



COVER PAGE

Bid Proposal #1864

138KV GAS CIRCUIT BREAKER

Sealed bids and electronic submitted bids for the above will be received until **10:00 AM CDT, Tuesday, October 18, 2011**, 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: Nancy Thiels, City Clerk
City of Alexandria - City Hall
915 Third Street, First Floor
Alexandria, LA 71301
Phone: 318-449-5047**

Mailed via USPS:

**Attention: Nancy Thiels, City Clerk
City of Alexandria - City Hall
PO Box 71
Alexandria, LA 71309-0071**

Electronic Bid Submission:

www.bidsync.com

Pursuant to Louisiana R.S. 38-2212(A)(1)(F) and R.S. 38-2212.1(B)(4), vendors/contractors now have the option to submit their bids and bid bonds, electronically. To view bids, download, and receive bid notices by e-mail, your company/agency will need to register with **BidSync at BidSync.com** . Please click the link below to register your company: <http://www.bidsync.com/DPX?ac=subscribe®only=1&>

If you need help registering or with completing an e-bid, please call 800-990-9339 (M-F) 8 AM to 7PM (CST).

City of Alexandria Buyer Name:	Sue Ducote
Phone Number:	(318)441-6182
Fax Number:	(318)619-3412
E-Mail Address:	<u>sue.ducote@cityofalex.com</u>



Joe C. Despino
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 CDT, Tuesday, October 18, 2011**, and publicly opened in the Council Chambers or Council Committee Room.

City of Alexandria Bid Proposal #1864
Page: 1 of 15
Date Specifications Prepared: August 29, 2011

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

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

Please file bid with the following:

Nancy Thiels, City Clerk
City of Alexandria - City Hall
915 Third Street
P.O. Box 71
Alexandria, LA 71309-0071
Phone: 318-449-5047

INTRODUCTION

138KV GAS CIRCUIT BREAKER

It is the intent of the City of Alexandria to secure pricing on one (1) **138kV Gas Circuit Breaker**, for the City of Alexandria Electric Distribution Department. The circuit breaker shall be furnished with all accessories ready for mounting, connecting and energization. Submitted bid prices shall be for the breaker only, NO installation to be included.

All bid prices shall include any and all freight charges. All products are to be shipped F.O.B., freight pre-paid, to the D.G. Hunter Generating Station, located at 1011 North Third Street, Alexandria, LA 71301, to the attention of Robert Normand, phone (318)473-1349.

In estimating the lowest cost to the City of Alexandria as one of the factors in deciding the award of the bid, the City will consider, not only bid price, but will also consider adherence to specifications, delivery schedule, and warranty.

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.

Questions and/or clarifications of bid specifications are to be in written form only, either mailed, faxed, or e-mailed to the attention of Sue Ducote, City of Alexandria - Purchasing Department, P.O. Box 71, Alexandria, LA 71309-0071; Fax #318-619-3412; e-mail sue.ducote@cityofalex.com ; and must be received by close of business on **Wednesday, October 5, 2011.**

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

GENERAL CONDITIONS FOR BIDDERS - PLEASE READ CAREFULLY

1. Pursuant to LA R.S 38:2212.1C(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 A.(1)(b), 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 should 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 shall 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 A.(2), 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 and/or Wholesale Price Index. Bids based on specifications which are subject to a recognized escalation index shall be legal and valid.
8. Pursuant to LA R.S. 39:1701-1709, 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.
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.
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.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

General Conditions for Bidders - Please Read Carefully (Continued)

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 taxes. A 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.

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 (A)(1)(c)(i) (see Item #22 below).

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

General Conditions for Bidders - Please Read Carefully (Continued)

22. All bids shall be signed by hand and in ink by an authorized company representative per LA R.S. 38:2212(A)(1)(c)(i) 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.

23. In-State preferences shall not apply to procurements involving federal funds.

24. Pursuant to LA R.S. 38:2212 C.(2)(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 twenty-one (21) 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; or (3) hand-delivered to all prime bidders who have requested bid documents.

