



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. ^

^

REFERENCE CLAUSES FOR USE OF WSTP STANDARDIZATION CONTRACTS

Instructions:

- 1. The clauses in this document should be added to the relevant Bid Opportunity. The clause numbering in this document will not be correct, and it is the responsibility of the Bid Opportunity author to ensure that the clauses are incorporated into the correct section.*
- 2. If a section is not applicable to the work, for example, if there is no instrumentation under the contract, then delete the applicable section(s).*

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FORM B: PRICES
 (See B3)

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UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1.						
2.						
3.						
4.						
5.						

Standardized Goods.

Indicate base costs for material supply under the following standardization agreements. Any material mark-up or installation costs, as applicable, shall be included in other line items above.

6.	Standardized Control System and Motor Control Equipment – Base Cost	E2				
7.	Standardized Gas Detection Equipment – Base Cost	E3				
8.	Standardized Electric Valve Actuators – Base Cost	E4				
9.	Standardized Instrumentation – Base Cost	E5				
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						

TOTAL BID PRICE (GST extra) (in figures) \$ _____

FORM B: PRICES
(See B3)

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UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
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Name of Bidder

PART B - BIDDING PROCEDURES

B1. CONFIDENTIALITY

- B1.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Bidder before receipt hereof; or
 - (b) becomes publicly known other than through the Bidder; or
 - (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.
- B1.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.
- B1.3 Notwithstanding B1.1, all quotations, invoices and other pricing related information associated with the Standardized Goods and acquired by a Bidder or its Subcontractors through enquiries, investigation or any other means is confidential. Such information shall not be used or disclosed in any way, other than meeting the requirements of this Bid Opportunity.

B2. SUBSTITUTES

- B2.1 Substitutes to the City's Standardized Goods, as identified in E2, will not be accepted.

B3. PRICES

Spec Note: MRST treatment for the below needs to be reviewed and is dependent upon the PST treatment of the overall construction bid opportunity.

- B3.1 Form B, Item 6: The Bidder shall enter the cost of the Standardized Goods to be supplied from Schneider Electric Canada Ltd. (Schneider) as part of the Standardized Control System and Motor Control Equipment agreement identified in E2. The cost shall be the base cost received from Schneider, without any mark-up or taxes applied.
- B3.1.1 Any mark-up to the supply of the Standardized Goods shall be deemed to be included in other applicable Form B lines.
- B3.2 Form B, Item 7: The Bidder shall enter the cost of the Standardized Goods to be supplied from Rotork Control Canada Ltd. (Rotork) as part of the Standardized Electric Valve Actuators agreement identified in E3. The cost shall be the base cost received from Rotork, without any mark-up or taxes applied.
- B3.2.1 Any mark-up to the supply of the Standardized Goods shall be deemed to be included in other applicable Form B lines.
- B3.3 Form B, Item 8: The Bidder shall enter the cost of the Standardized Goods to be supplied from Mine Safety Appliances Company, LLC (MSA) as part of the Standardized Gas Detection Systems agreement identified in E4. The cost shall be the base cost received from MSA, without any mark-up or taxes applied.
- B3.3.1 Any mark-up to the supply of the Standardized Goods shall be deemed to be included in other applicable Form B lines.
- B3.4 Form B, Item 9: The Bidder shall enter the cost of the Standardized Goods to be supplied from Trans-West Supply Company Inc. (Trans-West) as part of the Standardized Instrumentation

agreement identified in E5. The cost shall be the base cost received from Trans-West, without any mark-up or taxes applied.

- B3.4.1 Any mark-up to the supply of the Standardized Goods shall be deemed to be included in other applicable Form B lines.

PART C - GENERAL CONDITIONS

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. DEFINITIONS

D1.1 When used in this Bid Opportunity:

- (a) "**Standardized Goods**" means the respective goods identified in D2 that have been standardized by the City.
- (b) "**Standardization Vendor**" means a contractor or supplier of Standardized Goods, as identified in D2.

STANDARDIZATION

D2. STANDARDIZED GOODS

D2.1 The following goods have been standardized by the City and will be supplied by the Contractor:

- (a) Standardized Control System and Motor Control Equipment as per E2.
- (b) Standardized Electric Valve Actuators as per E3.
- (c) Standardized Gas Detection Systems as per E4.
- (d) Standardized Instrumentation as per E5.

D3. CONTRACTUAL ARRANGEMENT

D3.1 Each Standardization Vendor shall be a Subcontractor of the Contractor.

D3.2 The City's contract with each of the Standardization Vendors defines the prices and general terms of supply to the Contractor. Each Standardization Vendor is obligated to enter into a contract with the Contractor, based upon such prices and general terms of supply.

D3.2.1 The City is not a party to any contract between a Standardization Vendor and the Contractor, or any Subcontractor.

D3.3 In the event that a potential dispute arises between the Contractor and a Standardization Vendor, the Contract Administrator shall be notified.

D4. PAYMENT OF STANDARDIZATION VENDORS

D4.1 The Contractor is obligated to pay the Standardization Vendors in accordance with general terms of supply applicable to such Standardization Vendor.

