Corporate Finance Department
Purchasing Division

442-2024 ADDENDUM 1

ARLINGTON BRIDGE – PIER 2, 4 AND 6 BEARING REPLACEMENT

ISSUED: June 5, 2024
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URGENT

PLEASE FORWARD THIS DOCUMENT TO WHOEVER IS IN POSSESSION OF THE BID/PROPOSAL

THIS ADDENDUM SHALL BE INCORPORATED INTO THE BID/PROPOSAL AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS

Template Version: Add 2024-02-01

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid/Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid/Proposal may render your Bid/Proposal non-responsive.

FORM B: PRICES

Replace: 442-2024 Form B: Prices with 442-2024 Addendum 1 - Form B: Prices. The following is a summary of changes incorporated in the replacement Bid/Proposal Submission:

Form B(R1): Add Item 3 – Supply Pier 6 Pedestal Repair Structural Steel and Threaded Rod Assemblies

Form B(R1): Add Item 5 – Install Pier 6 Pedestal Repair Structural Steel and Threaded Rod Assemblies

Form B(R1): Add Item 8 – Pedestal Concrete Repairs

Page numbering on some forms may be changed as a result.

PART E – SPECIFICATIONS

Revise: D13 to read:

D13. INSURANCE

D13.1 The Contractor shall provide and maintain the following insurance coverage at all times:

(a) Commercial general liability insurance, in the amount of at least ten million dollars ($10,000,000) inclusive, with The City of Winnipeg and Canadian Pacific Railway Company to be added as an additional insured, with a cross liability clause, such liability policy to also contain contractual liability, sudden and accidental pollution liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period; The Certificate of insurance to clearly that operations within the vicinity of the railway right of way are not excluded.

(b) Automobile liability insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than $5,000,000 inclusive for loss or damage including personal injuries and death resulting from any on accident or occurrence.

(c) All risks course of construction insurance in an amount of one hundred percent (100% of the total Contract Price, written in the name of the Contractor and The City of Winnipeg, at all times during the performance of the Work and until the date of Total Performance.

(d) Contractors Pollution Liability (CPL) insurance in the amount of at least two million dollars ($2,000,000) per occurrence and two million dollars ($2,000,000) aggregate insuring against claims covering third party

injury and property damage claims and including clean-up costs and transported cargo as a result of a pollution condition arising suddenly or gradually from the Contractors' operations and completed operations. Such policy to name The City and Canadian Pacific Railway Company are added as additional insureds. Such policy to remain in place during the warranty period.

D13.2 The Contractor is to ensure that all sub-contractors provide and maintain comparable insurances to that outlined in D13.1 (a) and (b) above. Insurances are to be maintained during the performance of the Work and throughout the warranty period.

D13.3 Deductibles shall be borne by the Contractor.

D13.4 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

D13.5 The Contractor shall provide the Contract Administrator with evidence of insurance at least two (2) business days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, as applicable.

D13.6 The Contractor shall not cancel, or cause any such policy or policies to lapse without a minimum thirty (30) days prior written notice to the City.

Add: D20.5 and D20.6

D20.5 If the Contractor desires to work beyond the allotted 6-hour track blocks, the Contractor shall develop a formal procedure to ensure all equipment and debris can be contained within the pier footprint and avoid fowling adjacent tracks with access from the sidewalk hatch.

D20.6 Contractor activities within the CPKC Railway yard are limited to CPKC flag protection within the permitted allotted track blocks only.

Revise: D22.1, D22.2 and D22.3 to read:

D22.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
a) Pier 6 Bearing Works – Complete by August 1, 2024
b) Pier 4 Bearing Works – Complete by August 20, 2024
c) Pier 2 Bearing Works – Complete by September 6, 2024

D22.2 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
a) Pier 6 Bearing Works – Commence by July 22, 2024
b) Pier 4 Bearing Works – Commence by August 2, 2024
c) Pier 2 Bearing Works – Commence by August 21, 2024

D22.3 Should the Critical Stage dates not be achieved, the work shall continue to achieve the next scheduled item of Work and then return to complete the remaining incomplete items of Work, unless arrangements have been made with CPKC for additional work blocks to complete a Critical Stage. However, the Contractor shall not move to the next pier if a critical stage is not met until the structure is lowered on either the existing or new bearings. The Contractor is not permitted to move to the next pier and leave the previous span temporarily supported on jacks. Additional work blocks will be subject the approval and discretion of the CPKC or the Contract Administrator, to be accommodated by the Contractor.