25. All Federal Transit Administration (FTA) funded procurements, including operating assistance funding contracts, are to follow the *Best Practices Procurement Manual*, to include all applicable federal clauses.

26. 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.

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER

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.

Sincerely,

City of Alexandria

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

BID SPECIFICATIONS

SCOPE:

The equipment to be furnished by the bidder consists of one (1), 138kV Gas (SF₆) Circuit Breaker.

These specifications describe the circuit breaker to be designed, manufactured, and tested in accordance with the most recent applicable NEMA, IEEE, ANSI and NEC Standards.

Unit to be designed for outdoor use.

TECHNICAL SPECIFICATIONS:

A. **RATINGS & DESCRIPTION:** The ratings shall be as set forth in the following table:

1.	Continuous Current (Amps)	2,000
2.	Maximum Voltage Rating (kV)	145
3.	Phases	3
4.	Frequency (Hertz)	60
5.	Voltage Range Factor K	1.0
6.	Type of Interrupting Medium	SF ₆ Gas
7.	Normal Operating Pressure (psig)	93
8.	Maximum Symmetrical Short Circuit Current Capability (kA)	40
9.	Maximum Symmetrical Short Circuit Breaking Current (kA, RMS)	40
10.	Three (3) Second Short Time Current Carrying Capability (kA, RMS)	40
11.	Close and Latch Capability (kA, RMS)	104
12.	Withstand Test Voltage (kV) Low Frequency, 1-Minute Dry (kV, RMS) Full Wave Impulse (kV Peak)	310 650

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

A. **RATINGS & DESCRIPTION:** (Continued)

13.	Spring Winding Motor Voltage (DC Volts)	125
14.	Trip Control Voltage (DC Volts)	125
15.	Close Control Voltage (DC Volts)	125
16.	Maximum Interrupting Time (Cycles)	3.0
17.	Closing Time (Cycles)	6.0
18.	Reclosing Time (Cycles)	20
19.	Permissible Tripping Delay Y (Seconds)	2.0
20.	Mechanical Endurance Operatings	10,000

B. **OPERATING MECHANISM:**

1. The operating mechanism shall be of the automatic motor charged, spring-operated type. The mechanism shall be rated for 125V D.C. The stored energy shall allow a CO-15S-CO duty cycle without auxiliary power available.
2. Operating mechanism shall be mechanically and electrically trip free.
3. Heaters shall be provided in the mechanism housing. They shall be thermostatically controlled and rated for 230V, A.C., single-phase, operating at 120 A.C.
4. A molded case circuit breaker rated 10,000 amps with single-throw knife switches shall be used for the control circuits, heater circuit, and motor circuit.
5. A manual closing device shall be provided.
6. The unit shall be furnished with two (2) mechanically and electrically independent trip coils. Simultaneous operation of both trip coils shall not prevent the breaker from tripping.
7. An operation counter shall be installed to record on trip.
8. An auxiliary switch shall be provided with a minimum of ten (10) "a" and ten (10) "b" contacts for customer use, all wired to a terminal block in the control housing.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

B. OPERATING MECHANISM: (Continued)

9. Interrupters shall be single break, single pressure units.
10. Moving interrupter contacts shall be mechanically linked together.
11. A hand trip device shall be included on each breaker and accessible from outside the breaker control cabinet. This trip device shall be capable of mechanically tripping the breaker without control power available.
12. Density gauges shall be provided to monitor air system conditions and SF₆ gas system density. Cutout contacts shall be provided to block tripping from low SF₆ gas system density in each interrupter and spring charged/discharged as applicable.
13. The proper amount of SF₆ gas shall be supplied with the device to fill the breaker to manufacturer's specifications.

C. BUSHINGS & CONNECTIONS:

All bushings shall be porcelain and all connections shall be made with stainless steel nuts and bolts. All bushings shall be rated for maximum voltage and current. Each bushing shall be supplied complete with four-hole, NEMA pad, bronze stud connectors. The surface area of the pads shall be sufficient to accommodate the full current rating of the breaker.

