

**RESOLUTION 14-89**

**A RESOLUTION TO AUTHORIZE SUBSTANTIAL COMPLETION OF  
THE CONSTRUCTION OF THE WASTEWATER TREATMENT PLANT**

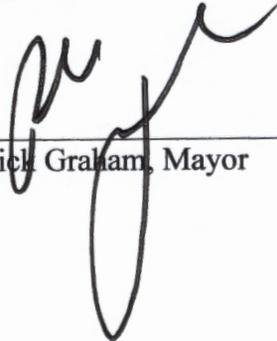
**WHEREAS**, the City of Spring Hill entered into a Contract with PF Moon for the construction of improvements to the City's wastewater treatment plant with Notice to Proceed dated July 11, 2011. The initial contract completion date was established as July 9, 2013 and has been extended; and

**WHEREAS**, the contract documents (Section 01 2976, Applications for Payment), paragraph 1.8E states, "No further applications for payment will be processed after the expiration of the Contract Time, including approved extensions thereof, until the date of Substantial Completion as described in these Contract Documents"; and

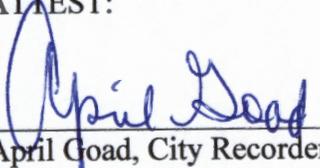
**WHEREAS**, the contract has been determined to be substantially complete

**NOW, THEREFORE BE IT RESOLVED**, that the City of Spring Hill authorizes final payment of the contract, including retainage in the amount of \$423,655.33.

**Passed and adopted by the Board of Mayor and Aldermen of the City of Spring Hill, Tennessee on the 21<sup>st</sup> day of July, 2014.**

  
\_\_\_\_\_  
Rick Graham, Mayor

ATTEST:

  
\_\_\_\_\_  
April Goad, City Recorder

LEGAL FORM APPROVED:

  
\_\_\_\_\_  
Patrick Carter, City Attorney



July 16, 2014

Mr. Victor Lay  
City Administrator  
City of Spring Hill  
199 Town Center Parkway  
Spring Hill, TN 37174  
( By Fed-Ex Overnight Delivery)

Re: City of Spring Hill, Tennessee  
Waste Water Treatment Plant Expansion  
CWSRF Project No. CWA 2010-267

Dear Mr. Lay:

The following is a summary of the outstanding items to be taken into account in calculating a reduction of P.F. Moon's retainage on the above-referenced contract. Please refer to P.F. Moon's July 14, 2014 letter and previous correspondence for further information regarding these items.

#### **Concrete Wall Cracking**

Pending resolution of responsibility for the concrete wall cracking, P.F. Moon acknowledges that the City will retain estimated repair costs. These are as follows:

- Oxidation ditch repairs for concrete cracking: \$247,728.00.
- Filter Structure repairs for concrete cracking: \$ 22,300.00.

P.F. Moon maintains its position that the concrete cracking is the result of defective design and reserves its rights to payment of monies held to cover repair costs as well as costs previously incurred by P.F. Moon for crack repairs.

#### **Liquidated Damages**

P.F. Moon acknowledges that some amount of liquidated damages is due to be assessed by the City. For purposes of calculating the pending retainage reduction P.F. Moon has used the March 9, 2014 substantial completion date put forth by C.T.I. in its March 28, 2014 letter. This March 9, 2014 substantial completion date represents a contract time overrun of 223 days.

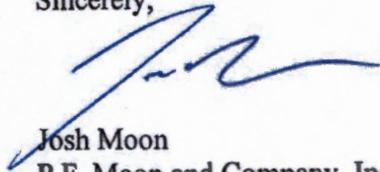
- 223 calendar days of liquidated damages: \$ 111,500.00.

P.F. Moon does not agree with C.T.I.'s March 9, 2014 substantial completion date. It is P.F. Moon's position that the project was substantially complete on December 9, 2013. P.F. Moon reserves its rights to recover liquidated damages assessed by the City after December 9, 2013.

The amounts set out above total \$381,528.00. Attached is P.F. Moon's Pay Application No. 28 which shows this amount to be withheld and the balance of the contract, \$423,655.33, to be paid.

We appreciate your prompt attention to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "Josh Moon", is written over the typed name and company information.

