



**BIDDING DOCUMENTS**

**FOR**

**FURNISHING**

**PADMOUNT SWITCHGEAR AND  
PRIMARY POWER CABLE**



**CITY OF REDWOOD FALLS/  
PUBLIC UTILITIES  
REDWOOD FALLS, MINNESOTA**

**January 2021**

**DGR Project No. 421122**

**BIDDING DOCUMENTS**  
**FOR**  
**FURNISHING**  
**PADMOUNT SWITCHGEAR AND PRIMARY POWER CABLE**  
  
**CITY OF REDWOOD FALLS/  
PUBLIC UTILITIES**  
**REDWOOD FALLS, MINNESOTA**

January 2021

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By \_\_\_\_\_  
Chad A. Rasmussen, P.E.

License No. 41434      Date 1-22-2021

DGR Project No. 421122

**DGR Engineering**

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Rock Rapids, IA  
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**BIDDING DOCUMENTS**  
**FOR**  
**FURNISHING**  
**PADMOUNT SWITCHGEAR AND PRIMARY POWER CABLE**  
**CITY OF REDWOOD FALLS/**  
**PUBLIC UTILITIES**  
**REDWOOD FALLS, MINNESOTA**

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## ADVERTISEMENT FOR BIDS

Sealed bids will be received by the City Administrator's Office of the City of Redwood Falls/Public Utilities, Minnesota (RFPU) at City Hall at 333 South Washington Street, Redwood Falls, MN, 56283, until 1:15 P.M. on the 18th day of February 2021, for Furnishing Padmount Switchgear and Primary Power Cable, at which time the bids shall be publicly opened and read aloud.

The material required is as follows:

- 15 kV Padmount Distribution Switchgear (Air-insulated)
- 15 kV Primary Power Cable

The above equipment shall be in accordance with the specifications and proposed form of contract now on file in the office of the Municipal Electric Utility in said City of Redwood Falls, Minnesota, by this reference made a part hereof, as though fully set out and incorporated herein.

All bids shall be made on proposal forms furnished by the Engineer and shall be accompanied by bid security in the form of a certified check or bid bond, made payable to City of Redwood Falls, Minnesota, in the amount of ten percent (10%) of the bid, which security becomes the property of RFPU in the event the successful bidder fails to enter into a contract and post satisfactory Performance and Payment Bonds.

Material suppliers desiring a copy of the bid forms and specifications for individual use may obtain them from the office of DGR Engineering, Rock Rapids, Iowa, telephone (712) 472-2531, fax (712) 472-2710, website [www.dgr.com](http://www.dgr.com), e-mail [dgr@dgr.com](mailto:dgr@dgr.com), no deposit required.

Payment to the Supplier will be made on the basis of one hundred percent (100%) of the contract price of the material within thirty-one (31) days of receipt of the equipment in acceptable condition and associated invoice.

Delivery of the materials may start after execution of Contract Documents. All materials shall be delivered by the dates set in the Specifications.

RFPU reserves the right to defer acceptance of any bid for a period not to exceed thirty (30) days after the date bids are received and no bid may be withdrawn during this period. RFPU also reserves the right to reject any or all bids and enter into such contract as it shall deem to be in the best interest of Municipal Electric Utility.

CITY OF REDWOOD FALLS/PUBLIC UTILITIES, MINNESOTA

By \_\_\_\_\_ /s/ Chuck Heins  
Public Utilities Superintendent

## **INSTRUCTIONS TO BIDDERS**

### **1.01 FAMILIARITY OF CONDITIONS.**

- A. Bidders are required to examine to their satisfaction, the plans and specifications and to make sure that the requirements are fully understood. The failure or omission of any Bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation regarding their bid.

### **1.02 BIDDERS QUALIFICATIONS.**

- A. Bidder must be capable of performing the work bid upon. The lowest responsive Bidders will be required to satisfy the Owner as to their integrity, experience, number of employees, equipment, personal, and financial ability to perform and ability to finance the cost of the work.
- B. If the information and data requested by the Owner is not furnished, the Owner may consider the Bidder non-responsive or non-responsible. The Owner reserves the right, in its sole and absolute discretion, to accept the bid of a Bidder despite the fact that said Bidder has not submitted any information, list, data or statement requested.
- C. The Owner reserves the right to reject any bid if the Owner determines, in its sole and absolute discretion, that the Bidder is not properly qualified to carry out the obligations of the Contract and/or to complete the work contemplated by the Contract. Conditional bids will not be accepted.

