



# ADDENDUM 6 BID OPPORTUNITY NO. 498-2006

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

### URGENT

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

ISSUED: October 18, 2006  
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**THIS ADDENDUM SHALL BE INCORPORATED  
INTO THE BID OPPORTUNITY AND SHALL  
FORM A PART OF THE CONTRACT  
DOCUMENTS**

Template Version: A20050301

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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.**

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### PART A -- BID SUBMISSION

Replace 498-2006\_Addendum\_4-Bid\_Submission with 498-2006\_Addendum\_6-Bid\_Submission. Form G2(R1) has been replaced by Form G2(R2).

### PART E – SPECIFICATIONS

#### Section 02223

- Add: 2.1.6 Drain material (for drain pipe or weeping tile): granular drain material shall consist of natural or crushed stone having clean, hard, strong, durable, uncoated particles free from injurious amounts of soft, friable, thin, elongated, or laminated pieces, alkali, organic, or other deleterious matter, and ranging in size from 5 mm to 20 mm. Limestone material will not be accepted for drain material.
- Add: 2.1.7 Drain Pipe: drain pipe shall be 200 mm nominal inside diameter perforated pipe complete with knitted polyester continuous seamless sleeve; pipe connecting perforated pipe to sump pit shall be 200 mm nominal inside diameter non-perforated pipe. Acceptable product is Goldline and associated products as manufactured by Prinsco.
- Add: 2.1.8 Drainage Filter Fabric: drainage filter fabric (also called filter cloth liner on the Drawings) shall conform to CW 3120-R1.
- Add: 3.1.3 Place drain pipe to indicated elevations.
- Delete: 3.5.5
- Revise: 3.6 to read: 3.7 Disposal
- Revise: 3.7 to read: 3.8 Clean-Up
- Add: 3.6 Drain Pipe Installation
- Add: 3.6.1 Drain pipe installation, complete with drainage filter fabric, shall be in accordance with the Drawings and pipe manufacturer's instructions.
- Add: 3.6.2 Drain pipe shall be placed on a minimum 100 mm bed of granular drain material. The first lift of granular drain material covering the pipe shall be placed to a depth of 300 mm above the crown of the pipe, lightly compacted up to the pipe spring line and the remainder loosely placed.

Add: 3.6.3 Subsequent lifts of drain material to a thickness of 300 mm, shall be placed in layers not greater than 150 mm in compacted thickness compacted to a density of at least 95 percent Standard Proctor Density.

Add: 3.6.4 The entire granular drain material section shall be wrapped with drainage filter fabric as shown on the Drawings.

**Section 03300**

Revise: 1.4.5 to read: Submit proposed mix design statements for each class of concrete to the Contract Administrator for review ten (10) Business Days prior to commencement of the Work. If blended cement is proposed for sulphate resistant concrete, testing data supporting conformance to CSA-A3000 shall be submitted with the mix design statement.

Revise: 2.1.1 to read: Normal Type 10 Portland Cement conforming to CSA-A3000 and sulphate resistant Type 50 Portland Cement or HSb conforming to CSA-A3000.

Revise: 2.1.7 to read: Supplementary cementing materials: conforming to CSA-A23.5.

Revise: 2.4.3 to read: Maximum allowable substitution of cement with supplementary cementing materials shall be 20% by weight except that blended cements may contain the amount of supplementary cementing materials as required for the intended purpose such as sulphate resistance. Blended cements shall be used as blended by the manufacturer without additional substitution of cement with supplementary cementing materials unless the resulting blend is supported with testing data showing conformance to CSA-A3000 satisfactory to the Contract Administrator.

**Section 15300**

Add: 2.3 Controls

Add: 2.3.1 Generator Building (for SMP-H235A & SMP-H235B).

Add: 2.3.1.1 Supply and install duplex control panel with automatic duty/standby switch-over.

Add: 2.3.1.2 Include three (3) float level controls for:

Add: 2.3.1.2.1 Level 1: turn off pumps

Add: 2.3.1.2.2 Level 2: turn duty pump on

Add: 2.3.1.2.3 Level 3: turn standby pump on

Add: 2.3.1.3 High level alarm will be taken care of by I&C

Add: 2.3.1.4 Duplex Pump Control panel will send pump running and pump failure signals to Generator Building BAS.

Add: 2.3.2 Clearwell Sump Pit (for P-T410A and P-T420A).

Add: 2.3.2.1 Supply and install duplex control panel with automatic duty/standby switch-over.