D4.2 The Contractor's payment terms to the Standardization Vendor, in respect of Standardized Control System and Motor Control Equipment identified in E2, include the following:

- D4.2.1 Except as indicated in D4.2.2, payment shall be in Canadian funds net thirty (30) Calendar Days after shipment.
- D4.2.2 Payment for motor control centres shall be in Canadian funds net thirty (30) Calendar Days and initiated based upon the following schedule:
 - (a) Upon approval of the shop drawings or forty (40) Calendar days after the last comprehensive submittal, in the event that a response is not made to the submittal: 25% of the total value.
 - (b) Upon delivery of the complete MCC along with all associated as-manufactured documentation: 60% of the total value; or

- (c) In the event that the delivery is intentionally delayed, upon request by the Contractor, the following payment schedule would replace the 60% payment:
 - (i) Upon completion of the FAT and delivery of all as-manufactured documentation to the Contractor – 30% of the total value.
 - (ii) Forty (40) Calendar days after delivery of the as-manufactured documentation to the Contractor, or upon delivery, whichever comes sooner – 30% of the total value.
- (d) Upon successful commissioning and delivery of documentation or six (6) months after delivery, whichever comes first: 15% of the total value.

D4.3 The Contractor's payment terms to the Standardization Vendor, in respect of Standardized Electric Valve Actuators identified in E3, include the following:

D4.3.1 Payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Standardization Vendor's invoice.

D4.4 The Contractor's payment terms to the Standardization Vendor, in respect of Standardized Gas Detection Systems identified in E4, include the following:

D4.4.1 Payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Standardization Vendor's invoice.

D4.5 The Contractor's payment terms to the Standardization Vendor, in respect of Standardized Instrumentation identified in E5, include the following:

D4.5.1 Payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Standardization Vendor's invoice.

SUBMISSIONS

D5. ESTIMATES

D5.1 The Contractor shall provide the Contract Administrator with copies of the estimates provided by Standardized Equipment Suppliers identified in E2, E3, E4 and E5.

Work with the Standardized Equipment Project Manager to check the estimates and ensure the vendors provided the appropriate City pricing.

MEASUREMENT AND PAYMENT

D6. PAYMENT SCHEDULE

D6.1 The City's payment to the Contractor, associated with Standardized Goods, will be in accordance with C12.

PART E - SPECIFICATIONS

CONTRACTOR SUPPLIED STANDARDIZED GOODS

E1. GENERAL REQUIREMENTS

- E1.1 Comply with the general requirements of E1 for all Standardized Goods supplied by the Contractor.
- E1.2 Comply with the following Standardization Goods requirements:
- E1.2.1 Control System and Motor Control Equipment in accordance with E2.
 - E1.2.2 Electric Valve Actuators in accordance with E3.
 - E1.2.3 Gas Detection Systems in accordance with E4.
 - E1.2.4 Instrumentation in accordance with E5.
- E1.3 Contact the Contract Administrator regarding any potential uncertainty as to whether a good is covered under a standardization agreement.
- E1.4 The Contractor may utilize a Standardization Vendor to provide other goods required under the Contract, in addition to Standardized Goods.
- E1.5 The Contractor shall separately track all goods supplied under each standardization agreement.
- E1.5.1 In the event that one or more Standardization Vendors are utilized to procure goods not covered under a standardization agreement, the Contractor shall ensure such goods are quoted, ordered, tracked and accounted in a separate manner.
- E1.6 Pricing:
- E1.6.1 The City has obtained discounted pricing for Standardized Goods. Each Standardization Vendor is obligated to sell Standardized Goods to all prospective Contractors at the discounted price, provided the goods are for the City of Winnipeg.
 - E1.6.2 The Standardization Vendors may at their option provide lump sum pricing for goods packages. The Standardization Vendor is not required to provide breakout pricing details to the Contractor.
 - E1.6.3 The Contractor and Subcontractors shall not utilize the City's agreements with the Standardization Vendors for any purpose other than City work.
 - E1.6.4 The City may audit the goods purchased from the Standardization Vendors under the standardization agreements and may identify to the Standardization Vendors any goods procured that are not associated with the Contract.
- E1.7 The Contractor is responsible for ensuring that the Material supplied by the Standardization Vendors meets the requirement of the Contract. The Contractor shall review and confirm quotations supplied by the Standardization Vendors to ensure that all required Material is supplied.
- E1.8 Without limiting or otherwise affecting any other term or condition of the Contract, including (non-exhaustive) D3.2.1:
- E1.8.1 The supply of goods through a Standardization Vendor shall not relieve the Contractor of their obligations.
 - E1.8.2 Errors or omissions by a Standardization Vendor shall not be a cause for a Change in Work.

- E1.8.3 Delays by a Standardization Vendor shall not be a cause for a Change in Work where the delay could have been avoided through reasonable planning, contingency allocation, or communication by the Contractor.
- E1.8.4 The Contractor shall engage directly with the persons listed as the Standardized Vendor contact in the following sections E2.7, E3.9, E 4.5 and E 5.6 unless otherwise directed by the Contract Administrator.
- E1.9 Submittals
- E1.9.1 Submittals shall be provided for Standardized Goods in accordance with the Specifications and typical industry practice. Submittals shall not be bypassed for Standardized Goods.

E2. STANDARDIZED CONTROL SYSTEM AND MOTOR CONTROL EQUIPMENT

- E2.1 The City has standardized on a specific vendor for the supply and delivery of control system and motor control equipment. The Standardization Vendor was selected via RFP 756-2013 and was awarded to Schneider Electric Canada Inc. (Schneider).
- (a) Refer to E2.7 for contact information.
 - (b) Copies of the tender documents are available from City of Winnipeg Material Management's website.
- E2.2 Goods to be procured via this standardization agreement includes but is not limited to:
- (a) Programmable Controllers (PLCs) including all associated components, hardware and software.
 - (b) PLC to Infi90 Termination Unit migration cables.
 - (c) Programmable Controller Programming Software.
 - (d) Aveva Dynamic- Dynsim Process Simulator Software.
 - (e) HMI System software.
 - (f) Historian Server and Client Software.
 - (g) Touchscreen HMI systems such as Harmony HMIs.
 - (h) Touchscreen HMI Programming Software.
 - (i) Motor Control Centers including all components
 - (j) Loose VFDs, motor starters, soft starters, and associated components.
 - (k) Industrial Ethernet Switches as per design. Note that some Ethernet switches may be specified to be from other vendors due to application requirements. Refer to drawings and specifications.
 - (l) MDT Version Management Software.
 - (m) Aveva Insight Information Server Software.
 - (n) Training sessions.