Revise: D23.1 to read:

D23.1 The Contractor shall achieve Substantial Performance by September 6, 2024

Revise: D24.1 to read:

D24.1 The Contractor shall achieve Total Performance by September 13, 2024

Revise: D25.1 to read:

D25.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working or

Calendar Day for each and every Working or Calendar Day following the days fixed herein for same during which such failure continues:

(a) Substantial Performance - Five thousand dollars ($5,000) per Working Day. Where a Working Day is defined as a Calendar Day in which access to the worksite has been permitted by the Contract Administrator.

(b) Total Performance - Two hundred fisty dollars *(*$250*)* per Calendar Day for each and every Calendar Day following the day fixed herein for Substantial Performance during which such failure continues.

Add: E6.4.6 and E6.4.7

E6.4.6 Pier 6 Threaded Rods

(a) Threaded Rods shall be ASTM F1554 Grade 105 (Plain or Galvanized) with two DH heavy hex nuts and two ASTM F436 washers.

(b) ASTM F1554 Grade 105 (Plain or Galvanized) threaded rods to be installed using turn of nut method.

E6.4.7 Epoxy Adhesive

(a) Epoxy adhesive for bonding threaded rods to concrete shall be HILTI HIT-RE 500 V3 or equal as accepted by the Contract Administrator.

Revise: E6.9 to read:

E6.9 Measurement and Payment

E6.9.1 The supply and delivery of structural steel shall be measured on a unit basis, as computed from the reviewed shop drawings.

E6.9.2 Supply and delivery of structural steel will be paid for at the Contract Unit Price per unit for the “Items of Work” listed here below, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in the Specification, accepted and measured by the Contract Administrator.

(a) Items of Work:

Supply and Delivery of Structural Steel

(i) Type A Jacking Beam Assemblies

(ii) Pier 6 Pedestal Repair Structural Steel and Threaded Rod Assemblies

(b) The measurement excludes the mass of bolts and washers, which are incidental to the Works.

Add: E7.7.8

E7.7.8 Pier 6 Threaded Rod Installation

(a) Drill holes into concrete of the diameters and depths shown on the Drawings.

(b) Holes shall be located to the correct depth and alignment as indicated on the Drawings;

(c) Drilling equipment shall be operated so as to ensure that no damage to the concrete results from such drilling operation. Coring of holes is not permitted. In the event that existing reinforcing steel bars are hit during the drilling operations, that hole shall be abandoned and a new hole shall be drilled nearby to the correct depth. All abandoned holes shall be filled with non-shrink grout or approved adhesive agent;

(d) Holes for threaded rods shall be blown clean with compressed air. Approved adhesive agent shall be placed in the back of the drilling hole. The threaded rods shall be worked back into the holes for complete coverage around the portion of the bar that extends into the hole, such that adhesive agent is squeezed from the hole;

(e) Epoxy adhesive operations shall be performed in accordance with the manufacturer’s recommended procedures.

(f) ASTM F1554 Grade 105 (Plain or Galvanized) threaded rods to be installed using turn of nut method. Follow the manufacturer curing time and procedure prior to tightening the nuts by using turn of the nut method as per the Drawings.

Revise: E7.9 to read:

E7.9 Measurement and Payment

E7.9.1 The erection of structural steel shall be measured on a unit basis, as computed from the reviewed shop drawings. The measurement excludes the mass of bolts and washers, which are incidental to the Works

E7.9.2 Erection of structural steel will be paid for at the Contract Unit Price per unit for the “Items of Work” listed here below, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in the Specification, accepted and measured by the Contract Administrator.

