

## Crosslake WWTF Improvement Project

**Date:** May 7, 2018  
**To:** City Council  
**From:** Mike Rardin, PE *MR*  
**Cc:** Ted Strand - Public Works Director  
**Subject:** Monthly Project Update

---

### Project Description

The Project can generally be described as follows:

1. Pretreatment improvements including replacing the existing mechanical fine screen, addition of a self-priming grit pump, adding a new blower for the aerated grit removal system, and adding a new handrail and grating system.
2. Construct a new 82,000 gallon equalization basin.
3. Construct a new rapid mix manhole with ferric chloride addition.
4. Construct a new control structure to feed the final clarifiers.
5. Construct a new effluent metering manhole.
6. Miscellaneous electric actuator valve replacements.
7. Re-routing the existing WAS line into the biosolids storage tanks.
8. Furnish and install new blowers for the existing aerated biosolids storage tank
9. Furnish and install a new backwash blower
10. Construct a 30,000 gallon backwash supply water storage tank.

### Work Progress - Seventh Project Update

On September 15, 2017 the City of Crosslake awarded the 2017 Waste Water Treatment Plant Improvement Project to Eagle Construction Company, Inc. of Little Falls, MN for the amount of \$2,227,000.00. The contractor began to mobilize equipment and materials to the site on October 5 in order to prepare for the construction of the treatment plant improvements.

October thru April - the contractor completed the concrete work for the EQ Basin and Water Storage Tanks and installed some process piping and several blowers.

May - during May the contractor continued installing valves and process piping as it was delivered onsite; the blower for the backwash filters was set in place and the contractor installed backwash filter valves, completed backwash filter modifications, and installed new backwash filter media; concrete was placed for the generator slab and the control structure slab and walls; the new generator was delivered and set in place; both 4" and 6" watermain piping was installed throughout the site (the 4" watermain connects the new well to the water storage tank and the 6" watermain will provide water to the plant filter room for use in the backwash cycle as well as provide water for the fire truck load out station); worked on Sludge Storage Tank piping and modifications; and finally, the electrical subcontractor installed various blower piping and underground electrical conduit, where possible around the site, in preparation for new equipment hookup. Unfortunately, extended winter conditions led to a later than expected start on all underground work so spring startup has been slower than expected.

Specific progress to date can be summarized as follows:

1. Pretreatment Bldg Improvements - in progress
2. Construct a new 82,000 gallon equalization basin - complete except for final pumps and controls
3. Construct a new rapid mix manhole with ferric chloride addition - in progress
4. Construct a new control structure to feed the final clarifiers - in progress
5. Construct a new effluent metering manhole - in progress
6. Miscellaneous electric actuator valve replacements - complete except for controls

7. Re-routing the existing WAS line into the biosolids storage tanks - complete
8. Furnish and install new blowers for the existing aerated biosolids storage tank - complete except for controls
9. Furnish and install a new backwash blower - complete except for controls
10. Construct a 30,000 gallon backwash supply water storage tank - complete except for final pumps and controls

Contract changes identified during late April and May are Sludge Tank Diffusers Modifications, Clarifier Splitter Box Modifications, Clarifier Tank Weir Gate Modifications, Minor Wiring and Conduit additions at WWTP, Transfer Switch Modifications at PW Bldg, Emergency Lighting Revisions at PW Bldg. and EQ Basin Mixer. These changes are summarized in the “Costs” section below.

**Project Schedule**

The contractor’s proposed schedule (**attached - Project Schedule - 02.02.18**), has not changed the past several months and overall construction still is estimated to take about forty (40) weeks - with a projected substantial completion date of August 31, 2018. Based on the contractor’s proposed schedule, the following is a brief summary of future construction activities:

**June** - Mechanical Fine Screen installation, blower and air piping, Water Storage Tank pump installation, Control Structure concrete and piping, Sludge Storage Tank piping and modifications, Rapid Mix Manhole and piping construction, Meter Manhole and piping construction, and electrical conduit, wiring, and controls.

