

CITY OF ANN ARBOR
INVITATION TO BID



Low Lift Pump Variable Frequency Drives

ITB No. 4768

Due Date: March 26, 2025 at 11:00 AM (Local Time)

Public Services, Water Treatment Services Unit

Issued By:

City of Ann Arbor
Procurement Unit
301 E. Huron Street
Ann Arbor, MI 48104

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INSTRUCTIONS TO BIDDERS

General

The City of Ann Arbor's Procurement Office is soliciting bids for the purchase of five (5) variable frequency drives with bypass based on the specifications provided herein. The pricing provided for this ITB shall be firm for 90 days upon mutual agreement between the City and the vendor.

Any Bid which does not conform fully to these instructions may be rejected.

Preparation of Bids

Bids should be prepared providing a straight-forward, concise description of the Bidder's ability to meet the requirements of the ITB. Bids shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed and dated in ink by the person signing the Bid.

Bids must be submitted on the "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid. No alternative bid will be considered unless alternative bids are specifically requested. If alternatives are requested, any deviation from the specification must be fully described, in detail on a clearly marked "Alternate" section of Bid form.

Each person signing the Bid certifies that he/she is the person in the Bidder's firm/organization responsible for the decision as to the fees being offered in the Bid and has not and will not participate in any action contrary to the terms of this provision.

Questions or Clarifications / Designated City Contacts

All questions regarding this ITB shall be submitted via email. Emailed questions and inquiries will be accepted from any and all prospective Bidders in accordance with the terms and conditions of the ITB.

All questions shall be due on or before March 18, 2025 at 2:00 p.m. (local time) and should be addressed as follows:

Specification/Scope of Work questions emailed to Nicholas Baran, nbaran@a2gov.org
Bid Process and Compliance questions emailed to Colin Spencer, CSpencer@a2gov.org

Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall quickly be brought to the attention of Colin Spencer at cspencer@a2gov.org after discovery. Further, the contractor and/or service provider shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

Addenda

If it becomes necessary to revise any part of the ITB, notice of the Addendum will be posted to Michigan Inter-governmental Trade Network (MITN) www.mitn.info and/or City of Ann Arbor web site www.A2gov.org for all parties to download.

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received, but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The City will not be bound by oral responses to inquiries or written responses other than written addenda.

Bid Submission

All Bids are due and must be delivered to the City of Ann Arbor Procurement Unit on or before March 26, 2025 at 11:00 a.m. (Local time). Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

Each Bidder must submit one (1) original Bid and one (1) Bid copy in a sealed envelope clearly marked: ITB No. 4768 – Low Lift Pump Variable Frequency Drives.

Bids must be addressed and delivered to:

City of Ann Arbor
Procurement Unit,
c/o Customer Services, 1st Floor
301 East Huron Street
Ann Arbor, MI 48104

All Bids received on or before the Due Date will be publicly opened and recorded immediately. No immediate decisions are rendered.

The following forms provided within this ITB Document should be included in submitted bids.

- **Vendor Conflict of Interest Disclosure Form**
- **City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance**

Bids that fail to provide these forms listed above upon bid opening may be rejected as non-responsive and may not be considered for award.

Hand delivered bids may be dropped off in the Purchasing drop box located in the Ann Street (north) vestibule/entrance of City Hall which is open to the public Monday through Friday from 8am to 5pm (except holidays). The City will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time for submission of bids past the stated due date and time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines in its sole discretion that circumstances warrant it.

Award

The City intends to award a Contract/Purchase Order to the lowest responsible Bidder(s) providing the best value to the City. The City may, at its sole discretion, award line-by-line in the best interest of value to the City.

Responsible bidder means a bid submitted, which conforms in all aspects of the requirements set forth in the invitation to bid. All aspects could include references, past experience, past performance, and qualifications.

Official Documents

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. If you obtained City of Ann Arbor Bid documents from

other sources, it is recommended that you register on www.MITN.info and obtain an official Bid.

Taxes

Municipalities are exempt from Michigan State Sales and Federal Excise taxes. Do not include such taxes in the bid figure(s). The City will furnish the successful bidder with tax exemption certificates when requested.

Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of one-hundred and twenty (120) days.

Non-Discrimination Requirements

All contractors proposing to do business with the City shall satisfy the non-discrimination administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

Conflict Of Interest Disclosure

The City of Ann Arbor Purchasing Policy requires that prospective Vendors complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected Vendor unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Vendor Conflict of Interest Disclosure Form is attached.

