

**COUNCIL ACTION FORM**

**SUBJECT: CHANGE ORDER – WATER POLLUTION CONTROL FACILITY  
STRUCTURAL REHABILITATION PROJECT PHASE 2**

**BACKGROUND:**

On June 12, 2018 the City Council awarded a construction contract to Minturn, Inc. of Brooklyn, Iowa for structural improvements to the Water Pollution Control Facility (WPCF) in the amount of \$558,600.

As construction has progressed, several items have been identified that need to be addressed and would result in a change to the contract. One previous change has been authorized by the Department Head in accordance with the City's Purchasing Policies, for an increase of \$22,230.

An additional change order is now needed. Below is a breakdown of what is included in Change Order 2.

**Repair Two Existing Valve Cans**

During the demolition and placement of new concrete sidewalks on site, two valve cans were found that were damaged beyond repair. The contractor replaced the damaged valve cans with new. **The total cost of this item is \$730.**

**Storm Drain Revisions**

Drain basins require upsizing from original design to accommodate the existing roof drains on site. **The total cost for this item is \$790.**

**River Rock Surfacing**

Additional river rock to be added around the Primary Clarifiers in areas of poor site drainage. **The total cost for this item is \$3,350.**

**Trickling Filter Revisions**

Additional repairs to the structure to minimize future concrete deterioration related to water damage (freeze/thaw). The repairs include the following:

1. Replace missing grout below tees and beyond shims (\$4,090.00)
2. Install waterstop in horizontal and vertical joints behind new concrete fillets (\$22,310)
3. Remove and replace sealant on interior of trickling filter parapet walls (\$5,530)

**The total cost for this item is \$31,930.**

**The total cost for the change order is \$36,800.** The costs for each of the items have been reviewed by staff and HDR Engineering and determined to be reasonable. The summary of change orders for the project is shown below. A copy of the change order and documentation is attached.

Original Contract Amount		\$558,600
Change Order 1		
Trickling Filter – Concrete Fillet Repair	5,280	
Trickling Filter – Precast Tee Bearing Repair	6,090	
Trickling Filter – Precast Connection Repair	1,980	
Trickling Filter – Masonry Column Repair	8,880	
		\$22,230
Change Order 2		
Valve Can Replacement	730	
Drain Revisions	790	
River Rock Surfacing	3,350	
Trickling Filter – Replace Grout at Tees/Shims	4,090	
Trickling Filter – Install Waterstop (Horz. Joint)	22,310	
Trickling Filter - Remove/Replace Interior Joints	5,530	
		\$36,800
Revised Contract Amount		\$617,630

The revised project budget is as follows.

Expenses	
Engineering	\$ 148,107
Original Contract	\$ 558,600
Change Order #1	\$ 22,230
Change Order #2 (This action)	\$ 36,800
<u>Total Encumbered Expenses</u>	<u>\$ 765,737</u>
Authorized Funding (FY 18/19 CIP, pg. 66)	\$ 1,113,000
Remaining Balance (after this Change Order)	\$347,263

**ALTERNATIVES:**

1. Approve Change Order Number 2 in the amount of \$36,800 to Minturn, Inc. of Brooklyn, Iowa.
2. Do not approve the change order at this time.

MANAGER'S RECOMMENDED ACTION:

Additional work that was not included in the original scope of the construction contract has been identified. The changes proposed are to improve the expected life and function of various structures at the Water Pollution Control Facility. The consulting engineers, City staff, and Minturn have worked together to come up with reasonable, cost effective recommendations. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative 1 as described above.



<b>CHANGE ORDER NO. 2</b>	
<b>CONTRACT / BID NO:</b>	<b>2018-163</b>
<b>PURCHASE ORDER NO:</b>	<b>55717</b>



September, 2018

<b>Project:</b>	<b>Ames Water Pollution Control Facility Structural Rehabilitation Phase 2</b>
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<b>Contractor Name:</b>	<b>Minturn, Inc.</b>	<b>Change Orders Approved to Date:</b>			
<b>Address:</b>	<b>144 W. Front St.</b>	<b>1</b>	\$22,230.00	<b>3</b>	
<b>City, State, &amp; Zip Code:</b>	<b>Brooklyn, IA 52211</b>	<b>2</b>		<b>4</b>	


ACTION	DESCRIPTION	COST
1	Repair Two Existing Valve Cans (Area B)	\$730.00
2	Nyloplast Drain Revisions	\$790.00
3	Additional River Rock Surfacing	\$3,350.00
4	Trickling Filter Revisions – Additional to repairs described in the drawings to minimize future water damage to the structure.  1. Replace missing grout below tees and beyond shims (\$4,090.00) 2. Install waterstop in horizontal and vertical joints behind new concrete fillets (\$22,310) 3. Remove and replace sealant on interior of trickling filter parapet walls (\$5,530)	\$31,930.00
<b>TOTAL AMOUNT - CHANGE ORDER #2</b>		<b>\$36,800.00</b>
<b>Additional Working Days</b>		<b>15</b>
<b>Revised Contract Completion date</b>		<b>11/30/18</b>

**Contract Price:**

Original contract price:	\$558,600.00
Change orders approved to date:	\$22,230.00
Amount of this change order:	\$36,800.00
Adjusted contract price including this change order:	<b>\$617,630.00</b>

Accepted for (Company Name): [Minturn, Inc.](#)

Recommended for City of Ames Approval:  
(Usually the Department Head)

  
 \_\_\_\_\_  
 Signature Date 9/19/18

\_\_\_\_\_  
 Signature Date

Printed Name & Title:

City of Ames Approval (Mayor):  
(If Change Order puts changes over \$50,000)

[Gregory J. Menke, Project Manager](#)  
 \_\_\_\_\_

\_\_\_\_\_  
 Signature Date

# MINTURN

Minturn, Inc.  
144 W. Front St.  
Brooklyn, IA 52211  
641-455-0331  
641-843-7256 Fax  
minturn@minturninc.com

August 1, 2018

City of Ames  
515 Clark Avenue  
Ames, IA 50010

Attn: Neil Weiss, P.E.

