

RFQ # 15717
ENG

Quotation Due By: 06/20/2013
Bid Due Time: 10:00:00 AM

REPLY TO:

VENDOR INFO: _____
NAME: _____
CONTACT: _____
ADDRESS 1: _____
ADDRESS 2: _____
CITY: _____ STATE: _____ ZIP: _____
EMAIL: _____
PHONE: _____ FAX: _____

Monica Fowler
PURCHASING DEPARTMENT
Grand River Dam Authority
226 W DWAIN WILLIS AVE
PO BOX 409
VINITA OK 74301
PHONE: 405-297-9963 x4650
FAX: 405-840-1390
EMAIL: mfowler@grda.com

- NOTE:
- 1.The bid opening date for this RFQ is June 20, 2013 at 10:00 am Central Time.
 - 2.A completed non-collusion certificate is required and must be submitted with your bid.
 - 3.This form must be signed by an authorized representative of your company in the space provided in the lower right hand corner of this form.
 - 4.The award to the successful bidder will be based on the lowest and best bid received that meets the specifications listed below and the requirements herein. Preference may be given to E-pay vendors if analysis estimates that such appears to result in a lower cost to GRDA.
 - 5.The brand names, model(s), part number(s) provided herein are for comparable quality and identification purposes only and equivalent bids may be submitted.
 6. Invoice Affidavit Certification for Payment (GRDA/CAP-Form 001) must be completed and accompany invoice(s) before GRDA can pay vendor.

This form is not required to be completed at the time of bid...it is completed after award and when the vendor submits an invoice for payment to A/P.

Bidders should list the cost to provide these units by

- 1) July 30, 2013, and
- 2) bidder's optimum delivery date.

Bidders should specify their optimum delivery date in their bid response.

***** Read the General Bidding Instructions attached to this RFQ for further instructions.*****

GRDA Visa Payment

GRDA provides a Visa payment program which invoices payment by a secure Visa account number assigned to the supplier after award of contract. Notification of payments and required invoice information are issued to your designated Accounts Receivable contact by e-mail remittance payment.

Preference may be shown during the evaluation process to bidders that agree to accept the Visa payment of invoices. To learn more about the benefits of the Visa payment program, and to obtain answers to FAQ, click or copy and paste the following URL into your browser: www.bankofamerica.com/epayablesvendors.

Will accept payment by Visa: Yes ____ No ____ (check one)

Visa acceptance signature: _____

Designated Accounts Receivable Contact for Visa remittance advices:

Name: _____

Phone: _____

Email: _____

LINE ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT OF MEASURE	UNIT PRICE	LINE COST	LEAD TIME
1	Switch: Vertical Break, 69 kV 1200A, Swing Handle, High Bus, Horizontal Mount. Per attached specifications and drawings. Beggs Substation. SC# 042-1390-001-001 Tag: Beggs Substation 1. Unit Price for delivery by July 30, 2013 Line Cost for delivery by July 30, 2013 2. Unit Price for delivery by the bidder's optimum date. Line Cost for delivery by the bidders optimum date. Bidders optimum delivery date GRDA Item # 042-1390-001-001	4.0	EACH	_____	_____	_____

NOTE: All prices must be quoted FOB: Destination. All freight charges to delivery point must be included in the unit price quoted for each line item. All packaging, handling, delivery and any other surcharges must also be included in the price quoted for each line item.

PAYMENT TERMS: _____

QUOTE EXPIRATION DATE: _____

QUOTATION NUMBER: _____

QUOTED BY (please print): _____

COMPANY NAME: _____

SIGNATURE: _____

DATE OF QUOTE: _____

SHIP TO: Grand River Dam Authority
TRANSMISSION & ENGINEERING HDQTRS
635 HWY 69A
PRYOR OK 74362

THIS IS NOT AN ORDER. We would be pleased to receive your quotation for furnishing the above. This form must be completed **in full** (including signature) and returned by the due date above. You may attach additional pages if necessary. If attached, the Non-Collusion form must be completed and returned with your quotation. NO PARTIAL SHIPMENTS OR PARTIAL PAYMENTS WILL BE ALLOWED WITHOUT PRIOR APPROVAL.

All articles purchased hereunder shall be in accordance with the Bidding Procedures and General Terms & Conditions contained on the attached sheets.



GRAND RIVER DAM AUTHORITY

NON-COLLUSION CERTIFICATE

RFQ / RFP # _____

A Non-Collusion Certificate shall be included with any competitive bid or contract submitted to the Authority for goods or services exceeding \$5,000.00 (but not exceeding \$50,000.00), with the exception of those for the purpose of repairs and improvements to GRDA facilities.

A. For purposes of competitive bid or contract, I certify:

1. I am the duly authorized agent of _____, (Company Name), the bidder submitting the competitive bid which is attached to this statement, for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and state officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to said bid;
2. I am fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and have been personally and directly involved in the proceedings leading to the submission of such bid; and
3. Neither the bidder, nor contractor, nor anyone subject to the bidder's or contractor's direction or control, has been a party:
 - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding,
 - b. to any collusion with any state official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor
 - c. in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract, nor, whether competitively bid or not, has paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma any money or other thing of value, either directly or indirectly, in procuring this contract herein.

B. The contractor further certifies that no person who has been involved in any manner in the development of said contract while employed by the State of Oklahoma shall be employed to fulfill any of the services provided for under said contract.

C. If any contract pursuant to this bid is for professional services as defined in 74 O.S. § 85.2.25, and if the final product is a written proposal, report or study, the contractor further certifies that (s)he has not previously provided the state agency or any other state agency with a final product that is a substantial duplication of the final product of the proposed contract.

