Corporate Finance Department
Materials Management Branch

ADDENDUM 4
BID OPPORTUNITY NO. 498-2006

**CITY OF WINNIPEG WATER TREATMENT PROGRAM
CONSTRUCTION OF STANDBY GENERATOR BUILDING AND ANCILLARY BUILDINGS**

ISSUED: October 13, 2006
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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 A – BID SUBMISSION

Replace 498-2006_Addendum_3-Bid_Submission with 498-2006_Addendum_4-Bid_Submission. Form B: (Prices) has been replaced by Form B(R1): Prices.

PART D – SUPPLEMENTAL CONDITIONS

Add:	D2.2(e)	Supply of diesel fuel required for the demonstration, running test and performance tests, and on completion of the performance tests, supply fuel to fill one storage tank.
Add:	D17.4	The City of Winnipeg will endeavour to award the Contract within 30 Calendar Days of the Submission Deadline. If award is not made within that time period, Contract Dates identified in D18 Critical Stages, D19 Substantial Performance, D20 Total Performance and D21 Liquidated Damages will be extended by an equivalent number of Calendar Days until such a time an award is made.

PART E – SPECIFICATIONS

Section 15650

Replace Section 15650 with Section 15650(R1).

Clarification:		Section heading “Terminal Heat Transfer Units” has been revised to read “Electric Unit Heaters”.
Clarification:		Clause 2.2.6 has been added.

Section 15705

This Section has been added and forms part of this Addendum.

Clarification:		There was a tender query concerning Section 15750 – Heat Tracing being missing from the Specifications. The Heat Trace specifications can be found in Section 15705.
Clarification:	2.2.1	Heat tracing shall be applied to all wall louvers and gravity intake hoods in the Inlet Building and the Emergency Generator Building to prevent frost build-up.

Section 15750

Delete this Section. It has been replaced by Section 15705.

Section 15800

Add:	1.1.2	This section applies only to the Generator Building air handling unit (AHU-H222A).
Revise:	2.1.1.1 to read:	Supply fans complete with backdraft hampers. Backdraft hampers shall be installed in the full size air duct 1m downstream of the supply fan discharge.
Delete:	2.1.1.4	
Delete:	2.3.3	
Delete:	2.8.5	
Revise:	2.10.1 to read:	Low leakage type dampers. Dampers shall be thermally insulated. Air leakage through a 1.2m x 1.2m (48”x48”) damper shall not exceed 7.5 Pa (0.03” wg) at 5 m/s (1000 fpm).
Revise	2.10.2 to read:	Blades shall be minimum 12 gauge extruded aluminum. Blades shall be of air foil design, 150 mm side. Maximum blade length 1200 mm. Blades shall be hollow, filled with non-CFC, expanded polyurethane insulation for an insulation factor of R2.29 with a temperature index of 55. The entire frame shall be thermally broken by means of polyurethane resin pockets complete with thermal cuts. Damper frame to be insulated with polystyrene on all sides.
Add:	2.10.9	Standard of Acceptance: TAMCO 9000 series.
Add:	2.12	Acceptable Manufacturers:
Add:	2.12.1	Standard of Acceptance: Haakon
Add:	2.12.2	Approved Equal: Scott Springfield

Section 15801

This Section has been added and forms part of this Addendum.

Section 15815

Revise:	2.2.2 to read:	Heat Exchanger:
Add:	2.2.2.1	Titanium Stabilized Aluminized Steel (for unit heaters in the Electrical Room)
Add:	2.2.2.2	Stainless Steel 409 (for unit heaters in the Emergency Generator Room)
Add:	2.5	Acceptable Manufacturers:
Add:	2.5.1	Standard of Acceptance: Reznor UDBS
Add:	2.5.2	Acceptable Alternate (Not Equal): A separate price may be submitted for providing Trane Gas Fired Unit Heaters with similar performance.

Section 15900

Revise:	1.3.1.7 to read:	The Building Automation (i.e. Controls Contractor) for the Main Water Treatment Plant shall be used as the Base Bid for this Bid Opportunity. Johnson Controls is the contractor to be used for Base Bids. All other Controls Contractors shall be carried as Alternate Bids.
Revise:	3.1.1.1.1 to read:	The AHU-H222A is equipped with an economizer section (outside air damper and return air damper) and two (2) supply fans. Each fan has it’s own motor. The supply fan motors also each have a VFD. The fans are VFD controlled and they will operate together at the