RE: WPCF STRUCTURAL REHABILITATION PHASE 2  
AMES, IOWA  
PROPOSAL.02

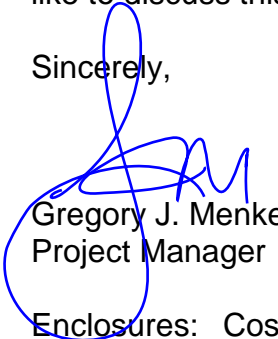
Dear Mr. Weiss,

Enclosed is a cost breakdown for the additional work required to repair 2 existing valve cans in Area B as requested by the City of Ames.

Please issue a change order as shown above in the amount of seven hundred thirty dollars and no cents (\$730.00) for the additional work required. A contract time extension will not be required.

Please don't hesitate to call if you have any questions, need additional information, or would like to discuss this matter further.

Sincerely,



Gregory J. Menke  
Project Manager

Enclosures: Cost breakdowns for Proposal.02 (1 page)  
Municipal Supply invoice (1 page)

## DESCRIPTION OF WORK: REPAIR 2 EXISTING VALVE CANS IN AREA B

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION	TOTAL
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**LABOR**

SUPERINTENDENT	3	HR	\$37.50	\$113	
PIPE LAYER	3	HR	\$22.50	\$68	
LABORER	3	HR	\$21.50	\$65	
OT PREMIUM (TOTAL HRS/5)*(AVE WAGE/2)	2	HR	\$13.58	\$24	
<b>TOTAL LABOR</b>					<b>\$269</b>
<b>TOTAL LABOR BURDEN @ 53%</b>					<b>\$143</b>

**EQUIPMENT**

3/4 TON PICKUP	3	HR	\$15.00	\$45	
<b>TOTAL EQUIPMENT</b>					<b>\$45</b>

**MATERIAL**

MUNICIPAL SUPPLY	1	LS	\$166.00	\$166	
<b>TOTAL MATERIAL</b>					<b>\$166</b>

**SUBCONTRACT**

NA		LS		\$0	
<b>TOTAL SUBCONTRACT</b>					<b>\$0</b>

**OTHER**

NA		LS		\$0	
<b>TOTAL OTHER</b>					<b>\$0</b>

<b>TOTAL LABOR, EQUIPMENT, MATERIAL, SUBCONTRACT, AND OTHER</b>					<b>\$622</b>
<b>TOTAL CONTRACTOR'S FEE @ 15%</b>					<b>\$93</b>
<b>SUBTOTAL</b>					<b>\$716</b>
<b>TOTAL BOND &amp; INSURANCE @ 2%</b>					<b>\$14</b>
<b>TOTAL</b>					<b>\$730</b>



**MUNICIPAL SUPPLY, INC.**

*Municipal, Contractor, and Industrial Supplies*

1550 N.E. 51st Avenue Des Moines, Iowa 50313  
 PH: (515) 262-1300 FAX: (515) 262-6662  
 WATS (800) 747-2025

INVOICE NUMBER: 0698594-IN

INVOICE DATE: 7/17/2018

ORDER NUMBER: 0533938

ORDER DATE: 7/13/2018

SHIP DATE: 7/13/2018

SALESPERSON: HOUSE ACCOUNT

CUSTOMER NO: 10-MINTINC

1808-019500-O  
 \$166.00 (no tax)  
 GJM

SOLD TO:  
 MINTURN, INC.  
 309 N. ORCHARD STREET  
 BROOKLYN, IA 52211

SHIP TO:  
 MINTURN, INC.  
 309 N. ORCHARD STREET  
 BROOKLYN, IA 52211

BUYER:

CUSTOMER P.O.	JOB NAME	SHIP VIA	TERMS
	1808	WC	NET 30 DAYS

ITEM NO.	UNIT	ORDERED	SHIPPED	BACK ORD	PRICE	AMOUNT
144953	EACH	2.00	2.00	0.00	83.000	166.00
26T SCREW VLV BOX TOP 112426						

ORDER# 533938

Net Invoice: 166.00

Freight: 0.00

Sales Tax: 9.96

**Invoice Total: 175.96**

**A SERVICE CHARGE OF 1 1/2% WITH A MINIMUM OF \$1.00 PER MONTH  
 WILL BE CHARGED ON ALL PAST DUE ACCOUNTS.**

# MINTURN

Minturn, Inc.  
144 W. Front St.  
Brooklyn, IA 52211  
641-455-0331  
641-843-7256 Fax  
minturn@minturninc.com

August 6, 2018

City of Ames  
515 Clark Avenue  
Ames, IA 50010

Attn: Neil Weiss, P.E.

RE: WPCF STRUCTURAL REHABILITATION PHASE 2  
AMES, IOWA  
PROPOSAL.03

Dear Mr. Weiss,

Enclosed is a cost breakdown for the additional cost associated with supplying 12" drain basins instead of 8" drain basins for Catch Basins 5 and 6 on Sheet C110. The 8" drain basins required are not large enough to accommodate 6" pipes at 90 degrees.

Please issue a change order as shown above in the amount of seven hundred ninety dollars and no cents (\$790.00) for the additional cost required.

Please don't hesitate to call if you have any questions, need additional information, or would like to discuss this matter further.