Authorized Signature

Certified this Date

Printed Name

Title

Telephone Number

Fax Number

E-Mail

**Grand River Dam Authority is an agency of the State of Oklahoma.
Administrative Headquarters • 226 West Dwain Willis Avenue • Vinita, Oklahoma 74301 • 918-256-5545**

GENERAL BIDDING INSTRUCTIONS FOR STANDARD & EMERGENCY BIDS

1. Bids shall be submitted to the designated purchasing agent at the Grand River Dam Authority (hereinafter referred to as "GRDA" or "the Authority") at the address on the attached RFQ or RFP form on or before the date (and time, if applicable) indicated. Bids shall be in conformity with these and any additional instructions to bidders and shall be submitted on GRDA's form. **The RFQ (Request for Quote) or RFP (Request for Proposal) form must be completed in full and signed by the bidder.** If your bid response necessitates additional space, you may attach additional pages; however, the RFQ or RFP form must be completed, signed and reference the additional pages. All bid responses shall be typewritten or handwritten in ink, and any corrections to bids shall be initialed in ink. Quotations or proposals submitted in pencil shall not be accepted.
2. Quotations or proposals may be submitted to GRDA via postal mail, delivery service, fax or e-mail, provided all required signatures can be transmitted successfully.
3. **Non-Collusion Certificate:** RFQs or RFPs anticipated to exceed a total amount of \$5,000 shall be accompanied by a Non-Collusion Certificate. This certificate shall be completed by the bidder and include a signature in ink of an authorized company representative (preferably the bidder) with full knowledge and acceptance of the bid proposal. In the case of bids submitted via fax or e-mail, the Non-Collusion Certificate may be submitted with the bid. Purchase orders in excess of \$5,000 will not be released to the successful bidder without receipt of a properly signed certificate for the bid.
4. In the event the unit price and line total extension do not agree, the unit price shall be considered the quoted price accepted for evaluation.
5. **Freight Terms:** All prices shall be quoted FOB: Destination/Freight Allowed. All packaging, handling, shipping and delivery charges shall be included in the unit price quoted for each line item. No exceptions shall be granted unless approved by the guidelines of the GRDA Chief Financial Officer or designee.
6. **Other Surcharges:** Any additional surcharges (such as HazMat charges, fuel surcharges, set-up fees, etc.) shall be included in the unit price quoted for each line item. All additional charges are considered a part of the cost of the goods, and bids shall be evaluated to include these additional charges.
7. **Tax-Exempt Status:** GRDA is an agency of the state of Oklahoma and is specifically exempt from the payment of sales tax by Oklahoma state statute, Title 68 O.S.A. § 1356 (10). An excerpt from the statute shall be furnished upon request.
8. **Questions arising during the bidding process should be submitted in writing to the GRDA purchasing agent named on the RFQ or RFP.** The GRDA purchasing agent shall coordinate a reply from the end user to ensure that all potential bidders are provided the same information. Under no circumstances shall a bidder discuss pricing with any GRDA employee prior to the bid opening.
9. All bids submitted shall be subject to GRDA's Purchasing Policy and Procedures, General Terms and Conditions, the bidding instructions and specifications, the Oklahoma Open Records Act, other statutory regulations as applicable, and any other terms and conditions listed or attached herein – all of which are made part of this Request for Quote or Request for Proposal.
10. GRDA reserves the right to reject any and all bids, and to contract as the best interests of the Authority may require. GRDA reserves the right to reject any bids that do not comply with the requirements and specifications of the Request for Quote or Request for Proposal. All bid responses become the property of GRDA and are subject to the Oklahoma Open Records Act. GRDA shall endeavor to protect technical information designated by the bidder as proprietary information; however, only technical information (i.e., "trade secrets") may be considered proprietary – pricing and other non-technical aspects of the quote shall be considered non-proprietary.
11. **"Sole Brand" or "No Sub" Items:** Items with a "Sole Brand" or "No Sub" designation in the description shall be furnished as the specified manufacturer and model/part number. No exception may be taken to the specification, and no alternate shall be accepted. In those cases where a manufacturer has discontinued the specified model/part number, the bidder shall indicate so on the RFQ. If a replacement item is available, the new model/part number shall be indicated on the RFQ form and the price quoted. It shall also be noted whether the replacement item is a direct replacement for the obsolete part number originally requested. If not, or if the specifications differ in any way, the bidder shall explain in detail, and corresponding drawings or descriptive literature shall be included with the quote.

