

**EXHIBIT  
"A"**

STATE OF TEXAS §  
 COUNTY OF WILLIAMSON §  
 §

**SUPPLEMENTAL CONTRACT NO. 1  
 TO CONTRACT FOR ENGINEERING SERVICES**

**FIRM:** PLUMMER ASSOCIATES, INC. ("Engineer")  
**ADDRESS:** 1221 Auraria Parkway, Denver, CO 80204  
**PROJECT:** BCRWWS East WWTP SCADA and HMI Programming Services

This Supplemental Contract No. 1 to Contract for Engineering Services is made by and between the City of Round Rock, Texas, hereinafter called the "City" and Plummer Associates, Inc., hereinafter called the "Engineer."

**WHEREAS,** the City and Engineer executed a Contract for Engineering Services, hereinafter called the "Contract," on the 14th day of November, 2019 for the BCRWWS East WWTP SCADA and HMI Programming Services Project in the amount of \$1,005,580.00; and

**WHEREAS,** it has become necessary to amend the Contract to modify the provisions for the scope of services and to increase the compensation by \$183,250.00 to a total of \$1,188,830.00;

**NOW THEREFORE,** premises considered, the City and the Engineer agree that said Contract is amended as follows:

I.

Article 2, Engineering Services and Exhibit B, Engineering Services shall be amended as set forth in the attached Addendum to Exhibit B. Exhibit C, Work Schedule shall be amended as set forth in the attached Addendum to Exhibit C.

II.

Article 4, Compensation and Exhibit D, Fee Schedule shall be amended by increasing by \$183,250.00 the maximum amount payable under the Contract for a total of \$1,188,830.00, as shown by the attached Addendum to Exhibit D.

**IN WITNESS WHEREOF,** the City and the Engineer have executed this Supplemental Contract in duplicate.

[signature pages follow]

**PLUMMER ASSOCIATES, INC.**

By: *Nick E. Toussaint*  
NICK TOUSSAINT, PRINCIPAL

5/17/2023  
Date

**CITY OF ROUND ROCK**

**APPROVED AS TO FORM:**

**By:** \_\_\_\_\_  
**Craig Morgan, Mayor**

\_\_\_\_\_  
**Stephanie L. Sandre, City Attorney**

\_\_\_\_\_  
**Date**

**ADDENDUM TO EXHIBIT B**  
**Engineering Services**

This Exhibit is part of the Agreement between Plummer Associates, Inc. (Plummer) (the "Engineer") and the City of Round Rock (the "City") for the project generally described as:

**Brushy Creek Regional Wastewater Treatment System East Plant (BCE)**  
**Expansion to 30 MGD**  
**SCADA and HMI Programming Services**  
**Amendment 1**

***Introduction***

The scope of this amendment is to complete Phase B services for PLC and HMI programming for the 20MGD TO 30 MGD plant expansion, including continued coordination with the construction teams through final completion of the construction project. The scope of this amendment also includes the addition of maintenance services through 2023, including additional operator training and HMI software support. This is intended to maintain the Ignition HMI servers as well as the Programmable Logic Controllers (PLCs) as version upgrades and additional support packs are released. It also includes firmware upgrades to the cellular radios in service at the lift stations and at the gateway in the WWTF.

***Work Remaining***

Major Tasks B has been completed. Tasks A, C & D have remaining tasks to be completed, Task E (Maintenance Services) has been added and the work tasks are described below:

**Task A – Project Management Services**

Project Management services are included to support the remaining work including the programming HMI configuration and on-site testing and commissioning tasks. We are estimating three months duration for the contractor to complete the remaining work.

A.1 Additional time for PM services to include:

1. Bi-Weekly progress meetings to monitor the scope tasks and completion of the tasks. Conduct internal team coordination as required to accomplish the work.
2. Project status reporting includes the percent complete for scope tasks and the issues, budget status, and schedule. Maintain and update monthly, an action item log, a decision log, and a project change log as well as the schedule.
3. Conduct final QC review for the deliverables.

**Task B – Bid Phase Services**

Phase B services are complete.

## **Task C – Construction Phase Services**

Phase C services (Bid Phase) are nearly complete. We anticipate additional time required due to the project stretching into 2023 with construction in several areas not yet completed and requiring electrical, instrumentation and control testing, commissioning, and final punch listing before substantial completion is reached by the contractor.

