

ADDENDUM 5 BID OPPORTUNITY 742-2005

WINNIPEG WATER TREATMENT PROGRAM – SUPPLY AND INSTALLATION OF WATER TREATMENT PLANT PROCESS MECHANICAL AND ELECTRICAL

URGENT

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

ISSUED: May 19, 2006
BY: Bill Richert, P. Eng.
TELEPHONE NO. (204) 986-6053

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

Template Version: A20050506

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 A – BID SUBMISSION

Replace: 742-2005_Addendum_4-Bid_Submission with 742-2005_Addendum_5-Bid_Submission. Form B(R2): Prices has been replaced by Form B(R3): Prices.

PART B – BIDDING PROCEDURES

Revise: B9.1.2 to read: Cash allowances shall cover the net cost to the Contractor of services, products, construction machinery and equipment, freight, unloading, handling, storage, installation and other expenses incurred in performing the portion of the Work stipulated under the cash allowance. The unit price for the supply and installation of the instrumentation and control system on Form B: Prices (item 1 for Alternative 1 and item 2.1 for Alternative 2), and not the cash allowance, shall include the Contractor's, and any applicable Subcontractor's, overhead and profit in connection with the cash allowance.

PART D – SUPPLEMENTAL CONDITIONS

Revise: D2.2(c) to read: Perform all portions of the Work as specified in Divisions 03, 05, 09, 11, 13, 14 and 15 including (but not limited to):

Add: D2.2(c)(xiv) Supply and installation of any concrete grouting required for the support of mechanical Plant and the supply and installation of reinforced concrete as specified in Section 03301 for the filter underdrains specified in D2.2(a)(iv).

Add: D2.6 Further to D2.2(a)(iv) and D2.2(a)(v), shop drawings and other product information for the following City Supplied Equipment have been provided in this Addendum as follows:

742-2005_Addendum_5-Shop_Drawings_Filter_Troughs-R0
742-2005_Addendum_5-Shop_Drawings_Filter_Underdrains-R0
742-2005_Addendum_5-Shop_Drawings_Flap_Gates-R0

PART E – SPECIFICATIONS

The following Sections have been added and form part of this Addendum:

Section 03301 - CAST-IN-PLACE REINFORCED CONCRETE

Section 11202

Add: 2.5.9.14: Type V741 Combination Air and Vacuum Valve 25 mm to 200 mm:

Add: 2.5.9.14.1: 25 mm through 100 mm NPT inlets and outlets, 150 mm and larger ANSI B16.1 Class 125 flanged inlet with plain outlet and protective hoods.

Add: 2.5.9.14.2: Dual body, double orifice configuration.

Add: 2.5.9.14.3: Rated 1035 kPa working pressure, cast iron or ductile iron body and cover, stainless steel float and trim, built and tested to AWWA C512.

Add: 2.5.9.14.4: The small orifice air release valve shall be an independent valve body, side connected to the large orifice air vacuum valve body with piping and isolation valve. While the large orifice is closed, the small air release orifice will open to allow small pockets of air to escape automatically and independently of the large orifice.

Add: 2.5.9.14.5: Acceptable Manufacturers: APCO Valve and Primer Corp.; (Series 1800), Val-Matic Valve; (Series 101S/22.9 – 108/38)

Section 11251

Add 2.2.1.16: The tank interior and exterior shall be ground to remove weld spatter and smooth out scratches to provide a relatively smooth plate finish.

Section 11333

Revise: 2.3.1 to read: Provide pumps which are capable of running dry for fifteen (15) minutes.

Section 15200-000

Revise: 3.19.2 to read: Peroxide piping and tanks shall be cleaned and passivated in accordance with the Hydrogen Peroxide supplier's procedures (Brenntag Canada Inc.). Confirm procedures with Contract Administrator before proceeding.