E7.9.3 Items of Work:

Erection of Structural Steel

(i) Type A Jacking Beam Assemblies

(ii) Pier 6 Pedestal Repair Structural Steel and Threaded Rod Assemblies

Revise: E8.3.1b) to read:

E8.3.1 The Work under this Specification shall involve:

b) Raising the superstructure at the piers, is intended to permit the Contractor to carry out the following works:

(i) Removal of existing bearings to the limits shown on the Drawings;

(ii) Installation of new bearings;

(iii) Cleaning and lubricating existing bearing pin. (Note – the existing bearing pin is intended to remain in place and shall not be removed for cleaning and lubricating operations)

(iv) Miscellaneous modifications to the piers.

Add: E10

E10. PEDESTAL CONCRETE REPAIRS

E10.1 Description

(a) This Specification shall cover all operations related to the repair of Pier 6 bearing pedestal concrete as herein specified.

(b) The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all other things necessary for and incidental to the satisfactory completion of all Work as hereinafter specified.

E10.2 Scope of Work

(a) The Work under this Specification shall involve the preparation and repair of concrete that includes:

(i) Removal of all delaminated concrete to sound concrete.

(ii) Installation of pedestal repair formwork.

(iii) Supplying and placing repair grout.

(iv) Drilling holes in pedestal concrete to facilitate threaded rod installation.

(v) Install and epoxy threaded rods and tighten using turn of nut method.

(vi) All other items specified herein.

(vii) Scope of work items not necessarily presented in sequence of work.

E10.3 Materials

E10.3.1 General

(a) The Contractor shall be responsible for the supply, safe storage, and handling of all materials set forth in the Specification. All materials shall be new and within the recommended shelf-life, as approved by the Contract Administrator.

E10.4 Submittals

E10.4.1 General

(a) The Contractor shall submit to the Contract Administrator for review and approval, at least ten (10) Business Days prior to the commencement of any scheduled Work on the Site, a proposed schedule, including methods and sequence of operations.

(b) The Contractor shall submit to the Contract Administrator for review and approval, at least ten (10) Business Days prior to the commencement of any Work on Site, the proposed materials to be used.

E10.4.2 Testing and Approval

(a) All materials supplied under this Specification shall be subject to inspection and testing by the Contract Administrator or by the Testing Laboratory designated by the Contract Administrator. There shall be no charge to the City for any materials taken by the Contract Administrator for testing purposes.

(b) All materials shall be approved by the Contract Administrator at least seven (7) Calendar Days before any construction is undertaken. If, in the opinion of the Contract Administrator, such materials in whole or in part, do not conform to the Specifications detailed herein or are found to be defective in manufacture or have become damaged in transit, storage, or handling operations, then such materials shall be rejected by the Contract Administrator and replaced by the Contractor at his/her own expense.

E10.4.3 Cementitious Non-Shrink Grout

(a) Cementitious grout shall be non-shrink and non-metallic. Approved products are Sternson M-bed Standard, Specialty Construction Products CPD Non-Shrink Grout, Sika 212 Non-Shrink Grout, or equal as accepted by the Contract Administrator, in accordance with, B7, “Substitutes”. The minimum compressive strength of the grout at 28 days shall be 40 MPa.

(b) Grouting operations shall be performed in accordance with the manufacturer’s recommended procedures.

E10.4.4 Water

(a) Water to be used for all operations in the Specification, including mixing and curing of concrete or grout, surface texturing operations, and saturating the substrate shall conform to the requirements of CSA A23.1 and shall be free of oil, alkali, acidic, organic materials, or deleterious substances. The Contractor shall not use water from shallow, stagnant, or marshy sources.

E10.4.5 Bonding Agents

(a) Latex Bonding Agent

(i) Latex bonding agent shall be SikaCem 810, or equal as accepted by the Contract Administrator, in accordance with B7. Polyvinyl acetate-based latexes will not be permitted. Planicrete AC by MAPEI is approved for use as a latex bonding agent on concrete greater than twenty-eight (28) days in age.

(b) Epoxy Bonding Agent

(i) Epoxy bonding agent shall be SikaTop Armatec 110 EpoCem or equal as approved by the Contract Administrator.

E10.4.6 Bonding Grout

(a) For latex bonding grouts, the grout for bonding the new barrier concrete to the existing barrier concrete shall be mixed in an agitating hopper slurry pump and shall consist of the following constituents, by weight:

(i) One (1) part water;

(ii) One (1) part latex bonding agent; and,

(iii) One and a half (1½) parts Type GUSF Portland cement.

