



REQUEST FOR BID (RFB)

REQUESTOR: City of Georgetown
1134 North Fraser Street
Georgetown, SC 29440
Contact: Daniella Howard, Purchasing Agent
Email: dhoward@cogsc.com
Phone: 843.545.4043

PROJECT: Front Street Underground System Upgrade Project #1919
Pad-mounted Transformers
Specification 171007-01

PREPARED BY:



UTILITY TECHNOLOGY
ENGINEERS – CONSULTANTS
147-B DUBLIN SQUARE ROAD
ASHEBORO, NC 27203

DATE OF ISSUE: January 23, 2019

DUE: On or before 4:00 pm EST, February 6, 2019

Return to by mail or hand deliver only to:

City of Georgetown
Attn: Purchasing
Project #1919
1134 N Fraser Street
Georgetown, SC 29440

1	BID DOCUMENTS AND INSTRUCTIONS TO BIDDERS	1-1
1.1	PURPOSE	1-1
1.2	PROJECT DESCRIPTION	1-1
1.3	BACKGROUND	1-1
1.4	SCOPE OF SERVICES	1-4
1.5	SUBMITTAL INSTRUCTIONS	1-4
1.6	SUBMITTAL EVALUATION	1-6
1.7	GENERAL CONTRACTUAL REQUIREMENTS	1-7
2	PROPOSAL	2-1
3	BID PROPOSAL DATA	3-1
4	GENERAL REQUIREMENTS	4-1
4.1	REFERENCES	4-1
4.2	SUBMITTALS	4-1
4.3	DELIVERY	4-2
4.4	SCHEDULE	4-2
4.5	TRANSFORMER RATINGS AND QUANTITIES	4-2
5	PRODUCTS	5-1
5.1	SINGLE-PHASE PAD-MOUNTED TRANSFORMERS (DEAD-FRONT)	5-1
5.2	WARNING SIGNS	5-3
5.3	ROUTINE AND OTHER TESTS	5-3

1 BID DOCUMENTS AND INSTRUCTIONS TO BIDDERS

1.1 PURPOSE

The City of Georgetown is accepting bids for single-phase loop feed pad-mounted transformers for the upgrade of the downtown Front Street electric power distribution system in Georgetown, SC.

1.2 PROJECT DESCRIPTION

These instructions apply to the preparation of proposals for single-phase transformers as indicated in the project specifications.

The City of Georgetown, South Carolina is hereinafter referred to as the “OWNER” or the “CITY”. Utility Technology Engineers-Consultants is hereinafter referred to as the “ENGINEER”.

Due to the unique nature of goods and or services sought, local vendor preference shall not apply under this RFB.

1.3 BACKGROUND

The City of Georgetown (City) is an incorporated municipality with a population of nearly 10,000 residents. The City is located 60 miles north of Charleston and 36 miles south of Myrtle Beach. It is the end point of the area commonly known as “The Grand Strand”. The City is bordered by the Winyah Bay to the east and the Sampit River to the south. Tourism is a major economic driver in the area, as well as local industries, such as International Paper and Tideland Hospital. The City is the county seat and operates under the Mayor-Council form of government as set forth in the State of South Carolina Code Chapter II, Article I, Section 2-1. Additional information is available on our website at www.cogsc.com.

PROJECT SCHEDULE OF EVENTS

The following is the schedule of events listed in the order of occurrence, showing the major milestones from issuance of the RFB to the contract award:

MILESTONE EVENT	DATE	TIME EST (LOCAL TIME)
1. Request for Bid (RFB) issued	Wednesday, January 23, 2019	
2. Pre-Bid meeting	N/A	
3. Deadline for questions - emailed to: purchasing@cogsc.com	Tuesday, January 29, 2019	4:00 pm
4. Deadline for addenda to be posted to the City's website, www.cogsc.com , under "Bids"	Thursday, January 31, 2019	5:00 pm
5. Bid due date	Wednesday, February 6, 2019	On or before 4:00 pm
6. Approve of contract by City Council (tentative)	Thursday, February 21, 2019	

Questions

No answers will be given over the phone.

