Subsequent Contract Term"). The Initial Contract Term and any Subsequent Contract Term(s) are together the "Contract Term".

**5. CONTRACT PRICING WITH OPTIONAL PRICE ADJUSTMENTS**

The Contract Amount/unit price(s) will remain firm until October 14, 2022 ("Price Adjustment Date"). To request a price adjustment, the Contractor or the County must submit a written request to the other party not less than 90 days before the Price Adjustment Date. Adjustments to the Contract Amount/unit price(s) will not exceed the percentage of change in the U.S. Department of Labor Consumer Price Index, All Items, Unadjusted, Urban Areas ("CPI-U") for the 12-month period preceding the Price Adjustment date of each year of the Contract.

Any Contract Amount/unit price(s) that result from this provision will become effective the day after the Price Adjustment Date and will be binding for 12 months. The new Price Adjustment Date will be 12 months after the price adjustment.

If the Contractor and the County have not agreed on a requested adjustment by 30 days before the Price Adjustment Date, the County may terminate the Contract, whether or not the County has previously elected to extend the Contract's term.

**6. PAYMENT**

The Contractor must submit invoices to the County's Project Officer, who will either approve the invoice or require corrections. Each invoice must certify that the invoice submitted is a true and accurate accounting of the work performed and goods and/or services provided and must be signed and attested to by the Contractor or authorized designee. The County will pay the Contractor within 45 days after receipt of an invoice for completed work or goods that is reasonable and allocable to the Contract and that has been performed to the satisfaction of the Project Officer. The number of the County Purchase Order pursuant to which goods and services have been delivered or performed must appear on all invoices.

**7. PAYMENT OF SUBCONTRACTORS**

The Contractor is obligated to take one of the two following actions within seven days after receipt of payment by the County for work performed by any subcontractor under this Contract:

- a. Pay the subcontractor for the proportionate share of the total payment received from the County attributable to the work performed by the subcontractor under this Contract; or
- b. Notify the County and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's payment, with the reason for nonpayment.

The Contractor is obligated to pay interest to the subcontractor on all amounts owed by the Contractor to the subcontractor that remain unpaid after seven days following receipt by the Contractor of payment from the County for work performed by the subcontractor under this Contract, except for amounts withheld as allowed in subsection b., above. Unless otherwise provided under the terms of this Contract, interest will accrue at the rate of 1% per month.

The Contractor must include in each of its subcontracts, if any are permitted, a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

The Contractor's obligation to pay an interest charge to a subcontractor pursuant to this section may not be construed to be an obligation of the County. A Contract modification may not be made for the purpose of providing reimbursement for such interest charge. A cost reimbursement claim may not include any amount for reimbursement for such interest charge.

**8. NO WAIVER OF RIGHTS**

The County's approval or acceptance of or payment for any goods under this Contract will not waive any rights or causes of action arising out of the Contract.

**9. NON-APPROPRIATION**

All payments by the County to the Contractor pursuant to this Contract are subject to the availability of an annual appropriation for this purpose by the County Board of Arlington County, Virginia ("Board"). In the event that the Board does not appropriate funds for the goods provided under this Contract, the County will terminate the Contract, without termination charge or other liability to the County, on the last day of the fiscal year or when the previous appropriation has been spent, whichever event occurs first.

**10. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR**

This Contract does not obligate the County to purchase a specific quantity of items during the Contract Term. Any quantities that are included in the Contract Documents are the present expectations of the County for the period of the Contract; and the County is under no obligation to buy that or any amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods than the estimated annual quantities, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates in the Contract.

The County does not guarantee that the Contractor will be the exclusive provider of the goods covered by this Contract. The items covered by this Contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items through those contract(s).

**11. COUNTY PURCHASE ORDER REQUIREMENT**

County purchases are authorized only if the County issues a Purchase Order in advance of the transaction, indicating that the ordering County agency has sufficient funds available to pay for the purchase. If the Contractor provides goods without a signed County Purchase Order, it does so at its own risk and expense. The County will not be liable for payment for any purchases made by its employees that are not authorized by the County Purchasing Agent.

**12. DELIVERY**

All goods are purchased F.O.B. destination in Arlington County as described in the specifications. Transportation, handling and all related charges are included in the unit prices or discounts that the Contractor submitted with its bid.

**13. WARRANTY**

The Contractor guarantees against and will correct at its expense factory defects that occur during the manufacturer's standard warranty period. The Contractor will provide all manufacturers' warranties at the time of delivery.

**14. INSPECTION, ACCEPTANCE, TITLE, AND RISK OF LOSS**

The County will inspect all materials at the delivery location within ten days of delivery and may test the goods at its discretion before accepting them.

The Contractor warrants that it has good title to, and will require all subcontractors to warrant that they have good title to, all delivered goods.

The Contractor bears title and risk of loss or damage to all delivered goods until the County accepts them.

Neither the Contractor nor any subcontractor may retain any interest in the goods after the County accepts them.

**15. DAMAGE TO PROPERTY**

Any damage, as determined by the Project Officer, to the real or personal property, whether owned by the County or others, resulting from the Work performed under this Contract shall be timely repaired or replaced to the County's satisfaction at the Contractor's expense. The County will perform the repairs unless the County agrees that such repairs will be made by the Contractor. Any such Contractor repairs will be made within ten (10) days of the date of damage to the satisfaction of the County. All costs of the repair performed by the County shall be deducted from the Contractor's final payment.

**16. DISPOSAL OF PACKING MATERIALS, TRASH, AND DEBRIS**

The Contractor must, at its expense and without using any County waste containers, immediately remove and legally dispose of off-site all packing materials, trash and debris ("Waste"). Otherwise, the County will contract a third party to dispose of the Waste and will deduct the expense from the final payment to the Contractor.

The County will deduct from the final payment the expense to repair any damage to County-owned or controlled property that the Contractor or its agents cause, unless the County agrees that the Contractor can make the repairs, in which case the Contractor must make the repairs at its expense within ten days of the damage and to the satisfaction of the County.

**17. OSHA REQUIREMENTS**

The Contractor certifies that all material supplied or used under this Contract meets all federal and state Occupational Safety and Health Administration ("OSHA") requirements. If the material does not meet the OSHA requirements, the Contractor will bear all costs necessary to bring the material into compliance.

**18. HAZARDOUS MATERIALS**

The Contractor must comply with all federal, state, and local laws governing the storage, transportation, and use of toxic and hazardous materials. The County is subject to the Hazard Communication Standard, 29 CFR § 1910.1200 ("Standard"). The Contractor will provide, no later than delivery or first use of the materials, Material Safety Data Sheets ("MSDS") for all hazardous materials supplied to the County or used in the performance of the Work. The Contractor will also ensure that all shipping and internal containers bear labels that meets the requirements of the Standard. The County may refuse shipments of hazardous materials that are not appropriately labeled or for which the Contractor has not timely provided MSDS. The Contractor must pay any expenses that it or the County incurs as a result of the County's refusal of goods under this section or rejection of MSDS.

**19. HAZARDOUS WASTE GENERATOR/HAZARDOUS WASTE DISPOSAL**

The County and the Contractor shall be listed as co-generators. The Contractor assumes all duties pertaining to the waste generator, including signing the Waste Shipment Record (“WSR”) and manifest. The Contractor shall supply the County Project Officer with the executed original Owner’s Copy of the WSR, as required by applicable regulatory agencies within thirty-five (35) days from the time the waste was accepted by the initial waste transporter, and prior to request for final payment. A separate WSR shall be submitted for each shipment to the disposal site.

Delayed Waste Shipment Records: The Contractor shall report in writing to the EPA Region III office within forty-five (45) days if an executed copy of the WSR is not received from the operator of the disposal site. The report to the EPA regional office shall include a copy of the original WSR and a cover letter signed by the Contractor stating the efforts taken to locate the hazardous waste shipment and the results of those efforts.

Temporary Hazardous Waste Storage Prohibited: The Contractor shall not temporarily store hazardous waste unless pre-approved by the County. If so approved, hazardous waste stored off-site in a temporary facility shall be monitored and records shall be kept on the number of containers, size, and weight. The Contractor shall inform the County when the hazardous waste is to be transported to the final disposal site. The County has the right to inspect the temporary site at any time. The Contractor shall submit copies of all relevant manifests, WSRs, and landfill receipts to the County Project Officer prior to the request for final payment. All paperwork shall be signed by the Contractor and disposal site operator as required.

**20. PROHIBITION AGAINST ASBESTOS-CONTAINING MATERIALS**

No goods, equipment or material that the Contractor or its subcontractor provides or installs may contain asbestos. The Contractor must remove any asbestos-containing goods, equipment and material at its sole cost, which includes worker protection and legal disposal, and must reimburse the County for the replaced goods, equipment and material. The County may offset these costs and reimbursement against any amounts that it owes the Contractor.

**21. SAFETY**

The Contractor shall comply with, and ensure that the Contractor's employees and subcontractors comply with, all current applicable local, state and federal policies, regulations and standards relating to safety and health, including, by way of illustration and not limitation, the standards of the Virginia Occupational Safety and Health program of the Department of Labor and Industry for General Industry and for the Construction Industry, the Federal Environmental Protection Agency standards and the applicable standards of the Virginia Department of Environmental Quality.

The Contractor shall provide, or cause to be provided, all technical expertise, qualified personnel, equipment, tools and material to safely accomplish the work specified to be performed by the Contractor and subcontractor(s).

The Contractor shall identify to the County Project Officer at least one on-site person who is the Contractor's competent, qualified, and authorized person on the worksite and who is, by training or experience, familiar with and trained in policies, regulations and standards applicable to the work being performed. The competent, qualified and authorized person must be capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, shall be capable of ensuring that applicable safety regulations are complied with, and shall have the authority and responsibility to take prompt corrective measures, which may include removal of the Contractor's personnel from the work site.

The Contractor shall provide to the County, at the County's request, a copy of the Contractor's written safety policies and safety procedures applicable to the scope of work. Failure to provide this information within seven (7) days of the County's request may result in cancellation of the contract.

**22. FAILURE TO DELIVER**

If the Contractor does not deliver the goods or services required by the Scope of Work, the County may procure the goods or services from other sources at the Contractor's expense, including purchase and administrative costs, and may offset the costs against any amount that the County owes the Contractor. The County must provide the Contractor written notice of the deficiency and may choose to provide an opportunity to cure. This remedy is in addition to the County's other remedies for the Contractor's failure to perform.

**23. UNSATISFACTORY WORK**

The Contractor must within 15 days of written notice from the County remove and replace, at its expense, any goods that the County rejects as unsatisfactory. Otherwise, the County may choose to remove or replace the rejected goods at the Contractor's expense. The County may offset the costs against any amounts that it owes the Contractor. The County may also decide not to remove or replace the unsatisfactory goods and instead to adjust the Contract Amount to account for the unsatisfactory performance. This paragraph applies throughout the Contract Term and any warranty or guarantee period.

**24. PROJECT STAFF**

The County has the right to reasonably reject staff or subcontractors whom the Contractor assigns to the Project. The Contractor must then provide replacement staff or subcontractors satisfactory to the County in a timely manner and at no additional cost to the County. The day-to-day supervision and control of the Contractor's employees and its subcontractors is the sole responsibility of the Contractor.

**25. SUPERVISION BY CONTRACTOR**

The Contractor shall at all times enforce strict discipline and good order among the employees and subcontractors performing under this Contract and shall not employ on the Work any person not reasonably proficient in the work assigned.

**26. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED**

During the performance of its work pursuant to this Contract:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age or disability or on any other basis prohibited by state law. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation will be deemed sufficient for meeting the requirements of this section.
- C. The Contractor will state in all solicitations or advertisements for employees that it places or causes to be placed that such Contractor is an Equal Opportunity Employer.

- D. The Contractor will comply with the provisions of the Americans with Disabilities Act of 1990 ("ADA"), which prohibits discrimination against individuals with disabilities in employment and mandates that disabled individuals be provided access to publicly and privately provided services and activities.
- E. The Contractor must include the provisions of the foregoing paragraphs in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

**27. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED**

In accordance with §2.2-4311.1 of the Code of Virginia, as amended, the Contractor must not during the performance of this Contract knowingly employ an unauthorized alien, as that term is defined in the federal Immigration Reform and Control Act of 1986.

**28. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR**

During the performance of this Contract, the Contractor must: (i) provide a drug-free workplace for its employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violating such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "workplace" means the site(s) for the performance of the work required by this Contract.