Add: 2.3.2.2 Include four (4) float level controls for:

Add: 2.3.2.2.1 Level 1: turn off pumps

Add: 2.3.2.2.2 Level 2: turn duty pump on

Add: 2.3.2.2.3 Level 3: turn standby pump on

Add: 2.3.2.2.4 Level 4: high level alarm

Add: 2.3.2.3 High level alarm will be sent back to the Main Water Treatment Plant.

Add: 2.3.3 Valve Chambers (for P-T301A and P-T302A).

- Add: 2.3.3.1 Each pump shall come complete with an ON/OFF float style switch for pump control.  
 Add: 2.3.3.2 High level alarm will be taken care of by I&C.

**Section 15650**

Revise: 2.2.6 to read: Standard of Acceptance: Chromalox EU Series

**Section 15940**

- Revise: 4.1.1 to read: The AHU-H242A is equipped with an economizer section (outside air damper and return air damper) and one (1) supply fan. The supply fan will operate at a constant volume.  
 Revise: 4.1.3.1 to read: The minimum outside air damper position shall modulate inversely with the return air damper to maintain the minimum space pressurization of 6 Pascals positive relative to outside and to provide free cooling.  
 Revise: 4.1.4.1 to read: The Mix air damper position shall be modulated to maintain mix air temperature at 15C (60F).  
 Delete: 4.1.4.2  
 Revise: 4.1.6 to read: Heating Mode: When the space temperature drops below setpoint 16°C (61°F) the stand-alone control unit shall energize and modulate, via the SCR, the air handling unit electric heating coil. When the space temperature is satisfied the stand-alone control unit shall de-energize the air handling unit electric heating coil. There shall be a mixed air temperature override in heating mode to prevent the outside air damper opening beyond the heating capacity of this air handling unit. The mixed air damper shall open to the required position to maintain a minimum mixed air temperature of 15C / 60F.  
 Revise: 4.1.7 to read: Free-cooling Mode: When the outside air temperature permits the air handling unit shall operate on free-cooling mode. The stand-alone control unit shall modulate the outside air and return air damper to maintain a discharge temperature of 13°C (55°F). Free-cooling shall not be energized until the space temperature reaches 22°C (72°F). When the space pressurization exceeds 12 Pascals positive pressure, modulate open the motorized damper in the wall (MD-H244A).

**Section 15999**

Revise: 1.4 to read Electric Unit Heater Schedule

| Tag                   | UH-H219A   |
|-----------------------|--|
| Location              | Crawl Space  |
| Type                  | Electric Forced Air  |
| Capacity, kW (MBH)    | 5 (17.1)   |
| Air Flow, L/s (cfm)   | 165 (350)  |
| Power Supply, V/ph/Hz | 600/3/60   |
| Manufacturer          | Chromalox  |
| Model                 | EUH05B84CT   |
| Accessories           | Complete with:<br><ul style="list-style-type: none"> <li>• Wall Bracket (EUHWB)</li> </ul> |

Clarification: 3.1 Regarding Pump Schedule 3.1 which was revised in Addendum 4, please add the following Tag information for pump P-T301A:

| Tag                   | P-T301A  |
|-----------------------|--|
| Accessories & Remarks | Complete with:<br><ul style="list-style-type: none"> <li>• WL20P1S0 Float</li> </ul> |

Revise: 3.2 to read: Electric Unit Heater Schedule

| Tag                   | UH-T301A                                 | UH-T302A                                |
|-----------------------|--|---|
| Location              | Cell 1 Treated Water Valve Chamber       | Cell 3 Treated Water Valve Chamber      |
| Type                  | Electric Forced Air                      | Electric Forced Air                     |
| Capacity, kW (MBH)    | 5 (17.1)                                 | 5 (17.1)                                |
| Air Flow, L/s (cfm)   | 165 (350)                                | 165 (350)                               |
| Power Supply, V/ph/Hz | 600/3/60                                 | 600/3/60                                |
| Manufacturer          | Chromalox                                | Chromalox                               |
| Model                 | EUH05B84CT                               | EUH05B84CT                              |
| Accessories & Remarks | Complete with:<br>• Wall Bracket (EUHWB) | Complete with:<br>• Wall Bracket(EUHWB) |

### **Section 16120**

Replace Section 16120 with Section 16120(R1)

Revisions for this revised section include the following:

- Revise: 1.1.1 to read: Complete supply, installation and termination of 4160 V power cables with minimum 8 kV insulation rating (15kV is acceptable).
- Revise: 2.1.1.4 to read: Insulation Rating: 90°C rating, 133% insulation level, 100% insulation level for 15kV cables
- Revise: 2.1.2 to read: The Armoured Cables shall be Prysmian 8kV or 15kV 3/C Armortek or approved equal.
- Revise: 2.2.2.4 to read: Insulation Rating: 90°C rating, 133% insulation level, 100% insulation level for 15kV cables.
- Revise: 2.2.3 to read: The Non-Armoured cables shall be Prysmian 8 kV or 15kV 3/C Power CSA cables suitable for cable tray and UG duct installation or approved equal.