Debarment

Submission of a Bid in response to this ITB is certification that the Bidder is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

Disclosures

After bids are opened, all information in a submitter's bid is subjected to disclosure under the provisions of Michigan Public Act No. 442 of 1976, as amended (MCL 15.231 et seq.) known as the "Freedom of Information Act." The Freedom of Information Act also provides for the complete disclosure of contracts and attachments thereto except where specifically exempted.

Bid Protest

All Bid protests must be in writing and filed with the Purchasing Agent within five (5) business days of the award action. The bidder must clearly state the reasons for the protest. If a bidder contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the bidder to the Purchasing Agent. The Purchasing Agent will provide the bidder with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee whose decision shall be final.

Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by the Offeror to initiate contact with anyone

other than the Designated City Contacts provided herein that the prospective Offeror believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.

Cost Liability

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the Bidder prior to the execution of a contract with the City. By submitting a bid, a bidder agrees to bear all costs incurred or related to the preparation, submission and selection process for the bid.

Reservation of Rights

The City of Ann Arbor reserves the right to accept any bid or alternative bid proposed in whole or in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the City.

Environmental Commitment

The City of Ann Arbor recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a vibrant community and economy. The City further recognizes that the products and services the City buys have inherent environmental and economic impacts and that the City should make procurement decisions that embody, promote and encourage the City's commitment to the environment.

The City strongly encourages potential vendors to bring forward tested, emerging, innovative, and environmentally preferable products and services that are best suited to the City's environmental principles. This includes products and services such as those with lower greenhouse gas emissions, high recycled content, without toxic substances, those with high reusability or recyclability, those that reduce the consumption of virgin materials, and those with low energy intensity.

As part of its environmental commitment, the City reserves the right to award a contract to the most responsive and responsible bidder, which includes bids that bring forward products or services that help advance the City's environmental commitment. In addition, the City reserves the right to request that all vendors report their annual greenhouse gas emissions, energy consumption, miles traveled, or other relevant criteria in order to help the City more fully understand the environmental impact of its procurement decisions.

INVITATION TO BID

City of Ann Arbor
Guy C. Larcom Municipal Building
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including City Nondiscrimination requirements, Vendor Conflict of Interest Form, Instructions to Bidders, Bid Forms, Purchase Order Terms and Conditions, General Conditions, Detailed Specifications, and all Addenda, and understands them. The Bidder declares that it conducted a full investigation of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

In accordance with these bid documents, and Addenda numbered _____, the undersigned, as Bidder, proposes to deliver to the City all product/services herein described for the amounts set forth in the Bid Forms.

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

Bidder further agrees that the cited provisions of Chapter 14 form a part of this Contract.

The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

SIGNED THIS _____ DAY OF _____, 202__.

Bidder's Name

Authorized Signature of Bidder

Official Address

(Print Name of Signer Above)

Telephone Number

Email Address for Award Notice

LEGAL STATUS OF BIDDER

(The Bidder shall fill out the appropriate form and strike out the other three.)

Bidder declares that it is:

* A corporation organized and doing business under the laws of the State of

_____, for whom _____, bearing the office title
of _____, whose signature is affixed to this Bid, is authorized to execute contracts.

NOTE: If not incorporated in Michigan, please attach the corporation's Certificate of Authority

• A limited liability company doing business under the laws of the State of _____,
whom _____ bearing the title of _____
whose signature is affixed to this proposal, is authorized to execute contract on behalf of the
LLC.

* A partnership, organized under the laws of the state of _____ and filed in the county
of _____, whose members are (list all members and the street and mailing address of
each) (attach separate sheet if necessary):

* An individual, whose signature with address, is affixed to this Bid: _____
(initial here)

Authorized Official

_____ **Date** _____, 202_

(Print) Name _____ Title _____

Company: _____

Address: _____

Contact Phone () _____ Fax () _____

Email _____

VARIABLE FREQUENCY DRIVE (VFD) SPECIFICATIONS

PART 1 – GENERAL

1.1 SCOPE

- A. The work of this section consists of furnishing Variable Frequency Drives as specified herein and shown on the drawings. Any changes from this specification shall be submitted to the Owner's Representative in writing for approval a minimum of 14 days prior to bid.
- B. The supplier of the VFD must be factory authorized for component level warranty repair work.
- C. Factory trained service engineer shall be available for on-site breakdown service within 24 hours of notification at any location within the continental USA.