Ensure that the appropriate specifications are provided to fully detail the equipment that the vendor needs to supply. Do not assume that the vendor understands the project requirements.

- E2.3 For clarity, this standardization agreement does not include:
- (a) Computer workstation hardware including operating systems;
 - (b) Computer server hardware, including operating systems and general terminal server / client software;
 - (c) Thin client terminals;
 - (d) Fused and un-fused disconnect switches not incorporated into a MCC or other motor starter;
 - (e) Control stations and pendants not incorporated into a MCC or other motor starter;

- (f) Electrical Transformers not in a MCC or motor starter;
- (g) Panelboards not integrated in a MCC;
- (h) Switchboards / Switchgear not integrated in a MCC;
- (i) System Integration Services (including programming and configuration);
- (j) Control Panels to house PLCs;
- (k) Instrumentation;
- (l) Power supplies not integrated with the PLC / HMI systems; and
- (m) Terminal blocks not integrated with the PLC / HMI systems

E2.4 The following model series shall be utilized unless otherwise indicated in the Specifications, Drawings or otherwise approved by the Contract Administrator:

- (a) Modicon M580 PLCs;
- (b) Modicon X80 PLC I/O;
- (c) EcoStruxure Control Expert programming software;
- (d) Aveva Plant Scada HMI systems;
- (e) Aveva Historian;
- (f) Local HMI – Harmony HMIGTO or HMIGTU series;
- (g) Schneider Electric Model 6 MCC – NEMA rated starters, Intelligent Ethernet (unless otherwise specified);
- (h) Altivar Process 600 series VFDs for variable torque applications; and
- (i) Altivar Process 900 series VFDs for more demanding applications.

E2.5 Commissioning and start-up:

E2.5.1 Except as identified in E2.5.2, commissioning and start-up of all goods purchased under this standardization agreement shall be performed by the Contractor.

E2.5.2 Schneider shall provide MCC start-up services, but not commissioning services. Coordinate with Schneider as required to understand the limitations of Schneider's MCC start-up services and provide all remaining testing, commissioning and start-up services to provide a complete commissioning and start-up.

Ensure that complete start-up and commissioning requirements are identified in the specifications.

E2.6 Training

E2.6.1 Programmable Controller Local Training

(a) Overview

- (i) Provide instruction to designated City personnel in the operation and maintenance of the Schneider programmable controller control system components and associated Schneider tools and equipment.
- (ii) This training shall be provided by Schneider.
- (iii) This training does not relieve the Contractor of other training requirements associated with the control system.

(b) Location

- (i) The location of the training will be in the City of Winnipeg, in a facility provided by the City.
- (ii) The room will be classroom style.

(c) Submittals

- (i) Submit the names and qualifications of the proposed instructors.

- (ii) Submit training proposal complete with hour by hour schedule including brief overview of content of each training segment a minimum of 30 Working Days prior to the anticipated date of beginning of training.
- (d) Quality Assurance
 - (i) Provide competent instructors thoroughly familiar with all aspects of the programmable controller control system.
 - (ii) The Contract Administrator may reject instructors it deems to not be qualified.
 - (iii) In the event that the training provided is not satisfactory, reduction of payment may be applied.
- (e) Duration
 - (i) The training shall be a minimum of one (1) day in duration.
- (f) Materials
 - (i) Provide equipment, visual and audio aids, and materials.
 - (ii) Supply manual for each trainee, describing in detail the information included in each training program.
- (g) Attendees
 - (i) The attendees are expected to include, but not be limited to: electrical and instrumentation maintenance personnel and programmable controller support specialists.
- (h) Content
 - (i) Overview of the equipment.
 - (ii) Equipment maintenance training including:
 - ◆ Installation
 - ◆ Troubleshooting
 - ◆ Preventative maintenance
 - ◆ Replacement of modules
 - ◆ Network communication troubleshooting and diagnostics.
 - ◆ Fieldbus troubleshooting and diagnostics
 - ◆ Programmable controller redundancy strategies and operation.
 - (iii) Maintenance use of programmable controller programming software, including:
 - ◆ Basic operation of the software
 - ◆ Connecting to programmable controllers
 - ◆ Download and upload of software configuration.
 - ◆ Diagnostics and troubleshooting.
- (i) Number of Sessions:
 - (i) Provide a minimum of two (2) sessions.

E2.6.2 MCC and VFD Local Training Session

- (a) Overview
 - (i) Provide instruction to designated City personnel in the operation and maintenance of the motor control centres and variable frequency drives.
 - (ii) This training shall be provided by Schneider.
 - (iii) This training does not relieve the Contractor of other training requirements associated with the control system.
- (b) Location
 - (i) The location of the training will be in the City of Winnipeg, in a facility provided by the City.
- (c) Submittals

