



City of Grand Island

Tuesday, December 18, 2012

Council Session

Item G13

#2012-361 - Approving Standardizing on Allen-Bradley Electrical Components for Headworks Improvements Project, WWTP-2013-1

Staff Contact: Terry Brown, Interim Public Works Director

Council Agenda Memo

From: Marvin Strong, Wastewater Plant Engineer

Meeting: December 18, 2012

Subject: Standardizing on Allen-Bradley Electrical Components for Headworks Improvements Project, WWTP-2013-1

Item #'s: G-13

Presenter(s): Terry Brown, Interim Public Works Director

Background

City staff is requesting City Council recognition for standardizing Allen-Bradley electrical components. Past plant projects, hardware, and educational training have standardized the Allen-Bradley instrumentation architecture within the treatment facilities processes. The standardized architecture includes Programmable Logic Controllers (PLC), and Variable Frequency Drive (VFD). The Headworks Improvements Project, WWTP-2013-1 will utilize both architecture environments within its design philosophy.

In October 2011, the city embarked on development of construction plans for the rehabilitation / replacement of the City's headworks facilities (pumping, flow measurement, screening, and grit collection systems). City staff in conjunction with consulting engineer; Black & Veatch are in the final development stage of the construction bidding documents for the Headworks Improvements Project, WWTP-2013-1.

Discussion

An expanded Supervisory Control and Data Acquisition system (SCADA) will be required to network upgraded pumping, flow measurement, screening, and grit collection systems for the Headworks Improvements Project, WWTP-2013-1. Allen Bradley Programmable Logic Controllers network architecture is the treatment facilities current running platform performing Human Machine Interface (HMI) operations. With new and existing systems currently in design the insurance of systems compatibility will require products of the same manufacturer and of the same series of product line.

Variable Frequency Drive (VFD) technology provides advanced application flexibility and control system integration, which is demanded in today's treatment facility needs. The drive is developed in a complex manner, trained personnel are required, software, hardware, licensing, maintenance agreements, network compatibility are all reasons to maintain a standard manufacturer in VFD's. Allen Bradley has a local supplier (Kriz Davis) in Grand Island that offers any required services. Currently the treatment facility operates and maintains thirty (30)

VFDs in its process control operations, in which two (2) are not of the Allen Bradley product line. New facilities will add the addition of six (6) VFDs.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve a resolution specifying Allen Bradley products, as a single manufacturer for Programmable Logic Controllers (PLC), and Variable Frequency Drive (VFD) systems for Headworks Improvements Project, WWTP-2013-1.
2. Refer the issue to a Committee.
3. Postpone the issue to future date.
4. Take no action on the issue.

Recommendation

The result of this Headworks Improvements Project, WWTP-2013-1, will provide placement of new pumping, flow measurement, screening, and grit collection systems, which provides the essential infrastructure needed for effective preliminary treatment process stream at the wastewater treatment plant.

City Staff recommends that the Council approve adding the specifying language to the bidding documents for Headworks Improvements Project, WWTP-2013-1, that shall list Allen Bradley products, as a single manufacturer for Programmable Logic Controllers (PLC), and Variable Frequency Drive (VFD) systems.

Sample Motion

Move to approve Allen Bradley products, as a single manufacturer, for Programmable Logic Controllers (PLC), and Variable Frequency Drive (VFD) systems in the Headworks Improvements Project, WWTP-2013-1.

RESOLUTION 2012-361

WHEREAS, Waste Water Division is specifying Programmable Logic Controllers (PLC), and Variable Frequency Drive (VFD) Equipment for a construction project entitled the Headwork's Improvements Project, WWTP-2013-1; and

WHEREAS, City Staff in conjunction with, City Administration recommends that Allen Bradley products, as single manufacturer for Programmable Logic Controllers (PLC), and Variable Frequency Drive (VFD) systems; and

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the City of Grand Island be, and hereby is, authorizing city staff to add the specifying language to the bidding documents for Headwork's Improvements Project, WWTP-2013-1, that shall list Allen Bradley products, as a single manufacture, for Programmable Logic Controllers (PLC), and Variable Frequency Drive (VFD) systems.

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Adopted by the City Council of the City of Grand Island, Nebraska, December 18, 2012.

Jay Vavricek, Mayor

Attest:

RaNae Edwards, City Clerk

Approved as to Form	☐ _____
December 15, 2012	☐ City Attorney