Corporate Finance Department
Materials Management Branch

ADDENDUM 2
BID OPPORTUNITY NO. 166-2005

WINNIPEG WATER TREATMENT PROGRAM – CLEARWELL CONSTRUCTION

ISSUED: May 13, 005
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URGENT

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

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

Template Version: A20050301

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 D – SUPPLEMENTAL CONDITIONS

Revise: D2.2(b) to read: Supply and installation of aluminum fabrications as specified in Section 05530 Aluminum Fabrications, clause 1.1.

Revise: D2.2(h) to read: Fabricate sluice gate testing frame as detailed on Drawing 1-0601T-D-S0040-001-01D and perform leakage tests on sluice gates in accordance with notes on Drawing 1-0601T-G-P001-001-01D.

Delete: D17.1(b)

Delete: D17.1(c)

Delete: D20.4(b)

Delete: D20.4(c)

Revise: D23.4 to read: The approximate location of the site access is indicated on the drawings. Where site access requires relocation for installation of the works, the Contractor shall construct suitable, all-weather detours as required. Initially, the access route will be used primarily as an earthworks haul route. The Contractor shall maintain and upgrade the access as required to meet his needs throughout the contract.

Delete: D25 in its entirety: Replace with:

D25 Building Permit

D25.1 Notwithstanding GC:6.12, the City will obtain and pay for the Building Permit for this project.

PART E – SPECIFICATIONS

Revise: E5.1 to read: Bid Opportunity 70-2005 requires that the earthworks contractor dewater the south half of the clearwell until June 20, 2005 when the completed portion of the excavation is turned over to the Contractor. The Contractor shall then accept responsibility for dewatering. The earthworks contractor will also be responsible for dewatering the remainder of the clearwell until completed and ready for turn over to the Contractor. At this time, the Contractor shall assume responsibility for dewatering and site drainage of the entire clearwell area. Completion of the earthworks contract is scheduled for July 29, 2005.

Revise: E5.2 to read: Subsequent to the dates identified in E5.1, provision of adequate site drainage during the entire construction phase shall be the Contractor's responsibility. The Contractor shall maintain site grading as necessary to provide for proper drainage away from the excavated areas. This water is to be re-directed into ditches outside of the site. Silt fences shall be properly erected and keyed into the primary ditches to prevent eroded materials from leaving the site. No extra payment or time extension will be granted as a result of difficulties associated with site access resulting from poor site drainage during any part of the construction phase.

Revise: E8.1 to read: **Condition of the Aqueduct and Existing Yard Piping**

Revise: E8.1.1 to read: The Deacon Booster Pumping Station and area contains numerous water conduits of various constructions and vintages. All are critical components of the City of Winnipeg Water Supply and shall be treated with the utmost caution. Work around any of these pipelines shall be well planned and executed to ensure that the Aqueduct is not subjected to construction related loads, including excessive vibrations and concentrated or asymmetrical lateral loads during backfill placement.

Add: E8.1.2 The Shoal Lake Aqueduct, north of the main access road is a cast-in-place reinforced concrete pipe, vintage 1916-1917. The Branch I Aqueduct running east to west, immediately south of the Booster Pumping Station, commencing at the existing main entrance to the station, is constructed of precast reinforced concrete pipe, vintage 1918-1919. The Branch II Aqueduct, running southerly from the surge tower structure, is constructed of AWWA C301 pre-stressed concrete cylinder pipe vintage 1958-1960. Other existing water transmission lines within the Deacon Booster Pumping Station compound consist of AWWA C301 pre-stressed concrete cylinder pipe vintage 1970-1995.

Revise: E8.2 to read: Protection of the Aqueducts and Water Transmission Lines

Revise E8.2.1 to read: Contractors carrying out repair work or working in the vicinity of the Aqueducts and transmission lines shall ensure that:

(a) Equipment shall only be permitted to cross the pipes at designated locations.

(b) Granular material, construction material, soil or other material shall not be stockpiled on the Aqueduct or within 5 metres of the Aqueduct centerline.

(c) Construction practices shall not subject the Aqueduct to asymmetrical loading at any time.

(d) Construction practices or procedures at or near the Aqueduct shall not impart excessive vibration loads on the Aqueduct and/or cause settlement of the subgrade below the Aqueduct.

(e) Asymmetrical water pressures shall not be permitted to build up on one side of the Aqueduct arch.

(f) Further to CW 2030-R6, only smooth edged excavation buckets, soft excavation or hand excavation shall be used for excavation adjacent to and over the pipelines.

Section 02223

Delete: 3.2

Revise: 3.3.3 to read: Excavated material to be used for backfilling to be stockpiled at locations designated by the Contract Administrator.