12. **Approved Equivalents:** Unless an item is designated as a “Sole Brand” or “No Sub” item, any manufacturer’s name, brand name, information and/or catalog number listed in a specification is for informational or cross-reference purposes and is not intended to limit competition. Bidders may offer any brand/manufacturer for which they are an authorized representative, provided it meets or exceeds the specification of the listed item. However, if quoting an equivalent product, bidders shall indicate on the RFQ form the manufacturer’s name and part number. Bidder shall also submit any drawings, descriptive literature and specifications for evaluation purposes. Reference to literature submitted with a previous bid shall not satisfy this provision. The bidder shall also provide written confirmation that the proposed equivalent will meet the requested specifications and is not considered an exception. Bids which do not comply with these requirements may be rejected. GRDA warehouses are not permitted to accept any item with a part number differing from that quoted by the bidder. Bids lacking any written indication of intent to furnish an alternate brand, model or part number shall be considered to be in complete compliance with the specifications as listed on the RFQ.
13. **Insurance Certificates:** Any service to be performed that requires the vendor’s employee, vehicle or equipment to be on any GRDA property must be covered by minimum insurance requirements. The workscope to be performed for the Authority shall be evaluated and the minimum insurance requirements shall be provided to prospective bidders with the RFQ or RFP. Evidence of insurance coverage shall be furnished in the form of a Certificate of Insurance, and shall be submitted with the bid response. Bidders shall disclose any subcontractors to be used, and the Authority shall consider the supplier as the single point of contact. The supplier shall assume responsibility for the performance of the subcontractor. Policies shall remain current for the duration of the requested service period, and GRDA shall be notified of any cancellation or revision to policies. Purchase Orders shall not be released to the successful bidder without a current Certificate of Insurance naming GRDA as certificate holder on file. A Memorandum of Insurance shall not be acceptable for this requirement.
14. **MSDS:** Material Safety Data Sheets shall be furnished to GRDA’s Safety Department at the address noted on the PO prior to delivery of items.
15. **Purchase Orders** shall be awarded to the “lowest and best” or “best value” bidder. Line items may be split into multiple orders, taking low items from each respective bidder, or orders may be awarded on an “all or none” basis, whichever is in the best interests of the Authority. Award decisions are further subject to consideration of any additional terms and conditions contained in the bid proposal. Vendor protests must be submitted in writing to the Central Purchasing Unit of GRDA within thirty-six (36) hours of award of Contract or Purchase Order.
16. Successful vendor shall deliver the merchandise or perform the service as quoted. Substitutions or changes without prior approval of the GRDA purchasing agent shall be rejected and returned at the vendor’s expense.
17. **Bidder Responsibilities:** Bidders are to transact all phases of the purchasing function directly with the GRDA purchasing agent. Bidders are to conduct all written and verbal communication with the Authority through the GRDA purchasing agent. Bidders are to conduct negotiations ethically, without attempts to influence through offers of valuable personal gifts or entertainment. Bidders are to make available as requested any technical information which might be of benefit in the bid evaluation.
18. **Supplier List:** The Finance Department maintains a current listing of suppliers with a cross-reference as to products and services offered. Suppliers may have their names added to the list by submitting a completed Vendor Registration/Payee Application, and shall notify the Authority of any update information. If a supplier fails to respond to bid requests after four appropriate solicitations, that supplier may be removed from the active list. Suppliers who do not meet quoted shipping dates or lead times, supply products or services of poor quality, substitute items of unequal quality, continually over-ship or under-ship items, or do not invoice properly may be placed under suspension or disqualified from the active supplier list. Suppliers may voluntarily request to be removed from the supplier database.
19. **Service Contracts:** By submitting a bid for services, the bidder certifies that they, and any proposed subcontractors, are in compliance with 25 O.S. §1313 and participate in the Status Verification System. The Status Verification System is defined in 25 O.S. §1312 and includes, but is not limited to, the free Employment Verification Program (E-Verify) available at www.dhs.gov/E-Verify. This shall remain in effect through the entire term, including all renewal periods, of the contract. The State may request verification of compliance for any contractor or subcontractor. Should the State suspect or find the contractor or any of its subcontractors are not in compliance, the State may pursue any and all remedies allowed by law, including, but not limited to: suspension of work, termination of the contract for default, and suspension or debarment of the contractor. All costs necessary to verify compliance are the responsibility of the contractor.

GENERAL TERMS AND CONDITIONS



Any contract or order issued by the Grand River Dam Authority (hereinafter referred to as GRDA) is expressly conditioned upon Seller's assent to these terms and conditions, unless otherwise agreed in writing. Any order issued or filled by Seller shall be deemed to constitute Seller's assent to these terms and conditions. Any additional or different terms submitted by the Seller are hereby expressly objected to by GRDA unless expressly agreed to in writing by GRDA.