Josh Moon  
P.F. Moon and Company, Inc

cc: Dan Allen-City of Spring Hill, TN  
Jerome Dempsey-Dempsey, Dilling & Associates  
File

**Periodic Estimate for Partial Payment  
Wastewater Treatment Plant Expansion  
City of Spring Hill Tennessee**

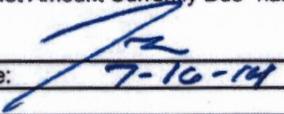
Periodic Estimate No. 26 for Period Ending September 30th, 2013

	Contract Sums	Previous Estimates	This Estimate	Totals to Date
Original Contract	\$15,960,000	\$15,960,000.00	\$0.00	\$15,960,000.00
Materials Stored at End of Period		\$0.00	\$0.00	\$0.00
Change Order:				
No. 1	\$59,839.00	59,839.00	0.00	59,839.00
No. 2	\$55,357.00	55,357.00	0.00	55,357.00
No. 3	\$24,947.51	24,947.51	0.00	24,947.51
No. 4	\$3,523.00	3,523.00	0.00	3,523.00
Total to Date	\$16,103,666.51	\$16,103,666.51	\$0.00	\$16,103,666.51
Retainage		\$ 805,183.33	\$0.00	\$381,528.00
Total Earned Less Retainage		\$15,298,483.18	\$0.00	\$15,722,138.51
Less Previous Requests for Payment				(15,298,483.18)
Net Amount Currently Due				\$423,655.33

**Certification of Contractor**

According to the best of my knowledge and belief, I certify that all items and amounts shown on the face of this Periodic Estimate for Partial Payment are correct; that all work has been performed and/or materials supplied in full accordance with the requirements of the referenced contract, and/or duly authorized deviations, substitutions, alterations, and/or additions; that the foregoing is a true and correct statement of the contract account up to and including the last day of the period covered by this periodic estimate; and that no part of the "Net Amount Currently Due" has been recieved

Contractor: P. F. Moon & Company, Inc.

By: 

Name and Title: Joshua J Moon, CEO

Date: 7-10-14

**Certification of Engineer**

I certify that I have checked and verified the above and foregoing Periodic Estimate for Partial Payment; that to the best of my knowledge and belief it is a true and correct statement of work performed and/or material supplied by the Contractor; and that partial payment claimed and requested by the contractor is correctly computed on the basis of work performed and/or materials supplied to date.

Engineer: CTI Engineers, INC.

By:

Name and Title: Allen Stephens, Project Manager

Date:

**Certification of Engineer's Field Representative**

By:

Date:

**Certification of Owner's Representative**

City of Spring Hill

By:

Name and Title: Rick Graham, Mayor

Date:

Periodic Estimate for Partial Payment

Project: Spring Hill WWTP Expansion  
 Contractor: PF Moon and Co Inc  
 Estimate Number: Twenty Eight  
 Period: Retainage Reduction