### **Section 16722**

Add: 3.2.10 Install fiber optic cable from annunciator panel to network distribution cabinet. Terminate cable on patch rack.

### **DRAWINGS**

The following Shop Drawing from Toromont Industries Ltd. regarding contract 682-2005 is provided for your information and forms part of this Addendum:

| <b><u>Consultant Dwg No.</u></b> | <b><u>City Drawing No.</u></b> | <b><u>Title</u></b>        |
|----------------------------------|--------------------------------|----------------------------|
| 69C4150                          |                                | ARC DUCT / LOUVRE ASSEMBLY |

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

| <b><u>Consultant Dwg No.</u></b> | <b><u>City Drawing No.</u></b> | <b><u>Title</u></b>   |
|----------------------------------|--------------------------------|---|
| WG-E0451                         | 1-0601G-D-E0451-001-00D        | ELECTRICAL - STANDARD DETAILS                                       |
| WH-A0631                         | 1-0601H-J-A0631-001-00B        | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0632                         | 1-0601H-J-A0632-001-00B        | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |

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

## **STANDBY POWER GENERATOR**

### **CIVIL**

#### **Consultant**

| <b><u>Dwg No.</u></b> | <b><u>City Drawing No.</u></b> | <b><u>Title</u></b>   |
|-----------------------|--------------------------------|---|
| WG-C0101              | 1-0601G-A-C0101-001-01D        | CIVIL – OVERALL SITE PLAN   |
| WG-C0102              | 1-0601G-A-C0102-001-01D        | CIVIL – GENERATOR BUILDING, TRANSFORMER AND FUEL TANKS – GRADING PLAN |

### **STRUCTURAL**

|          |                         |  |
|----------|-------------------------|--|
| WG-S0002 | 1-0601G-A-S0002-001-02D | STRUCTURAL - SCHEDULES STANDARD DETAILS                |
| WG-S0003 | 1-0601G-A-S0003-001-03D | STRUCTURAL - STANDARD DETAILS                          |
| WG-S0100 | 1-0601G-A-S0100-001-03D | STRUCTURAL - PILING PLAN AND FOUNDATION PLAN           |
| WG-S0201 | 1-0601G-A-S0201-001-02D | STRUCTURAL - FLOOR PENETRATIONS PLAN BUILDING SECTIONS |
| WG-S0401 | 1-0601G-A-S0401-001-01D | STRUCTURAL - DETAILS                                   |
| WG-S0406 | 1-0601G-A-S0406-001-03D | STRUCTURAL - SECTIONS & DETAILS                        |
| WG-S0408 | 1-0601G-A-S0408-001-02D | STRUCTURAL - FUEL TANKS SECTIONS & DETAILS             |
| WG-S0450 | 1-0601G-A-S0450-001-01D | STRUCTURAL - DUCT BANK PLAN & SECTIONS                 |
| WG-S0451 | 1-0601G-A-S0451-001-01D | STRUCTURAL - DUCT BANK PLANS                           |
| WG-S0452 | 1-0601G-A-S0452-001-01D | STRUCTURAL - DUCT BANK SECTIONS                        |

### **ELECTRICAL**

|          |                         |  |
|----------|-------------------------|--|
| WD-E0112 | 1-0601D-A-E0112-001-03D | ELECTRICAL - DBPS FLOOR PLAN                           |
| WG-E0002 | 1-0601G-A-E0002-001-03D | ELECTRICAL - PARTIAL SITE PLAN                         |
| WG-E0003 | 1-0601G-A-E0003-001-02D | ELECTRICAL - SITE DETAILS                              |
| WG-E0101 | 1-0601G-A-E0101-001-01D | ELECTRICAL - CRAWLSPACE LIGHTING PLAN AND SCHEDULE     |
| WG-E0111 | 1-0601G-A-E0111-001-01D | ELECTRICAL - MAIN FLOOR LIGHTING PLAN                  |
| WG-E0401 | 1-0601G-F-E0401-001-02D | ELECTRICAL - SINGLE LINE DIAGRAM MAIN DISTRIBUTION     |
| WG-E0502 | 1-0601G-A-E0502-001-02D | ELECTRICAL - SCHEDULES                                 |
| WT-E0001 | 1-0601T-F-E0001-001-01D | ELECTRICAL - PARTIAL SITE PLAN AND SINGLE LINE DIAGRAM |
| WY-E0121 | 1-0601Y-A-E0121-001-01D | ELECTRICAL - POWER AND LIGHTING                        |
| WY-E0122 | 1-0601Y-A-E0122-001-01D | ELECTRICAL - POWER AND LIGHTING                        |

