



475-2011 ADDENDUM 1

GWWD AQUEDUCT BRIDGING STRUCTURE AT MILE 13.19

URGENT

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

ISSUED: July 15, 2011
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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

Replace: E3.6.2 with The temporary Aqueduct bridging structure shall be designed and constructed in such a manner so as to prevent any additional loads (live or dead loads) being transmitted to the Aqueduct during construction, launching or operation. All temporary bridging structures shall be removed when they are no longer required to facilitate construction.

Replace: E8 Railroad Work with the following.

E8. RAILROAD WORK

E8.1 Description

(a) Work includes:

- (i) The City will arrange for others to carryout the removal of signal bonds at each rail joint before construction and replacement after the construction.
- (ii) The City will arrange for others to carryout the removal of the railway track rails and ties to the extent required to construct the aqueduct bridging structure and the track transitions at both ends of the structure.
- (iii) Removal of ballast, and sub-ballast to the extent required to construct the aqueduct bridging structure.
- (iv) The signal crossing protection for Highway 207 must be disabled by the City's signal contractor prior to any track removal and must be reactivated by same before regular traffic resumes after the end of track reconstruction.
- (v) Excavating and disposing of the material under the sub-ballast only to the extent necessary to construct the aqueduct bridging structure.
- (vi) Placement and compaction of backfill material to the previously removed sub-grade.
- (vii) Supplying and installing partly worn (PW) 100 lb rail plus the supply only of new ties, transition ties, and other track materials for the length of the 100 lb rails and the 85/100 lb compromise bars.
- (viii) Installation of railway rails on the aqueduct bridging structure.
- (ix) Designing, supplying, and installation of rail anchorage assemblies on the aqueduct bridging structure.
- (x) Supplying new 85/100 lb compromise bars at the locations shown approximately on the drawings and to be field determined later by the Contract Administrator.

- (xi) The City will arrange for others to carry out the reconstruction of the previously removed GWWD track at both ends of the aqueduct bridging structure. This includes adjustment of the approaching rail and track profile to suit the track elevation on the aqueduct bridging structure.
- (b) Job Conditions
 - (i) The Work will be performed in the vicinity of tracks operated by the GWWD Railway.
 - (ii) The track will be closed during the construction.
- (c) Reference Standards
 - (i) AREMA Manual for Railway Engineering, Chapter 5, Part 4 Track Construction and Trackwork Plans.
 - (ii) Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate, ASTM Designation C88.
 - (iii) Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing, ASTM Designation C117.
 - (iv) Standard Test Method for Lightweight Particles in Aggregate, ASTM Designation C123.
 - (v) Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate, ASTM Designation C127.
 - (vi) Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine, ASTM Designation C131.
 - (vii) Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates, ASTM Designation C136.
 - (viii) Determination of particle shape - Flakiness index, British Standard BS EN 933-3:1997

E8.2 Materials

(a) Steel

- (i) Rail:
 - (i) All rails shall be PW 100 lb as approved by the Contract Administrator and the City's Ross Section Foreman.
 - (ii) Vertical head wear shall not exceed 8mm for 100 lb head free (HF) and 11 mm for 100 lb.
 - (iii) Rail used shall be without known defects (and may only contain bends that can be straightened easily).
 - (iv) Joint batter is not to be in excess of 3 mm.
 - (v) Rails of different manufacturer should not be mixed in any stretch.
 - (vi) The position of brand marks should be uniform in the same line of rail.
- (ii) Splice Bars for PW 100 lb Rails
 - (i) Partly-worn toeless 4-hole splice bars
 - (ii) New track bolts and washers: bolt diameter 25.4 mm
- (iii) Tie Plates: 11 inch tie plates on 100 lb rails.
- (iv) Rail Anchors: the City will arrange for others to provide new improved Fair anchors for all track 200 ft (60 m) beyond each end of the bridge slab.
- (v) Spikes: the City will arrange for others to provide spikes which shall be new 150 mm spikes and will be applied to all tie plates. Two per plate required.
- (vi) Rail Anchorage Assemblies on Bridging Structure:
 - (i) GANTREX as shown on the drawings or approved equal.
 - (ii) All parts of the assemblies must be suitable for outdoor usage under low temperature.

(b) Wood

- (i) Transition Ties: new hardwood Ties Douglas Fir NGLA No.1 Structural.

(c) Crush Rock Ballast and Sub-ballast

- (i) The City will arrange for others to provide crush rock ballast and sub-ballast including the installation

E8.3 Construction Methods

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- (vi) An approved lubricant will be applied at the joints.
- (vii) Fibre or hardwood shims must be used to obtain proper expansion space. Expansion shims must not be removed until the rail is properly spiked, bolts tightened and rail anchors applied. The required expansion space will be determined by the Contract Administrator at the time of construction.
- (iii) Tie Plates for PW 100 lb Rails:
 - (i) 100 lb rails on wooden track ties shall be tie plated with partly worn double shouldered tie plates.
 - (ii) Tie plates that are bent, broken, or badly corroded must not be supplied.
 - (iii) Supply two plates per tie.
 - (iv) Tie plates having different slopes on the rail seat must not be mixed together in the same stretch of track. Tie plates must have a cant of 1:20.
- (iv) Rail Anchors:
 - (i) The City will arrange for others to install all rail anchors as called up on the drawings..
- (v) Rail Anchorage Assemblies on Bridging Structure
 - (i) Work with the manufacturer and submit a set of design and shop drawing to the Contract Administrator for review and approval prior to proceeding.
 - (ii) Layout plywood templates for all the anchorage assemblies on the bridging structure after or during the placement of the top layer reinforcing bars and prior to the concrete placement. Adjust the reinforcing bars as required to avoid conflicting with the anchor bolts locations.
 - (iii) Follow the manufacturer's guidelines and recommendations.

E8.4 Method of Measurement and Basis of Payment

- (a) Railroad Work shall be paid for on a Lump Sum basis, as accepted by the Contract Administrator.
- (b) No measurement will be made for this Work.