Item	Sub	Description	Amounts Per Contract			Completed This Period		Completed to Date	
			Quantity	Cost/Unit	Total Costs	Quantity	Total Costs	Quantity	Total Costs
1		<b>Mobilization, Bonds, Insurance, Procurement</b>							
	a.	Payment bond	LS	0.00	160,000.00	0.00%	0.00	100.00%	160,000.00
	b.	Performance bond	LS	0.00	160,000.00	0.00%	0.00	100.00%	160,000.00
	c.	Insurance	LS	0.00	45,000.00	0.00%	0.00	100.00%	45,000.00
	e.	Mobilization	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	f.	Temporary facility set-up	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	g.	Demobilization	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	h.	Record drawings	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
2		<b>General/ Sitework</b>							
	a.	Storm water pollution control measures	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
	b.	Construction entrance and tire wash station	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
	c.	Site grading	LS	0.00	12,500.00	0.00%	0.00	100.00%	12,500.00
	d.	Finished grading and grassing	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
	e.	Asphalt paving	LS	0.00	100,000.00	0.00%	0.00	100.00%	100,000.00
	f.	Sidewalks and yard steps	LS	0.00	5,500.00	0.00%	0.00	100.00%	5,500.00
3		<b>Influent Pump Station</b>							
	a.	Demolition/ renovation at existing inf ps	LS	0.00	1,800.00	0.00%	0.00	100.00%	1,800.00
	b.	Blast rock subgrade	LS	0.00	45,000.00	0.00%	0.00	100.00%	45,000.00
	c.	Excavation, sheeting and gravel subgrade	LS	0.00	75,000.00	0.00%	0.00	100.00%	75,000.00
	d.	Concrete slab	25 CY	600.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	e.	Concrete walls	86 CY	600.00	51,600.00	0.00%	0.00	100.00%	51,600.00
	f.	Valve vault concrete slab	12 CY	625.00	7,500.00	0.00%	0.00	100.00%	7,500.00
	g.	Valve vault concrete walls	15 CY	600.00	9,000.00	0.00%	0.00	100.00%	9,000.00
	h.	Concrete roof deck	15 CY	600.00	9,000.00	0.00%	0.00	100.00%	9,000.00
	i.	Influent box concrete slab	5 CY	600.00	3,000.00	0.00%	0.00	100.00%	3,000.00
	j.	Influent box concrete walls	30 CY	600.00	18,000.00	0.00%	0.00	100.00%	18,000.00
	k.	Backfill structure	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
	l.	Submersible pumps	LS	0.00	100,000.00	0.00%	0.00	100.00%	100,000.00
	m.	Piping and valves	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	n.	Hydraulic gates	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	o.	Misc. metals and hatches	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
	p.	Painting	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
	q.	Electrical	LS	0.00	18,000.00	0.00%	0.00	100.00%	18,000.00
4		<b>Influent PS Electrical Building</b>							
	a.	Excavation for footings/ slab	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
	b.	Concrete footings	4 CY	625.00	2,500.00	0.00%	0.00	100.00%	2,500.00
	c.	Concrete slabs	8 CY	625.00	5,000.00	0.00%	0.00	100.00%	5,000.00
	d.	Masonry	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
	e.	Roof/ Trim framing	LS	0.00	3,500.00	0.00%	0.00	100.00%	3,500.00
	f.	Roofing	LS	0.00	4,000.00	0.00%	0.00	100.00%	4,000.00
	g.	Ceiling and insulation	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00

	h.	Doors and accessories	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
	i.	Painting	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
	j.	HVAC	LS	0.00	6,000.00	0.00%	0.00	100.00%	6,000.00
	k.	Electrical	LS	0.00	40,940.00	0.00%	0.00	100.00%	40,940.00
	l.	Stairway and metals	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
5		<b>Headworks</b>							
	a.	Excavation and gravel subgrade	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	b.	Concrete lower slab and footings	75 CY	600.00	45,000.00	0.00%	0.00	100.00%	45,000.00
	c.	Concrete walls	94 CY	600.00	56,400.00	0.00%	0.00	100.00%	56,400.00
	d.	Concrete upper slabs	38 CY	605.26	23,000.00	0.00%	0.00	100.00%	23,000.00
	e.	New rotary bar screen	LS	0.00	125,000.00	0.00%	0.00	100.00%	125,000.00
	f.	Relocate screen system	LS	0.00	8,000.00	0.00%	0.00	100.00%	8,000.00
	g.	Proposed grit removal system	LS	0.00	183,000.00	0.00%	0.00	100.00%	183,000.00
	h.	Relocate grit removal system	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	i.	Piping and valves	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	j.	Structural steel framing for canopy	LS	0.00	100,000.00	0.00%	0.00	100.00%	100,000.00
	k.	Masonry	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
	l.	Hollow core concrete roof slabs	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
	m.	Concrete roof topping	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	n.	Trim and flashing	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	o.	Painting	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	p.	Misc. metals	LS	0.00	8,000.00	0.00%	0.00	100.00%	8,000.00
	q.	Grating and supports	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	r.	Handrail	LS	0.00	2,000.00	0.00%	0.00	100.00%	2,000.00
	s.	Electrical	LS	0.00	41,555.00	0.00%	0.00	100.00%	41,555.00
6		<b>Oxidation Ditch</b>							
	a.	Excavation to el. 674	LS	0.00	175,000.00	0.00%	0.00	100.00%	175,000.00
	b.	Excavation and gravel for footings	LS	0.00	55,000.00	0.00%	0.00	100.00%	55,000.00
	c.	Excavation and gravel for concrete slabs	LS	0.00	165,000.00	0.00%	0.00	100.00%	165,000.00
	d.	Underslab drain piping	LS	0.00	53,000.00	0.00%	0.00	100.00%	53,000.00
	e.	Concrete footings	1160 CY	500.00	580,000.00	0.00%	0.00	100.00%	580,000.00
	f.	Concrete slabs	1000 CY	500.00	500,000.00	0.00%	0.00	100.00%	500,000.00
	g.	Concrete walls	2262 CY	575.00	1,300,650.00	0.00%	0.00	100.00%	1,300,650.00
	h.	Concrete decks	635 CY	599.06	380,400.00	0.00%	0.00	100.00%	380,400.00
	i.	Backfill structure	LS	0.00	30,000.00	0.00%	0.00	100.00%	30,000.00
	j.	Walkways	LS	0.00	40,000.00	0.00%	0.00	100.00%	40,000.00
	k.	Stairways	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
	l.	Handrail	LS	0.00	75,000.00	0.00%	0.00	100.00%	75,000.00
	m.	Misc. Metals and stairways	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	n.	Hydraulic gates and mud valves	LS	0.00	75,000.00	0.00%	0.00	100.00%	75,000.00
	o.	Oxidation Ditch equipment	LS	0.00	1,250,000.00	0.00%	0.00	100.00%	1,250,000.00
	p.	Submersible mixers	LS	0.00	0.00	0.00%	0.00	100.00%	0.00
	q.	Fixed header aeration system	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
	r.	Re-aeration blowers	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
	s.	Masonry for electrical building	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
	t.	Roof framing for elec building	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
	u.	Roofing system	LS	0.00	4,000.00	0.00%	0.00	100.00%	4,000.00
	v.	Doors and accessories	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
	w.	Building finishes	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00