- (i) Submit the names and qualifications of the proposed instructors.
- (ii) Submit training proposal complete with hour by hour schedule including brief overview of content of each training segment a minimum of 30 Working Days prior to the anticipated date of beginning of training.
- (d) Quality Assurance
 - (i) Provide competent instructors thoroughly familiar with all aspects of the MCC and VFD systems.
 - (ii) The Contract Administrator may reject instructors it deems to not be qualified.
 - (iii) In the event that the training provided is not satisfactory, reduction of payment may be applied.
- (e) Duration
 - (i) The training shall be a minimum of six (6) hours in duration, excluding coffee and lunch breaks.
- (f) Materials
 - (i) Provide equipment, visual and audio aids, and materials.
 - (ii) Supply manual for each trainee, describing in detail the information included in each training program.
- (g) Attendees
 - (i) The attendees are expected to include, but not be limited to:
 - ◆ Electrical and instrumentation maintenance personnel.
 - ◆ Programmable controller support specialists.
- (h) Content
 - (i) Overview of the equipment.
 - (ii) Equipment maintenance training including:
 - ◆ Installation
 - ◆ Troubleshooting
 - ◆ Preventative maintenance
 - ◆ Replacement of modules
 - ◆ Fieldbus diagnostics
 - ◆ Configuration of equipment parameters.
 - (iii) Maintenance use of equipment configuration software, including:
 - ◆ Basic operation of the software
 - ◆ Connecting to intelligent starts and VFDs.
 - ◆ Download and upload of software configuration.
 - ◆ Diagnostics and troubleshooting.
- (i) Number of Sessions:
 - (i) Provide a minimum of two (2) sessions.

E2.7 The contact information for all quotations and purchases from Schneider is:
Garth Eastman
21 Omands Creek Blvd
Winnipeg, MB, R2R 2V2
Telephone: 204-228-7807
E-mail: garth.eastman@se.com

- E2.7.1 Goods to be procured directly from Schneider using the Schneider contact:
- (a) Further to E2.2, goods to be procured via Schneider includes but is not limited to:
 - (i) PLC to Infi90 Termination Unit migration cables;
 - (ii) Process Simulator Software;

- (iii) Historian Server and Client Software;
- (iv) Version Management Software; and
- (v) Training sessions.

E2.7.2 Goods to be procured via Eecol Electric (Eecol), as Schneider's High Tech Automation Distributor (HTAD):

(a) Further to E2.2, goods to be procured via Eecol includes but is not limited to:

- (i) Programmable Controllers (PLCs) including all associated components hardware and software;
- (ii) Programmable Controller Programming Software;
- (iii) HMI System software;
- (iv) Touchscreen HMI systems such as Magellis HMIs;
- (v) Touchscreen HMI Programming Software;
- (vi) Motor Control Centers including all components;
- (vii) Loose VFDs, motor starters, soft starters, and associated components; and
- (viii) Industrial Ethernet Switches as per design. Note that some Ethernet switches may be specified to be from other vendors due to application requirements. Refer to drawings and specifications.

(b) The Eecol contact:

Theodore Howe
1760 Wellington Avenue
Winnipeg, MB, R3H 0E9
Telephone: 204-774-2800
E-mail: Theodore.Howe@eecol.com

(a) All correspondence related to requests-for-quotations to Eecol for goods listed under E2.7.2(a) shall be copied to the Schneider contact listed under E2.7.

(b) For whatever reason, if Eecol is unable to receive or respond to request-for-quotations for goods listed under E2.7.2(a), request-for-quotations may be issued directly to the Schneider contact listed under E2.7.

E2.8 Quotations and orders:

E2.8.1 Reference the following in all quotation requests and purchase orders:

- (a) This Bid Opportunity number; and
- (b) A statement indicating:

"This request / purchase order is subject to the Terms and Conditions of City of Winnipeg Request for Proposal RFP 756-2013."

E3. STANDARDIZED ELECTRIC VALVE ACTUATORS

E3.1 The City has standardized on a specific vendor for the supply and delivery of electric valve actuators. The Standardization Vendor was selected via RFP 331-2014 and was awarded to Rotork Control Canada Ltd. (Rotork).

(a) Copies of the tender documents are available from City of Winnipeg Material Management's website.

E3.2 Goods to be procured via this standardization agreement include but are not limited to:

- (a) Multi-turn electric valve actuators and quarter-turn electric valve actuators with approximate torque requirements of:
 - (i) On/off torques > 250 Nm
 - (ii) Modulating torques > 150 Nm

(b) Associated accessories are also included in the agreement.

Ensure that the appropriate specifications are provided to fully detail the equipment that the vendor needs to supply. Do not assume that the vendor understands the project requirements.

- E3.3 For clarity, this standardization agreement does not include:
- (a) Solenoid valve actuators;
 - (b) Small HVAC damper actuators; and
 - (c) Electric valve actuators with a power supply < 120 VAC.
- E3.4 The use of gearboxes shall not be utilized to reduce actuator torque requirements for the purpose of bypassing this standardization agreement.
- E3.5 The following model series shall be utilized unless otherwise indicated in the Specifications, Drawings or otherwise approved by the Contract Administrator:
- (a) IQ3 Range – (IQ, IQM, IQS, IQT, IQTM)
- E3.6 Valve Integration Assistance
- E3.6.1 Coordinate with Rotork to review the integration of valves with the valve actuators. Comply with guidance provided by Rotork.
- E3.6.2 The review provided by Rotork shall be for the purpose of ascertaining conformance of the actuator application with the given valve. The responsibility for integration of the valve with the valve actuator shall remain with the Contractor.
- E3.6.3 Rotork will make all applicable actuator shop drawings and datasheets available to the Contractor to allow for integration of the valve with the valve actuator.
- E3.6.4 In the event that the valve cannot directly attach to a standard base available for the electric actuator, supply and installation of valve adaptors between the actuator base and the valve will be the responsibility of the Contractor.
- E3.6.5 Costs
- (a) Rotork is obligated to provide valve integration assistance services at no additional cost above the supply of the actuator.
- E3.7 Valve Integration Services
- E3.7.1 The Contractor may engage Rotork to provide valve integration services in addition to that required in E3.6; however, this additional work would be outside of the Standardization Agreement.
- (a) The Contractor is encouraged to provide the best value for services provided.
- E3.8 Field setup and commissioning:
- E3.8.1 Field setup and commissioning of the actuators shall be performed by Rotork under the standardization agreement for the following:
- (a) The first actuator of each type installed on site; and
 - (b) A minimum of two actuators additional of each type, or 5% of the actuators of that type, whichever is greater.
- E3.8.2 Coordinate with Rotork as required to understand the limitations of Rotork's field setup and commissioning services and provide all remaining services to provide a complete commissioning and start-up.
- E3.8.3 Field setup and commissioning of the remaining actuators may be performed by Rotork, or by a representative of the valve manufacturer.
- E3.8.4 Rotork's presence to setup and commission the actuator in no way limits the valve or gate vendor's responsibility for setup and commissioning.
- E3.8.5 Responsibility of the Contractor:

- (a) It is the responsibility of the Contractor to ensure that the installation of the actuator is complete and that the valve is ready to commission, as per Rotork's documented pre-commissioning checklist.

E3.8.6 Field setup and commissioning servers shall include all standard manufacturer recommended start-up and commissioning procedures, as well as the following:

- (a) Visual Inspection
 - (i) Inspect equipment for signs of damage.
 - (ii) Verify mechanical installation per drawings.
 - (iii) Inspect electrical terminal compartment for foreign objects.
- (b) Mechanical Inspection
 - (i) Check all bolts for tightness and to the correct torque.
 - (ii) Check for alignment.
 - (iii) Ensure appropriate clearances for all connecting bushings and connecting faces.
- (c) Electrical Inspection
 - (i) Check all power wiring connections for tightness.
 - (ii) Check all fuses for continuity.
 - (iii) Confirm input voltage and phase rotation is correct.
 - (iv) Confirm that the control / fieldbus connections are correct.
- (d) Start-up Services
 - (i) Coordinate turning on power to the actuator.
 - (ii) Perform functional tests.
 - (iii) Coordinate with City personnel and designated representatives to confirm and finalize the application requirements.
 - (iv) Configure and document all settings, as appropriate for the application.
 - (v) Perform test runs.
 - (vi) Verify that all configuration values are in the correct state.
 - (vii) Transfer the configuration settings to on-site personnel.

Ensure that complete start-up and commissioning requirements are identified in the specifications.

E3.9 On-Site Training Session

E3.9.1 Operation and Basic Maintenance

- (a) Overview
 - (i) Provide instruction to designated City personnel in the operation and basic maintenance of the electric actuators.
- (b) Location
 - (i) The location of the training will be in the City of Winnipeg, in a facility provided by the City.
- (c) Travel
 - (i) Provide all travel and accommodations at no additional cost.
- (d) Submittals
 - (i) Submit the names and qualifications of the proposed instructors.
 - (ii) Submit training proposal complete with hour by hour schedule including brief overview of content of each training segment a minimum of 30 Calendar Days prior to the anticipated date of beginning of training.
- (e) Quality Assurance

- (i) Provide competent instructors thoroughly familiar with all aspects of the electric actuators.
 - (ii) The Contract Administrator may reject instructors it deems to not be qualified.
 - (iii) In the event that the training provided is not satisfactory, reduction of payment may be applied.
- (f) Duration
- (i) The training shall consist of two (2) three and a half (3.5) hours periods, excluding coffee breaks. Both sessions shall be in one day.
 - (ii) Each day shall be assumed to be independent of other training days, and not necessarily aligned with other on-site work or training.
- (g) Materials
- (i) Provide equipment, visual and audio aids, and materials.
 - (ii) Supply manual for each trainee, describing in detail the information included in each training program.
- (h) Attendees
- (i) The attendees are expected to include, but not be limited to:
 - ◆ Operations personnel.
 - ◆ Mechanical maintenance personnel.
 - ◆ Electrical and instrumentation maintenance personnel.
- (i) Content
- (i) Overview of the equipment.
 - (ii) Internal operation of the actuators.
 - (iii) Equipment operating training including:
 - ◆ Local operation of the actuator,
 - ◆ Manual / handwheel operation,
 - ◆ Remote operation, and
 - ◆ Operation via the remote configuration tool.
- (j) Basic equipment maintenance training including:
- (i) Basic diagnostics,
 - (ii) Basic troubleshooting,
 - (iii) Access to historical information and torque values, and
 - (iv) Preventative maintenance
- (k) Number of Sessions:
- (i) Provide a minimum of three (3) sessions.

E3.9.2 Detailed Configuration and Service

- (a) Overview
- (i) Provide instruction to designated City personnel in the detailed setup, configuration, and service of the electric actuators.
- (b) Location
- (i) The location of the training will be in the City of Winnipeg, in a facility provided by the City.
- (c) Travel
- (i) Provide all travel, meals and accommodations at no additional cost.
- (d) Submittals
- (i) Submit the names and qualifications of the proposed instructors.

