



January 18, 2018

**Proposal Q17.0419C**

Rockwell Automation MV Business  
135 Dundas Street  
Cambridge, Ontario N1R 5X1

**Attention: Jeff Mills**

Dear Mr. Mills,

JMP Engineering Inc. ("JMP") appreciates this opportunity to offer a proposal for the following project:

**Rockwell MV TRWD Rolling Hills PS PLC Panels**

The accompanying proposal provides a comprehensive response to the requirements outlined by Rockwell Automation Medium Voltage Business ("Rockwell") in your RFQ received on March 17, 2017 as well as our subsequent conversations.

Rockwell plans to implement one medium voltage drives at the Tarrant Region Water District (TRWD) Rolling Hills Pump Station requiring a Modicon M580 PLC control panel.

JMP will provide the design, programming, equipment supply, testing and commissioning for the PLC control panel.

JMP offers Rockwell a strong engineering partner for implementation of this project. Our experience with Modicon control systems allows us to provide Rockwell with a quality and on-time project deliverable, which meets the provided specifications.

We look forward to working with you. I am available at (519) 652-2741 x228 to answer any questions, or to put this proposal into action.

Sincerely,

**JMP ENGINEERING INC.**

Adam Douglas, C.E.T.  
Branch Leader - London

AD/rf



## Executive Overview

### JMP Company Overview

JMP is an engineering services company with eleven locations in the U.S. and Canada, focusing on Fortune 500 manufacturers and producers (or medium and large companies). We provide engineering services and turnkey solutions in the areas of control system integration, smart robotic applications, and information solutions.

We differentiate ourselves with:

- Our Promise:
  - Guaranteed Performance, Exceptional Communication, and Radical Commitment
- Customer Satisfaction Scores:
  - Out of the top 25 SI's in our space, we are the only ones who formally survey our customers and publish those results on our website

JMP Engineering has achieved status as a Rockwell Automation Solution Partner. We are one of only fifty companies in North America to achieve this status. This enhanced relationship with Rockwell Automation, coupled with being CSIA (Control System Integrators Association) Certified and RIA (Robotic Industries Association) Certified, sets JMP apart as being the **only company in the world** with these three unique and complementary classifications.

## 1 PROJECT SUMMARY

### 1.1 Project Intent

We understand that the intent of this project is to provide one PLC control back plate to be installed in a medium voltage VFD which Rockwell proposes to supply to the Tarrant Region Water District (TRWD) Rolling Hills Pump Station.

### 1.2 Project Scope/Solution Overview

We understand JMP's scope of work to include the following:

- Project management, attend meetings
- Design and drafting using AutoCAD
- Modicon PLC Programming
- Documentation
- Control panel back plate supply
- Testing at panel builder facility
- Testing support at Rockwell in Cambridge, Ontario
- Site acceptance testing and training at end customer location

## 2 PROJECT DELIVERABLES

Based on our understanding of the project scope, JMP proposes to supply the following:

### 2.1 Engineering

#### 2.1.1 Project Management

- Design support and coordination
- Panel and material supply coordination

#### 2.1.2 Design and Drafting

- Electrical design and drafting including:
  - Power/control schematics
  - Safety system
  - Communication networks
  - Panel layout and Bill of Material

#### 2.1.3 Programming

- PLC

#### 2.1.4 Control Panel Testing in London, Ontario

- Power on, I/O checks, debug and testing during regular time
- To be done before delivery to Rockwell in Cambridge, Ontario
- Rockwell is invited to witness this testing
- Documentation will be provided to serve as proof of completion

### 2.1.5 Documentation

The following documentation will be provided in hard copy and/or electronic format:

- Schedule and milestone plan
- Panel FAT documentation – testing plan
- Recommended spare parts list
- Electrical schematics
- OEM manuals/cut sheets
- Digital and hard copy of program listings
- Controls narrative

### 2.2 Equipment

Based upon preliminary engineering, the following major equipment components will be supplied to complete the functionality:

- (1) Control panel back plate including:
  - UL Certification
  - Transformer
  - Power supply
  - Stratix series managed Ethernet switch
  - Modicon M580 PLC control system and X80 I/O
    - (1) M580 Ethernet capable PLC
    - (1) M580 PLC system power supply
    - (2) Chassis, 8 slot
    - (3) Input modules, 16pt, 24vdc, includes 1 installed spare
    - (3) Relay output modules, 8pt, includes 1 installed spare
    - (2) Analog input modules, 8ch, includes 1 installed spare
    - (2) Analog output modules, 4ch, includes 1 installed spare
    - (A/R) Slot fillers
  - Includes shipping to Rockwell in Cambridge, Ontario
  - A single spare PLC and power supply will be provided
  - Includes spare panel components (fuses, tb's etc.) as outlined in the specifications
  - Back plate to be designed and built to fit into 36" x 91" enclosure

#### 2.2.1 Procurement, Fabrication, Build and Assembly

- Procure purchased components
- Assemble system

## 2.2.2 Safety

- Our systems are designed consistent with the following standards:
  - For US end users:
    - National Electrical Safety Code
    - ANSI B11.0 – Safety of Machinery – General Requirements and Risk Assessment
    - ANSI/RIA R15.06 – Robot Safety Standard
    - ANSI Z244.1 – Control of Hazardous Energy – Lockout/Tagout and Alternative Methods
  - For Canadian end users:
    - CSA-C22.2 – General requirements – Canadian Electrical Code, Part II
    - CSA Z434 – Industrial Robots and Robot Systems – General Safety Requirements
    - CSA Z432 – Safeguarding of Machinery
    - CSA Z460 – Control of Hazardous Energy – Lockout and Other Methods

## 2.2.3 Software

JMP will supply the source code for all applications in the system. It is the responsibility of the customer to supply viewing/editing software for the code.

## 2.3 On-Site Services

### 2.3.1 Shipping

- Shipping to Rockwell in Cambridge will be completed by JMP. All other shipping requirements will be the responsibility of others.

### 2.3.2 Testing Support at Rockwell in Cambridge, Ontario

- Power on, I/O checks, debug and testing during regular time.
- JMP has allowed for up to 24 hours on-site testing support once installation is complete.

### 2.3.3 Commissioning Support at End User in Trinidad, Texas

- Power on, I/O checks, debug and testing during regular time.
- JMP has allowed for up to 24 hours on-site commissioning support once installation is complete.

### 2.3.4 System Training

- Training time has not been included as part of this proposal.

### 3 CLARIFICATIONS

#### 3.1 Customer Specifications

JMP has reviewed the specifications and drawings provided and will comply with its requirements where possible. Any deviations will be submitted to the customer in writing for approval. However, JMP would like to request a deviation at this time for the following items:

- Arc flash warning labels will not be provided.

#### 3.2 Reference Documents

- Section 16381 MV VFDs.pdf
  - Sections 2.11 – 2.16
- Appendix A - Drawings.pdf

#### 3.3 Equipment and Services Supplied by the Customer

This proposal is based on the customer providing services including, but not limited to:

- Unloading of delivery truck and rough positioning of equipment into its location at customer facility
- Service technicians to assist JMP personnel during installation at customer facility
- Certification by CSA, the Electrical Safety Authority (ESA), UL, or other applicable governing body

#### 3.4 Assumptions

This proposal was prepared based on the following assumptions:

- The panel back plate will be built and testing by JMP. Installation of the back plate into the Rockwell VFD enclosure will be completed by Rockwell at their facility.
- Witness time has not been included in this proposal.
- All materials, other than those mentioned in Section 2.2 of this proposal, is the responsibility of others.
- Test stand development is not included.
- Control room SCADA programming and integration is not included.

### 3.5 Pre-start Health and Safety Review (PHSR)

It is the responsibility of the owner to ensure that the equipment described in this proposal meets all statutory requirements for the jurisdiction where the equipment is installed.

For full compliance with safety standards the customer should conduct a Cross Functional Risk Assessment to identify potential hazards during each phase of machine life including commissioning, operation, break-down, maintenance, setting and process changeover. The risk assessment determines the safeguards and control reliability requirements and may be different from what is provided in this proposal.

JMP strongly recommends conducting a risk assessment and preliminary Safety Review during the design phase of this project to minimize changes and associated costs. Unless specifically listed as a deliverable in this proposal, JMP has not included the time and cost of conducting or participating in a customer risk assessment or providing a Safety Review, any changes required to JMP's scope of supply will be quoted as an extra.