x	Electrical HVAC	LS	0.00	6,000.00	0.00%	0.00	100.00%	6,000.00
y	Oxid. Ditch electrical	LS	0.00	282,760.00	0.00%	0.00	100.00%	282,760.00
z	900KW Standby generator and accessories	LS	0.00	250,000.00	0.00%	0.00	100.00%	250,000.00
7	<u>Clarifier Splitter Box</u>							
a.	Excavation and gravel subgrade	LS	0.00	5,500.00	0.00%	0.00	100.00%	5,500.00
b.	Concrete slab	12 CY	600.00	7,200.00	0.00%	0.00	100.00%	7,200.00
c.	Concrete walls	40 CY	600.00	24,000.00	0.00%	0.00	100.00%	24,000.00
d.	Backfill structure	LS	0.00	6,500.00	0.00%	0.00	100.00%	6,500.00
e.	Grating and supports	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
f.	Handrail	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
g.	Hydraulic gates	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
8	<u>Clarifier # 1</u>							
a.	Blast rock and excavate	LS	0.00	100,000.00	0.00%	0.00	100.00%	100,000.00
b.	Underslab piping	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
c.	Concrete center cone- sludge hopper	31 CY	451.61	14,000.00	0.00%	0.00	100.00%	14,000.00
d.	Concrete slab	250 CY	600.00	150,000.00	0.00%	0.00	100.00%	150,000.00
e.	Concrete walls	180 CY	600.00	108,000.00	0.00%	0.00	100.00%	108,000.00
f.	Concrete troughs	30 CY	1,000.00	30,000.00	0.00%	0.00	100.00%	30,000.00
g.	Backfill structure	LS	0.00	30,000.00	0.00%	0.00	100.00%	30,000.00
h.	Clarifier equipment	LS	0.00	125,000.00	0.00%	0.00	100.00%	125,000.00
i.	FRP weirs and baffles	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
j.	FRP density current baffle	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
k.	Grating and misc metals	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
l.	Small piping	LS	0.00	12,000.00	0.00%	0.00	100.00%	12,000.00
m.	Electrical	LS	0.00	15,895.00	0.00%	0.00	100.00%	15,895.00
n.	Clarifier scum pump station	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
9	<u>Clarifier # 4</u>							
a.	Blast rock and excavate	LS	0.00	100,000.00	0.00%	0.00	100.00%	100,000.00
b.	Underslab piping	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
c.	Concrete center cone- sludge hopper	31 CY	451.61	14,000.00	0.00%	0.00	100.00%	14,000.00
d.	Concrete slab	250 CY	600.00	150,000.00	0.00%	0.00	100.00%	150,000.00
e.	Concrete walls	180 CY	600.00	108,000.00	0.00%	0.00	100.00%	108,000.00
f.	Concrete troughs	30 CY	1,000.00	30,000.00	0.00%	0.00	100.00%	30,000.00
g.	Backfill structure	LS	0.00	30,000.00	0.00%	0.00	100.00%	30,000.00
h.	Clarifier equipment	LS	0.00	125,000.00	0.00%	0.00	100.00%	125,000.00
i.	FRP weirs and baffles	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
j.	FRP density current baffle	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
k.	Grating and misc metals	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
l.	Small piping	LS	0.00	12,000.00	0.00%	0.00	100.00%	12,000.00
m.	Electrical	LS	0.00	15,895.00	0.00%	0.00	100.00%	15,895.00
n.	Clarifier scum pump station	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
o.	Clarifier effluent junction box	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
10	<u>Return Sludge Pump Building</u>							
a.	Excavation and gravel subgrade	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
b.	Concrete slab	36 CY	600.00	21,600.00	0.00%	0.00	100.00%	21,600.00
c.	Concrete walls	30 CY	600.00	18,000.00	0.00%	0.00	100.00%	18,000.00