Add: 3.19.3: All peroxide piping and tanks shall be pickled and passivated by the Contractor. This shall include but not be limited to the following:

Add: 3.19.3.1: Grinding to remove any remaining weld spatter and smooth out scratches,

Add: 3.19.3.2: Degreasing to remove oil and grease films,

Add: 3.19.3.3: Pickling to chemically clean the surface,

Add: 3.19.3.4: Passivating with nitric acid to form an oxide film,

Add: 3.19.3.5: Testing with dilute hydrogen peroxide to ensure successful treatment.

Section 15200-00S(R1)

Revise the four rows in the schedule related to condenser water supply and return to read as follows:

Service	Commodity Abbreviation	Nominal Size(s) (mm)	Exposure ²	Piping Material ²	Specification Section	Test Type and Pressure (kPa) ¹	Remarks
Condenser Water Return	CDR	100 and larger	EXP	CS	15200-03	H, 620	
Condenser Water Return	CDR	75 and smaller	EXP	COP or CS	15200-13 or 15200-03	H, 1000	
Condenser Water Supply	CDS	100 and larger	EXP	CS	15200-03	H, 620	
Condenser Water Supply	CDS	75 and smaller	EXP	COP or CS	15200-13 or 15200-03	H, 1000	

Section 15200-09

Add the following row to the data sheet:

Item	Size	Description
Unions	50mm and smaller	Threaded Forged: ASTM A182/A182M, Grade F304, 13800 or 20700 kPag WOG, integral ground seats, AAR design meeting the requirements of ANSI B16.11, bore to match pipe. Unions shall be used only where shown on the Drawings.

Section 15202-02(R2)

This Section has been replaced by Section 15202-02(R3) included in this Addendum.

Section 15810

Revise: 2.9.1 to read: Location: Provide ductwork with internal insulation liner where indicated in Section 15810-01 and Section 15085.

Section 15810-01

This Section has been replaced by Section 15810-01(R1) included in this Addendum.

Section 15900-15

Delete .4.9.2

Section 15901

Add: 2.8: HVAC CONTROL PANELS (HCP)

Add: 2.8.1: Provide at locations shown on Drawings.

Add: 2.8.2: A single 120-volt, 30-amp feeder shall serve each HCP provided by Division 16, unless otherwise indicated.

- Add: 2.8.3: HCP Contents: Microprocessor control modules, electronic indication relays, transformers, display screens, keypads, and other necessary devices.
- Add: 2.8.4: HCP Construction:
 - Add: 2.8.4.1: Construct each HCP to Type 4 of NEMA 250 rating, except where indicated otherwise.
 - Add: 2.8.4.2: Metal enclosure to accommodate secure conduit fittings and protect against electrical transients.
 - Add: 2.8.4.3: Hinged front door with locking handle.
 - Add: 2.8.4.4: Flush-mount manual switches, pilot lights, and direct-reading gauges on front panel face, where applicable.
 - Add: 2.8.4.5: Identify front panel mounted devices and HCP with labeling in accordance with Section 15900, HVAC Instrumentation and Controls—General.
- Add: 2.8.5: Panel Listing:
 - Add: 2.8.5.1: Panels shall bear UL or ETL listing mark stating “LISTED ENCLOSED INDUSTRIAL CONTROL PANEL.”
- Add: 2.8.6: Control Devices:
 - Add: 2.8.6.1: Mount inside HCP.
 - Add: 2.8.6.2: Pre-wired internally.
 - Add: 2.8.6.3: Terminate wires leaving HCP at separately numbered terminal strips (one terminal pair per circuit).
 - Add: 2.8.6.4: Furnish individual connectors for every item of mechanical equipment, integral and remote pilot lights, and other devices.
 - Add: 2.8.6.5: Refer to Drawings for power and control circuit requirements.
 - Add: 2.8.6.6: Identify wires by color coding or numerical tags at both ends.
 - Add: 2.8.6.7: Wire control devices without splices to the terminal strip.
 - Add: 2.8.6.8: Furnish integral circuit protection for panel mounted control devices.
- Add: 2.8.7: Terminal Blocks:
 - Add: 2.8.7.1: One-piece molded plastic blocks with screw type terminals and barriers rated for 120 volts.
 - Add: 2.8.7.2: Double sided and supplied with removable covers to prevent accidental contact with live circuits.
 - Add: 2.8.7.3: Furnish permanent, legible identification, clearly visible with protective cover removed.
 - Add: 2.8.7.4: Terminate wires at terminal blocks with crimp type, preinsulated, ring-tongue lugs.
 - Add: 2.8.7.5: Size lugs for terminal block screws and for the number and size of wires terminated.
 - Add: 2.8.7.6: Provide screwdriver access for blade width of a minimum of 3/16 inch or Klein 601 Series screwdrivers. Terminals requiring use of special screwdrivers are not acceptable.
- Add: 2.8.8: Miscellaneous Accessories:

Add: 2.8.8.1: Furnish panel as-built wiring diagrams, secured to inside of panel door, or enclosed in plastic jackets placed inside each panel.

Add: 2.8.8.2: Install plastic or stick-on labels on interior control devices to identify them in conjunction with control schematics.

Section 16903-01(R1)

Clarification: Cables identified as F[500], [F350] and F[1000] on drawing WB-E0511 are specified as RW90 on the drawing as TECK90 in this Section. Revise the applicable rows in this Section as specified in this Addendum so the Specifications match the Drawings.

Revise: On page 1 of 13, the following rows of the Power Cable Schedule to match the cables identified as F[1000] on drawing WB-E0511:

CABLE NUMBER	CABLE TYPE	CABLE ROUTING	ORIGIN	DESTINATION	DESCRIPTION	REMARKS
P-MCC1A	<i>6x 1C-1000 kcmil, RW90</i>	<i>Duct Bank</i>	SW1A	MCC1A	Power	
P-MCC2A	<i>9x 1C-1000 kcmil, RW90</i>	<i>Duct Bank</i>	SW1A	MCC2A	Power	
P-MCC3A	<i>6x 1C-1000 kcmil, RW90</i>	<i>Duct Bank</i>	SW1A	MCC3A	Power	
P-MCC1B	<i>6x 1C-1000 kcmil, RW90</i>	<i>Duct Bank</i>	SW1B	MCC1B	Power	
P-MCC2B	<i>9x 1C-1000 kcmil, RW90</i>	<i>Duct Bank</i>	SW1B	MCC2B	Power	
P-MCC3B	<i>6x 1C-1000 kcmil, RW90</i>	<i>Duct Bank</i>	SW1B	MCC3B	Power	

Revise: On page 2 of 13, the following rows of the Power Cable Schedule to match the cables identified as [F350] on drawing WB-E0511:

CABLE NUMBER	CABLE TYPE	CABLE ROUTING	ORIGIN	DESTINATION	DESCRIPTION	REMARKS
P-LCP-I001A	<i>3x 1C-350 kcmil, RW90</i>	<i>Duct Bank</i>	SW1A	LCP-I001A	Power	
P-LCP-I002A	<i>3x 1C-350 kcmil, RW90</i>	<i>Duct Bank</i>	SW1B	LCP-I002A	Power	
P-LCP-I003A	<i>3x 1C-350 kcmil, RW90</i>	<i>Duct Bank</i>	SW1A	LCP-I003A	Power	
P-LCP-I004A	<i>3x 1C-350 kcmil, RW90</i>	<i>Duct Bank</i>	SW1B	LCP-I004A	Power	

Revise: On page 3 of 13, the following rows of the Power Cable Schedule to match the cables identified as F[500] on drawing WB-E0511:

CABLE NUMBER	CABLE TYPE	CABLE ROUTING	ORIGIN	DESTINATION	DESCRIPTION	REMARKS
P-LCP-F911A	<i>3x 1C-500 kcmil, RW90</i>	<i>Duct Bank</i>	SW1A	LCP-F911A	Power	
P-LCP-F921A	<i>3x 1C-500 kcmil, RW90</i>	<i>Duct Bank</i>	SW1B	LCP-F921A	Power	

