



COVER PAGE

Bid Proposal #2482

PAD-MOUNTED UNDERGROUND SWITCHGEAR

Sealed bids and electronic submitted bids for the above will be received until **10:00 AM CDT, Tuesday, July 23, 2024**, and publicly opened in the City of Alexandria Council Chambers or Council Committee Room.

Please file bid by one of the following means:

Hand-Delivered or Express Delivery:

Attention: Donna Jones, City Clerk
City of Alexandria - City Hall
915 Third Street, First Floor
Alexandria, LA 71301
Phone: 318-449-5090

Mailed via USPS:

Attention: Donna Jones, City Clerk
City of Alexandria - City Hall
PO Box 71
Alexandria, LA 71309-0071

Electronic Bid Submission: Central Bidding

Pursuant to Louisiana R.S. 38:2212 B.(6)(a) through E. (1-7) and R.S. 38:2212.1 B.(4)(a), vendors/contractors have the option to submit their bids and bid bonds electronically. Bids and bonds to be filed electronically shall be posted with **Central Bidding** at www.centralauctionhouse.com (phone 1-225-810-4814). Registration will need to be completed prior to posting of bid.

Complete bid specifications are available for viewing and downloading at the City of Alexandria's website www.cityofalexandrialala.com ; on the left hand side of the opening page, go to the heading "Business" then drop down to "RFP/RFQ/Bids"; the current bids will be listed for your convenience.

City of Alexandria Buyer Name: Joann Swain, Purchasing Manager
Phone Number: (318) 441-6182
Fax Number: (318) 619-3412
E-Mail Address: joann.swain@cityofalex.com



Wilma Kelly
Purchasing Manager

City of Alexandria

Purchasing Department
P.O. Box 71
Alexandria, Louisiana
71309-0071



Office: (318) 441-6180
Fax: (318) 441-6185

Sealed bids will be received until 10:00 AM Tuesday, **July 23, 2024**, and publicly opened in the Council Chambers or Council Committee Room.

City of Alexandria Bid# 2482
Page: 1 of 22
Date Specifications Prepared: May 20, 2024

Bid Bond Requirements: A bid bond or check for N/A% of the total amount of the bid.

Performance Bond Requirements: In the event bid If accepted, a performance bond shall be required In the amount of N/A%.

Please file a bid with the following:

Donna Jones, City Clerk
City of Alexandria – City Hall
915 Third Street
P.O. Box 71
Alexandria, LA 71309-0071
Phone: (318) 449-5090

INTRODUCTION

PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR

The City of Alexandria intends to secure pricing for a minimum of one **Pad-Mounted Underground Manual Switchgear** for use by the City of Alexandria Electric Distribution Department.

All products shall be new and of current model year manufacture. Each unit shall be equipped with the manufacturer's equipment and accessories which are included as "standard" in the advertised and published literature for the unit. No such item of equipment shall be removed or omitted for the reason that it was not specified in the bid documents.

All bid prices shall include any and all freight charges. All products are to be shipped F.O.B., freight prepaid, the City of Alexandria Electric Distribution, located at 1015 N. 3rd Street, Alexandria, LA 71301.

Completed bid packet should be returned as issued by the City of Alexandria with ALL PAGES intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, may result in the bidder's (proposer's) entire bid being rejected.

Note: A mandatory pre-bid conference shall be held on Thursday, **June 27, 2024 at 10:00 AM, at the City of Alexandria Electric Distribution Department, located at 1015 N. Third Street, Alexandria, LA 71301. All vendors wishing to submit bid proposals for this project "**MUST ATTEND**" this pre-bid conference. Pursuant to LA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid.**

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

GENERAL CONDITIONS FOR BIDDERS - PLEASE READ CAREFULLY

1. Pursuant to LA R.S 38:2212.1. C.(1)(2), any manufacturer's preference in this proposal is descriptive, but non-restrictive, and is used only to indicate minimum requirement for type, grade and quality unless otherwise specified.
2. Pursuant to LA R.S. 38:2212 B.(1), the provisions and requirement of this bid shall not be considered as informalities and shall not be waived by the City of Alexandria. Therefore, conditions and specifications on this bid form shall be strictly enforced and any and all alterations, deviations, and non-compliance to said conditions and specifications, either on the bid form or by separate attachment, shall be grounds for immediate disqualification.
3. Preference shall be given to bidders quoting F.O.B. Destination (the City of Alexandria using department), FREIGHT PREPAID, unless otherwise requested.
4. Each bidder shall submit his proposal on the proposal form furnished by the City of Alexandria Purchasing Department. The complete bid package must be returned as issued by the City with all pages intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, shall result in the vendor's entire bid package being rejected.
5. Literature, brochures, and other related paperwork attached to the bid should be identified with the name of the bidder and bid item number.
6. In case of a mathematical discrepancy between unit price and extensions, the unit price shall prevail.
7. Pursuant to LA R.S. 38:2212 F., the bid specifications may contemplate a fixed escalation or de-escalation in accordance with the United States Bureau of Labor Statistic's Consumer Price Index or the Producer Price Index. Bids based on specifications which are subject to a recognized escalation index shall be legal and valid for any item of a public work, at the discretion of the City.
8. Pursuant to LA R.S. 38:2212.1. F., any public procurement unit may participate in a cooperative purchasing agreement with the City of Alexandria to acquire quantities of the above listed items under a contract with the City of Alexandria for items awarded by public bid, pursuant to the cooperative purchasing provisions of Part VII of Chapter 17 of Subtitle III of Title 39 of the Louisiana Revised Statutes of 1950, R.S. 39:1701 et seq.
9. The City of Alexandria reserves the right to award by item or by total bid, unless otherwise specified in the bid specifications. (Price(s) should be itemized.)
10. All erasures or corrections on the bid form must be initialed and the City of Alexandria may rely on the apparent authority represented by the initials.
11. The City of Alexandria reserves the right to reject for cause any and all bids or parts of bids, or accept bids most beneficial to the City.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

