

CONSTRUCTION SPECIFICATIONS

DEFINITIONS:

Owner shall mean Public Utility District No. 1 of Okanogan County.

Bidder shall mean a potential **Contractor** prior to awarding the Contract.

Contractor shall mean the successful **Bidder** for the Distribution Reconductor Project.

Project shall mean the identified work orders of the **Owner**.

Engineer shall mean the Owners engineer or authorized operations representative.

Contract shall mean the terms under which the **Contractor** has agreed to complete the work.

Specifications shall mean this Construction Contract and Specifications Document along with documents referred to therein.

Access: (see Access Section)

SCOPE OF WORK:

The scope of the work has been described in the "Notice and Instructions to Bidders" and is more fully described in the construction standards and the following specifications. It is anticipated that the majority of this project will be completed with the primary conductors energized (hot work) to minimize the interruption of power to customers. **The District has a 2010 budget of "not to exceed \$200,000." including tax for this pole replacement project.** This contract may be extended, at the sole discretion of the District, for a second year at a similar dollar amount (2011).

The work includes furnishing all equipment, machinery, tools, labor, transportation, and other means required to construct the projects in strict accordance with the Construction Contract and Specification Document.

The Contractor shall perform complete work regardless of possible omissions in the Specifications. Miscellaneous material items that are missing shall be furnished by the Owner to produce a complete working system in conformity with the intent of the work. The Engineer shall have final authority in determining the Contractor's responsibility to complete all work in conformance with the Specifications. The Engineer shall have the final authority to direct the Contractor to correct any and all work that has been improperly performed, at no additional cost to the Owner.

INTERPRETATION OF DOCUMENTS AFTER CONTRACT AWARDED:

Report any errors or ambiguities in the Specifications to the Engineer as soon as detected. The Engineer shall interpret the intended meaning of the Specifications and his interpretation shall be final.

If any construction problem arises that is not covered by these Specifications, the Engineer shall be consulted immediately and shall render a decision regarding the problem. Failure to notify the Engineer may preclude any consideration of change to the Contract time or price.

MATERIAL:

Material furnished by the Owner shall be transferred to the Contractor at Owner's warehouse unless specified otherwise.

Contractor shall:

- 1) Accept the materials at the delivery points specified;
- 2) Check all materials to satisfy himself that the materials delivered are in good condition and the quantities are correct;
- 3) Execute a receipt for all materials accepted from the Owner. Delinquency in signing material receipts may result in delayed progress payments.

After the materials are accepted as specified above, the Contractor shall become solely responsible for their care, storage and protection. In the event materials are damaged, lost, stolen or destroyed by any cause whatsoever after the Contractor has signed a receipt for them, their repair or replacement shall be entirely at the Contractor's expense.

Contractor shall load, unload, haul, distribute and store all materials furnished by the Owner.

Owner agrees to provide the quantities of the materials set forth in the material list produced by the "Unit Summary". It is not represented that these materials are adequate to complete the Projects. Any and all additional materials which are necessary for completion of the Projects in accordance with the Drawings and Specifications shall be furnished by the Owner.

If the Owner fails to deliver the materials set forth as described earlier, the Contractor's sole remedy and compensation shall be an extension of time not greater than the delay. Any such time extension must be requested in writing by the Contractor.

All materials, furnished by the Owner in excess of those actually used, and that are removed from the Projects, shall be returned to the Owner's warehouse or designated location along with a complete list of all materials returned. The return of materials to the Owner shall be at the Contractor's expense.

All construction material and equipment shall be stored so as to be protected from detrimental effects of the elements. Material and equipment shall be stored, as appropriate, with due regard to public safety.

COORDINATION:

The Contractor is responsible for coordinating the notification of all involved utility companies prior to starting any excavation work to determine the location of any underground facilities. The Contractor shall repair any damaged underground equipment/cable without additional cost to the Owner.