		same speed (initially set to 50%). In the event that one fan motor or VFD fails, the VFD for the other fan will speed up to full speed to compensate. In addition, the AHU is equipped with two (2) DX cooling coils and two (2) remote air cooled condensing units CU-H224A and CU-H225A, which are mounted on the roof. Each of the condensing units has 2 compressors for 2 stages of cooling and a total of 4 stages with both condensing units running at full speed.
Add:	3.1.1.1.2	When the electrical room rises to the cooling setpoint (initially set to 26C), there shall be a call for cooling.
Add:	3.1.1.1.3	When the outside air temperature is below the indoor cooling setpoint (initially set to 26C), the outside air and return air dampers shall modulate to deliver a minimum mixed air temperature of 12.8C / 55F. Upon the outside air damper reaching the fully open position and the return air damper reaching the fully closed position, the VFD for both supply fans shall ramp up to 100% speed. Upon the mixed air temperature exceeding 18.5C / 65F, there shall be a call for additional mechanical cooling. The condensing units shall bring (time delay between staging) on each of the four (4) stages to maintain the discharge air temperature at 18.5C / 65F.
Add:	3.1.1.1.4	When the electrical room drops 2C below the cooling setpoint (initially set to 26C), the call for cooling shall be de-energized. Upon the call for cooling being de-energized, the condensing units shall each stage down until they are all off. Then both of the VFD's shall ramp down to 50% speed. Finally, the outside and return air dampers shall return to their normal position (Refer to New Sequence of Operation Clause 3.1.3 Room Pressurization).
Add:	3.1.1.1.5	When the outside air temperature rises above the indoor cooling setpoint (initially set to 26C), the outside air and return air damper positions will not change. Both of the VFD's shall ramp up to full speed. The condensing units shall bring (time delay between staging) on each of the four (4) stages to maintain the discharge air temperature at 18.5C / 65F.
Add:	3.1.1.1.6	When the electrical room drops 2C below the cooling setpoint (initially set to 26C), the call for cooling shall be de-energized. Upon the call for cooling being de-energized, the condensing units shall each stage down until they are all off. Then both of the VFD's shall ramp down to 50% speed.
Revise:	3.1.2.1 to read:	The BAS shall modulate the AHU outside and return air dampers to maintain a minimum mixed air temperature of 12.8C / 55F. The BAS shall also modulate the supply air fan speed in between 50% and 100% to maintain the required room pressurization (Refer to 3.1.3 Room Pressurization). This air handling unit has no heating section. The two (2) gas fired unit heaters shall provide the required space heating. The unit heaters UH-H218A and UH-H218B shall operate on separate heating only thermostats which shall be initially set to a space temperature of 15C / 60F.
Add:	3.1.3	Room Pressurization:
Add:	3.1.3.1	The Electrical Room shall be maintained at a minimum positive pressure of + 6 Pascals. There will be a differential pressure sensor between outside and inside the room. The BAS shall speed up the air handling unit supply fans if the building pressure drops below 6 Pascals. If the room pressure exceeds 12 Pascals, the motorized damper in the exhaust duct of exhaust fan EF-H226A shall modulate open first until it reaches the fully open position. Upon the motorized damper reaching it's fully open position (proving a limit switch), the VFD for the exhaust fan shall modulate between minimum (20%) and full speed.
Add:	3.1.3.2	Upon the electrical room pressure rising above 20 Pascals, the motorized damper in the relief air duct (through the roof) shall modulate open.
Add:	3.1.3.3	Upon the electrical room pressure rising above 25 Pascals, both of the VFD's on the supply fan shall reduce in speed to 50%.

Add:	3.1.4	Alarms:
Add:	3.1.4.1	In the event that either of the two (2) condensing units fail or either of the two supply fan fails, or the exhaust fan fails, an alarm shall be indicated at the BMS.

Section 15999

Replace Section 15999 with Section 15999(R1)

Revisions and clarifications for this revised section include the following:

Schedule 1.1: Air Unit Handling Schedule

AHU-H222A: E.S.P. revise to read 250 Pa (1.00" wg)

AHU-H222A: new line T.S.P. to read 935 Pa (3.75" w.g.)

AHU-H222A: DX Coil data based on R407

AHU-H222A: EAT revised to 27C db / 20C wb

AHU-H222A: LAT revised to 20C db / 19.5C wb

Schedule 1.2 Exhaust Air Fan Schedule

EF-H226A: E.S.P. revised to 125 Pascals

Schedule 1.6 Air Cooled Condensing Unit Schedule

CU-H224A and CU-H225A: EER, capacity and weight changed

CU-H224A and CU-H225A: Accessories & Remarks: C/W hail guards & Hot Gas Bypass

Schedule 2.1 Air Handling Unit Schedule

AHU-H242A: heating capacity revised to read 61 kW

Schedule 2.6 Motorized Damper Schedule

This Schedule has been added

Schedule 3.1 Pump Schedule

P-T301A: Pump Speed revised to read 1550 rpm.

