June 3, 2019

Invitation to Bid

Engineering Services for 2020 Lyons to Gay Hill structure change

Bluebonnet Electric Cooperative would like to invite you to submit a firm bid for engineering services for the Lyons to Gay Hill structure change out. The Lyons to Gay Hill transmission line is owned by Bluebonnet Electric Cooperative and is located in the Burleson and Washington County areas. This line segment is approximately 11.62 miles long with approximately seventy seven (82) structures.

The project consists of changing out all of the remaining wooden H-frame structures and swing angle structures to steel H-frame structures and concrete swing angles structures on the line. Some structures on this line segment have been changed out previously due to structure degradation. This leaves approximately fifty seven (57) wooden structures to be changed out.

All bid submittals with the required bid information is due on or before **July 1, 2019** to Phillip Ellis, Manager of Technical Services by **2 p.m.** via email or by hard copy (email preferred). The Engineering services shall start in **January 2020** and to be completed on or before **May 1, 2020**. The construction for this structure change out will be performed in the 2021 calendar year.

Phillip Ellis

Manager of Technical Services

3186 East Austin Street

Giddings, TX 78942

Phillip.ellis@bluebonnet.coop

Office – 1-979-542-8548

Bid Package shall include (minimum):

1. Cost estimate for each of the Deliverables below (Itemized)
2. Total firm cost for the bid
3. Exhibit “A” shall include bidding firm’s pricing schedule

4. Exclusions taken by bidding firm

Engineering Deliverables (are to include, but not limited to):

1. Complete set of transmission structure and foundation drawings “For Bid” and “Approved for Construction”
2. Completed PLS Model, KMZ file (Google Earth)
3. Construction bid specification and bid unit documents
4. Complete transmission material list
5. Complete set of As-Built drawings upon completion of construction (PDF and AutoCad)
6. Electronic drawing files “For Bid”, “Approved for Construction” and “As-Built” (PDF and AutoCad, KMZ)
7. Provide any and all other engineering reports as needed or used in this project (soil borings, foundation design calculations and etc.)
8. Soil Investigation (soil borings)
9. SWPPP study (Environmental studies if required)
10. Update line impedances
11. Update facility ratings (normal, emergency and conductor)
12. Update line relay settings if applicable (a review of the settings at a minimum)
13. Perform protection system coordination verification

Engineering deliverables shall include:

1. Engineered plan and profile for the replacement of the of the current wood pole structures – PLS CADD Model:
    a. Use Google Earth structure and angle coordinates
    b. Incorporating Chartiff elevation data; ownership data on the plan
    c. Creation of Plexscape Google Map Ortho
    d. Pole models of new steel H-frame structures
    e. Loading Cases

f. Engineering wire model of existing 336 ACSR conductor and (2) 3/8" HS Shield wire
g. Engineering wire model of future 795 ACSR conductor and (2) 3/8" HS Shield wire and OPGW
h. Location of any and all distribution under build or crossings
i. Railroad, TXDOT, County or Farm to Market crossings

2. Engineered structure drawings – AutoCad
    a. Drawings to include layout, hardware material list, load diagram and details
    b. Structure drawings for each pole designed used
    c. Material list for each structure type and material list for entire project
    d. Provide PDF drawings to Bluebonnet for construction bidding purposes
    e. Provide load calculations for new structures for pole manufacturer use
    f. Review vendor engineering drawings and calculations

3. Engineered Foundation drawings- AutoCad, analyzed per Caisson/LPile
    a. Using Soil Bore Report, provide foundation drawings for all structure types

Bluebonnet Deliverables:

1. BBEC will provide accurate updated distribution facility measurements as required
2. BBEC will provide any and all mylar, PDF or AutoCad drawings of the line segment if available for the firm to meet the deliverables
3. BBEC will make the BBEC project manager available at reasonable notice to firm for project meetings to meet project timelines as agreed upon

4. BBEC will provide access to line segment ROW for onsite services required for this project (firm shall undergo a member best practices meeting with BBEC before performing field services)