Questions regarding this RFQ should be submitted in writing to purchasing@cogsc.com, no later than 4:00 EST (local time), Thursday, January 17, 2019. No questions will be accepted after the aforementioned deadline. All submittals shall include the following in the subject line:

Questions – Front Street UG System Upgrade Project #1919

You will receive email confirmation that your questions were received on time. If you do not receive confirmation of such within 2 hours, it is the bidders responsibility to call the purchasing agent at 843.545.4043 to verify that the questions were received before the deadline.

Answers to questions will be posted on the City's website at www.cogsc.com under "Current Bids" as an Addendum no later than 5:00 pm EST (local time), Thursday, January 31, 2019.

The City of Georgetown reserves the right to change the project schedule as it deems necessary. In the event of a major date change, the City of Georgetown will notify known participants. The City of Georgetown reserves the right to issue addenda to this RFB up to 3 days before the RFB due date as needed to clarify the City of Georgetown’s desires, or to make corrections or changes to the RFB document or submittal process.

When the Procurement Division is closed due to force majeure, bid openings will be postponed to the same time on the next official business day.

The City also reserves the right to cancel or reissue the RFB and/or revise the project schedule at any time.

The City also reserves the right to reject any or all proposals as deemed to be in its best interest, and to accept all or part of the scope of work herein as its project timeline and/or budget allows.

The City reserves the right to reject any or all bids as deemed to be in its best interest, and to accept all or part of the scope of work herein as its project timeline and/or budget allows. All information will be updated and posted on the City’s website www.cogsc.com under “Bids”. It is the bidder’s responsibility to obtain the information directly from the City’s website regarding this project.

The bidder will acknowledge receipt of all issued addenda in their submittals, if applicable.

No: _____ Dated: _____

No: _____ Dated: _____

No: _____ Dated: _____

1.4 SCOPE OF SERVICES

The successful candidate shall furnish f.o.b. job site, Georgetown, SC, single-phase loop feed pad-mounted transformers for use in upgrade of the Owner's Front St Electrical System. The transformers shall be furnished complete and ready for installation, connection, and immediate service.

1.5 SUBMITTAL INSTRUCTIONS

All procurement procedures are subject to the City's procurement policies as outlined in Section 2-187 of the City's Municipal Code.

To be considered responsive, interested parties must submit the following in a sealed envelope on or before the deadline, 4:00 pm, Wednesday, February 6, 2019 EST (local time):

1. 2 originals
2. 1 electronic copy (ex. CD rom or USB flash drive)

1. Sealed bids must be received no later than 4:00 pm Wednesday, February 6, 2019, and at said office will be publicly opened and read aloud at that time. No bid proposal will be accepted after the due date and time specified above. Faxed or emailed bid proposals will not be accepted for any reason.
2. The City reserves the right to waive any technicalities or informalities and to accept or reject any and/or all submissions as deemed by its sole judgment to be in its best interest. The City also reserves the right to terminate the selection process without notice, to waive any irregularities in any submittal, and to request additional information from any of the firms submitting a bid proposal.
3. All proposals should be clearly marked on the outside, "Front Street Underground Electrical System Upgrade Project #1919".
4. It is the sole responsibility of the bidder to have their bids delivered to the City of Georgetown before the closing hour and dated. The City assumes no responsibility for delivery of proposals that are mailed. Late, faxed, or emailed proposals will not be accepted nor considered for any reason and will remain unopened. The official clock shall be that of the City's Purchasing Agent, or designee. The City reserves the right to reject any or all bids and to waive any informalities and technicalities in the bid process.
5. All proposals must be valid for a period of 60 days following the bid opening date.
6. Proposals must be submitted as specified herein and shall address all RFB requirements. Each bidder shall list in the space provided on the proposal form ALL EXCEPTIONS or conflicts between his proposal and this specification. If no exceptions are noted, it will be assumed the bidder is complying with all requirements. If more space is required for this listing, additional pages may be added. Proposals which do not comply with this requirement will be considered irregular and may be rejected at the discretion of the OWNER. All exceptions shall be specific in nature and referenced to the applicable article of these specifications. Conflict notations which make reference to the bidder's descriptive information as a whole will not be acceptable. The bidder shall not alter any part of these specifications in any way, except by stating his exceptions in the space provided on the proposal form. Partial or incomplete bids may be rejected.