### **1.03 METHOD OF BIDDING.**

- A. Bids shall be submitted on a unit price or lump sum basis as stated on the Bid form. In preparing a bid, the Bidder shall specify the price, written legibly in ink or typewritten, at which the Bidder proposes to do each item of work. The price shall be stated with respect to each and every alternate item, whether an add alternate, or a deduct alternate. Failure to state a price for any alternate bid item shall constitute a non-responsive bid that will not be considered. The prices shall be stated in figures. In items where unit price is required, the total amount for each item shall be computed at the unit prices bid for the quantities given in the estimate. In the event of discrepancies in the unit price extensions listed in the bid, unit prices shall govern.
- B. For all work let on a unit price basis, the Engineer's estimate of quantities shown on the bid is understood to be approximate only, and will be used only for the purpose of comparing bids. For work let on a lump sum basis, any estimate of quantities provided is furnished for the convenience of Bidders and is not guaranteed.

#### **1.04 BID SECURITY.**

- A. Each bid shall be accompanied by bid security as specified in the Advertisement for Bids and made payable to the Owner. Should the bidder receiving the award fail to execute a satisfactory contract and file acceptable bonds within ten (10) days after the award of contract, the Owner may consider Bidder to be in default, annul the Notice of Award, and the bid security of that Bidder will be forfeited. Such forfeiture shall be the Owner's exclusive remedy if Bidder defaults.
- B. The bid security of unsuccessful Bidders will be returned promptly after the award has been made. In no case will the bid security be held longer than thirty (30) days without written permission of the Bidder, except that the bid security of the Bidder to whom the contract is awarded will be retained until he or she has entered into contract and filed an acceptable bond.

#### **1.05 TAXES.**

- A. The unit prices for material items in all Bids shall not include provisions for the payment of any taxes payable to the State of Minnesota or any other taxing authority. If any taxes are due, they shall be paid by the Owner. The Owner will issue a tax exemption certificate to the successful bidder.

#### **1.06 ALTERNATE MATERIALS.**

- A. Requests for approval of 'or-equal' materials and equipment shall be submitted to the Engineer in writing at least fifteen days prior to receipt of bids. Each request shall conform to the terms and conditions of the bidding documents and to the type, function, and quality standards of approved materials and equipment. The burden of proof of the merit of proposed 'or-equal' materials and equipment is upon the Bidder. The engineer's decision of approval or disapproval of a proposed 'or-equal' item will be final. No substitution shall be approved except by a written addendum issued to all prospective Bidders.
- B. Bidders may submit bids for alternate materials which do not meet all of the detailed requirements of the specifications. Such submissions shall be in addition to the basic bid which shall comply with all requirements of the specifications. Bid evaluation and contract award will be made on the basis of the base bid. Alternate materials will then be considered, and the final contract amount adjusted accordingly if the Owner decides to accept bids for alternate materials. In submitting bids for alternate materials, Bidders shall submit manufacturer's data and note the exceptions to the requirements of the plans and specifications.

#### **1.07 TERMS AND CONDITIONS.**

- A. The Bidder is invited to attach their standard patent protection and liability limitation conditions, but shall not include any other terms and conditions to this bid. Attachment of additional terms and conditions shall be grounds for disqualification of the submitted bid.



## **1.08 CHANGES IN QUANTITIES.**

- A. The Bidder understands and agrees that the quantities called for in the bid are approximate, and that the total number of material items upon which payment shall be made shall be set forth in the material contract and purchase order.

## **1.09 SUBMISSION OF BIDS.**

- A. Bidders will be furnished with bid form(s) giving the estimate of quantities needed to complete the work. Two copies of the completed bid form(s) and all supporting documentation shall be included with the bid.
- B. If the bid is made by an individual, his or her name and post office address must be shown. If made by a firm or partnership, the name and post office address of the firm or partnership must be shown. If made by a corporation, the person signing the bid must name the state under the laws of which the corporation is chartered, and the name, title, and business address of the executive head of the corporation. Anyone signing a bid as agent may be required to submit satisfactory evidence of his or her authority to do so.
- C. Any changes or alterations made in the official bid form, or any additions thereto, may result in the rejection of the bid. No bid will be considered which contains a clause in which the Bidder reserves the right to accept or reject a contract awarded by the Owner. Bids in which the unit prices are obviously unbalanced may be rejected.
- D. Should the Bidder find discrepancies, ambiguities or omissions from these documents, they should immediately notify the Engineer and an addendum will be sent to all known entities holding copies of the Bidding Documents.
- E. Two copies of each bid form and all supporting documentation shall be provided. Bids shall be placed in an opaque envelope and the envelope sealed and marked “Bid Enclosed – Padmount Switchgear and Primary Power Cable” to indicate its contents. If forwarded by mail, the envelope shall be mailed to the following address:  
  

