

ADDENDUM No. 1

**Walnut Street Bridge Repair and Rehabilitation
TDOT PIN: 128099.00
Federal Project Number: STP-M-9202(134)
State Project Number: 33LPLM-F3-229
Chattanooga Department of Public Works**

This Addendum #1, is being issued to provide Special Provision SP920EPT.

This special provision SP920EPT refers to pay items that will be added to the plans and the bid form in a subsequent addendum.

Should you require additional clarification or need additional information please contact City of Chattanooga Purchasing (423. 643.7230), or by emailing bidinfo@chattanooga.gov. Please include the title 'Walnut Street Bridge Repair and Rehabilitation' with your request for information.

Bidder Must Acknowledge Receipt of this Addendum on Bid Form

June 13, 2024

/s/ William C. Payne, P.E., City Engineer

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June 13, 2024

SPECIAL PROVISION

REGARDING

EXISTING EXTERNAL POST-TENSIONING STRANDS AND WORK PLAN

General

A. Scope of Work

This work consists of measuring the stress in the existing post-tensioning strands and developing a work plan for the removal and replacement of timber decking and other repairs per the construction drawings. Additionally, this work includes engineering analysis of the bridge to determine the effects on the bridge because of the timber deck removal and replacement, and any deficiencies that may be found in the measurements of the stresses in the existing strands. This work includes adjustments or replacement of the post-tensioning strands as required by the engineering analysis. The work plan shall include a post-tensioning strand monitoring system that will measure the stress in the strands during and after the repair work to the bridge.

B. Qualifications of the Work Plan and Analysis Engineer

The work plan and analysis engineer to be a licensed professional engineer in the state of Tennessee with experience in developing bridge repair work plans that include external post-tensioning systems. Show evidence of experience and expertise by furnishing a list containing a description of at least three projects either on-going or completed in the last ten years on which the work plan and analysis engineer performed similar tasks. This list of projects shall contain and brief description of the project as well as names and phone numbers of the project owner's representatives who can verify their participation on the project.

C. Field Verification and Existing Plans

Previous repair plans for the bridge are available and can be utilized in determining the existing bridge's general overall measurements and materials but all measurements must be field verified.

The following information is provided based on conversations with the engineer that prepared the 1990 bridge repair plans and is to be verified if utilized in the analysis: The existing plans show a Post-Tensioning Force per Strand and these forces per strand were designed to carry fifty percent of the dead load of the bridge. The existing post-tensioning was completed after the timber deck was installed.

D. Measuring Stress in Existing Post Tensioned Strands

Existing stress in the strands is to be measured by mechanical methods using a Dillon Quick-Check Tension Meter or similar that is rated for the expected loads. Measurements are to be taken on each section of strand on either side of the saddles for all strands on the bridge. A report of findings is to be submitted to the Engineer.

E. Work Plan and Analysis

Utilizing the information gathered from the Measuring Stress in Existing Post-Tensioned Strands work, existing bridge plans, and direct measurements develop a work plan and submit the plan for review and acceptance by the Engineer 30 days prior to working on the bridge. The work plan is to be coordinated with the other repair work on the bridge and work schedule restrictions described in the contract documents.

The work plan and analysis shall show the methodologies, schedule, construction phasing, and analysis to remove and replace the timber decking, perform other repairs and to remedy deficiencies that may be found in the measurements of the stress in the existing strands. The work plan shall include plans and specifications for adjustments to or replacement of strands as required by analysis. Additionally, the work plan is to describe a load monitoring system for all the post-tensioned strands. The work plan analysis drawings and supporting documentation to be sealed by a professional engineer licensed in the state of Tennessee.

F. Post-Tensioning Preconstruction Conference

After the work plan has been reviewed by the Engineer a post-tensioning preconstruction conference shall be scheduled with the contractor to discuss the removal and replacement of the timber decking and the forces in the post-tensioning strands shown in the work plan. At a minimum, the attendees should include the General Contractor's Superintendent, the Work Plan and Analysis Engineer, Post-Tensioning Contractor's representative, Monitoring System Installer representatives, The City's representatives, the Engineer, and members of the Construction Inspection Team. No work shall be performed on the bridge until the Post-Tensioning Preconstruction Conference is completed and work plan approved.

G. Strand adjustments and replacements

Any post-tensioning strand that is deficient as determined by the work plan and analysis engineer and cannot be adjusted is to be replaced in-kind or improved and stressed to a force determined by the work plan and analysis engineer. Strand replacement to include all labor and materials required to replace a strand.

Strand adjustments to change the force in the strand is to be completed with care as not to damage the existing strand. Strand adjustments to include all labor and materials required to adjust the strand force.

H. Monitoring System

A load monitoring system is to be installed on the bridge to measure the change in the tensile force in each post-tensioning strand. For strands that are required to be replaced or adjusted, the DYWIDAG DYNA Force Monitoring System or similar is to be installed. For existing strands that are to remain in place and not required to be replaced or adjusted shall be fitted with strain gauges and a monitoring system. The monitoring system or systems shall be capable of monitoring the forces in the strands for at least 25 years. The work plan and analysis engineer is to develop and submit with the work plan a complete description of the monitoring systems including but not limited to plans, equipment, and a schedule for taking readings from the monitoring system. A Maintenance and Operation manual for the system or systems is to be provided to the Engineer. The monitoring system or systems are to be installed prior to any bridge repair work that would change the forces in the strands.

Sequence Contract Submittals

Submittals described in this Special Provision to be submitted in the following order.

1	Report of Findings from the Measurements of Stress in the Post-Tensioning Strands
2	Work Plan
3	PT-Preconstruction Conference
4	Shop Drawings
5	Monitoring System Maintenance and Operation Manual.

Basis of Payment

The Owner will pay for accepted quantities, complete in place, at the contract prices as follows:

Item	Description	Pay Unit
920-20.40	Strand Replacement	LINEAR FEET
920-20.41	Strand Adjustment	EACH
920-20.42	Work Plan and Analysis	LUMP SUM
920-20.43	Monitoring Systems	LUMP SUM

Such payment is full compensation for all described work, including all material, equipment, tools, labor, and any other incidentals necessary to complete the work. These items may be increased or decreased as directed by the Engineer.