



ADDENDUM 6 BID OPPORTUNITY 742-2005

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

ISSUED: May 30, 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: 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_5-Bid_Submission with 742-2005_Addendum_6-Bid_Submission. Form B(R3): Prices has been replaced by Form B(R4): Prices.

PART B – BIDDING PROCEDURES

Revise: B9.1.2 to read: The cash allowance 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 supplying the Medicon Unity PLC's specified in article 2.1 of Section 17500.

PART D – SUPPLEMENTAL CONDITIONS

Add: 2.3(c)(iv): Cabling between equipment supplied pursuant to D2.3(c) and equipment supplied and installed by the Electrical Contractor will be supplied and installed by the Installation Contractor. Terminations in equipment supplied and installed by the Electrical Contractor shall be provided by the Electrical Contractor, including all materials required to make these terminations.

Clarification: With reference to D2.6 and information provided for the City supplied underdrains: The underdrain air scour piping supplied by the Supply Contractor will be PVC.

Clarification: With reference to D2.2(c)(xiv) and information provided for the City supplied underdrains: The reinforced concrete false floor that supports the underdrain nozzles shall cover the entire plan area of each of the eight filter tanks shown on drawings WF-M0401, WF-M0402, WF-M0403 and WF-M0404.

Add: D27.3: Further to GC:12.1, for the cables scheduled in Sections 16903-01 and 16903-02, the Contractor will be paid in accordance with D27.1(a) and either:

Add: D27.3(a): for the supplied and installed cost pursuant to GC:12.1, or

Add: D27.3(b): for the supply cost upon the transfer of title to the City via an original bill of sale and successful delivery to the City Warehouse. The Contractor shall provide the Contract Administrator with a complete inventory of all cables supplied to the City Warehouse and attach this inventory to a completed Form 100 prior to any payment. All costs

associated with the handling of materials supplied by the Contractor to the City Warehouse and transportation to the Site will be incidental to the Work.

PART E – SPECIFICATIONS

Section 11320

Revise: Supplement 1 to read:

