

Amendment No. 1 to the  
Consulting Services Contract dated March 3, 2023  
City of Waukesha–Strand Associates, Inc.®

Project Name: Clean Water Plant Biogas Purification and Sludge Drying with Facilities Enhancements-2023

This is Amendment No. 1 to the referenced Contract. The purpose of this Amendment is to modify the scope, schedule, and fee as described herein All terms and conditions remain in force, except as specifically amended herein.

Now, therefore the City and the Consultant agree to amend the Contract as follows:

- 1. Scope of Services, REPLACE Schedule B with the attached Schedule B, Amendment No. 1.
- 3. Payment, CHANGE \$985,000 to "\$811,000" and REPLACE Schedule C with the attached Schedule C, Amendment No. 1.
- 4. Time, CHANGE May 1, 2024, to "December 31, 2024."

City of Waukesha

**DRAFT**

**DRAFT**

By Shawn N. Reilly, Mayor

Attested by Gina L. Kozlik, City Clerk

Date: \_\_\_\_\_

Date: \_\_\_\_\_

To certify that funds are provided for payment:

\_\_\_\_\_  
Joe Ciurro, Director of Finance

Date: \_\_\_\_\_

Strand Associates, Inc.®

**DRAFT**

By Joseph M. Bunker, Corporate Secretary

Date: \_\_\_\_\_

## Schedule B, Amendment No. 1

### SCOPE OF SERVICES

Consultant will provide the following services to City:

#### Preliminary Design

1. Conduct one project kickoff meeting (Workshop No. 1) with City at the Clean Water Plant (CWP) to discuss the project scope, schedule, budget, and goals. Prepare meeting minutes and distribute to attendees.
2. Request CWP operational data related to biosolids and biogas production and related processes from City. Develop a basis of design letter for biosolids production, operating schedules, and design criteria for use in sizing the drying system, renewable natural gas (RNG) system, and associated equipment. Review basis of design with City for concurrence and incorporate appropriate edits.
3. Participate in Workshop No. 2 at the CWP to review and refine technologies to be included in the pre-selection process and to review electrical infrastructure considerations associated with the project. Prepare meeting minutes and distribute to attendees.
4. Request and evaluate cost proposals from up to three sludge dryer system suppliers and up to three pipeline quality gas treatment system suppliers. Dryer system suppliers are anticipated to include one paddle-style dryer system supplier with a thermal oil system, one electric dehumidification system supplier, and one belt-style dryer system supplier with a hot water system. Pipeline quality gas treatment system suppliers are anticipated to include one membrane system, one pressure swing absorption system, and one wash water system.
5. Evaluate the existing electrical infrastructure within Structure 410 and Structure 430 to accommodate the equipment from each sludge dryer and pipeline quality gas treatment supplier based on existing connected loads and existing supervisory control and data acquisition (SCADA) system power usage data obtained from City.
6. Develop technical memorandum (TM) No. 1 including present worth analyses and nonmonetary comparisons of up to three dryer alternatives.
7. Develop TM No. 2 including present worth analyses and nonmonetary comparisons of up to three pipeline quality gas treatment alternatives.
8. Participate in Workshop No. 3 at the CWP to review project funding options. Prepare meeting minutes and distribute to attendees.
9. Develop TM No. 3 summarizing funding options and evaluating the separation of the construction contract(s) for the potential upgrades.
10. Develop TM No. 4 including present worth analyses for up to two conceptual layouts for solar energy upgrades at the CWP.
11. Participate in up to two coordination meetings with City and the natural gas utility.
12. Assist City with identifying potential RNG brokers and renewable energy compliance consultants.