### **C.1 Additional time for construction items to include:**

1. On-site Input/Output checks and commissioning of Trains 1 & 2 PLCs.
2. On-site commissioning of Train 1 & 2 Anoxic mixers
3. On-site commissioning of Train 1 & 2 Anerobic mixers
4. On-site commissioning of Train 1 & 2 Return Pumps
5. On-site commissioning of Train 1 & 2 Dissolved Oxygen analyzers
6. On-site commissioning of Aeration blowers
7. On-site commissioning of UV controls and tie in to SCADA
8. On-site commissioning of post-Aeration Blowers
9. On-site commissioning of Alum systems
10. On-site tie-in of PTU PLCs and control systems

### **D.01 PLC programming**

Programming needs to be completed in the following areas and will include site testing and commissioning activities for the areas listed below in Section D.04. Construction progress is expected to be completed in the next few months to allow the PLC programming to be completed and tested in the following areas:

1. AB Train 1 Air Flow Valve AB Train
2. AB Train 1 Anoxic Mixers AB Train
3. AB Train 1 Instruments AB Train
4. AB Train 1 Aner Mixers AB Train
5. AB Train 1 Return Pumps AB Train
6. AB Train 2 Air Flow Valve AB Train
7. AB Train 2 Anoxic Mixers AB Train
8. AB Train 2 Instruments AB Train
9. AB Train 2 Aner Mixers AB Train
10. AB Train 2 Return Pumps AB Train
11. AB Trains 1-3 DO programming.
12. East Electrical building programming additions
13. Post Aeration Blowers UV Complex 2
14. Flow Split to UV1, UV2 UV1, UV2
15. UV PLC programming
16. Primary Alum Pumps Thickener Building
17. Secondary Alum Pumps Thickener Building
18. Sludge PLC programming
19. PTU coordination with contractor, commissioning, and communication setup.
20. Blower System Coordination and assistance to Howden during checkout of Master Blower control panel.

### **E.02 HMI Configuration**

1. Database tag additions for AB Trains 1&2
  - a. Air flow meters

- b. DO instrumentation.
  - c. Anoxic mixers
  - d. Return Pumps
2. Additional tags for new blowers after Howden PLC program revisions completed
3. Changes/additions to Daily Report
4. Cleanup of duplicate tags on ILS2
  - a. Updating of flow tags since equipment changes
  - b. Tuning and operational items on ILS2 after equipment resolution
  - c. Updates after Thalle/Alterman completion
5. Resolution of PTU effluent meters
6. Resolution of RAS/WAS flow meters.
7. Revise tags for DO tags on Train 1, Aeration Basins 1-4, Train 2, Aeration Basins 1-4 after equipment changes.
8. UV System screen updates and additions
9. Sludge system tags, alarms, and display screens
10. Revise screens/pages on Reuse system for better operations
  - a. Upgrade register list for swap to new Modicon PLC
11. Add dewatering press summary screens.