d.	Concrete deck	36 CY	600.00	21,600.00	0.00%	0.00	100.00%	21,600.00
f.	Masonry walls	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
g.	Roof framing	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
h.	Roofing system	LS	0.00	4,000.00	0.00%	0.00	100.00%	4,000.00
i.	Building finishes	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
j.	Doors and accessories	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
k.	Misc. metals and embeds	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
l.	Grating and supports	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
m.	Handrail	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
n.	Access ladder	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
o.	Demolition of existing equipment	LS	0.00	1,750.00	0.00%	0.00	100.00%	1,750.00
p.	Pump pads	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
q.	RAS- WAS pumps	LS	0.00	185,000.00	0.00%	0.00	100.00%	185,000.00
r.	Piping and valves	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
s.	Sump pumps	LS	0.00	13,500.00	0.00%	0.00	100.00%	13,500.00
t.	Small piping	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
u.	HVAC	LS	0.00	13,000.00	0.00%	0.00	100.00%	13,000.00
v.	Electrical	LS	0.00	65,060.00	0.00%	0.00	100.00%	65,060.00

11

**Effluent Filters**

a.	Excavation and gravel subgrade	LS	0.00	71,250.00	0.00%	0.00	100.00%	71,250.00
b.	Underslab piping	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
c.	Concrete slabs	250 CY	600.00	150,000.00	0.00%	0.00	100.00%	150,000.00
d.	Concrete walls	165 CY	606.06	100,000.00	0.00%	0.00	100.00%	100,000.00
e.	Concrete decks	65 CY	692.31	45,000.00	0.00%	0.00	100.00%	45,000.00
f.	Concrete troughs	42 CY	595.24	25,000.00	0.00%	0.00	100.00%	25,000.00
g.	Filter underdrains	LS	0.00	400,000.00	0.00%	0.00	100.00%	400,000.00
h.	Filter air laterals	LS	0.00	50,000.00	0.00%	0.00	100.00%	50,000.00
i.	Filter media	LS	0.00	50,000.00	0.00%	0.00	100.00%	50,000.00
j.	Filter valves, controls and misc. equipment	LS	0.00	335,000.00	0.00%	0.00	100.00%	335,000.00
k.	Filter gallery piping and valves	LS	0.00	215,000.00	0.00%	0.00	100.00%	215,000.00
l.	Stainless steel air piping	LS	0.00	12,500.00	0.00%	0.00	100.00%	12,500.00
m.	Filter blowers	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
n.	Mudwell pumps and accessories	LS	0.00	55,000.00	0.00%	0.00	100.00%	55,000.00
o.	Backwash pumps and accessories	LS	0.00	50,000.00	0.00%	0.00	100.00%	50,000.00
p.	Access hatches	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
p.	Stairway	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
p.	Platforms	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
p.	Handrail	LS	0.00	12,000.00	0.00%	0.00	100.00%	12,000.00
p.	Misc. Metals	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
q.	Weir plates	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
r.	Small piping	LS	0.00	4,500.00	0.00%	0.00	100.00%	4,500.00
s.	Masonry walls for elec building	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
t.	Roof framing for elec building	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
u.	Roofing system	LS	0.00	4,000.00	0.00%	0.00	100.00%	4,000.00
v.	Building finishes	LS	0.00	3,500.00	0.00%	0.00	100.00%	3,500.00
w.	Painting	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
x.	Doors and accessories	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
y.	HVAC	LS	0.00	12,000.00	0.00%	0.00	100.00%	12,000.00
z.	Electrical	LS	0.00	105,160.00	0.00%	0.00	100.00%	105,160.00