Revise: 3.4.1 to read: Provide all shoring, bracing, and sheet piling required to prevent injury to personnel and damage to existing structures and excavations, where indicated on the Drawings. The shoring, bracing, and sheet piling shall accommodate the yard piping to be connected to the discharge chamber. The live load of equipment to be used in the Yard Piping installation shall be considered in the shoring designs.

Revise: 3.5.6 to read: All temporary ditching and water retention areas shall be lined with an impervious membrane to the satisfaction of the Contract Administrator. Remove impervious membrane prior to backfilling.

Delete: 3.6.4.3

Revise: 3.6.6.7 to read: Installation schedule shall be submitted to the Contract Administrator for review and acceptance prior to commencement of the roof cover installation.

Revise: 3.8.3 to read: Clean at the end of each working day.

Section 02451

Revise: 1.1.2 to read: Coordinate with Contract Administrator and precast concrete pile supplier for the delivery schedule.

Revise: 1.1.3 to read: Installation of precast concrete piles for the Clearwell for piles supplied as specified in Section 02468. The quantity of piles in Section 02468, Clause 1.1.1, is amended to read “18,500 linear metres”.

Revise: 1.2.1 to read: Protect piles from damage due to excessive bending stresses, impact, abrasion, or other causes from point of pick-up and during storage and handling. Install piles to stated driving tolerances.

Revise: 1.3.3 to read: Notify Contract Administrator in writing if subsurface conditions at Site differ materially from those indicated and await further instructions from Contract Administrator.

Revise: 2.1.3 to read: In the event that site conditions require pile extensions, they shall be constructed in accordance with the Detail on Drawing 1-0601T-B-S0002-001-02D and are additional to the Scope of Work.

Add: 2.1.4 Grout Seal – ENVIROPLUG No. 16 or No. 20, or accepted alternate, mixed in accordance with the manufacturer’s instructions.

Revise: 3.3.3 to read: Completely infill any air space between the wall of pre-bore hole and outside the pile for the full depth of pre-bore with grout seal. Application procedure for grout seal shall be submitted for review and acceptance prior to commencement of pile installation.

Revise: 3.4.1 to read: Contractor shall cooperate with the Contract Administrator and shall allow access during the pile installation operations so that all the field measurements can be performed expeditiously.

Delete: 3.4.2

Revise: 3.10.4.2 to read: The protection caps shall be highly visible and shall be made secure so that accidental contact will not easily dislodge the caps. Dislodged caps shall be re-installed immediately.

Section 02620

Add: 3.1.2 Installation of the Sub-Drainage shall be scheduled for the Spring of 2006.

Delete: 3.2

Revise: 3.3.3 to read: The fabric shall be overlapped at all joints a minimum of 600 millimetres. The overlap shall be pinned or secured.

Revise: 3.6.1 to read: The manholes shall be installed to the dimensions and at the grades as shown on the Drawings, in accordance with CW 2131-R3.

Section 03100

Revise: 1.2.2 to read: Design to be done by a Professional Engineer, registered in the Province of Manitoba.

Revise: 1.4 to read: Formwork, falsework, and reshoring are to be reviewed by the same Professional Engineer prior to each concrete pour.

Revise: 2.4.3.2 to read: Void Form 2: Product shall be engineered foam or degradable cardboard collapsible void form to meet the following characteristics:

.1 Provide a minimum void of 300 millimetres.

.2 Shall be structurally sufficient to support weight of reinforcing steel, 600 millimetres wet concrete mix, and 2.4 kilopascals construction live load for a minimum 48 hours from completion of concrete placement.

.3 Maximum uplift forces from soil heave transferred to the slab by the void form before collapse shall be 34 kilopascals (14 kilopascals from concrete self weight and 20 kilopascals from soil pressures).

.4 Contractor shall submit product information and construction procedures for review at least one (1) week before placing void form. Degradable moisture sensitive products that rely on moisture contact to limit loads transferred to the structure shall include artificial introduction of water to degrade void form after the 48 hour minimum curing period.

Revise: 2.4.3.3 to read: Protection for Void Form 1 shall be one (1) layer of 12.7 millimetres thick spruce plywood sheeting and for Void Form 2 shall be minimum 6 millimetres masonite sheeting.

Revise: 3.3.3 to read: Void Form 1 polyethylene film exposed edge around the Clearwell perimeter shall remain intact through the winter of 2005 to 2006 and shall be cut just prior to installation of the perimeter subdrain system. The cuts shall be full length and close to the bottom of each layer.

Add: 3.3.4 Void Form 1 polyethylene film under the dividing wall shall be cut just prior to the installation of the adjacent slab construction.