- (ii) Submit training proposal complete with hour by hour schedule including brief overview of content of each training segment a minimum of 30 Calendar Days prior to the anticipated date of beginning of training.
- (e) Quality Assurance
 - (i) Provide competent instructors thoroughly familiar with all aspects of the electric actuators.
 - (ii) The Contract Administrator may reject instructors it deems to not be qualified.
 - (iii) In the event that the training provided is not satisfactory, reduction of payment may be applied.
- (f) Duration
 - (i) The training shall consist of two days, each seven (7) hour sessions, excluding lunch and coffee breaks. The session days shall be back-to-back.
 - (ii) Each session (2-days) shall be assumed to be independent of other training sessions, and not necessarily aligned with other on-site work or training.
- (g) Materials
 - (i) Provide equipment, visual and audio aids, and materials.
 - (ii) Supply manual for each trainee, describing in detail the information included in each training program.
- (h) Attendees
 - (i) The attendees are expected to include, but not be limited to:
 - ◆ Mechanical maintenance personnel.
 - ◆ Electrical and instrumentation maintenance personnel.
- (i) Content
 - (i) Detailed overview of the equipment and its internal construction.
 - (ii) Equipment configuration training, including:
 - ◆ Setup of the actuator parameters,
 - ◆ Establishing communications, and
 - ◆ Setting torque limits and end limits.
- (j) Equipment maintenance training including:
 - (i) Detailed diagnostics,
 - (ii) Detailed troubleshooting,
 - (iii) Preventative maintenance,
 - (iv) Disassembly,
 - (v) Replacement of modules, and
 - (vi) Fieldbus diagnostics
- (k) Maintenance use of equipment configuration software, including:
 - (i) Basic operation of the software,
 - (ii) Connecting to electric actuators,
 - (iii) Download and upload of the actuator configuration, and
 - (iv) Diagnostics and troubleshooting.
- (l) Number of Sessions:
 - (i) Provide a minimum of two (2) sessions.

E3.10 The contact for all quotations and purchases:

Brett Kinaschuk
Sales Manager- Oil and Gas – Canada
P: (403) 569-9455 ext 12251
C: (403) 993-5522
E: brett.kinaschuk@rotork.com
Rotork Controls (Canada) Ltd.
120S 3030-3rd Ave N.E. Calgary, AB T2A 6T7

Terry Arduini
Sector Manager
Water & Power- Canada
C: +1 (514) 292-3488
E: terry.arduini@rotork.com
Rotork Controls (Canada) Ltd
4228 – 55 Ave NW, Edmonton, AB T6B 3S2

E3.11 Quotations and orders:

E3.11.1 Reference the following in all quotation requests, quotations \ proposals, purchase orders, and invoices:

- (a) This Bid Opportunity number; and
- (b) A statement indicating:

“This request / purchase order is subject to the Terms and Conditions of City of Winnipeg Request for Proposal RFP 331-2014.”

E4. STANDARDIZED GAS DETECTION SYSTEMS

E4.1 The City has standardized on a specific vendor for the supply and delivery of gas detection systems. The Standardization Vendor was selected via RFP 123-2014 and was awarded to Mine Safety Appliances Company, LLC (MSA) c/o Tundra Process Solutions Ltd.

- (a) Copies of the tender documents are available from City of Winnipeg Material Management’s website.

E4.2 Goods to be procured via this standardization agreement include but are not limited to:

- (a) Gas detection sensors;
- (b) Gas detection transmitters;
- (c) Gas detection controllers;
- (d) Gas detection sensor consumables; and
- (e) Associated accessories.

Ensure that the appropriate specifications are provided to fully detail the equipment that the vendor needs to supply. Do not assume that the vendor understands the project requirements.

E4.3 The following model series shall be utilized unless otherwise indicated in the Specifications, Drawings or otherwise approved by the Contract Administrator:

- (a) X5000 gas detection systems.
- (b) GasGard XL controllers.

E4.4 Field setup and commissioning:

E4.4.1 Field setup and commissioning of the gas detection systems may be performed by MSA under the Standardization Agreement. Coordinate with MSA as required to understand the

capabilities and limitations of MSA's field setup and commissioning services and provide all remaining services to provide a complete commissioning and start-up.

Ensure that complete start-up and commissioning requirements are identified in the specifications.

E4.4.2 The Contractor may provide field setup and commissioning services for the gas detection system via alternate means, provided that this does not result in a reduction of the services or quality of work.

E4.4.3 Where MSA is utilized to provide field setup and commissioning, their scope of work has been standardized as follows:

- (a) Provide the services for a factory-trained instrument technician to setup and commission the gas detection instruments and controllers, as requested by the City. It is expected that setup and commissioning will be required for some, but not all, of the equipment.
- (b) Qualification
 - (i) The personnel provided shall be a factory trained and certified technologist, with a minimum of one year of experience working with the products proposed.
- (c) Services
 - (i) Provide a full eight hours of on-site labour, for each allocated day, to setup and commission the gas detection systems.
 - (ii) Provide all travel and tools required.

E4.5 Training

E4.5.1 Local Training Session

- (a) Overview
 - (i) Provide instruction to designated City personnel in the operation and maintenance of the gas detection equipment.
- (b) Location
 - (i) The location of the training will be in the City of Winnipeg, in a facility provided by the City.
- (c) Travel
 - (i) Provide all travel, meals and accommodations at no additional cost.
- (d) Submittals
 - (i) Submit the names and qualifications of the proposed instructors.
 - (ii) Submit training proposal complete with hour by hour schedule including brief overview of content of each training segment a minimum of 30 Working Days prior to the anticipated date of beginning of training.
- (e) Quality Assurance
 - (i) Provide competent instructors thoroughly familiar with all aspects of the gas detection equipment.
 - (ii) The Contract Administrator may reject instructors it determines to not be qualified.
 - (iii) In the event that the training provided is not satisfactory, reduction of payment may be applied.
- (f) Duration
 - (i) The training shall be a minimum of eight (8) hours in duration, excluding coffee and lunch breaks.
 - (ii) Each session shall be assumed to be independent of other training sessions, and not necessarily aligned with other on-site work or training.
- (g) Materials
 - (i) Provide equipment, visual and audio aids, and materials.