DRAWINGS

The following drawings have been revised and form part of this Addendum:

<u>Consultant</u>	<u>City Drawing No.</u>	<u>Title</u>
WA-E0111	1-0601A-A-E0111-001-02D	ELECTRICAL -ADMINISTRATION AREA - FIRST FLOOR FACILITY PLAN
WA-E0113	1-0601A-A-E0113-001-02D	ELECTRICAL -ADMINISTRATION AREA - FIRST FLOOR POWER AND LIGHTING PLAN
WA-E0121	1-0601A-A-E0121-001-02D	ELECTRICAL -ADMINISTRATION AREA - SECOND FLOOR FACILITY PLAN
WA-E0133	1-0601A-A-E0133-001-02D	ELECTRICAL -ADMINISTRATION AREA - THIRD FLOOR POWER AND LIGHTING PLAN
WA-E0402	1-0601A-A-E0402-001-02D	ELECTRICAL -ADMINISTRATION AREA - THIRD FLOOR POWER AND LIGHTING PLAN
WA-H0102	1-0601A-A-H0102-001-01D	PLUMBING -ADMINISTRATION AREA - LOWER LEVEL PLAN
WA-H0112	1-0601A-A-H0112-001-01D	PLUMBING -ADMINISTRATION AREA - FIRST FLOOR PLAN
WA-H0122	1-0601A-A-H0122-001-01D	PLUMBING -ADMINISTRATION AREA - SECOND FLOOR PLAN
WA-H0132	1-0601A-A-H0132-001-01D	PLUMBING -ADMINISTRATION AREA - THIRD FLOOR PLAN
WA-H0142	1-0601A-A-H0142-001-01D	PLUMBING -ADMINISTRATION AREA - PLAN AT ELEVATION 251.450
WA-H0146	1-0601A-A-H0146-001-01D	PLUMBING -ADMINISTRATION AREA - ROOF PLAN
WB-E0511	1-0601B-F-E0511-001-02D	ELECTRICAL -600V SWITCHGEAR SINGLE LINE DIAGRAM
WB-E0519	1-0601B-F-E0519-001-02D	ELECTRICAL -600V SINGLE LINE DIAGRAM
WB-E0531	1-0601B-D-E0531-001-02D	ELECTRICAL -PANEL SCHEDULE
WB-E0533	1-0601B-D-E0533-001-02D	ELECTRICAL -PANEL SCHEDULE
WB-E0536	1-0601B-D-E0536-001-01D	ELECTRICAL -PANEL SCHEDULE
WB-E0553	1-0601B-H-E0553-001-02D	ELECTRICAL -CONTROL DIAGRAM
WB-E0555	1-0601B-H-E0555-001-01D	ELECTRICAL -CONTROL DIAGRAM
WB-E0561	1-0601B-H-E0561-001-02D	ELECTRICAL -CONTROL DIAGRAM