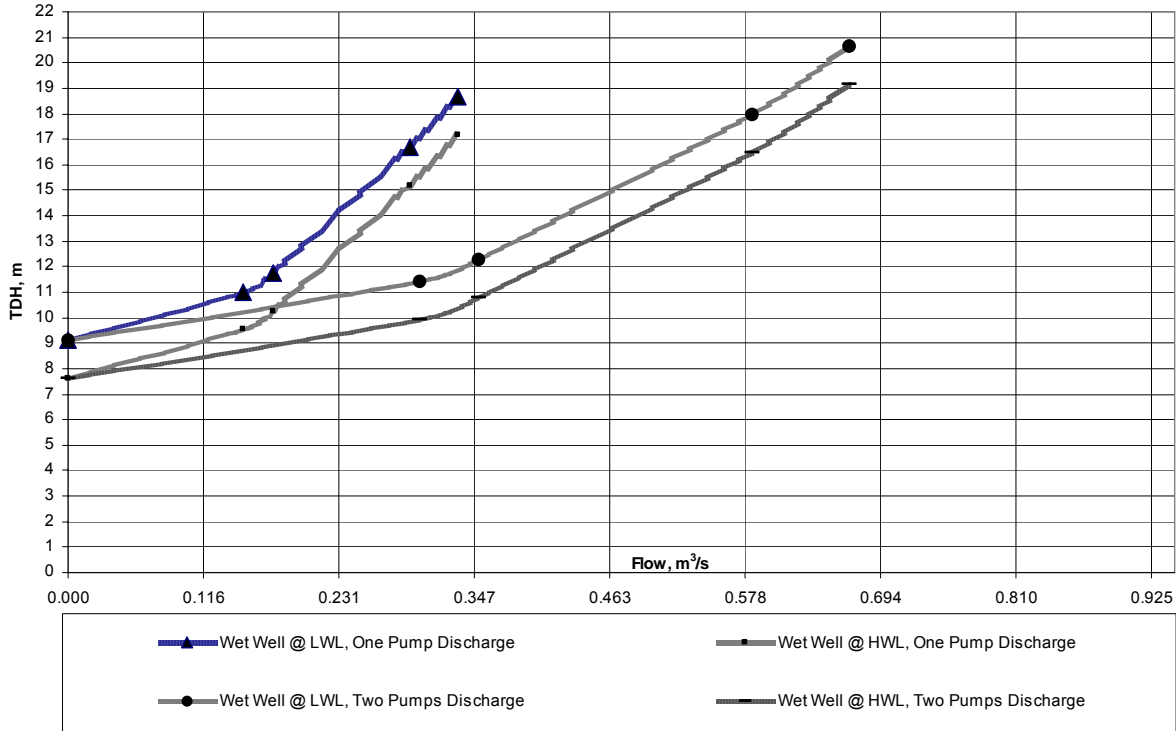
SUPPLEMENT 1 – SUPERNATANT PUMPS

| PARAMETER | VALUE | |
|---|---|-----------------------|
| Tag No. (s) | P-R021, P-R022,P-R023 | |
| Location | Inside / Non-Hazardous Area | |
| Type of Installation: | Vertical Turbine | |
| Design Point Flow Capacity (L/s) | Primary : 292 | Secondary: 580 |
| Design Point TDH (m) (excludes losses internal to pump) | Primary : 15.2 | Secondary: 18 |
| NPSH Required (Head (m) at Design Flow) | By Manufacturer | |
| Flow Operating Range (L/s) | 292-570 | |
| TDH Operating Range (m) | 15.2 - 18 | |
| Fluid Temperature Operating Range (°C) | 0.5-25 | |
| Solids Concentration Operating Range (%) | 0.01 to 0.06 | |
| Minimum Suction Water Elevation (Geodetic) (m) | 232.75 | |
| Maximum Suction Water Elevation (Geodetic) (m) | 237.61 | |
| Pump Room Finished Floor (Geodetic) (m) | 239.41 | |
| Centreline Pump Discharge (Geodetic) (m) | 239.87 | |
| Driver Maximum (kW) | 75 | |
| Driver Voltage (V/phase/frequency) | 575/3/60 | |
| Enclosure | TEFC | |
| Speed (max) | 1185 rpm | |
| Motor Suitable for VSD | Yes | |
| Minimum Pump Efficiency at Design Point (%) | 80 | |
| Design Standard | Flowserve | |
| Acceptable Manufacturer's | Flowserve, Ebara, Fairbanks, Morse, Peerless, Patterson | |

Revise: Supplement 2 to read:

SUPPLEMENT 2 – SUPERNATANT PUMP SYSTEM CURVES

Supernatant Pump System Curves



Section 11374

Revise: 2.2.2. to read: Supply centrifugal blowers of the vertically split, multistage, type with high strength cast aluminum alloy impellers mounted on a polished carbon steel shaft

Section 11950

Revise: 1.1.1 to read: The Contractor shall remove all construction debris in accordance with GC:6.29 including removal and disposal of water and debris resulting from portions of the Work specified in this Section.

Clarification: With reference to clause 1.4.1 and structures requiring disinfection: in addition to clearwell structure and the conduit explicitly identified in this clause, all of the concrete structures in the WTP which convey or store BWS, FTR, FW, FIN BWW, CWS, SLU or SUP shall be disinfected.

Revise: 3.4.3 to read: Dechlorinate the chlorinated water using methods outlined in AWWA C653.

Add: 3.4.4: The Contractor shall be responsible for removing all cleaning solutions from the concrete structures and delivering it to a disposal area as directed by the Contract Administrator.

Section 13930

Revise: The last row of the table in 1.3.2.3 to read as follows:

| |
|--|
| Notes: 1. Hazard Occupancy: Light. 2. Hazard Occupancy: Ordinary, Group 1. 3. Provide water flow based on Area/Density Curves in NFPA 13. |
|--|

Section 15202-02(R3)

Revise the valve size in the following rows of the Manual Valve Schedule to read as follows:

| P&ID Number | Tag Number | Valve Type | Valve Type Number | Commodity | Size (mm) | Valve Location | Maximum Working Pressure (kPa) | Comments/ Control Features |
|-------------|------------|------------|-------------------|-----------|-----------|----------------|--------------------------------|----------------------------|
| WP - P0018 | HV - P931J | Ball | V304 | DF | 50 | Exposed | 115 | |
| WP - P0018 | HV - P932J | Ball | V304 | DF | 50 | Exposed | 115 | |
| WP - P0018 | HV - P941J | Ball | V304 | DF | 50 | Exposed | 115 | |
| WP - P0018 | HV - P942J | Ball | V304 | DF | 50 | Exposed | 115 | |
| WP - P0019 | HV - P951J | Ball | V304 | DF | 50 | Exposed | 115 | |
| WP - P0019 | HV - P952J | Ball | V304 | DF | 50 | Exposed | 115 | |
| WP - P0019 | HV - P961J | Ball | V304 | DF | 50 | Exposed | 115 | |
| WP - P0019 | HV - P962J | Ball | V304 | DF | 50 | Exposed | 115 | |

