



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

April 19, 2018

SUBJECT: Various Routes
Project NHPP-STP-FAP6(281)
Section 2011-045-I
Will County
Contract No. 60P55
Item No. 159, April 27, 2018 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised pages 327-329 of the Special Provisions.
2. Revised sheet 106 of the Plans

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Very truly yours,

Jack A. Elston, P.E.
Acting Bureau Chief
Bureau of Design and Environment

A handwritten signature in black ink, reading "Ted B. Walschleger P.E." with a stylized flourish at the end.

By: Ted B. Walschleger, P. E.
Engineer of Project Management

cc: Anthony Quigley, Region 1, District 1; Tim Kell; D. Carl Puzey

MS/kf

AERIAL CABLE SUPPORT SYSTEM

Description. This work shall consist of designing, furnishing, and installing a complete aerial cable support system for the Ruby Street Bridge according to the contract plans and approved shop drawings. This work shall include the towers, guy wires, lightning rods and conductors, cross arms, messengers, cable support, climbing rungs, all anchor bolts, nuts and incidentals, and tower and guy foundations. This work shall be according to these Special Provisions and the following:

General. The towers shall be engineered structures of tubular steel construction and as shown on the Plans. The east tower shall be anchored to the north side of the east pier as shown on the Plans. An existing AC unit is present in this location and may require relocation within the same area. The east guy shall be anchored near the existing billboard behind the east abutment on the north side of Ruby Street. The west tower and guy foundations shall be located behind the existing river wall on the north side of the west bridge abutment. A drilled shaft foundation is suggested for this tower. Conventionally reinforced concrete foundations are suggested for the east and west guy foundations. Foundation details shown on the Plans are for quantity estimating purposes only. The described system shall be designed by the Contractor. The Contractor may propose an alternate type of system to be approved by the Engineer. The towers shall have a galvanized finish according to ASTM A123. Welding shall be inspected at the fabrication shop in accordance with Section 1069.08(b)(2) of the Standard Specifications. The Contractor shall submit the appropriate documents to the Engineer for approval. The Contractor shall not fabricate any parts of the system before receiving written approval of all required documents from the Engineer.

Loadings. The aerial cable support system design shall accommodate the proposed and future electrical cables as shown on the Plans. The towers, foundations, and their anchoring systems shall be designed to withstand the force of a 90 MPH wind without dependence on a transverse guying system. Ice and other loads and load combinations shall be as specified in the National Electrical Safety Code, C2-2017. Ice on cables and guys plus wind on the structure, cables, and guys shall be considered in the design with no overstress in the members or components. Longitudinal guys may be used as shown on the Plans to compensate for loads imposed by the aerial cables. The west guy may require a skew of up to 10 degrees with the messenger in order to remain within the available ROW. Towers shall be designed to limit deflection to 1" for 30 mph wind speed.

Codes and Standards. The towers and foundations shall be engineered in accordance with the National Electrical Safety Code, C2-2017, NFPA-70-National Electrical Code and ASTM Standards.

Revised 4/19/18

Coordination. The Contractor shall ensure coordination between the tower manufacturer and the aerial cable manufacturer. The tower shall be provided with messenger and cable supports as approved by the cable manufacturer for supporting the cable on the cross arms and down the tower to the conduit riser. The following coordination is also required:

- (a) Aerial Cables. (Ruby Street Bridge)
- (b) Coordination of Marine Navigation.
- (c) Bridge Electrical Installation.
- (d) Integrated Bridge Controls System.
- (e) Systems Integration.
- (f) Bridge Control CCTV System.

CONSTRUCTION REQUIREMENTS

Submittals. The following shall be submitted to the Engineer for approval:

- (a) Structural calculations and design drawings signed and sealed by a Structural Engineer licensed in the State of Illinois (for towers, foundations, anchor bolts, guys, messengers and any stressed members)
- (b) Cable data
- (c) OHGW data
- (d) Ice and wind Loading data (towers, foundations and cables)
- (e) Tower shop drawings showing fabrication details
- (f) Shop drawings for anchor bolts
- (g) Guying and anchoring details
- (h) Cable supports
- (i) Lightning rod and lightning rod anchor details
- (j) Foundations details (towers and guys)
- (k) Reinforcement and dimensions

Revised 4/19/18

- (l) Material and finish specifications
- (m) Field assembly methods
- (n) Quantity calculations (CONCRETE STRUCTURES, REINFORCEMENT BARS (EPOXY COATED), STRUCTURE EXCAVATION and ROCK EXCAVATION)

Installation. All materials brought to the site shall be inspected and approved by the Engineer before assembly on site. Any existing systems that require relocation or adjustment shall be relocated or adjusted before any erection of structural elements. Any relocation or adjustments shall be included in this work.

The towers shall be installed on leveling nuts so they are plumb. The Contractor shall submit the method of field assembly of the pole sections to the Engineer for approval. The centerline alignment of the assembled pole shall not vary from the centerline joining base and tip section by more than three inches. The plumbing shall be accomplished with an approved surveying instrument. The tower will be considered plumb when the center of the top is directly over the center of the base.

After the Engineer has approved the installation for plumb, absence of a lip in the wireway entrances, tightness of all nuts, and sufficient air gap for the foundation, stainless steel mesh shall be installed to enclose the void between the foundation and the base of the tower in accordance with Section 733.08 of the Standard Specifications.

After the anchor bolts have been tightened in accordance with the manufacturer's recommendations, the top nut shall be secured with a lock nut.

Basis of Payment. This work will be paid for at the contract lump sum price for AERIAL CABLE SUPPORT SYSTEM. Foundations for aerial cable towers and guy wires shall be paid for at the contract unit price for CONCRETE STRUCTURES, REINFORCEMENT BARS (EPOXY COATED), STRUCTURE EXCAVATION and ROCK EXCAVATION FOR STRUCTURES.

Revised 4/19/18