**July** - electrical and system controls.

**August** - electrical and system controls, Site Grading/ Fencing/ Restoration and punchlist items.

SCADA, system controls, and associated electrical equipment has been designed, ordered, and has begun arriving at the site. Due to nationwide demand for this type of equipment and extended winter conditions, this work is slightly behind schedule. An updated project schedule has been requested.

The contractor generally appears to be on or slightly behind the schedule they proposed for this project. Minor concern has been raised by the contractor that completion may be delayed into September or possibly even October.

**Completion Dates**

The contract calls for substantial completion (defined as operation of all new structures and equipment with the ability to treat wastewater as intended) by August 31, 2018.

**Costs**

Approved and proposed changes to date have the potential to increase construction costs for the waste water portion of the project by \$61,613.30 as follows:

<b>Approved Changes</b>	<b>Cost</b>
1 - Field Order #1 - Add Rebar: Water Storage Tank Base Slab	\$ 424.00
2 - Field Order #2:	
a - RAS Piping Relocation to EQ Basin	\$ 11,923.13
b - Remove and Replace Three (3) Four Inch Plug Valves	\$ 2,464.93
c - Relocate 6" Oxidation Ditch Drain Line	\$ (4,221.27)
3 - Field Order #3 - Pipe Insulation (EQ Basin to Oxidation Ditch)	\$ 1,822.51
4 - Relocate 6" RW Piping to South Oxidation Ditch	TBD - \$2,500
5 - Pipe Insulation (extra as needed)	TBD - \$2,000
6 - Sludge Tank Diffuser Modifications (revised from coarse to fine nozzles)	TBD - \$2,500
7 - Field Order #4:	

a - Modify Clarifier Splitter Box	TBD - \$500
b - Clarifier Tank Weir Gates (2)	TBD - \$1,000

The following information is provided for the items identified above:

1. During construction review of the Water Storage Tank plans, additional rebars were needed for the base slab - cost determined to be \$424.00. This work is complete.
2. Field Orders:
  - a. Staff found the existing 6” RW piping to be improperly installed and full of solids. As a result, it was decided the existing RAS piping should be relocated / extended to the EQ Basin to avoid future use of this piping - cost estimated at \$11,923.13. This work is complete.
  - b. RAS pump inlet isolation valves (3) have been identified by staff as failing. These can be replaced as a part of the project - cost determined to be \$2,464.93. This work is complete.
  - c. The oxidation ditch drains are being relocated to a location which avoids a building conflict - contractor has offered a credit (deduct) of \$4,221.27 for this change. This work is complete.
3. EQ Basin and Oxidation Ditch pipe connections will result in less than 7-ft of bury depth. To prevent freezing, 4-inch thick insulation 4-ft wide is to be placed over these pipes where there is less than 7-ft of cover. \$1,822.51 of work has been completed.
4. The new 12” EQ basin pipe conflicted with the existing 6” RW pipe to the south oxidation ditch. No records from the original construction plan were found during design or by City staff that show the RW pipe elevation. The 6” RW pipe was raised / reinstalled when it was encountered - contractor is to submit costs associated with this work for review and approval. Costs are tentatively estimated at about \$2,500.
5. Some additional existing tank and pipe connections may result in less than a 7-ft of bury depth. To prevent freezing, 4-inch thick insulation 4-ft wide is to be placed over pipe locations with less than 7-ft of cover - costs to be determined where this situation is encountered. Costs are tentatively estimated at \$2,000 or less.
6. Sludge Tank Diffuser Modifications - BMI design called for coarse nozzle diffusers, City staff directed those be changed to fine nozzle diffusers. Final costs for this change remain to be determined, but are tentatively estimated at \$2,500 or less. This work is essentially complete at this time.
7. Field Order #4:
  - a. Modify Clarifier Splitter Box - modifications provide for temporary pipe closures and structure drainage while structure remains unused. Costs should be minimal, not expected to be more than \$500. Work is in progress.
  - b. Clarifier Tank Weir Gates - gates provided were based on faulty as-built information. The gates provided allow for 12” lift while the existing gates provide for 18” lift. BMI directed gates be modified to provide for the 18” lift needed to operate the clarifiers. Costs to modify the gates are estimated at about \$1,000.00. This work is complete.