WB-H0112	1-0601B-A-H0112-001-01D	FIRE PROTECTION -OVERALL BUILDING - FIRST FLOOR PLAN
WB-H0122	1-0601B-A-H0122-001-01D	FIRE PROTECTION -OVERALL BUILDING - SECOND FLOOR PLAN
WB-H0132	1-0601B-A-H0132-001-01D	FIRE PROTECTION -OVERALL BUILDING - THIRD FLOOR PLAN
WB-H0503	1-0601B-G-H0503-001-01D	HVAC -SCHEMATIC
WB-H0533	1-0601B-G-H0533-001-01D	PLUMBING -POTABLE WATER SCHEMATIC
WC-E0111	1-0601C-A-E0111-001-02D	ELECTRICAL -CHEMICAL AREA - FIRST FLOOR FACILITY PLAN
WC-E0113	1-0601C-A-E0113-001-02D	ELECTRICAL -CHEMICAL AREA - FIRST FLOOR POWER AND LIGHTING PLAN
WC-E0133	1-0601C-A-E0133-001-02D	ELECTRICAL -CHEMICAL AREA - THIRD FLOOR POWER AND LIGHTING PLAN
WC-H0111	1-0601C-A-H0111-001-01D	HVAC -CHEMICAL AREA - FIRST FLOOR PLAN
WC-H0112	1-0601C-A-H0112-001-01D	PLUMBING -CHEMICAL AREA - FIRST FLOOR PLAN
WC-H0121	1-0601C-A-H0121-001-01D	HVAC -CHEMICAL AREA - SECOND FLOOR PLAN
WC-H0122	1-0601C-A-H0122-001-01D	PLUMBING -CHEMICAL AREA - SECOND FLOOR PLAN
WC-H0131	1-0601C-A-H0131-001-01D	HVAC -CHEMICAL AREA - THIRD FLOOR PLAN
WC-H0132	1-0601C-A-H0132-001-01D	PLUMBING -CHEMICAL AREA - THIRD FLOOR PLAN
WC-H0142	1-0601C-A-H0142-001-01D	PLUMBING -CHEMICAL AREA - ROOF PLAN
WF-E0132	1-0601F-A-E0132-001-02D	ELECTRICAL -FILTRATION AREA 2 - THIRD FLOOR FACILITY PLAN
WF-E0134	1-0601F-A-E0134-001-02D	ELECTRICAL -FILTRATION AREA 2 - THIRD FLOOR PROCESS PLAN
WF-E0136	1-0601F-A-E0136-001-02D	ELECTRICAL -FILTRATION AREA 2 - THIRD FLOOR POWER AND LIGHTING PLAN
WF-H0105	1-0601F-A-H0105-001-01D	PLUMBING -FILTRATION AREA 2 - LOWER LEVEL PLAN
WF-H0131	1-0601F-A-H0131-001-01D	HVAC -FILTRATION AREA 1 - THIRD FLOOR PLAN
WF-H0132	1-0601F-A-H0132-001-01D	HVAC -FILTRATION AREA 2 - THIRD FLOOR PLAN