Section 15720

Revise: 2.2.2.2 to read: Unit shall be provided with 22 gauge solid galvanized metal liner over all insulated areas of sidewalls and roof. Finish side of the liner that is in contact with the airstream shall be a two-part epoxy applied in the same fashion as that on the unit casing. Provide stainless steel in lieu of galvanized metal at the gas fired heat exchanger.

Add: 2.2.2.5.5: Provide vapor proof marine light with guard in each section where access is provided. Lighting shall be 120V factory installed and wired to a junction box with separate On/Off switch for each light mounted on the outside of unit adjacent to the access door.

Section 15810

Delete: 2.21.1.4

Section 15830-01(R1)

Replace: Section 15830-01(R1) with 15830-01(R2) included in this Addendum.

Section 15900-01

Add: .17: HIGH TEMPERATURE ALARM:

Add: .17.1: High Room Temperature alarm shall be indicated at the BAS HMI.

Add: .17.2: Indicate the Room Name in which the temperature sensor is located

Add: .17.3: Indicate the HVAC System identification which is associated with the temperature sensor

Add: .17.4: Indicate the actual room temperature.

Add: .17.5: Provide a general alarm to PLC with proper system identification.

Add: .18: COMPRESSOR FAILURE ALARM:

Add: .18.1: Compressor Failure alarm shall be indicated at the BAS HMI.

Add: .18.2: Indicate the HVAC System identification which is associated with the temperature sensor

Add: .18.3: Provide a general alarm to PLC with proper system identification

Section 15900-10

Add: .5.1.6: When T-H035A reaches 40C or higher, a High Temperature Alarm is logged and a High Temperature Alarm sequence shall be initiated.

Add: .5.1.7: When BAS detects a Compressor Failure signal from the Factory Mounted Controller, a Compressor Failure alarm is logged and a Compressor Failure Alarm sequence shall be initiated.

Section 15900-11

Add: .5.1.6: When T-H061A reaches 40C or higher, a High Temperature Alarm is logged and a High Temperature Alarm sequence shall be initiated.

Add: .5.1.7: When BAS detects a Compressor Failure signal from the Factory Mounted Controller, a Compressor Failure alarm is logged and a Compressor Failure Alarm sequence shall be initiated.

Section 15900-12

Add: .5.1.6: When T-H062A reaches 40C or higher, a High Temperature Alarm is logged and a High Temperature Alarm sequence shall be initiated.

Add: .5.1.7: When BAS detects a Compressor Failure signal from the Factory Mounted Controller, a Compressor Failure alarm is logged and a Compressor Failure Alarm sequence shall be initiated.

Section 15900-13

Add: .5.1.15: When BAS detects a Compressor Failure signal from the Factory Mounted Controller, a Compressor Failure alarm is logged and a Compressor Failure Alarm sequence shall be initiated.

Section 16426

Revise: 2.4.1 to read: Three phase and full capacity neutral busbars, continuous current rating 4000A, self-cooled, extending full width of multi-cubicle switch board, suitably supported on insulators.

Revise: 2.4.3 to read: Busbars and main connections: 99.30% conductivity tin plated copper.

Section 16815

Revise: 2.1.11.19.1 to read: A data communication gateway shall be provided for the connection to the Ethernet Plant Control and Monitoring System. The data communication protocol shall be Modbus/TCP.

Section 16610

Revise: 2.10.5 to read: Unit will communicate with the CDACS via Modbus/TCP protocol and to the BMS system via RS232 port and unit software.

Section 16811

Revise: 2.6.2.4 to read: Modbus/TCP Module for transmitting starter information and receiving setting adjustments to/from a central control facility.