Pending Changes	Cost
8 - BMI Proposal Request #4 - Minor Electrical Modifications	
a - Minor Wiring and Conduit Additions at WWTP	TBD - \$4,400.00
b - Transfer Switch Modifications at PW Bldg	TBD - \$22,000.00
c - Emergency Lighting Revisions at PW Bldg	TBD - \$4,300.00
9 - EQ Basin Mixer	TBD - \$15,000.00
10 - SCADA System - Computer Modifications (deduct)	TBD - (\$5,000.00)

The following information is provided for the items identified above:

8. BMI Proposal Request #4 - Minor Electrical Modifications requested by BMI.
  - a. Minor Wiring and Conduit Additions at WWTP - provides for wiring and conduits to grit pump and EQ Blower that were not shown in the plans. Estimated cost of this work is about \$4,400 based on a proposal provided by Eagle (**attached - Eagle Proposal**). This work is complete.
  - b. Transfer Switch Modifications at PW Bldg - this work is necessary to power the PW Bldg from

the new stand by generator. Location of the new switch in the PW Bldg must be revised from that shown in the plans due to location of main power line feeding the PW Bldg. Line location was not known and assumed location was incorrect. Estimated cost of this work is about \$22,000 based on a proposal provided by Eagle (**attached - Eagle Proposal**). This work will not be undertaken without Council approval.

- c. Emergency Lighting Revisions at PW Bldg - this work, if necessary, is proposed to cost about \$4,300 based on a proposal by Eagle (**attached - Eagle Proposal**). Emergency lighting, per current code, is to be on a dedicated circuit which is not currently the case for the existing lighting. However, the need to do this work is still being determined; input from the electrical inspector is needed in this determination.
- 9. EQ Basin Mixer - as a result of the RAS Piping rerouting (change 2.a described above) a mixer should be installed in the EQ Basin to avoid solids settlement issues. Options and costs are currently being reviewed. Costs could range from \$5,000 up to about \$15,000. Council approval will be needed before this work is ordered.
- 10. SCADA System - Computer Modifications (deduct) - the existing computer at the WWTP can be used versus a new one planned to be supplied by the contractor. A credit of about \$5,000 will be provided the city for continued use of their existing computer for SCADA purposes. Final costs for this remain to be determined.

Items 1 through 5 above have been previously reviewed by staff and City Council and these changes have been found to be acceptable. Changes 6 and 7 were authorized by city staff and BMI to allow work to continue without delay. Items 8 and 9 are fairly recent issues and will not be undertaken without further review and Council approval. Item 10 is noncontroversial and will be approved by city staff and BMI when a final cost has been determined. Changes 1 through 3 have been authorized by BMI and have been incorporated into pay requests as appropriate (totaling \$12,413.30). Costs for changes 4 through 7 will be reported back to Council and incorporated into pay requests when final costs have been determined (estimated at \$8,500.00). Costs for changes 8 and 9 are estimated at about \$45,000. Item 10 provides for a contractor deduct (city credit) of about \$5,000.

A construction allowance of \$75,000 to pay for possible contract changes was incorporated into the construction contract for this project. So far, \$12,413.30 has been charged towards that allowance. Assuming all changes above are approved and costs remain as estimated, the charges towards the construction allowance would increase to \$61,613.30.

Well construction has been completed and final costs are \$67,940, which is \$455 less than contracted for.

Engineering services for the project have been continuing as agreed to according to the existing “Not to Exceed” contract. No cost changes are anticipated at this time.