13. Submit each draft TM for City review and attend TM review meetings via videoconference. (Alternatively, TM review meetings may be held concurrently with in-person workshops at the CWP.) Incorporate City comments, as appropriate.
14. Prepare a draft Preliminary Engineering Report incorporating TMs Nos. ~~1 through 4~~ 1 and 4. Preliminary design for pipeline quality gas treatment is not included. The design will include a single set of Contract Documents.
15. Participate in Workshop No. 4 at the CWP to review the draft Preliminary Engineering Report. ~~Workshop No. 4 may be separated into one meeting for pipeline quality gas treatment and one meeting for sludge drying. Incorporate City comments, as appropriate, and finalize the report.~~
16. Request underground electrical and natural gas utility locates and conduct a topographic survey of those areas of the potential biosolid production improvements.
17. Request proposals on City's behalf from three geotechnical firms to conduct geotechnical investigations for new structures. Geotechnical services shall be contracted directly between City and the geotechnical firm.
- ~~18. Prepare air emissions calculations related to the sludge dryer system boiler for City's Type A Registration Air Permit.~~
19. Assist City with contracting with a firm to conduct a dust hazard analysis associated with the new biosolids dryer. Dust hazard analysis services shall be contracted directly between City and its chosen dust hazard analysis firm.

#### Final Design

1. Prepare draft Bidding Documents using Engineers Joint Contract Documents Committee C-700 Standard General Conditions and Construction Contract, 2018 edition, technical specifications, and engineering drawings for the project components below. ~~The design includes two separate sets of Contract Documents: one for pipeline quality gas treatment and one for the remaining design components.~~ It anticipates all relevant industry standard manufacturer/equipment information selected by City can be provided to Consultant in one submittal prior to the initiation of Final Design.
  - ~~a. Pipeline quality gas treatment system in accordance with utility gas standards consisting of a pressure skid located in the existing gas handling room of Structure 410 and an exterior treatment system located approximately in the area north of Structure 430. The exterior treatment system is anticipated to be located on a new concrete slab. A building structure for this system is not anticipated. Control panel drawings, wiring diagrams, interconnection diagrams, and etc. are anticipated to be provided by the system supplier. The electrical design anticipates that the existing Structure 410 motor control center (MCC) will have adequate ampacity and space available to power the new gas treatment system.~~
  - b. Biosolids dryer and dried solids conveyor located in the Structure 440 sludge bay adjacent to Structure 430. Structural modifications to the Structure 440 sludge bay include walls and doorways provide a new Dryer Room and Electrical Room. The anticipated location for dried solids storage is ~~in dumpsters in the existing sludge bay adjacent to the proposed Dryer Room~~ under a new open-sided roof structure south of Structure 440. Control panel drawings, wiring diagrams, interconnection diagrams, etc. are anticipated to be provided by manufacturer. The electrical design anticipates that the existing Structure 430 MCC will have adequate ampacity and space available to power a new MCC for the sludge drying equipment using a single, non-redundant power feed.

- c. ~~Site modifications including site electrical, yard piping, and sidewalk access associated with the exterior pipeline quality gas treatment system.~~ Roadway modifications for access to the dried sludge storage bay in Structure 440.
  - d. Power and SCADA controls design. The design anticipates that all existing medium voltage infrastructure is adequately sized to accommodate the new loads and that all SCADA system controls will be through existing supervisory control centers.
  - e. Lighting design for the new Dryer Room and Electrical Room in Structure 440.
  - f. Fire alarm system design for the Dryer Room. The fire alarm system design anticipates that a new fire alarm control panel compatible with the existing plant fire alarm system will be specified and be designed to communicate with the existing plant fire alarm system through the existing plant fiberoptic network.
  - g. Heating, ventilation, and air conditioning (HVAC) and plumbing design for the Dryer Room and Electrical Room in Structure 440.
  - h. Replacement of the polyvinyl chloride aeration piping and diffusers in Aeration Basins Nos. 1, 2, and 3.
  - i. Replacement of the two Structure 110 primary influent pump variable frequency devices (VFDs). The design anticipates in-kind replacement of the existing VFDs with new ABB VFDs mounted within the existing VFD enclosures, reconnected to the existing power and controls system without any modifications other than evaluation and possible replacement of the individual VFD overcurrent protection within each VFD enclosure.
  - j. Replacement of the two Structure 140 primary effluent pump VFDs. The design anticipates in-kind replacement of the existing VFDs with new ABB VFDs mounted within the existing VFD enclosures, reconnected to the existing power and controls system without modifications other than evaluation and possible replacement of the individual VFD overcurrent protection within each VFD enclosure.
  - k. Replacement of the Structure 515 generators and associated paralleling switchboard. This includes controls and associated electrical infrastructure.
  - l. Replacement of the automatic transfer switches for Structures 110 and 140. This includes controls and associated electrical infrastructure.
  - m. Replacement of the Structure 510 MCC. This includes controls and associated electrical infrastructure.
  - n. Replacement of the Structure 250 MCC. This includes controls and associated electrical infrastructure.
  - ~~e. Replacement of the Structure 440 sludge distribution conveyor.~~
  - p. Addition of a generator transfer switch and portable generator plug at Structure 220.
  - q. Replacement of the suction and discharge isolation valves associated with the five return activated sludge pumps in Structure 240.
2. Participate in biweekly videoconference meetings with City.