Sincerely,



Gregory J. Menke  
Project Manager

Enclosures: Cost breakdowns for Proposal.03 (1 page)  
Brown Supply proposal (1 page)



DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION	TOTAL
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**LABOR**

NA		LS		\$0	
<b>TOTAL LABOR</b>					<b>\$0</b>
<b>TOTAL LABOR BURDEN @ 53%</b>					<b>\$0</b>

**EQUIPMENT**

NA		LS		\$0	
<b>TOTAL EQUIPMENT</b>					<b>\$0</b>

**MATERIAL**

BROWN SUPPLY - 8" DRAIN BASIN (CB5)	(1)	LS	\$298.00	(\$298)	
BROWN SUPPLY - 12" DRAIN BASIN (CB5)	1	LS	\$635.00	\$635	
BROWN SUPPLY - 8" DRAIN BASIN (CB6)	(1)	LS	\$298.00	(\$298)	
BROWN SUPPLY - 12" DRAIN BASIN (CB6)	1	LS	\$635.00	\$635	
<b>TOTAL MATERIAL</b>					<b>\$674</b>

**SUBCONTRACT**

NA		LS		\$0	
<b>TOTAL SUBCONTRACT</b>					<b>\$0</b>

**OTHER**

NA		LS		\$0	
<b>TOTAL OTHER</b>					<b>\$0</b>

<b>TOTAL LABOR, EQUIPMENT, MATERIAL, SUBCONTRACT, AND OTHER</b>					<b>\$674</b>
<b>TOTAL CONTRACTOR'S FEE @ 15%</b>					<b>\$101</b>
<b>SUBTOTAL</b>					<b>\$775</b>
<b>TOTAL BOND &amp; INSURANCE @ 2%</b>					<b>\$16</b>
<b>TOTAL</b>					<b>\$790</b>

**Brown Supply Co. - Ames Branch**

23937 580th Ave  
 Ames, IA 50010  
 PH: 1-515-233-2245  
 Fax: 1-515-233-2676

Project: Ames Pollution Control Facility Structural

Location: Ames, Iowa

Engineer: HDR Engineering

Phone # (515) 280-4940

Bid Date: 5/23/18 2:00 PM

**Quotation**

Quantity	Description	Unit	Price	Total
<b>Storm Sewer pipe and Drain Basins (verify material needed)</b>				
1	8" Drain Basin 10' Tall w/ Solid Lid CB-5	EA	298.00	\$298.00
1	10" Drain Basin 10' Tall w/ Solid Lid CB-6	EA	415.00	\$415.00
3	12" Drain Basin 10' Tall w/ Solid Lid CB-7,8,10	EA	635.00	\$1,905.00
1	12" Drain Basin 5' Tall w/ Solid Lid CB-9	EA	493.00	\$493.00
1	12" Drain Basin 5' Tall w/ Std Grate CB-11	EA	493.00	\$493.00
4	18" Drain Basin 10' Tall w/ Std Grate CB-1,2,3,4	EA	930.00	\$3,720.00
1	24" Drain Basin 10' Tall w/ Solid Lid WQ3	EA	1160.00	\$1,160.00
1	24" Drain Basin 5' Tall w/ Solid Lid WQ2	EA	1040.00	\$1,040.00
1	24" Drain Basin Square Weir 5' Tall w/ Solid Lid WQ1	EA	1830.00	\$1,830.00
1	30" Drain Basin 10' Tall w/ Solid Lid WQ4	EA	2040.00	\$2,040.00
580	6" x 20' N12 Hwy WT IB Solid	LF	1.90	\$1,102.00
240	12" x 20' N12 Hwy WT IB Solid	LF	5.90	\$1,416.00
6	6" N12 WT 90 Degree Bend	EA	22.80	\$136.80
6	6" x 6" x 6" DownSpout Adapter	EA	58.00	\$348.00
<b>Bid Item Total</b>				<b>\$16,396.80</b>
<b>Storm Chambers (verify material needed)</b>				
5	Storm Chamber SC310	EA	129.00	\$645.00
2	Storm Chamber End Cap SC310EPE	EA	38.00	\$76.00
4	Chamber End Cap w/ 12" Bottom Stub SC310EPE12B	EA	170.00	\$680.00
1	15' x 300' Filter Fabric Roll 0601TS	EA	450.00	\$450.00
1	12.5' x 260' Filter Fabric Roll 315WTK	EA	450.00	\$450.00
20	12" N12 Hwy ST IB Solid	LF	5.90	\$118.00
4	12" Spilt Coupling	EA	11.00	\$44.00
80	4" N12 Hwy ST IB Perf	LF	1.05	\$84.00
3	4" N12 St 45 Degree Bend	EA	15.00	\$45.00
1	4" N12 ST Tee	EA	16.00	\$16.00
2	4" Snap Cap	EA	5.00	\$10.00
1	6" Staple Box	EA	40.00	\$40.00
2	6" SDR into Chamber Inserta Tee Hole Saw	EA	125.00	\$250.00
28	6" SDR 35	LF	1.85	\$51.80
2	12" x 6" SDR Inline Drain Basin Inspection Port	EA	370.00	\$740.00
<b>Bid Item Total</b>				<b>\$3,699.80</b>
<b>Misc.</b>				
	Silt Fence	ANY	0.35	\$0.00
	Inlet Protection Device	ANY	145.00	\$0.00
	9" x 25' Straw Wattle w/ stakes per foot	ANY	2.50	\$0.00
<b>Bid Item Total</b>				<b>\$0.00</b>
<b>Project Total</b>				<b>\$20,096.60</b>

This quote is our best interpretation of the plans and specs

# MINTURN

Minturn, Inc.  
144 W. Front St.  
Brooklyn, IA 52211  
641-455-0331  
641-843-7256 Fax  
minturn@minturninc.com

August 13, 2018

City of Ames  
515 Clark Avenue  
Ames, IA 50010

Attn: Neil Weiss, P.E.