(b) The consistency of the bonding grout shall be such that it can be brushed on the existing concrete surface in a thin, even coating that will not run or puddle in low spots.

E10.4.7 Curing Compound

(a) Curing compounds shall be liquid membrane-forming and conform to the requirements of ASTM Standard C309-98a.

(b) Curing compounds shall be resin-based and white-pigmented.

(c) WR Meadows 1215 WHITE Pigmented Curing Compound is an approved product, or equal as accepted by the Contract Administrator, in accordance with B7 “Substitutes”.

E10.4.8 Curing Blankets

(a) Curing blankets for wet curing shall be one hundred percent (100%) polyester, 3 mm thick, white in colour. An approved product is “Mirafi Geotextile P150”. Alternately, a 10 oz burlap, 5 mil polyethylene, curing blanket white in colour shall be used; “Curelap” manufactured by Midwest Canvas, together with a second layer of burlap, or equal as accepted by the Contract Administrator, in accordance with B7.

E10.4.9 Formwork

(a) Formwork materials shall conform to CAN/CSA Standard A23.1, and American Concrete Publication SP4, “Formwork for Concrete.”

(b) Form sheeting plywood to be covered with form liner or to be directly in contact with soil shall be exterior Douglas Fir, concrete form grade, conforming to CSA Standard O121, a minimum of 20 mm thick.

(c) Boards used for formwork shall be fully seasoned and free from defects such as knots, warps, cracks, etc., which may mark the concrete surface.

(d) No formwork accessories will be allowed to be left in place within 50 mm of the surface following form removal. Items to be left in place must be made from a non-rusting material or stainless steel; and they shall not stain, blemish, or spall the concrete surface for the life of the concrete.

(e) Forms for exposed surfaces that do not require a form liner may be either new plywood or steel as authorized by the Contract Administrator.

(f) Studding shall be spruce or pine and shall have such dimensions and spacing that they shall withstand without distortion all the forces to which the forms shall be subjected.

(g) Walers shall be spruce or pine, with minimum dimensions of 100 mm x 150 mm. Studding shall be spruce or pine, with minimum dimensions of 50 x 150.

(h) Stay-in-place formwork or falsework is not acceptable and shall not be used by the Contractor unless specifically shown on the Drawings.

E10.5 Equipment

(a) General

(i) All equipment shall be of a type accepted by the Contract Administrator and shall be kept in good working order.

(b) Preparation for Concreting Against Hardened Concrete

(i) All hardened concrete against which new concrete is to be placed shall be prepared in the following manner:

- Concrete shall be removed to sound concrete or to the limits as shown on the Drawings, whichever is greater. The resulting surface shall be roughened by water jet to remove latent cement and miscellaneous debris.
- Prior to pouring, surface shall be brought to a Saturated Surface Dry (SSD) condition.
- Immediately prior to puring, bonding grout shall be thoroughly brushed onto the entire surface of the existing hardened concrete in a thin and even coating that will not run or puddle.

E10.6 Construction Methods

E10.6.1 General Curing

(a) Hot weather curing shall be in accordance with CSA A23.1, refer to E10.6.3 for additional hot weather curing requirements.

(b) Unformed concrete surfaces shall be covered and kept moist by means of wet polyester blankets for three minimum 24 hours following finishing operations or otherwise approved by the Contract Administrator and shall be maintained at above 10ºC for at least seven (7) consecutive days.

(c) Unformed concrete surfaces shall have curing compound applied immediately after the wet curing period.

(d) Concrete shall be protected from the harmful effects of sunshine, drying winds, surface dripping, or running water, vibration, and mechanical shock. Concrete shall be protected from freezing until at least twenty-four (24) hours after the end of the curing period.

(e) Changes in temperature of the concrete shall be uniform and gradual and shall not exceed 3°C in any one hour period or 20ºC in any twenty-four (24) hour period.