**29. TERMINATION**

The County may terminate this Contract at any time as follows: (1) for cause, if, as determined by the County, the Contractor is in breach or default or has failed to perform the Work satisfactorily; or (2) for the convenience of the County.

Upon receipt of a notice of termination, the Contractor must not place any further orders or subcontracts for materials, services or facilities; must terminate all vendors and subcontracts, except as are necessary for the completion of any portion of the Work that the County did not terminate; and must immediately deliver all documents related to the terminated Work to the County.

Any purchases that the Contractor makes after the notice of termination will be the sole responsibility of the Contractor, unless the County has approved the purchases in writing as necessary for completion of any portion of the Work that the County did not terminate.

If any court of competent jurisdiction finds a termination for cause by the County to be improper, then the termination will be deemed a termination for convenience.

A. TERMINATION FOR CAUSE, INCLUDING BREACH AND DEFAULT; CURE



1. Termination for Unsatisfactory Performance. If the County determines that the Contractor has failed to perform satisfactorily, then the County will give the Contractor written notice of such failure(s) and the opportunity to cure them within 15 days or any other period specified by the County ("Cure Period"). If the Contractor fails to cure within the Cure Period, the County may terminate the Contract for failure to provide satisfactory performance by providing written notice with a termination date. The Contractor must submit any request for termination costs, with all supporting documentation, to the County Project Officer within 30 days after the expiration of the Cure Period. The County may accept or reject the request for termination costs, in whole or in part, and may notify the Contractor of its decision within a reasonable time.

In the event of termination by the County for failure to perform satisfactorily, the Contractor must continue to provide its services as previously scheduled through the termination date, and the County must continue to pay all fees and charges incurred through the termination date.

2. Termination for Breach or Default. If the County terminates the Contract for default or breach of any Contract provision or condition, then the termination will be immediate after notice of termination to the Contractor (unless the County provides for an opportunity to cure), and the Contractor will not be permitted to seek termination costs.

Upon any termination pursuant to this section, the Contractor will be liable to the County for costs that the County must expend to complete the Work, including costs resulting from any related delays and from unsatisfactory or non-compliant work performed by the Contractor or its subcontractors. The County will deduct such costs from any amount due to the Contractor; or if the County does not owe the Contractor, the Contractor must promptly pay the costs within 15 days of a demand by the County. This section does not limit the County's recovery of any other damages to which it is entitled by law.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt the notice of the termination.

#### **B. TERMINATION FOR THE CONVENIENCE OF THE COUNTY**

The County may terminate this Contract in whole or in part whenever the Purchasing Agent determines that termination is in the County's best interest. The County will give the Contractor at least 15 days' notice in writing. The notice must specify the extent to which the Contract is terminated and the effective termination date. The Contractor will be entitled to termination costs, plus any other reasonable amounts that the parties might negotiate; but no amount will be allowed for anticipatory profits.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt of the notice of the termination.

#### **30. INDEMNIFICATION**

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless and indemnify the County and all of its elected and appointed officials, officers, current and former employees, agents, departments, agencies, boards and commissions (collectively the "County Indemnitees") from and against any and all claims made by third parties for any and all losses, damages,

injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability, demands or exposure resulting from, arising out of or in any way connected with the Contractor's acts or omissions, including the acts or omissions of its employees and/or subcontractors, in performance or nonperformance of the Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

### **31. INTELLECTUAL PROPERTY INDEMNIFICATION**

The Contractor warrants and guarantees that in providing services under this Contract neither the Contractor nor any subcontractor is infringing on the intellectual property rights (including, but not limited to, copyright, patent, mask and trademark) of third parties.

If the Contractor or any of its employees or subcontractors uses any design, device, work or material that is covered by patent or copyright, it is understood that the Contract Amount includes all royalties, licensing fees, and any other costs arising from such use in connection with the Work under this Contract.

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless, and indemnify the County Indemnitees, as defined above, from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability or exposure for infringement of or on account of any trademark, copyright, patented or unpatented invention, process or article manufactured or used in the performance of this Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

### **32. SEXUAL HARASSMENT POLICY**

If the Contractor employs more than five employees, the Contractor shall (i) provide annual training on the Contractor's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post the Contractor's sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that the Contractor owns or leases for business purposes and (b) the Contractor's employee handbook.

### **33. CONFIDENTIAL INFORMATION**

The Contractor and its employees, agents and subcontractors will hold as confidential all County information obtained under this Contract. Confidential information includes, but is not limited to, nonpublic personal information; personal health information (PHI); social security numbers; addresses; dates of birth; other contact information or medical information about a person; and information pertaining to products, operations, systems, customers, prospective customers, techniques, intentions, processes, plans and expertise. The Contractor must take reasonable measures to ensure that all of its employees, agents and subcontractors are informed of and abide by this requirement.

**34. ETHICS IN PUBLIC CONTRACTING**

This Contract incorporates by reference Article 9 of the Arlington County Purchasing Resolution, as well as all state and federal laws related to ethics, conflicts of interest or bribery, including the State and Local Government Conflict of Interests Act (Code of Virginia § 2.2-3100 et seq.), the Virginia Governmental Frauds Act (Code of Virginia § 18.2-498.1 et seq.) and Articles 2 and 3 of Chapter 10 of Title 18.2 of the Code of Virginia, as amended (§ 18.2-438 et seq.). The Contractor certifies that its bid was made without collusion or fraud; that it has not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor; and that it has not conferred on any public employee having official responsibility for this procurement any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

**35. COUNTY EMPLOYEES**

No Arlington County employee may share in any part of this Contract or receive any benefit from the Contract that is not available to the general public.

**36. FORCE MAJEURE**

Neither party will be held responsible for failure to perform the duties and responsibilities imposed by this Contract if such failure is due to a fire, riot, rebellion, natural disaster, war, act of terrorism or act of God that is beyond the control of the party and that makes performance impossible or illegal, unless otherwise specified in the Contract.

**37. AUTHORITY TO TRANSACT BUSINESS**

The Contractor must, pursuant to Code of Virginia § 2.2-4311.2, be and remain authorized to transact business in the Commonwealth of Virginia during the entire term of this Contract. Otherwise, the Contract is voidable at the sole option of and with no expense to the County.

**38. RELATION TO COUNTY**

The Contractor is an independent contractor, and neither the Contractor nor its employees or subcontractors will be considered employees, servants or agents of the County. The County will not be responsible for any negligence or other wrongdoing by the Contractor or its employees, servants or agents. The County will not withhold payments to the Contractor for any federal or state unemployment taxes, federal or state income taxes or Social Security tax or for any other benefits. The County will not provide to the Contractor any insurance coverage or other benefits, including workers' compensation.

**39. ANTITRUST**

The Contractor conveys, sells, assigns and transfers to the County all rights, title and interest in and to all causes of action under state or federal antitrust laws that the Contractor may have relating to this Contract.

**40. AUDIT**

The Contractor must retain all books, records and other documents related to this Contract for at least five years after the final payment and must allow the County or its authorized agents to examine the documents during this period and during the Contract Term. The Contractor must provide any requested documents to the County for examination within 15 days of the request, at the Contractor's expense. Should the County's examination reveal any overcharging by the Contractor, the Contractor must, within 30 days of County's request, reimburse the County for the overcharges and for the reasonable costs of the County's examination, including, but not limited to, the services of external audit firm and attorney's

fees; or the County may deduct the overcharges and examination costs from any amount that the County owes to the Contractor. If the Contractor wishes to destroy or dispose of any records related to this Contract (including confidential records to which the County does not have ready access) within five years after the final payment, the Contractor must give the County at least 30 days' notice and must not dispose of the documents if the County objects.

**41. ASSIGNMENT**

The Contractor may not assign, transfer, convey or otherwise dispose of any award or any of its rights, obligations or interests under this Contract without the prior written consent of the County.

**42. AMENDMENTS**

This Contract may not be modified except by written amendment executed by persons duly authorized to bind the Contractor and the County.

**43. ARLINGTON COUNTY PURCHASING RESOLUTION AND COUNTY POLICIES**

Nothing in this Contract waives any provision of the Arlington County Purchasing Resolution, which is incorporated herein by reference, or any applicable County policy.

**44. DISPUTE RESOLUTION**

All disputes arising under this Agreement or concerning its interpretation, whether involving law or fact and including but not limited to claims for additional work, compensation or time, and all claims for alleged breach of contract must be submitted in writing to the Project Officer as soon as the basis for the claim arises. In accordance with the Arlington County Purchasing Resolution, claims denied by the Project Officer may be submitted to the County Manager in writing no later than 60 days after the final payment. The time limit for a final written decision by the County Manager is 30 days. Procedures concerning contractual claims, disputes, administrative appeals and protests are contained in the Arlington County Purchasing Resolution. The Contractor must continue to work as scheduled pending a decision of the Project Officer, County Manager, County Board or a court of law.

**45. APPLICABLE LAW, FORUM, VENUE AND JURISDICTION**

This Contract is governed in all respects by the laws of the Commonwealth of Virginia; and the jurisdiction, forum and venue for any litigation concerning the Contract or the Work is in the Circuit Court for Arlington County, Virginia, and in no other court.

**46. ARBITRATION**

No claim arising under or related to this Contract may be subject to arbitration.

**47. NONEXCLUSIVITY OF REMEDIES**

All remedies available to the County under this Contract are cumulative, and no remedy will be exclusive of any other at law or in equity.

**48. NO WAIVER**

The failure to exercise a right provided for in this Contract will not be a subsequent waiver of the same right or of any other right.

**49. SEVERABILITY**

The sections, paragraphs, clauses, sentences, and phrases of this Contract are severable; and if any section, paragraph, clause, sentence or phrase of this Contract is declared invalid by a court of competent jurisdiction, the rest of the Contract will remain in effect.

**50. ATTORNEY'S FEES**

In the event that the County prevails in any legal action or proceeding brought by the County to enforce any provision of this Contract, the Contractor will pay the County's reasonable attorney's fees and expenses.

**51. SURVIVAL OF TERMS**

In addition to any statement that a specific term or paragraph survives the expiration or termination of this Contract, the following sections also survive: INDEMNIFICATION; INTELLECTUAL PROPERTY INDEMNIFICATION; RELATION TO COUNTY; AUDIT; WARRANTY; DISPUTE RESOLUTION; APPLICABLE LAW AND JURISDICTION; ATTORNEY'S FEES, AND CONFIDENTIAL INFORMATION

**52. HEADINGS**

The section headings in this Contract are inserted only for convenience and do not affect the substance of the Contract or limit the sections' scope.

**53. AMBIGUITIES**

The parties and their counsel have participated fully in the drafting of this Agreement; and any rule that ambiguities are to be resolved against the drafting party does not apply. The language in this Agreement is to be interpreted as to its plain meaning and not strictly for or against any party.

**54. NOTICES**

Unless otherwise provided in writing, all legal notices and other communications required by this Contract are deemed to have been given when either (a) delivered in person; (b) delivered by an agent, such as a delivery service; or (c) deposited in the United States mail, postage prepaid, certified or registered and addressed as follows:

**TO THE CONTRACTOR:**

Yvonne Boysen, Operation Manager  
Anlac, LLC dba Alexandria Armature Works  
3025 Colvin Street  
Alexandria, Virginia 22314  
Phone: (703) 370-3500  
Email: [yvonne@aawva.com](mailto:yvonne@aawva.com)

**TO THE COUNTY:**

Ivan Collazo, Project Officer  
Arlington County, Virginia  
3111 South Fern Street  
Arlington, Virginia 22202  
Phone: (703) 228-6899  
Email: [icollazo@arlingtonva.us](mailto:icollazo@arlingtonva.us)

AND

Sharon T. Lewis, LL.M, MPS, VCO, CPPB  
Purchasing Agent  
Arlington County, Virginia  
2100 Clarendon Boulevard, Suite 500  
Arlington, Virginia 22201  
Phone: (703) 228-3294  
Email: [slewis1@arlingtonva.us](mailto:slewis1@arlingtonva.us)

**TO COUNTY MANAGER'S OFFICE (FOR PROJECT CLAIMS):**

Mark Schwartz, County Manager  
Arlington County, Virginia  
2100 Clarendon Boulevard, Suite 318  
Arlington, Virginia 22201

**55. ARLINGTON COUNTY BUSINESS LICENSES**

The Contractor must comply with the provisions of Chapter 11 ("Licenses") of the Arlington County Code, if applicable. For information on the provisions of that Chapter and its applicability to this Contract, the Contractor must contact the Arlington County Business License Division, Office of the Commissioner of the Revenue, 2100 Clarendon Blvd., Suite 200, Arlington, Virginia, 22201, telephone number (703) 228-3060.