Total project costs to date and estimated final costs can be summarized as follows:

<b>Total Estimated Project Cost</b>	<b>Original Cost</b>	<b>Changes</b>	<b>Costs to Date</b>	<b>Estimated Final Costs</b>
WWTF Construction	\$2,152,000	\$61,613	\$1,558,380	\$2,213,613
Well Construction	\$ 68,395	\$ (455.00)	\$ 67,940	\$ 67,940
Engineering	\$ 198,400	\$ (514.00)	\$ 194,753	\$ 197,886
<b>Totals</b>	<b>\$ 2,418,795</b>	<b>\$ 60,644</b>	<b>\$ 1,821,074</b>	<b>\$ 2,479,439</b>
<b>Other City Costs (pre 2018)</b>			<b>\$188,016</b>	<b>\$2,667,455</b>

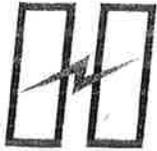
Please see project cost summary (**attached - Project Cost Summary - 06.06.18**) for project cost details.

**Attachments**

1. Project Schedule - 02.02.18
2. Project Cost Summary - 06.06.18
3. Eagle Proposal (change items 8a through 8c)







# Holden Electric Co., Inc.



Construction and Maintenance

7669 COLLEGE ROAD, P.O. BOX 2688

BAXTER, MN 56425-2688

TELEPHONE: (218) 829-4759

FAX# (218) 829-4121

5/21/2016

Jayd Newman  
Eagle Construction

RE: Crosslake WWTP PR #4

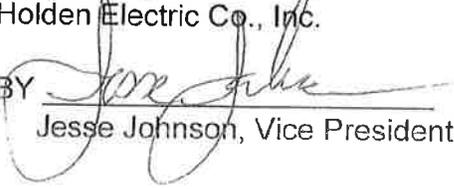
Jayd,  
The following will be our cost change for PR #4.  
See attached Breakdowns.

Total Price \$28,870.00

Please call with any questions.

Respectfully Submitted,  
Holden Electric Co., Inc.

BY

  
Jesse Johnson, Vice President

Phone: 218-829-4759 Fax: 218-829-4121  
CROSSLAKE WTP IMPROVEMENTS : PR #4  
Totals (Summary) - Bid Summary: Default

Material	
Non-Quoted	\$8,208.52
Quotes	0.00
Sales Tax (7.88%)	646.83
Total Material	\$8,855.35
Labor	
Direct (200.81 hours @ \$77.50)	\$15,562.77
Non-Productive Labor	0.00
Total Labor (200.81 hours)	\$15,562.77
Direct Job Expenses	\$35.00
Tools and Miscellaneous Materials	244.18
Subcontracts	0.00
Job Subtotal (Prime Cost)	\$24,697.30
Overhead (5.00%)	1,234.87
Profit (10.00%)	2,593.22
Job Total	\$28,525.39
Bond	342.30
Job Total with Bond	\$28,867.69
Actual Bid Price	\$28,867.69
Material to Direct Labor ratio: 0.36	
Prime Cost per square foot	\$0.00
Job Total per square foot	\$0.00
Actual Bid Price per square ft	\$0.00
Labor cost per square foot	\$0.00
Labor hours per square foot	0.00
Gross Profit %	14.45
Gross Profit \$	\$4,170.39
Net Profit %	10.17

\$ 28,870.<sup>00</sup>

Phone: 218-829-4759 Fax: 218-829-4121  
**CROSSLAKE WTP IMPROVEMENTS : PR #4**  
**Job Number: CO29361-1**