1.2 SUBMITTALS

- A. Submit manufacturer's product data in accordance with control schematics including control devices operating in conjunction with the VFD.
- B. Wiring diagrams and Manufacturer's recommended spare parts list shall be included with the submittal.
- C. Dimensioned drawings with significant detail for locating conduit stub ups and field wiring.
- D. Installation and Maintenance manuals shall be shipped with the VFD and shall include detailed installation, start-up, and checkout procedures and adjustment and troubleshooting information.
- E. Submit evidence that the equipment will be provided with all specified controls, features, options and accessories.
- F. Submit certification that the equipment is designed and manufactured in conformance with all applicable codes and standards.
- G. Certified copies of test results shall be submitted for all tests specified in this section.
- H. The VFD will be certified as compatible with a submersible pump motor.

1.3 SYSTEM HARMONIC DISTORTION STUDY

- A. The Contractor shall gather all data on the electric source, connected station loads and operation. The Contractor shall verify transformer size, X/R ratio, available fault current and fault capacity.
- B. The Contractor shall prepare a harmonic distortion study to determine voltage and current harmonics at the point of connection. The study shall include various VFD speeds and load settings.
- C. The Contractor shall submit confirmation the VFD limits disturbances below 5% THD for voltage and below the current distortion established in IEEE – 519 Table 10.3.
- D. The “point of connection” shall be the line side of the breaker on the line side of the VFD.
- E. The System Harmonic Study result finding will be part of the submittal package.

1.4 CODES AND STANDARDS

- A. The VFD shall comply with the applicable requirements of the latest standards of ANSI, IEEE, NEMA, the NEC, and be UL/CSA listed.

1.5 WARRANTY

- A. The Contractor shall warranty the VFD in accordance with the general provisions of the contract for a period of no less than two years. The warranty will be placed in the name of the Owner.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Allen-Bradley/Rockwell
- B. Square “D”/Schnieder
- C. Dan Foss
- D. Toshiba

2.2 MOTOR DATA

- A. The AC drive shall be designed to operate an electrical motor with a nameplate rating of three (3) 60 horsepower without bypass and two (2) 60 horsepower with bypass, 460V three phase, 1.15 service factor, 90% power factor and a 94% efficiency.

- B. Driven System Data:

	<u>Quantity</u>	<u>RPM</u>	<u>Description</u>
1.	3 each - 60 HP	700	Submersible Pump Without Bypass
2.	2 each - 60 HP	700	Submersible Pump With Bypass

2.3 CONSTRUCTION

- A. The VFD shall convert fixed utility voltage and frequency to variable voltage and frequency for AC motor speed control, adjustable from 1.0 to 60.0 HZ.
- B. The VFD shall produce adjustable voltage and frequency via a two-step process. The first section shall utilize a three-phase diode bridge rectifier to convert AC to fixed voltage DC. The rectifier shall maintain AC line power factor at 95% or better, at any combination of speed or load, including both displacement and distortion components. The second section shall utilize a fifteen step Pulse Width Modulated inverter that converts the fixed potential DC into a variable voltage, variable frequency AC waveform suitable for a standard three phase induction motor. VFD techniques other than pulse width modulated (PWM) technology will not be considered. The Contractor shall be responsible for ensuring compatibility of the VFD with the actual pump motor NEMA design.

The VFD will be an 18 Pulse system.

- C. Insulated Gate Bipolar Transistors (IGBTs) shall be used in the inverter section. Bipolar Junction Transistors, GTOs or SCRs will not be acceptable.
- D. The amp rating of the transistors used in each phase of the inverter section shall be rated a minimum of 2.75 times the continuous amp rating of the VFD.
- E. Full load efficiency shall be in excess of 95% at rated output frequency. Efficiency shall exceed 80% at 50% speed and load.
- F. The adjustable frequency and voltage output shall provide constant volts per hertz excitation to the motor terminals, up to (60 HZ). The rated continuous output current of the VFD shall not be less than 1.10 times the full load amp rating of the motor to which the VFD is applied.
- G. The logic section of the VFD shall be microprocessor based. In addition, VFD shall have a common logic card throughout the HP range required. Logic card, or control board, must be interchangeable. Logic card shall be a surface mounted device with a protective coating.