1. Mail or deliver all invoices or correspondence pertaining to the payment of this Purchase Order to: Accounts Payable Department, Grand River Dam Authority, P.O. Box 409, 226 West Dwain Willis Avenue, Vinita, Oklahoma 74301. Seller shall submit invoices, with one copy detailing each item with unit prices, with the top copy being distinguishable as an original, accompanied by one copy of complete shipping papers. If shipment is not made by routing instructions as specified on the face of this Purchase Order, GRDA reserves the right to deduct any excess transportation charges resulting therefrom. Copy of original freight bill must be supplied for payment. Time, in connection with any discount offered, will be computed from date of delivery of items, or from date the correct invoice is received in Vinita, Oklahoma, whichever period of time is the later date. No Oklahoma State Sales or Use Tax shall be included in payment of this Purchase Order.
2. All articles, materials, equipment and supplies (hereinafter referred to as "items") covered by this Purchase Order, unless otherwise specified, are purchased subject to inspection before and during manufacture and upon arrival at destination. GRDA reserves the right to return for full credit and/or refund, at Seller's sole risks and expense, including all transportation and storage charges, all items found defective or furnished contrary to instructions and/or specifications contained herein.
3. In case of default by Seller, GRDA may procure the items or services from other sources and hold Seller responsible for any excess cost occasioned thereby; provided, that if necessity requires the use of items not conforming to specifications, they may be accepted, and payment made at a proper reduction in price. Notwithstanding anything herein to the contrary, GRDA reserves the right to terminate this Purchase Order for its convenience. In the event of such termination, GRDA shall pay and Seller shall accept the reasonable value of all work performed and items delivered by Seller up through the effective date of such termination.
4. Seller warrants that all items covered by this Purchase Order will conform to the specifications, drawings, samples or other description furnished by GRDA, or any revisions thereof, and any items purchased pursuant to this Purchase Order shall be subject to all warranties expressed or implied by law, and will be merchantable of good material and fit and sufficient for the purpose intended, and shall satisfy any performance guarantee requirements as specified herein by GRDA. In the event the items and/or services purchased hereunder do not meet the warranty specified hereinabove, Seller shall promptly repair or replace any defective item at its expense, or re-perform any necessary services, and shall hold GRDA harmless from any and all costs and expenses incurred due to said defective item or performance of services, including the cost for removing any part or product to be repaired or replaced, as well as transportation and installation charges in connection with the repair, replacement or servicing of any parts or equipment. Seller further agrees that the manufacturer's warranties and guaranties of the items purchased hereunder extended to Seller shall extend to GRDA.
5. Seller shall indemnify and hold GRDA harmless from and against any and all loss, costs or expenses arising out of any liens or claims in any way related to the items or services furnished hereunder. Seller shall likewise indemnify and hold GRDA harmless from any patent, trademark or copyright infringement, except items supplied in accordance with design originating with GRDA. Seller shall be an independent contractor. Seller shall protect, defend, indemnify and hold GRDA harmless from any damage or injury to any persons, including Seller's employees or property, and from any claim, demand, action, cost or expense arising out of the activities hereunder as a result of Seller's negligent or intentional wrongful acts. In no event shall Seller's liability be limited under this Purchase Order for the negligent or intentional wrongful acts of the Seller.
6. Seller shall, before any items are shipped and/or any services are commenced, provide GRDA with certificates evidencing that the following minimum insurance will remain in force until Seller's obligations are completed: (a) Workmen's Compensation Insurance, including Employer's Liability Insurance, in accordance with the laws of the state in which Seller may be required to pay compensation; and (b) Public Liability Insurance with an individual limit of not less than \$100,000 and a total for any one accident of not less than \$300,000, unless otherwise specified herein.
7. This Purchase Order (including Seller's right to receive payments hereunder) shall not be assigned or subcontracted in whole or in part without GRDA's prior written consent. No assignment hereof shall relieve this assignor of its obligations hereunder.
8. Service Contracts: By submitting a bid for services, the Bidder certifies that they, and any proposed Subcontractors, are in compliance with 25 O.S. §1313 and participate in the Status Verification System. The Supplier/Contractor/Consultant/Construction Manager/etc. certifies that it and all proposed Subcontractors, whether known or unknown at the time a contract is executed or awarded, are in compliance with 25 O.S. §1313 and participate in the Status Verification System. The Status Verification System is defined in 25 O.S. §1312 and includes, but is not limited to, the free Employment Verification Program (E-Verify) available at www.dhs.gov/E-Verify. This shall remain in effect through the entire term, including all renewal periods, of the Contract. The State may request verification of compliance for any Contractor or Subcontractor. Should the State suspect or find the Contractor or any of its Subcontractors are not in compliance, the State may pursue any and all remedies allowed by law, including, but not limited to: suspension of work, termination of the Contract for default, and suspension or debarment of the Contractor. All costs necessary to verify compliance are the responsibility of the Contractor.
9. All Items shipped pursuant to this Purchase Order will conform with all municipal, state and federal laws, ordinances and regulations, and Seller will defend and save harmless GRDA from loss, costs or damage by reason of any actual or alleged violation thereof.
10. GRDA hereby notifies Seller that Seller must comply, and by acceptance of this Purchase Order, Seller represents that it has complied with, and will continue to comply with, all applicable federal, state and local laws, regulations or orders.
11. This Purchase Order shall be construed as being performed by both parties in Craig County, Oklahoma, and shall be governed in accordance with the laws of the State of Oklahoma.

Grand River Dam Authority is an agency of the State of Oklahoma.

Administrative Headquarters • 226 West Dwain Willis Avenue • Vinita, Oklahoma 74301 • Phone: 918-256-5545 • Fax: 918-256-1051



Invoice Affidavit Certification for Payment

(For Projects under the Statutory Amount or Minor Project without a Design Consultant)

Progress Payment

Date of Progress Invoice: _____

Final Payment

Date of Final Invoice: _____

STATE OF OKLAHOMA)

Project Name: _____

) ss

COUNTY OF _____)

Project No.: _____

CONTRACTOR OR SUPPLIER – COMPLETE THIS SECTION (Choose Appropriate Option)

Option 1: Contract Award is Less than \$50,000 and Affidavit Provided in lieu of Statutory Bonds

Affidavit: The undersigned Contractor or Supplier hereby affirms under oath that to the best of my knowledge, information and belief, the Work or Materials covered by this Invoice for Payment has been completed or materials delivered in accordance with the Contract Documents, that all amounts have been paid by the Contractor or Supplier for Work or Materials for which previous Invoices for Payment, if any, were issued and payments received from GRDA, and that current payment shown herein is now due. In accordance with 61O.S., § 1.(C), the Contractor acknowledges that the execution of this affidavit with knowledge that any of the contents of the affidavit are false, upon conviction, shall constitute perjury, punishable as provided for by law.

Option 2: Contract Award is Greater than \$50,000 and Statutory Bonds have been provided

Certification: The undersigned Contractor or Supplier hereby certifies that to the best of my knowledge, information and belief, the Work or Materials covered by this Invoice for Payment has been completed or materials delivered in accordance with the Contract Documents, that all amounts have been paid by the Contractor or Supplier for Work or Materials for which previous Invoices for Payment, if any, were issued and payments received from GRDA, and that current payment shown herein is now due.