#### **F.01 Training and Maintenance Services**

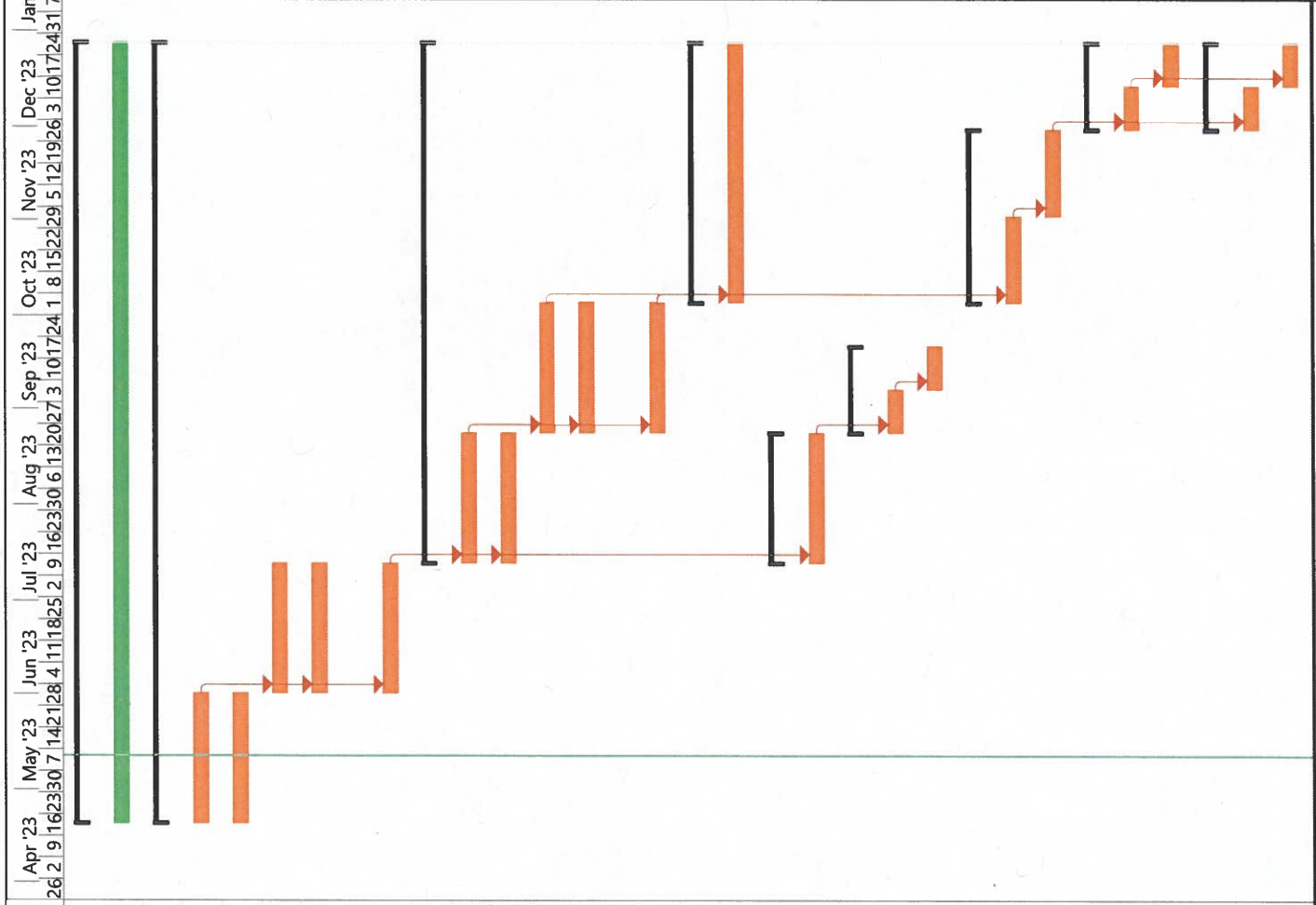
City staff have indicated a need for additional training as the project started in March 2020, and the staffing has changed significantly since that time. In addition, conversion of the HMI system at the WTP has provided data on the need for maintenance services which has benefited the City with helpful transition to the new system. The following services are proposed:

1. HMI training for operations staff
2. PLC/HMI configuration training for SCADA Technicians and maintenance staff
3. Software upgrades to the Ignition HMI software
4. Configuration support and minor updates/additions to the system through 2023

**ADDENDUM TO EXHIBIT C**  
**Work Schedule**

Attached Behind This Page

# BCRWS East WWTP SCADA and HMI PROGRAMMING



ID	Task Mode	Task Name	Duration	Start
1		<b>Phase B Construction</b>	<b>180 days</b>	<b>Thu 4/20/23</b>
2		Phase B HMI & PLC Programming	180 days	Thu 4/20/23
3		<b>Aeration Basin Train 1</b>	<b>180 days</b>	<b>Thu 4/20/23</b>
4		AB Train 1 Anoxic Mixers	30 days	Thu 4/20/23
5		AB Train 1 Anaerobic Mixers	30 days	Thu 4/20/23
6		AB Train 1 Instruments	30 days	Thu 6/1/23
7		AB Train 1 Air Flow Valves (0400-PLC-1001/2)	30 days	Thu 6/1/23
8		AB Train 1 Return Pumps	30 days	Thu 6/1/23
9		<b>Aeration Basin Train 2</b>	<b>120 days</b>	<b>Thu 7/13/23</b>
10		AB Train 2 Anoxic Mixers	30 days	Thu 7/13/23
11		AB Train 2 Anaerobic Mixers	30 days	Thu 7/13/23
12		AB Train 2 Instruments	30 days	Thu 8/24/23
13		AB Train 2 Air Flow Valves (0400-PLC-1001/2)	30 days	Thu 8/24/23
14		AB Train 2 Return Pumps	30 days	Thu 8/24/23
15		<b>RAS/WAS Pump Station (T3)</b>	<b>60 days</b>	<b>Thu 10/5/23</b>
16		Sludge Pumps	60 days	Thu 10/5/23
17		<b>UV Controls</b>	<b>30 days</b>	<b>Thu 7/13/23</b>
18		Flow Split to UV1/UV2	30 days	Thu 7/13/23
19		<b>Post Aeration Blowers</b>	<b>20 days</b>	<b>Thu 8/24/23</b>
20		Blower Electrical Checks	10 days	Thu 8/24/23
21		Blower I/O checks	10 days	Thu 9/7/23
22		<b>Alum Feed System</b>	<b>40 days</b>	<b>Thu 10/5/23</b>
23		Alum Instrumentation	20 days	Thu 10/5/23
24		Alum Pump Checkout	20 days	Thu 11/2/23
25		<b>Sodium Hypo Feed Pumps</b>	<b>20 days</b>	<b>Thu 11/30/23</b>
26		Instrument Checkout	10 days	Thu 11/30/23
27		Pump Checkout	10 days	Thu 12/14/23
28		<b>Sodium Bisulfate Feed Pumps</b>	<b>20 days</b>	<b>Thu 11/30/23</b>
29		Instrument Checkout	10 days	Thu 11/30/23
30		Pump Checkout	10 days	Thu 12/14/23