- (ii) Supply manual for each trainee, describing in detail the information included in each training program.
- (h) Attendees
 - (i) The attendees are expected to include, but not be limited to:
 - ◆ Electrical and instrumentation maintenance personnel and
 - ◆ Operations personnel.
 - (i) Content
 - (i) Overview of the equipment.
 - (ii) Equipment maintenance training including:
 - ◆ Installation,
 - ◆ Configuration,
 - ◆ Troubleshooting, and
 - ◆ Preventative maintenance
 - (j) Number of Sessions:
 - (i) Provide a minimum of two (2) sessions.

E4.6 The contact for all quotations and purchases:

Darren Bye
Operations Manager, Measurement & Analytical
11061-269 St
Acheson, AB
T7X 6E1
Telephone: 587-689-2158
Mobile: 780-239-7009
E-mail: dbye@tundrasolutions.ca

E4.7 Quotations and orders:

E4.7.1 Reference the following in all quotation requests, quotations \ proposals, purchase orders, and invoices:

- (a) This Bid Opportunity number; and
- (b) A statement indicating:

“This request / purchase order is subject to the Terms and Conditions of City of Winnipeg Request for Proposal RFP 123-2014.”

E5. STANDARDIZED INSTRUMENTATION

E5.1 The City has standardized on a specific vendor for the supply and delivery of specific instrumentation. The Standardization Vendor was selected via RFP 449-2014 and was awarded to Trans-West Supply Company Inc. (Trans-West).

- (a) Copies of the tender documents are available from City of Winnipeg Material Management’s website.

E5.2 Goods to be procured via this standardization agreement include but are not limited to:

- (a) Flowmeters – Electromagnetic;
- (b) Flowmeters – Differential pressure based;
- (c) Pressure Transmitters including manifold assemblies;
- (d) Temperature Transmitters including temperature elements and thermowells;
- (e) Ultrasonic Level Transmitters; and
- (f) Associated accessories.

Ensure that the appropriate specifications are provided to fully detail the equipment that the vendor needs to supply. Do not assume that the vendor understands the project requirements.

- E5.3 For clarity, this standardization agreement does not include:
- (a) Flowmeters - Coriolis;
 - (b) Flowmeters – Thermal Dispersion;
 - (c) Flowmeters – Ultrasonic;
 - (d) Flow switches (i.e. mechanical);
 - (e) Pressure switches;
 - (f) Temperature switches;
 - (g) Radar Level Transmitters; and
 - (h) Level Switches (non-ultrasonic based).
- E5.4 The following model series shall be utilized unless otherwise indicated in the Specifications, Drawings or otherwise approved by the Contract Administrator:
- (a) Magnetic Flowmeter Flowtubes – SITRANS F M MAG 5100W series.
 - (i) SITRANS F M MAG 3100W series may be utilized where specified.
 - (b) Magnetic Flowmeter Transmitters - SITRANS F M MAG 6000 series.
 - (c) Pressure Transmitters - SITRANS P420.
 - (d) Temperature Transmitters
 - (i) SITRANS TF (Process Applications)
 - (ii) SITRANS TH400 (HVAC applications)
 - (e) Ultrasonic Level Transmitters
 - (i) Integrated applications: SITRANS Probe LU
 - (ii) Separate controller applications: Multiranger 100/200 with EchoMax transducers.
- E5.5 Field setup and commissioning:
- E5.5.1 Field setup and commissioning of the gas detection systems may be performed by Trans-West under the Standardization Agreement. Coordinate with Trans-West as required to understand the capabilities and limitations of Trans-West's field setup and commissioning services and provide all remaining services to provide a complete commissioning and start-up.
- E5.5.2 Field setup and commissioning of the standardized instrumentation shall be performed by Trans-West under the standardization agreement for the following:
- (a) The first instrument of each type installed on site; and
 - (b) A minimum of five additional instruments of each type, or 10% of the actuators of that type, whichever is greater.
- E5.5.3 The Contractor may provide field setup and commissioning services for the remaining instrumentation via alternate means, provided that this does not result in a reduction of the services or quality of work.
- E5.5.4 The services provided are to include at all standard manufacturer recommended start-up and commissioning procedures, as well as the following:
- (a) Visual Inspection
 - (i) Inspect instrument for signs of damage,
 - (ii) Verify mechanical and piping installation per drawings and manufacturer requirements,
 - (iii) Verify wiring installation per drawings and manufacturer requirements, and
 - (iv) Inspect electrical terminal compartment for foreign objects.

- (b) Mechanical Inspection
 - (i) Check all connections and bolts for tightness and to the correct torque,
 - (ii) Check for alignment, and
 - (iii) Ensure appropriate clearances for all connecting bushings and connecting faces.
- (c) Electrical Inspection
 - (i) Check all power wiring connections for tightness,
 - (ii) Check all fuses in the instrument for continuity,
 - (iii) Confirm input voltage is correct, and
 - (iv) Confirm that the signal / fieldbus connections are correct.
- (d) Start-up Services
 - (i) Coordinate turning on power to the instrument,
 - (ii) Configure all applicable settings and parameters that could not be configured prior to installation,
 - (iii) Perform functional tests,
 - (iv) Coordinate with City personnel and designated representatives to confirm and finalize the application requirements,
 - (v) Configure and document all settings, as appropriate for the application,
 - (vi) Coordinate to perform test demonstrations to verify instrument performance,
 - (vii) Verify that all configuration values are in the correct state, and
 - (viii) Transfer the configuration settings to on-site personnel.
- (e) Documentation
 - (i) Provide a signed documented commissioning form for each instrument, in a format acceptable to the Contract Administrator.
- (f) Travel
 - (i) Provide all travel and accommodations at no additional cost.
- (g) Personnel:
 - (i) Personnel shall be factory trained in the maintenance, configuration, and service of the proposed instrumentation.