City of Redwood Falls City Hall  
333 South Washington Street  
Redwood Falls, MN 56283  
Attn: Mr. Keith Muetzel, City Administrator
- F. Receipt of any Addenda must be acknowledged on the bid form or a copy of any addenda relating to the bid shall be signed and attached to the bid.

## **1.10 MODIFICATION OR WITHDRAWAL OF BIDS.**

- A. A bid may be withdrawn by an appropriate document duly executed in the same manner that a bid must be executed and delivered to the place where bids are to be submitted prior to the date and time for the opening of bids. Upon receipt of such notice, the unopened bid will be returned to the Bidder.

- B. If a Bidder wishes to modify its bid prior to bid opening, Bidder must withdraw its initial bid and submit a new bid prior to the date and time for the opening of bids.
- C. No bid may be withdrawn for a period of thirty (30) days after the scheduled date and time for the receipt of bids.

### **1.11 CONTRACT AWARD.**

- A. Award of the Contract, if an award is made, will be on the basis of the base bid and/or any alternate bid(s) chosen by the Owner, as is in the best interest of the Owner. It is the intent of the Owner to award one (1) Contract for each of the bid(s) as is deemed to be in the best interest of the Owner. The Owner reserves the right to reject any or all bids, waive technicalities, and make award(s) as deemed to be in the best interest of the Owner. In addition to cost, other items that will impact the award decision include the following:
  - 1. Relevant experience with installations of similar size and type.
  - 2. Support capabilities.
  - 3. Ability to meet specified delivery schedule.
  - 4. Conformance to project specifications.
- B. The anticipated award date is March 2, 2021.

### **1.12 PERFORMANCE BOND.**

- A. The Bidder to whom the contract is awarded shall furnish a Performance Bond in an amount equal to the total amount of the bid guaranteeing the faithful performance of the work in accordance with the terms of the contract. Such bond shall be with a surety company authorized to do business in the State of Minnesota and in form acceptable to the Owner.

### **1.13 EXECUTION OF CONTRACT.**

- A. The Bidder to whom the contract has been awarded shall enter into contract with the Owner within ten (10) days after the award has been made.
- B. No bid shall be considered binding upon the Owner until the contract is properly executed by both parties and the Performance Bond filed, if required.
- C. The contract, when executed, shall be combined with all the Contract Documents identified in the Material Agreement representing the entire agreement between parties. The Bidder shall not claim any modification resulting from representation or promise made by representative of the Owner or other persons.



## 1.14 WARRANTY

- A. The Supplier shall warrant that the materials included in the contract are free of defects for one (1) year from the delivery date. The Supplier shall repair or replace any materials found to be defective at no cost to the Owner. Any costs incurred by the Owner due to defective materials supplied by the Supplier shall be reimbursed to the Owner by the Supplier.

## 1.15 MATERIAL DELIVERY

- A. Materials specified within shall be purchased FOB, Redwood Falls, Minnesota, Freight prepaid and included in quoted price. Materials shall be shipped in total or in truckload lots, minimum. Deliveries shall be arranged with the Owner. Acceptable delivery times are 8:00 a.m. to 3:00 p.m., Monday through Friday, working days only.
- B. The Owner desires delivery of the material no later than the following dates. Any exceptions to this schedule shall be clearly stated in the Bid(s) submitted.

	<u>Material</u>	<u>Delivery Date</u>
Bid No. 1	15 kV Padmount Switchgear	June 30, 2021
Bid No. 2	15 kV Primary Cable	June 1, 2021
Bid No. 1	Box pads only	June 1, 2021

- C. The Owner agrees to indemnify the Supplier for circumstances beyond his control, including acts of God, acts of government, and related circumstances. Actions that cause delivery delays that are under the control of the Supplier are failure to allow sufficient time for manufacturing, failure to inform the Engineer of changes in the manufacturing schedule, or lack of cooperation in establishing effective measures by which delays could be minimized.