7. The bidder shall submit a lump sum cost for all services required, in an itemized format. All costs incurred in preparing the proposal, or costs incurred in any other manner by the bidder in responding to this RFB, will be wholly the responsibility of the bidder. All materials and documents submitted by the respondent in response to this RFB become the property of the City of Georgetown and will not be returned.
8. Any proprietary information contained in the proposal should be so indicated as follows:

Vendor Disclosure

Notice of SC Freedom of Information Act

“The parties acknowledge that all material submitted may be subject to release under the South Carolina Freedom of Information Act (FOIA) and will be released to the public unless exempt from disclosure under the FOIA.”

We discourage you from including any information you consider propriety or trade secret, as this material is subject to the FOIA once it's in the City's possession. If you must include any such information in your submission, please identify it by color, labeling, and/or bold font so that it can be readily recognized. In the event the City receives a request for this material, the City will notify those parties who have identified information they believe is proprietary or trade secret of the request. The City has a 10 day deadline to respond to the request. This is your window to file an action challenging the release. Please be on notice that if the City is not served with such an action, the information will be released.

9. Proposals must be made in the official name of the company or individual under which business is conducted (showing official business address) and must be signed in ink by a person duly authorized to legally bind the person, partnership, company or corporation submitting the proposal. Proposals having any erasures or corrections must be initialed in ink by the bidder.
10. Letter of Interest – Must be no more than two (2) pages (one page is one side of an 8.5” x 11” paper) in length and include contact information and signature.
11. Summary of Qualifications, Experience, and Availability – Must be no more than five (5) pages. It should summarize qualifications, relevant experience, and availability to participate in the RFP process to provide requested services to the City. Key staff members participating should be identified.
12. Proposed Process Approach – Must be no more than three (3) pages summarizing the method and approach to providing services to the City.
13. List of Professional References – Must be no more than one (1) page listing most recent professional references for similar projects and their contact information.
14. Disqualification and Rejection of Bid – The City of Georgetown reserves the right to reject any bid of a bidder who has failed to perform satisfactorily, or complete on time, or in a manner consistent with the RFB documents, contract of similar nature, or to reject the bid of a bidder who is not in a position to perform such a contract satisfactorily. The City expressly reserves the right to award the contract to the bidder that best meets the requirements as set forth herein.
15. Assignment of Contract – Assignment of any contract to be entered into in accordance with this RFB will not be recognized by the City of Georgetown unless such assignment has prior written approval of the City.

16. Insurance Provisions – The selected bidder will be required to provide and maintain proof of insurance throughout the contract term in the amount of \$1,000,000.00 and as required at point of contract negotiation by the City’s Risk Manager as follows:

- Comprehensive General Liability (per occurrence);
- Comprehensive Auto Liability (per occurrence); and
- Workers’ Compensation Liability
- Automobile Liability
- Professional Liability

The City of Georgetown is to be named as “Additional Insured” on the above insurance coverage as respect to the City’s interest under the contract. Certificates showing proof of insurance shall be submitted to the City prior to commencement of services under the Agreement. Further, it shall be an affirmative obligation upon the firm to advise the City’s Risk Management Department at Fax No. 843.527.6173; email, cmcdaniel@cogsc.com, PO Box 939, Georgetown, SC 29442, within 2 days of the cancellation herein, and failure to do so shall be construed to be a breach of the agreement.

17. Indemnification - The selected bidder agrees to indemnify, defend and hold harmless the City of Georgetown and their authorized officers, employees, agents, and volunteers from any and all claims, actions, losses damages, and/or liabilities arising from their acts, errors, or omissions and for any costs or expenses incurred by the City therefore under an agreement.
18. Compliance With Law – The selected bidder and its agents and employees shall be bound and comply with all federal, state and local laws, ordinance rules and regulations, as well as all other governing bodies having legal jurisdiction with respect to the area where such work is performed.
19. City Business License and Permits - (Applicable for work performed on site) - The selected firm shall be required to obtain all applicable City of Georgetown permits and business licenses prior to work commencing. Contact Jestin Gilliard, Revenues Manager, 843.545.4041 for business license information. Contact the Housing & Community Development Department at 843.545.4017 for permitting information. These expenses shall be included in the total proposal cost.
20. Bid and Performance Bonds – Bid and Performance Bonds or other securities may be requested for supply contracts and service contracts as the Risk Manager, Purchasing Agent, and/or Department Head deems advisable to protect the City’s interest. Reference line item #21 under “General Contractual Requirements” for additional information.
21. Proposal Attachments - The bidder shall staple or otherwise bind, with each bound copy of these specifications and documents submitted, a signed copy of each addendum issued for these specifications during the bidding period. The bidder shall assemble all drawings, catalog data, and other supplementary information necessary to thoroughly describe materials and equipment covered by the proposal, and shall attach such supplemental information to the bound copy of these specifications submitted with the proposal.