General Conditions for Bidders - Please Read Carefully (Continued)

12. Any bid submitted which contains additions, conditional or alternate bids, or irregularities which may make the proposal incomplete, indefinite, or ambiguous as to its meaning, thus requiring clarification after the specified date and time of bid opening shall be rejected.
13. Bids shall be opened publicly in the City Council Chambers or Council Committee Room.
14. Cash discounts may be accepted, but SHALL NOT be considered in making award.
15. Regarding a bid for purchase of materials, supplies or services, not to include construction of any public works, a written notice of acceptance mailed or otherwise furnished to the successful bidder shall result in a binding contract without further action by either party.
16. When any bid is accepted for the construction or doing of any public works, a written contract shall be executed by and between the City of Alexandria and the Contractor. No contract shall be binding upon the City until it has been executed by the City and delivered to the successful bidder. Should the bidder to whom the contract is awarded fail to execute the contract, the award shall then be made to the next lowest responsible bidder, or re-advertised for public bid, said decision to be in the sole judgment of the City of Alexandria. This action may result in the loss of bidding privileges for a period of one (1) year.
17. The City of Alexandria shall schedule for payment the invoices for articles or services purchased under this bid within thirty (30) days after due and proper delivery accompanied by invoice.
18. The City of Alexandria is exempt from all sales taxes. A sales tax exempt form shall be furnished by the City of Alexandria Purchasing Department, if requested.
19. Bidder(s) awarded item(s) by the City of Alexandria shall be responsible for supplying all products at the awarded price(s). Failure may result in the City's cancellation of the remaining items awarded.
20. Regarding Service Contracts and Procurement Contracts, the terms of the contract shall be binding upon any and all parties involved until goods and supplies are delivered, services have been rendered, and/or work has been completed and accepted by the Mayor on behalf of the City of Alexandria and all payments required to be made to the Contractor have been made. However, a contract may be terminated under any and all of the following conditions:
 - (a) By mutual agreement and consent of either party upon thirty (30) days written notice to the other party;
 - (b) By the Mayor, on behalf of the City of Alexandria, as a consequence of the failure of the Contractor to comply with the terms and conditions of the contract or the progress or quality of work to be performed in a satisfactory manner, proper allowance being made for circumstances beyond the control of the Contractor; or
 - (c) By satisfactory completion of all services and obligations described in the contract.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

General Conditions for Bidders - Please Read Carefully (Continued)

If the contract is terminated for any of the terms and conditions authorized in sub-paragraph (b) above, Contractor shall be formally notified in writing by the City of Alexandria Purchasing Department by means of certified mail informing him of cancellation of the contract, giving specific reasons for said cancellation. Contractor shall have the right to appeal to the City Council within ten (10) days from the date that said notification is placed in the U.S. Mail. Contractor's appeal shall be accomplished by means of a letter addressed to the City Council and delivered to the City Clerk, stating that an appeal to the decision of cancellation is desired. The City Council shall thereafter hold a hearing on the appeal, giving all parties the opportunity to present any and all evidence concerning the decision of cancellation. After hearing the appeal, the city Council may, by a majority vote, sustain, modify, or reverse the findings for said decision and shall provide, if requested by Contractor, a written determination of its findings.

21. Contractors submitting bids for Public Works construction projects in excess of \$1.00 must show his Contractor's License Number on the front of the bid envelope, except for certain projects for which a Contractor's License Number is not required by the State Contractor's Licensing Board. Failure to comply with this directive shall result in automatic bid rejection, furthermore, any Contractor who submits a bid for a type of construction for which he is not properly licensed shall be acting in violation of LA R.S. 37:2163, and shall be subject to all provisions for violation and penalties thereof. Contractors who are owned by, and are submitting a bid as a subsidiary of a parent company, whose name is listed in the State of Louisiana's Roster of Licensed Contractors, may do so by including a letter of proof of ownership from the parent company with the submitted bid package. The letter must be signed as per LA R.S. 38:2212 B.(5)(a)(b)(c) (see Item #22 below).