\* \* \* END OF SECTION \* \* \*

**BID FORM No. 1**  
**PADMOUNT SWITCHGEAR (DEAD-FRONT, AIR-INSULATED)**

TO: City of Redwood Falls/Public Utilities  
Redwood Falls, Minnesota

From: Bidder's Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Pursuant to and in compliance with the Advertisement for Bids and the Instructions to Bidders relating thereto, the terms of which are incorporated herein by reference thereto, the undersigned as bidder offers and agrees, if this offer is accepted, to furnish and deliver the equipment and materials in strict conformance with the Specifications forming a part of these contract documents and in accordance with following addenda for the sum indicated on the following bid schedule.

Addendum Number

Addendum Date

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1. The prices set forth herein do not include any sums which are or may be payable by the seller on account of taxes imposed by the State of Minnesota upon the sale, purchase or use of the equipment. If any such tax is applicable to the sale, purchase or use of the equipment, the amount thereof shall be paid by the purchaser.
2. The prices included herein are firm without regard for time of delivery, increase in cost from manufacturer, or any other factor.
3. The price of the equipment set forth herein shall include the cost of delivery to the job site in Redwood Falls, Minnesota. The guaranteed delivery date shall be included in the bid.
4. Title to the equipment shall pass to the Owner upon completion of the contract and acceptance by the Owner.
5. This bid is void unless a materials contract based on this bid is entered into by the Owner and the Supplier within 30 days after the date hereof.
6. The undersigned being familiar with all the details, conditions, and requirements hereby proposes to furnish the following material to City of Redwood Falls/Public Utilities, Redwood Falls, Minnesota, in strict conformance with the specifications and Bidding Documents, to-wit:

<u>Item No.</u>		<u>Unit Price</u>	<u>Extended Price</u>
1. <u>1 ea.</u>	more or less, padmount switches with one 200A fuse bays and three 600A gang operated switch bays, 14.4 kV	\$ _____	\$ _____
	Catalog No. _____		
2. <u>5 ea.</u>	more or less, padmount switches with two 200A fuse bays and two 600A gang operated switch bays, 14.4 kV	\$ _____	\$ _____
	Catalog No. _____		
3. <u>6 ea.</u>	more or less, 12" base spacer for switchgear	\$ _____	\$ _____
4. <u>33 ea.</u>	more or less, fusing equipment SMU-20, 100E, TCC 119-2	\$ _____	\$ _____
5. <u>6 ea.</u>	more or less, box pads for switchgear	\$ _____	\$ _____
	Catalog No. _____		
TOTAL BID (Items 1-5)			\$ _____

Switchgear Manufacturer \_\_\_\_\_

Delivery Date \_\_\_\_\_

Box Pad Manufacturer \_\_\_\_\_

Delivery Date \_\_\_\_\_

All materials shall be F.O.B., Redwood Falls, Minnesota.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

Bidder \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Authorized Officer \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Phone No. \_\_\_\_\_

E-mail \_\_\_\_\_

**BID FORM No. 2**  
**15 kV PRIMARY POWER CABLE**

TO: City of Redwood Falls/Public Utilities  
Redwood Falls, Minnesota

From: Bidder's Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

Pursuant to and in compliance with the Advertisement for Bids and the Instructions to Bidders relating thereto, the terms of which are incorporated herein by reference thereto, the undersigned as bidder offers and agrees, if this offer is accepted, to furnish and deliver the equipment and materials in strict conformance with the Specifications forming a part of these contract documents and in accordance with following addenda for the sum indicated on the following bid schedule.

<u>Addendum Number</u>	<u>Addendum Date</u>
_____	_____
_____	_____

1. The prices set forth herein do not include any sums which are or may be payable by the seller on account of taxes imposed by the State of Minnesota upon the sale, purchase or use of the equipment. If any such tax is applicable to the sale, purchase or use of the equipment, the amount thereof shall be paid by the purchaser.
2. The prices included herein are firm without regard for time of delivery, increase in cost from manufacturer, or any other factor. **Note: the Owner may accept non-firm bids that are presented as “subject to metals escalation” or similar provisions. If pricing of that nature is provided, a clear description of how pricing adjustments will be made shall be furnished, including metals base prices, pricing indexes, and quantity of metals in the material to be supplied.**
3. The price of the equipment set forth herein shall include the cost of delivery to the job site in Redwood Falls, Minnesota. The guaranteed delivery date shall be included in the bid.
4. Title to the equipment shall pass to the Owner upon completion of the contract and acceptance by the Owner.
5. This bid is void unless a materials contract based on this bid is entered into by the Owner and the Supplier within 30 days after the date hereof.
6. The undersigned being familiar with all the details, conditions, and requirements hereby proposes to furnish the following material to City of Redwood Falls/Public Utilities, Redwood Falls, Minnesota, in strict conformance with the specifications and Bidding Documents, to-wit:

<u>Item No.</u>	<u>Unit Price</u>	<u>Extended Price</u>
1. <u>41,400 ft.</u> more or less, 15 kV Power Cable Conductor: 750 MCM, Al., <b>stranded</b> Insulation: 220 mil EPR Neutral: <b>(15) #10</b> , round, Cu. Outer jacket: Insulating black polyethylene 9 reels @ 1,600 ft. per reel, -0,+1% 18 reels @ 1,500 ft. per reel, -0,+1%	\$ _____	\$ _____

Catalog # \_\_\_\_\_

TOTAL BID (Item 1)      \$ \_\_\_\_\_

Manufacturer \_\_\_\_\_

Delivery Date \_\_\_\_\_

All materials shall be F.O.B., Redwood Falls, Minnesota.

Dated this \_\_\_\_ day of \_\_\_\_\_, 2021.

Bidder \_\_\_\_\_

Address \_\_\_\_\_

Authorized Officer \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Phone No. \_\_\_\_\_

E-mail \_\_\_\_\_

# TECHNICAL SPECIFICATIONS

## FOR FURNISHING

### PADMOUNT SWITCHGEAR (DEAD FRONT, AIR-INSULATED)

#### PART 1 - GENERAL

##### 1.01 GENERAL REQUIREMENTS:

- A. Padmount switchgear shall be 14.4 kV nominal, 95 kV BIL, 600 amp continuous, 14,000 amps RMS sym. short circuit.
- B. The switchgear shall meet the latest applicable requirements of ANSI/IEEE standards, including but not limited to ANSI C57.12.28, ANSI C37.20, ANSI C37.74, and ANSI/IEEE 386.

#### PART 2 - PRODUCTS

##### 2.01 DEAD FRONT SWITCHGEAR:

- A. Design:
  - 1. Double-side padmount style with front and back access.
  - 2. Multi-way with 4 modules. **[SEE BID FORM FOR CONFIGURATIONS]**
  - 3. Grounding studs at each incoming cable connection.
- B. Enclosure:
  - 1. Shall be mild steel.
  - 2. Color: Olive green/Munsell.
  - 3. Shall be free standing with padlocked security.
  - 4. Enclosure finish shall be resistant to salt spray and shall have been successfully tested in accordance with ASTM B-117.
- C. Load Break Switch Modules:
  - 1. Three phase interrupter switches with 3-pole gang operated functionality.



2. Interrupter switches shall utilize a quick-make, quick-break mechanism which shall swiftly and positively open and close the interrupter switch independent of the speed of the switch operating handle.
3. External switch operating mechanism, folding switch operating handle in hub pocket.
4. Viewing window for visual identification of open or closed switch position. Viewing windows shall be wide-viewing and mar-resistant.
5. 600 amp bushings, dead front, suitable for bolt-on elbow connections.
6. Modules shall include parking stands for each phase included on each switch way.
7. Insulation: Air-insulated.
8. Ratings:
  - a. 600 amp continuous
  - b. 600 amp load break, with fault close in ratings to exceed short circuit rating of the gear.

D. Fuse Modules:

1. 200 amp bushings, dead front, suitable for elbow connections. **Include removable loadbreak bushing well inserts as required.**
2. Each fuse bay shall be equipped with fuse-unit end fittings (including silencer) for use with S&C SMU-20 fuse units.
3. Fuse units shall be S&C SMU-20, E-speed, TCC 119-2, 14.4 kV. Fuse size is listed in the Bid Form.
4. Viewing window for visual identification of blown-fuse indicators. Viewing windows shall be wide-viewing and mar-resistant.
5. Modules shall include parking stands for each phase included on each fuse way.
6. Insulation: Air-insulated.
7. Ratings:
  - a. 200 amp continuous

- b. 200 amp load break, with fault close in ratings to exceed short circuit rating of the gear.

E. Acceptable Manufacturers:

- 1. S & C, type PME
- 2. Federal Pacific, type PSE
- 3. No equal

2.02 BASE SPACERS FOR SWITCHGEAR:

- A. Shall be mild steel.
- B. Shall be 12” in height.
- C. Color: Olive green/Munsell to match switchgear.