12

**UV Disinfection and Step Aeration**

a.	Excavate and gravel subgrade	LS	0.00	6,500.00	0.00%	0.00	100.00%	6,500.00
b.	Concrete slabs	110 CY	600.00	66,000.00	0.00%	0.00	100.00%	66,000.00
c.	Concrete walls	100 CY	600.00	60,000.00	0.00%	0.00	100.00%	60,000.00
d.	Structural steel framing for canopy	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
e.	Grating and supports	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
f.	Handrail	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
g.	UV equipment and controls	LS	0.00	250,000.00	0.00%	0.00	100.00%	250,000.00
h.	Interconnection piping and gates	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
i.	Demolition/ Renovation at existing UV	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
j.	Sampler	LS	0.00	18,000.00	0.00%	0.00	100.00%	18,000.00
k.	H-Flume and ultrasonic meter	LS	0.00	12,500.00	0.00%	0.00	100.00%	12,500.00
l.	Masonry walls	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
m.	Roof framing	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
n.	Roofing system	LS	0.00	4,000.00	0.00%	0.00	100.00%	4,000.00
o.	Building finishes	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
p.	Doors and accessories	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
q.	Lifting rail system	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
r.	Electrical HVAC	LS	0.00	6,000.00	0.00%	0.00	100.00%	6,000.00
s.	Electrical	LS	0.00	54,300.00	0.00%	0.00	100.00%	54,300.00

13

**Digester renovation**

a.	Misc. demolition	LS	0.00	4,000.00	0.00%	0.00	100.00%	4,000.00
b.	New concrete walls	LS	0.00	8,000.00	0.00%	0.00	100.00%	8,000.00
c.	Fixed header aeration system	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
d.	Digester blower slab	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
e.	Digester blowers	LS	0.00	45,000.00	0.00%	0.00	100.00%	45,000.00
f.	Decant return pumps	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
g.	Sludge transfer pumps	LS	0.00	27,000.00	0.00%	0.00	100.00%	27,000.00
h.	SS air piping	LS	0.00	12,500.00	0.00%	0.00	100.00%	12,500.00
i.	Misc. piping and valves	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
j.	Hydraulic gates	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
k.	Electrical	LS	0.00	202,040.00	0.00%	0.00	100.00%	202,040.00

14

**Dewatering Building**

a.	Excavation and gravel subgrade	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
b.	Electrical rough-in	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
c.	Plumbing rough-in	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
d.	Underslab process piping	LS	0.00	12,500.00	0.00%	0.00	100.00%	12,500.00
f.	Concrete footings	32 CY	609.38	19,500.00	0.00%	0.00	100.00%	19,500.00
g.	Masonry walls and columns	LS	0.00	100,000.00	0.00%	0.00	100.00%	100,000.00
h.	Concrete slab	123 CY	601.63	74,000.00	0.00%	0.00	100.00%	74,000.00
i.	Roof trusses and framing	LS	0.00	6,500.00	0.00%	0.00	100.00%	6,500.00
j.	Roof system	LS	0.00	45,000.00	0.00%	0.00	100.00%	45,000.00
k.	Doors and windows	LS	0.00	18,000.00	0.00%	0.00	100.00%	18,000.00
l.	Roll-up doors	LS	0.00	5,400.00	0.00%	0.00	100.00%	5,400.00
m.	Awning	LS	0.00	1,500.00	0.00%	0.00	100.00%	1,500.00
n.	Concrete loading ramp and accessories	LS	0.00	8,500.00	0.00%	0.00	100.00%	8,500.00
o.	Structural steel framing for canopy	LS	0.00	8,000.00	0.00%	0.00	100.00%	8,000.00
p.	Platforms for Belt Press	LS	0.00	8,000.00	0.00%	0.00	100.00%	8,000.00
q.	Misc. metals	LS	0.00	4,000.00	0.00%	0.00	100.00%	4,000.00
r.	Insulation	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
s.	Plumbing	LS	0.00	65,000.00	0.00%	0.00	100.00%	65,000.00