D. BUSHING CURRENT TRANSFORMERS:

1. Two (2) multi-ratio (ANSI Standard) relaying accuracy bushing current transformers shall be furnished and installed on each bushing of the breaker.
2. Each current transformer shall be 2000:5 MR, C-800 accuracy.
3. All C.T. leads shall terminate on suitable C.T. terminal blocks located in the mechanism and control housing. All C.T. terminal blocks shall have short-circuiting straps. Wire jumpers are not acceptable.

E. OTHER ACCESSORIES:

The following shall also be supplied:

1. Mechanical position indicator. Green "open", Red "closed".

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

E. **OTHER ACCESSORIES:** (Continued)

2. Two bolted type grounding terminal for attachment to Owner's 2/0 AWG to 300 MCM stranded copper ground cables. They shall be placed on diagonally opposite locations of the frame.
3. One lot special tools required for installation and gas filling.
4. Galvanized Framework - The frame shall allow for a 9' - 0" minimum height from grade to the bottom of the porcelain insulators.
5. Control cabinet light and a 120V A.C. G.F.I. convenience outlet. Light shall be operated by a cabinet door switch.
6. Cut off switches.
7. One trip-close push-button station.
8. Nameplate for all bushing current transformers.
9. Loss of voltage alarm relay on each auxiliary power and control circuit at each breaker.
10. Local / Remote control switch.
11. Trip / Normal / Close control switch.

F. **CONSTRUCTION:**

1. The phasing of all terminals, switchboards, instruments, breakers, fuses, disconnecting switches, and other equipment shall be A-B-C from left to right when facing the front of the equipment. In the vertical plane, the phasing shall be A-B-C from top to bottom. All equipment involving direct current shall be arranged "plus-minus" from left to right and top to bottom.
2. The equipment shall operate satisfactorily in an environment that may have a temperature range from -30°C to 40°C and a relative humidity as high as 100%.
3. All nameplates shall be stainless steel and mounted by the supplier and shall be attached with stainless steel screws.
4. A weatherproof, NEMA 3R breaker control cabinet shall be provided and mounted on the breaker frame.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

F. **CONSTRUCTION:** (Continued)

5. Control and instrument switches shall be located at such a height that the operator may use them conveniently.
6. All primary and auxiliary devices and all wiring to such devices shall be completely accessible for operation, maintenance, removal and replacement. Perforated wiring grilles are acceptable if furnished with 1-1/2" grommets holes. Panel wiring will not pass behind panels that are not removable. Use of "PANDUIT", or approved equivalent, is encouraged.
7. Terminal blocks for control wiring shall be provided and shall be rated at least 600 volts and 30 amperes. The terminal strip shall be molded block type to accommodate ring lugs. The terminal screws shall be #10 slotted head, tin plated brass machine with phosphor bronze lockwashers. The terminal blocks shall be 12-point with molded insulating barriers between terminals and a removable marking strip. Short-circuit type blocks will be furnished for all C.T. circuits. Slide links are not to be used in C.T. circuits.
8. One (1) empty 12-point terminal block shall be provided in the mechanism and control housing for customer's use.
9. The breaker shall be equipped with all internal wiring necessary for complete and proper operation.
10. Power sources shall be provided with molded case circuit breakers and knife switches located within the panel.

G. **WIRING:**

1. All wiring shall be not smaller than No. 14 AWG, 41 strand copper wire which is insulated with SIS insulation rated 600 volts or higher.
2. There shall be no splices in the wiring and all connections shall be made at device studs or terminal blocks.
3. All wiring will be terminated with T&B Stakon Type No. 10RC-10, or approved equal, nylon insulated ring tongue connectors. The connectors shall be copper and shall be tin plated. The inner barrel shall be serrated and the exterior surface of the terminal barrel shall be furnished with crimp guides. The nylon insulation shall be color coded to indicate conductor size. All compression terminals shall be crimped with hand or power tools approved by the terminal manufacturer. If hand tools are used, they must be "ratchet" type tools that require full compression of the terminal barrel.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

G. **WIRING:** (Continued)

4. Each wire termination device shall be labeled to coincide with the breaker drawings. Each wire termination shall be identified by permanent printing on conductor identification PVC sleeve. A sleeve shall be provided on each end of the internal conductor. Each sleeve shall be marked with the local and opposite end terminal/device number/code. Adhesive labels are not acceptable.
5. Fuse and/or circuit breaker wiring shall be such that the source will be at the top with the load at the bottom of the device.