Owner/Engineer and the Contractor shall jointly prepare an outage plan for all scheduled interruptions of electrical power that affect third parties.

Contractor shall be required to attend a preconstruction conference with the Engineer and any other party involved with the Projects. The Contractor's Superintendent (field man-in-charge) shall also attend the conference. At the conference the Contractor and Owner shall discuss the following:

1. Construction sequence, methods and equipment to be used in all phases.
2. Tentative access and Right-of-Way roads.
3. Location(s) of staging area(s).
4. Work outside of Owners business hours.
5. Hygiene, First Aid and Safety.
6. Switching of District Electrical System.

Contractor bears sole responsibility under the law for the safety of its own personnel and for persons entering the work site as agents or visitors of the Contractor.

CLEANUP:

The Right-of-Way and staging area(s) shall be kept in a neat and orderly condition, as stipulated below. The Engineer may at any time during construction order a general cleanup of the site as a part of the work under this section. Such cleanup shall not result in any additional cost to the Owner.

At the time they become scrap, all wire clippings, bundle ties, nails, breakaway bolt heads and nuts, and other metallic scrap are to be picked up.

All garbage, lunch wraps, equipment parts, oil filters, petroleum products and light packaging material such as plastic, paper, and cardboard are to be removed on a daily basis.

After completion of construction, all survey debris - stakes, lath, flagging, etc. - shall be removed by the Contractor.

The Contractor shall dispose of waste, trash and debris in a manner acceptable to the Engineer.

Final Cleanup of Facilities: Prior to final inspection by the Engineer and after all construction work is essentially complete, the Contractor shall thoroughly clean up all facilities.

Items to be cleaned up include but are not limited to all work staging areas, material storage areas, structures and facilities, access areas, and all other sites and facilities within or incidental to the construction.

The Contractor will be responsible for repair of damages caused by the Contractor to roads and terrain. The Owner shall be responsible for any reseeding required.

FINAL INSPECTION:

Requirements Preparatory to Final Inspection:

Contractor shall notify the Engineer to perform a preliminary final inspection for the purpose of determining the state of completion of the Project. Contractor shall notify the Engineer at least seven (7) days in advance of the time this inspection is to be performed. From the information gathered from this inspection the Engineer shall prepare a punch list of work to be performed, corrected or completed before the Project will be accepted. All work on the punch list shall be completed by the Contractor prior to final inspection.

After the completion of the punch list items, if any, the engineer will coordinate a Final Inspection with the Contractor. All corrections noted on the final inspection must be completed by the Contractor prior to receiving final payment.

RECORD DOCUMENTS:

Contractor shall maintain in a safe place at the site one (1) record copy of all Drawings, Specifications, Addenda, Change Orders, Field Orders, and written interpretations and clarifications in good order and annotated to show all changes made during construction.

Upon completion of the work, the Contractor shall provide the Engineer with a marked up copy of the Construction Drawings and the Staking Sheets. All changes made during construction shall be shown.

Contractor's progress payment retention will not be released until the Engineer receives the actual Construction Drawings and Staking Sheets with all changes recorded on the original documents.

ACCESS:

Access to some of the existing structures and new structure are along side of existing roadways and driveways. Other access includes varied terrain from flat to very steep. The engineer and contractor will work with property owners for approval of access to structures.

CONSTRUCTION UNITS:

These construction units describe the work the Contractor will perform to provide complete in-place units. Contractor will be responsible for transporting all Owner furnished material, unless otherwise noted, from the Owners warehouse to the job site. The unit price shall include all: labor, transportation and expenses required to reinstall any conductors, material, hardware or equipment temporarily detached, to complete the intended work of the Specifications. These units are all more fully described in Exhibit A of the Bid Package. Questions regarding the construction of the “Units” shall be directed to the Owner or Engineer.

Conductor Assembly Units

A conductor assembly unit consists of 1,000 feet of single conductor for primary circuits, and includes tie wires, splices, connectors and armor rods where necessary. The length of conductor shall be determined by summing all straight horizontal spans distances between pole stakes.