## 4 WARRANTY

### 4.1 Hardware Warranty

JMP Engineering warrants any new machinery and equipment installed against electrical and mechanical defects for a period of 36 months from start-up or 54 months from shipment. Warranty shall be null and void where preventative maintenance is not done as per the supplied documentation or where evidence of machine misuse, abuse, modifications, tampering or neglect exists and/or to wear items. Any new components not manufactured by JMP Engineering, which fail under the original manufacturer's warranty policy, will be serviced or replaced by the original manufacturer. Any installation or replacement completed by JMP Engineering will be completed for an extra charge on a Time & Material basis at JMP Engineering standard rates. Shipping charges for warranty items are the responsibility of the customer.

### 4.2 Software Warranty

JMP warrants that software developed by JMP specifically for Customer's application will perform in accordance with its specifications for a period of ninety (90) days from the date of acceptance by Customer if the software is properly used as specified by JMP. Warranty shall be null and void where evidence of misuse, abuse, modifications, tampering or neglect exists. If any defect appears during this period, the nonconformity will be corrected by JMP during regular business hours. Standard software products produced by another vendor(s) and provided to Customer by JMP have the warranty offered by such vendor(s). Improvements and enhancements to any standard software products will not be provided during the warranty period unless the enhancements correct a defect found in the software that affects the ability of the software to perform in Customer's original application.

## 5 COMMERCIAL DETAILS

### 5.1 Base System

Base system price including:

- Engineering ..... \$33,408
- Panel Supply..... \$24,928
- Spare Parts (1 PLC and 1 Rack Power Supply)..... \$9,068
- Onsite Services..... \$7,438

Net Price..... \$74,842

**The above prices are in Canadian funds and are firm for 90 days from the date of issue.**

### 5.2 Extras

**Please note that if any costs are incurred for the following reasons, they will be considered extra and billed at our prevailing rates:**

- Information provided for the development of this proposal is understood to be accurate, complete, and in English. Site conditions are understood to be accurate and hardware is assumed to be functional. We have allowed for a 5% deviation in accuracy of these items. Any time or expenses incurred due to a greater deviation will constitute an engineering change and will be billed accordingly. Any Time and Material (T&M) or Time and Expense (T&E) estimates are not to be interpreted as not to exceed amounts. Actual price may exceed estimated T&M or T&E amounts.
- Additions or modifications to the scope or description of work will be considered extra.
- Delays or on-site wait times resulting from a means outside the control of JMP beyond a cumulative total of eight hours will be considered extra.
- If the customer requires additional time on-site by JMP, beyond the time stated in this proposal, for work outside the scope of supply, it will be considered extra.
- Any scheduling changes by parties other than JMP, affecting the resources or hours required to complete the project on time will be considered extra.
- All engineering services have been proposed at regular time unless specified. If services are required outside of regular hours, overtime premiums could apply.
- JMP’s proposal provides for a single programming iteration, without provision for on-going client/customer directed changes, revisions or concept changes.
- Changes in the equipment, layout, or process which alters the scope of work may be subject to additional fees; the change of scope will be reviewed and estimated, if required.
- Included in this proposal are corrective actions on programming work that are solely associated with errors or omissions on the part of JMP. Corrective actions are limited to programming revisions.
- In the event that this project is cancelled, appears to be cancelled, or is delayed for greater than 45 days for convenience or for cause, then JMP will invoice the customer, and the customer will pay all material and labour incurred by JMP at JMP’s prevailing Time and Material (T&M) rates. Payment will be due Net 10 days from date of invoice from JMP to the customer.



### 5.3 Engineering Change Authorization (ECA) Process

In the event that scope changes are required that will impact the scope (quality, functionality, cost or delivery) of the project, JMP will prepare an ECA and submit it to the customer for approval prior to performing the additional work. All ECAs will be sent to the customer including a description of the additional work required, reasons for the change, and the additional cost (if any) that will be incurred. The approval process for handling scope changes will be reviewed at the onset of the project.

### 5.4 Scheduling

Please note that all scheduling is subject to equipment and engineering resource availability. Actual delivery is to be confirmed at time of order.

### 5.5 Terms of Payment

- 10% to accompany purchase order, Net 0 days.
- 20% upon engineering approval.
- 50% upon panel FAT testing in London Ontario.
- 10% upon commencement of testing support.
- 10% upon acceptance.