- H. All parts and sub-assemblies shall be completely front accessible and easily removable. All printed circuit board connectors must be polarized and stamped with identifiers to match up with printed circuit board designators.
- I. For safety purpose, local operator control interfaces shall be 120 VAC or less.
- J. VFD shall accept speed reference inputs for 4 to 20 mA, 250 ohms input impedance. Input reference offset and gain shall be programmable to interface with a variety of transducers. Input A/D converter should be a least 10 bit to ensure smooth control of the output frequency.
- K. Digital Operator/keypad shall be included for monitor indication and ease of troubleshooting. Unit must be visible through the cover of the VFD. Digital Operator shall include the following minimum functions:
 - 1. Motor speed indication in RPM, percent speed, or other engineering units, selectable and scalable through software programming of the VFD.
 - 2. Speed Reference Signal.
 - 3. Fault trip annunciation.
 - 4. Output current accurate to within approximately 3% regardless of frequency.
 - 5. Output Power in kW.
 - 6. Output Voltage.
 - 7. Bus Voltage.
 - 8. The keypad operator shall display in text programmable in English or Spanish language for ease of understanding for the operators. The alphanumeric display shall be a minimum of 56 characters. Coded non-text displays or LED indicators are not acceptable.
- L. The VFD shall have a form C "Fault" contacts rated at least 1.0A, at 250 VAC available for customer use.
- M. The VFD shall have a normally open "Run" contact rated at least 1.0A, at 250 VAC available for customer use.
- N. All contact/switch inputs into the VFD must be completely isolated from the analog reference signal.
- O. A three phase input line reactor shall be supplied with the VFD.
- P. VFD shall be provided with RFI filtering.
- Q. Total voltage harmonic distortion, THD shall be a maximum of 5% measured at the point of connection.

- R. Total current harmonic distortion shall not exceed the values in Table 10.3 of IEEE – 519 at the point of connection.
- S. The VFD will be supplied with enough I/O expansion card to handle all the required signals and alarms as shown on the drawings.

2.4 OPERATING CONDITIONS

- A. Conditions of operation shall include:
 - 1. Service factor for current capacity of 1.0 with 120% overload capacity for 60 seconds at maximum ambient temperature.
 - 2. Incoming three phase, 480VAC power, + 5% - 10% from nominal, 60 HZ.
 - 3. AC line frequency variation less than +/- 2% from nominal.
 - 4. Operating temperature range from +14 to +103 degree Fahrenheit. Contractor shall provide all necessary auxiliary equipment required for continuous operation within this temperature range. If auxiliary cooling, i.e. air conditioning is required, calculations showing proper size unit required to maintain temperature at specified limits at 100% load must be submitted.
 - a. Storage temperature range from -4 to 140 degree Fahrenheit.
 - b. Humidity rating of 90% RH, non-condensing.
 - c. Altitude of 3,300 feet or less.

2.5 PERFORMANCE/OPERATION

- A. Three-phase power applied to the motor shall be real time generated sine-coded Pulse Width Modulated to maximize available torque per amp and minimize unnecessary motor heating. In addition, waveform must be generated by an asynchronous carrier to eliminate torque pulsation and eliminate the irritation of "gear-shift" type audible noise fluctuations as the motor speed is varied.
- B. Output voltage fluctuations due to input voltage variations shall be eliminated by utilization of a voltage regulation scheme. Regulation must be at least +/- 3%.
- C. VFD must be able to start into a rotating load. Unit should perform "speed search" type operation in which the VFD will automatically decrease the output frequency to track motor speed. Once the VFD output is precisely matched to the motor RPM, the unit will smoothly return the motor to the speed set point at full rated motor torque, according to the programmed acceleration ramp. Units that trip or attempt to brake the motor by regenerative current limit will be unacceptable.
- D. 2.0 second power loss ride through capability. In the event of a complete loss (2 sec. and less) and restoration of three phase input power, the unit shall continue

operation without requiring any fault reset. This feature shall be defeatable in the programming.