22. All bids submitted via USPS (registered or certified), overnight courier or hand delivered, shall be signed by hand and in ink by an authorized company representative per LA R.S. 38:2212 B.(5)(a)(b)(c), which states:

(c)(i) Evidence of agency, corporate, or partnership authority shall be required for submission of a bid to the division of administration or the State of Louisiana. The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable if any of the following conditions are met:

(aa) The signature on the bid is that of any corporate officer listed on the most current annual report on file with the Secretary of State, or the signature on the bid is that of any member of a partnership or partnership in commendam listed in the most current partnership records on file with the Secretary of State.

(bb) The signature on the bid is that of an authorized representative of the corporation, partnership, or other legal entity and the bid is accompanied by a corporate resolution, certification as to the corporate principle, or other documents indicating authority which are acceptable to the public entity.

(cc) The corporation, partnership, or other legal entity has filed in the appropriate records of the Secretary of State in which the public entity is located, an affidavit, resolution, or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. Such document on file with the Secretary of State shall remain in effect and shall be binding upon the principal until specifically rescinded and canceled from the records of the office.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

General Conditions for Bidders - Please Read Carefully (Continued)

23. In-State preferences shall not apply to procurements involving federal funds.
24. Pursuant to LA R.S. 38:2212 O.(2)(a)(b), any modifications of plans and specifications will be made through an addendum. No addendum shall be issued within seventy-two (72) hours of the bid opening, excluding weekends and legal holidays, without the extension of the bid opening date. An extension of at least seven (7) but no more than thirty (30) working days is required but, re-advertising is not required. The addendum shall be transmitted by any one of the following methods: (1) facsimile transmission; (2) e-mail; (3) by hand; or (4) posted on the City of Alexandria's website (www.cityofalexandrialala.com) and posted on Central Bidding's website (www.centralauctionhouse.com) if applicable.
25. All Federal Transit Administration (FTA) funded procurements, including operating assistance funding contracts, are to follow the *Master Agreement*, to include all applicable federal clauses.
- a. Any bidder that is found listed on the Federal Government's *System for Award Management* (SAM) website, at www.sam.gov/portal/sam, under the advanced search feature for *Excluded Parties List System* (EPLS), shall automatically be rejected for the award of this bid, by Category and/or in its entirety. This applies to any portion of the bid that is a procurement funded by FTA.
26. Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. Inquiries about the *AFEAT* Program should be directed to the Division of Finance. As a part of its RFP response, each Bidder ***shall*** submit documentation of its bona fide effort to secure subcontractors that meet the City's *AFEAT* goals. Each bidder ***shall*** also submit proof of engagement of any subcontractor selected because of its solicitations. The Bidder's bona fide efforts and engagement(s) are a consideration in bid review and rating.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Alexandria Fairness, Equality, Accessibility and Teamwork Program (AFEAT)

Dear Vendor:

Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. The AFEAT Program should be inquired about through the Division of Finance. The goals for qualifying disadvantaged, minority and female owned business in the use of professional service agreements with prime contractors will help effectuate the goals of increasing: the competitive viability of small business, minority, and women business enterprise by providing contract, technical, educational, and management assistance; business ownership by small business persons, minority persons, and women (including professional service opportunities); and the procurement by the City of professional services, articles, equipment, supplies, and materials from business concerns owned by small business concerns, minority persons, and women.

Prime contractors offering subcontracting should take specific action to ensure that a bona fide effort is made to achieve maximum results towards meeting the established goals. Primes shall document efforts and shall implement steps at least as extensive as the following in a good faith effort to reach or exceed the established goals:

- A. *Establish and maintain a current list of minority and female owned businesses in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- B. *Document and maintain a record of all solicitations of offers for subcontracts from minority or female construction contractor and suppliers in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- C. *Secure listing of minority and women owned businesses from the City of Alexandria Purchasing Department, the Central Louisiana Business Incubator, and the State of Louisiana Department of Minority Affairs.*
- D. *Participate in associations which assist in promoting minority and women owned businesses such as the Central Louisiana Business League, the Central Louisiana Business Incubator, and the Entrepreneurial League System.*
- E. *Designate a responsible official to monitor all activity made in the effort to achieve or exceed the established goals; record contacts made, subcontracts entered into with dollar amounts, and other relevant information.*

For more information on AFEAT and the City of Alexandria's Diversity in Action Initiative, and to explore a local and statewide directory of minority businesses, please visit www.diversityinaction.org. Should you have any questions or comments, please do not hesitate to contact our Finance Department at 318-449-5091 or our Purchasing Department at 318-441-6180.

As a part of its RFP response, each Bidder ***shall*** submit documentation of its bona fide effort to secure subcontractors that meet the City's AFEAT goals. Each bidder ***shall*** also submit proof of engagement of any subcontractor selected because of its solicitations. The Bidder's bona fide efforts and engagement(s) are a consideration in bid review and rating.

Sincerely,

City of Alexandria

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications

Bidder's Response:

1.0 General: (Continued)

1.1 No bid may be withdrawn for at least thirty (30) days after the scheduled closing time for the receipt of bids. Quoted prices shall remain firm until product(s) have been accepted by the City of Alexandria as delivered.