2.03 BOX PADS FOR PADMOUNT SWITCHGEAR:

- A. Fiberglass box pads shall be furnished and properly sized to match the padmount switchgear listed in the Bid.
- B. Box pad shall be step designed of heavy construction in order to support the above switch.
- C. Pad shall be sized to place the weight of the supported device as close to the outside edge as possible.
- D. Height of pad shall be thirty-six (36) inches.
- E. **The box pad manufacturer shall be responsible for coordinating with the padmount switchgear supplier regarding pad size, top opening, etc.**
- F. Acceptable Manufacturers:
  - 1. Nordic Fiberglass, Inc., type GS
  - 2. Highline, FSG series
  - 3. Approved equal

\* \* \* END OF SECTION \* \* \*

**TECHNICAL SPECIFICATIONS**  
**FOR FURNISHING**  
**15 kV PRIMARY POWER CABLE**

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS:

- A. This specification is for 15 kV ethylene propylene rubber (EPR) insulated URD type power cable with concentric neutral and insulating jacket.
- B. Cable is intended for use on a 15 kV grounded wye system and shall be suitable for direct burial installation.
- C. The cable shall meet all applicable provisions of the current ANSI/ICEA Standard S-94-649 and current AEIC Cable Specification No. CS8 except where they conflict with the requirements of this specification, in which case this specification shall apply.

PART 2 - PRODUCTS

2.01 15 KV PRIMARY POWER CABLE (JCN, EPR):

- A. Central Conductor:
  - 1. Central conductor shall be aluminum, solid or stranded as specified in the attached Bid.
  - 2. Solid-Aluminum: Aluminum 1350-H12 or H22, H14 or H24 in accordance with ASTM B609.
  - 3. Stranded-Aluminum: Aluminum 1350-H14 or H24, H142 or H242, H16 or H26 in accordance with ASTM B609 or aluminum 1350-H19 in accordance with ASTM B230. Concentric stranded conductors shall conform to ASTM B231 for Class B stranding.
- B. Conductor Shield:
  - 1. An extruded insulating or semi-conducting shield meeting the applicable requirements of Part 3 of ANSI/ICEA S-94-649 shall be provided. The minimum point thickness shall be in accordance with Table 3-1.

C. Insulation:

1. Insulation shall be ethylene propylene rubber (EPR) which meets all requirements of ANSI/ICEA publication S-94-649.
2. The insulated cable shall fully comply with applicable provisions of current AEIC Cable Specification No. CS8 including the limits on voids and contaminants, as per section D.1, method of examination per section G, and frequency of sampling as per ANSI/ICEA S-94-649 Table 9-5.
3. The nominal thickness of the insulation shall be 220 mils. The minimum and maximum thickness at any point shall be within the guidelines of Table 4-11 per ANSI/ICEA S-94-649.

D. Insulation Shielding:

1. A semi-conducting layer meeting the requirements of section 5 of ANSI/ICEA S-94-649 shall be extruded tightly over the insulation to serve as an electrostatic shield.
2. The shield compound shall be compatible with the insulation.
3. The voids and protrusion limits shall be in accordance with sections 5.3 and 5.4 of ANSI/ICEA S-94-649.
4. The thickness of the extruded insulation shield shall be in accordance with table 5-1 of ANSI/ICEA S-94-649.
5. The shielding shall be applied such that all conducting material can be easily removed without externally applied heat.
6. Stripping tension values shall be in accordance with the applicable requirements of part 5.4 of ANSI/ICEA S-94-649.
7. The insulation shielding shall meet all applicable tests of Table 9-5 of ANSI/ICEA S-94-649.

E. Concentric Neutral:

1. A concentric neutral of annealed copper wires shall be spirally wound over the insulation shielding with uniform spacing between wires, in accordance with ASTM B3.
2. The number, size, and shape of wires shall be as specified in the Bid.
3. The length of lay of the neutral wires shall be not less than 6 nor more than 10 times the diameter over the concentric wires.

F. Outer Jacket:

1. An insulating black linear low density polyethylene layer meeting the requirements of ANSI/ICEA S-94-649, Table 7-1 shall be extruded directly over the insulation shield and concentric neutral wires. The jacket shall fill the interstice area, leaving no voids.
2. The jacket shall be applied such that the neutral wires are equally spaced and they shall remain in intimate contact with the underlying extruded insulation shield.
3. The jacket shall be free stripping from the insulation shield and neutral wires without applying external heat.
4. The minimum and maximum thickness at any point of the jacket over metallic neutral wires or straps shall be per ANSI/ICEA S-94-649, Table 7-10.