**Extension By Section, And Subtotals By Breakdown**

Item #	Description	Quantity	Price U	Ext Price	Labor Hr U	Ext Lab Hr
--- Section #1 ---						
--- 1. ---						
1191	1-1/2" PVC Conduit	200.00	89.06 C	178.12	3.38 C	6.76
1351	1-1/2" GRC Elbow	2.00	1,189.30 C	23.79	0.72 E	1.44
1590	1-1/2" Locknut	2.00	75.19 C	1.50	0.03 E	0.06
2064	1-1/2" PVC Male Adaptor	2.00	72.23 C	1.44	0.12 E	0.24
2118	1-1/2" PVC Coupling	22.00	58.77 C	12.93	0.09 E	1.98
2359	1-1/2" Conduit Hanger w/Bolt	25.00	120.30 C	30.08	19.88 C	4.97
T0001	103c VFD cable	200.00	2,451.28 M	490.26	20.00 M	4.00
	--- 1. Total ---			738.12		19.45
--- 2. ---						
1349	1" GRC Elbow	2.00	765.76 C	15.32	0.54 E	1.08
1588	1" Locknut	2.00	42.91 C	0.86	0.03 E	0.06
2062	1" PVC Male Adaptor	2.00	61.05 C	1.22	0.09 E	0.18
2116	1" PVC Coupling	22.00	27.94 C	6.15	0.06 E	1.32
2357	1" Conduit Hanger w/Bolt	25.00	83.49 C	20.87	18.75 C	4.69
3107	1/8" Poly Pull Line	210.00	5.80 M	1.22	3.00 M	0.63
24351	1" PVC Conduit	200.00	64.48 C	128.96	2.63 C	5.26
	--- 2. Total ---			174.60		13.22
--- 3A ---						
1003	1-1/4" EMT	50.00	253.34 C	126.67	4.13 C	2.07
1005	2" EMT	80.00	369.64 C	295.71	5.25 C	4.20
1340	1-1/4" EMT Elbow	2.00	565.49 C	11.31	0.38 E	0.76
1342	2" EMT Elbow	4.00	825.76 C	33.03	0.53 E	2.12
1457	3/4" Set Screw Steel Insul Throat Conn	34.00	76.95 C	26.16	0.09 E	3.06
1459	1-1/4" Set Screw Steel Insul Throat Conn	2.00	233.65 C	4.67	0.14 E	0.28
1461	2" Set Screw Steel Insul Throat Conn	4.00	574.86 C	22.99	0.24 E	0.96
1551	2" Set Screw Die Cast Cplg	12.00	300.13 C	36.02	0.06 E	0.72
1557	3/4" Set Screw Steel Cplg	68.00	57.24 C	38.92	0.09 E	6.12
1559	1-1/4" Set Screw Steel Cplg	7.00	180.84 C	12.66	0.14 E	0.98
2283	2" 1-Hole Strap	10.00	105.47 C	10.55	3.66 C	0.37
2356	3/4" Conduit Hanger w/Bolt	85.00	65.35 C	55.55	18.75 C	15.94
2358	1-1/4" Conduit Hanger w/Bolt	6.25	102.67 C	6.42	19.88 C	1.24
2550	3/8" All Thread	44.00	77.60 C	34.14	9.44 C	4.15
2552	3/8" Hex Nut	88.00	63.60 C	55.97	0.30 C	0.26
2554	3/8"x1-1/2" Bolt	22.00	31.16 C	6.86	4.50 C	0.99
2555	3/8" Self Drill Anchor	22.00	183.14 C	40.29	21.00 C	4.62
2787	#12 THHN CU Solid Wire	3,528.00	154.37 M	544.62	8.25 M	29.11
2793	#6 THHN CU Stranded Wire	860.00	736.38 M	633.29	10.50 M	9.03
2794	#4 THHN CU Stranded Wire	216.00	1,204.30 M	260.13	12.75 M	2.75
2800	#3/0 THHN CU Stranded Wire	352.00	4,545.89 M	1,600.15	25.50 M	8.98
4371	#3/0-4/0 Wire Termination Labor	16.00	0.00 E	0.00	0.38 E	6.08
6407	6"x6"x5" Wireway-Nema 1	1.00	53.38 E	53.38	0.60 E	0.60
6436	6"x6" Wireway End	2.00	5.88 E	11.76	0.23 E	0.46
6447	8x8x4" Screw Cover Pull Box-Nema 1	2.00	20.08 E	40.16	1.13 E	2.26
6644	Unistrut (Deep)	16.00	267.61 C	42.82	2.25 C	0.36
6650	Cut 12 Gauge 1-5/8x1-5/8 Channel (labor)	11.00	0.00 E	0.00	0.23 E	2.53
23884	3/4" EMT	680.00	87.91 C	597.79	3.52 C	23.94
T0002	Panel tubs	2.00	48.00 E	96.00	4.50 E	9.00
T0006	RJ MECH RELOCATE WATER LINES	1.00	900.00 E	900.00	OPEN	0.00