Schedule 3.2 Electric Unit Heater Schedule

UH-T301A: Motor Speed revised to read 1550 rpm

Section 16105

Section 16105 has been added and forms part of this Addendum

Section 16114

Replace Section 16114 with Section 16114(R1)

Section 16461

Replace Section 16461 with Section 16461(R1)

Section 16471

Replace Section 16471 with Section 16471(R1)

Section 16480

Replace Section 16480 with Section 16480(R1)

Section 16610

Replace Section 16610 with Section 16610(R1)

Section 16627

Replace Section 16627 with Section 16627(R1)

Section 17015

Replace Section 17015 with Section 17015(R1)

Section 17600-A

Replace Section 17600-A with Section 17600-A(R1). Records which have been added or modified have a “1” in the Rev No. column of the schedule.

Section 17700-A

Replace Section 17700-A with Section 17700-A(R1). Records which have been added or modified have a “1” in the Rev No. column of the schedule.

DRAWINGS

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

Consultant Dwg No.	City Drawing No.	Title
CM G001		CONSTRUCTION SITE LAYOUT
WG-A0410	1-0601G-G-A0410-001-00D	AUTOMATION/ I & C - LCP-H908A-FUEL TRANSFER CONTROL PANEL SCHEMATIC
WG-A0411	1-0601G-G-A0411-001-00D	AUTOMATION/ I & C - LCP-H908B-BULK FUEL STORAGE MONITORING SCHEMATIC

The following Drawings have been revised and are included with Addendum:

Consultant Dwg No.	City Drawing No.	Title
WD-E0112	1-0601D-A-E0112-001-02D	ELECTRICAL - DBPS FLOOR PLAN
WG-B0501	1-0601G-A-B0501-001-01D	ARCHITECTURAL - ROOM FINISH SCHEDULE, DOOR SCHEDULE & CODE ANALYSIS
WG-E0002	1-0601G-A-E0002-001-02D	ELECTRICAL - PARTIAL SITE PLAN
WG-E0102	1-0601G-A-E0102-001-02D	ELECTRICAL - CRAWLSPACE POWER PLAN AND SECTIONS
WG-E0103	1-0601G-A-E0103-001-02D	ELECTRICAL - CRAWLSPACE AND MAIN FLOOR GROUNDING PLANS
WG-E0112	1-0601G-A-E0112-001-02D	ELECTRICAL - MAIN FLOOR POWER PLAN
WG-E0403	1-0601G-A-E0403-001-02D	ELECTRICAL - BUILDING DISTRIBUTION SINGLE LINE DIAGRAM
WG-H0100	1-0601G-A-H0100-001-02D	MECHANICAL - PLUMBING PLAN - CRAWLSPACE PLAN AND MAIN LEVEL PLAN
WG-H0110	1-0601G-A-H0110-001-01D	MECHANICAL - PIPING PLAN - MAIN LEVEL PLAN
WG-H0120	1-0601G-A-H0120-001-02D	MECHANICAL - VENTILATION PLAN
WG-H0140	1-0601G-A-H0140-001-02D	MECHANICAL - VENTILATION PLAN
WG-H0202	1-0601G-A-H0202-001-01D	MECHANICAL - VENTILATION SECTIONS
WG-H0203	1-0601G-A-H0203-001-02D	MECHANICAL - VENTILATION SECTIONS
WG-H0204	1-0601G-A-H0204-001-01D	MECHANICAL - VENTILATION SECTIONS

Consultant Dwg No.	City Drawing No.	Title
WG-H0402	1-0601G-G-H0402-001-01D	MECHANICAL - STANDARD DETAILS
WG-H0501	1-0601G-G-H0501-001-02D	MECHANICAL - COOLING AND VENTILATION SCHEMATICS
WG-P0002	1-0601G-G-P0002-001-01D	AUTOMATION/ I & C - FUEL SYSTEM - PROCESS & INSTRUMENTATION DIAGRAM
WG-S0100	1-0601G-A-S0100-001-02D	STRUCTURAL - PILING PLAN AND FOUNDATION PLAN
WG-S0110	1-0601G-A-S0110-001-02D	STRUCTURAL - MAIN FLOOR FRAMING PLAN
WG-S0406	1-0601G-A-S0406-001-02D	STRUCTURAL - SECTIONS & DETAILS
WT-E0401	1-0601T-A-E0401-001-01D	ELECTRICAL - SECTIONS