1.2 Products shall be new and of current model year manufacture.

1.3 Quotes for "optional" equipment shall be listed in the appropriate spaces provided on the bid specifications "Price Page". Option quotes shall not be a basis for bid award, and shall not be included in the total bid price.

1.4 **One or two** copies of the Parts Manual, Service Manual, and Operator's Manual for all products listed in these bid specifications, to include sub-contracted components, shall be furnished by the successful bidder at the time of delivery. CD versions of manuals are acceptable.

1.5 The successful bidder shall be responsible for obtaining permanent license plate(s) and registration(s) for awarded vehicles and/or equipment (if applicable). Registration documents shall be dropped off at the time of delivery, to the City of Alexandria Motor Pool, located at 2021 Industrial Park Road, Building V, Alexandria, LA 71303, Attention: Anthony Clayton, Motor Pool Superintendent.

1.6 Successful bidder shall notify the City of Alexandria Motor Pool, phone number 318-441-6075 or 318-441-6157, within a minimum of twenty-four (24) hours prior to delivery of vehicle/equipment.

1.7 **All products shall be delivered F.O.B., freight pre-paid**, City of Alexandria Central Warehouse, 2021 Industrial Park Road, Building WH, Alexandria, LA 71303.

1.8 Products shall not be considered delivered until Product Specification Compliance Inspection has been performed by representatives of the City of Alexandria using department, Purchasing Department, Motor Pool (if applicable), and the successful bidder(s).

1.9 The City of Alexandria using department for whom the product(s) is intended shall not be allowed to accept delivery from the successful bidder, see Bid Specification Item 1.7 above.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

1.0 General: (Continued)

1.10 Each bidder **is requested to furnish**, attached to the bid, complete descriptive literature on product being quoted. Any item(s) appearing in the manufacturer's regularly published specifications as "standard" equipment are assumed to be included in the bidder's proposal.

1.11 Each respective bidder shall be responsible for insuring that his/her product meets or exceeds specifications as described herein.

2.0 Warranty:

2.1 Successful bidder **should** furnish complete warranty information for product(s) being quoted, to include all sub-contracted components installed by vendor as well as vendor warranted components.

2.2 The successful bidder **shall** supply a copy of the warranty information to the City of Alexandria Motor Pool at the time of delivery. Products delivered without the complete warranty information, for vendor as well as sub-contracted components, **will not be accepted** by the Motor Pool.

2.3 Warranty work that cannot be performed at the City of Alexandria Motor Pool **shall be performed at the dealer's repair facility that is listed on the Price Page of this bid packet** . The transportation to and from the dealer's facility shall be the responsibility of the successful bidder with NO cost incurred by the City of Alexandria.

2.4 Warranty shall be for a period of one (1) year, minimum.

2.5 Components that have been installed on the quoted product and are not designated as sub-contracted by the successful bidder, **shall** be covered under the minimum one (1) year warranty as specified in this bid specification, with all warranty work for these components being the sole responsibility of the successful bidder.

3.0 Manual Switchgear:

3.1 The manual switchgear shall be in accordance with the single-line diagram.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

3.0 Manual Switchgear: (Continued)

3.2 The manual switchgear shall consist of a gas-tight tank containing SF6 gas, load-interrupter switches and resettable fault interrupters with visible open gaps and integral visible grounds, and a microprocessor-based overcurrent control.

3.2.1 Load-interrupter switch terminals shall be equipped with bushings rated 600 amperes continuous to provide for elbow connection.

3.2.2 Fault-interrupter terminals shall be equipped with bushing wells rated 200 amperes continuous.

3.2.3 Manual operating mechanisms and viewing windows shall be located on the opposite side of the tank from the bushings, so that operating personnel shall not be required to perform any routine operations in close proximity to high-voltage elbows and cables.

3.3 Ratings for the integrated switchgear shall be as designated below:

3.3.1 Frequency – 60 Hz.

3.3.2 Short-Circuit Current – 12,500 Amperes RMS Symmetrical.

3.3.3 Voltage Class – 15.5 kV.

3.3.4 Maximum Voltage – 15.5 kV.

3.3.5 BIL Voltage – 95 kV.

3.3.6 Main Bus Continuous Current – 600 Amperes.

3.3.7 Three-Pole Load-Interrupter Switches:

A. Continuous Current – 600 Amperes.

B. Load Dropping Current – 600 Amperes.

3.3.8 Fault Closing Current Duty-Cycle:

A. Ten-Time 12.500 Amperes RMS Symmetrical.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

3.0 Manual Switchgear: (Continued)

3.3.9 Fault Interrupters:

A. Continuous Current – 200 Amperes.

B. Load Dropping Current – 200 Amperes.

3.3.10 Fault Interrupting Current Duty-Cycle:

A. Ten-Time 12,500 Amperes RMS Symmetrical.

3.4 The switchgear shall conform to or exceed the applicable requirements of the following standards and codes:

3.4.1 The applicable portions of ANSI C57.12.28 – Covering enclosure integrity for pad-mounted equipment.

3.4.2 The applicable portions of IEEE C37.74, IEEE C37.60-2012, IEC 62271-100, IEC 62271-200, and IEEE C37.20.7 – Which specify test procedures and sequences for the load-interrupter switches, fault interrupters, and the complete switchgear assembly.