RE: WPCF STRUCTURAL REHABILITATION PHASE 2  
AMES, IOWA  
PROPOSAL.04

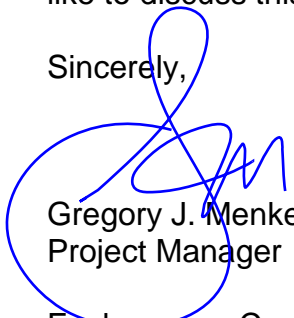
Dear Mr. Weiss,

Enclosed is a cost breakdown for the additional work required to add river rock around the primary clarifiers in the areas shown on the attached drawing as requested by the City of Ames.

Please issue a change order as shown above in the amount of three thousand three hundred fifty dollars and no cents (\$3,350.00) for the additional cost required.

Please don't hesitate to call if you have any questions, need additional information, or would like to discuss this matter further.

Sincerely,



Gregory J. Menke  
Project Manager

Enclosures: Cost breakdown for Proposal.04 (1 page)  
Drawing (1 page)

## DESCRIPTION OF WORK: ADD RIVER ROCK AT PRIMARY CLARIFIERS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION	TOTAL
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**LABOR**

SUPERINTENDENT	5	HR	\$37.50	\$188	
OPERATOR	10	HR	\$23.50	\$235	
PIPE LAYER	10	HR	\$21.50	\$215	
LABORER	10	HR	\$21.50	\$215	
OT PREMIUM (TOTAL HRS/5)*(AVE WAGE/2)	7	HR	\$12.18	\$85	
<b>TOTAL LABOR</b>					<b>\$938</b>
<b>TOTAL LABOR BURDEN @ 53%</b>					<b>\$497</b>

**EQUIPMENT**

SKID LOADER	10	HR	\$45.00	\$450	
3/4 TON PICKUP	5	HR	\$15.00	\$75	
<b>TOTAL EQUIPMENT</b>					<b>\$525</b>

**MATERIAL**

CONSTRUCTION MATERIALS - GEOFABRIC	0.5	EA	\$400.00	\$200	
HALETT MATERIALS - 2" RIVER ROCK	20	TON	\$35.00	\$700	
<b>TOTAL MATERIAL</b>					<b>\$900</b>