1.6 SUBMITTAL EVALUATION

Submittals will be evaluated based on the following criteria:

- Price
- Schedule
- Transformer Losses
- Proposal Completion

1.7 GENERAL CONTRACTUAL REQUIREMENTS

1. Force Majeure - The bidder shall not be liable for any excess costs if the failure to perform the contract arises out of causes beyond the control and without the fault or negligence of the bidder. Such causes may include, but are not limited to acts of God or of the public enemy, acts of Governments in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the bidder.
2. Governing Law - Except to the extent that this agreement may be governed by any federal law, including federal bankruptcy law, this Agreement shall be governed by, constructed and interpreted under, and enforced exclusively in accordance with the laws of the State of South Carolina, and the courts in the State of South Carolina shall have jurisdiction with respect to any dispute arising hereunder.
3. Bidder Qualifications - Bidder must, upon request of the City, furnish satisfactory evidence of its ability to furnish products and/or services in accordance with the terms and conditions of this RFB. The City of Georgetown reserves the right to make the final determination as to the bidder's ability to provide the services herein.
4. Bidder Responsibility – Each bidder shall fully acquaint him/herself with conditions relating to the scope and restrictions attending the execution of the work under the conditions of this RFB. It is expected that this will sometimes require on-site observation. The failure or omission of the bidder to acquaint him/herself with existing conditions shall in no way relieve him/her of any obligation with respect to this RFB or to a contract.
5. Affirmative Action - The bidder will take affirmative action in complying with all federal and state requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees without regard or discrimination by reason of race, color, religion, sex, national origin or physical handicap.
6. WMBE Statement - It is the policy of the City of Georgetown to provide minorities, and women equal opportunity for participating in all aspects of the City's contracting and procurement programs, including but not limited to employment, construction projects, and lease agreements consistent with the laws of the State of South Carolina. It is further the policy of the City of Georgetown to prohibit discrimination against any person or business in pursuit of these opportunities on the basis of race, color, national origin, religion, sex, age, handicap, or veteran status. It is further the policy of the City

of Georgetown to conduct its contracting and procurement programs so as to prevent such discrimination and to resolve any and all claims of such discrimination.

7. Termination - Subject to the following provisions, any contract resulting from this request for proposals may be terminated by the City provided a thirty (30) day advance notice in writing by the City Administrator, or his designee, is given to the bidder:
 - Non-Appropriations - Funds for this contract are payable from local appropriations. If the sufficient appropriations are not made to pay the charges under the contract it shall terminate without any obligation to the City.
 - Convenience - In the event that a contract is terminated or canceled upon request and for the convenience of the City without the required thirty (30) day advance written notice, then the City shall negotiate reasonable termination costs, if applicable.
 - Cause - Termination by the City for the cause, default or negligence on part of the bidder, shall be excluded from the foregoing provisions; termination costs, if any shall not apply. The thirty (30) day advance notice requirement is waived and the default provision herein shall apply.
 - Default – In case of default by the bidder, the City reserves the right to purchase any and all items/services in default in open market, charging bidder with any excessive costs. SHOULD SUCH CHARGE BE ASSESSED, NO SUBSEQUENT PROPOSALS OF THE DEFAULTING BIDDER WILL BE CONSIDERED UNTIL THE ASSESSED CHARGE HAS BEEN SATISFIED.
8. Prime Bidder Responsibilities - The bidder will be required to assume sole responsibility for the complete effort as required by this RFB. The City will consider the bidder to be the sole point of contact with regard to all contractual matters.
9. Subcontracting - If any part of the work covered by this RFB is to be subcontracted, the bidder shall identify the subcontracting organization and the contractual arrangements made therewith at the time of the offer. All subcontractors must be approved by the City. The successful bidder will also furnish the corporate or company name and the names of the officers of any subcontractors engaged by the bidder.
10. Ownership of Material – All materials and documents submitted by the bidder in response to this specification become the property of the City of Georgetown and will not be returned to the bidder.
11. Compliance with State and Federal Requirements – State and Federal requirements that are more restrictive than these set forth herein shall be followed by the bidder.
12. Contract Amendments - Amendments to any agreement between the City and the bidder must be reviewed and approved in writing by the City of Georgetown City Administrator or his designee.
13. Assignment - No contract or its provisions may be assigned, sublet, or transferred without the written consent of the City of Georgetown Finance Department.