Revise: 3.6.1 to read: Inspect and check formwork, falsework, shoring, and bracing to ensure that Work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and parts are secure. Submit written report from Professional Engineer responsible for the work as specified in Clause 1.4 Shop Drawings.

Revise: 3.6.3 to read: Re-use of formwork and falsework shall be subject to the requirements of CAN/CSA-A23.1.

Revise: 3.7.1 to read: Clean formwork in accordance with CAN/CSA-A23.1.

Revise: 3.10.2 to read: Reshore structural members where required due to design requirements or construction conditions under the direction of the Professional Engineer responsible for this work.

Section 03200

Revise: 3.3.7 to read: Install purpose made highly visible protective safety caps on all exposed projecting bar ends.

Section 03250

Delete: 1.1.4

Delete: 2.2.4

Revise: 3.1.7.3 to read: Install waterstop continuous without displacing reinforcement. Butt weld splices to Manufacturer's directions. Secure in place to prevent dislodgment during placing of concrete. All filed splices to be heat-fused and tested for complete seals by use of a corona discharge unit. Costs for testing to be paid for by Contractor.

Delete: 3.1.9

Section 03300

Revise: 1.4.15.5 to read: Concrete failing to meet the strength requirements of this Specification shall be strengthened or replaced at the Contractor's expense.

Revise: 2.2.7 to read: Pozzolans: Type C fly ash, conforming to CSA-A23.5.

Revise: 2.5.3 to read: Maximum allowable substitution of cement with fly ash material shall be 20% by weight.

Delete: 2.5.4

Delete: 2.5.5

Revise: 3.2.7 to read: Concrete shall be handled from the mixer to the place of final deposit as rapidly as practicable by methods, which will prevent the separation or loss of the ingredients. Concrete shall be deposited in the forms as nearly as practicable in its final position to avoid re-handling or flowing. Vibrators shall not be used to move concrete. Under no circumstances shall the concrete, which has partially hardened, be deposited in the forms. Concrete for the floor slab shall not be allowed to pile up higher than 650 millimetres on the void form.

Add: 3.2.17 Prior to placing concrete for walls, the construction joints shall be sand blasted and cleaned as per Clause 3.16 of this specification section. The first layer of concrete to be placed on the cleaned surface shall be of the quality specified, and it shall be proportioned to have an excess of mortar, have a depth of approximately 150 mm, and be well-vibrated to achieve maximum bond.

Section 07550

Revise: 1.1.1 to read: Supply and installation of ethylene propylene diene monomer (EPDM) roof membrane and insulation to extents shown on the Drawings including the following major items of Work:

Revise: 1.1.1.1 to read: Roof, walls, and footing membrane.

Revise:	2.1.1.1 to read:	EPDM membrane shall be felt-backed EPDM synthetic rubber waterproofing membrane applied with hot Type III asphalt for the roof and rubberized asphalt for the walls and footings. Membrane shall be Lexcan Design D, 1.5 millimetre thick felt-backed membrane or accepted alternate.
Add:	3.3.1.4	Membrane shall be installed only after successful watertightness testing.

Appendix A

Form 200 Replace with new Form 200(R1).

Form 201 Replace with new Form 201(R1).

Form 202 Replace with new Form 202(R1).

Form 203 Replace with new Form 203(R1).

DRAWINGS

Drawing 1-0601T-B-S0002-001-01D:	Replace with Drawing 1-0601T-B-S0002-001-02D.
Drawing 1-0601T-A-S0011-001-01D:	Replace with Drawing 1-0601T-A-S0011-001-02D.
Drawing 1-0601T-A-S0016-001-01D:	Replace with Drawing 1-0601T-A-S0016-001-02D.
Drawing 1-0601T-A-S0017-001-01D:	Replace with Drawing 1-0601T-A-S0017-001-02D.
Drawing 1-0601T-A-S0021-001-00D:	Replace with Drawing 1-0601T-A-S0021-001-01D.
Drawing 1-0601T-A-S0028-001-00D:	Replace with Drawing 1-0601T-A-S0028-001-01D.
Drawing 1-0601T-D-S0032-001-01D:	Replace with Drawing 1-0601T-D-S0032-001-02D.
Drawing 1-0601T-D-S0033-001-01D:	Replace with Drawing 1-0601T-D-S0033-001-02D.
Drawing 1-0601T-A-S0038-001-01D:	Replace with Drawing 1-0601T-A-S0038-001-02D.
Drawing 1-0601T-A-S0039-001-01D:	Replace with Drawing 1-0601T-A-S0039-001-02D.
Drawing 1-0601T-D-S0040-001-01D:	Replace with Drawing 1-0601T-D-S0040-001-02D.
Drawing 1-0601T-D-M0005-001-00D:	Replace with Drawing 1-0601T-D-M0005-001-01D