**56. NON-DISCRIMINATION NOTICE**

Arlington County does not discriminate against faith-based organizations.

**57. LIMITED ENGLISH PROFICIENCY**

The Contractor must comply with Executive Order 13166, Title VI of the Civil Rights Act of 1964 and make reasonable efforts to ensure that as part of the services that it provides, adequate communication services, including interpretation and translation, are available to persons who have limited English proficiency. If such services are not included in the Contract's scope of services and pricing, the Contractor will use a County-contracted service provider, and the County will pay the fees.

**58. ADA COMPLIANCE**

The Contractor is solely responsible for its compliance with the ADA and must defend and hold the County harmless from any expense or liability arising from the Contractor's non-compliance. The Contractor also must respond promptly to and cooperate fully with all inquiries from the U.S. Department of Labor.

The Contractor's responsibilities related to ADA compliance include, but are not limited to, the following:

- a. Access to Programs, Services and Facilities: The Contractor must ensure that its programs, services and facilities are accessible to persons with disabilities. If a particular facility or program is not accessible, the Contractor must provide equivalent services in an accessible alternate location or manner.
- b. Effective Communication: Upon request, the Contractor, must provide appropriate communication aids and services so that qualified persons with disabilities can participate equally in the Contractor's programs, services and activities. Communication aids and services can include, but are not limited to, qualified sign language interpreters, Braille documents and other

means of facilitating communications with people who have speech, hearing or vision impairments.

- c. Modifications to Policies and Procedures: The Contractor must modify its policies and procedures as necessary to ensure that people with disabilities have an equal opportunity to enjoy the Contractor's programs, services and activities. For example, individuals' service animals must be allowed in the Contractor's offices or facilities, even if pets are generally prohibited.
- d. No Extra Charges: The Contractor may not charge a person with a disability or any group of individuals with disabilities to cover the cost of providing aids or services or of reasonable modifications to policies and procedures.

#### **59. INSURANCE REQUIREMENTS**

Before beginning work under the Contract or any extension, the Contractor must provide to the County Purchasing Agent a Certificate of Insurance indicating that the Contractor has in force at a minimum the coverage below. The Contractor must maintain this coverage until the completion of the Contract or as otherwise stated in the Contract Documents. All required insurance coverage must be acquired from insurers that are authorized to do business in the Commonwealth of Virginia, with a rating of "A-" or better and a financial size of "Class VII" or better in the latest edition of the A.M. Best Co. Guides.

- a. Workers Compensation - Virginia statutory workers compensation (W/C) coverage, including Virginia benefits and employer's liability with limits of \$100,000/100,000/500,000. The County will not accept W/C coverage issued by the Injured Worker's Insurance Fund, Towson, MD.
- b. Commercial General Liability - \$1,000,000 per occurrence, with \$2,000,000 annual aggregate covering all premises and operations and including personal injury, completed operations, contractual liability, independent contractors, and products liability. The general aggregate limit must apply to this Contract. Evidence of contractual liability coverage must be typed on the certificate.
- c. Business Automobile Liability - \$1,000,000 combined single-limit (owned, non-owned and hired).
- d. Property Insurance - \$1,000,000 per occurrence.
- e. Property Insurance – Motor Cargo - \$1,000,000 per occurrence.
- f. Additional Insured – The County and its officers, elected and appointed officials, employees and agents must be named as additional insureds on all policies except workers compensation and automotive and professional liability; and the additional insured endorsement must be typed on the certificate.
- g. Cancellation - If there is a material change or reduction in or cancellation of any of the above coverages during the Contract Term, the Contractor must notify the Purchasing Agent immediately and must, with no lapse in coverage, obtain replacement coverage that is consistent with the terms of this Contract. Not having the required insurance throughout the Contract Term is grounds for termination of the Contract.

- h. Claims-Made Coverage - Any "claims made" policy must remain in force, or the Contractor must obtain an extended reporting endorsement, until the applicable statute of limitations for any claims has expired.
- i. Contract Identification - All insurance certificates must state this Contract's number and title.

The Contractor must disclose to the County the amount of any deductible or self-insurance component of any of the required policies. With the County's approval, the Contractor may satisfy its obligations under this section by self-insurance for all or any part of the insurance required, provided that the Contractor can demonstrate sufficient financial capacity. In order to do so, the Contractor must provide the County with its most recent actuarial report and a copy of its self-insurance resolution.

The County may request additional information to determine if the Contractor has the financial capacity to meet its obligations under a deductible and may require a lower deductible; that funds equal to the deductible be placed in escrow; a certificate of self-insurance; collateral; or another mechanism to guarantee the amount of the deductible and ensure protection for the County.

The County's acceptance or approval of any insurance will not relieve the Contractor from any liability or obligation imposed by the Contract Documents.

The Contractor is responsible for the Work and for all materials, tools, equipment, appliances and property used in connection with the Work. The Contractor assumes all risks for direct and indirect damage or injury to the property used or persons employed in connection with the Work and for of all damage or injury to any person or property, wherever located, resulting from any action, omission, commission or operation under the Contract or in connection in any way whatsoever with the Work. The Contractor's insurance shall be the primary non-contributory insurance for any work performed under this Contract.

The Contractor is as fully responsible to the County for the acts and omissions of its subcontractors and of persons employed by them as it is for acts and omissions of persons whom the Contractor employs directly.

**60. MATERIAL CHANGES**

The Contractor shall notify Purchasing Agent within seven days of any material changes in its operation that relate to any matter attested regarding certifications on its bid form.

**61. COUNTERPARTS**

This Agreement may be executed in one or more counterparts and all of such counterparts shall together constitute one and the same instrument. Original signatures transmitted and received via facsimile or other electronic transmission (e.g., PDF or similar format) are true and valid signatures for all purposes hereunder and shall be effective as delivery of a manually executed original counterpart.

WITNESS these signatures:

THE COUNTY BOARD OF ARLINGTON  
COUNTY, VIRGINIA

ANLAC, LLC DBA ALEXANDRIA ARMATURE  
WORKS

AUTHORIZED

AUTHORIZED



DocuSigned by:  
*Kaylin Schreiber*  
SIGNATURE: \_\_\_\_\_  
2513E5602A3A4DE...

NAME AND TITLE: KAYLIN SCHREIBER  
PROCUREMENT OFFICER

DATE: 10/15/2020  
\_\_\_\_\_

DocuSigned by:  
*Yvonne Boysen*  
SIGNATURE: \_\_\_\_\_  
BD21D7A5A202451...

NAME AND TITLE: Yvonne Boysen  
Operations Manager  
\_\_\_\_\_

DATE: 10/15/2020  
\_\_\_\_\_

## SPECIFICATIONS AND SCOPE OF SERVICES

The intent of this solicitation and resulting agreement is to obtain the services of a qualified contractor(s) ("Contractor") to provide on-call/as needed electric motor repair services for the Arlington County Water Pollution Control Bureau (WPCB). The anticipated contract term will be one (1) base year with four (4) one-year renewal options.

Other County departments may use this contract as needed.

### CONTRACTOR'S RESPONSIBILITIES

Contractor records pertaining to Arlington County jobs must be available for audit if requested.

1. Contractor shall furnish all technical supervision, equipment and materials as required for the maintenance of the motor as defined by this Specification and the scope of work requested.
2. Contractors shall not be responsible for mechanical or electrical work at Arlington County WPCB facilities. Motors will be electrically and mechanically disconnected from the driven equipment and loaded on to the Contractor transport by the County. Repaired motors returned by the Contractor will be unloaded, reinstalled, set and aligned by the County.
3. Maintenance performed, and materials of components supplied under the terms of this Specification shall at a minimum meet the latest revision of the following codes and standards:
  - ANSI/IEEE: Standard 43-1974 **"Recommended Practice for Testing Insulation Resistance of Rotating Machinery"**
  - ANSI/EASA: AR100-1998 **"Recommended Practice For The Repair of Rotating Electrical Apparatus"**
  - IEEE: Standard 62-1978 **"Guide for Field Testing Apparatus Insulation"**, Std. 43: **"Recommended Practice for Testing Insulation Resistance of Rotating Machinery"**, Std. 112, **"IEEE Standard Test Procedure for Poly Phase Induction Motors and Generators"**
  - EASA: Standards for the Electrical Apparatus Service Association, Inc.
  - NEMA: Standard Publication NO. MG1 **"Motor and Generator Standards"**
  - ISO1940-1: **"Mechanical Vibration—Balance Quality Requirements of Rigid Rotors"**
  - ABMA ANSI/ABMA Std. 7: **"Shaft and Housing Fits for Metric Radial Ball and Roller Bearings"**
4. Repairs to individual motors must be made within five (5) working days from picking up motor from plant site unless noted otherwise on the Work Order or authorized by the Plant

Project Officer and delivered to the County generally within forty-eight (48) hours of completion of repairs.

5. Location/Contract – Name & Phone Numbers:

**Arlington County Water Pollution Control Bureau  
New Maintenance Building  
3111 South Fern Street  
Arlington, Virginia 22202  
Ivan Collazo (703-228-6899)**

6. Transport Procedures – Truck driver picking up or delivering motors must check in at one of the WPCB security gates. County personnel will notify Project Officer that carrier is on site for pick up/delivery of motor(s) so proper documentation can be completed for transfer of equipment.
7. Orders will generally be called in by the Project Officer to the Contractor between the hours of 6:00 a.m. and 2:30 p.m., Monday - Friday, and the Contractor will be given a WPCB Work Order number as a Notice to Proceed with Inspection only. The Contractor must pick up the motor(s) within twenty-four (24) hours after receipt of order, unless directed differently by the Project Officer. The motor must be disassembled and inspected, and an inspection report forwarded to the Project Officer within three (3) business days from the Contractor's receipt.
8. On occasion motors not listed in the price schedule may need to be repaired. The Contractor agrees to repair these other motors at the hourly rates listed on the Pricing Sheet. The Contractor must provide a not to exceed price to the Project Officer for these repairs prior to beginning the work on any motor. Any unforeseen repairs needed that require a change to the cost of the repair must be approved by the Project Officer prior to beginning the additional repairs.
9. If the estimated repair cost exceeds 50% of the replacement cost, the Contractor shall call Project Officer to obtain written authorization for the repair before proceeding.
10. All replacement parts must be original manufacturer's factory parts (with the exception of rolling element bearings – noted in **TECHNICAL REQUIREMENTS below, number 1**) unless authorized by the County representative in **writing** (e-mail or fax is sufficient).
11. After the Project Officer reviews an inspection report and cost of the motor to be reconditioned or rebuilt, the Project Officer may determine that a new motor is desired. The NEW motor shall be furnished by the Contractor per the specifications of the old motor and specification in "**DIVISION 16 – ELECTRICAL, SECTION 16220 – MOTORS**", Attachment B.

## **TECHNICAL REQUIREMENTS**

**Note:** Abnormalities found during the disassembly, testing and maintenance of the motors which are outside the original scope of the maintenance activities should be brought to the attention of the Project Officer in order that suitable corrective measures can be defined and planned. (The County

reserves the right to do an on-site visual inspection). These repairs shall not be performed by the Contractor until authorized by the County.

**1. BEARINGS: DOUBLE-SHIELDED, PRE-LUBRICATED BALL BEARINGS SUITABLE FOR RADIAL AND THRUST LOADING FOR APPLICATION. EXCEPTIONS TO THIS REQUIREMENT ARE AS FOLLOWS:**

- a. For frame 250 and larger, re-greaseable with Alemite fittings extended to accessible location.
- b. AFBMA B10 bearing life rated - 130,000 hours for horizontal direct coupled motors and 50,000 hours for horizontal belted and vertical type applications.

**2. INITIAL INSPECTION/TESTS –SECTION I OF PRICING SHEET**

- a. The motor shall be visually inspected before disassembly for obvious damage and defects. Notes of the as-found condition of the motor should be made on the inspection record.
- b. Insulation resistance to ground of all windings shall be taken and recorded. A polarization index shall be calculated and recorded for medium voltage motors. Voltage test levels shall be consistent with the operating voltage of the motor being tested.
- c. Air gap shall be measured and recorded at the 12, 3, 6 and 9 o'clock positions at both ends of the motor.
- d. The motor shall be dismantled and inspected for defective components. Care must be taken during the disassembly to ensure components are marked for identification and orientation for reinstallation.
- e. An inspection report with estimated cost of repair shall be forwarded to the Project Officer for approval to proceed with repair or other disposition. The estimate shall include the subject motor's nameplate information such as make, model, serial number, frame size, RPM, voltage, insulation class, etc., as well as the WPCB Work Order number.