Extension By Section, And Subtotals By Breakdown

Item #	Description	Quantity	Price U	Ext Price	Labor Hr U	Ext Lab Hr
--- 3A Total ---				5,598.02		143.94
--- 3B ---						
T0003	relocate 4 contactors	4.00	15.00 E	60.00	0.75 E	3.00
--- 3B Total ---				60.00		3.00
--- 3C ---						
1003	1-1/4" EMT	35.00	253.34 C	88.67	4.13 C	1.45
1340	1-1/4" EMT Elbow	2.00	565.49 C	11.31	0.38 E	0.76
1439	1-1/4" Set Screw Steel Conn	2.00	270.46 C	5.41	0.14 E	0.28
1559	1-1/4" Set Screw Steel Cplg	5.50	180.84 C	9.95	0.14 E	0.77
2358	1-1/4" Conduit Hanger w/Bolt	4.38	102.67 C	4.49	19.88 C	0.87
2794	#4 THHN CU Stranded Wire	152.00	1,204.30 M	183.05	12.75 M	1.94
7142	17x30" Concrete J-Box w/Steel Cover	1.00	OPEN	0.00	0.00 E	0.00
--- 3C Total ---				302.88		6.07
--- 3D ---						
T0004	Field install 60 amp breaker	1.00	1,075.00 E	1,075.00	2.00 E	2.00
--- 3D Total ---				1,075.00		2.00
--- 3E ---						
1002	1" EMT	40.00	156.02 C	62.41	3.75 C	1.50
1339	1" EMT Elbow	2.00	507.71 C	10.15	0.23 E	0.46
1438	1" Set Screw Steel Conn	2.00	119.12 C	2.38	0.11 E	0.22
1558	1" Set Screw Steel Cplg	6.00	103.19 C	6.19	0.11 E	0.66
2357	1" Conduit Hanger w/Bolt	5.00	83.49 C	4.17	18.75 C	0.94
2793	#6 THHN CU Stranded Wire	176.00	736.38 M	129.60	10.50 M	1.85
T0007	Relocate Transformer	1.00	OPEN	0.00	3.50 E	3.50
--- 3E Total ---				214.90		9.13
--- 3F ---						
T0005	RECIRCUIT EM LIGHTING	1.00	45.00 E	45.00	4.00 E	4.00
--- 3F Total ---				45.00		4.00
--- Section #1 Total ---				8,208.52		200.81
Job Total				8,208.52		200.81

<b>PROPOSAL</b>	OWNER	<input type="checkbox"/>
	ENGINEER	<input type="checkbox"/>
	CONSULTANTS	<input type="checkbox"/>
<b>REQUEST</b>	CONTRACTOR	<input type="checkbox"/>
	FIELD	<input type="checkbox"/>
	OTHER	<input type="checkbox"/>

---

PROJECT: Crosslake WWTP Improvements (name, address)	PROPOSAL REQUEST NO: 4
OWNER: City of Crosslake, Minnesota	DATE: 5-1-18
TO: (CONTRACTOR) Eagle Construction Company 515 9 <sup>th</sup> Avenue NW Little Falls, MN 56345	ENGINEER'S PROJECT NO: M25.113425
	CONTRACT FOR: \$2,227,000
	CONTRACT DATED: August 15, 2017

---

Please submit an itemized quotation for changes in the Contract Sum and/or Time incidental to proposed modifications to the Contract Documents described herein.