H. **PAINT:**

The breaker, cabinets and other non-current carrying metal accessories mounted on it shall be painted with an undercoat of rust inhibiting primer such as red inorganic zinc, (or equal), followed by two (2) coats of Devoe 379 polyurethane (or equal). Finish color shall be ANSI #70, light gray. Minimum overall dry thickness of the undercoat and the finish coats shall be 1.5 and 3 mills, respectively. All removable transit braces shall be painted red.

Prior to undercoating, all surfaces to be painted shall be thoroughly cleaned of all dirt, oil and other impurities by applying Devoe Deprep 88 (or equal) per the manufacturer's instructions. Then the surface shall be shot blasted or sandblasted for removal of weld splatter, rust, dirt and all or any foreign matter accumulated during fabrication. Sufficient amount of touch-up paint (spray cans) will be furnished to cover scratches that occurred during shipping.

I. **GALVANIZING:**

The steel frame will be completely fabricated with all holes punched, drilled and all cutting, notching and bending of the steel being done before galvanizing. All steel shall be shipped pre-laced. Only required holes shall be drilled. "Double dip" galvanizing is prohibited. Galvanizing shall be in accordance with ASTM A-123, ASTM A-143 and ASTM 1-153.

All parts of the structural assembly should be made from materials that ensure galvanizing compatibility. The immersion time, the temperature of the bath, and the use of inhibitors will vary with the type of steel being used. Parts made from steel of different chemistry or from members having large differences in thickness may result in various coating colors, textures, and thicknesses.

Surface Preparation: A caustic bath shall be used to remove excessive oils, paints, and grease. Mill scale and rust are removed in an acid bath. Shot or grit blasting may be necessary to remove deeply embedded mill scale or where the surface has inclusions of sand particles that cannot be removed by pickling. All welds must be cleaned by hand or blast methods because welding residues are chemically inert in standard pickling solutions.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER**

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

I. **GALVANIZING:** (Continued)

The temperature of the pickling bath and prolonging the immersion in the bath may increase the susceptibility of embrittlement due to hydrogen absorption. Inhibitors that reduce hydrogen absorption are available for use in the pickling bath. It is imperative that all of the pickling solution be removed from both the inside and outside surface of the part before immersion in the preflux solution.

Zinc Coating: After prefluxing, the parts shall be dipped in a molten zinc galvanizing bath in accordance with the ASTM specifications noted above.

Areas that have become damaged prior to delivery at site may be repaired by using commercial zinc products designed for this purpose, applying zinc rich paint, zinc spraying or applying brushed molten zinc. All repairs shall be subject to the approval of the Engineer.

J. **FACTORY WITNESS TEST:**

The manufacturer shall notify the City of Alexandria not less than ten (10) working days prior to the date of factory witness test.

K. **DRAWINGS:**

Drawings shall be supplied to each of the following:

BHA, Inc.
Post Office Box 4467
Baton Rouge, LA 70821
ATTENTION: Mr. Gerard Waguespack
Phone: (504) 927-7430

City of Alexandria - Electric Distribution Department
Post Office Box 71
Alexandria, LA 71309-0071
ATTENTION: Mr. Robert Normand
Phone: (318) 449-5000

Approval Drawings:

Supplier shall furnish three (3) sets of approval drawings to BHA, Inc., as soon as possible after award of contract. Drawings shall indicate weight, dimensions, mounting data, anchor bolt plans, performance, summary of equipment sheets, elementary diagrams, C.T. excitation curves, and other pertinent data on all significant items. Any drawings not approved shall be re-submitted until approved.