- E. VFD shall have user selectable capability to automatically apply a programmable level of regulated DC Injection current to the motor windings at start (anti-wind milling protection to bring the motor to rest when the direction of rotation can not be guaranteed) or stop. Non-regulated DC current (or voltage) control schemes are unacceptable. In addition, time at start and stop should be independently adjustable to provide application flexibility.
- F. Prohibited frequency points: The VFD must possess three field programmable, critical frequency rejection points with field programmable dead band.
- G. VFD shall have provision for user selectable reference loss protection. In the event the speed reference signal to the VFD decreases by more than 90% in less than 0.4 sec. the inverter shall continue operation at 80% of the previous setting. If the reference returns, the VFD will again track the input reference. The VFD shall stop whenever a stop command is given.
- H. Intelligent automatic fault reset. If the VFD experiences a non-catastrophic fault trip (not indicative of component failure), the unit will automatically reset the trip condition (field programmable number of restarts). After 10 minutes of continuous operation, the number of resets in the register shall be returned to zero.
- I. VFD shall have provisions to invert speed reference signal. As reference signal increases, output frequency decreases.
- J. Motor speed dependent, adaptive, motor thermal overload protection shall be programmable in the drive software based on motor nameplate amps.
- K. Standard programming adjustments via the English/Spanish language operator (switches and pot settings are not acceptable) shall include:
 - 1. V/HZ pattern
 - 2. Minimum Speed
 - 3. Maximum Speed
 - 4. Critical frequency rejection points
 - 5. Slip compensation
 - 6. Acceleration Time
 - 7. Deceleration Time
 - 8. Power loss ride through time
 - 9. Separately adjustable Current Limit for acceleration and at speed conditions.

10. Motor thermal overload protection.
11. DC Injection Time and Current.
12. Motor Rated Current (for overload protection).
13. Minimum MTBF shall be 100,000 hours.

2.6 PROTECTIVE FEATURES/FUNCTIONS

- A. Controller shall have as a minimum, the following alphanumeric fault trip indications annunciated in English or Spanish on the keypad operator. In addition, the fault diagnostics should be stored in non-volatile memory to retain important trip information after removal and later restoration of three-phase input power.
 1. Over current (OC)
 2. Over voltage (OV)
 3. Blown Fuse (FU)
 4. Overheat (OH)
 5. Motor Overload (OL1)
 6. Inverter Overload (OL2)
 7. Phase Balance (PB)
 8. Under voltage (UV)
 9. External Fault Input (EB)
- B. In addition, the following conditions must be detected or protected against:
 1. Ground fault
 2. Loss of phase
 3. Output short circuit, phase-to-phase or phase-to-ground

2.7 PRE-ENGINEERED OPTIONS

- A. The following integrally mounted options shall be provided with the VFD:
 1. Proportional Integral Derivative, (PID) EEPROM controller. All control variables including reset; derivative times and proportional band shall be adjustable from the cover-mounted keypad. The PID controller shall accept a 4-20mA signal from an external pressure transducer.

2. Circuit breaker with through door handle, lockable in the "off" position. Unit shall have an AIC rating as indicated on the drawings. AIC rating shall be 65,000 A/C.
3. Drive shall be provided with standard RS-232C serial communications port, USB port and Ethernet communication.
4. AC Input Reactor
5. 6 digit non-resettable elapsed time meter, ETM.
6. Door mounted H-O-A selector switch. The drive will have Local and Automatic capabilities. Refer to Instrumentation and Controls drawings for further details.

2.8 QUALITY ASSURANCE

- A. 100% of the power semi-conductors (IGBT transistors, diodes, etc.) must be inspected before acceptance.
- B. 100% of all completed printed circuit board assemblies must be subjected to a minimum 72-hour heat cycle, consisting of 9 cycles, each as described below:
 1. Raise temperature from ambient to +70 degree C in 0.5 hours.
 2. Maintain at +70 degree C for 3 hours.
 3. Decrease temperature to -10 degree C in 1 hour.
 4. Maintain at -10 degree C for 3 hours.
 5. Increase temperature to ambient in 0.5 hours.
- C. All printed circuit boards shall be subjected to a computerized functional test to verify the integrity of all components and circuits.
- D. Completed inverter must be subjected to full load testing prior to final inspection and shipment.

2.9 SERVICE

- A. The VFD manufacturer shall provide, a start-up package for the VFDs. Service shall include inspection, final adjustments, operational checks and a final report for inclusion in the documentation package shipped with the unit.
- B. Factory trained service engineer must be available for breakdown service at the site within 24 hours of notification.
- C. VFD supplier must be factory authorized to perform warranty field and bench repair service. Such service must be performed at the component level to minimize any

non-warranty repair charges to the Owner of the equipment. "Board Swapping" level of repair capability shall be considered unacceptable.