**3. ROTOR INSPECTION/TEST/RECONDITIONING –SECTION II OF PRICING SHEET**

- a. The rotor and shaft shall be visually inspected for physical damage or signs of abnormal operation.
- b. A core loss test shall be performed on the rotor. Results shall be recorded on the test report.
- c. Thoroughly clean and dry the rotor and shaft.
- d. Inspect the rotor laminations and verify they are firm and secure on the shaft. Dress any minor rubs or burrs.
- e. Inspect the rotor bars for signs of fatigue or cracking especially at the end ring connections. Non-Destructive Examination (NDE) methods may be requested if questionable indications are found.

- f. Inspect end rings for signs of overheating, arcing or burning.
- g. Inspect the shaft and coupling fits. Verify proper tolerances of the key/keyway.
- h. Measure and record the shaft runout and inspect the bearing journals and seal areas for signs of overheating or scoring. Shaft metalizing, machining, straightening or replacement is deemed outside the scope of this maintenance activity and shall not be completed without prior approval from the Project Officer.
- i. Dynamically balance the rotor to a maximum vibration level of 0.5 mils.

**4. STATOR INSPECTION/TEST/RECONDITIONING –SECTION II OF PRICING SHEET**

- a. Visually inspect the stator for signs of damage or abnormal operation. These would include rubs, overheating, loose coil tires or edges, etc.
- b. Thoroughly clean and dry the stator and motor housing. Verify cooling passages are completely free of foreign material.
- c. Inspect and clean the motor leads and lead terminals.
- d. Repair/replace loose winding ties and blocking.
- e. Tighten loose slot wedges.
- f. Dress and separate shorted laminations.
- g. Temperature sensing devices shall be replaced, if needed, with devices comparable to those previously used.
- h. Space heaters shall be tested for insulation resistance for one minute according to manufacturer's specifications. They shall be tested for correct functioning.
- i. Vibration sensors shall be replaced in their original locations.

**5. MECHANICAL INSPECTION/RECONDITIONING –SECTION II OF PRICING SHEET**

- a. Measure and record bearing, seal and journal dimensions (include bearing Outside Diameter (OD) and bearing housing fits when rolling element bearings are used). Verify proper tolerances and concentricity.
- b. Rolling element bearings shall be replaced with new sealed bearings (unless not available for size required) according to these **TECHNICAL REQUIREMENTS, number 1.**
- c. No knurling, peening or adhesives will be used as a means of retaining bearings to the shaft or in the bearing bracket.

- d. Final bearing clearance data shall be taken and recorded.
- e. Motor frame shall be degreased, cleaned and painted with a quality coating system suitable for the motor application (primer and finish coat) from Carboline, Sherwin Williams, KECO Coatings or other manufacturer approved by the County.

**6. FINAL ASSEMBLY INSPECTION/TESTS SECTION II OF PRICING SHEET**

- a. Prior to assembly, machined surfaces shall be cleaned and polished and all threaded holes shall be cleaned and tapped.
- b. Motor shall be reassembled with new nuts, bolts and gaskets as necessary. Nuts and bolts shall be USA manufactured Grade 5 or better.
- c. All motors repaired shall have the original wire leads numbered or identified.
- d. Bearings shall be properly positioned on the shaft.
- e. Rotor to armature position on horizontal motors must be such that end thrust against either bearing is eliminated. Rolling element supplied machines shall have sufficient end plan to allow for shaft expansion caused by temperature rise.
- f. Vertical machines shall have thrust bearings set per the manufacturer's specification.
- g. Rolling element bearings shall be properly lubricated in accordance manufacturer's recommendations and grease fittings removed and holes plugged if sealed bearings are used. As much totally sealed lifetime lubricated bearings as possible shall be installed.
- h. Rotors shall be checked for freedom of rotation.
- i. Perform and record the results of a low resistance phase test for each phase.
- j. Perform and record the results of an insulation resistance test to ground for all windings. A polarization index shall be calculated and recorded for all medium voltage motors. Voltage test levels shall be consistent with the operating voltage of the motor being tested.
- k. Perform a surge comparison test (turn to turn) in accordance with test equipment manufacturer's instructions and verify satisfactory results.
- l. If previous test results are acceptable, the motor shall be energized at rated voltage and run for a period of one hour or until bearing temperatures have stabilized for a minimum of fifteen (15) minutes. Notify Project Officer of bearing temperatures above one hundred and sixty (160) degrees Fahrenheit.
- m. During the test operation the following data shall be recorded at a maximum of fifteen (15) minute intervals:
  - Bearing Temperatures

- Stator Temperatures
  - Phase Currents
  - Phase Voltages
  - Vertical, Horizontal, Axial Vibrations
- n. Blue shaft and scribe magnetic center on the motor shaft.
- o. Terminate test, shut down motor and drain oil from the bearings and tag appropriately.
- p. Complete final assembly as necessary and prepare motor for shipment and/or delivery.

## **7. DOCUMENTATION**

- a. A test report shall be returned with the motor. The report shall contain at a minimum all data requested in the specifications.
- b. Additional maintenance activities or parts replacement required outside those identified in these specifications shall be documented and submitted for approval before proceeding with repairs. Repairs completed without prior approval shall be deemed part of the original scope of work.
- c. All motors repaired or reconditioned shall be marked with a tag containing the Contractor's name and location, date of service, WPCB Work Order number, and the motor weight securely attached to the motor housing.

## **8. GUARANTEE**

- a. Contractor has the sole responsibility for ensuring and guaranteeing that the equipment and materials furnished or supplied meet the requirements of this specification.
- b. All repair work and parts supplied shall be guaranteed for a minimum of one (1) year from the date equipment is returned to the County against defects in materials or workmanship supplied by the Contractor. Any warranted failures shall be corrected at no cost to the County including transportation to and from the plant site.

## **9. TRANSPORTATIONS/SHIPPING**

- a. Contractor shall be responsible for ensuring motors are cleaned and properly prepared for shipment and/or delivery. This includes the proper handling of all waste resulting from any of the processes used during the motor maintenance activities.
- b. Arlington County WPCB personnel shall load and off-load motor(s) on to the Contractor's transport vehicle. The correct vehicle size, load capacity, and appurtenances for securing the motor(s) for transport are the responsibility of the Contractor.
- c. Electric motors must be transported in the position of normal operation, whether vertically or horizontally.

- d. Motors shall be protected against damage during transit. All motors must be covered and rotors blocked. Oil shall be removed from bearings before shipment. A conspicuous tag shall be attached to each oil level sight glass indicating oil must be added to the bearings. County Staff will sign delivery receipts acknowledging condition. Failure to properly tag motors may result in Contractor responsibility to repair or replace motors as needed.
- e. Contractor shall supply all timbers, blocking and tie downs necessary to properly secure a motor during transit. Contractors shall be responsible for damages or loss during transit.

## **10. STATOR REWINDING**

- a. All rewinding shall include complete reconditioning. Reconditioning is defined as replacement of bearings, seals, o-rings, oil and labor to bring the motor back to working condition as determined by post assembly testing.
- b. All winding shall include thermal protection installation/replacement (if necessary).
- c. Old windings shall be removed in a manner which prevents warping or cracking of the frame and deterioration of the core laminations or its magnetic qualities.
- d. Stator slots and core laminations shall be cleaned, inspected and dressed as necessary.
- e. A stator core loss test shall be performed following winding removal and stator inspection.
- f. Core damage that requires iron replacement or total restacking is deemed outside the scope of this maintenance activity and shall not be completed without prior approval from the Project Officer.
- g. Rewind material specifications shall meet or exceed the existing windings with regard to the number and size of conductors and insulating capabilities (electrical and thermal). Materials shall be upgraded when physically possible.
- h. A test coil shall be Vacuum Pressure Impregnation (VPI) treated with the stator. The coil shall be destructively examined to ensure full penetration of resin. Repeat VPI treatment as necessary to provide complete resin penetration.
- i. The stator and test coil shall Also be dipped and baked a minimum of two (2) times using a two-part epoxy varnish. The coating shall be compatible with the entire insulation system and be suitable for the environment of the motors. The test coil shall be returned with the motor.
- j. Following rewind, conduct the Hi-Potential Test (HIPOT) at  $1.7(2E + 1000)$  volts DC.

## **11. SERVICE FACILITY**

The successful Contractor shall allow Arlington County personnel to inspect their shop(s) if requested. A central service/repair phone number shall be provided to the County. A log shall be kept of all incoming requests for repair and shall include:



- Date/time call received.
- Problem description.
- Location.
- Name of contact person.
- Date/time of dispatch.

This log may be inspected as required by Arlington County representatives.

**12. RECONDITIONING PRICES SHALL INCLUDE:**

- a. Replace bearings
- b. Replace seals
- c. Replace O-rings
- d. Oil
- e. Labor

**13. COMPLETE REWINDING PRICES SHALL INCLUDE:**

- a. All reconditioning above
- b. Windings
- c. Coating/baking
- d. Thermal protection installation/replacement (includes space heaters)

**PRICE LIST**

When requested by the County, the Contractor shall provide originals or certified copies of invoices issued by its supplier(s) detailing the materials used on the assigned job.

The percentage discount from manufacturer's list price shall remain firm for the duration of the contract.

**RECORDS**

The Contractor shall maintain history repair records and apply a Contractor's shop nametag for future tracking purposes.

**INVOICES**

Invoices shall be based on actual time spent by Contractor's personnel to complete the repair, using the contract rates or the price quoted in Attachment A, Pricing Sheet. The cost for parts and materials used for the repair shall be at the terms included in the contract. The Contractor's estimate becomes a template for the invoice which will not only show the actual labor and materials costs, but also any added repairs or materials such as component upgrades or special tests/ reports requested by the County Project Officer.

The Contractor shall be paid upon submission of invoices, through the requesting department, to the Arlington County Water Pollution Control Bureau, Accounts Payable, 3402 South Glebe Road, Arlington, Virginia 22202. The prices stipulated herein for articles delivered and accepted.

A proper invoice must include:

- Name and address of the Contractor
- Invoice date

- Invoice number (Contractor is encouraged to assign an identification #)
- Contract number
- County's Purchase Order number
- WPCB's Work Order number
- Terms of any prompt payment discount offered
- Name and address of official to whom payment is to be sent
- Federal Identification Number

#### **ASSIGNMENT OF REPAIR JOBS**

The County will assign all motor repair work according to this Contract to the three (3) lowest responsive bidders. Each awarded Contractor will be assigned as Primary, Secondary, or Tertiary. If the Primary Contractor is not capable of repairing a motor within the required time-frame, as determined by the WPCB Project Officer, the Project Officer will notify the Primary Contractor, via email, that the time to repair is unacceptable. Accordingly, the WPCB Project Officer will assign the motor repair work to the Secondary Contractor. If the Secondary is not capable of repairing a motor within the required time-frame, the Project Officer will follow the same steps stated above and assign the work to the Tertiary Contractor.

If any of the Contractors cannot perform the WPCB Project Officer requested repair within the required time frame more than three (3) times within a six (6) month period, the Contractor may be removed from the Contract.

**DIVISION 16 – ELECTRICAL**  
**SECTION 16220 – MOTORS**

**PART 1 – GENERAL**

1.01 SECTION INCLUDES

- A. Electric motors for use on ac power systems up to 600 volts.
- B. Motors that are factory-installed as part of equipment.
- C. Field-installed motors.
- D. Section does not include manufacturer's definite purpose, direct current, synchronous or wound rotor motors.

1.02 REFERENCE, SPECIFICATIONS, CODES, AND STANDARDS

- A. Codes: Comply with applicable requirements of the following codes:
  - a. NEMA - National Electrical Manufacturer's Association.
  - b. ASTM - American Society for Testing Materials
  - c. AFBMA - Antifriction Bearing Manufacturers Association
  - d. ANSI - American National Standards Institute
  - e. IEEE - Institute of Electrical and Electronics Engineers
  - f. NEC - National Electric Code
  - g. UL - Underwriters' Laboratories, Inc.
- B. All materials and equipment shall be labeled or listed as being approved by the Underwriters Laboratories (UL) whenever applicable. Equipment offered as meeting the intent of the UL requirements may be acceptable subject to the approval of OWNER.
- C. Equipment shall be built and installed in compliance with OSHA.

1.03 SUBMITTALS

- A. Shop drawings and brochures shall be submitted for all items to be furnished and shall include at least the following:
  - 1. Shop drawings, including all equipment and components.
  - 2. Brochures and/or catalogue cuts:
    - a. Preliminary dimension print and frame size.