G. Testing:

1. The following tests shall be performed on all lengths of cable shipped on this order:
  - a. A cold bend test shall be performed in accordance with the appropriate provisions of ANSI/ICEA S-94-649.
  - b. A spark test shall be performed in accordance with part 7.3.1 of ANSI/ICEA S-94-649 on all cable prior to its being wound on shipping reels.
  - c. The manufacturer shall measure each length of cable supplied to determine compliance with the dimensional requirements in Table 2-6 of the appropriate AEIC specification.
  - d. The manufacturer shall perform an apparent discharge test in accordance with ANSI/ICEA S-94-649 except with a maximum allowable discharge of 5 picocoulomb to full test voltage of 200 volts/mil.
  - e. The manufacturer shall perform an A.C. Voltage Withstand test in accordance with ANSI/ICEA S-94-649.
  - f. The manufacturer shall provide certified test reports on all of the above tests at the time of cable shipment.

H. Markings:

1. The cable shall have suitable markings on the outer surface of the jacket at regular intervals to indicate the manufacturer, conductor size, type of insulation, type of conductor, voltage rating, and year of manufacture.
2. Markings shall also be applied sequentially for length and the required NESC direct buried electric cable symbol.
3. Marking shall include the use of multiple red stripes equally spaced around the cable.

I. Shipping:

1. Cable shall be shipped on non-returnable reels in lengths as specified in the Bid. The quantity of cable specified in the Bid shall not be exceeded. Reels shall be numbered by manufacturer for proper record keeping.
2. Watertight seals shall be applied to all cable ends to prevent the entrance of moisture during transit or outside storage.
3. Reels used for shipment shall be in good condition and free of sharp projections that would damage the cable. The drum shall be wrapped with heavy corrugated paper or equivalent prior to reeling cable.
4. The cable ends shall be secured to the reel in a manner to prevent cable damage and unreeling during shipment. The inside end shall be water sealed and secured to prevent “walkout” during unreeling.
5. The manufacturer shall be responsible for any damage resulting from improper packing, sealing or blocking of the reels during transit.
6. Identification tags for all reels shall be a weather-resistant tag firmly affixed to both the inside and outside of one flange. Reel tag information shall include:
  - a. Destination
  - b. Manufacturer’s name and serial number
  - c. The gross and tare weights
  - d. The size, type, stranding, length and net weight of the conductor
  - e. Coding to test data can be correlated to each reel
  - f. Customer purchase order number

J. Evaluation of Bids:

1. Preference will be given to Bids with firm prices and short lead times.

K. Acceptable Manufacturers:

1. Okonite
2. Kerite
3. Prysmian
4. General Cable
5. No equal

\* \* \* END OF SECTION \* \* \*



## **MATERIAL AGREEMENT**

THIS AGREEMENT made as of \_\_\_\_\_, 2021 between \_\_\_\_\_ (hereinafter called the "Supplier"), and City of Redwood Falls/Public Utilities, Redwood Falls, Minnesota (hereinafter called the "Owner"),

WITNESSETH, that the Supplier and the Owner for the considerations hereinafter named agree as follows:

### **1.01 SCOPE OF WORK.**

- A. The Supplier agrees to sell and deliver to the Owner and the Owner agrees to purchase and receive from the Supplier the equipment under Bid No.\_\_\_\_, in strict accordance with the documents entitled **“Furnishing Padmount Switchgear And Primary Power Cable for City of Redwood Falls/Public Utilities, Redwood Falls, Minnesota ”**.

### **1.02 THE CONTRACT DOCUMENTS.**

- A. The Contract Documents shall consist of this written Agreement, Bid Form, Advertisement for Bids, Instructions to Bidders, Addendums issued numbers \_\_\_\_\_, Insurance Policies and Certificates, General Requirements, Performance Bond, drawings and specifications, tests and engineering data, approved change orders, Supplier’s Requests for Payment, and all addenda issued by the Owner prior to the awarding of the Contract (collectively, the “Contract Documents”). All of the Contract Documents listed in this Material Agreement are hereby incorporated by this reference as fully as if they were set out in this Agreement in full, all of which documents and instruments are incorporated by the signature of the parties hereto.