Firm Name

Printed Name and Title

Signature

(NOTARIZE ONLY IF OPTION 1 ABOVE IS CHECKED)

Subscribed and sworn to before me this _____ day of _____, _____

by _____

Notary Public

My Commission Expires _____

CERTIFICATION OF SUPERVISORY OFFICIAL (GRDA's Representative)

In accordance with the Contract Documents, based on on-site observations and the data comprising the Invoice for Payment, the Supervisory Official certifies to GRDA that to the best of the Supervisory Official's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the Amount Certified. Attach Copy of Approved Invoice.

Signature

Title

Printed Name

Date

GRAND RIVER DAM AUTHORITY

HIGH VOLTAGE SWITCHES

DATA SHEET

This sheet is to be filled out for each type of switch.

QUANTITY of SWITCHES for this DATA SHEET: 4

Substation Name: Beggs Substation

VOLTAGE (L-L): **69** kV
 BIL: **Standard**
AMPACITY (Continuous): **1200** A
AMPACITY (Momentary): **STD**
TYPE OF MECHANISM: **Vertical Break**
 (VERTICAL Break, Center Break, Side Break, Double End Break, etc.)

MOUNTING: **Horizontal**
 (Horizontal, Vertical, other)
PHASE SPACING: **7** Feet
SWITCH STAND: **See Steel Drawings**
 (Existing, (see steel dwgs), To be provided)

OPERATOR: **Swing Handle**
 (Swing handle, Gear box, Motor operated)
Direction of Rotation: **CCW**
 (CW, CCW)

SPECIAL FEATURES: **None**
 (Wips, Vacuum Bottles, etc.)

Switch Tag(s): **2142, 3542, 3742, 7242**

GRAND RIVER DAM AUTHORITY

HIGH VOLTAGE SWITCHES

GENERAL REQUIREMENTS

I. PROPOSAL

- A. The Vendor/Manufacturer shall provide a bid proposal for the listed switches (on the Data Sheet) and shall comply with the following specifications. The vendor/Manufacturer shall call out specifically and label as such, any exceptions to these specifications in his proposal.
- B. The Vendor/Manufacturer's bid shall be on a lump sum price basis for which he agrees to furnish the disconnect switches covered in the specification. ***Without limitations, it is to be understood that the prices bid are to be firm and not subject to adjustment due to changes in the costs of material, labor, or any other factors except for those specifically authorized in these specifications.***
- C. The proposal shall state the time in weeks after receipt of the purchase order, when the approval drawings specified will be submitted to the Company. At no time shall this exceed a period of six (6) weeks.
- D. The proposal shall state a firm shipping date.
- E. Proposal shall state the emergency overload ratings for four (4), eight (8), and twenty-four (24) hours without loss of switch life.
- F. With the bid document, Bidder shall state the width and thickness of the silver plating on the switch contacts (female) and on the switch arm contact (male).
- G. ***With the bid documents, the Bidders shall furnish any drawings, pictures, or other descriptive data needed to explain fully the type of equipment proposed.*** These drawings shall be in sufficient detail to indicate the kind, size, arrangement, weights, breakdown for shipment, and operation of component materials and devices; the external connections, anchorages, and supports required; the dimensions needed for installation, and correlation with other materials and equipment.

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HIGH VOLTAGE SWITCHES

I. GENERAL

- A. This specification covers the furnishing of the switches listed on the Data Sheet. The switches shall be complete with insulators, operating arms and mechanism, mounting brackets, hardware, and documentation.
- B. As used herein "switch" means a disconnect switch including operating mechanism whether manual or motor operated with all operating piping and interphase rods, shop and field erection nuts, bolts, and fasteners as well as station post insulators.
- C. The disconnect switches and their appurtenances shall conform to this specification and shall conform to the requirements for the latest published IEEE Standard for air switches and bus supports and the NEMA Standard for power switching equipment.

II. SPECIFICATIONS

- A. Disconnect Switches
 - 1. Disconnect switches shall be of the 3-pole group-operated type, for either vertical or horizontal mounting with ANSI 70 light gray station post insulators.
 - 2. Mechanical strength of switch and insulators shall be coordinated with all forces to which they may be subjected during normal use and shall meet the latest applicable NEMA and USA Standards. The switches shall be designed such that no appreciable interphase forces will be transmitted to the switch support structure during switch operation. Switches shall either open or close satisfactorily under a deposit of hard ice 3/4 inch in thickness. Switch-blades shall be counter balanced to prevent them from falling closed from any open position.
 - 3. All electrical contacts shall be silver to silver. The Vendor/manufacturer shall state the width and thickness of the silver plating on the switch contacts (female) and on the switch arm contact (male) with the bid document.
 - 4. Stub-type arcing horns shall be provided to minimize arcing of main switch contacts.
 - 5. Terminal pads of switches shall be suitable for use with aluminum connections, and the drill pattern shall comply with NEMA pad dimensions.

GRAND RIVER DAM AUTHORITY

HIGH VOLTAGE SWITCHES

The typical drill pattern should allow the use of four ½-inch diameter bolts on 1 ¾ inch centers, and if different, shall be stated in the proposal. Terminals will be furnished by others.

6. If the switch is to operate at a voltage of or greater than 199 kV line to ground, 345 kV phase to phase, then adequate corona suppression shall be engineered into the switch such that detectable corona is not present at operating voltage.
7. If disconnect switches are specified for manual operation, they shall be designed with the provision for future replacement of the manual operating mechanism with a motor operated mechanism.
8. All bearings shall be sealed-type, non-rusting ball or roller.
9. Current path(s) through the switch shall not go through the bearings, springs, or hardware.