E5.5.5 Responsibility of the Contractor:

- (a) It is the responsibility of the Contractor to ensure that the installation of the instrumentation is complete and that the instrument is ready to commission prior to engaging Trans-West to commission any instrumentation.

E5.6 Training

E5.6.1 Local Training Session – General Requirements

- (a) Overview:
 - (i) Provide instruction to designated City personnel in the operation, configuration, and maintenance of the proposed instruments and associated components.
- (b) Location:
 - (i) The location of the training will be in the City of Winnipeg, in a facility provided by the City.
 - (ii) The room will be classroom style.
- (c) Submittals:
 - (i) Submit the names and qualifications of the proposed instructors.
 - (ii) Submit training proposal complete with hour by hour schedule including brief overview of content of each training segment a minimum of 30 Calendar Days prior to the anticipated date of beginning of training.

- (d) Quality Assurance:
 - (i) Provide competent instructors thoroughly familiar with all aspects of the instruments.
 - (ii) The Contract Administrator may reject instructors it deems to not be qualified.
 - (iii) In the event that the training provided is not satisfactory, reduction in payment may be applied.
- (e) Materials:
 - (i) Provide equipment, visual and audio aids, and materials.
 - (ii) Sample instruments of each type shall be provided, along with all equipment required to power and configure the instruments.
 - (iii) Supply manual for each trainee, describing in detail the information included in each training program.
- (f) Attendees:
 - (i) The attendees are expected to include, but not be limited to:
 - ◆ Electrical and instrumentation maintenance personnel.

E5.6.2 Local Training Session – Electromagnetic Flowmeter, Pressure, Temperature

- (a) Provide local training sessions, in accordance with E8.6.1:
- (b) Duration:
 - (i) Each training session shall be a minimum of six (6) hours in duration, excluding coffee and lunch breaks.
 - (ii) Each day shall be assumed to be independent of other training days, and not necessarily aligned with other on-site work or training.
- (c) Scope:
 - (i) Each training session shall address the complete scope of all products proposed.
- (d) For each instrument type, provide the following training content:
 - (i) Overview of the instrument,
 - (ii) Equipment maintenance training, including:
 - ◆ Installation,
 - ◆ Troubleshooting,
 - ◆ Preventative maintenance,
 - ◆ Replacement of components,
 - ◆ Fieldbus network troubleshooting and diagnostics, and
 - ◆ Calibration procedures.
 - (iii) Maintenance use of associated software and HART/PROFIBUS parameters, including:
 - ◆ Basic operation of software,
 - ◆ Connecting to instruments,
 - ◆ Configuration of parameters,
 - ◆ Download and upload software configuration, and
 - (iv) Diagnostics and troubleshooting.
- (e) Number of Sessions:
 - (i) Provide a minimum of two (2) sessions for each instrument type.

E5.6.3 Local Training Session – Ultrasonic Level

- (a) Provide local training sessions, in accordance with E5.6.1:
- (b) Duration:

- (i) Each training session shall be a minimum of three (3) hours in duration, excluding coffee and lunch breaks.
 - (ii) Each day shall be assumed to be independent of other training days, and not necessarily aligned with other on-site work or training.
- (c) Scope:
- (i) Each training session shall address the complete scope of all products proposed.
- (d) For each instrument, provide the following training content:
- (i) Overview of the instrument,
 - (ii) Equipment maintenance training, including:
 - ◆ Installation,
 - ◆ Troubleshooting,
 - ◆ Preventative maintenance,
 - ◆ Replacement of components,
 - ◆ Fieldbus network troubleshooting and diagnostics, and
 - ◆ Calibration procedures.
 - (iii) Maintenance use of associated software and HART/PROFIBUS parameters, including:
 - ◆ Basic operation of software,
 - ◆ Connecting to instruments,
 - ◆ Configuration of parameters,
 - ◆ Download and upload software configuration, and
 - ◆ Diagnostics and troubleshooting.
- (e) Number of Sessions:
- (i) Provide a minimum of two (2) sessions for each instrument type.

E5.6.4 Electromagnetic Flowmeter Calibration Verification Tool Training

- (a) Provide local training sessions, in accordance with E5.6.1:
- (b) Provide one training session per unit supplied, to instruct designated City personnel in the operation, configuration, and maintenance of the proposed instruments and associated components.
- (c) The location of the training will be in the City of Winnipeg, in a facility provided by the City.
- (d) Provide competent instructors thoroughly familiar with all aspects of the verification tool.
 - (i) The Contract Administrator may reject instructors it deems to not be qualified.

E5.6.5 Each training session shall be a minimum of four (4) hours in duration, excluding coffee and lunch breaks, or longer as required to instruct personnel in the required operation.

Ensure that complete start-up and commissioning requirements are identified in the specifications.

E5.7 The contact for all quotations and purchases:

Amurthan (Amu) Abimanan Branch Manager
126 Bannister Road
Winnipeg, MB, R3R 0S3
Telephone: 204-783-0100
Mobile: 204-782-1864
E-mail: amu@transwest-mb.com

E5.8 Quotations and orders:

E5.8.1 Reference the following in all quotation requests, quotations \ proposals, purchase orders, and invoices:

- (a) This Bid Opportunity number; and
- (b) A statement indicating:

“This request / purchase order is subject to the Terms and Conditions of City of Winnipeg Request for Proposal RFP 449-2014.”