### **1.03 TIME OF COMPLETION.**

- A. The work to be performed under this contract shall be commenced upon execution of this Agreement and shall be fully completed by\_\_\_\_\_.

### **1.04 THE CONTRACT SUM.**

- A. The Owner shall pay the Supplier for the equipment, in current funds: The Owner shall pay to the Supplier for performance of the work encompassed by this Agreement, and the Supplier will accept as full compensation therefore the lump sum of \$ \_\_\_\_\_, subject to adjustment as provided by the Contract Documents, to be paid by progress payments in cash or its equivalent in the manner provided for in the Contract Documents.

### **1.05 PAYMENT.**

- A. Payment to the Supplier will be made on the basis of one hundred percent (100%) of the base bid within thirty (30) days of receipt of the materials in acceptable condition and associated invoice.

#### **1.06 TERMINATION.**

- A. This Agreement may be terminated by either party upon seven (7) days written notice should the other party breach the terms of this Agreement.

#### **1.07 ASSIGNMENT.**

- A. The Supplier shall not assign all of his rights or obligations under this Agreement without the express written consent of the Owner. Upon any assignment even though consented to by the Owner, the Supplier shall remain liable for the performance of the work under this Agreement.

#### **1.08 PARTIAL INVALIDITY.**

- A. If any provisions of this Agreement are in violation of any statute or rule of law of the State of Minnesota, then such provisions shall be deemed null and void to the extent that they may be violative of law, but without invalidating the remaining provisions hereof.

#### **1.09 WAIVER.**

- A. No waiver of any breach of any one of the agreements, terms, conditions or covenants of this Agreement by the Owner shall be deemed or imply or constitute a waiver of any other agreement, term, condition or covenant of this Agreement. The failure of the Owner to insist on strict performance of any agreement, term, condition or covenant, herein set forth, shall not constitute or be construed as a waiver of the Owner's rights thereafter to enforce any other default; neither shall such failure to insist upon strict performance be deemed sufficient grounds to enable the Supplier to forego or subvert or otherwise disregard any other agreement, term, condition or covenant of this Agreement.

#### **1.10 ENTIRE AGREEMENT.**

- A. The within Agreement, together with the Contract Documents, constitute the entire agreement of the parties hereto. No modification, change, or alteration of the within Agreement shall be of any legal force or effect unless in writing, signed by all the parties.

#### **1.11 COUNTERPARTS.**

- A. This Agreement may be executed in several counterparts and each such counterpart shall be deemed an original.

#### **1.12 GOVERNING LAW.**

- A. Venue for any and all legal actions regarding or arising out of the transaction covered herein shall be solely in the District Court in and for Redwood County, State of

Minnesota or the United States District Court for the State of Minnesota. This transaction shall be governed by the laws of the State of Minnesota.

**1.13 NOTICES.**

- A. All notices, requests, demands and other communications given or to be given under this Agreement shall be in writing and shall be deemed to have been duly given when served if served personally, or on the second day after mailing if mailed by first class mail, registered or certified, postage prepaid, and properly addressed to the party to whom notice is to be given as set forth below.

If to Owner:

If to Supplier:

City of Redwood Falls/Public Utilities  
333 South Washington St.  
Redwood Falls, MN 56283

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**1.14 CASUALTY INSURANCE.**

- A. Except when the risk of loss of the Equipment is with Owner, Supplier shall maintain on the Equipment insurance against loss or damage by fire, lightning and all other risks covered by the so-called extended coverage insurance endorsement in an amount equal to the full insurable value of the Equipment. Upon the request of Owner, Supplier shall deliver to Owner a certificate of insurance evidencing the insurance required by this section.

**1.15 RISK OF LOSS.**

- A. Risk of loss of the Equipment shall remain with Supplier until the Equipment has been unloaded, inspected, and accepted by the Owner or Owner’s Representative, at which time risk of loss shall pass to Owner. Notwithstanding the foregoing, if Owner rejects the Equipment as non-conforming, risk of loss of the Equipment shall be and remain with Supplier until Supplier corrects the non-conformity or Buyer accepts the Equipment.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives all as of the day and year first above written.

City of Redwood Falls/Public Utilities  
Owner

\_\_\_\_\_  
Supplier

By \_\_\_\_\_

By \_\_\_\_\_

ATTEST:

ATTEST:

By \_\_\_\_\_

By \_\_\_\_\_