THIS IS NOT A CHANGE ORDER NOR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN.

---

**Description:** (Written Description of the Work)

1. Electrical contractor to use VFD cable for Grit Pump GP-1 feeder. Size conduit per cable requirements.
2. Electrical contractor to provide a 1" control conduit with the 1-1/2" conduit to future EQ Blower #1.
3. Refer to Sheet 7.01:
  - A. Move two (2) existing (HP-1A/B) panels from west wall to the east wall. Extend circuits in wireway as required.
  - B. Relocate four (4) lighting contactors as required for installation of new transfer switch.
  - C. Existing 60A/3P Life Safety transfer switch to remain. Provide 4-#4+GRND conductors from new generator to existing transfer switch. Extend existing 2" conduit to south side of building for connection to 60A/3P Life Safety disconnect.
  - D. Provide and install a new 60A/3P Life Safety disconnect on new generator.
  - E. Contractor shall relocate non-emergency circuits from the Life Safety system to the general transfer switch.
  - F. The contractor shall re-circuit one emergency lighting and exit sign in the electrical room so that the circuit feeding the lighting in the room also feeds the emergency and exit illumination.

Attachments: (List Attached Documents that Support Description)  
None

---

ENGINEER: John Graupman	DATE: 5-1-18
-------------------------	--------------

---

**City of Crosslake**  
**Waste Water Treatment Facility Project**  
 BMI Project # - M25.113425

**Project Cost Summary**  
 June 6, 2018

Item	Contract Amounts	Changes	Estimated Final Amounts	Notes
Eagle - Contract Amount				
Construction	\$ 2,152,000.00		\$ 2,152,000.00	construction amount
Allowance	\$ 75,000.00			contingency
Contract Changes				
1 - Field Order #1 - Add Rebar: Water Storage Tank Base Slab		\$ 424.00	\$ 424.00	required - requested by BMI
2 - Field Order #2:				
a - BMI Proposal Request #1 - RAS Piping Relocation to EQ Basin		\$ 11,923.13	\$ 11,923.13	optional - requested by city
b - BMI Proposal Request #2 - Remove and Replace Three (3) Four Inch Plug Valves		\$ 2,464.93	\$ 2,464.93	optional - requested by city
c - Eagle Proposal Request #1 - Relocate 6" Oxidation Ditch Drain Line (deduct)		\$ (4,221.27)	\$ (4,221.27)	optional - requested by Eagle
3 - Field Order #3 - Pipe Insulation (Eq Basin to Oxidation Ditch)		\$ 1,822.51	\$ 1,822.51	optional - requested by city
4 - Relocate 6" RW Piping to South Oxidation Ditch		\$ 2,500.00	TBD	required - requested by BMI
5 - Pipe Insulation (additional - as needed)		\$ 2,000.00	TBD	optional - requested by city
6 - Sludge Tank Diffuser Modifications (revised from coarse to fine nozzles)		\$ 2,500.00	TBD	optional - requested by city
7 - Field Order #4:				
a - Modify Clarifier Splitter Box		\$ 500.00	TBD	required - requested by BMI
b - Lengthen Clarifier Weir Gates (2)		\$ 1,000.00	TBD	required - requested by BMI