3.4.3 The switchgear shall meet all City of Alexandria, LA. specifications and standards.

4.0 Construction:

4.1 SF6 – Gas Insulation:

4.1.1 The SF6 gas shall conform to ASTM D2472.

4.1.2 The switchgear shall be filled with SF6 gas to a pressure of 7 psig at 68° F.

4.1.3 The gas-tight tank shall be evacuated prior to filling with SF6 gas to minimize moisture in the tank.

4.1.4 The switchgear shall withstand system voltage at a gas pressure of 0 psig at 68° F.

4.1.5 A gas-fill valve shall be provided.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

4.0 Construction: (Continued)

4.1.6 A temperature-compensated pressure gauge shall be provided that is color-coded to show the operating range. The gauge shall be mounted inside the gas-tight tank (visible through a large viewing window) to provide consistent pressure readings regardless of the temperature or altitude at the installation site.

4.2 Gas-Tight Tank:

4.2.1 The tank shall be submersible and able to withstand up to 10 feet of water over the base.

4.2.2 The tank shall be of welded construction and shall be made of Type 304L stainless steel, as specified in Section 4.0.

4.2.3 A means of lifting the tank shall be provided.

4.3 Viewing Windows:

4.3.1 Each load-interrupter switch shall be provided with a large viewing window at least 6 inches by 12 inches to allow visual verification of the switch-blade position (closed, open, and grounded) while shining a flashlight on the blades.

4.3.2 Each fault interrupter shall be provided with a large viewing window at least 6 inches by 12 inches to allow visual verification of the disconnect-blade position (closed, open, and grounded) while shining a flashlight on the blades.

4.3.3 Viewing windows shall be located on the opposite side of the gear from the bushings and bushing wells so that operating personnel shall not be required to perform any routine operations in close proximity to high-voltage elbows and cables.

4.3.4 A cover shall be provided for each viewing window to prevent operating personnel from viewing the flash which may occur during switching operations.

4.4 High-Voltage Bus:

4.4.1 Bus and interconnections shall withstand the stresses associated with short-circuit currents up through the maximum rating of the switchgear.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

4.0 Construction: (Continued)

4.4.2 Before installation of aluminum bus, all electrical contact surfaces shall first be pre-pared by machine-abrading to remove any oxide film. Immediately after this operation, the electrical contact surfaces shall be coated with a uniform coating of an oxide inhibitor and sealant.

4.5 Provisions for Grounding:

4.5.1 One ground-connection pad shall be provided on the gas-tight tank of the switchgear.

4.5.2 The ground-connection pad shall be constructed of stainless steel and welded to the gas-tight tank, and shall have a short-circuit rating equal to that of the switchgear.

4.5.3 When an enclosure is provided, no less than one enclosure ground pad shall be provided.

4.6 Connections:

4.6.1 For gear rated 12.5 kA short circuit, load-interrupter switches shall be equipped with 600-ampere bushings, and fault interrupters shall be equipped with 200-ampere bushing wells.

4.6.2 For gear rated 25 kA short circuit, load-interrupter switches and fault interrupters shall be equipped with 600- or 900-ampere bushings.

4.6.3 Bushings and bushing wells shall be located on one side of the gear to reduce the required operating clearance.

4.6.4 Bushings rated 600 or 900 amperes continuous shall be provided without a threaded stud.

4.6.5 Fault interrupters shall be equipped with 600-ampere bushings.

4.6.6 Load-interrupter switches shall be equipped with 200-ampere bushing wells.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

4.0 Construction: (Continued)

4.7 Bushings and Bushing Wells:

4.7.1 Bushing and bushing wells shall conform to ANSI/IEEE Standard 386.

4.7.2 Bushings and bushing wells shall include a semi-conductive coating.

4.7.3 Bushings and bushing wells shall be mounted in such a way that the semi-conductive coating is solidly grounded in the gas-tight tank.

5.0 Basic Components:

5.1 Load-Interrupter Switches:

5.1.1 The three-phase, group-operated load-interrupter switches shall have a three-time and ten-time duty-cycle fault-closing rating as specified under "Ratings." This rating defines the ability to close the switch the designated number of times against a three-phase fault with an asymmetrical (peak) current in at least one phase equal to the rated value, with the switch remaining operable and able to carry and interrupt rated current. Certified test abstracts establishing such ratings shall be furnished upon request.

5.1.2 The switch shall be provided with an integral ground position that is readily visible through the viewing window to eliminate the need for cable handling and exposure to high voltage to ground the equipment.

5.1.3 The ground position shall have a three-time and ten-time duty-cycle fault-closing rating.

5.1.4 The switch shall be provided with an open position that is readily visible through the viewing window to eliminate the need for cable handling and exposure to high voltage to establish a visible gap.