- b. Approximate motor weight.
- c. Complete motor nameplate Information.
- B. Installation and Maintenance Manual Information:
  - 1. Submit IO&M Manual to include the following:
    - a. Complete product submittals in electronic Adobe Acrobat (pdf) format.
    - b. Storage and alignment instructions
    - c. Installation instructions with connection diagrams
    - d. Schedule of routine maintenance and required lubrication
    - e. Product description including materials of construction, physical arrangement, dimensions, exploded views, parts lists, and trouble-shooting guides
    - f. Certified assembly drawing
    - g. Certified motor data and performance curves for rated capacity including:
      - i. Nominal efficiency in accordance with IEEE 112 for three phase motors 1 hp and larger.
      - ii. Full load power factor and maximum recommended correction capacitor kVA for motors 5 hp and larger.
      - iii. Complete nameplate data in accordance with NEMA standards and Section 2.02.P below.
      - iv. Performance characteristics:
        - 1) Guaranteed minimum efficiencies at 100%, 75% and 50% of full load.
        - 2) Guaranteed minimum power factor at 100%, 75% and 50% of full load.
        - 3) Locked rotor current.
        - 4) Full load current.
        - 5) Starting torque.
        - 6) Full Load torque.
        - 7) Breakdown torque.
    - h. Warranty & guarantee information
    - i. Test reports as specified.

- j. Cut sheets for all buy-out items.

#### 1.04 QUALITY ASSURANCE

##### A. Manufacturer's Qualifications

- 1. Have a minimum of ten (10) years experience in manufacture and successful start-up of the specified equipment/design. OWNER may request submission of a list of ten (10) similar projects completed within the last ten (10) years including project names and addresses; contact names, addresses and telephone numbers of owners; and other any other information specified or requested by the OWNER.

##### B. Items provided under this section shall be listed or labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).

- 1. Terms "NRTL" shall be as defined in OSHA Regulation 1910.7.
- 2. Terms "listed" and "labeled" shall be as defined in National Electrical Code, Article 100.

##### C. Comply with NEMA MG 1, "Motors and Generators."

##### D. Comply with UL 1004, "Motors, Electric".

#### 1.05 WARRANTY

##### A. Guarantee and warranty shall be furnished.

##### B. Motor components shall have a full 3-year performance warranty.

### **PART 2 – PRODUCTS**

#### 2.01 MANUFACTURERS

- A. US Motors, Baldor, General Electric, or TECO Westinghouse. No other manufacturers will be accepted.

#### 2.02 GENERAL

- A. Specific requirements are detailed in the SUPPLEMENT; any contradictions between the SUPPLEMENT and other requirements of this section shall be resolved by the Arlington County Project Officer.

- B. Requirements below apply to motors covered by this section except as otherwise indicated.

- C. Motors 1/2 hp and Larger: polyphase where three phase electrical service is available.

- D. Motors Smaller Than 1/2 hp: single-phase.

- E. Frequency Rating: 60-hertz.
- F. Voltage Rating: Determined by voltage of circuit to which motor is connected or following motor voltage ratings (utilization voltages):
  - 1. 120 Volts Circuit: 115 volts - motor rating.
  - 2. 208 Volts Circuit: 200 volts - motor rating.
  - 3. 240 Volts Circuit: 230 volts - motor rating.
  - 4. 480 Volts Circuit: 460 volts - motor rating.
- G. Service factors indicated for motors are minimum values and apply at frequency and utilization voltage at which motor is connected. Provide motors which will operate in service factor range when supply voltage is within 10% of motor voltage rating.
- H. Capacity: Sufficient to start and operate connected loads at designated speeds in indicated environment, and with indicated operating sequence, without exceeding nameplate ratings. Provide motors rated for continuous duty at 100% of rated capacity.
- I. Temperature Rise: Based on 104°F (40°C) ambient except as otherwise indicated.
- J. Enclosure: Totally enclosed fan cooled (TEFC) unless otherwise indicated in other sections and as required by NEC:
  - 1. Weather proof motors designed for outdoors and in wet areas.
  - 2. Explosion proof motors approved for specific hazard classifications covered by NEC.
  - 3. Chemical resistant motors designed for severe duty applications, including high humidity, corrosive, dirty or salty atmospheres.
  - 4. Wash down motors designed to prevent ingress of high pressure direct water spray.
- K. Copper Windings.
- L. Premium Efficiency (higher than minimum in NEMA MG1 tables).
- M. Service Conditions.
  - 1. Unless otherwise specified, motors conforming to this Specification shall be suitable for operation in accordance with their rating under the following service conditions:
    - a. Ambient temperature in a range of -40°F to 104°F (-40°C to 40°C).

- b. Maximum altitude of 3,300 feet above sea level.
- c. Indoor or outdoor installations in hostile duty applications.
- d. Motors shall be suitable for continuous operation on a three-phase, 60-hertz system rated 460 volts.

N. Design Requirements:

- 1. Motors shall be capable of withstanding all normal forces that may be imposed upon them during the course of normal operation, including starting and normal stops.
- 2. Motors shall be suitable for across-the-line starting and shall be able to start and accelerate the connected load to full load speed with 90% of rated voltage at the motor terminals.
- 3. Motors shall be capable of continuous operation at full load and rated frequency with a voltage variation of  $\pm 10\%$ .
- 4. Motors shall be capable of continuous operation at full load and rated voltage with a frequency variation of  $\pm 5\%$ .
- 5. Motor starting current shall not exceed a value equal to 650% of the motor full load current.
- 6. Motor installation is in a hostile environment subject to dust, moisture and/or corrosive atmospheric conditions. All parts shall be given protective treatment.

O. Noise Level:

- 1. Sound pressure levels shall be measured according to IEEE 85 and shall not exceed 85 decibels as measured on the A-Weighted Scale at a distance of one (1) meter from any motor surface under no load, free field conditions.

P. Motor Vibration:

- 1. Motor vibration shall not exceed 0.08 inches/second velocity.

Q. Nameplates:

- 1. Motor nameplates shall be of stainless steel and shall be securely fastened to the motor frame with pins of a like material.
- 2. The following information shall be contained on the motor nameplate as a minimum:
  - a. Rated horsepower.
  - b. Full load speed.

- c. Frequency.
  - d. NEMA KVA code and design letter (when applicable).
  - e. Rated voltage.
  - f. Manufacturer's serial number.
  - g. Service factor.
  - h. Insulation class.
  - i. Maximum ambient temperature.
  - j. Full load current at nameplate voltage.
  - k. Frame size designation.
  - l. Weight
- R. Terminal Boxes:
- 1. Terminal boxes shall be of fabricated steel or cast iron construction to be compatible with the motor enclosure specified and when possible, shall be diagonally split and capable of rotation in 90° increments. Boxes not suitable for rotation must be capable of top entry.
  - 2. The area in which the main terminal box is connected with the motor frame shall be fully gasketed in order to prevent entrance of foreign matter into the motor and to provide support for the stator leads where they pass through the motor frame.
  - 3. A properly sized grounding terminal shall be mounted in the main terminal box when specified.
  - 4. The main terminal box shall be sufficiently oversized to allow stress cone terminations of shielded power cables and to allow mounting of any surge capacitors, lightning arrestors or current transformers as may be specified.
- S. Leads:
- 1. Main motor leads shall have EPDM or equal type jackets and shall be permanently tagged for identification.
  - 2. The relationship between lead markings and the direction of rotation shall be indicated on a separate motor nameplate.
- T. Space Heaters:
- 1. Provide motor space heaters in accordance with the following:
    - a. Motors located outdoors and 5 horsepower and larger.



2. As specified, motors shall be furnished with space heaters to provide sufficient wattage to maintain the internal temperature of the motor at a level approximately 10°C above the ambient temperature while the motor is not in operation.
  3. Space heaters shall be of the silicone rubber strip type attached directly to the stator end turns. The leads shall be brought out to an auxiliary terminal box.
  4. Space heaters shall be rated for operation on a single phase, 60-hertz, 120-volt AC system.
- U. Metering:
1. When specified for metering purposes, one (1) bar or window-type current transformer shall be furnished mounted in the main terminal box.
- V. Protective Devices:
1. Stator winding protection shall consist of one or more of the following systems:
    - a. Provide stator winding protection in accordance with the following:
      - 1) Thermostat type for all explosion proof motors and motors operated from variable frequency drives (VFD's) up to 25 horsepower.
      - 2) Thermistor type for non-explosion-proof constant speed motors 50 horsepower and larger up to 200 horsepower and motors operated from VFD's 30 horsepower and larger up to 200 horsepower, unless specified otherwise.
      - 3) RTD type for motors 200 horsepower and larger.
    - b. Six (6) 120 ohm nickel resistance-type temperature detectors (RTD's) embedded in the stator windings, two (2) per phase. Each detector shall have its leads wired to an auxiliary terminal box.
    - c. One (1) positive temperature coefficient (PTC) thermistor temperature sensor embedded in each phase of the stator winding and corresponding solid state electronic control. Thermistor system shall be U.S. Motors' "THERMA-SENTRY".
    - d. Three (3) bi-metallic thermostats of the automatic reset type, with normally closed contacts, mounted one per phase. Each thermostat shall be furnished with leads suitable for connection to the control circuit.

2. Provide bearing protection in accordance with the following:
    - a. Provide bearing protection for motors 200 horsepower and larger.
    - b. Bearing protection shall consist of one of the following:
      - 1) Two (2) 120 ohm nickel resistance-type temperature detectors (RTD's), one (1) per bearing, mounted as closely as possible to the outer surface of each bearing. Each detector shall have its leads wired to a terminal block located in an auxiliary terminal box.
      - 2) Indicating scale.
      - 3) Two (2) dial type thermometers, one (1) per bearing.
      - 4) Two (2) iron or copper constantan thermo-couples, one (1) per bearing.
  3. When specified, surge protection shall be provided in form of surge capacitors and lightning arrestors mounted, one (1) per phase in the main terminal box.
  4. When specified, differential ground protection shall consist of three (3) window-type current transformers, mounted one (1) per phase in the main terminal box. Leads of each phase shall be passed through individual current transformers. Transformers shall be of a ratio specified by the Purchaser at time of order placement.
- W. Ventilating Fans:
1. Ventilating fans shall be corrosion resistant, non-sparking material. All fans shall be suitable for bi-directional rotation.
- X. Conduit Box:
1. Conduit box shall be gasketed between the conduit box halves. A grounding provision shall be provided in the conduit box. The conduit box shall be oversize as compared to NEMA requirements and diagonally split and rotatable in 90 degree increments. The conduit box shall be field convertible to cast iron.
- Y. External Screws And Bolts:
1. External screws and bolts shall be grade five, hex heads and be plated to resist corrosion.
- Z. Motor Shaft:

1. Motor shaft shall be provided with an external recessed slinger at the drive end of the motor to provide additional (minimum IP-54) protection from moisture and foreign material.

AA. Rotor And Stator Air Gap Surfaces:

1. Rotor and stator air gap surfaces shall be coated so as to prevent corrosion.

2.03 POLYPHASE MOTORS

A. Squirrel-cage induction-type conforming to following requirements except as otherwise indicated.

B. NEMA Design Letter Designation: "B".

C. Bearings: Double-shielded, pre-lubricated ball bearings suitable for radial and thrust loading for application.

1. Re-greaseable with Alemite fittings extended to accessible location for frame 250 and larger.

2. AFBMA B10 bearing life rated - 130,000 hours for horizontal direct coupled motors and 50,000 hours for horizontal belted and vertical type applications.

3. Vertical Motors:

a. Thrust Bearings:

- 1) Motors shall be designed and constructed with thrust bearings on top to allow inspection and/or replacement without requiring complete disassembly of motor.
- 2) Thrust bearings shall be deep-groove ball, angular contact ball or spherical roller type. Bearings mounted back-to-back or in tandem are acceptable and may be furnished when required according to manufacturer's standard design.
- 3) Deep-groove ball bearings shall be used only on normal thrust design motors and shall be capable of handling thrust loads in either direction.
- 4) High thrust design motors shall be supplied with angular contact ball bearings whenever possible and in accordance with manufacturer's standard design.
- 5) Where thrust requirements restrict the use of angular contact bearings, spherical roller bearings shall be furnished.