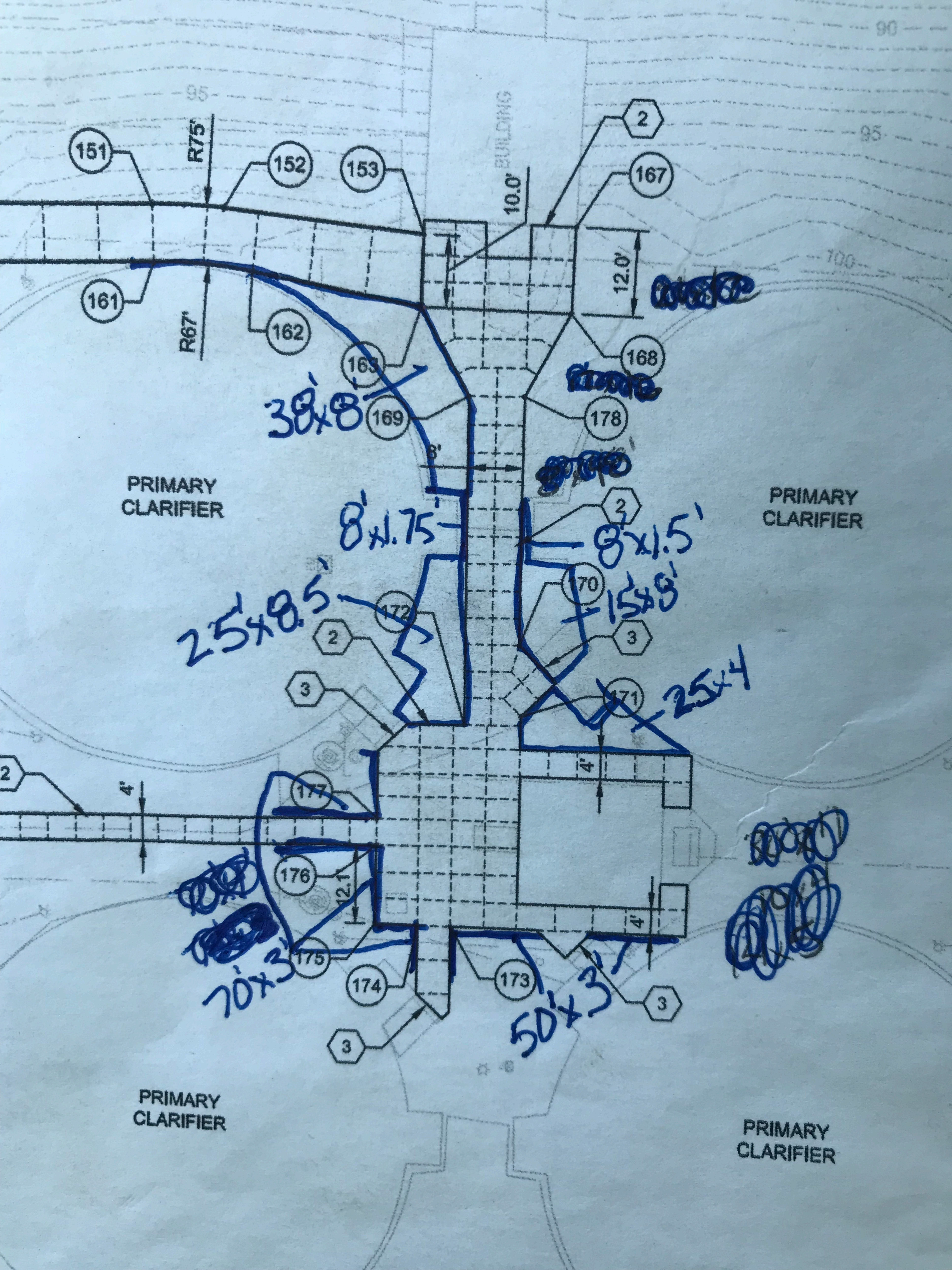
**SUBCONTRACT**

NA		LS		\$0	
<b>TOTAL SUBCONTRACT</b>					<b>\$0</b>

**OTHER**

NA		LS		\$0	
<b>TOTAL OTHER</b>					<b>\$0</b>

<b>TOTAL LABOR, EQUIPMENT, MATERIAL, SUBCONTRACT, AND OTHER</b>					<b>\$2,860</b>
<b>TOTAL CONTRACTOR'S FEE @ 15%</b>					<b>\$429</b>
<b>SUBTOTAL</b>					<b>\$3,289</b>
<b>TOTAL BOND &amp; INSURANCE @ 2%</b>					<b>\$66</b>
<b>TOTAL</b>					<b>\$3,350</b>



PRIMARY CLARIFIER

PRIMARY CLARIFIER

PRIMARY CLARIFIER

PRIMARY CLARIFIER

BUILDING  
10.0'

R75

R67

151

152

153

2

167

161

162

163

12.0'

168

$30 \times 8$

169

178

8'

$8 \times 0.75$

2

$8 \times 1.5$

$25 \times 0.5$

172

170

3

$15 \times 8$

171

$25 \times 4$

4'

177

4'

176

12.1

$70 \times 3$

175

174

173

4'

3

$50 \times 3$

3

PRIMARY CLARIFIER

PRIMARY CLARIFIER

# MINTURN

Minturn, Inc.  
144 W. Front St.  
Brooklyn, IA 52211  
641-455-0331  
641-843-7256 Fax  
minturn@minturninc.com

September 16, 2018

City of Ames  
515 Clark Avenue  
Ames, IA 50010

Attn: Neil Weiss, P.E.

RE: WPCF STRUCTURAL REHABILITATION PHASE 2  
AMES, IOWA  
PROPOSAL.05RR

Dear Mr. Weiss,

Enclosed are cost breakdowns for the additional work required to complete the following trickling filter revisions as requested by the City of Ames.

Description	Estimated Quantity	Unit	Unit Price	Amount
Replace missing grout below tees and beyond shims	1	LS	\$4,090.00	\$4,090.00
Install waterstop in horizontal and vertical joints behind new concrete fillets	1	LS	\$22,250.00	\$22,310.00
Remove and replace sealant on interior of trickling filter parapet walls	1	LS	\$5,530.00	\$5,530.00
Total				\$31,930.00

Please issue a change order in the amount of thirty-one thousand nine hundred thirty dollars and no cents (\$31,930.00) if the City of Ames would like to revise the contract as described above. A contract time extension in the amount of 15 calendar days will also be required.

Please don't hesitate to call if you have any questions, need additional information, or would like to discuss this matter further.

Sincerely,



Gregory J. Menke  
Project Manager

Enclosures: Cost breakdowns for Proposal.05RR (3 pages)  
Drawings describing revisions (2 pages)  
HD Supply quote and Euclid Speedstop product data (3 pages)

DESCRIPTION OF WORK: REPLACE MISSING GROUT BELOW TEES AND BEYOND SHIMS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION	TOTAL
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**LABOR**

SUPERINTENDENT	10	HR	\$33.75	\$338	
FINISHER	36	HR	\$21.50	\$774	~15 MIN/EA
LABORER	36	HR	\$20.50	\$738	~15 MIN/EA
OT PREMIUM (TOTAL HRS/5)*(AVE WAGE/2)	16	HR	\$11.28	\$185	
<b>TOTAL LABOR</b>					<b>\$2,034</b>
<b>TOTAL LABOR BURDEN @ 53%</b>					<b>\$1,078</b>

**EQUIPMENT**

AIR COMPRESSOR, JACKHAMMERS, SANDBLASTER	9	HR	\$16.50	\$149	
3/4 TON PICKUP	10	HR	\$15.00	\$150	
<b>TOTAL EQUIPMENT</b>					<b>\$299</b>

**MATERIAL**

WHITE CAP - SIKQUICK VOH (0.44 CF/EA)	4	EA	\$19.00	\$76	
<b>TOTAL MATERIAL</b>					<b>\$76</b>

**SUBCONTRACT**

NA		LS		\$0	
<b>TOTAL SUBCONTRACT</b>					<b>\$0</b>

**OTHER**

NA		LS		\$0	
<b>TOTAL OTHER</b>					<b>\$0</b>

<b>TOTAL LABOR, EQUIPMENT, MATERIAL, SUBCONTRACT, AND OTHER</b>					<b>\$3,487</b>
<b>TOTAL CONTRACTOR'S FEE @ 15%</b>					<b>\$523</b>
<b>SUBTOTAL</b>					<b>\$4,010</b>
<b>TOTAL BOND &amp; INSURANCE @ 2%</b>					<b>\$80</b>
<b>TOTAL</b>					<b>\$4,090</b>

DESCRIPTION OF WORK: INSTALL WATERSTOP IN HORIZONTAL AND VERTICAL JOINTS BEHIND FILLETS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION	TOTAL
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**LABOR**