### **INSTRUMENTATION/AUTOMATION / I&C**

|          |                         |  |
|----------|-------------------------|--|
| WH-A0100 | 1-0601H-E-A0100-001-03D | AUTOMATION / I&C - PLANT COMMUNICATION NETWORK OVERALL BLOCK CABLE DIAGRAM |
| WH-A0103 | 1-0601H-E-A0103-001-03D | AUTOMATION / I&C - PLANT COMMUNICATION NETWORK BLOCK DIAGRAM               |
| WH-A0104 | 1-0601H-E-A0104-001-03D | AUTOMATION / I&C - PLANT COMMUNICATION NETWORK BLOCK DIAGRAM               |
| WH-A0615 | 1-0601H-J-A0615-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS        |

| <b>Consultant<br/>Dwg No.</b> | <b>City Drawing No.</b> | <b>Title</b>  |
|-------------------------------|-------------------------|---|
| WH-A0616                      | 1-0601H-J-A0616-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0617                      | 1-0601H-J-A0617-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0618                      | 1-0601H-J-A0618-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0619                      | 1-0601H-J-A0619-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0620                      | 1-0601H-J-A0620-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0621                      | 1-0601H-J-A0621-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0622                      | 1-0601H-J-A0622-001-05B | AUTOMATION / I&C - PLANT COMMUNICATION CABLE - TERMINATION DIAGRAMS |
| WH-A0701                      | 1-0601H-K-A0701-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0702                      | 1-0601H-K-A0702-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0703                      | 1-0601H-K-A0703-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0704                      | 1-0601H-K-A0704-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0705                      | 1-0601H-K-A0705-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0706                      | 1-0601H-K-A0706-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0707                      | 1-0601H-K-A0707-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0708                      | 1-0601H-K-A0708-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0709                      | 1-0601H-K-A0709-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0710                      | 1-0601H-K-A0710-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |
| WH-A0711                      | 1-0601H-K-A0711-001-06B | AUTOMATION / I&C - PLANT COMMUNICATION CABLES - CABLE LIST          |

**MECHANICAL**

|          |                         |                                   |
|----------|-------------------------|-----------------------------------|
| WT-M0003 | 1-0601T-A-M0003-001-02D | MECHANICAL - VENTILATION PLAN     |
| WT-M0004 | 1-0601T-A-M0004-001-01D | MECHANICAL - VENTILATION SECTIONS |

**TREATED WATER STORAGE INLET BUILDING****ARCHITECTURAL**

|          |                         |   |
|----------|-------------------------|---|
| WT-B0001 | 1-0601T-D-B0001-001-01D | ARCHITECTURAL - DOOR TYPES & DOOR FRAMES DETAILS - ROOM FINISH & DOOR SCHEDULES |
| WT-B0002 | 1-0601T-A-B0002-001-02D | ARCHITECTURAL - FLOOR PLANS   |
| WT-B0005 | 1-0601T-A-B0005-001-01D | ARCHITECTURAL - EMERGENCY EGRESS HUT BUILDING ELEVATIONS AND SECTION            |

**STRUCTURAL**

|          |                         |                                       |
|----------|-------------------------|---------------------------------------|
| WT-S0002 | 1-0601T-A-S0002-001-01D | STRUCTURAL - PLANS                    |
| WT-S0006 | 1-0601T-A-S0006-001-01D | STRUCTURAL - STANDARD DETAILS SHEET 1 |

**ELECTRICAL**

|          |                         |  |
|----------|-------------------------|--|
| WT-E0112 | 1-0601T-A-E0112-001-02D | ELECTRICAL - POWER AND FIRE ALARMS FLOOR PLANS |
| WT-E0401 | 1-0601T-A-E0401-001-02D | ELECTRICAL - SECTIONS                          |