All payments other than the down payment are Net 30 days.

### 5.6 Transportation and Delivery

EXW JMP Engineering Inc., London, Ontario

### 5.7 Taxes

Extra, if applicable.

### 5.8 Terms and Conditions of Sale

Please refer to the attached JMP Engineering Inc. Terms and Conditions document.

### 5.9 Disclosure

The information contained in this document is strictly confidential and contains proprietary information and intellectual property belonging to JMP Engineering Inc. which shall not be retransmitted, reproduced, or communicated to any third party without the prior written consent of JMP Engineering Inc.

## Appendix A

### Proposal Revision Notes

**Rev A            March 24, 2017**

- Initial release

**Rev B            January 16, 2018**

- Split total cost into the following line items:
  - Engineering
  - Panel Supply
  - Onsite Commissioning
  - Added ECA01 cost into Equipment cost

**Rev C            January 18, 2018**

- Split Panel supply cost out into
  - Panel supply
  - Spare Hardware

## Appendix B

### About JMP

#### At JMP, we are continually redefining what is possible.

This purpose helps us to create relevant, reliable, and easily maintained automation, control, and information solutions that take advantage of current technology to enhance manufacturing performance for clients in:

*Aggregates, Cement & Minerals*  
*Automotive*  
*Consumer Packaged Goods*  
*Entertainment*  
*Water Wastewater*  
*Food & Beverage*

*Industrial Energy & Utility*  
*Life Sciences*  
*Mining and Metal Processing*  
*Oil & Gas*  
*Pulp & Paper*  
*Specialty Chemical, Petrochemical & Refining*

We have forged strong, long-term working relationships with both clients and partners because we always do what we say we'll do. Every time. All the time.

#### Our competencies equate to performance.

##### Automation

*Automation and migration planning*  
*Complete turnkey systems*  
*Flexible Material Handling systems*  
*Quality solutions*

##### Information

*Manufacturing IT Strategy*  
*MES/MOM software solutions*  
*Track & Trace solutions*  
*Plant floor data and networking*

##### Control

*Electrical system design*  
*PLC, DCS and HMI*  
*Motion control, vision systems*  
*Powerhouse and Boiler Control*  
*Advanced Process Control*

##### Services

*Operational Support Services*  
*Equipment, functional, and bid specifications*  
*Application training*  
*Continuous improvement services*  
*Project Management*

#### Our project management methodology leads to success.

JMP follows a very structured approach to system design and project management. Based on the Project Management Institute (PMI) process for project management, the JMP Project Management Methodology defines the process of planning, organizing, and managing tasks and resources to complete your project successfully. Our Project Manager is responsible for ensuring this success, and each of our project engineers is trained on our Project Management Methodology as well. At the beginning of a project, we document our project team, create a master project schedule and set a project review meeting schedule. We recognize that communication is critical to the success of every project and in ensuring the scope of supply is delivered on time and on budget.

## Terms and Conditions of Sale between JMP Engineering Inc. and Customer

JMP Engineering Inc. (JMP) and Customer agree that the terms and conditions in this document, its schedules and in any written specification of services to be furnished by JMP, govern exclusively the sale of goods and services by JMP. Any Order submitted by Customer will only be accepted by JMP on the condition that the following terms and conditions apply and any addition or modification is not binding upon JMP unless it is in writing and signed by an authorized representative of JMP.

### TERMS OF CREDIT

JMP will extend a level of credit to Customer in the form of work-in-process and outstanding invoices. If, at any point, the credit limit is exceeded, JMP will send notice to Customer requesting payment of amount necessary to reduce balance to below the extended limit. In addition, if any invoice remains unpaid fifteen (15) days beyond the due date, JMP will send notice to Customer requesting payment of the outstanding invoice in full. Unless otherwise stated, invoice due date is within thirty (30) days of the invoice date. If either of the above payments is not received within fifteen (15) days of the date of the notice, any services then being provided by, or scheduled to be provided by JMP in the future, will be suspended until the required payment is received. JMP will charge interest on any unpaid invoice balances at the rate of two percent (2%) per month (24% per annum) from the due date until payment is received.