Section 17600-A

Replace: Section 17600-A with Section 17600-A(R1) included in this Addendum.

Clarification: The column "Rev No." has been added to each sheet in this Section. Each record with a revision number of "1" has been revised for this Addendum. Those records with a revision number of "0" have not been revised. The reason for the revision is the addition of Category 5e communication cables, network switches and terminations.

Section 17700-A(R2)

Replace: Section 17700-A(R2) with Section 17700-A(R3) included in this Addendum.

Clarification: The column "Rev No." on each sheet in this Section indicates the latest revision to the individual records. Each record with a revision number of "3" has been revised for this Addendum.

Section 17701-A(R1)

Revise: Instrument I112 Specifications to read:

| | |
|---|--|
| INSTRUMENT SPECIFICATION NUMBER: | I112 |
| DEVICE: | Pressure Gauge (<i>Gauge and Differential</i>) |
| TAG: | Refer to Instrument Index, Section 17700 |
| SERVICE: | Refer to Instrument Index and P&ID Diagrams |
| PROCESS CONNECTION: | 6.35 mm bottom connection |
| CASE: | 75 mm stainless steel complete with stainless steel wetted parts |
| ACCURACY: | ±1% of span |
| RANGE: | Refer to Instrument Index, Section 17700 |
| ACCESSORIES: | <i>Refer to PID for details on accessories and installation requirements</i> |
| MANUFACTURER AND MODEL: | Ashcroft H.O. Trerice Budenberg |

DRAWINGS

Clarification: With reference to WB-E0501: The Type J luminaire shall come with an integral ballast.

Clarification: With reference to WS-E0511: The 4000A bus duct between the transformers and SWGR2A and SWGR2B will be supplied and installed by others.

Clarification: With reference to detail 2 on WB-E0458: The Contractor shall supply and install the embedded conduits and the wall mounted junction box. The remainder of the security system will be supplied and installed by others.

The following drawings from City of Winnipeg Bid Opportunity 583-3005 are added for information and form part of this Addendum. The intent is to provide information required for concrete encased piping supplied and installed pursuant to D2.3(a)(i) and for the section referenced on drawing WP-M9106:

| <u>Consultant Drawing No.</u> | <u>City Drawing No.</u> | <u>Title</u> |
|-------------------------------|-------------------------|--|
| WB-S0458 | 1-0601B-A-S0458-001-00D | Structural – Standard Details |
| WM-S0203 | 1-0601M-A-S0203-001-01D | Structural – Electrical Room - Section |

Further to clause 1.4.1 of Section 11950, the following drawings of the clearwell structure outside of the WTP and the clearwell conduit connecting the WTP to the clearwell are being added for information and form part of this Addendum:

| <u>Consultant Drawing No.</u> | <u>City Drawing No.</u> | <u>Drawing Title</u> |
|-------------------------------|-------------------------|---|
| WT-P004 | 1-0601T-A-P0004-001-02D | Process - Inlet Plans |
| WT-P007 | 1-0601T-A-P0007-001-02D | Process - Outlet Structure Plan |
| WT-S010 | 1-0601T-A-S0010-001-04D | Structural - Foundation Slab Elevations Plan |
| WT-S011 | 1-0601T-A-S0011-001-06D | Structural – Roof Framing Plan |
| WT-S014 | 1-0601T-A-S0014-001-04D | Structural - Building Sections |
| WT-S015 | 1-0601T-A-S0015-001-04D | Structural – Building Sections |
| WT-S016 | 1-0601T-A-S0016-001-06D | Structural - Sections and Details |
| WT-S017 | 1-0601T-A-S0017-001-06D | Structural - Sections and Details |
| WT-S018 | 1-0601T-B-S0018-001-04D | Structural – Sections and Details |
| WT-S041 | 1-0601T-B-S0041-001-00D | Structural - CCT Effluent Conduit - Piling Plan, Foundation Plan and Schedule |
| WT-S042 | 1-0601T-B-S0042-001-00D | Structural - CCT Effluent Conduit - Sections and Details |

The following Automation I&C Drawings have been added and form part of this Addendum. Please note that even though they indicate “revision 1”, they have not been issued previously.