B. Operating Mechanism

1. Switches shall be furnished with an operating mechanism complete with vertical operating pipes, interphase rods, couplings, guide bearings, flexible braid grounding strap, and offsets as required for operation from the switch stand to provide group operations of all three blades from one operating mechanism. An indicator showing the status of the open and closed positions of the switch shall be provided at each operating mechanism. Each mechanism shall have provisions for padlocking in either position.
2. Manually operated switches.
 - a. The switch handle or gear box is to be designed for mounting approximately 2'-6" above the switch structure foundation and shall be readily operated by one man.
3. Motor operated switches.
 - a. Motor shall be for DC operation. The supply motor current information shall be provided with the bid. The motor and control voltage shall be 125VDC, unless listed otherwise on the Data Sheet. Operating time of motor operator is to be approximately 10 seconds or less. Motor operated mechanism cabinet shall be weatherproof. A cabinet heater shall be furnished with thermostat to operate on 120 or 240 VAC.

GRAND RIVER DAM AUTHORITY

HIGH VOLTAGE SWITCHES

- b. An auxiliary switch shall be furnished with at least 8 individually and fully adjustable contacts, which are to include four "a" and four "b" contacts.
- c. Mechanism shall have capability of manual operation with handle to be furnished. Motor operation shall be electrically disconnected during manual hand cranking of switch.
- d. Motor operator mechanism shall have capability of being manually tested at the mechanism cabinet. Remote control of motor operator shall be inhibited during manual testing of motor operator.
- e. The requirements of the latest revision of ANSI C37.32-1972 for power operated mechanisms shall apply.
- f. If switches are to be motor operated, the centerline of the motor mechanism cabinet shall be approximately 2'-6" above the switch structure foundation.

C. GROUNDING

The switch shall be supplied with an 18" long ground strap and the necessary hardware to attach the strap to the operating pipe and the switch stand steel. The strap shall have the same ampacity (or greater) than a 4/0 copper cable.

D. EQUIPMENT NAMEPLATE

Each switch and motor operator will have nameplate identifying the following information:

- A. Manufacturer.
- B. Rating in amperes.
- C. Voltage in kV for switches; operating voltage for motor operator.
- D. Instruction book number.
- E. Catalog number.
- F. Year manufactured.

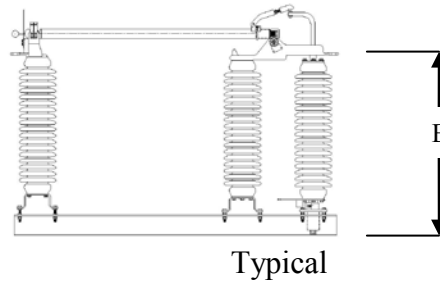
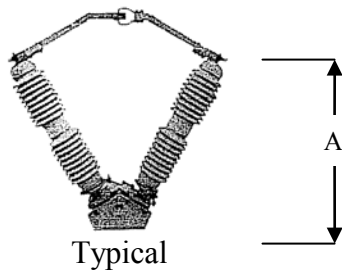
E. DIMENSIONS

The switch shall meet the dimensions as shown on the following table for the applicable voltage. That dimension shall be the distance measured from the top of

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HIGH VOLTAGE SWITCHES

the terminal pads (“paddle”) to the bottom of the switch base as shown for the following basic configurations.



KV	Dimension "A" (inches)	Dimension "B" (inches)
69	44	44
115	64	64
138	72	72
161	80	80
230	102	102
345	130	130

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III. PREPARATION FOR SHIPMENT AND SHIPMENT

- A. All disconnect switches shall be carefully prepared for shipment including packaging, tagging, and boxing of small parts in substantial containers. Particular care shall be used in placing suitable separators between heavy pieces and extra long pieces, and also general use of non-abrading dunnage materials in such a manner as to prevent damage to porcelain insulators and zinc coatings in transit.
- B. Any particular shipment shall include complete switches with no extra pieces or missing pieces.
- C. Proposal shall be based on F.O.B. job site not F.O.B. shipping point transportation allowed.
- D. Notify GRDA Warehouseman two business days before delivery as to exact time of arrival to arrange for receiver and unloader to be present. Notify:

**GRAND RIVER DAM AUTHORITY
Engineering and Transmission Headquarters
East on Highway 69A
Pryor, Oklahoma 74361
Telephone (918) 825-0280 Ext 7750**

IV. CORRESPONDENCE

All technical correspondence, transmittal letters, technical information, approval drawings, final reproducible drawings, prints, and instruction books should be mailed to:

**GRAND RIVER DAM AUTHORITY
P. O. Box 1128
Pryor, Oklahoma 74362-1128
ATTN: Mike Herron**

V. DOCUMENTS/DRAWINGS

- A. The Vendor/manufacturer shall furnish three (3) copies of outline drawings and detail and assembly drawings for approval. Each drawing submitted shall be clearly marked with the name of the project, GRDA's name, and GRDA's purchase order number. When catalog pages are submitted, the applicable items

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shall be indicated. These approval drawings shall be submitted as soon as possible but no later than six weeks after award of purchase.