3. Meet with City to obtain input and concurrence with the design. Attend review meetings at the CWP at approximately 60 and 90 percent drawing completion. ~~The review meetings may be separated for pipeline quality gas treatment and sludge drying.~~ Provide draft Bidding Documents and updated opinions of probable construction costs (OPCC) for review prior to each meeting. Incorporate comments, as appropriate, and provide minutes following each meeting.
4. Develop Bidding Documents and OPCC and provide to City. Submit the Bidding Documents to the Wisconsin Department of Natural Resources (WDNR) for review and approval. City shall pay all review fees.
5. Respond to comments and questions from WDNR and update the final Bidding Documents, as appropriate, in accordance with WDNR's review to assist City in receiving approved Bidding Documents from WDNR. City will be included in all correspondence with WDNR. Contractor shall be responsible for obtaining necessary construction permits during the construction phase.
6. Develop a preliminary operation and maintenance manual summarizing the design intent of the pipeline quality gas treatment and biosolids drying systems.
7. Provide City with portable document format (PDF) and AutoCAD files of the final Bidding Documents. Reuse, or any modification of the documents, without written verification, completion, or adaptation by ENGINEER, as appropriate for the specific purpose intended, will be at OWNER's sole risk and without liability or legal exposure to ENGINEER.
- ~~8. Assist City with preparing Clean Water Fund Program loan application for submittal to the WDNR.~~

#### Bidding

1. Attend one prebid conference at the CWP.
2. Prepare addenda, if required, to clarify the Bidding Documents. Answer prospective bidder questions throughout bidding.
3. Tabulate and analyze bid results and assist City in the award of the Construction Contracts.
4. Provide City with six hard copies of the final Contract Documents.

#### SERVICE ELEMENTS NOT INCLUDED

The following services are not included in this Agreement. If such services are required, they will be provided as noted.

1. Additional Design Services such as, but not limited to, the below. Any services of this type will be provided through an amendment to this Agreement.
  - a. Design of infrastructure provided by the natural gas utility, such as design of the utility interconnection facilities, utility metering equipment, and utility gas monitoring equipment.
  - b. Design of dried solids storage equipment such as silos or bagging systems.
  - c. Medium voltage power distribution system design modifications.
  - d. Design of site lighting, video surveillance and security system.
  - e. Development of process and instrumentation diagrams.
  - f. Modifications to existing buildings other than the two sludge bays in the existing Structure 440.