- a) When required, motors furnished with spherical roller bearings shall also be provided with a system of coils in the oil reservoir for the circulation of cooling water.
  - b) Spherical roller bearings shall be spring loaded to keep the lower bearing race in contact and prevent bearing damage during starting and momentary up-thrust conditions.
- b. Guide Bearings:
  - 1) Guide bearings shall be deep-groove ball type and shall be located at the bottom of the motor.
  - 2) Guide bearings may be stacked when necessary according to manufacturer's standard design to accommodate specified up-thrust conditions.
  - 3) Guide bearings or bearing assemblies shall be provided with sufficient means for preventing the leakage of lubricant or entrance of foreign matter along the shaft.
- c. Lubrication:
  - 1) Thrust bearings shall be oil lubricated and contained in an oil reservoir with oil sight level gauge and oil fill and drain openings with plugs.
  - 2) Deep-groove ball bearings furnished as thrust bearings for normal thrust motors shall be grease lubricated. When furnished as guide bearings for high thrust units, they shall be oil lubricated.
  - 3) Grease lubricated bearings shall be furnished with provisions for in-service positive lubrication. A drain shall be provided to guard against over lubrication.
4. All motors 250 frame and above shall have fully regreasable, anti-friction bearings. All motors 140 frame and lower shall be sealed and lubed for life, 180-360 frame shall be double shielded and 400-440 frame bearings will be open.
5. All motors 182 frame and above shall have cast iron inner bearing caps.
6. All motors shall have a charged lubrication system to inhibit moisture condensation.

7. Standard motors in frames 254-447 shall have extended grease fittings on the opposite drive-end to facilitate re-lubrication. Grease ports shall be located on the periphery of the motor endshield.
  8. Motor shall be fitted with a shaft slinger for a minimum of IP-54 protection.
- D. Energy Efficient Motors: Premium efficiency, greater than that stated in NEMA MG 1, Table 12-10 for that type and rating of motor.
- E. Multi-Speed Motors: Separate winding for each speed.
- F. Internal Thermal Overload Protection For Motors: For motors so indicated, protection automatically opens control circuit arranged for external connection. Protection operates when winding temperature exceeds safe value calibrated to temperature rating of motor insulation. Internal thermal overload protection shall not be installed on inverter duty motors.
- G. Motors for Reduced Inrush Starting: Coordinate with indicated reduced inrush controller type and with characteristics of driven equipment load. Provide required wiring leads in motor terminal box to suit control method.
- H. Torque:
1. Breakdown torque shall be 200% or more of maximum torque load placed on motor shaft.
  2. Provide necessary WK<sub>2</sub> curves for special loads to coordinate with motors.
  3. Supply special motors where load requirements exceed standard design.
- I. Open Drip Proof (ODP) – IP22:
1. Premium energy efficient.
  2. Protected openings.
  3. Class F insulation.
  4. 1.15 service factor.
  5. Cast iron construction.
- J. Totally Enclosed Fan Cooled (TEFC) and Totally Enclosed Non-Ventilated (TENV) – IP44:
1. Premium energy efficient.
  2. 1.15 service factor, Class "F" insulation.
  3. Cast iron construction; frame, conduit box, end shields, fan cover, inner caps for 182T frames and larger.

4. Positive lubrication systems.
  5. Removable eyebolt.
  6. Suitable for indoor and outdoor installations.
  7. Diagonally split, neoprene gasketed, rotatable oversized conduit box with NPT threaded lead hole.
  8. Conduit box mounted, UL approved clamp type grounding lug.
  9. Permanently numbered non-wicking leads.
  10. Rust inhibitive non-washing lubricant.
  11. Stainless steel nameplate with data listed in Section 2.02.P and:
    - a. NEMA nominal efficiency (MG 1-12).
    - b. AFBMA bearing numbers.
    - c. Lubrication instructions.
- K. Corrosion Resistant (Mill and Chemical Duty) – IP55:
1. Same features as TEFC, except as noted below.
  2. Neoprene lead seal separator gasket mounted between motor frame and conduit box.
  3. Anti-static corrosion resistant fan.
  4. Zinc plated hex head hardware.
  5. Stainless steel T drains and breather fittings.
  6. Stator and rotor completely epoxy coated for corrosion protection.
  7. Non-metallic V-ring shaft slinger.
  8. Double shielded bearings.
  9. Double-coated epoxy enamel exterior finish.
  10. Stainless steel nameplate.
- L. Explosion Proof:
1. Same features as TEFC.
  2. Approved for NEC hazardous classified location as noted in equipment Specification or as indicated on Contract Drawings.
  3. Automatic explosion proof breather drains.

- M. Wash-down Duty Motor – IP56:
  - 1. Same features as Corrosion Resistant (Mill and Chemical Duty).
  - 2. Sealed to prevent ingress of direct application of a stream of water at 5,000 psig.
- N. Submersible pump and mixer motors – IP68:
  - 1. As specified with equipment Specifications.
  - 2. 1.10 service factor, unless otherwise indicated in equipment Specification sections.

#### 2.04 SINGLE-PHASE MOTORS

- A. One of following types as selected to suit starting torque and other requirements of specific motor application:
  - 1. Permanent Split Capacitor.
  - 2. Split-Phase Start, Capacitor-Run.
  - 3. Capacitor-Start, Capacitor-Run.
- B. Shaded-Pole Motors: Use only for motors smaller than 1/20 hp.
- C. Internal Thermal Overload Protection for Motors: For motors so indicated, protection automatically opens power supply circuit to the motor, or control circuit arranged for external connection. Protection operates when winding temperature exceeds safe value calibrated to temperature rating of motor insulation. Provide device that automatically resets when motor temperature returns to normal range except as otherwise indicated.
- D. Bearings, belt connected motors and other motors with high radial forces on motor shaft shall be ball bearing type. Sealed, pre-lubricated sleeve bearings may be used for other single phase motors.

#### 2.05 SOURCE QUALITY CONTROL

- A. Testing:
  - 1. Perform individual motor test on motors over 1 hp.
  - 2. Test shall be standard NEMA routine production test in accordance with MG 1-12.55.

**SUPPLEMENT**  
**AC-MOTOR REQUIREMENTS**

Reference Equipment, Equipment Tag No., and/or Work Order No.

\_\_\_\_\_   
Horsepower rating: \_\_\_\_\_

Voltage rating: \_\_\_\_\_

Phase: \_\_\_\_\_

RPM: \_\_\_\_\_

Frame: \_\_\_\_\_

Insulation Class: \_\_\_\_\_

Duty: \_\_\_\_\_

Temperature range: \_\_\_\_\_ to \_\_\_\_\_ °C

Enclosure (mark all that apply):

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> explosive proof  | <input type="checkbox"/> weatherproof (IP56) | <input type="checkbox"/> chemical resistant (IP55) |
| <input type="checkbox"/> wash down (IP56) | <input type="checkbox"/> submersible (IP68)  | <input type="checkbox"/> ODP (IP22)                |
| <input type="checkbox"/> TEFC (IP44)      | <input type="checkbox"/> TENV (IP44)         |  |

Mounting (mark all that apply):

- |                                       |                                 |                                   |                                     |
|---------------------------------------|---------------------------------|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> foot mounted | <input type="checkbox"/> c-face | <input type="checkbox"/> vertical | <input type="checkbox"/> horizontal |
|---------------------------------------|---------------------------------|-----------------------------------|-------------------------------------|

Stator winding protection:

- |                                     |                                     |                              |
|-------------------------------------|-------------------------------------|------------------------------|
| <input type="checkbox"/> thermostat | <input type="checkbox"/> Thermistor | <input type="checkbox"/> RTD |
|-------------------------------------|-------------------------------------|------------------------------|

Bearing protection:

- |                                |   |                                       |  |
|--------------------------------|---|---------------------------------------|--|
| <input type="checkbox"/> RTD's | <input type="checkbox"/> indicating scale | <input type="checkbox"/> thermometers | <input type="checkbox"/> thermocouples |
|--------------------------------|---|---------------------------------------|--|

Drive type system:

- |                                       |   |   |
|---------------------------------------|---|---|
| <input type="checkbox"/> v-belt drive | <input type="checkbox"/> synchronous belt drive | <input type="checkbox"/> direct coupled |
|---------------------------------------|---|---|

Other specifications:

- |   |   |
|---|---|
| <input type="checkbox"/> winding space heaters                | <input type="checkbox"/> differential ground protection |
| <input type="checkbox"/> surge protection                     | <input type="checkbox"/> thermal overload protection    |
| <input type="checkbox"/> reduced inrush starting (soft start) | <input type="checkbox"/> constant torque                |
| <input type="checkbox"/> _____                                |   |

END OF SECTION



20-213-ITB - ATTACHMENT A - BID FORM

PRICING SHEET

PROVISION OF PARTS AND ELECTRIC MOTOR REPAIR SERVICES FOR THE ARLINGTON COUNTY WATER POLLUTION CONTROL BUREAU (WPCB)  
FOR A FIVE (5) YEAR PERIOD

BIDDERS SHALL PROVIDE THEIR BID PRICES IN THE CELLS HIGHLIGHTED IN BLUE BELOW. BIDDERS SHALL INCLUDE A BID PRICE FOR ALL ITEMS. FAILURE TO PROVIDE A PRICE FOR ALL ITEMS, OR ANY MODIFICATIONS OR ADDITIONS TO THE BID FORM MAY RESULT IN BID REJECTION.

SECTION I: INSPECTION/TESTING MOTORS - PRICING PROVIDED SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTAL EXPENSES NECESSARY TO COMPLETE THE WORK