- B. A drawing index listing all drawings, instruction manuals, complete parts list with appropriate identifying part numbers, and switch and motor operator adjustment instructions to be submitted for the equipment furnished under these specifications, shall be included with the initial submittal of approval drawings.
- C. In addition to the above drawings, the Vendor/manufacturer shall furnish reproducible copies of all drawings after any corrections made for approval as follows:
- One (1) copy of drawing index
 - One (1) copy of each final drawing
 - One (1) copy of parts list
1. AutoCAD Release 2004 drawings on CD are preferred by Grand River Dam Authority. The Vendor/manufacturer may provide these drawings in AutoCAD Release 2004 in lieu of hardcopy reproducible drawings as described below.
 2. If AutoCAD drawings are not provided, the manufacturer shall provide reproducible drawings. These reproducible drawings shall be of a right reading translucent for a minimum 0.003 thickness Mylar base, wash-off type, photographic or equal, with sufficient tooth to take pencil or ink line. The reproducible shall not exceed a maximum of 24" X 36".
 3. The drawings are to be mailed to GRDA as soon as possible, and in any event, no later than six (6) weeks prior to date of shipment of equipment covered by these specifications.
 4. The final drawing will show information described under approval drawings.
- D. If complete bills of material are not included on above drawings, then six (6) separate copies, fully describing equipment shall be supplied as soon as possible after drawing approval.
- E. Bill of material shall include a detailed list of all parts, containing part number, description of part, and identification number. The identification number will be shown on drawings such that location of each part is evident. Exploded type drawing would be desirable to show this information.

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HIGH VOLTAGE SWITCHES

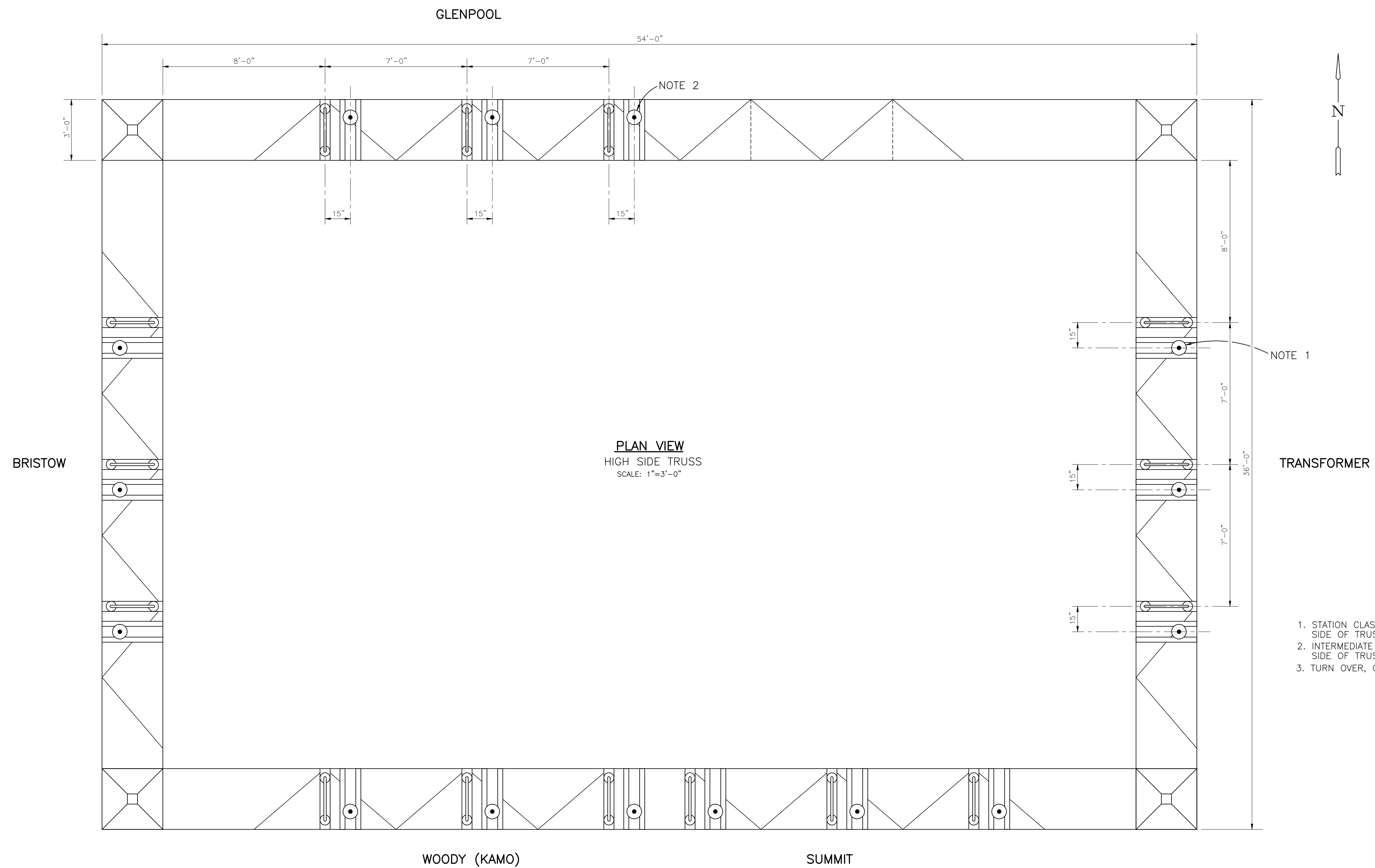
- F. Six (6) copies of all other drawings and data describing the equipment furnished shall be sent to the Company prior to shipment of the equipment.