- g. New buildings other than an open-sided roof structure south of Structure 440.
  - h. Retaining walls or deep foundations for the exterior pipeline quality gas treatment system, or special design to accommodate problematic soil conditions.
  - i. Stormwater modifications.
  - j. Three-dimensional model of existing or new buildings.
  - k. HVAC and plumbing modifications other than those for the new Dryer Room and Electrical Room in Structure 440.
  - l. Solar energy design except for the items specifically indicated under the Scope of Services.
  - m. Fire alarm system design other than the Structure 440 Dryer Room fire alarm system design.
2. Additional Site Visits and/or Meetings: Additional City-required site visits, meetings, or tours of existing facilities with similar equipment will be provided through an amendment to this Agreement or through a separate agreement with City.
  3. Construction-Related Services: Construction-related services for the project will require a separate agreement with City.
  4. Geotechnical Engineering: Geotechnical engineering information will be required and provided through City and City's geotechnical consultant. Consultant will assist City with defining initial scope of geotechnical information that is required to allow City to procure geotechnical engineering services.
  5. Preparation for and/or Appearance in Litigation on Behalf of City: This type of service by Consultant will be provided through a separate agreement with City.
  6. Revising Designs, Drawings, Specifications, and Documents: Any services required after these items have been previously approved by state or federal regulatory agencies, because of a change in project scope or where such revisions are necessary to comply with changed state and federal regulations that are put in force after Services have been partially completed, will be provided through an amendment to this Agreement.
  7. Secondary or Additional Reviews of Manufacturer-provided Equipment Data: Services of this type will be provided through an amendment to this Agreement or through a separate agreement with City.
  8. Services Furnished During Readvertisement for Bids, if Ordered by City: If a Contract is not awarded pursuant to the original bids, any services of this type will be provided through an amendment to this Agreement.
  9. VFD Harmonic Analysis: Harmonic analysis to confirm compliance with IEEE 519 or evaluation of alternative VFD manufacturers for the primary influent and primary effluent pump VFD replacements will be provided through an amendment to this Agreement or through a separate agreement with City.
  10. Permit and Plan Review Fees: All permit and plan review fees shall be paid by the City.
  11. Services Related to Buried Wastes and Contamination: Should buried solid, liquid, or potentially hazardous wastes or subsurface or soil contamination be uncovered at the site, follow up investigations may be required to identify the nature and extent of such wastes or subsurface soil or groundwater contamination and to determine appropriate methods for managing of such wastes or contamination and for follow up monitoring. Investigation, design, or construction related services related to buried solid, liquid, or potentially hazardous wastes or soil or groundwater contamination will be provided through a separate agreement with OWNER.