14. Records Retention and Right to Audit – The City shall have the right to audit the books and records of the bidder as they pertain to this contract. Such books and records shall be maintained for a period of three (3) years from the date of final payment under contract.
15. The City may conduct performance audits of the bidder, as determined necessary by the City. Pertaining to all audits, the bidder shall make available to the City, access to its computer files containing the history of the contract performance and all other documents related to the audit. Additionally, any software used by the bidder shall be made available for auditing purposes at no cost to the City.
16. Independent Contractor Status - The parties hereby agree that the contractor is an independent contractor of the City and that nothing in an agreement with the City shall be deemed to place the parties in a relationship of employer/employee, partners, or joint ventures. Neither party shall have the right to obligate or bind the other in any manner. Each party agrees and acknowledges that it will not hold itself out as an authorized agent with the power to bind the other party in any manner. Each party shall only be responsible for any withholding taxes, payroll taxes, disability insurance payments, unemployment taxes, or other similar taxes or charges with respect to its activities in relation to performance of its obligations of an agreement.
17. Representations of Bidder - Bidder represents, warrants, and covenants that:
 - In providing the services bidder shall utilize the care and skill used by members of bidder’s profession practicing under similar circumstances at the same time and in the same locality.
 - All employees provided by the bidder (employees) to the City shall have the qualifications, skills and experience necessary to perform his/her job in accordance with the requirements of the agreement. The City may request removal of any employee for good cause.
 - Bidder is a business, validly existing and in good standing under the Laws of the State of South Carolina.
18. Indemnity Provisions - Bidder agrees to and shall indemnify and hold the City harmless from and against all liability, loss, damages or injury, and all costs and expenses (Including attorney fees and costs of any suit related thereto) suffered or incurred by the City, arising from or related to the terms of this project, or bidder’s performance thereunder.
19. Insurance - The selected bidder will be required to provide and maintain proof of insurance throughout the project term in the amount of \$1,000,000.00, and as required at point of contract negotiation by the City’s Risk Manager as follows:
 - Comprehensive General Liability (per occurrence)
 - Professional Liability
 - Comprehensive Auto Liability (per occurrence)
 - Workers’ Compensation Liability (as required by State of South Carolina statutes)

The City of Georgetown is to be named as “Additional Insured” on the above insurance coverage as respect to the City’s interest under the contract. Certificates showing proof of insurance shall be submitted to the City prior to commencement of services under an Agreement. Further, it shall be an affirmative obligation upon the bidder to advise the City’s Risk Management Office at Fax No. 843.527.6173; email lbell@cogsc.com; PO Box 939; Georgetown, SC 29442, within 2 days of the cancellation herein, and failure to do so shall be construed to be a breach of an agreement.

20. City Business License and permits - The selected bidder shall be required to obtain all applicable City of Georgetown permits and business licenses **prior to work commencing**. Contact Jestin Gilliard, Revenues Manager, jgiiliard@cogsc.com or 843.545.4041, for business license information. Contact the Housing & Community Development Department at 843.545.4017 for permitting information. These expenses shall be included in the total proposal cost.

21. Bid and Performance Bonds – Bid and performance bonds or other securities may be requested for supply contracts and service contracts as the Risk Manager, Purchasing Agent, and/or Department Head deems advisable to protect the City’s interest. Any such bonding requirement shall be set forth in the solicitation.