SUPERINTENDENT	50	HR	\$33.75	\$1,688	
FINISHER	160	HR	\$21.50	\$3,440	~40 MIN/EA
LABORER	160	HR	\$20.50	\$3,280	~40 MIN/EA
OT PREMIUM (TOTAL HRS/5)*(AVE WAGE/2)	74	HR	\$11.36	\$841	
<b>TOTAL LABOR</b>					<b>\$9,248</b>
<b>TOTAL LABOR BURDEN @ 53%</b>					<b>\$4,902</b>

**EQUIPMENT**

AIR COMPRESSOR, JACKHAMMERS, SANDBLASTER	80	HR	\$16.50	\$1,320	
3/4 TON PICKUP	50	HR	\$15.00	\$750	
<b>TOTAL EQUIPMENT</b>					<b>\$2,070</b>

**MATERIAL**

MUNICIPAL SUPPLY - EUCLID SPEEDSTOP	60	EA	\$42.50	\$2,550	
MISC. MATERIALS	1	LS	\$250.00	\$250	
<b>TOTAL MATERIAL</b>					<b>\$2,800</b>

**SUBCONTRACT**

NA		LS		\$0	
<b>TOTAL SUBCONTRACT</b>					<b>\$0</b>

**OTHER**

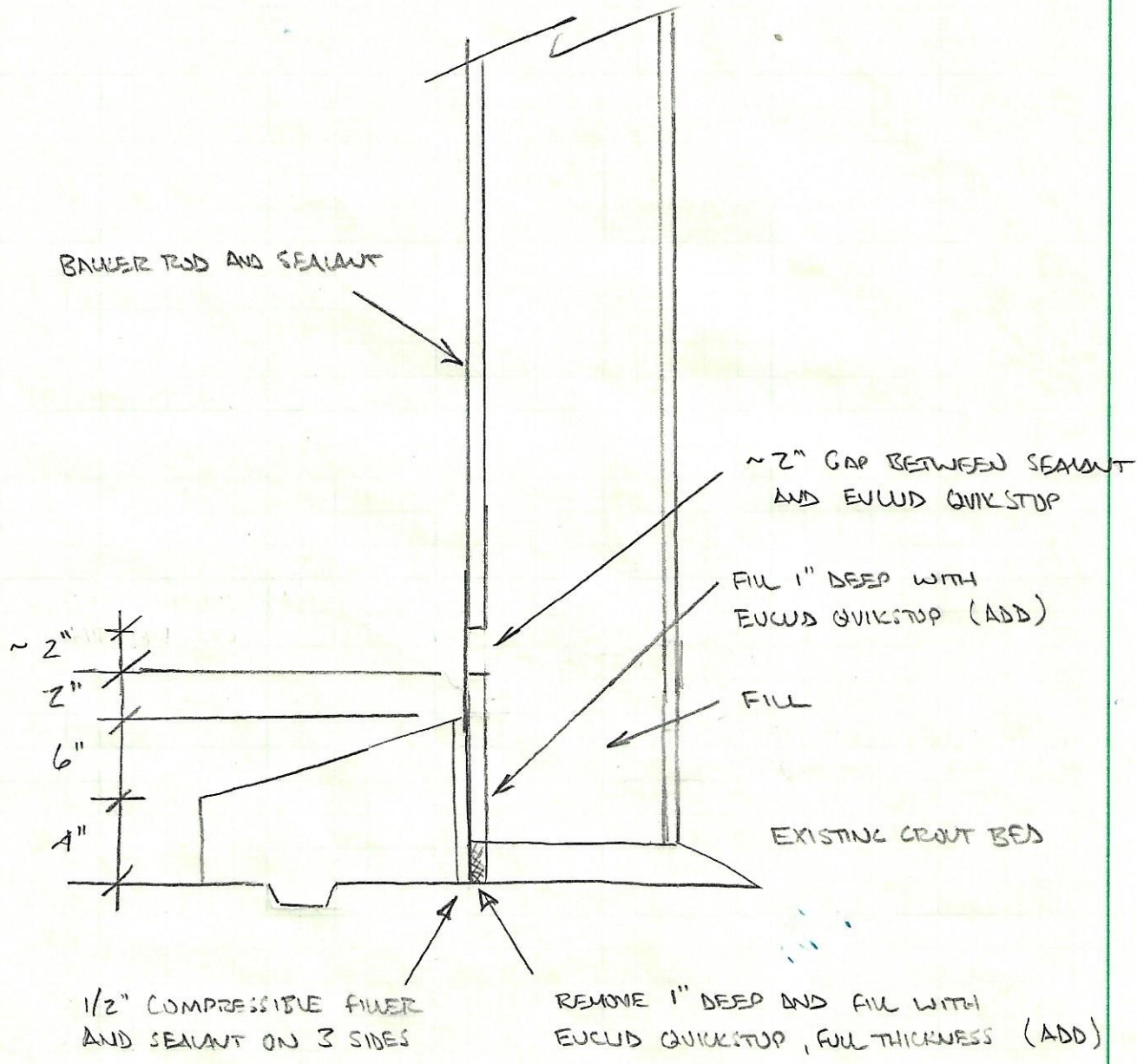
NA		LS		\$0	
<b>TOTAL OTHER</b>					<b>\$0</b>

<b>TOTAL LABOR, EQUIPMENT, MATERIAL, SUBCONTRACT, AND OTHER</b>					<b>\$19,020</b>
<b>TOTAL CONTRACTOR'S FEE @ 15%</b>					<b>\$2,853</b>
<b>SUBTOTAL</b>					<b>\$21,873</b>
<b>TOTAL BOND &amp; INSURANCE @ 2%</b>					<b>\$437</b>
<b>TOTAL</b>					<b>\$22,310</b>