ITEM NO.	ITEM DESCRIPTION	MODEL	Motor Brg Shaft End	Motor Brg Oth End	HP	RPM	Ph/Hz/Volt	ESTIMATED ANNUAL USAGE	YEAR 1 UNIT PRICE	YEAR 1 EXTENDED PRICE	YEAR 2 UNIT PRICE	YEAR 2 EXTENDED PRICE
1	SAT1-MIXR-A-NORTH, SEC AERATION TANK MIXER-01 A-PASS S, METER 53012, Siemens, horizontal, direct drive, frame 213T, constant speed, weatherproof	MD000637	6308-ZZ	6308-ZZ	7.5	1740	3/60/460	5	\$ 120.00	\$ 600.00	\$ 120.00	\$ 600.00
2	SAT1-MIXR-A-SOUTH, SEC AERATION TANK MIXER-01 A-PASS N, METER 53011, Siemens, horizontal, direct drive, frame 215T, constant speed, weatherproof	MD000638	40BC02JP3	30BC02JP3	10	1740	3/60/460	3	\$ 150.00	\$ 450.00	\$ 150.00	\$ 450.00
3	DWB-DRIVE-BINBTM-03A, DRIVE, DEWATERING BIN BOTTOM CONV, #3 WEST SCREW, Baldor, horizontal, constant torque, belt drive, frame 326-TZ, variable	M12N042W693GI	BG6312B03	BG6311B03	15	1200	3/60/460	3	\$ 150.00	\$ 450.00	\$ 150.00	\$ 450.00
4	DWB-FAN-AMMONIASCORB-01, FAN, 30", AMMONIA SCRUBBER #1, TECO Westinghouse, horizontal, belt drive, frame 256T, constant speed	NP0204	45BC03J30X	45BC03J30X	20	1760	3/60/460	1	\$ 150.00	\$ 150.00	\$ 150.00	\$ 150.00
5	PTB-PUMP-GRIT-02, PUMP, PTB GRIT #2, US Motors, horizontal, belt drive, frame 284T, constant speed	7970	6310-2Z-J/C3	6210-2Z-J/C3	25	1775	3/60/460	1	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
6	DWB-MTR-CENT-01-40HP, MOTOR, #1 CENTRIFUGE SCROLL 40 HP, Magnetek, horizontal, belt drive, frame 324T, variable speed	CJB5S	312SF	210SF	40	1770	3/60/460	1	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00
7	WIN-MTR-PUMP-01, MOTOR, PUMP #1, WINDY RUN PUMP STATION, US Motors, vertical, direct drive, frame 326VP, variable speed, washdown	G42244	6312-J/C3	6211-2Z-J	50	1770	3/60/230-460	2	\$ 250.00	\$ 500.00	\$ 250.00	\$ 500.00
8	RRPS-MTR-PUMP-01, MOTOR, PUMP #1, US Motors, vertical, direct drive, frame 444VP, variable speed, washdown	R0620085377-0001-R0002	75BC03J3/6314-J	65BC03J3/6214-2Z-J	75	895	3/60/460	1	\$ 380.00	\$ 380.00	\$ 380.00	\$ 380.00
9	FEQ-MTR-PUMP-01, MOTOR, FLOW EQUALIZATION PUMP #1, Toshiba, horizontal, direct drive, frame 405T, variable speed, weatherproof	GJ4075Q1DEHH	6317C3	6313C3	75	1180	3/60/460	2	\$ 380.00	\$ 760.00	\$ 380.00	\$ 760.00
10	WSPSB-MTR-PUMP-RAS-07, MOTOR, RAS PUMP #7, US Motors, horizontal, direct drive, frame 447T, variable speed, washdown	TYPE TC1 ; ID# L08 20077396-100R-02	6220-JC3	6313-JC3	100	890	3/60/460	1	\$ 380.00	\$ 380.00	\$ 380.00	\$ 380.00
11	KWPS-MTR-PUMP-01, MOTOR, PUMP #1, US Motors, vertical, direct drive, frame 447VP, variable speed, washdown	R0620085356-0001 R 0004	75BC03J3	65BC03J3	100	900	3/60/460	2	\$ 570.00	\$ 1,140.00	\$ 570.00	\$ 1,140.00
12	NFF-MTR-FAN-FAF-01, MOTOR, ODOR CONTROL FAN, 100 HP, GE Motors, horizontal, belt drive, frame 405T, constant speed	5KS405SAA2003	6316ZC3	6316ZC3	100	1785	3/60/460	1	\$ 380.00	\$ 380.00	\$ 380.00	\$ 380.00
13	DWB-FAN-SULFSCR-02, FAN, 54", SULFIDE SCRUBBER STAGE #2, OLD BLDG. SRCE, Reliance, horizontal, belt drive, frame 444T, constant speed	ID# 01MAN92588 C001 FD	90BC03J30X	90BC03J30X	125	1785	3/60/460	1	\$ 570.00	\$ 570.00	\$ 570.00	\$ 570.00
14	PAF-MTR-BLWR-01, MOTOR, CENTRIFUGAL BLOWER, POST AERATION 1, 125 HP, Emerson Motors, horizontal, direct drive, frame 444TS, constant speed	TYPE TCE; ID# P01 30169340-0001 R 0003	6313-J/C3	6313-J/C3	125	3575	3/60/460	1	\$ 570.00	\$ 570.00	\$ 570.00	\$ 570.00
15	FMRL-MTR-PUMP-01, MOTOR, FOUR MILE RUN PUMP #1, TECO, vertical, direct drive, frame 5007C, variable speed	TYPE ASVA-TK001 S/N KED48220-1	6320/NU324	6320/NU324	150	585	3/60/460	1	\$ 760.00	\$ 760.00	\$ 760.00	\$ 760.00
16	DWB-MTR-CENT-01-200HP, MOTOR, #1 CENTRIFUGE BOWL, 200 HP, Magnetek, horizontal, direct drive, frame 447T, variable speed	355443	6322	6314	200	1780	3/60/460	1	\$ 760.00	\$ 760.00	\$ 760.00	\$ 760.00
17	PAF-MTR-PUMP-PEW-01, MOTOR, PLANT EFFLUENT WATER PUMP #1, US Motors, vertical, direct drive, frame 449VP, variable speed, weatherproof	TYPE JVC14; ID# M03 20069556-100R-03	29426 EJ	6219-J/C3	250	1750	3/60/460	1	\$ 760.00	\$ 760.00	\$ 760.00	\$ 760.00
18	ASE1-MTR-L1, MOTOR, ACTIVATED SLUDGE EFFLUENT PUMP #1, US Motors, vertical, direct drive, frame 5811P, variable speed, weatherproof	TYPE JVE14; ID# D03 99030767-001R-0Z	6226-JC3	7228BCB	300	591	3/60/460	1	\$ 950.00	\$ 950.00	\$ 950.00	\$ 950.00
19	WWFF-MTR-PUMP-N5, MOTOR, N5 PUMP, WET WEATHER FILTRATION FACILITY, US Motors, vertical, direct drive, frame 5811P, variable speed, corro-duty	5811P JVC14 - P/N- 20112242	6320	7230	400	720	3/60/460	1	\$ 950.00	\$ 950.00	\$ 950.00	\$ 950.00
20	WWFF-MTR-PUMP-N3, MOTOR, N3 PUMP, WET WEATHER FILTRATION FACILITY, US Motors Titan, vertical, direct drive, frame 1680P, variable speed, weatherproof	ORDER # 873-08512 I/D NO. J521504 54-02157-443	6320	7230	500	705	3/60/460	1	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00
21	SBB-MTR-BLWR-05, MOTOR, BLWR #5, HIGH PRESSURE, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012S, constant speed	REFERENCE ORDER# 30101494 CUSTOMER PN - HH00236-003-MTRM			700	1780	3/60/4000	1	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00
22	SBB-MTR-BLWR-03, MOTOR, BLWR #3, SWING, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012MS, constant speed	REFERENCE ORDER# 30101496 CUSTOMER PN - HH00236-005-MTRM			800	1750	3/60/4000	1	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00

23	SBB-MTR-BLWR-01, MOTOR, BLWR #1, LOW PRESSURE, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012MS, constant speed	REFERENCE ORDER# 30101488 CUSTOMER PN - HH00236-001-MTRM			900	1780	3/60/4000		1	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00
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**SECTION II: RECONDITIONED MOTORS - PRICING PROVIDED SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTAL EXPENSES NECESSARY TO COMPLETE THE WORK**

ITEM NO.	ITEM DESCRIPTION	MODEL	Motor Brg Shaft End	Motor Brg Oth End	HP	RPM	Ph/Hz/Volt	ESTIMATED ANNUAL USAGE	YEAR 1 UNIT PRICE	YEAR 1 EXTENDED PRICE	YEAR 2 UNIT PRICE	YEAR 2 EXTENDED PRICE
1	SAT1-MIXR-A-NORTH, SEC AERATION TANK MIXER-01 A-PASS S, METER 53012, Siemens, horizontal, direct drive, frame 213T, constant speed, weatherproof	MD000637	6308-ZZ	6308-ZZ	7.5	1740	3/60/460	5	\$ 760.00	\$ 3,800.00	\$ 760.00	\$ 3,800.00
2	SAT1-MIXR-A-SOUTH, SEC AERATION TANK MIXER-01 A-PASS N, METER 53011, Siemens, horizontal, direct drive, frame 215T, constant speed, weatherproof	MD000638	40BC02JP3	30BC02JP3	10	1740	3/60/460	3	\$ 855.00	\$ 2,565.00	\$ 855.00	\$ 2,565.00
3	DWB-DRIVE-BINBTM-03A, DRIVE, DEWATERING BIN BOTTOM CONV, #3 WEST SCREW, Baldor, horizontal, constant torque, belt drive, frame 326-TZ, variable speed	M12N042W693GI	BG6312B03	BG6311B03	15	1200	3/60/460	3	\$ 1,235.00	\$ 3,705.00	\$ 1,235.00	\$ 3,705.00
4	DWB-FAN-AMMONIASCRB-01, FAN, 30", AMMONIA SCRUBBER #1, TECO Westinghouse, horizontal, belt drive, frame256T, constant speed	NP0204	45BC03J30X	45BC03J30X	20	1760	3/60/460	1	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00	\$ 1,140.00
5	PTB-PUMP-GRIT-02, PUMP, PTB GRIT #2, US Motors, horizontal, belt drive, frame 284T, constant speed	7970	6310-2Z-J/C3	6210-2Z-J/C3	25	1775	3/60/460	1	\$ 1,235.00	\$ 1,235.00	\$ 1,235.00	\$ 1,235.00
6	DWB-MTR-CENT-01-40HP, MOTOR, #1 CENTRIFUGE SCROLL 40 HP, Magnetek, horizontal, belt drive, frame 324T, variable speed	CJB5S	312SF	210SF	40	1770	3/60/460	1	\$ 1,235.00	\$ 1,235.00	\$ 1,235.00	\$ 1,235.00
7	WIN-MTR-PUMP-01, MOTOR, PUMP #1, WINDY RUN PUMP STATION, US Motors, vertical, direct drive, frame 326VP, variable speed, washdown	G42244	6312-J/C3	6211-2Z-J	50	1770	3/60/230-460	2	\$ 1,235.00	\$ 2,470.00	\$ 1,235.00	\$ 2,470.00
8	RRPS-MTR-PUMP-01, MOTOR, PUMP #1, US Motors, vertical, direct drive, frame 444VP, variable speed, washdown	R0620085377-0001-R0002	75BC03J3/6314-J	65BC03J3/6214-2Z-J	75	895	3/60/460	1	\$ 2,280.00	\$ 2,280.00	\$ 2,280.00	\$ 2,280.00
9	FEQ-MTR-PUMP-01, MOTOR, FLOW EQUALIZATION PUMP #1, Toshiba, horizontal, direct drive, frame 405T, variable speed, weatherproof	GJ4075Q1DEHH	6317C3	6313C3	75	1180	3/60/460	2	\$ 1,900.00	\$ 3,800.00	\$ 1,900.00	\$ 3,800.00
10	WSPSB-MTR-PUMP-RAS-07, MOTOR, RAS PUMP #7, US Motors, horizontal, direct drive, frame 447T, variable speed, washdown	TYPE TC1 ; ID# L08 20077396-100R-02	6220-JC3	6313-JC3	100	890	3/60/460	1	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00
11	KWPS-MTR-PUMP-01, MOTOR, PUMP #1, US Motors, vertical, direct drive, frame 447VP, variable speed, washdown	R0620085356-0001 R 0004	75BC03J3	65BC03J3	100	900	3/60/460	2	\$ 2,375.00	\$ 4,750.00	\$ 2,375.00	\$ 4,750.00
12	NFF-MTR-FAN-FAF-01, MOTOR, ODOR CONTROL FAN, 100 HP, GE Motors, hroizontal, belt drive, frame 405T, constant speed	5KS405SAA2003	6316ZC3	6316ZC3	100	1785	3/60/460	1	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00
13	DWB-FAN-SULFSCR-02, FAN, 54", SULFIDE SCRUBBER STAGE #2,OLD BLDG. SRCE, Reliance, horizontal, belt drive, frame 444T, constant speed	ID# 01MAN92588 C001 FD	90BC03J3OX	90BC03J3OX	125	1785	3/60/460	1	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00
14	PAF-MTR-BLWR-01, MOTOR, CENTRIFUGAL BLOWER, POST AERATION 1, 125 HP, Emerson Motors, horizontal, direct drive, frame 444TS, constant speed	TYPE TCE; ID# P01 30169340-0001 R 0003	6313-J/C3	6313-J/C3	125	3575	3/60/460	1	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00	\$ 2,375.00
15	FMRL-MTR-PUMP-01, MOTOR, FOUR MILE RUN PUMP #1, TECO, vertical, direct drive, frame 5007C, variable speed	TYPE ASVA-TK001 S/N KED48220-1	6320/NU324	6320/NU324	150	585	3/60/460	1	\$ 4,750.00	\$ 4,750.00	\$ 4,750.00	\$ 4,750.00
16	DWB-MTR-CENT-01-200HP, MOTOR, #1 CENTRIFUGE BOWL, 200 HP, Magnetek, horizontal, direct drive, frame 447T, variable speed	355443	6322	6314	200	1780	3/60/460	1	\$ 2,850.00	\$ 2,850.00	\$ 2,850.00	\$ 2,850.00
17	PAF-MTR-PUMP-PEW-01, MOTOR, PLANT EFFLUENT WATER PUMP #1, US Motors, vertical, direct drive, frame 449VP, variable speed, weatherproof	TYPE JVC14; ID# M03 20069556-100R-03	29426 EJ	6219-J/C3	250	1750	3/60/460	1	\$ 4,750.00	\$ 4,750.00	\$ 4,750.00	\$ 4,750.00