| <u>Consultant Drawing No.</u> | <u>City Drawing No.</u> | <u>Drawing Title</u> |
|-------------------------------|-------------------------|---|
| WH-A0566 | 1-0601H-J-A0566-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0567 | 1-0601H-J-A0567-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0568 | 1-0601H-J-A0568-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0569 | 1-0601H-J-A0569-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0570 | 1-0601H-J-A0570-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0571 | 1-0601H-J-A0571-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0572 | 1-0601H-J-A0572-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0573 | 1-0601H-J-A0573-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0574 | 1-0601H-J-A0574-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0575 | 1-0601H-J-A0575-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0576 | 1-0601H-J-A0576-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0577 | 1-0601H-J-A0577-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0578 | 1-0601H-J-A0578-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0579 | 1-0601H-J-A0579-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0580 | 1-0601H-J-A0580-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0581 | 1-0601H-J-A0581-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0582 | 1-0601H-J-A0582-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0583 | 1-0601H-J-A0583-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0584 | 1-0601H-J-A0584-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0585 | 1-0601H-J-A0585-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0586 | 1-0601H-J-A0586-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0587 | 1-0601H-J-A0587-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |

| <u>Consultant Drawing No.</u> | <u>City Drawing No.</u> | <u>Drawing Title</u> |
|-----------------------------------|-------------------------|---|
| WH-A0548 | 1-0601H-J-A0548-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0549 | 1-0601H-J-A0549-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0550 | 1-0601H-J-A0550-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0551 | 1-0601H-J-A0551-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0552 | 1-0601H-J-A0552-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0553 | 1-0601H-J-A0553-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0554 | 1-0601H-J-A0554-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0555 | 1-0601H-J-A0555-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0556 | 1-0601H-J-A0556-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0557 | 1-0601H-J-A0557-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0558 | 1-0601H-J-A0558-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0559 | 1-0601H-J-A0559-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0560 | 1-0601H-J-A0560-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0561 | 1-0601H-J-A0561-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0562 | 1-0601H-J-A0562-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0563 | 1-0601H-J-A0563-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0564 | 1-0601H-J-A0564-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0565 | 1-0601H-J-A0565-001-01B | Automation / I & C - Plant Communication Cable - Termination Diagrams |
| WH-A0601 | 1-0601H-K-A0601-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WH-A0602 | 1-0601H-K-A0602-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WH-A0603 | 1-0601H-K-A0603-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WH-A0604 | 1-0601H-K-A0604-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WH-A0605 | 1-0601H-K-A0605-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WH-A0606 | 1-0601H-K-A0606-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WH-A0607 | 1-0601H-K-A0607-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WH-A0608 | 1-0601H-K-A0608-001-01B | Automation / I & C - Plant Communication Cables - Cable List |

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

| <u>Consultant Drawing No.</u> | <u>City Drawing No.</u> | <u>Drawing Title</u> |
|-----------------------------------|-------------------------|--|
| WB-H0505 | 1-0601B-G-H0505-001-01D | HVAC - Schematic |
| WC-H0131 | 1-0601C-A-H0131-001-02D | HVAC - Chemical Area - Third Floor Plan |
| WF-H0112 | 1-0601F-A-H0112-001-01D | HVAC - Filtration Area 2 - First Floor Plan |
| WH-A0102 | 1-0601H-E-A0102-001-01D | Automation / I & C - Plant Communication Network - Block Diagram |
| WH-A0105 | 1-0601H-E-A0105-001-01D | Automation / I & C - Plant Communication Network - Block Diagram |
| WH-A0609 | 1-0601H-K-A0609-001-01B | Automation / I & C - Plant Communication Cables - Cable List |
| WI-H0111 | 1-0601I-A-H0111-001-01D | HVAC - Raw Water Pump Station Area - First Floor Plan |
| WI-H0131 | 1-0601I-A-H0131-001-01D | HVAC - Raw Water Pump Station Area - Third Floor Plan |
| WP-M0111 | 1-0601P-A-M0111-001-01D | Process - First Floor Plan - DAF Influent Gallery |
| WP-M0214 | 1-0601P-A-M0214-001-01D | Process - DAF Influent Gallery - Plans and Sections |
| WR-H0121 | 1-0601R-A-H0121-001-01D | HVAC - Residuals Handling Area - Second Floor Plan |
| WR-P0007 | 1-0601R-G-P0007-001-01D | Process - Supernatant Pump Station – Process and Instrumentation Diagram |