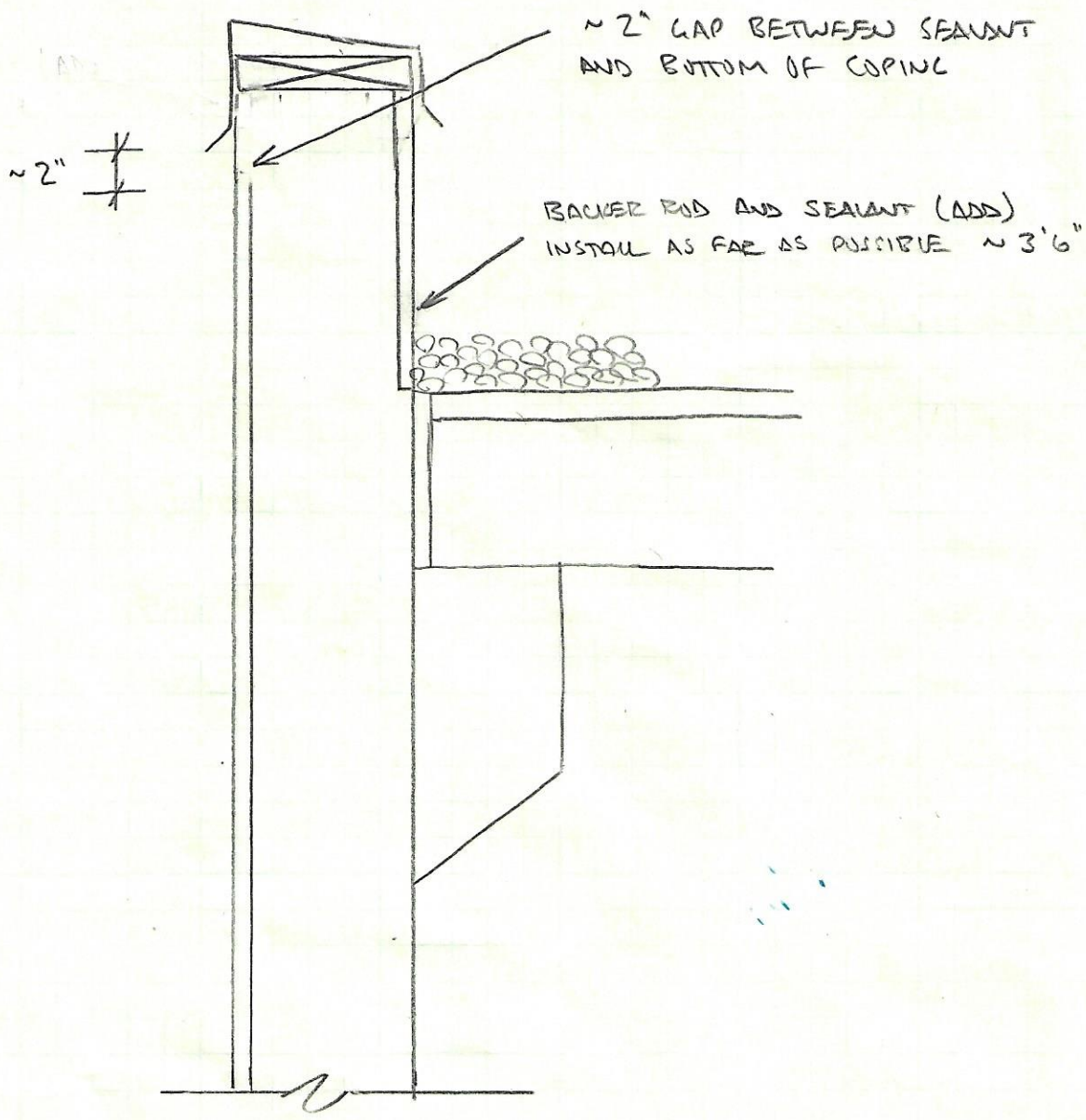


DESCRIPTION OF WORK: REMOVE AND REPLACE SEALANT ON INTERIOR OF TRICKLING FILTER PARAPET WALLS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION	TOTAL
<b>LABOR</b>					
SUPERINTENDENT	10	HR	\$33.75	\$338	
FINISHER	68	HR	\$21.50	\$1,462	~30 MIN/EA
LABORER	34	HR	\$20.50	\$697	~15 MIN/EA
OT PREMIUM (TOTAL HRS/5)*(AVE WAGE/2)	22	HR	\$11.15	\$250	
<b>TOTAL LABOR</b>					<b>\$2,746</b>
<b>TOTAL LABOR BURDEN @ 53%</b>					<b>\$1,455</b>
<b>EQUIPMENT</b>					
3/4 TON PICKUP	10	HR	\$15.00	\$150	
<b>TOTAL EQUIPMENT</b>					<b>\$150</b>
<b>MATERIAL</b>					
STETSON - 5/8" BACKER ROD (1,550 LF / EA)	1	EA	\$124.16	\$124	
STETSON - SIKFLEX-1A "STONE" (5 GALLON / EA)	1	EA	\$138.82	\$139	
MISC. MATERIALS	1	LS	\$100.00	\$100	
<b>TOTAL MATERIAL</b>					<b>\$363</b>
<b>SUBCONTRACT</b>					
NA		LS		\$0	
<b>TOTAL SUBCONTRACT</b>					<b>\$0</b>
<b>OTHER</b>					
NA		LS		\$0	
<b>TOTAL OTHER</b>					<b>\$0</b>
<b>TOTAL LABOR, EQUIPMENT, MATERIAL, SUBCONTRACT, AND OTHER</b>					<b>\$4,715</b>
<b>TOTAL CONTRACTOR'S FEE @ 15%</b>					<b>\$707</b>
<b>SUBTOTAL</b>					<b>\$5,422</b>
<b>TOTAL BOND &amp; INSURANCE @ 2%</b>					<b>\$108</b>
<b>TOTAL</b>					<b>\$5,530</b>



REVISIONS TO DETAIL A 103A101



REVISIONS TO DETAIL S / 00AS01 (TRICKLING FILTERS ONLY)

**From:** Blair, Travis  
**To:** [Greg Menke](#)  
**Subject:** SPEED PLUG  
**Date:** Tuesday, September 4, 2018 12:01:09 PM

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Greg-

Your cost on the Euclid Speed Plug in 50# pails is \$42.50 each. It would take 2-3 days to get my hands on it. There are 36 per pallet, but we can order partial pallets. Give me a call with any questions. Thanks!