5.1.5 The open gaps of the switch shall be sized to allow cable testing through a feed thru bushing or the back of the elbow.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

5.0 Basic Components: (Continued)

5.2 Fault Interrupters:

5.2.1 Fault interrupters shall have a three-time and ten-time duty-cycle fault-closing and fault-interrupting rating as specified under "Ratings." This rating defines the fault interrupter's ability to close the designated number of times against a three-phase fault with asymmetrical (peak) current in at least one phase equal to the rated value and clear the resulting fault current, with the interrupter remaining operable and able to carry and interrupt rated current. Certified test abstracts establishing such ratings shall be furnished upon request.

5.2.2 The fault interrupter shall be provided with a disconnect with an integral ground position that is readily visible through the viewing window to eliminate the need for cable handling and exposure to high voltage to ground the equipment.

5.2.3 The ground position shall have a three-time and ten-time duty-cycle fault-closing rating.

5.2.4 The disconnect shall be provided with an open position that is readily visible through the viewing window, eliminating the need for cable handling and exposure to high voltage to establish a visible gap.

5.2.5 The fault interrupter, including its three-position disconnect, shall be a single integrated design so that operation between the closed and open positions or the open and grounded positions is accomplished with a single, intuitive movement.

5.2.6 The open gaps of the disconnect shall be sized to allow cable testing through a feed thru bushing or the back of the elbow.

5.2.7 An internal indicator shall be provided for each fault interrupter to show when it is in the tripped condition. The indicator shall be clearly visible through the viewing window.

5.3 Operating Mechanisms:

5.3.1 Load-interrupter switches and fault interrupters shall be operated by means of a quick-make, quick-break mechanism.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

5.0 Basic Components: (Continued)

5.3.2 The manual handle shall charge the operating mechanism for closing, opening, and grounding of the switches and fault interrupters.

5.3.3 A single, integrated operating mechanism shall fully operate each fault interrupter or load interrupter switch in a continuous movement so that additional operations are not required to establish open or grounded positions.

5.3.4 Operating mechanisms shall be equipped with an operation selector to prevent inadvertent operation from the closed position directly to the grounded position, or from the grounded position directly to the closed position. The operation selector shall require physical movement to the proper position to permit the next operation.

5.3.5 Operating shafts shall be pad-lockable in any position to prevent operation.

5.3.6 The operation selector shall be pad-lockable to prevent operation to the grounded position.

5.3.7 The operating mechanism shall indicate the switch position which shall be clearly visible from the normal operating position.

5.4 Overcurrent Control:

5.4.1 A microprocessor-based overcurrent control shall be provided to initiate fault interruption.

5.4.2 For pad-mounted style switchgear, the control shall be mounted in a watertight enclosure.

5.4.3 Control settings shall be field-programmable using a personal computer connected via a USB port to the control. The USB port shall be accessible from the exterior of the enclosure. All programming software is resident on the control and can be accessed via personal computer using the Microsoft Edge or Firefox web browser. Energization of the gear shall not be required to set or alter control settings.

5.4.4 Power and sensing for the control shall be supplied by integral current transformers.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

5.0 Basic Components: (Continued)

5.4.5 The control shall provide time-current characteristic (TCC) curves, including standard E-speed, K-speed, T-speed, coordinating-speed tap, coordinating-speed main, and relay curves per IEEE C37.112-2018 and IEC 60255-151:2009. Coordinating speed tap curves shall optimizer coordination with load-side weak-link/backup current-limiting fuse combinations, and coordinating-speed main curves shall optimize coordination with tap-interrupter curves and upstream feeder breakers.

5.4.5 The standard E-speed curve shall have Phase Overcurrent settings ranging from 7E through 400E. The standard K-speed curve shall have Phase Overcurrent settings ranging from 8K through 200K. The standard T-speed curve shall have Phase Overcurrent settings ranging from 8T through 200T. The coordinating-tap curve shall have Phase Overcurrent and independent Ground Overcurrent settings ranging from 15 amperes through 400 amperes. The coordinating-main curve shall have Phase Overcurrent and independent Ground Overcurrent settings ranging from 25 amperes through 800 amperes.

5.4.6 Time-current characteristic curves shall conform to the following IEEE C37.112- 2018 IEEE and IEC 60255-151:2009 Standard Inverse-Time Characteristic Equations for Overcurrent Relays: U.S. Moderately Inverse Curve U1, U.S. Inverse Curve U2, U.S. Very Inverse Curve U3, U.S. Extremely Inverse Curve U4, U.S. Short-Time Inverse Curve U5, I.E.C. Class A Curve (Standard Inverse) C1, I.E.C. Class B Curve (Very Inverse) C2, I.E.C. Class C Curve (Extremely Inverse) C3, I.E.C. Long-Time Inverse Curve C4, and I.E.C. Short-Time Inverse Curve C5.

5.4.7 The control shall have two independently settable and field-adjustable definite- time delay settings. (A definite-time delay setting can be configured to be an instantaneous trip setting if the definite-time delay is set to 0 milliseconds.)