(f) Care shall be exercised to ensure that the polyester curing blanket is well drained and that it is placed as soon as the surface will support it without deformation. The Contractor shall ensure that water from the polyester curing blankets does not run into areas where concrete placement and finishing operations are underway. If this occurs, concrete placement shall stop until the problem is corrected satisfactory to the Contract Administrator.

E10.6.2 Patching of Formed Surfaces

(a) Immediately after forms have been removed, but before any repairing or surface finishing is started, the concrete surface shall be inspected by the Contract Administrator. Any repair or surface finishing started before this inspection may be rejected and required to be removed.

(b) All formed concrete surfaces shall have bolts, ties, struts, and all other timber or metal parts not specifically required for construction purposes cut back 50 mm from the surface before patching.

(c) Minor surface defects caused by honeycomb, air pockets greater than 5 mm in diameter, and voids left by strutting, and tie holes shall be repaired by removing the defective concrete to sound concrete, dampening the area to be patched and then applying patching mortar. A slurry grout consisting of water and cement shall be thoroughly brushed onto the area to be patched. When the slurry grout begins to lose the water sheen, the patching mortar shall be applied. It shall be struck-off slightly higher than the adjacent surface and left for one (1) hour before final finishing to prevent initial shrinkage of the patching mortar and it shall be touched up until it is satisfactory to the Contract Administrator. The patch shall be cured as specified in this Specification, and the final colour shall match the surrounding concrete.

(d) All objectionable fins, projections, offsets, streaks, or other surface imperfections shall be removed by approved means to the Contract Administrator's satisfaction. Cement washes of any kind shall not be used.

(e) Concrete shall be cast against forms that will produce plane surfaces with no bulges, indentations, or protuberances other than those shown on the Drawings. The arrangement of panel joints shall be kept to a minimum. Panels containing worn edges, patches, or other defects that will impair the texture of concrete surfaces shall not be used. All fins on the concrete surfaces shall be removed.

E10.6.3 Hot Weather Concreting

(a) General

(i) The requirements of this section shall be applied during hot weather; i.e., air temperatures above 25ºC during placing.

(ii) Concrete shall be placed at as low a temperature as possible, preferably below 15ºC, but not above 30ºC.

(iii) Form and conveying equipment shall be kept as cool as possible before concreting, by shading them from the sun, painting their surfaces white, and/or the use of water sprays.

(iv) Sunshades and wind breaks shall be used as required during placing and finishing.

(v) Work shall be planned so that concrete can be placed as quickly as possible to avoid “cold joints.”

E10.6.4 Cleanup

(a) The Contractor shall cleanup equipment and construction debris on at least a daily basis to the satisfaction of the Contract Administrator.

E10.7 Inspection by Contract Administrator

E10.7.1 The following describes the construction hold-points for concrete repairs where approval by the Contract Administrator is required. The Contract Administrator shall inspect all work at the hold-points and provide authorization for the Contractor to proceed.

E10.7.2 The Contractor shall be responsible for informing the Contract Administrator of the status all works.

E10.7.3 Hold-Points for all concrete repairs are as follows:

(a) Prior to any concrete demolition works, the Contract Administrator shall confirm concrete areas to be repaired as noted on the Drawings.

(b) Once all concrete has been removed, the Contract Administrator shall inspect the repair area to confirm the extents of removal and the condition and surface preparation of the existing concrete.

(c) Any work that has proceeded without authorization may be rejected by the Contract Administrator and shall be removed by the Contractor at his/her own expense.

E10.8 Measurement and Payment

E10.8.1 General

(a) Pedestal Concrete Repairs will be measured on a unit basis and paid for at the Contract Unit Price per square metre for “Pedestal Concrete Repairs”, repaired in accordance with this Specification and accepted by the Contract Administrator.

(b) The Contractor shall be made aware that the quantities associated with the items of Work specified herein are approximate and may vary based on conditions at the Site. The Contract Administrator will verify all quantities with the Contractor for purposes of payment.

(c) If additional concrete repairs are required based on confirmed site conditions, the additional repairs will be paid for at the Contract Unit Price per square metre for “Pedestal Concrete Repairs. The Contract Administrator will verify all quantities with the Contractor for purposes of payment.

DRAWINGS

Add: 442-2024 _Drawing_ B106-24-15