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

K. **DRAWINGS:** (Continued)

Final Drawings: Final drawings shall be supplied no later than the date of shipment as follows:

- a. One (1) complete set of printed drawings plus all drawings in AutoCAD (DXF) format shall be sent to BHA, Inc., and two (2) complete sets of printed drawings plus all drawings in AutoCAD (DXF) format shall be sent to the City of Alexandria.
- b. One (1) copy of each instruction/installation/maintenance manual will be supplied to BHA, Inc., and four (4) copies will be provided to the City of Alexandria. Each instruction manual will be complete with the following:

Table of Contents and Index Tabs
Description of Equipment
Specification, Test Data, Curves
Ordering Information on Obtaining Spare Parts
Long Term Storage and Handling Information
Installation/Operating/Maintenance Instructions
Assembly Drawings
Parts List
Shop Order Numbers for Each Item of Equipment

The following information shall be included on all drawings, in or adjacent to the Title Block, and on the first page of all instruction books:

City of Alexandria
D.G. Hunter Substation
138kV Gas Circuit Breaker
City of Alexandria Purchase Order Number

L. **SPARE PARTS & SPECIAL TOOLS:**

The breaker shall be shipped with a complete set of recommended spare parts. Also one set of special tools shall be supplied, if they are required, for dismantling and maintenance of the breaker. The tools and spare parts shall be shipped in separate well constructed wooden boxes provided with hinged cover and padlock hasps. All boxes shall be designed as permanent storage enclosures. Spare parts shall be protected during an extended storage period by use of coatings, airtight enclosure and moisture absorbing chemical bags.

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER

BID SPECIFICATIONS (Continued)

TECHNICAL SPECIFICATIONS: (Continued)

M. **BREAKER SHIPMENT:**

The circuit breaker and components shall be clean, dry, and sealed when shipped from the factory. Each component shall contain a packaged moisture absorbing chemical. Complete instructions on inspection upon receipt at substation and maintaining moisture free components as well as SF₆ filling instructions shall be shipped inside of breaker control cabinet.

The circuit breaker shall be shipped F.O.B., freight pre-paid, to the D.G. Hunter Substation, located at 1011 North Third Street, Alexandria, Louisiana 71301.

N. **FIELD ENGINEERING SERVICE:**

Manufacturer shall furnish an authorized and qualified Field Engineer to perform on site inspection and alignment of the breaker, to fill the breaker with SF₆ gas, and to instruct personnel on operation and maintenance prior to placing the breaker in service. Price for this service shall be included in the base bid.

O. **DELIVERY:**

The breaker shall be delivered to the D.G. Hunter Substation site within 24 to 30 weeks ARO. Manufacturer's scheduled shipment and delivery date should be included in the proposal.

P. **WARRANTY:**

The breakers, including all accessories, shall be warranted to the City of Alexandria for a minimum period of one (1) year. Bidder should include with his proposal a warranty statement indicating the terms and conditions of the warranty for the breaker and all accessories.

END OF SPECIFICATIONS

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
138KV GAS CIRCUIT BREAKER

PRICE PAGE

Bid price for one (1), **138kV Gas Circuit Breaker**, as per these bid specifications, delivered F.O.B., freight pre-paid to D.G. Hunter Substation:

Bid Price \$ _____

Manufacturer's Name: _____

Manufacturer's scheduled shipment delivery date ARO: _____

Warranty Statement Terms & Conditions included with bid: **Yes** **No**

OPTIONAL PRICING:

Bid Price for one (1) additional 138kV Gas Circuit Breaker, as per these bid specifications, delivered F.O.B., freight pre-paid to D.G. Hunter Substation:

Bid Price \$ _____

Bidder Information:

Company Name: _____

Address: _____

City/State/Zip: _____

Telephone #: (_____) _____ Fax #: (_____) _____

Authorized Printed Name and Title: _____

Authorized Signature: _____

Email Address (optional): _____