- D. Full remote analysis of the VFD shall be achievable with the motor leads disconnected from the VFD.

2.10 ENCLOSURE

- E. The VFD shall be installed within NEMA I enclosure.

PART 3 – EXECUTION

3.1 INSTALLATION AND START-UP

- A. A qualified manufacturer's technical representative shall supervise the contractor's installation, testing, and start-up. A minimum of 2 supervision days (16 hours) shall be provided by the manufacturer's representative.

3.2 SPARE PARTS

- A. Furnish spare parts for each drive as follows:
 - 1. All parts recommended by the Manufacturer as spare parts.
 - 2. Special tools as recommended by the manufacturer.
- B. All spare parts shall be packaged in original factory containers and labeled identifying all parts for recording.
- C. All spare parts shall be delivered to the OWNER after completion of work and prior to final acceptance.

END OF SECTION

BID FORM

VENDOR NAME: _____

Item Description	Estimated Quantity	Unit Price	Total Price
Low Lift VFD, no Bypass	3		
Low Lift VFD, with Bypass	2		
Start-up Services	1		
Total Base Bid			
<u>Alternate</u> Extended Warranty from 2-year to 3-year (add)			
TOTAL BASE BID PLUS ALTERNATE			

REFERENCES: Please list at least three (3) entities for which you have provided similar materials:

Organization

Address

Contact Person

Telephone

1. _____

2. _____

3. _____

GENERAL CONDITIONS

ESTIMATED QUANTITIES

Quantities stated are estimated and not guaranteed. The quantities stated will be used for award purposes only and are based up an average of actual annual usage.

DOWN PAYMENTS

Any bid proposal submitted which requires a down payment or prepayment of any kind prior to delivery and acceptance of the item, as being in conformance with the specifications will not be considered for award.

PURCHASE ORDER

The successful bidder will be issued a purchase order from the City of Ann Arbor, which will create a bilateral contract between the City and the successful bidder. The purchase order shall commit the bidder to perform the contract in accordance with the specifications and the terms and conditions of the purchase order.

The terms and conditions of the Purchase Order are provided herein.

CONTRACT TERM

The pricing provided for this ITB shall be firm for 90 days Upon mutual agreement between the City and the vendor.

City of Ann Arbor: General Terms and Conditions

The following General Terms and Conditions shall apply to all purchases by or on behalf of the City of Ann Arbor unless specifically provided otherwise on the front of this document:

Tax Exemption: The City of Ann Arbor ("City") is tax exempt: FEIN # 38-6004534.

Acceptance of Contract: This purchase order is the City's contract to purchase the goods or services attached to this document from the Vendor. The City's placement of this order is expressly conditioned upon the Vendor's acceptance of all the terms and conditions on or attached to this purchase order. All specifications, drawings, and data submitted to the Vendor with this order are hereby incorporated and made part hereof.

Amendments: No agreement or understanding to modify this contract shall be binding upon the City unless in writing and signed by the City's authorized agent.

Delivery: All prices must be F.O.B. delivery point. Time is of the essence on this contract. If delivery dates cannot be met, the Vendor agrees to advise the City in writing of the earliest possible shipping date. The City reserves the right to cancel or purchase elsewhere and hold the Vendor accountable.

Risk of Loss: Regardless of F.O.B. point, the Vendor agrees to bear all risk of loss, injury, or destruction of goods or materials ordered herein that occur prior to delivery or acceptance by the City, whichever is later. No such loss, injury, or destruction shall release the Vendor from any obligations hereunder.

Inspection: Vendor must properly package goods to prevent damage. The City will not accept damaged goods. The City reserves the right to inspect goods at a reasonable time subsequent to delivery where circumstances or conditions prevent effective inspection of the goods at the time of delivery. All rejected goods shall be returned to the Vendor at Vendor's cost, with no cost to the City, whether the damage is readily apparent at the time of delivery or later. The City's acceptance is conditioned on such inspection.

Patents and Copyrights: If goods sold and delivered to the City hereunder are protected by an applicable patent or copyright, the Vendor agrees to indemnify and save harmless the City from and against any and all suits, claims, judgments, and costs instituted or recovered against the City by any person on account of the use or sale of such goods by the City in violation of such patent or copyright.

Uniform Commercial Code: All applicable portions of the Michigan Uniform Commercial Code shall govern contracts for goods with the City of Ann Arbor; except as modified by contract documents.