Bid Security: In an amount equal to or at least five percent (5%) of the amount of the bid shall be required for all competitive bidding for construction contracts exceeding \$100,000. Bid security shall be a legitimate bid bond provided by a surety company authorized to do business in South Carolina, or the equivalent in cash, certified check, cashiers’ check, or money order. The City, at its option, may require bid bonds on construction contracts under \$100,000 when the circumstances warrant. Noncompliance with this provision mandates that the City reject the bid. Bid security will be returned to the unsuccessful bidders upon contract award by the Purchasing Agent. When a construction contract is awarded in excess of \$100,000 the following bonds or security shall be delivered by the successful bidder to the City and shall become binding on the parties upon execution of the contract. Bid or performance bonds shall not be used in substitution for determination of bidder’s responsibility.

- A performance bond shall be in an amount equal to one hundred and ten percent (110%) of the contract amount; and
- A payment bond for the protection of all persons supplying labor and material to the contractor or its subcontractors for the performance of the work shall be in an amount equal to one hundred percent (100%) of the contract amount.

The Purchasing Agent shall make the award of bid after obtaining the recommendation from City Council. The award letter shall be issued by the Purchasing Agent or designee to the lowest responsible and responsive bidder meeting the requirements set forth in the Invitation for Bids.

- The division/department head is responsible for obtaining the required insurance certificates and Business License verification for submittal to the Purchasing Agent and Risk Manager for approval.

- A bid may be canceled and/or all bids rejected upon written recommendation of the division/department manager, and approval of the Purchasing Agent.

2 PROPOSAL

City of GEORGETOWN
Georgetown, South Carolina

FRONT STREET
UNDERGROUND ELECTRICAL SYSTEM UPGRADE
PROJECT #1919
PAD-MOUNTED TRANSFORMERS

Gentlemen:

The undersigned, as bidder, hereby declares that the only person or persons interested in this Proposal as Principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the Contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a bid or Proposal; and that it is in all respected fair and good faith without collusion or fraud.

The bidder further declares that he has examined the Specifications and Contract Documents relative thereto and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work performed.

The undersigned hereby declares that the following list states any and all variations from and exceptions to the requirements of the Specifications and Contract Documents and that, otherwise, it is the intent of this Bid Proposal that the above designated equipment will be furnished in strict accordance with these documents.

The undersigned hereby declares that the following list states the conditions and terms of the Contractor's warranty for the power transformers.

Lump Sum Price – Base Bid Proposal

The undersigned bidder hereby proposes to furnish single-phase loop feed pad-mounted transformers in the quantity and sizes listed in Section 4.5 complete f.o.b. job site Georgetown, SC, in accordance with the attached specifications and specification data for the firm lump sum price of

\$ _____ (Price in Words)
(\$ _____)

Delivery Schedule

The undersigned bidder hereby proposes to deliver the power transformers at the Owner's job site on or before the date shown below:

the _____ day of _____, 2019.

The undersigned bidder hereby certifies (a) that all conflicts and exceptions have been noted or listed as directed in the Contractor's Bid Proposal; (b) that this bid proposal is genuine and is not made in the interest of or on the behalf of, any undisclosed person, firm or corporation, and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; (c) that he has not directly or indirectly induced or solicited any other bidder to put in a false or sham proposal; (d) that he has not solicited or induced any person, firm, or corporation to refrain from bidding; and I that he has not sought by collusion to obtain for himself any advantage over any other bidder or over the Owner.

Dated at _____ this _____ day of _____, 2019.

Bidder

By

Title

Business Address of Bidder

Phone

State of Incorporation

Address of Principal Office

3 BID PROPOSAL DATA

Each bidder shall submit complete and definitive information on his offering in sufficient detail to permit a complete analysis of the bid. The requirements stated in the Instructions to Bidders relative to information submittal shall be followed. The requirements for information contained in this section are basic requirements. Additional information shall be provided as requested by the Owner.

The blank data sheets included in this section shall be completely filled in where required. The data listed therein shall not relieve the Contractor of his responsibility of his for meeting requirements of the detailed specifications.