VI INSTRUCTION MANUALS

- A. The seller shall furnish six (6) complete and final copies of instruction manuals for each purchase order, and/or substation, and/or type of switch no later than thirty (30) days prior to shipment of the equipment.
- B. The instruction manuals shall cover complete installation including any special factory or field adjustment instructions, operating and maintenance instructions, drawings and parts lists for each item of equipment furnished.
- C. The instruction manuals shall be bound in the manufacturer's standard heavy duty binders, suitable for rough usage. The front cover shall be assembled so that GRDA's name, location of equipment, name of equipment, and basic capacity rating of equipment can be read.
- D. Where applicable, a list of recommended spare parts with the price of each item and a schedule of required lubricants, as recommended for each item, shall be included in the instruction manual.
- E. The instruction manuals shall show all nameplate information and shop order numbers of each item of equipment.

VII WARRANTY

Any equipment specified herein or part thereof that shall develop defects not disclosed prior to acceptance by GRDA within one year after energization or eighteen months after delivery, whichever occurs first, shall be promptly replaced by the Vendor/manufacturer free of charge to GRDA.



PLAN VIEW
HIGH SIDE TRUSS
SCALE: 1"=3'-0"

NOTES

1. STATION CLASS LIGHTNING ARRESTORS TO BE INSTALLED TO EAST SIDE OF TRUSS.
2. INTERMEDIATE CLASS LIGHTNING ARRESTORS TO BE INSTALLED TO NORTH SIDE OF TRUSS.
3. TURN OVER, CLIP AND FIT DIAGONALS OF TRUSS AS NECESSARY.

LEGEND

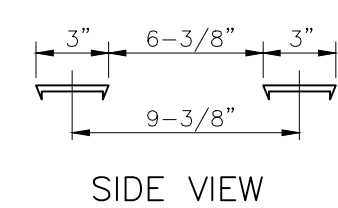
- DRILLED HOLE
- ⊙ TOP OF SWITCH OR ARRESTOR

REFERENCE DRAWINGS

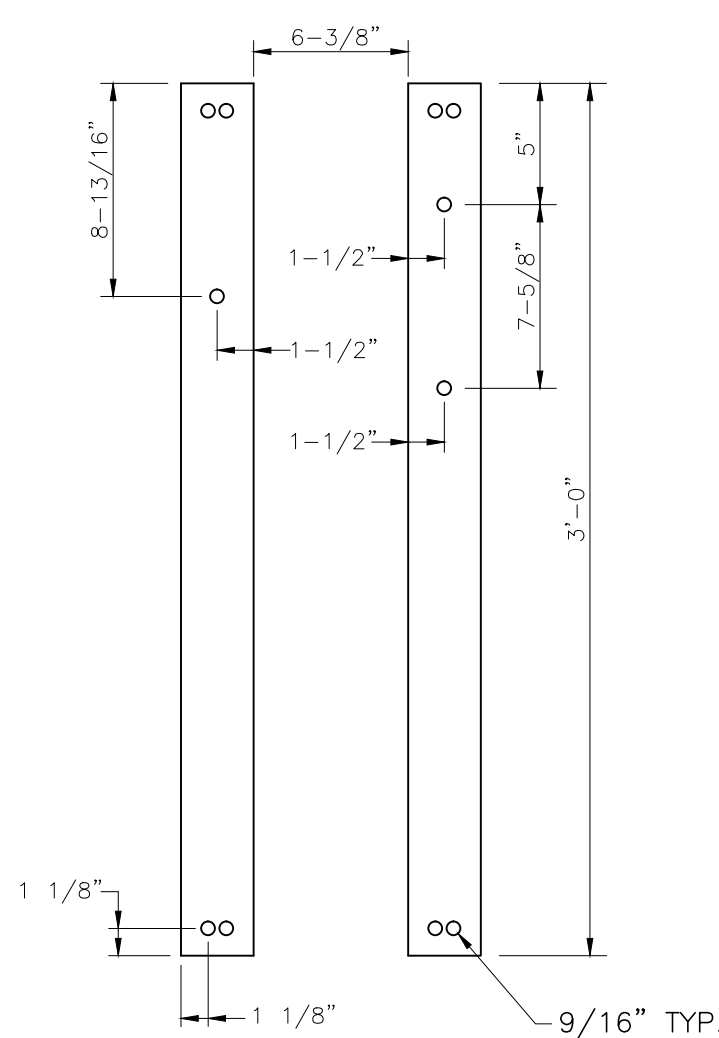
- S612PE01 PLAN VIEW
- S612PE02 ELECTRICAL ELEVATIONS AA, BB, CC
- S612PE03 ELECTRICAL ELEVATIONS DD, EE, GG, HH, JJ, KK
- S612PG21 GROUNDING DETAILS LIGHTNING ARRESTOR

FOR BID PURPOSE ONLY

NOTE:
THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL SIGNED AND SEALED DOCUMENT.



SIDE VIEW



ARRESTOR STANDS

TOP VIEW
NOT TO SCALE

CONTROL SYSTEM AND AMPACITY UPGRADE						GRAND RIVER DAM AUTHORITY BEGGS SUBSTATION S612 BEGGS, OKLAHOMA 69kV					
						SUBSTATION STEEL: TRUSS & SURGE ARRESTORS (69kV)					
SCALE: AS NOTED						DRAWN BY: JT		ENGR: RM		APPD: BA	
0 RFD11-00474 02/2013 RM JT RM BA						CH: RM		DATE: 18SEP12		DRAWING No. S612PE05	
REV. NO. JOB NO. DATE DESIGN ENGR DFTR DESIGN CHECK ISSUE APPROVD								GRAND RIVER DAM AUTHORITY P.O. BOX 409 VINITA, OK 74301		REV. 0	