



774-2013 ADDENDUM 2

RECONSTRUCTION OF THE ST. JAMES STREET BRIDGE OVER OMAND'S CREEK

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE BID
OPPORTUNITY**

ISSUED: November 20, 2013
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE BID OPPORTUNITY AND SHALL
FORM A PART OF THE CONTRACT
DOCUMENTS**

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

PART E – SPECIFICATIONS

- Add: E18.4.9(e): The Contractor is advised that the addition of supplementary cementitious materials may increase the electrical resistivity of the concrete.
- Add: E18.7.5(j): For concrete specified as low resistivity, and for which the concrete supplier has included supplementary cementitious materials such as fly ash, slag, or silica fume in the concrete mix design, the concrete shall be tested in accordance with ASTM C1760. For concrete specified as low resistivity that does not include supplementary cementitious materials in the mix design, electrical resistivity testing is not required.
- Revise: E20.4.6(a) to read: Grout shall conform to ASTM C1107 Grade C, have a compressive strength of 45 MPa @ 28 days and shall be non-shrink, non-metallic. Admixtures to be used in grout must be approved by the Contract Administrator. Grout specified within this Specification section shall be used for the grouting the post-tensioning ducts, anchor rods, precast girder shear keys and miscellaneous recesses. Grout shall be prepared and cured in accordance with the manufacturer's recommendations.
- Delete: E20.5.14
- Delete: E20.5.14(a)
- Delete: E20.5.14(b)
- Delete: E20.5.14(c)
- Delete: E20.5.14(d)
- Delete: E20.5.14(e)
- Add: E20.6.9 Grouting of Lateral Stressing Ducts and Recesses
- Add: E20.6.9(a) Grout shall be mixed in accordance with the grout manufacturer's recommendations, followed by slow agitation until the grout is used up.
- Add: E20.6.9(b) Immediately prior to grouting each duct, compressed air shall be forced through the duct. The compressor shall be equipped to ensure that air blown through the ducts is clean and, in particular, oil free. During the forcing of air through a duct, the Contractor shall

inspect carefully the opposite end of the duct to ascertain that there is a free flow of clean air through each duct.

- Add: E20.6.9(c) If required, spaces between the units shall be sealed to prevent loss of grout.
- Add: E20.6.9(d) From the mixer, the grout shall pass through a strainer into positive displacement grouting pumps equipped with a recirculating device for use when the grout is not being injected.
- Add: E20.6.9(e) Grouting shall be carried out quickly, completely filling a given duct within 30 min. after the cement and water are first brought together. Sufficient grout shall always be available so that each duct can be grouted completely in one operation. A generous allowance shall be made for wastage. If, for any reason, a sufficient grout is not available to complete the grouting of a duct, grout already in the duct shall be forced out and the duct cleaned out completely with water and compressed air.
- Add: E20.6.9(f) Grouting pressure shall be sufficiently high to cause a stream of grout to issue freely at the open end of the duct.
- Add: E20.6.9(g) The Contractor shall supply and install grout fittings at the grouting anchorage and open anchorage, capable of maintaining the grout in the duct under pressure, from the time the duct has been filled with grout until the grout has set.
- Add: E20.6.9(h) Grout shall be pumped through the duct and wasted continuously at the open anchorage until no visible slugs of water or air are ejected. Once a steady stream of pure grout is evident at the open anchorage, the grout fitting of this anchorage shall be closed and the pumping pressure shall be held for thirty seconds. Grout fittings of the grouting anchorage shall then be closed while maintaining this pressure.
- Add: E20.6.9(i) The Contractor must take steps as to ensure the ducts will not have air pockets upon completion of grouting.
- Add: E20.6.9(j) After the grout has set, all grout fittings shall be cut off inside the recesses.
- Add: E20.6.9(k) Before patching recesses, they shall be cleaned by abrasive blast to remove all dirt and residue which is not bonded firmly to the metal or concrete surfaces. Without delay, the recess shall be coated thoroughly with an approved epoxy resin and then patched immediately with mortar. Patched areas shall be rubbed flush with the surface of the girders after the mortar has hardened.
- Add: E20.6.9(l) The Contractor shall take not less than six (6) standard cubes at his own cost during each day of duct grouting operations for 7 and 28 day strength determinations. The results of these tests as well as the slump, air tests and grout temperature shall be supplied to the Contract Administrator.
- Add: E20.6.10 Grouting Keys Between Girders
- Add: E20.6.10(a) Grout shall be mixed in accordance with the grout manufacturer's recommendations, followed by slow agitation until the grout is used up.
- Add: E20.6.10(b) When the roadway crown is built into the substructure units, the keys and joints on centreline of the structure or on each side of the centreline girder shall be grouted with non-shrink grout prior to lateral stressing. The crown creates a wedge type of gap between the vertical faces of these girders, therefore, sufficient grout must be used to fill the space between the girders, as well as the key. If required, Oakum or equivalent product approved by the Contract Administrator shall be placed only at the bottom of the gap in order to prevent leakage of grout from the joint at the bottom of the girders.
- Add: E20.6.10(c) Keys between the remaining girders shall be grouted after the completion of lateral stressing and placing of the anchor rods. If required, the bottoms of the keys shall be