Bidder's Name

Unit Prices – Pad-mounted Transformers

10 kVA _____
50 kVA _____
100 kVA _____
167 kVA _____

Equipment Data

Guaranteed Impedance _____
 10 kVA _____
 50 kVA _____
 100 kVA _____
 167 kVA _____
Guaranteed Losses _____
 10 kVA _____
 50 kVA _____
 100 kVA _____
 167 kVA _____
Approximate Weight _____
 10 kVA _____
 50 kVA _____
 100 kVA _____
 167 kVA _____
Warranty Period _____

4 GENERAL REQUIREMENTS

4.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D 117	(2002) Standard Guide for Sampling, Test Methods, Specifications and Guide for Electrical Insulating Oils of Petroleum Origin
ASTM D 1535	(2008) Specifying Color by the Munsell System
ASTM D 3487	(2000; R 2006) Standard Specification for Mineral Insulating Oil Used in Electrical Apparatus

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C57.12.00	(2015) Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
IEEE C57.12.28	(2014) Standard for Pad-Mounted Equipment—Enclosure Integrity
IEEE C57.12.38	(2014) Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 Kva and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below
IEEE C62.11	(2012) Standard for Metal-Oxide Surge Arresters for Alternating Current Power Circuits (>1Kv)
IEEE Std 386	(2016) Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600V

4.2 SUBMITTALS

The following items shall be submitted:

- a. A certification, from the manufacturer, that the technical requirements of this specification shall be met.
- b. An outline drawing of the transformer with devices identified.
- c. ANSI nameplate data of the transformer.
- d. Manufacturer's published time-current curves (on full size logarithmic paper) of the transformer high side fuses.
- e. Routine and other tests shall be conducted by the manufacturer. Provide certified copies of the tests.

Three copies of all submittals shall be sent to:

Heather Sudduth
Utility Technology, Engineers-Consultants
775 Spartan Blvd., Suite 207
Spartanburg, South Carolina 29301

One copy of all submittals shall be sent to:
Alan Loveless, Utilities Director
PO Box 1146
Georgetown, SC 29442

4.3 DELIVERY

The equipment shall be delivered F.O.B. job site, Georgetown, South Carolina. Exact delivery location will be provided to the successful bidder after award of the contract. Shipping notice for the equipment at least 48 hours before delivery is made to:

Alan Loveless, Electric Utilities Director
843-545-4600

4.4 SCHEDULE

The Bidder is required to state transformer delivery schedules. Delivery schedules at the City's discretion may be considered in the bid evaluation. Late delivery penalties shall be 5% of the bid price per transformer per City work day and (2) suspension from the next (3) transformer bids. Penalties shall apply at the discretion of the City.

Equipment delivery shall be on or before May 23, 2019.

4.5 TRANSFORMER RATINGS AND QUANTITIES

Rating	Quantity
7,200 V – 120/240 V, 10 kVA	1
7,200 V – 120/240 V, 50 kVA	5
7,200 V – 120/240 V, 100 kVA	2
7,200 V – 120/240 V, 167 kVA	8

5 PRODUCTS

5.1 SINGLE-PHASE PAD-MOUNTED TRANSFORMERS (DEAD-FRONT)

Applicable Sections of IEEE C57.12.28, IEEE C57.12.38 and as specified herein.

5.1.1 COMPARTMENT CONSTRUCTION

Single compartment: Provide Type 2 combination high and low-voltage compartment, clam shell style, with lockable hinged cover and single-point latching. Type 2 is defined by IEEE C57.12.38.

5.1.1.1 HIGH VOLTAGE

High-voltage compartment shall contain the incoming line, insulated high-voltage load-break connectors, bushing well inserts, high-voltage bushing wells configured for loop feed application, access to oil-immersed fuses, tap changer handle, connector parking stands, and ground pad.

- a. Insulated high-voltage load-break connectors: IEEE Std 386, rated 15 kV, 95 kV BIL. Current rating: 200 amperes rms continuous. Short time rating: 10,000 amperes rms symmetrical for a time duration of 0.17 seconds. Connector shall have a steel reinforced hook-stick eye, grounding eye, test point, and arc-quenching contact material.
- b. Bushing well inserts: IEEE 386, 200 amperes, 15 kV class. Provide a bushing well insert for each bushing well unless indicated otherwise.
- c. Provide oil-immersed, expulsion fuses in series with oil-immersed, partial-range, current-limiting fuses. Coordinate transformer protection with expulsion fuse clearing low-current faults and current-limiting fuse clearing high-current faults beyond the interrupting rating of the expulsion fuse.