18	A5E1-MTR-L1, MOTOR, ACTIVATED SLUDGE EFFLUENT PUMP #1, US Motors, vertical, direct drive, frame 5811P, variable speed, weatherproof	TYPE JVE14; ID# D03 99030767-001R-0Z	6226-JC3	7228BCB	300	591	3/60/460		1	\$ 6,270.00	\$ 6,270.00	\$ 6,270.00	\$ 6,270.00
19	WWFF-MTR-PUMP-N5, MOTOR, N5 PUMP, WET WEATHER FILTRATION FACILITY, US Motors, vertical, direct drive, frame 5811P, variable speed, corro-duty	5811P JVC14 - P/N-20112242			400	720	3/60/460		1	\$ 6,270.00	\$ 6,270.00	\$ 6,270.00	\$ 6,270.00
20	WWFF-MTR-PUMP-N3, MOTOR, N3 PUMP, WET WEATHER FILTRATION FACILITY, US Motors Titan, vertical, direct drive, frame 1680P, variable speed, weatherproof	ORDER # 873-08512 I/D NO. J521504 54-02157-443	6320	7230	500	705	3/60/460		1	\$ 8,075.00	\$ 8,075.00	\$ 8,075.00	\$ 8,075.00
21	SBB-MTR-BLWR-05, MOTOR, BLWR #5, HIGH PRESSURE, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012S, constant speed	REFERENCE ORDER# 30101494 CUSTOMER PN - HH00236-003-MTRM			700	1780	3/60/4000		1	\$ 9,500.00	\$ 9,500.00	\$ 9,500.00	\$ 9,500.00
22	SBB-MTR-BLWR-03, MOTOR, BLWR #3, SWING, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012MS, constant speed	REFERENCE ORDER# 30101496 CUSTOMER PN - HH00236-005-MTRM			800	1750	3/60/4000		1	\$ 9,975.00	\$ 9,975.00	\$ 9,975.00	\$ 9,975.00
23	SBB-MTR-BLWR-01, MOTOR, BLWR #1, LOW PRESSURE, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012MS, constant speed	REFERENCE ORDER# 30101488 CUSTOMER PN - HH00236-001-MTRM			900	1780	3/60/4000		1	\$ 11,875.00	\$ 11,875.00	\$ 11,875.00	\$ 11,875.00

**SECTION III: COMPLETE REWINDING MOTORS - PRICING PROVIDED SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTAL EXPENSES NECESSARY TO COMPLETE THE WORK**

ITEM NO.	ITEM DESCRIPTION	MODEL	Motor Brg Shaft End	Motor Brg Oth End	HP	RPM	Ph/Hz/Volt	ESTIMATED ANNUAL USAGE	YEAR 1 UNIT PRICE	YEAR 1 EXTENDED PRICE	YEAR 2 UNIT PRICE	YEAR 2 EXTENDED PRICE
1	SAT1-MIXR-A-NORTH, SEC AERATION TANK MIXER-01 A-PASS S, METER 53012, Siemens, horizontal, direct drive, frame 213T, constant speed, weatherproof	MD000637	6308-ZZ	6308-ZZ	7.5	1740	3/60/460	5	\$ 1,250.00	\$ 6,250.00	\$ 1,250.00	\$ 6,250.00
2	SAT1-MIXR-A-SOUTH, SEC AERATION TANK MIXER-01 A-PASS N, METER 53011, Siemens, horizontal, direct drive, frame 215T, constant speed, weatherproof	MD000638	40BC02JP3	30BC02JP3	10	1740	3/60/460	3	\$ 1,475.00	\$ 4,425.00	\$ 1,475.00	\$ 4,425.00
3	DWB-DRIVE-BINBTM-03A, DRIVE, DEWATERING BIN BOTTOM CONV, #3 WEST SCREW, Baldor, horizontal, constant torque, belt drive, frame 326-TZ, variable speed	M12N042W693GI	BG6312B03	BG6311B03	15	1200	3/60/460	3	\$ 2,280.00	\$ 6,840.00	\$ 2,280.00	\$ 6,840.00
4	DWB-FAN-AMMONIASCRB-01, FAN, 30", AMMONIA SCRUBBER #1, TECO Westinghouse, horizontal, belt drive, frame256T, constant speed	NP0204	45BC03J30X	45BC03J30X	20	1760	3/60/460	1	\$ 1,710.00	\$ 1,710.00	\$ 1,710.00	\$ 1,710.00
5	PTB-PUMP-GRIT-02, PUMP, PTB GRIT #2, US Motors, horizontal, belt drive, frame 284T, constant speed	7970	6310-2Z-J/C3	6210-2Z-J/C3	25	1775	3/60/460	1	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00
6	DWB-MTR-CENT-01-40HP, MOTOR, #1 CENTRIFUGE SCROLL 40 HP, Magnetek, horizontal, belt drive, frame 324T, variable speed	CJB5S	312SF	210SF	40	1770	3/60/460	1	\$ 2,280.00	\$ 2,280.00	\$ 2,280.00	\$ 2,280.00
7	WIN-MTR-PUMP-01, MOTOR, PUMP #1, WINDY RUN PUMP STATION, US Motors, vertical, direct drive, frame 326VP, variable speed, washdown	G42244	6312-J/C3	6211-2Z-J	50	1770	3/60/230-460	2	\$ 2,660.00	\$ 5,320.00	\$ 2,660.00	\$ 5,320.00
8	RRPS-MTR-PUMP-01, MOTOR, PUMP #1, US Motors, vertical, direct drive, frame 444VP, variable speed, washdown	R0620085377-0001-R0002	75BC03J3/6314-J	65BC03J3/6214-2Z-J	75	895	3/60/460	1	\$ 4,370.00	\$ 4,370.00	\$ 4,370.00	\$ 4,370.00
9	FEQ-MTR-PUMP-01, MOTOR, FLOW EQUALIZATION PUMP #1, Toshiba, horizontal, direct drive, frame 405T, variable speed, weatherproof	GJ4075Q1DEHH	6317C3	6313C3	75	1180	3/60/460	2	\$ 3,800.00	\$ 7,600.00	\$ 3,800.00	\$ 7,600.00
10	WSPSB-MTR-PUMP-RAS-07, MOTOR, RAS PUMP #7, US Motors, horizontal, direct drive, frame 447T, variable speed, washdown	TYPE TC1 ; ID# L08 20077396-100R-02	6220-JC3	6313-JC3	100	890	3/60/460	1	\$ 5,380.00	\$ 5,380.00	\$ 5,380.00	\$ 5,380.00
11	KWPS-MTR-PUMP-01, MOTOR, PUMP #1, US Motors, vertical, direct drive, frame 447VP, variable speed, washdown	R0620085356-0001 R0004	75BC03J3	65BC03J3	100	900	3/60/460	2	\$ 5,380.00	\$ 10,760.00	\$ 5,380.00	\$ 10,760.00

12	NFF-MTR-FAN-FAF-01, MOTOR, ODOR CONTROL FAN, 100 HP, GE Motors, horizontal, belt drive, frame 405T, constant speed	5KS405SAA2003	6316ZC3	6316ZC3	100	1785	3/60/460		1	\$ 3,610.00	\$ 3,610.00	\$ 3,610.00	\$ 3,610.00
13	DWB-FAN-SULFSCR-02, FAN, 54", SULFIDE SCRUBBER STAGE #2, OLD BLDG. SRCE, Reliance, horizontal, belt drive, frame 444T, constant speed	ID# 01MAN92588 C001 FD	90BCO3J3OX	90BCO3J3OX	125	1785	3/60/460		1	\$ 4,370.00	\$ 4,370.00	\$ 4,370.00	\$ 4,370.00
14	PAF-MTR-BLWR-01, MOTOR, CENTRIFUGAL BLOWER, POST AERATION 1, 125 HP, Emerson Motors, horizontal, direct drive, frame 444TS, constant speed	TYPE TCE; ID# P01 30169340-0001 R 0003	6313-J/C3	6313-J/C3	125	3575	3/60/460		1	\$ 4,655.00	\$ 4,655.00	\$ 4,655.00	\$ 4,655.00
15	FMRL-MTR-PUMP-01, MOTOR, FOUR MILE RUN PUMP #1, TECO, vertical, direct drive, frame 5007C, variable speed	TYPE ASVA-TK001 S/N KED48220-1	6320/NU324	6320/NU324	150	585	3/60/460		1	\$ 10,925.00	\$ 10,925.00	\$ 10,925.00	\$ 10,925.00
16	DWB-MTR-CENT-01-200HP, MOTOR, #1 CENTRIFUGE BOWL, 200 HP, Magnetek, horizontal, direct drive, frame 447T, variable speed	355443	6322	6314	200	1780	3/60/460		1	\$ 5,700.00	\$ 5,700.00	\$ 5,700.00	\$ 5,700.00
17	PAF-MTR-PUMP-PEW-01, MOTOR, PLANT EFFLUENT WATER PUMP #1, US Motors, vertical, direct drive, frame 449VP, variable speed, weatherproof	TYPE JVC14; ID# M03 20069556-100R-03	29426 EJ	6219-J/C3	250	1750	3/60/460		1	\$ 7,125.00	\$ 7,125.00	\$ 7,125.00	\$ 7,125.00
18	ASE1-MTR-L1, MOTOR, ACTIVATED SLUDGE EFFLUENT PUMP #1, US Motors, vertical, direct drive, frame 5811P, variable speed, weatherproof	TYPE JVE14; ID# D03 99030767-001R-0Z	6226-JC3	7228BCB	300	591	3/60/460		1	\$ 17,575.00	\$ 17,575.00	\$ 17,575.00	\$ 17,575.00
19	WWFF-MTR-PUMP-N5, MOTOR, N5 PUMP, WET WEATHER FILTRATION FACILITY, US Motors, vertical, direct drive, frame 5811P, variable speed, corro-duty	5811P JVC14 - P/N- 20112242			400	720	3/60/460		1	\$ 19,475.00	\$ 19,475.00	\$ 19,475.00	\$ 19,475.00
20	WWFF-MTR-PUMP-N3, MOTOR, N3 PUMP, WET WEATHER FILTRATION FACILITY, US Motors Titan, vertical, direct drive, frame 1680P, variable speed, weatherproof	ORDER # 873-08512 I/D NO. J521504 54-02157-443	6320	7230	500	705	3/60/460		1	\$ 23,750.00	\$ 23,750.00	\$ 23,750.00	\$ 23,750.00
21	SBB-MTR-BLWR-05, MOTOR, BLWR #5, HIGH PRESSURE, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012S, constant speed	REFERENCE ORDER# 30101494 CUSTOMER PN - HH00236-003-MTRM			700	1780	3/60/4000		1	\$ 21,850.00	\$ 21,850.00	\$ 21,850.00	\$ 21,850.00
22	SBB-MTR-BLWR-03, MOTOR, BLWR #3, SWING, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012MS, constant speed	REFERENCE ORDER# 30101496 CUSTOMER PN - HH00236-005-MTRM			800	1750	3/60/4000		1	\$ 23,750.00	\$ 23,750.00	\$ 23,750.00	\$ 23,750.00
23	SBB-MTR-BLWR-01, MOTOR, BLWR #1, LOW PRESSURE, US Motors Titan, horizontal open sleeve bearing, direct drive, frame 5012MS, constant speed	REFERENCE ORDER# 30101488 CUSTOMER PN - HH00236-001-MTRM			900	1780	3/60/4000		1	\$ 26,125.00	\$ 26,125.00	\$ 26,125.00	\$ 26,125.00

**SECTION IV: ADDITIONAL SERVICES - ITEMS IN THIS SECTION ARE NOT APPLICABLE TO THE INSPECTION/TESTING, RECONDITIONING, OR COMPLETE REWINDING OF THE MOTORS ITEMIZED ABOVE IN SECTIONS I, II, AND III.**

**LABOR RATES - PRICING PROVIDED SHALL BE \*HOURLY RATES\* FOR ADDITIONAL REPAIRS. ITEMS IN THIS SECTION ARE NOT TO THE INSPECTION/TESTING, RECONDITIONING, OR COMPLETE REWINDING OF THE MOTORS ITEMIZED ABOVE IN SECTIONS I, II, AND III.**

ITEM NO.	ITEM DESCRIPTION	ESTIMATED ANNUAL USAGE	YEAR 1 UNIT PRICE	YEAR 1 EXTENDED PRICE	YEAR 2 UNIT PRICE	YEAR 2 EXTENDED PRICE
1	Monday - Friday (7:00 a.m. - 5:00 p.m.)	200	90	\$ 18,000.00	95	\$ 19,000.00
2	Monday - Friday (after 5:00 p.m.)	100	135	\$ 13,500.00	142.5	\$ 14,250.00
3	Saturday & Sunday	60	135	\$ 8,100.00	142.5	\$ 8,550.00
4	County Holiday Rate	50	135	\$ 6,750.00	190	\$ 9,500.00

**SECTION V: PARTS - BIDDERS SHALL PROVIDE THE PERCENTAGE DISCOUNT FROM MANUFACTURER'S LIST PRICE BELOW. THE PERCENTAGE LISTED BELOW SHALL REMAIN FIRM FOR THE DURATION OF THE CONTRACT**

29	Percentage Discount (%) off list price	10%				
<b>TOTAL BID PER YEAR</b>				\$ 360,060.00		\$ 361,060.00
<b>TOTAL BID</b>						\$ <b>721,120.00</b>