Non-waiver of Rights: No failure of either party to exercise any right given to it hereunder or to insist upon strict compliance by the other party with its obligations hereunder, and no custom or practice of the parties at variance with the terms hereof, nor any payment under this contract shall constitute a waiver of either party's right to demand exact compliance with the terms hereof.

Material Safety Data Sheets: Applicable Material Safety Data Sheets, in compliance with OSHA/MIOSHA hazard communication regulations and standards, must be provided by the Vendor to the City at the time of purchase.

Assignments: The Vendor agrees not to assign or transfer any part of this contract without the written consent of the City, acting through an authorized agent. Any unauthorized assignment may subject the Vendor to immediate termination.

Laws Governing, Severability: This contract shall be governed by and construed according to the laws of the State of Michigan. Vendor agrees to submit to the jurisdiction and venue of the Circuit Court of Washtenaw County, MI, or if original jurisdiction is established, the U.S. District Ct. for Eastern District of MI, Southern Division. The Vendor stipulates venues referenced are convenient and waives any claim of non-convenience. If any term herein is found to be ineffective, unenforceable or illegal under any present or future law, such term shall be fully severable, and the remaining terms shall not be affected and shall remain in full force and effect.

Prevailing Wage: Vendor must comply with applicable prevailing wage requirements, including the Davis-Bacon Act.

Living Wage: Vendor must comply, when applicable, with the City's Living Wage Ordinance (Chapter 23, City Code).

Non-Discrimination: Vendor must comply with all applicable state, federal, and local non-discrimination laws, including MCL 37.2209 and Chapter 112 of City Code.

Indemnification: To the fullest extent permitted by law, the Vendor shall indemnify, defend, and hold the City, its officers, employees, and agents harmless from all suits, claims, judgments, and expenses, including attorney fees, resulting or alleged to result from any act or omission associated with the performance of this contract by the Vendor or anyone acting on the Vendor's behalf under this contract. The Vendor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence. This indemnity survives delivery and acceptance of the Vendor's goods and services.

Warranty: The Vendor warrants to the City that all goods and services furnished hereunder will conform in all respects to the terms of this contract, including any drawings, specifications and standards incorporated herein. In addition, the Vendor warrants the goods and services are suitable for and will perform in accordance with the purposes for which they were intended.

Payment Terms: The City's payment terms are "net 30." The payment date will be calculated based on the invoice receipt date or delivery date, whichever is later.

Payments: All invoices under this contract shall be emailed to accountspayable@a2gov.org. Mailed invoices shall be addressed to the City of Ann Arbor, Accounts Payable, P.O. Box 8647, Ann Arbor, MI 48107, as indicated on the front of this purchase order. Invoices must include the Vendor's name, phone number, and clearly list item descriptions, quantities, and units of measure. The Vendor acknowledges and understands that invoices not addressed as stated above shall have the "net 30" begin once the invoice is received by City Accounts Payable.

Compliance with Laws: The Vendor certifies that in performing this contract it will comply with all applicable laws, regulations, rules, and orders.

Termination for Cause: In the event the Vendor fails, at any time, to comply with, fully perform, or strictly adhere to any covenant, condition or representation contained within this contract, the City shall have the right to give written notice to Vendor of such failure. If such failure is not cured to the City's satisfaction within 10 business days from the time of delivery to Vendor of such notice, the City shall have the right to terminate this contract immediately without the requirement of further notice.



Vendor Conflict of Interest Disclosure Form

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor's Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

Conflict of Interest Disclosure*	
Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.	() Relationship to employee
	() Interest in vendor's company
	() Other (please describe in box below)

*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:

Vendor Name		Vendor Phone Number	
Signature of Vendor Authorized Representative	Date	Printed Name of Vendor Authorized Representative	

Non-Discrimination Ordinance

NDO-2

CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below.
You can review the entire ordinance at www.a2gov.org/humanrights.

Intent: It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

Discriminatory Employment Practices: No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

Discriminatory Effects: No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

Nondiscrimination by City Contractors: All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

Complaint Procedure: If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at www.a2gov.org/humanrights. Then submit it to the Human Rights Commission by e-mail (hrc@a2gov.org), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at hrc@a2gov.org.

Private Actions For Damages or Injunctive Relief: To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

THIS IS AN OFFICIAL GOVERNMENT NOTICE AND
MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.