5.4.8 The minimum trip current shall be 14 amperes for Vista switchgear with 660:1 ratio current transformers, and 28 amperes for models with 1320:1 ratio current transformers.

5.4.9 Event records shall be easily viewable from the control using a personal computer connected to the USB port. The event log shall capture the last 64 events recorded by the overcurrent control.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

5.0 Basic Components: (Continued)

5.4.10 The control shall store sufficient energy to operate the fault Interrupters without affecting the accuracy or coordination under fault conditions.

5.5 Voltage Indication:

5.5.1 Voltage indication with provisions for low-voltage phasing shall be provided for each load-interrupter switch and fault interrupter by means of capacitive taps on the bushings, eliminating the need for cable handling and exposure to high voltage to test the cables for voltage and phasing. This the feature shall include a flashing liquid-crystal display to indicate the presence of voltage for each phase, and a solar panel to supply power for testing of the complete voltage-indication circuit and phasing circuit.

5.5.2 The voltage-indication feature shall be mounted on the covers for the viewing windows, on the opposite side of the gear from the bushings and bushing wells, so that operating personnel shall not be required to perform any routine operations close to high-voltage elbows and cables.

6.0 Switchgear Style:

6.1 Pad-Mounted Style:

6.1.1 The gas-tight tank shall be made of 7-gauge Type 304L stainless steel.

6.1.2 For gear rated 12.5 kA short circuit, the switchgear shall conform to or exceed the requirements of applicable portions of IEC 62271-200 , covering arc resistance through 12.5 kA for 15 cycles.

6.1.3 Enclosure:

A. The switchgear shall be provided with a pad-mounted enclosure suitable for installation of the gear on a concrete pad.

B. The pad-mounted enclosure shall be separable from the switchgear to allow clear access to the bushings and bushing wells for cable termination.

C. The basic material shall be 14-gauge hot-rolled, pickled and oiled steel sheet.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

6.0 Switchgear Style: (Continued)

D. The enclosure shall be provided with removable front and back panels, and hinged lift-up roof sections for access to the operating and termination compartments. Each roof section shall have a retainer to hold it in the open position.

E. Lift-up roof sections shall overlap the panels and shall have provisions for pad-locking that incorporate a means to protect the padlock shackle from tampering.

F. The base shall consist of continuous 90-degree flanges, turned inward and welded at the corners, for bolting to the concrete pad.

G. Panel openings shall have 90-degree flanges, facing outward, which shall provide strength and rigidity as well as deep overlapping between panels and panel openings to guard against water entry.

H. For bushings rated 600 amperes continuous, the termination compartment shall be of an adequate depth to accommodate encapsulated surge arresters mounted on 600-ampere elbows having 200-ampere interfaces.

I. An instruction manual holder shall be provided.

J. Non-removable lifting tabs shall be provided.

6.1.4 Enclosure Finish

A. All exterior welded seams shall be filled and sanded smooth for neat appearance.

B. To remove oils and dirt, to form a chemically and anodically neutral conversion coating to improve the finish-to-metal bond, and to retard underfilm propagation of corrosion, all surfaces shall undergo a thorough pretreatment process comprised of a fully automated system of cleaning, rinsing, phosphatizing, sealing, drying, and cooling, before any protective coatings are applied. By utilizing an automated pretreatment process, the enclosure shall receive a highly consistent thorough treatment, eliminating fluctuations in reaction time, reaction temperature, and chemical concentrations.

C. After pretreatment, protective coatings shall be applied that shall help resist corrosion and protect the steel enclosure. To establish the capability to resist corrosion and protect the enclosure, representative test specimens coated by the manufacturer's finishing system shall satisfactorily pass the following tests:

- 1. 4000 hours of exposure to salt-spray testing per ASTM B 117 with:
 - a. Underfilm corrosion not to extend more than 1/32 in. from the

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

6.0 Switchgear Style: (Continued)

scribe, as evaluated per ASTM D 1645.

2. Loss of adhesion from bare metal not to extend more than 1/8 in. from the scribe.
 - a. 1000 hours of humidity testing per ASTM D 4585 using the Cleveland Condensing Type Humidity Cabinet, with no blistering as evaluated per ASTM D 714.
 3. 500 hours of accelerated weathering testing per ASTM G 53 using lamp UVB-313, with no chalking as evaluated per ASTM D 659, and no more than 10% reduction of gloss as evaluated per ASTM D 523.
 4. Crosshatch-adhesion testing per ASTM D 3359 Method B, with no loss of finish.
 5. 160-inch-pound impact, followed by adhesion testing per ASTM D 2794, with no chipping or cracking.
 6. 3000 cycles of abrasion testing per ASTM 4060, with no penetration to the substrate. Certified test abstracts substantiating the above capabilities shall be furnished upon request.
- D. The finish shall be inspected for scuffs and scratches. Blemishes shall be touched up by hand to restore the protective integrity of the finish. _____
- E. The finish shall be olive green, Munsell 7GY3.29/1.5. _____

