

Scope of Work: CWTS and Potable Booster Skid PLC

Upgrade

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This will be a turnkey replacement of the discontinued Allen-Bradley controllers with the current Allen-Bradley controllers

Contractor to provide the following:

1. Provide controller and all related hardware needed to functionally replace the existing controller
 - a. The CWTS PLC has three SLC 5/05 racks in two cabinets which are connected via ethernet cable and shall be replaced with 1756 Allen-Bradley Control Logix 5000 controllers
 - i. Figure 1 is a picture of the existing Main CWTS PLC
 - a. In Rack 0 Slot 8 a Prosoft Card is shown in the rack that does not need to be replaced and has been replaced with a DIN rail mounted PLX32-EIP-MBTCP Prosoft module located within the same cabinet as the PLC
 - ii. Figure 7 and Figure 8 show the current Main CWTS SLC 5/05 chassis racks
 - iii. Figure 2 is a picture of the existing LimeFeed PLC which is connected via ethernet to the Main CWTS PLC
 - iv. Figure 9 shows the current LimeFeed SLC 5/05 chassis rack
 - b. The Potable Water Booster PLC is a L23E-QBFC1B Controller and shall be replaced with a Allen-Bradley ControlLogix 5069-L33ER controller
 - i. Figure 3 is a picture of the existing Potable Water Booster Skid controller
2. Convert the existing PLC application to the newest RSLogix 5000 program
3. Upgrade HMI to ControlLogix tagging system and upgrade HMI as listed below
 - a. The Main CWTS PLC will need a new Panel View 7 display
 - i. Figure 4 shows the existing Main CWTS PLC HMI
 - b. The LimeFeed PLC will need a new HMI to replace the existing RedLion HMI with a similar Red Lion HMI
 - i. Figure 5 shows the existing LimeFeed PLC HMI
 - c. The Potable Water Booster Skid PLC HMI does not need to be replaced
 - i. Figure 6 shows the existing Potable Water Booster Skid PLC HMI
4. Upgrade network switches as listed below
 - a. The LimeFeed PLC and the Potable Water Booster Skid PLC will require new Allen-Bradley Stratix 5700 network switches
 - b. The Main CWTS PLC already has a Allen-Bradley Stratix 5700 that does not need to be replaced

5. Onsite services include the following
 - a. Remove PLCs
 - b. Install CompactLogix and 1756 ControlLogix 5000 controllers
 - c. Machine Startup and Testing

Figures

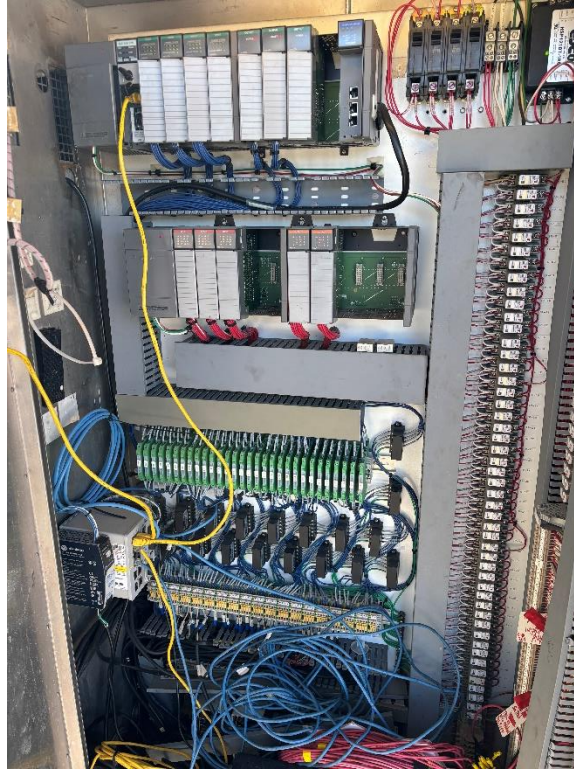


Figure 1: Existing Main CWTS SLC 5/05 Controller



Figure 2: Existing LimeFeed SLC 5/05 Controller

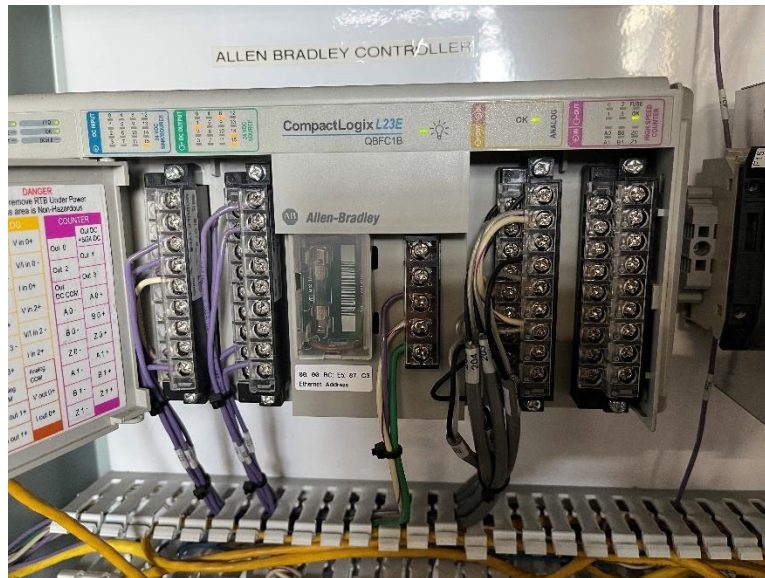




Figure 5: Existing RedLion Model G303 HMI



Figure 6: Existing RedLion Model G306A HMI

Main CWTS Current Chassis (1747-L551)		
Rack Number	Slot	Old Module
0	0	SLC 5/05 CPU
0	1	1746-NI8
0	2	1746-NI8
0	3	1746-NI8
0	4	1746-NI8
0	5	1746-NO4I
0	6	1746-NO4I
0	7	1746-NO4I
0	8	Empty
0	9	Empty

Figure 7: Main CWTS PLC Rack 0

Main CWTS Current Chassis (1747-L551)		
Rack Number	Slot	Old Module
1	0	1746-IA16
1	1	1746-IA16
1	2	1746-IA16
1	3	Empty
1	4	Empty
1	5	1746-OW16
1	6	1746-OW16
1	7	Empty
1	8	Empty
1	9	Empty

Figure 8: Main CWTS PLC Rack 1

Lime Feed Current Chassis (1747-L551)		
Rack Number	Slot	Old Module
0	0	SLC 5/05 CPU
0	1	1746-IA16
0	2	1746-OW16
0	3	1746-OW16
0	4	1746-NI4
0	5	1746-NO4I
0	6	Empty
0	7	1746-NI4
0	8	Empty
0	9	Empty

Figure 9: LimeFeed PLC Rack 0