Oil-immersed expulsion fuses: 15 kV, ABB Type ProLink or equal.

Oil-immersed current-limiting fuses: 8.3 kV Hi-Tech OS Shorty or equal.

Fuses shall be accessible through a handhole. Furnish two spare expulsion fuse elements for each transformer.

- d. Parking stands: Provide a parking stand for each bushing well pair. Provide insulated standoff bushings for parking of energized load-break connectors on parking stands.

5.1.1.2 LOW VOLTAGE

Low-voltage portion contains: low-voltage bushings with stud terminals IEEE C57.12.38 Figure 4 Detail C, accessories stainless steel or laser-etched anodized aluminum diagrammatic transformer nameplate, and ground pad.

Include the following accessories: drain plug, fill plug, pressure relief device and a suitable means for indicating the correct liquid level at 25 °C.

5.1.2 TRANSFORMER

- a. Oil-insulated, two winding, 60 hertz, 65° C rise above a 30° C average ambient, self-cooled type.

- b. Transformer shall be rated 95 kV BIL.
- c. Tap changer shall be externally operated, manual type for changing tap setting when the transformer is de-energized. Provide four 2.5 percent full capacity taps, two above and two below rated primary voltage. Tap changers shall clearly indicate which tap setting is in use.
- d. Tested impedance shall be less than or equal to the following at 85° C.
 - i. 50 kVA: 3.04%
 - ii. 100 kVA: 2.89%
 - iii. 167 kVA: 2.87%
- e. Transformer shall include lifting lugs. The transformer base construction shall be suitable for using rollers or skidding in any direction. The transformer shall have an insulated low-voltage neutral bushing with NEMA spade terminal, and with removable ground strap.
- f. Overall dimensions shall be suitable for installation on a pad that is 44 inches wide and 52 inches deep.

5.1.3 SPECIFIED TRANSFORMER LOSSES

The transformer(s) bids will be evaluated for total ownership cost using the following formula.

$$EC = IC + \$5.62*(NLL) + \$0.74*(LL)$$

Where: EC = Evaluated Cost
 IC = Initial Cost
 NLL = No Load Losses (watts) at 20°C
 LL = Load Losses (watts) at 85°C

Losses shall be guaranteed and no individual transformer shall be shipped that exceeds quoted losses by more than 5% No-Load or Load losses without City approval. If the order consists of more than one transformer, actual average losses of the transformers shipped shall be equal to or less than the guaranteed losses. If actual losses exceed guaranteed losses by more than 5%, the Total Ownership Cost (EC) shall be recalculated and actual increases in overall transformer cost shall be refunded to the City at the City's discretion. No action shall be taken in cases where losses are lower than quoted (that is: In no case shall the City pay a bonus).

5.1.4 INSULATING LIQUID

Mineral oil: ASTM D 3487, Type II, tested in accordance with ASTM D 117. Provide identification of transformer as "non-PCB" and "Type II mineral oil" on the nameplate.

5.1.5 LIQUID-FILLED TRANSFORMER NAMEPLATES

Distribution transformers shall be provided with nameplate information in accordance with IEEE C57.12.00 and as modified or supplemented by this section.

5.1.6 PAINTING

Paint entire transformer assembly Munsell 7GY3.29/1.5 green. Paint coating system shall comply with IEEE C57.12.29 for pad-mounted enclosures situated in coastal salt-water environments. The Munsell color notation is specified in ASTM D 1535.

5.2 WARNING SIGNS

Provide self-adhesive warning signs on the outside of the high voltage compartment door(s). Signs shall be decals and shall have nominal dimensions of 7 by 10 inches with the legend "DANGER HIGH VOLTAGE" printed in two lines of nominal 2 inch high letters. The word "DANGER" shall be in white letters on a red background and the words "HIGH VOLTAGE" shall be in black letters on a white background. Decal shall be Panduit No. PPSO710D72 or approved equal.

5.3 ROUTINE AND OTHER TESTS

IEEE C57.12.00. Routine and other tests shall be performed by the manufacturer on the actual transformer(s) prepared for this project to ensure that the design performance is maintained in production. Submit test reports, by serial number and receive approval before delivery of equipment to the project site.