### DELIVERY

If shipment of any goods is delayed at the request of or due to acts or omissions by Customer, JMP has the right to store such goods at a place of its own choice at Customer's expense. JMP shall not be liable for any loss, damage or delay in delivery of goods or services due to acts of God or causes beyond its reasonable control. To the extent that any such causes delay any deliveries of goods or services by JMP, the time for performance or delivery by JMP shall be extended for a period of time mutually agreed upon by Customer and JMP.

### MATERIAL FURNISHED BY CUSTOMER

Material, tools, parts and other property provided to JMP by Customer is at Customer's sole risk and expense.

### HARDWARE WARRANTY

JMP warrants any new machinery and equipment installed against electrical and mechanical defects for a period of one (1) year from the date of installation. Warranty shall be null and void where preventative maintenance is not done as per the supplied manual or where evidence of machine misuse, abuse, modifications, tampering or neglect exists and/or to wear items. Any new components not manufactured by JMP, which fail under the original manufacturer's warranty policy, will be serviced or replaced by the original manufacturer. Any installation or replacement completed by JMP will be completed for an extra charge on a time & material basis at JMP standard rates. Shipping charges for warranty items are the responsibility of the customer.

### SOFTWARE WARRANTY

JMP warrants that software developed by JMP specifically for Customer's application will perform in accordance with its specifications for a period of ninety (90) days from the date of acceptance by Customer if the software is properly used as specified by JMP. Warranty shall be null and void where evidence of misuse, abuse, modifications, tampering or neglect exists. If any defect appears during this period, the nonconformity will be corrected by JMP during regular business hours. Standard software products produced by another vendor(s) and provided to Customer by JMP have the warranty offered by such vendor(s). Improvements and enhancements to any standard software products will not be provided during the warranty period unless the enhancements correct a defect found in the software that affects the ability of the software to perform in Customer's original application.

### INTELLECTUAL PROPERTY

JMP is the sole owner of all intellectual property rights in any material, equipment, process or program developed by JMP in connection with Customer Order. Customer may use such material, equipment, process or program for its own use, as this use was contemplated when developed by JMP. JMP may utilize this intellectual property to obtain patents, trademarks, copyrights, and industrial property rights and for any government research and development program credits deemed applicable. JMP considers all Orders potentially eligible for program credits, however, if required, JMP will relinquish these rights to Customer for a fee of 5% of the contract value payable to JMP.

### SOLICITATION OF JMP EMPLOYEES BY CUSTOMER

Customer acknowledges the value and importance of JMP's employees to JMP's business. As such, and due to Customer's unique access to JMP employees, Customer agrees that it will not directly or indirectly solicit, employ, or assist any third party in employing any JMP employee. If this condition is breached, Customer agrees to pay JMP a fee of forty thousand dollars (\$40,000).

### TITLE

Title to any Articles sold will remain vested in JMP until payment in full is received by JMP. If Customer defaults in payment or any other breach of this Order, JMP or its representative may enter Customer's premises and dismantle, repossess and remove any articles sold under this order along with all tooling, testing, measuring and other equipment used in connection with its manufacturing. Customer releases JMP from any and all liability for actions taken under this paragraph.

### REMEDIES AND DAMAGES

If JMP breaches any provisions of this Order, Customer's sole and exclusive remedy, regardless of the form of action, whether based on contract, tort including negligence, or otherwise, is limited to the recovery of its direct, provable damages and will not exceed the amount paid by the Customer to JMP for the equipment and/or services provided by JMP under this Order. This limitation applies whether or not the alleged breach by JMP is a breach of condition or fundamental term, or a fundamental breach.

### LIMITATION OF LIABILITY

In no event, regardless of cause, will JMP assume responsibility or be liable for:

- (1) penalties or penalty clauses of any description unless otherwise specifically agreed to in writing, or
- (2) indemnification of Customer or others for costs, damages, or expenses arising out of or related to the goods or services of this Order unless otherwise specifically provided for, or
- (3) punitive, exemplary or aggravated damages, or
- (4) special, incidental or consequential damages of any kind, including but not limited to, loss of profits or revenue, failure to realize expected savings or other commercial or economic losses of any kind, loss of data, use of equipment or computer time, and downtime costs, even if JMP has been advised of the possibility of them.

### APPLICABLE LAW

These terms and conditions will be interpreted in accordance with the laws of the Province of Ontario, and the laws of Canada applicable therein.