	t.	HVAC	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	u.	Painting	LS	0.00	12,000.00	0.00%	0.00	100.00%	12,000.00
	v.	Relocate sludge pumps	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
	w.	New sludge pumps and piping	LS	0.00	35,000.00	0.00%	0.00	100.00%	35,000.00
	x.	Relocate existing press	LS	0.00	13,500.00	0.00%	0.00	100.00%	13,500.00
	y.	New belt press and controls	LS	0.00	250,000.00	0.00%	0.00	100.00%	250,000.00
	z.	Sludge cake feed pumps, piping and knife gate valves	LS	0.00	160,000.00	0.00%	0.00	100.00%	160,000.00
	aa.	Polymer system	LS	0.00	21,500.00	0.00%	0.00	100.00%	21,500.00
	bb.	Small piping and accessories	LS	0.00	12,000.00	0.00%	0.00	100.00%	12,000.00
	cc.	Electrical	LS	0.00	213,461.00	0.00%	0.00	100.00%	213,461.00
15		<b><u>Sludge tank and Filtrate PS</u></b>	LS						
	a.	Excavate and gravel subgrade	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	b.	Concrete slabs	50 CY	600.00	30,000.00	0.00%	0.00	100.00%	30,000.00
	c.	Concrete walls	40 CY	600.00	24,000.00	0.00%	0.00	100.00%	24,000.00
	d.	Sludge tank metals and piping	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	e.	Sludge tank submersible mixers	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
	f.	Filtrate ps wetwell	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	g.	Filtrate ps valve vault	LS	0.00	5,000.00	0.00%	0.00	100.00%	5,000.00
	h.	Filtrate pumps and accessories	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
	i.	Filtrate piping and valves	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	j.	Concrete apron at Filtrate ps	LS	0.00	3,500.00	0.00%	0.00	100.00%	3,500.00
	k.	Electrical	LS	0.00	9,360.00	0.00%	0.00	100.00%	9,360.00
16		<b><u>Lab and Control Building Renovations</u></b>							
	a.	New masonry construction	LS	0.00	65,000.00	0.00%	0.00	100.00%	65,000.00
	b.	New floor slab	22 CY	613.64	13,500.00	0.00%	0.00	100.00%	13,500.00
	c.	Steel and wood framing for upper walls	LS	0.00	10,000.00	0.00%	0.00	100.00%	10,000.00
	d.	Interior framing and gypsum board	LS	0.00	28,800.00	0.00%	0.00	100.00%	28,800.00
	e.	Windows	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
	f.	Doors and accessories	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
	g.	Acoustic ceilings	LS	0.00	12,000.00	0.00%	0.00	100.00%	12,000.00
	h.	Painting	LS	0.00	50,000.00	0.00%	0.00	100.00%	50,000.00
	i.	Plumbing and plumbing fixtures	LS	0.00	53,000.00	0.00%	0.00	100.00%	53,000.00
	j.	Flooring	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
	k.	Cabinets and casework	LS	0.00	21,000.00	0.00%	0.00	100.00%	21,000.00
	l.	Stair system	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	m.	HVAC	LS	0.00	65,000.00	0.00%	0.00	100.00%	65,000.00
	n.	Electrical and lighting	LS	0.00	57,400.00	0.00%	0.00	100.00%	57,400.00
	o.	Roofing system	LS	0.00	45,000.00	0.00%	0.00	100.00%	45,000.00
17		<b><u>Yard Piping</u></b>							
	a.	Influent sewer to influent PS	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
	b.	Influent FM	LS	0.00	102,000.00	0.00%	0.00	100.00%	102,000.00
	c.	Headworks to Ox ditch	LS	0.00	85,000.00	0.00%	0.00	100.00%	85,000.00
	d.	Ox ditch to Clarifiers ( New and Existing)	LS	0.00	105,000.00	0.00%	0.00	100.00%	105,000.00
	e.	Sludge suction, waste and return piping	LS	0.00	80,000.00	0.00%	0.00	100.00%	80,000.00
	f.	Clarifier effluent to Filter	LS	0.00	47,000.00	0.00%	0.00	100.00%	47,000.00
	g.	Filter to Outfall	LS	0.00	65,000.00	0.00%	0.00	100.00%	65,000.00
	h.	Sanitary sewer and drain line	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
	i.	Potable water	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
	k.	Plant water	LS	0.00	45,000.00	0.00%	0.00	100.00%	45,000.00