Pole Units

A pole unit consists of one pole in place. It does not include pole top assembly units or parts attached to the pole. All costs for excavation, pole drilling, pole cutting and pole scattering will be the contractors responsibility and are to be included in these units. The first two digits indicate the length of pole and the digit shows the classification per A.S.A. For example, a 45-4, means a 45 feet long, class 4. A ROCK HOLE unit consists of blasting and excavation required to set a pole unit to the required depth. No rock holes are anticipated.

Pole setting depth is “10% plus 2 feet” rule (i.e. 40 foot pole @ 10% = 4 ft plus 2 ft is a setting depth of 6 feet)

Pole Top Assembly Units

A pole top assembly unit consists of the crossarms and their appurtenances, insulators, dead-ends, hardware, etc., except tie wires, required to support the distribution conductors and neutral wire on the pole. In addition to the assembly unit, any necessary handling, splicing or re-sagging of conductor to provide a complete unit reattached to the structure.

Guy Assembly Units

A guy assembly unit consists of the hardware, guy wire and guy guards to include any necessary guy insulators or guy breakers.

Anchor Assembly Units

An anchor assembly unit consists of the anchor with rod or rods, complete ready for attaching the guy wire.

Existing anchors that are in correct alignment (not greater than 3 degrees out) may be used if and

only if the Contractor provides a physical test of the holding strength of the anchor. All tests and results must be noted on the staking sheets for time, date, anchor, and measured holding strength. Refer to Anchor data in Part 5 of the contract for anchors size, rod size soil characteristics and soil type.

Screw anchors shall be installed at the manufacturers installation torque.

Refer to Chance “Encyclopedia of Anchoring” Section C anchor testing for approved test procedures.

Transformer Units

A transformer unit consists of labor and equipment needed for installing or removing an existing transformer. Older transformers shall be replaced. Newer transformers will be removed from existing poles and installed on the new structure. The transformer unit includes labor to install necessary animal guards on the primary bushings. Outage duration shall be minimized and coordinated with the Engineer.

Single phase transformer grounding shall explicitly follow the grounding diagram shown in the transformer installation guide specifications.

Other Assembly Units

Animal guards shall be installed on the primary bushings of all oil filled equipment as part of the bid unit (i.e. capacitors, reclosers, transformers, etc.)

Pole grounds shall be installed according to specifications. Pole ground shall be installed in the neutral side quadrant on the cross-arm side of the pole. The ground rod shall be driven to a minimum depth of at least 12 inches below grade measured from the top of the ground rod.

Some existing structures may have other assembly units on them (underground primary or secondary risers, etc.). These will need to be reinstalled.

CONSTRUCTION UNITS – LINE CHANGES

Removal

The removal units consist of furnishing all labor and equipment required for the removal of existing distribution unit to include, but not limited to, structures, insulators, transformers, lines, etc and transporting material to the Owners warehouse in an orderly manner.

The pole will be transported to a pre-designated area unless authorized by Owner to alter these instructions. Pole holes will be filled and tamped in a workmanlike manner.

Removed conductor will be rewound on a wire reels or hand coils in a workmanlike manner and returned to the Owners warehouse.

Removed anchors only require the removal of the rod. If the rod cannot be unscrewed it will be cut or bent over so that it will be a minimum of 18 inches below ground.

CONSTRUCTION STAKING SHEETS:

The Bidder is responsible for becoming familiar with the structure units, maps and staking sheets. The maps, structure units and notes, along with a thorough inspection of the project, will be required to formulate unit prices. Any ambiguity in the staking sheets, that will affect the Bidders understanding of the bid units or number of units, must be clarified prior to submittal of the proposal.

This project will have minimal staking sheets if any as the work requires mainly replacement of existing structures and will only require construction standards to complete.

Pole locations are identified on the maps by pole numbers. Pole numbers are to be reinstalled or replaced if damaged.