BID #454-22

STEEL/TONASKET SUBSTATION
STEEL PACKAGE

1. GENERAL INFORMATION:

Okanogan County PUD is planning to rebuild our Tonasket substation. This is a 115kV/13.2kV substation with a present rating of 40MW. We will be adding the steel support structures and installing the electrical bus for the 40MW 115kV high side and 13.2kV low side bays with this project.
The new structures will be composed of galvanized steel columns, girders and braces all fabricated using the specifications and steel detail drawings provided with this quotation information.

SCOPE:

This quote is for the fabrication of all steel components needed for the assembly of the structures that comprise the Tonasket substation rebuild. All components will be ready for installation upon delivery to the job site. These components will be packaged, bundled and shipped in units that will be easily identified for job site check-in and placement during the unloading process. The steel fabricator will also provide all bolts, washers, and lock washers required for assembly.
Note: Concrete reinforcement and anchor bolts are NOT included in this steel package as footings are already in place.

PACKAGE CONTENT:

- Scope of work / Specifications
- Site map & Location information
- Price quote sheet (Bid form)
- Two drawings as general reference, TONA-P3-01, TONA-P4-01
- Nine structure drawings for component take-off information:

S4	DE Performance-DE1 (3 shts)
S6	115kV Switch-Low (2 shts)
S7	115kV Switch-High (2 shts)
S8	115kV Bus Support - Low&High (1 sht)
S9	15kV Transformer Riser (2 shts)
S10	15kV Regulator By-Pass (3 shts)
S11	15kV Switch 5ft (1 sht)
S12	15kV Switch 4ft (1 sht)
S13	Distribution Steel (2 shts)

CONTACTS:

Project Engineer;
Allen Allie
Engineering Manager
509-422-8407
allena@okpud.org

Purchasing;
Roy Schwilke
Purchasing Agent
509-422-8484
roys@okpud.org

2. SPECIFICATIONS:

General:

Structural steel shall be constructed to the latest and best manufacturing practice. The manufacturer shall be responsible for the correct fitting of all parts and pieces. Manufacturer and Contractor shall replace, at no cost to Owner, any defective materials discovered during assembly.

Structural steel shall be shop assembled to the extent required to check fits. Marks shall be affixed to steel to facilitate assembly in the field. Assemblies shall be disassembled at the factory to the extent required for shipping.

Materials:

1. Steel shall comply with latest edition of ASTM A36, 36,000 psi minimum yield strength, except as otherwise noted.
2. Base material shall be of "new" quality. No used material shall be allowed as structural steel. Bent or otherwise damaged steel shall not be used.
3. All assembly bolts and other hardware shall conform to ASTM 325 high strength with nuts. All assembly bolts, washers and nuts shall be galvanized and conform to the Galvanizing Specification. All bolts will be American standard size, hex head; additionally the bolt/nut combination shall be the same size head.
4. Arc welding electrodes shall be compatible with ASTM A36 steel. All welding shall be complete prior to galvanizing.
5. All holes shall be drilled. Flame or plasma cutting of holes is not allowed. All holes shall be located to within 1/16 of an inch. Reaming of mis-located holes shall not be allowed.
6. It is preferred that all material be saw cut or sheared cleanly. If material is cut with a grinder, torch or plasma process, material must be cleanly squared via grinding to within 1/16 inch of square.
7. All rough edges will be ground to a smooth uniform surface which will conform to dimensions specified. All drilling shall be done so that center to center distance shall not vary more than $1/16^{th}$ of one inch, any burs left from the drilling process shall be removed before galvanizing.

Upon arrival on the Project Site, a PUD representative shall inspect the steel and the galvanizing quality. The component lifetime of the Project is a minimum of 50 years and as such the *Engineer shall reject any steel that has galvanizing defects or discoloration. Field cold galvanizing compounds shall not be allowed other than for field bolt hole drillings and field welds. Rejected steel shall be transported back to the galvanizing factory for repair by hot dip process at the expense of the manufacturer.*

Marking:

All girders and columns shall be stamped with ½ inch stamp marks. Girders shall be marked on the bottom side where practical. Columns shall be marked within 24 inches of the base plate. Markings shall be clearly legible after galvanizing. All smaller components shall be bundled or boxed together and marked as a unit.
Galvanizing:

1. All galvanized structural steel shall be produced by the hot-dipped method.

2. Galvanizing shall conform to ASTM A123/123M, Specification for Zinc Coatings on Iron and Steel Products; A153/153M, Specification for Zinc Coating on Iron and Steel Hardware; latest editions.
3. Proper cleaning and preparation shall be performed over entire steel surface and all components.
4. Galvanizing shall be uniformly distributed over entire steel surfaces. Industry average galvanizing thickness on structural steel is between 5 and 7 mils (1 mil = 1/1000 inch) for structural steel. No surface area on structural steel must have less than 3.9 mils of properly adhering galvanizing coating.
5. The guidelines for safe guarding against warping and distortion ASTM A384, latest edition, shall be followed.
6. Cold galvanizing touch up shall not be allowed at the galvanizing factory. Field application of cold galvanizing touch up is allowed for drilled holes and other minor hardware attachments. Cold galvanizing process shall conform to ASTM A780.
7. Selected galvanizing manufacturer shall have a minimum of five years of successful experience in the galvanized steel industry.
8. Contractor shall supply Engineer with the name and statement of qualifications of the galvanizing manufacturer as well as the manufacturer's factory process and specifications for structural steel via written documentation. Engineer shall review manufacturer selection within one week.
9. This steel package shall also include all bolts, nuts, and washers necessary to assemble the structure. All bolts and nuts shall be hex head, in American standard sizes (not metric). All bolts, nuts and washers shall be hot dipped galvanized per the galvanizing specifications. All bolt assemblies shall have two round flat washers and one single helix lock washer unless otherwise specified.

Storage:

Structural steel shall be stored by timber blocking to prevent contact with the ground or surface water.

Shipping:

Delivery shall be made in large cumulative shipments. Welded or shop assembled sections shall be adequately braced to prevent damage during transport. The fabricator shall give Okanogan PUD one weeks notice prior to shipping. Delivery shall be made prior to 3:00 p.m. on any Monday through Thursday except for holidays.
The components in this package will be shipped F.O.B. jobsite, freight prepaid. The shipping address is;

Tonasket Substation
26 North State Frontage Road
Tonasket, Wa. 98855

(note: This is an un-manned site; notifying the PUD contact before arrival will facilitate the unloading process.)

Dates:

The steel package, in its entirety shall be delivered to the jobsite no later than April 13, 2023.

Billing Information:

Send invoice to the PUD main office:

Okanogan County Public Utility District No. 1
PO Box 912
Okanogan Wa. 98840
invoices@okpud.org

Please reference: Bid#454-22, Steel/*Tonasket Substation*