	1.	Digester decant return	LS	0.00	15,000.00	0.00%	0.00	100.00%	15,000.00
18		<b>Electrical</b>							
	a.	Yard ductbanks	LS	0.00	402,000.00	0.00%	0.00	100.00%	402,000.00
	b.	Conductors for duct banks	LS	0.00	241,260.00	0.00%	0.00	100.00%	241,260.00
	d.	Electrical equipment RAS building	LS	0.00	163,275.00	0.00%	0.00	100.00%	163,275.00
	e.	Electrical equipment Effluent Filter building	LS	0.00	136,062.00	0.00%	0.00	100.00%	136,062.00
	f.	Electrical equipment Dewatering building	LS	0.00	108,850.00	0.00%	0.00	100.00%	108,850.00
	g.	Electrical equipment Oxidation ditch	LS	0.00	81,637.00	0.00%	0.00	100.00%	81,637.00
	h.	Electrical equipment- Headworks/ Inf PS	LS	0.00	27,213.00	0.00%	0.00	100.00%	27,213.00
	i.	Electrical equipment- UV building	LS	0.00	27,922.00	0.00%	0.00	100.00%	27,922.00
	j.	Lighting fixtures	LS	0.00	184,215.00	0.00%	0.00	100.00%	184,215.00
19		<b>Process Controls and Integration</b>							
	a.	PCIS design and submittals	LS	0.00	12,300.00	0.00%	0.00	100.00%	12,300.00
	b.	PLC- 001- Influent	LS	0.00	29,790.00	0.00%	0.00	100.00%	29,790.00
	c.	PLC -002- Headworks	LS	0.00	20,000.00	0.00%	0.00	100.00%	20,000.00
	d.	Com pnl 003- Oxidation	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
	e.	PLC-004- RAS	LS	0.00	22,000.00	0.00%	0.00	100.00%	22,000.00
	f.	Com pnl 005- Filters	LS	0.00	2,500.00	0.00%	0.00	100.00%	2,500.00
	g.	PLC- 006- UV	LS	0.00	28,000.00	0.00%	0.00	100.00%	28,000.00
	h.	PLC- 007- Dewatering	LS	0.00	28,000.00	0.00%	0.00	100.00%	28,000.00
	i.	Com pnl 201- Control room	LS	0.00	3,000.00	0.00%	0.00	100.00%	3,000.00
	j.	Computer system software	LS	0.00	25,000.00	0.00%	0.00	100.00%	25,000.00
	k.	Computer system hardware	LS	0.00	23,000.00	0.00%	0.00	100.00%	23,000.00
	l.	Field service, start-up and testing	LS	0.00	60,000.00	0.00%	0.00	100.00%	60,000.00
14		<b>Misl Site Renovation</b>							
	a.	Headworks demolition	LS	0.00	5,600.00	0.00%	0.00	100.00%	5,600.00
	b.	Renovate clarifier mechanisms	LS	0.00	45,000.00	0.00%	0.00	100.00%	45,000.00
	c.	Remove aerators from sludge pond	LS	0.00	1,600.00	0.00%	0.00	100.00%	1,600.00

Original Contract Totals

15,960,000.00

0.00

15,960,000.00

**Periodic Estimate for Partial Payment - Stored Materials**

**Project: Spring Hill WWTP Expansion**  
**Contractor: PF Moon and Co Inc**  
**Estimate Number: Twenty Eight**  
**Period: Retainage Reduction**

			Stored Materials			
Item	Sub	Description	Previous Period	Added this Period	Placed this Period	Balance End of Period
			-	-	-	-
			-	-	-	-
			-	-	-	-
			-	-	-	-
			-	-	-	-
			-	-	-	-
<b>Total Stored Materials</b>			0.00	0.00	0.00	0.00



Periodic Estimate for Partial Payment - Summary Sheet

Project: *Spring Hill WWTP Expansion*  
Contractor: *PF Moon and Co Inc*  
Estimate Number: *Twenty Eight*  
Period: *Retainage Reduction*

Original Contract Amount	\$15,960,000.00
Change Orders	\$143,666.51
Revised Contract Amount	\$16,103,666.51
Original Contract Performed to Date	\$ 15,960,000.00
Change Order Work Performed	143,666.51
Total Cost of Work Performed	16,103,666.51
Materials stored on Job Site	-
Total of Completed Work and Materials Stored	16,103,666.51
Less Retainage	381,528.00
Subtotal	15,722,138.51
Less Previous Payments	(15,298,483.18)
<b>Balance Now Due</b>	<b>\$ 423,655.33</b>