sealed with Oakum or an equivalent product approved by the Contract Administrator, to prevent loss of grout.

- Add: E20.6.10(d) Surfaces to be in contact with grout shall be prepared in accordance with the grout manufacturer's recommendations.
- Add: E20.6.10(e) Grouted keys shall be cured in accordance with the manufacturer's recommendations.
- Add: E20.6.10(f) The Contractor shall take not less than six (6) standard cubes at his own cost during each day of key grouting operations for 7 and 28 day strength determinations. The results of these tests as well as the slump, air tests and grout temperature shall be supplied to the Contract Administrator.
- Revise: E22.3.9(a) Surface conditioner shall conform to the requirements of the Manufacturer of the rubberized asphalt waterproofing.
- Revise: E22.5.1(a) to read: All surfaces onto which the rubberized asphalt waterproofing is to be applied shall be thoroughly cleaned and prepared in accordance with the International Concrete Repair Institute (ICRI) to Concrete Surface Profile 3 (CSP-3) minimum. Methods to obtain the specified CSP shall be determined by the Contractor and may include waterblasting or shotblasting. The resulting surfaces shall be sound, free from curing compounds, laitance and scaling. All rough spots, ridges and edges in the concrete surface resulting from protrusions concrete aggregate or cement paste shall be removed by light chipping or grinding to leave a level surface. Immediately prior to the application of the hot poured rubberized asphalt waterproofing, a final cleaning of the concrete surfaces shall be done using high velocity compressed air. The concrete surfaces shall be dry, clean and free from frost, dust, dirt and all foreign matter. The Contractor shall contain and collect all spent product and waste resulting of the cleaning operation so as to ensure that all of these materials are prevented from entering into existing bodies of water, land drainage systems or ditches. All waste materials shall be collected and disposed of off-site by the Contractor at an approved disposal facility.
- Revise: E22.5.2(a) After all surfaces to be waterproofed have been cleaned and meets all manufacturers' requirements, they shall be covered with primer.
- Revise: E22.5.2(e) The Contractor shall apply the hot-poured rubberized asphalt waterproofing membrane over the entire deck area and along the vertical face of the curb to the required height (proposed elevation) of the bituminous pavement.
- Add: E34 Existing Utilities
- Add: E34.1 The Contractor shall verify all existing utilities prior to excavation or construction. As-built drawings of the existing bridge are available for viewing at the Contract Administrator's office.
- Add: E34.2 No responsibility will be assumed by the City for correctness or completeness of the drawings with respect to the existing utilities, pipes or other objects either underground or on the surface; the City shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of such utilities, pipes and other objects and to make good any damage done to them.
- Add: E34.3 The Contractor is advised that there are no plans to temporarily relocate or otherwise modify the existing overhead wires and supporting poles running along the west side of St. James Street. Prior to working near overhead wires, the Contractor shall arrange with applicable utility agencies, including but not limited to Manitoba Hydro, for the provision of all necessary precautions required to safely carry out the work. The Contractor shall bear all costs associated with this work, and no separate measurement or payment will be made for the provision of safety precautions for working near overhead wires.

DRAWINGS

Replace: 774-2013_Drawing_B126-13-19-R0 with 774-2013_Addendum_2-Drawing_B126-13-19-R1