**ADDENDUM TO EXHIBIT D**  
**Fee Schedule**

Attached Behind This Page

**City of Round Rock**  
**Brushy Creek East Expansion to 30 MGD Construction**  
**PCS PLCHMI/Mini/Training**  
**Project No. 3**

Level 2 (Phase) No. and Description Level 3 (Task) No. and Description	Principal (hrs)	Sr. Proj Mgr (hrs)	Sr. IC Eng (hrs)	IC Eng (hrs)	Eng (hrs)	Eng (hrs)	Eng (hrs)	Programmer (hrs)	Chemical (hrs)	QC (hrs)	Hours	Total Labor Fee (\$15)	Percent of Total Fee
<b>PCS PLCHMI/Mini/Training</b>													
<b>A PM</b>													
1 Progress Meeting	114	0	20	28	450	432	10	0			1,072	\$ 174,970	100.0%
2 Status Reports	8	0	0	0	8	8	0	0			74	\$ 19,760	11.3%
3 Final OC	6	0	0	0	6	6	0	0			32	\$ 7,200	4.1%
4	12	0	0	0	12	12	0	0			14	\$ 3,640	2.2%
5	4	0	0	0	4	4	0	0			28	\$ 8,720	5.0%
<b>B Bid Phase Services (Completed)</b>													
1	0	0	0	0	0	0	0	0			0	\$ -	0.0%
2	0	0	0	0	0	0	0	0			0	\$ -	0.0%
3	22	0	20	0	102	102	0	0			110	\$ 63,800	36.2%
4	8	0	4	0	50	50	0	0			60	\$ 18,240	10.4%
5	4	0	4	0	50	60	0	0			120	\$ 18,760	10.7%
6	4	0	4	0	32	32	0	0			72	\$ 11,200	6.4%
7	4	0	4	0	16	16	0	0			40	\$ 8,800	5.0%
8	4	0	4	0	24	24	0	0			56	\$ 9,040	5.2%
<b>C Construction Phase Services</b>													
1 Train 1 PLCs	0	0	0	0	0	0	0	0			200	\$ 27,000	15.5%
2 Train 2 PLCs	0	0	0	0	0	0	0	0			40	\$ 5,400	3.1%
3 UV PLC and network setup	0	0	0	0	0	0	0	0			40	\$ 5,400	3.1%
4 EMI Electrical Bldg modifications	0	0	0	0	0	0	0	0			30	\$ 2,700	1.5%
5 Alarm PLC programming	0	0	0	0	0	0	0	0			30	\$ 4,050	2.3%
6 Storage PLC programming	0	0	0	0	0	0	0	0			30	\$ 4,050	2.3%
7 Train 3 PLCs	0	0	0	0	170	40	0	0			170	\$ 23,600	13.5%
8 Train 4 PLCs	0	0	0	0	40	0	0	0			40	\$ 5,400	3.1%
9 UV PLC and network setup	0	0	0	0	40	0	0	0			40	\$ 5,400	3.1%
10 EMI Electrical Bldg modifications	0	0	0	0	30	0	0	0			30	\$ 2,700	1.5%
11 Alarm PLC programming	0	0	0	0	40	0	0	0			40	\$ 5,400	3.1%
12 Storage PLC programming	0	0	0	0	40	0	0	0			40	\$ 5,400	3.1%
<b>D PLC Programming</b>													
1 Train 1 PLCs	64	0	0	0	88	60	16	0			228	\$ 42,840	24.4%
2 Train 2 PLCs	16	0	0	0	20	20	10	0			66	\$ 11,740	6.7%
3 UV PLC and network setup	16	0	0	0	20	20	10	0			58	\$ 10,840	6.2%
4 EMI Electrical Bldg modifications	16	0	0	0	24	10	0	0			50	\$ 10,030	5.7%
5 Alarm PLC programming	16	0	0	0	24	10	0	0			50	\$ 10,030	5.7%
6 Storage PLC programming	16	0	0	0	24	10	0	0			50	\$ 10,030	5.7%
<b>E HMI Configuration</b>													
1 Quality Control	0	0	0	0	0	0	0	0			0	\$ -	0.0%
2 Project Management	0	0	0	0	0	0	0	0			0	\$ -	0.0%
<b>F TRAINING AND MAINTENANCE SERVICES</b>													
1 Operator HMI Training	64	0	0	0	88	60	16	0			228	\$ 42,840	24.4%
2 PLCHMI Config Training	16	0	0	0	20	20	10	0			66	\$ 11,740	6.7%
3 System Software Updates	16	0	0	0	20	20	10	0			58	\$ 10,840	6.2%
4 Configuration Support	16	0	0	0	24	10	0	0			50	\$ 10,030	5.7%
<b>G ADMINISTRATIVE/TASKS</b>													
1 Quality Control	0	0	0	0	0	0	0	0			0	\$ -	0.0%
2 Project Management	0	0	0	0	0	0	0	0			0	\$ -	0.0%
<b>TOTAL LABOR</b>	\$40	\$240	\$300	\$300	\$115	\$115	\$90	\$40	\$505				
Total Labor Hours	114	20	28	450	432	10	0	0			1,072	\$ 174,970	100.0%
Total Amount by Labor Category	\$ 38,760	\$ -	\$ 6,000	\$ 7,640	\$ 60,700	\$ 61,020	\$ 900	\$ -			\$ 174,970	\$ 174,970	100.0%
Labor Category Percent of Total Labor	22.2%	0.0%	3.4%	4.3%	34.7%	34.9%	0.5%	0.0%					
<b>TOTAL EXPENSES (See Attachments Below)</b>													
Total Subcontractors													
Total Expenses													
Total Reimbursables													
<b>GRAND TOTAL - PCS PLCHMI/Mini/Training</b>													