7.0 Lableing:

7.1 Hazard-Alerting Signs:

- 7.1.1 The exterior of the pad-mounted enclosure (if furnished) shall be provided with "Warning-Keep Out-Hazardous Voltage Inside-Can Shock, Burn, or Cause Death" signs. _____
- 7.1.2 Each unit of switchgear shall be provided with a "Danger-Hazardous Voltage-Failure to Follow These Instructions Will Likely Cause Shock, Burns, or Death" sign. The text shall further indicate that operating personnel must know and obey the employer's work rules, know the hazards involved, and use proper protective equipment and tools to work on this equipment. _____
- 7.1.3 Each unit of switchgear shall be provided with a "Danger-Keep Away-Hazardous Voltage-Will Shock, Burn, or Cause Death" sign. _____

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

Bid Specifications (Continued)

Bidder's Response:

7.0 Labeling: (Continued)

7.2 Nameplates, Ratings, Labels, and Connection Diagrams:

7.2.1 Each unit of switchgear shall be provided with a nameplate indicating the manufacturer's name, catalog number, model number, date of manufacture, and serial number.

7.2.2 Each unit of switchgear shall be provided with a ratings label indicating the following: voltage rating; main bus continuous current rating; short-circuit rating; fault-interrupter ratings including interrupting and duty-cycle fault-closing; and load-interrupter switch ratings including duty-cycle fault-closing and short-time.

8.0 Miscellaneous:

8.1 Certification of Ratings:

8.1.1 The manufacturer of the switchgear shall be completely and solely responsible for the performance of the load-interrupter switch and fault interrupter as well as the complete integrated assembly as rated.

8.1.2 The manufacturer shall furnish, upon request, certification of ratings of the load-interrupter switch, fault interrupter, and the integrated switchgear assembly consisting of switches and fault interrupters in combination with the gas-tight tank.

8.2 Accessories

8.2.1 A USB cable kit shall be provided for connecting an overcurrent control to a user-furnished personal computer.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

SAMPLE ONLY-DO NOT COMPLETE AT THIS TIME

Vehicle / Equipment Information Sheet

(To be completed by vendor prior to delivery of vehicles and/or equipment to the City of Alexandria Motor Pool)

1. Vehicle Year/Make: _____
2. Vehicle Model: _____
3. Keycodes: A: _____ B: _____
4. Wheelbase: _____ CA: _____
5. VIN #: _____
6. Odometer Readings: _____ Miles
7. Purchase Date: _____
8. In-Service Date: _____
9. Engine Make: _____
10. Engine Model: _____
11. Engine Oil Capacity: _____ Qts.
12. Transmission Make: _____
13. Transmission Model: _____
14. Transmission Oil Capacity: _____ Qts.
15. Rear Axle Make: _____
16. Number of Rear Axles: _____
17. Rear Axle Oil Capacity: _____ Qts.
18. Rear Axle Weight Capacity: _____ Lbs.
19. Front Axle Make: _____
20. Front Axle Weight Capacity: _____ Lbs.
21. Vehicle GVWR: _____ Lbs.
22. Wheel Size: _____
23. Tire Size/Ply (Front): _____
24. Tire Size/Ply (Back): _____
25. Tire Size/Ply (Spare): _____
26. Total Tire Count: _____
27. Lugs Per Wheel: _____
28. Alternator: _____
29. Battery (Each): _____ AH _____ CCA
30. Brakes (Type): _____
31. Steering (Type): _____
32. Fuel Capacity (Total): _____
33. EPA Fuel Rating: _____ City _____ Hwy.
34. Special Body Make: _____
35. Special Body Model: _____
36. Other Special Equipment (List): _____

37. Purchase Price: \$ _____
38. Purchase Order Number: _____
39. Service Recommendation: _____ Miles
40. Date of Manufacture: _____
41. Warranty Manuals on Vehicle & Other Components: _____
42. Shop Manuals / Line Sheet: _____
43. Additional Filters (As Specified): _____
44. (Trailer Only) Length: _____ Width: _____ Height: _____
45. (Trailer Only) Hitch Type: _____

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PAD-MOUNTED UNDERGROUND MANUAL SWITCHGEAR**

PRICE PAGE

Bid price for NAME PROJECT HERE, new and unused, complete unit ready for use, delivered F.O.B., freight pre-paid, as per the bid specifications:

Bid Price \$ _____/per each

Manufacturer's Brand Name: _____ Model No.: _____

Warranty Emplacement/Service Site:

Please list your factory authorized warranty emplacement or service site below.

Company Name: _____
Street Address: _____ City/State/Zip: _____
Phone No.: _____ Fax No.: _____
Attention: _____ Title: _____

Bidder Information:

Company Name: _____
Address: _____
City/State/Zip: _____
Telephone #: (_____) _____ Fax #: (_____) _____
Authorized Printed Name and Title: _____
Authorized Signature: _____

(Per LA R.S. 38:2212(A)(c)(i) - See General Conditions Item #22, Page 4 of these bid specifications.)