8 - BMI Proposal Request #4 - Minor Electrical Modifications				
a - Minor Wiring and Conduit Additions at WWTP		\$ 4,400.00	TBD	required - requested by BMI
b - Transfer Switch Modifications at PW Bldg		\$ 22,000.00	TBD	required - requested by BMI
c - Emergency Lighting Revisions at PW Bldg		\$ 4,300.00	TBD	TBD by Electrical Inspector
9 - EQ Basin Mixer		\$ 15,000.00	TBD	optional - requested by city
10 - SCADA System - Computer Modifications (deduct)		\$ (5,000.00)	TBD	required - requested by Eagle
<b>Totals</b>	<b>\$ 2,227,000.00</b>	<b>\$ 61,613.30</b>	<b>\$ 2,164,413.30</b>	
Pay Request # / Date	#9 - 05/29/18			
Eagle - Work Completed to Date	\$ 1,558,380.80			
Eagle - Paid to Date	\$ 1,099,340.76			
Eagle - Retainage	\$ 77,919.04			
Eagle - Pay Request	\$ 381,121.00			
<b>Item</b>	<b>Contract Amounts</b>	<b>Changes</b>	<b>Final Amounts</b>	
Blue Water Wells - Construction Costs				
Construction	\$ 68,395.00	\$ -	\$ 68,395.00	
Contract Changes				
1 - Test Pump		\$ (2,000.00)	\$ (2,000.00)	
2 - Water Analysis		\$ (1,750.00)	\$ (1,750.00)	
3 - Casing		\$ (1,080.00)	\$ (1,080.00)	
4 - Open Hole		\$ (1,125.00)	\$ (1,125.00)	
5 - Increase Pump and Casing Sizes (to 500 gpm capacity)		\$ 5,500.00	\$ 5,500.00	
<b>Totals</b>	<b>\$ 68,395.00</b>	<b>\$ (455.00)</b>	<b>\$ 67,940.00</b>	
Pay Request # / Date	#1 (Final) - 9/18/17		\$ 67,940.00	
<b>Item</b>	<b>Contract Amount</b>	<b>Changes</b>	<b>Cost to Date</b>	<b>Estimated Final Amounts</b>
BMI - Design and Construction Services Costs				
Task 1 - Site Work Design	\$ 8,400.00	\$ (9.00)	\$ 8,391.00	\$ 8,391.00
Task 2 - Waste Water Facility Design	\$ 82,000.00	\$ -	\$ 82,000.00	\$ 82,000.00
Task 3 - Bidding Services	\$ 8,000.00	\$ (505.00)	\$ 7,495.00	\$ 7,495.00
Task 4 - Water Supply Well and Storage Tank Design (Alternate)	\$ 30,000.00	\$ -	\$ 30,000.00	\$ 30,000.00
Task 5 - Construction Services	\$ 70,000.00	\$ -	\$ 66,867.41	\$ 70,000.00
<b>Totals</b>	<b>\$ 198,400.00</b>	<b>\$ (514.00)</b>	<b>\$ 194,753.41</b>	<b>\$ 197,886.00</b>
<b>Total Estimated Project Cost</b>	<b>Original Cost</b>	<b>Changes</b>	<b>Costs to Date</b>	<b>Estimated Final Amounts</b>
WWTF Construction	\$ 2,152,000.00	\$ 61,613.30	\$ 1,558,380.80	\$ 2,213,613.30
Well Construction	\$ 68,395.00	\$ (455.00)	\$ 67,940.00	\$ 67,940.00
Engineering	\$ 198,400.00	\$ (514.00)	\$ 194,753.41	\$ 197,886.00
<b>Totals</b>	<b>\$ 2,418,795.00</b>	<b>\$ 60,644.30</b>	<b>\$ 1,821,074.21</b>	<b>\$ 2,479,439.30</b>
<b>Other Related City Costs:</b>			<b>Costs to Date</b>	<b>Estimated Final Amounts</b>
City costs prior to 2016 - WIP at 12/31/2016			\$ 142,416.61	\$ 142,416.61
Other 2017 City Costs - USA Bluebook, Fiber Upgrades, Elite Fence and Deck, Etc			\$ 45,599.90	\$ 45,599.90
<b>Totals</b>			<b>\$ 188,016.51</b>	<b>\$ 188,016.51</b>
<b>TOTAL CITY COSTS</b>			<b>\$ 2,009,090.72</b>	<b>\$ 2,667,455.81</b>

Legend:

- Proposed change or estimated cost
- Authorized / approved changes / costs