Code	Description	Budget (\$)	Markup	Fee (\$)
CA	Account Consultant	\$ -	1.15%	\$ -
CC	Civil Eng Consultant	\$ -	1.15%	\$ -
CE	Electrical Consultant	\$ -	1.15%	\$ -
CG	Geotechnical Consultant	\$ -	1.15%	\$ -
CM	Mechanical Consultant	\$ -	1.15%	\$ -
CO	Other Consultant	\$ -	1.15%	\$ -
CS	Structural Consultant	\$ -	1.15%	\$ -
CY	Surveying Consultant	\$ -	1.15%	\$ -
C1	Construction	\$ -	1.15%	\$ -
C2	Construction	\$ -	1.15%	\$ -
C3	Construction	\$ -	1.15%	\$ -
C4	Construction	\$ -	1.15%	\$ -
C5	Construction	\$ -	1.15%	\$ -
C6	Construction	\$ -	1.15%	\$ -
<b>TOTAL SUBCONSULTANT EXPENSES</b>		\$ -		\$ -

Code	Description	Budget (\$)	Markup	Fee (\$)
RA	Laboratory Analysis	\$ -	1.15%	\$ -
RC	Computer	\$ -	1.15%	\$ -
RH	Historical	\$ -	1.15%	\$ -
RI	In-House Reproduction	\$ -	1.15%	\$ -
RL	Long Distance Telephone	\$ -	1.15%	\$ -
RM	Employee Mileage	\$ 7,200	1.15%	\$ 8,280
RO	Other Expenses	\$ -	1.15%	\$ -
RP	Purchased Services	\$ -	1.15%	\$ -
RR	Reproduction	\$ -	1.15%	\$ -
RS	Shipping, Delivery, Postage	\$ -	1.15%	\$ -
RT	Travel Meals Lodging	\$ -	1.15%	\$ -
RU	Telecommunications	\$ -	1.15%	\$ -
RZ	Travel	\$ -	1.15%	\$ -
<b>TOTAL REIMBURSABLE EXPENSES</b>		\$ 7,200		\$ 8,280