**City of Waukesha - Design and Bidding**

TASKS	Project Manager		Technology Advisor	Operations Specialist	Project Engineer	Quality Control	Lead Structural	Structural	Electrical Power	Electrical Controls	Electrical QC	Mechanical Engineer	Mechanical QC	Site Engineer	Technician	Office Production	TOTAL HRS	RAW LABOR	LABOR COSTS	TOTAL EXPENSES	TOTAL COST
	Travis Anderson	Randy Wirtz	Troy Larson	Ryan Yentz	Scott Stearns	Wayne Maki	Kyle Beth	Matt Careros	Rick Thimm	Shane Zenz	Adam Gander	Nathan Brandt	Pat Rank								
	\$167	\$306	\$182	\$138	\$301	\$216	\$126	\$170	\$173	\$290	\$164	\$178	\$224	\$116	\$99						
	Hrs.	\$	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.					
<b>Project Management (Increased)</b>																					
Initiate project	12	\$ 2,003.47	2		4	4										12	34	\$ 1,854	\$ 5,563	\$ 668	\$ 6,200
Monthly staff scheduling, budget control, internal meetings	256	\$ 42,740.70			96	24											376	\$ 21,060	\$ 63,180	\$ 7,582	\$ 70,800
Monthly billings review, invoicing, and reporting	128	\$ 21,370.35														12	140	\$ 7,521	\$ 22,563	\$ 2,708	\$ 25,300
<b>Subtotal</b>	<b>396</b>	<b>\$ 66,115</b>	<b>2</b>	<b>0</b>	<b>100</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>550</b>	<b>\$ 30,435</b>	<b>\$ 91,306</b>	<b>\$ 10,957</b>	<b>\$ 102,300</b>
<b>Task 1 - Project Meetings</b>																					
Kickoff Meeting (Complete)	8	\$ 1,335.65			12				8	8						1	37	\$ 1,942	\$ 5,825	\$ 699	\$ 6,500
Workshop No. 2 - Technology Review (Complete)	8	\$ 1,335.65			12											2	22	\$ 1,062	\$ 3,186	\$ 382	\$ 3,600
Workshop No. 3 - Funding and Contracting (Complete)	8	\$ 1,335.65			12											2	22	\$ 1,062	\$ 3,186	\$ 382	\$ 3,600
Workshop No. 4a/4b - Preliminary Design Report (REDUCED)	8	\$ 1,335.65			8											2	18	\$ 879	\$ 2,636	\$ 316	\$ 3,000
Workshop No. 5a/5b - 60% Design Review (REDUCED)	12	\$ 2,003.47			12						8					2	42	\$ 2,059	\$ 6,176	\$ 741	\$ 6,900
Workshop No. 6a/6b - 90% Design Review (REDUCED)	12	\$ 2,003.47			12											2	26	\$ 1,285	\$ 3,854	\$ 463	\$ 4,300
Tech Memo Review Meetings (REDUCED)	16	\$ 2,671.29			16				8	8						2	50	\$ 2,603	\$ 7,810	\$ 937	\$ 8,700
Utility Coordination Meetings (DELETED)																	0	\$ -	\$ -	\$ -	\$ -
Bi-weekly Conference Calls	16	\$ 2,671.29			16				8	8							48	\$ 2,537	\$ 7,612	\$ 913	\$ 8,500
<b>Subtotal</b>	<b>88</b>	<b>\$ 14,692</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>24</b>	<b>24</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>265</b>	<b>\$ 13,429</b>	<b>\$ 40,286</b>	<b>\$ 4,834</b>	<b>\$ 45,100</b>
<b>Task 2 and 3 - Preliminary Design Report</b>																					
Tech Memo No. 1 - Biogas (Complete)	8	\$ 1,335.65	12	4	20	4	4	8	8	8	4	8	2			8	98	\$ 5,977	\$ 17,932	\$ 2,152	\$ 20,100
Tech Memo No. 2 - Biosolids (Complete)	16	\$ 2,671.29	12	4	32	4	4	8	8	8	4	8	2			8	118	\$ 6,973	\$ 20,920	\$ 2,510	\$ 23,400
Tech Memo No. 3 - Funding and Construction Contracting (DELETED)		\$ -															0	\$ -	\$ -	\$ -	\$ -
Preliminary Design - Drawings and Schematics (REDUCED)	20	\$ 3,339.12	8		100	4	8	100	12	12	6	8	2		100		380	\$ 18,063	\$ 54,189	\$ 6,503	\$ 60,700
Preliminary Design Report (REDUCED)	4	\$ 667.82			32	4										6	46	\$ 2,291	\$ 6,873	\$ 825	\$ 7,700