**TRAVIS BLAIR**  
**WHITE CAP - IOWA CITY**  
**319-631-4887 CELL**  
**319-337-9619 FAX**



EUCLID CHEMICAL

# SPEED PLUG

## RAPID-SETTING HYDRAULIC CEMENT

### DESCRIPTION

**SPEED PLUG** is a rapid-setting hydraulic cement compound used to instantly stop running water or seepage in masonry or concrete. **SPEED PLUG** is ready to use and requires only the addition of water before plugging and sealing active leaks. **SPEED PLUG** is available in a standard 1-3 minute set time formula, as well as a faster setting 45 second version and a slower setting 3-5 minute formulation.

### PRIMARY APPLICATIONS

- Concrete and masonry walls and floors
- Dams, swimming pools, cisterns, reservoirs, water tanks and manhole repairs

### FEATURES/BENEFITS

- Non-shrinking, non-metallic and non-corrosive
- Initial set in 1 to 3 minutes
- Stops running water or seepage leaks
- High strength
- Controlled expansion
- Can be applied underwater

### TECHNICAL INFORMATION

#### Material Properties at 75°F (24°C)

#### Test Method

#### Compressive Strength ASTM C109 psi (MPa)

1 hour.....	1,000 (6.9)
1 day.....	1,500 (10.3)
28 days.....	3,000 (20.7)

#### Flexural Strength ASTM C348

7 days.....	300 (2.1)
28 days.....	350 (2.4)

#### Expansion/Shrinkage ASTM C157

28 Day Test Chg. Length	
Moist Room (100% RH).....	0.10%
Dry Room (50% RH).....	-0.25%

**Appearance:** **SPEED PLUG** is a gray hydraulic cement compound.

Values presented are typical and not necessarily referenced to create specifications.

### PACKAGING

**SPEED PLUG** is packaged in 20 lb (9.2 kg) pails, 50 lb (22.7 kg) pails, and in cases of 10 lb (4.5 kg) tubs (4 tubs per case).

### SHELF LIFE

18 months in original, unopened package

### COVERAGE/YIELD

1 lb (0.45 kg) of **SPEED PLUG** yields approximately 17 in<sup>3</sup> (171 cm<sup>3</sup>) and will repair approximately 30" of a 3/4" x 3/4" (1 kg for 155 cm of 2 cm x 2 cm) crack.

### DIRECTIONS FOR USE

**Surface Preparation:** Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface to achieve a surface profile equal to CSP >3 in accordance with ICRI Guideline 310.2. Properly clean profiled area.

**Priming:** Clean and prime exposed steel with DURALPREP A.C. and allow to fully dry prior to the application of **SPEED PLUG**.

**Mixing:** Pour potable water into a clean mixing container and gradually add **SPEED PLUG**. Use approximately 1 quart of water to 8 to 9 lbs (3.8 to 4.3 kg/L) of material. Mix rapidly with a trowel to the consistency of stiff putty with no slump for no more than 30 seconds. **SPEED PLUG** will flash set in 1 to 3 minutes. Properly mixed, **SPEED PLUG** can be hand formed into a ball.

**Application:** SSD areas for repair with potable water immediately before application of SPEED PLUG.

**General Patching:** Force SPEED PLUG into the crack or hole by hand or with a trowel. Rapidly fill to the full depth of the opening. **Patching Active Leaks:** Start at the top of the crack or hole, and force the SPEED PLUG to the full depth of the prepared area. Apply direct pressure to the new patch until the SPEED PLUG has taken a firm set. Mix fresh material, and continue patching toward the area of the greatest pressure. When extreme water pressure is encountered, physically hold the mixed SPEED PLUG with a hand against the leak and apply continuous pressure until the SPEED PLUG has set, and the water has stopped running. Do not use a twisting motion. **Floor-Wall Patching:** Follow above methods for the specific conditions encountered. Use a rounded tool to force the SPEED PLUG into the joint, and construct a 45° transitional cove between the floor and wall at the same time. **Expansion/Contraction Cracks:** Do not use SPEED PLUG to treat dynamic cracks. Consult the technical data sheets for the DURAL AQUA LINE of chemical/urethane grouts.

## CLEAN-UP

Clean tools and mixing equipment with water immediately after use.

## PRECAUTIONS/LIMITATIONS

- Do not retemper SPEED PLUG. Do not apply SPEED PLUG to frozen or frost filled surfaces.
- Do not twist SPEED PLUG into the hole while plugging running water leaks.
- In warm weather, mix SPEED PLUG with ice water. In cold weather, mix SPEED PLUG with warm water and use a torch to preheat the area to be patched.
- Do not prewet in cold weather.
- Do not use in dynamic (moving) cracks or expansion joints. Use a chemical grout from the DURAL AQUA Line
- In all cases, consult the Safety Data Sheet before use.

Rev. 04.18

**WARRANTY:** The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.