<u>Consultant Drawing No.</u>	<u>City Drawing No.</u>	<u>Title</u>
WF-H0133	1-0601F-A-H0133-001-01D	PLUMBING -FILTRATION AREA 1 - PARTIAL SECOND FLOOR AND THIRD FLOOR PLAN
WF-H0134	1-0601F-A-H0134-001-01D	PLUMBING -FILTRATION AREA 2 - THIRD FLOOR PLAN
WF-P0009	1-0601F-G-P0009-001-01D	PROCESS -BACKWASH SUPPLY PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
WI-E0113	1-0601I-A-E0113-001-01D	ELECTRICAL -RAW WATER PUMP STATION AREA - FIRST FLOOR POWER AND LIGHTING PLAN
WI-E0133	1-0601I-A-E0133-001-02D	ELECTRICAL -RAW WATER PUMP STATION AREA - THIRD FLOOR POWER AND LIGHTING PLAN
WI-M0131	1-0601I-A-M0131-001-02D	PROCESS MECHANICAL - RAW WATER PUMP STATION AREA - THIRD FLOOR PLAN
WI-M0201	1-0601I-A-M0201-001-01D	PROCESS MECHANICAL - RAW WATER PUMP STATION AREA - SECTION
WI-M0202	1-0601I-A-M0202-001-01D	PROCESS MECHANICAL - RAW WATER PUMP STATION AREA - SECTION
WI-P0001	1-0601I-G-P0001-001-01D	PROCESS -RAW WATER PUMP STATION AREA - PROCESS AND INSTRUMENTATION DIAGRAM
WI-P0002	1-0601I-G-P0002-001-01D	PROCESS -RAW WATER PUMP STATION AREA - PROCESS AND INSTRUMENTATION DIAGRAM
WM-E0131	1-0601M-A-E0131-001-02D	ELECTRICAL -ELECTRICAL ROOM LAYOUT - THIRD FLOOR FACILITY PLAN
WM-H0112	1-0601M-A-H0112-001-01D	PLUMBING -FIRE PUMP AND ELECTRICAL ROOM - FIRST FLOOR AND THIRD FLOOR PLANS
WO-E0131	1-0601O-A-E0131-001-02D	ELECTRICAL -OZONATION AREA - THIRD FLOOR FACILITY PLAN
WO-E0132	1-0601O-A-E0132-001-02D	ELECTRICAL -OZONATION AREA - THIRD FLOOR PROCESS PLAN
WO-E0133	1-0601O-A-E0133-001-02D	ELECTRICAL -OZONATION AREA - THIRD FLOOR POWER AND LIGHTING PLAN
WO-H0132	1-0601O-A-H0132-001-01D	PLUMBING -OZONATION AREA - THIRD FLOOR PLAN
WP-E0116	1-0601P-A-E0116-001-02D	ELECTRICAL -FLOC/DAF AREA 2 - FIRST FLOOR POWER AND LIGHTING PLAN
WP-E0133	1-0601P-A-E0133-001-01D	ELECTRICAL -FLOC/DAF AREA 1 - THIRD FLOOR PROCESS PLAN
WP-E0135	1-0601P-A-E0135-001-02D	ELECTRICAL -FLOC/DAF AREA 1 - THIRD FLOOR POWER AND LIGHTING PLAN
WP-E0136	1-0601P-A-E0136-001-02D	ELECTRICAL -FLOC/DAF AREA 2 - THIRD FLOOR POWER AND LIGHTING PLAN
WP-H0113	1-0601P-A-H0113-001-01D	PLUMBING -FLOC/DAF AREA 1 - FIRST FLOOR PLAN
WP-H0114	1-0601P-A-H0114-001-01D	PLUMBING -FLOC/DAF AREA 2 - FIRST FLOOR PLAN
WP-H0133	1-0601P-A-H0133-001-01D	PLUMBING -FLOC/DAF AREA 1 - THIRD FLOOR PLAN
WP-H0134	1-0601P-A-H0134-001-01D	PLUMBING -FLOC/DAF AREA 2 - THIRD FLOOR PLAN
WP-H0143	1-0601P-A-H0143-001-01D	PLUMBING -FLOC/DAF AREA 1 - ROOF PLAN
WP-H0144	1-0601P-A-H0144-001-01D	PLUMBING -FLOC/DAF AREA 2 - ROOF PLAN
WR-E0121	1-0601R-A-E0121-001-03D	ELECTRICAL -RESIDUALS HANDLING AREA - SECOND FLOOR FACILITY PLAN
WR-E0122	1-0601R-A-E0122-001-02D	ELECTRICAL -RESIDUALS HANDLING AREA - SECOND FLOOR PROCESS PLAN
WR-E0123	1-0601R-A-E0123-001-02D	ELECTRICAL -RESIDUALS HANDLING AREA - SECOND FLOOR POWER AND LIGHTING PLAN
WR-H0112	1-0601R-A-H0112-001-01D	PLUMBING -RESIDUALS AREA - FIRST FLOOR PLAN
WR-H0122	1-0601R-A-H0122-001-01D	PLUMBING -RESIDUALS AREA - SECOND FLOOR PLAN
WR-H0132	1-0601R-A-H0132-001-01D	PLUMBING -RESIDUALS AREA - THIRD FLOOR PLAN
WS-E0501	1-0601S-F-E0501-001-02D	ELECTRICAL - 600V SWITCHGEAR SINGLE LINE DIAGRAM
WT-P001	1-0601T-G-P0001-001-06D	PROCESS -PROCESS AND INSTRUMENTATION DIAGRAM