<b>Subtotal</b>	<b>48</b>	<b>\$ 8,014</b>	<b>32</b>	<b>8</b>	<b>184</b>	<b>16</b>	<b>16</b>	<b>116</b>	<b>28</b>	<b>28</b>	<b>14</b>	<b>24</b>	<b>6</b>	<b>0</b>	<b>100</b>	<b>22</b>	<b>642</b>	<b>\$ 33,305</b>	<b>\$ 99,915</b>	<b>\$ 11,990</b>	<b>\$ 111,900</b>
<b>Task 4 - Facility Plan 11 - 15 Year Upgrades</b>																					
Preliminary Design	8	\$ 1,335.65		2	40	8		32	80	80	16	8	2		120	24	420	\$ 21,197	\$ 63,591	\$ 7,631	\$ 71,200
<b>Subtotal</b>	<b>8</b>	<b>\$ 1,336</b>	<b>0</b>	<b>2</b>	<b>40</b>	<b>8</b>	<b>0</b>	<b>32</b>	<b>80</b>	<b>80</b>	<b>16</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>120</b>	<b>24</b>	<b>420</b>	<b>\$ 21,197</b>	<b>\$ 63,591</b>	<b>\$ 7,631</b>	<b>\$ 71,200</b>
<b>Task 5 - 60% and 90% Design</b>																					
<b>60% Design - Biogas (DELETED)</b>																	0	\$ -	\$ -	\$ -	\$ -
60% Design - Biosolids	24	\$ 4,006.94		8	120	12	20	120	60	80	20	40	8	16	160	12	700	\$ 35,365	\$ 106,094	\$ 12,731	\$ 118,800
60% Design - Facility Plan Upgrades	16	\$ 2,671.29		8	24	8	8	60	80	80	20	40	8	16	120	12	500	\$ 26,313	\$ 78,940	\$ 9,473	\$ 88,400
<b>90% Design - Biogas (DELETED)</b>																	0	\$ -	\$ -	\$ -	\$ -
90% Design - Biosolids	16	\$ 2,671.29		2	100	12	16	100	80	80	20	24	4	16	140	12	622	\$ 31,755	\$ 95,266	\$ 11,432	\$ 106,700
90% Design - Facility Plan Upgrades	16	\$ 2,671.29		2	24	8	8	60	60	60	20	24	4	16	120	12	434	\$ 22,555	\$ 67,665	\$ 8,120	\$ 75,800
<b>Subtotal</b>	<b>72</b>	<b>\$ 12,021</b>	<b>0</b>	<b>20</b>	<b>268</b>	<b>40</b>	<b>52</b>	<b>340</b>	<b>280</b>	<b>300</b>	<b>80</b>	<b>128</b>	<b>24</b>	<b>64</b>	<b>540</b>	<b>48</b>	<b>2,256</b>	<b>\$ 115,988</b>	<b>\$ 347,964</b>	<b>\$ 41,756</b>	<b>\$ 389,700</b>
<b>Task 6 and 7 - Final Plans and Specifications</b>																					
Preliminary O&M Manual	8	\$ 1,335.65		40	8	4			16	16						8	100	\$ 5,733	\$ 17,200	\$ 2,064	\$ 19,300
Preliminary O&M Manual (Biogas Only) (DELETED)																	0	\$ -	\$ -	\$ -	\$ -
Assist City with CWF Documents (DELETED)		\$ -															0	\$ -	\$ -	\$ -	\$ -
Prepare Final Design Documents (REDUCED)	8	\$ 1,335.65			52	4	8	20	20	20	4	24	4	8	52	12	236	\$ 11,864	\$ 35,593	\$ 4,271	\$ 39,900
Submit to WDNR	4	\$ 667.82			24												28	\$ 1,324	\$ 3,972	\$ 477	\$ 4,400
<b>Subtotal</b>	<b>20</b>	<b>\$ 3,339</b>	<b>0</b>	<b>40</b>	<b>84</b>	<b>8</b>	<b>8</b>	<b>20</b>	<b>36</b>	<b>36</b>	<b>4</b>	<b>24</b>	<b>4</b>	<b>8</b>	<b>52</b>	<b>20</b>	<b>364</b>	<b>\$ 18,922</b>	<b>\$ 56,765</b>	<b>\$ 6,812</b>	<b>\$ 63,600</b>
<b>Task 8 - Bidding Phase</b>																					
Pre-bid conference	16	\$ 2,671.29			24	1										8	49	\$ 2,357	\$ 7,071	\$ 849	\$ 7,900
Bidding assistance	24	\$ 4,006.94			40	2	2	8	4	4	4	4	2	2	8	8	112	\$ 5,755	\$ 17,265	\$ 2,072	\$ 19,300
<b>Subtotal</b>	<b>40</b>	<b>\$ 6,678</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>16</b>	<b>161</b>	<b>\$ 8,112</b>	<b>\$ 24,336</b>	<b>\$ 2,920</b>	<b>\$ 27,200</b>
<b>TOTAL HOURS</b>	<b>672</b>	<b>\$ 112,194</b>	<b>34</b>	<b>70</b>	<b>840</b>	<b>103</b>	<b>78</b>	<b>524</b>	<b>452</b>	<b>472</b>	<b>118</b>	<b>196</b>	<b>38</b>	<b>74</b>	<b>820</b>	<b>167</b>	<b>4,658</b>	<b>\$ 241,388</b>	<b>\$ 724,163</b>	<b>\$ 86,900</b>	<b>\$ 811,000</b>